# Th ANNIVERSARY Asia Pacific Medical Education Conference



TECHNOLOGY: ENHANCING EDUCATION FOR IMPROVEMENT OF PATIENT CARE Trends • Issues • Priorities • Strategies

10<sup>TH</sup> (WED) - 14<sup>TH</sup> (SUN) JANUARY 2018 SINGAPORE

## CONFERENCE HANDBOOK

Organised By:



Centre for Medical Education Yong Loo Lin School of Medicine

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#### **MESSAGE**

Dear Colleagues,

The Organising Committee of APMEC 2018 and the Centre for Medical Education (CenMED), Yong Loo Lin School of Medicine, National University of Singapore, National University Health System, warmly welcome you to the 15th Asia Pacific Medical Education Conference (APMEC) from 10 to 14 January 2018 in Singapore.

We have specially chosen our theme "Technology: Enhancing Education for Improvement of Patient Care – Trends • Issues • Priorities • Strategies (TIPS)". The aim of the conference is to share our experiences as educators, and learn from experts in medical and healthcare professional education some of the latest ideas, and best practices adopted internationally. This is also an opportunity for participants to stimulate discussions in medical and healthcare professional education with the experts.

The Asia Pacific Medical Education Conference has grown and strengthened over the years. It is now in its 15th year attracting participants, not only from the Asia-Pacific region, but also from around the globe. We have more than 1,100 medical and healthcare professionals from over 33 countries.

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

On behalf of the Organising Committee, it gives me great pleasure to once again welcome you to the 15th Anniversary APMEC 2018.

With best wishes,

Dr Dujeepa D. Samarasekera

Chairman, Organising Committee

15th APMEC 2018

Director, Centre for Medical Education (CenMED)

Yong Loo Lin School of Medicine National University of Singapore National University Health System

Singapore

VENUE: MD1 - Tahir Foundation Building, Block MD1, NUS Yong Loo Lin School of Medicine, 12 Science Drive 2, Singapore 117549 MD6 - Centre for Translational Medicine (CeTM), Block MD6, NUS Yong Loo Lin School of Medicine, 14 Medical Drive, Singapore 117599

#### Wednesday, 10 January 2018

Full Day: 8.30am – 5.30pm					
Essential Skills in Medical Education (ESME) Course (Session 1) Ronald M Harden, Matthew C E Gwee, Dujeepa D Samarasekera, Poh-Sun Goh and Tan Chay Hoon					
Venue: MD1, MPH 1					
Full Day: 9.00	Dam - 5.00pm				
W1F1: Using SPSS for Data Analysis Shen Liang					
Venue: MD1, Computer Lab 1, Level 8					
AM (8.30am – 12.30pm)	PM (1.30pm - 5.30pm)				
W1A1: Discourse Analysis: An Introduction Brian D Hodges	W1P1: Resilience, Grit and Emotional Intelligence: Key Personal Qualities for Effective Leadership Judy McKimm, Paul Jones, Kirsty Forrest and Greg Radu				
Venue: MD1, MPH 2	Venue: MD1, MPH 2				
W1A2: Medical Education Through the Lens of SAMR: An Applied Workshop Ruben Puentedera	W1P2: How to Best Engage Learners during Pre-and Para- Clinical Sciences Years in an Era of Technology-Enhanced Learning? Chen Zhi Xiong, Peter GM de Jong and Neil Osheroff				
Venue: MD6, 03-06	Venue: MD6, SMART Classroom, Level 4				
W1A3: Using Simulations to Learn About Teamwork in Healthcare Tan Keng Teng, Poh Chee Lien, Winnie Teo and Wong Teck Yee	W1P3: Less is More: The Basis, Value and Practicality of Focused Workplace Placement Assessments in Busy Disciplines Yip Chee Chew, Clement Tan, Anna Tan Wee Tien and Llewellyn Lee Kuan Ming				
Venue: MD6, 01-01B	Venue: MD6, 01-01B				
W1A4: Tips and Tricks for Successfully Publishing Scholarly Work in an International Journal on Medical Education Peter GM de Jong and Julie K Hewett	W1P4: Designing an Effective IPE Course/Activity – A Competency- and Theory-Based Approach, With Case Study on How to Run a Healthcare Team Challenge (HCTC)™ Wong Mun Loke, Chng Hui Ting, Liaw Sok Ying, Lim Hsiu Chin Keith, Lim Teik Chung Michael, Tai Yuen Ling Esther and Kee Li Leng Janice				
Venue: MD1, MPH 3	Venue: MD6, 01-02				
W1A5: Development of E-learning in Nursing Education: Trends and Strategies Yanika Kowitlawakul, Liaw Sok Ying, Lee Ching Siang, Serena Koh and Shefaly Shorey	W1P5: Qualitative Research: The Interview Technique, Coding and Data Analysis Lee Shuh Shing, Yanika Kowitlawakul and Calvin Ho Wai Loon				
Venue: MD6, 03-05	Venue: MD6, 03-04				
W1A6: Optimising Your Educational Activity Involving Simulated Patients Nicola Ngiam and Hor Chuen Yee	W1P6: When Things Don't Go as Planned: A Simulation- Based Workshop Nicola Ngiam and Jacqueline Ong				
Venue: MD6, 03-04	Venue: MD6, 03-05				
W1A7: WE PASS with A: A Comprehensive Approach for Designing Competency-Based Assessment Gandes Retno Rahayu	W1P7: Caring for Older People in an Ageing Society: An Ethics Case Development and Analysis Workshop Jacqueline Chin, Natalie Ling and Matthew Chen Zhixuan				
Venue: MD6, 03-07	Venue: MD6, 03-06				
W1A8: Work Place Based Assessment: Train The Trainer Workshop Balakrishnan R (Kichu) Nair AM and Carl Matheson	W1P8: Promoting Communication and Team Collaboration Among Health Care Providers in a Multicultural Clinical Setting Manasik Hassan, Ahmed Alhammadi, Hatim Abdulrahman and Magda Ahmed Wagdy Youssef				
Venue: MD6, 01-02	Venue: MD6, 03-07				
W1A9: Assessment Diagnostics Using Psychometrics Gominda G Ponnamperuma	W1P9: A Conceptual Framework For Planning Learning Activities and Assessing Learners In Continuing Professional Development (CPD)  Don Moore				
Venue: MD1, LT37	Venue: MD1, MPH 3				

#### PRE-CONFERENCE WORKSHOPS AND SPECIAL COURSES

VENUE: MD1 - Tahir Foundation Building, Block MD1, NUS Yong Loo Lin School of Medicine, 12 Science Drive 2, Singapore 117549 MD6 - Centre for Translational Medicine (CeTM), Block MD6, NUS Yong Loo Lin School of Medicine, 14 Medical Drive, Singapore 117599

#### Thursday, 11 January 2018

#### Full Day: 8.30am - 5.30pm

Research Essential Skills in Medical Education (RESME) Course (Session 1)

Charlotte Ringsted, Albert Scherpbier and Elise Paradis

Venue: MD1, MPH 1

#### Full Day: 9.00am - 4.00pm

Health Professions' Education 'Leaders' Toolkit': 'Leadership In Threes' Course (Session 1)

Judy McKimm, Paul Jones, Kirsty Forrest and Greg Radu

Venue: MD1, MPH 2

AM (8.30am – 12.30pm)	PM (1.30pm - 5.30pm)
W2A1: Innovative Practice in Mobile Technology to Enhance Learning, Assessment and Professional Development in the Clinical Workplace Trudie Roberts, Sandra Kemp, Richard Fuller and Katharine Boursicot	W2P1: How to Create and Use Developmental Assessments to Guide Residents to Become Effective Practitioners Eric Holmboe
Venue: MD1, MPH 3	Venue: MD6, 01-02
W2A2: What is Online Collaborative Learning? Why is it Important? And How to (easily) Enhance Online Medical Education Courses with These New Pedagogies Linda M Harasim	W2P2: Masterchef for Residency Selection Sarah Lu Qinghui, Tham Kum Ying , Habeebul Rahman and Terence Huey Cheong Wei
Venue: MD6, 03-07	Venue: MD6, 01-01B
W2A3: The Smorgasboard of Technology-Driven Teaching Strategies to Enhance Learning Rani Kanthan and Kalyani Premkumar	W2P3: How to Use Data (Analytics) to Inform eTeaching and eLearning Poh-Sun Goh, Sergio Hernandez-Marin and Lim Wee Khee
Venue: MD1, LT37	Venue: MD6, SMART Classroom, Level 4
<b>W2A4: Mobile Learning for Healthcare Educators</b> Vaikunthan Rajaratnam and Dong Chaoyan	W2P4: How Do We Apply Evidence of Interprofessional Education and Collaboration in Asia?  Junji Haruta, Sachiko Ozone and Ryohei Goto
Venue: MD6, SMART Classroom, Level 4	Venue: MD1, LT37
W2A5: Developing and Assessing Resilience in Medical and Healthcare Professionals Moi Kok Wah	W2P5: Technology Enhanced Learning and Design Thinking Process: Think Globally, Act Locally and Innovate! Ardi Findyartini, Diantha Soemantri and Anindya Pradipta Susanto
Venue: MD6, 01-01B	Venue: MD6, 03-05
W2A6: Professionalism in Practice Ng Ho-Keung, Alex Yung, Shekhar Kumta and Yan Jin	W2P6: Changes in the Teaching Methods- An Essential Need of the Hour: An Integrated Teaching to Medical Students by Who, Whom, How and Where BK Manjunatha Goud, Joan Kumar and Aruna Chanu Oinam
Venue: MD6, 01-02	Venue: MD6, 03-06
W2A7: From Conceptualisation to Implementation: Development of an Online Assessment System Vishna Devi Nadarajah and Er Hui Meng	W2P7: Family Practice Preceptorship: From Theory to Practice  Doris Young , Goh Lay Hoon and Victor Loh
Venue: MD6, 03-05	Venue: MD1, MPH 3
W2A8: Using the Four Quadrant Model to Engage the Faculty Meaningfully Danai Wangsaturaka and Indika Karunathilake	W2P8: Using a Web-Based Platform (Emedici©) to Enhance Students' Learning and Immediate Feedback Across the Healthcare Profession Michael Wan
Venue: MD6, 03-06	Venue: MD6, 03-07
	APME-Net 7th Niigata Meeting (By Invitation Only)
	Venue: Meeting Room 2, #01-07, MD11, Clinical Research Centre, Yong Loo Lin School of Medicine, National University of Singapore, 10 Medical Drive, Singapore 117597

# MAIN CONFERENCE

Venue: Resorts World Convention Centre, Resorts World Sentosa, 8 Sentosa Gateway, Singapore 098269

Basement 2

Central & East Ballrooms Registration & Help Desk

Slides Upload Counter for

Trade Exhibition
Refreshment
Best Abstract for Poster Presentation

Presentations at Basement 2 - Sagittarius

MoM e-Notification - Sagittarius Secretariat - Libra Level 1 Leo 4

> Pisces 1, 2 Virgo 1, 2, 3, 4

Learning Lounge - Pisces 3
Discussion Room - Pisces 4
Prayer Room - Cancer
Slides Upload Counter for
Presentations at Level 1

Day 1: Friday 12 January 2018

Time		Baser	nent 2		Level 1
	Central Ballroom	East Ballroom 1	East Ballroom 2	East Ballroom 3	Leo 4
8.30am - 9.00am	Opening Ceremony Welcome Address Dr Dujeepa D Samarasekera Chairman, Organising Committee, 15th APMEC 2018 Opening Address by Guest of Honour Assoc Professor Benjamin Ong Director, Medical Services Ministry of	East Ballroom 1	East Ballroom 2	East Ballroom 3	Leo 4
9.00am - 10.15am	Plenary 1 Technology in Health Professional Education: Boon or Bane? Technology, Compassion and Healthcare Education in an Interconnected World Brian D Hodges, Canada Technology Enhanced Education: Good Thing or Flash in the Pan? Erle Lim, Singapore Chairperson: Dujeepa D Samarasekera, Singapore				
10.15am - 11.15am	Openino	Ceremony Reception - F	Foyer, Central and East Ba	allrooms	
10.45am - 12noon					ASPIRE Board Meeting (By invitation only) - Pisces 4
11.15am - 12.30pm	Judging - Best Al	ostract for Poster Present	tation (Session 1) - Foyer,	Central Ballroom	

Key	
	Plenary, Leadership Forum
	Panel Discussion
	Symposium
	Special Interest Group (SIG)
	Free Communications
	E-Poster

Level 1						
Pisces 1 Pisces 2 Virgo 1 Virgo 2 Virgo 3 Virgo 4						

MAIN CONFERENCE

Time		Basen	nent 2		Level 1
	Central Ballroom	East Ballroom 1	East Ballroom 2	East Ballroom 3	Leo 4
11.15am - 12.45pm	Leadership Forum The Future of Medical Education in a Technology Advanced World	Panel Discussion 1 The Future Role of the Biomedical Sciences in Teaching and Learning Medicine	Panel Discussion 2 Use of Simulation and Standardised Patients - Current Trends and Scope for the Future	Symposium 1  Leveraging Technology to Optimise CME/ CPD, Clinical Care and Patient Engagement	Panel Discussion 3  Development of Technology for Education - Practical Approaches: Academic-Private Partnership
	How We Can Strategise for the Future of Medical Education in a Technology Advanced World Yeoh Khay Guan, Singapore Moving Beyond the Cerebral Hard Drive: Leveraging Technology to Improve Medical Education and Clinical Care Through Co- production Eric Holmboe, USA Preparing the Future Medical Workforce for the Use of Technology Across Their Career Lifespan Julie Quinlivan, Australia Medical Education in an Information Technology- Empowered Age: The Philippine Experience Alfaretta Luisa T Reyes, Philippines  Effective Use of Technology to Benchmark and Set Standards in Health Professions Education Programs for the Future Adeeba Kamarulzaman, Malaysia	Can Future Learning and Practice of Medicine Benefit from 'Biomedical Science Thinking' As a Way of Life? Chen Zhi Xiong, Singapore Integration of Biomedical Sciences into the Post-Clerkship Curriculum Neil Osheroff, USA Will Future Technology Replace the Biomedical Science Educator? Chan Lap Ki, Hong Kong S.A.R.	Use of Simulation - Strengths and Pittfalls Siau Chiang, Singapore Simulated Patients: Essential for the Education of a New Generation Nicola Ngiam, Singapore Shaping Simulation Learning for the Future Fatimah Lateef, Singapore The Future of Simulation for Rural and Remote Practice Training Richard Hays, Australia	How Can Backward Planning in CME/CPD Help Align the Needs Assessment and Program Outcomes? Lisa Sullivan, Australia Taking an Integrated Approach to CME, CPD, and Patient Engagement: Deploying a Blended Learning Model to Optimise Clinical Performance and Patient Engagement Sherlyn B. Celone- Arnold, USA Applying Facebook and Other Social Network Approaches into Interprofessional Continuing Education Alvaro Margolis, Uruguay The Rise of Digital Engagement of the Physician and their Patients Dale Robert Kummerle, USA	How to Foster the Academic- Private Partnership in Developing Technology for Education – A Perspective from an Academic Clinician Kelvin Foong, Singapore The Application of Digital Technology in Medical Education Frank Voon, Singapore Virtual Reality and Augmented Reality for Medical Training Desmond Ng, Singapore Capitalising on Opportunities for Developing Technological Resources for Learning: Lessons Learned Kalyani Premkumar, Canada
	Moderator: Lau Tang Ching, Singapore	Moderator: Neil Osheroff, USA	Moderator: Terry Pan, Singapore	Chairperson: Lisa Sullivan, Australia	Moderator: Marion Aw, Singapore
12.45pm - 2.00pm		Lunch - Foyer, Centra	al and East Ballrooms		
1.00pm - 2.00pm					Feedback with Faculty: ESME Course (Session 2)
1.30pm - 4.15pm					WPAME Board Meeting (By invitation only) - Pisces 4

Level 1						
Pisces 1	Pisces 2	Virgo 1	Virgo 2	Virgo 3	Virgo 4	
Free Communications 1	Free Communications 2	Elsevier Hackathon				
General Education I	Teaching and Learning	Innovating Medical				
Feedback with Faculty: RESME Course	Health Professions' Education 'Leaders' Toolkit': 'Leadership In					
(Session 2)	Threes' Course (Session 2)					

Time		Baser	nent 2		Level 1
	Central Ballroom	East Ballroom 1	East Ballroom 2	East Ballroom 3	Leo 4
2.00pm - 3.30pm	Judging - Best Ab	stract for Poster Present	tation (Session 2) - Foyer,	Central Ballroom	
2.00pm-3.30pm	Symposium 2  Technology in Assessment: Contemporary Best Practices and Future Developments to Enhance Education for the Improvement of Patient Care  Where is Assessment	Panel Discussion 4  Mentoring in Health Professional Education: How to Approach the Millenials  Building Health	Symposium 3  Using New Technologies in Biomedical Science Teaching  Applying MOOC	Symposium 4  Development of National Standards and Core Clinical Training Curriculum for Medical Schools in Singapore  Developing the	Panel Discussion 5 Interprofessional Education for the Future Incorporating IPE in
	Going? An Overview of Latest Developments and Future Directions in Assessment Katharine Boursicot, Singapore The Extended Mind - Knowledge Tests of the Future Trudie Roberts, United Kingdom Personalised Immersive Testing: The OSCE of the Future? Katharine Boursicot, Singapore A BAN on Big Testing: Behaviours, Adaptations and Nudges Richard Fuller, United Kingdom	Professional Students Through Multi-Model Mentoring Tan Chay Hoon, Singapore Building Empathy, Resilience and Professionalism in the Millenials Henry Yang, Taiwan Developing Resilience and Emotional Intelligence through Mentoring Judy McKimm, United Kingdom Mentoring, Reverse Mentoring and Collegial Conversations: Agile Strategies to Meet Changing Needs Chinthaka Balasooriya, Australia	Technology in Biomedical Science Education Peter GM de Jong, The Netherlands The Use of Novel Technologies to Enhance Student Assessment Neil Osheroff, USA The Role of Technology in Active Learning Sandy Cook, Singapore	National Medical School Standards for Singapore Koh Dow Rhoon, Singapore Developing a National Core Clinical Training Curriculum for Medical Schools - The Burning Platform Mabel Yap, Singapore A Medical School's Perspective on the Development of the National Medical School Standards Lau Tang Ching, Singapore The Importance of Education Standards, Quality Assurance and Quality Improvement - Local and International Perspectives Ian Curran, Singapore Standards for Medical Education in Singapore: An Opportunity to Enhance Collaboration and Promote Excellence Naomi Low-Beer, Singapore Setting Standards for Medical Schools Programs for Quality Assurance and Quality Improvement Theanne Walters, Australia	an Academic Medical Centre Lim Boon Leng, Singapore Preparing Nurses for Future Interprofessiona Collaborative Practice: Tips and Pitfalls Serena Koh, Singapore Findings and Cultural Characteristic of IPE in Japan - Experience from Japan and Asia Junji Haruta, Japan Incorporating IPE Strategies in Health Professional Education: Lessons Learnt from the Indonesia Experience Ardi Findyartini, Indonesia
	Chairperson: Sandra Kemp, Australia	Moderator: Marie- Veronique Clement, Singapore	Chairperson: Peter GM de Jong, The Netherlands	Chairperson: Koh Dow Rhoon, Singapore	Moderator: Keith Lim, Singapore
3.30pm - 4.15pm		Affarmaan T	ea Break - Foyer of all me	oting vonue	

		Leve	11		
Pisces 1	Pisces 2	Virgo 1	Virgo 2	Virgo 3	Virgo 4
Free Communications 3	Free Communications 4	Free Communications 5	Free Communications 6	Free Communications 7	Free Communications 8
Technology Enhanced Learning I	Assessment	Faculty Development	Curriculum	General Education II	Technology Enhanced Learning II
Psychiatry Clinical Simulation Initiative (CSI) Modules for Medical Education: An Update Martin Klapheke, USA Facilitators and Barriers of a Cross-Cultural Geriatric Education Distance Training Programme - The Singapore-Uganda Experience Lynette Ha Ngoc Huong Lien, Singapore Serious Games in Medical Education: Current Knowledge of, Use and Perceived Implementation Barriers Among Clinical Educators Kimberly Pei Rui Chan, Singapore  Leveraging on Database Management Tools, Cloud-Based Applications and Mobile App Development Platform to Administer the Curriculum Design Process Effectively and Accurately Ching Man Liu, Singapore  The Inaugural Neuro-Localisation Pokemon Hunt: A Marriage of Lesion Localisation and Geography with Technology as The Priest Derek Soon, Singapore  New Way to Learn Alzheimer Using Augmented Reality Gisella Anastasia, Indonesia	Developing a Comprehensive Checklist of Essential Dental Consultation Components into the Calgary Cambridge Framework and Its Psychometric Testing Sunila Sangappa, India Using Eye Tracking to Evaluate Medical Assessment Question Types Jia Rui Kwan, Singapore Involving Students in Assessment: Development of a Student Question Bank Kirsty Forrest, Australia Relationships Between Scores on the Biomedical Admissions Test (BMAT) and Later Stages of the Selection Process: Findings from a UK Medical School Amy Devine, United Kingdom Developing and Validating Script Concordance Testing for ENT Undergraduates Sivaraman Ganesan, India Educational Benefit of Peer-Assisting Mock OSCE Among Medical Students Warinrumphai Vanichranun, Thailand	What Should Residents Learn to Teach? A Modified Delphi Survey to Define Competencies of Resident-as-Teacher Tadayuki Hashimoto, Japan  Preparing Medical Students in Asia for International Clinical Elective Placements James Thomas, Japan  Understanding the Response Process of Residents Evaluating Clinical Teachers – Influences of Instrument and National Culture Makoto Kikukawa, Japan  Comparison Between the Teaching Performance Indicator Data and Teaching Hospital Accreditation Results Mei Yi Chou, Taiwan  Quality of Clinical Learning Environment and Its Association with Taiwanese National Cultural Values Between Medical Trainees and Clinical Teachers Jer-Chia Tsai, Taiwan  Towards a Consistent Approach to the Mentoring of Novices by Senior Physicians in Palliative Medicine Teck Wee Wesley Loo, Singapore	Improving Awareness of Quality Improvement Concept Among Paediatric Residents in Hamad Hospital ,Qatar: Successful Story Magda Youssef, Qatar Randomised Prospective Study Comparing the Effectiveness of Spaced Learning to Mass Learning in Microsurgical Procedures Wendy Teo, Singapore Positive Outcomes of Simulation-Based Learning in Critical Care Physiotherapy Geetha Kayambu, Singapore Effects on Student Results and Course Evaluations of Reduction in Teaching Hours in an Undergraduate Medical Course Richard Hays, Australia Workplace Based Assessment – Learner and Assessor Perspective Lessons From a 7 Year Project Balakrishnan R (Kichu) Nair AM, Australia Development of Values-Based Practice Workshop to Improve Patient-Centered Interprofessional Collaboration Hirotaka Onishi, Japan	Walking the Footsteps and Feeling the Pain: Patientisation Jamie Lim, Singapore The Main Considerations of Faculty and Residents When They Evaluate the Appropriateness of Facebook Posts and Their Negotiation of Conflicting Considerations May Eng Loo, Singapore Improving Clinician Compliance with a National Healthcare System Using Peer Review Julie Quinlivan, Australia The Challenges of Developing Informal Mentorships in the Medical Field Heba Mohtady, Saudi Arabia Improving Preclinical Students' Cultural Competence by Cross-Cultural Service Learning, Critical Reflection and Narrative Interview Po Wei Chen, Taiwan	Using New Technologies and Best Evidence to Unburden Medical Schools' Admissions and Student Affairs Offices, Without Sacrificing Diversity or Predictive Validity Christopher Zou, Canada An Ethnographic Study of Health Information Technology Use in Three Intensive Care Units Elise Paradis, Canada Culminating Projects - Academic Innovation to Improve Pedagogic Competence Anbarasi K, India Three Dimensional (3D) Printed Knee Joint Simulator for Medical Education Bohong Cai, Singapore 'It's on My iPad': Mobile Devices to Support and Augment and Transform the Learning Experience of Medical Students in the Clinical Workspace Jagrati Chopra, United Kingdom Technology in Medical Education: Facets of Using Google Classroom in Pharmacology Carolynn Pia Bagain, Philippines
Judges: Anurag Saxena, Canada* Jason Chan, Singapore Soracha Thamphiwatana, Thailand	Judges: Diantha Soemantri, Indonesia* Chiam Peak Chiang, Singapore Indika Karunathilake, Sri Lanka	Judges: Vishna Devi V Nadarajah, Malaysia* Anthony J Buzzard, Australia Danai Wangsaturaka, Thailand	Judges: Kalyani Premkumar, Canada* Tanya Tierney, Singapore Richard Fuller, United Kingdom	Judges: Lambert Schuwirth, Australia* Malcolm Mahadevan, Singapore Lim Ki-Young, South Korea	Judges: Don Moore, USA* Kathy Brotchie, Australia Harumi Gomi, Japan
		Afternoon Tea Break - Foy	ver of all meeting venue		

MAIN CONFERENCE

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Time		Basen	nent 2		Level 1
	Central Ballroom	East Ballroom 1	East Ballroom 2	East Ballroom 3	Leo 4
4.15pm - 5.00pm	Plenary 2				
	Learning and Technology not Learning Technology Ronald M Harden, United Kingdom				
	Discussion				
	Chairperson: Goh Poh Sun, Singapore				
5.30pm - 6.15pm					TAPS Advisory Board Meeting (By invitation only) - Pisces 4
6.45pm - 8.30pm	Conf	erence Dinner - SEA Aqu	arium, Resorts World Ser	ntosa	

#### Day 2: Saturday 13 January 2018

Time		Level 1			
	Central Ballroom	East Ballroom 1	East Ballroom 2	East Ballroom 3	Leo 4
8.15am - 9.00am		Special Interest Group (SIG) 1	Special Interest Group (SIG) 2		Asia Pacific Medical
		Artificial Intelligence, Robotics and the Challenges of Adapting Health Professions Education Brian D Hodges, Canada	The Future Role of Online Learning in Biomedical Science Education Peter GM de Jong, The Netherlands		Education Network (APME-Net) Meeting (By invitation only)
9.00am - 9.15am	Address by President, 69th Medical Society, NUS Yong Loo Lin School of Medicine, Singapore				
	Technology and Students: Yea or Nay? - A Student's Perspective Norman Lin, Singapore				
9.15am - 9.30am	Address by Chief Resident, National University Hospital, National University Health System				
	Residency - A Singaporean Perspective Benjamin Hooi, Singapore				

	Level 1							
Pisces 1	Pisces 2	Virgo 1	Virgo 2	Virgo 3	Virgo 4			

		Leve	l1		
Pisces 1	Pisces 2	Virgo 1	Virgo 2	Virgo 3	Virgo 4
E-Poster 1	E-Poster 2	E-Poster 3	E-Poster 4	E-Poster 5	E-Poster 6
	See Pa	ages 158 - 16	O for inform	ation	

Time		Baser	nent 2		Level 1
	Central Ballroom	East Ballroom 1	East Ballroom 2	East Ballroom 3	Leo 4
9.30am - 10.30am	Plenary 3 Incorporating Technology into Curricula and Learning Al (Artificial Intelligence) and Collaborativist Learning for Medical Education Linda M Harasim, Canada A Learner's Experience Does Not Mean Learning Effectiveness: Lessons from the Learning Sciences Robert K Kamei, Singapore Discussion				
	Chairperson: Alfred Kow, Singapore				
10.30am - 11.15am		Morning Te	ea Break - Foyer of all me	eting venue	
11.15am - 12.45pm	Panel Discussion 6 Gamification in Higher Education - Usefulness and Impact on Learning and Practice  Should Learning be Fun? Scott Stevens, USA Trials and Tribulations of Developing Gamifications for Medical Students Alfred Kow, Singapore Gaming and Learning - Learning to Game or Gaming to Learn Hoon Heh, P.R. China	Panel Discussion 7 Innovation in Education Technology: Insights from Global Leaders in CME, CPD, and Patient Engagement  CME/CPD Learning Insights from Around the Globe Lisa Sullivan, Australia  Disruptive Innovations in CME, Helped by IT. Examples from Latin America Alvaro Margolis, Uruguay  Seven Strategies to Elevate and Enhance the Virtual Classroom Experience Sherlyn B. Celone- Arnold, USA  Future of Virtual Reality in Healthcare and Educating Healthcare Professionals Dale Robert Kummerle, USA  Moderator: Lisa Sullivan Australia	Teaching Family Medicine: Challenges of Competencies and Complexities  Teaching Patient Centeredness in the Context of Family Medicine Lee Kheng Hock, Singapore  The FM Video Project: The Family Medicine Perspective through the Lens of the Medical Student Victor Loh, Singapore  Workplace-Based Assessment (WBAs) in the Family Medicine Setting Wong Teck Yee, Singapore	Required Resources for Learning: A Western Pacific Regional Perspective  Required Resources for Learning: An Australasian Perspective Pete Ellis, New Zealand Educational Resources for Medical Education in Japan: Strengths and Weaknesses Yasuyuki Suzuki, Japan Medical Curriculum Innovation at University of Medicine and Pharmacy at Ho Chi Minh City Tran Diep Tuan, Vietnam The College of Medicine Nursing and Health Sciences (CMNHS) in Fiji: 133 Years Old with Its Challenges- Update 2018 William May, Fiji  Chairperson: Michael Eigld Australia	Symposium 7  Influence of Culture in Health Professional Education and Healthcare Delivery  Teaching and Learning in Confucius Culture Hiroshi Nishigori, Japan Influence of Culture in Education Decision Making Matthew Gwee, Singapore  Teach to Serve Aymeric Lim, Singapore  Cultural Competence in International Collaboration in Education and Healthcare Lambert Schuwirth, Australia
	Nadarajah, Malaysia	Sullivan, Australia	Young, Singapore	Field, Australia	Pawlina, USA
12.45pm - 2.15pm		Lunch - Foyer, Centra	al and East Ballrooms		
1.00pm - 2.00pm 1.00pm - 1.45pm (e-posters)					Feedback with Faculty: ESME Course (Session 3) 1.00pm - 2.00pm

		Leve	l <b>1</b>		
Pisces 1	Pisces 2	Virgo 1	Virgo 2	Virgo 3	Virgo 4
		Morning Tea Break - Foye	er of all meeting venue		
			-		
E-Poster 7 & 8	E-Poster 9 & 10	E-Poster 11 & 12	E-Poster 13 & 14	E-Poster 15 & 16	E-Poster 17 & 18
	See Pa	ages 161 - 16	6 for informa	ation	
		· ·			ı
eedback with Faculty:	Health Professions'	Healthcare Team	E-Poster 19	E-Poster 20	E-Poster 21
RESME Course	Education 'Leaders'	Challenge™			
(Session 3) 1.00pm - 3.00pm	Toolkit': 'Leadership In Threes' Course	1.00pm - 2.00pm			
ι.ουριπ - ο.ουριπ	(Session 3)		See Page	167 for info	rmation
	1.00pm - 2.00pm				
					I

Time		Baser	nent 2		Level 1
	Central Ballroom	East Ballroom 1	East Ballroom 2	East Ballroom 3	Leo 4
2.15pm - 3.45pm	Panel Discussion 8	Panel Discussion 9	Panel Discussion 10	Symposium 8	Symposium 9
	Learning Space: Classroom of the Future	Cultural Anthropology and Medical Education	Postgraduate Healthcare Professional Education - Shifting the Paradigm	Using Data (Analytics) to Inform eTeaching and eLearning	Conceptual Framework That Illuminate and Magnify: How Theory Can Drive Simulation Design and Delivery
	Build Bridges, Not Walls* Trudie E Roberts, United Kingdom  Fostering Complex Learning through a Connected Curriculum Johan Geertsema, Singapore  Let's Get Down to Basics: What is the Role of the Technology in Learning? And What Does that Mean for Medical Education? Linda M Harasim, Canada  Pathways Towards the Classroom of the Future: Incremental vs Sustaining vs Disruptive Nabil Zary, Singapore	Collaborating in Teaching Behavioural and Social Sciences - Clinical Case Conference with Cultural Anthropologists Junko lida, Japan Collaborating in Qualitative Research - Collaborative Ethnography in Medical Education Research Yosuke Shimazono, Japan Collaborating in Faculty Development - Cultural Anthropology in Medical Education Certificate Programme Hiroshi Nishigori, Japan	Transforming Nursing Education for the Future Tan Soh Chin, Singapore The Changing Paradigm in Training Advance Pharmacy Practitioners Lita Chew, Singapore Challenges in Residency Training in Singapore: A Perspective from the Joint Committee of Specialist Training (JCST) and the Division of Graduate Medical Studies, NUS Medicine Chen Fun Gee, Singapore Postgraduate Medical Education – Moving Towards Competency- Based Education and Programme of Assessment Mabel Yap, Singapore	Poh-Sun Goh, Singapore Sergio Hernandez-Marin, Singapore Lim Wee Khee, Singapore	Overview of Theoretical Frameworks in Simulation-Based Education Lim Wee Shiong, Singapore How Do Theories of Motor Skills Learning Inform Simulation-Based Education Charlotte Ringsted, Denmark Sim-Round: Easing Transition into the Clinical Clerkship Tham Kum Ying, Singapore Debriefing: Taking Relational Aspects into Consideration Charmaine Krishnasamy Singapore
	Moderator: Nigel Tan, Singapore	Moderator: Diantha Soemantri, Indonesia	Moderator: Goh Khean Teik, Singapore	Chairperson: Poh-Sun Goh, Singapore	Chairperson: Lim Wee Shiong, Singapore
3.45pm - 4.15pm	Aft	ernoon Tea Break - Foyer	, Central and East Ballroo	ms	
4.15pm - 5.15pm	Plenary 4				
	Technology in Health Professional Education: Future of Medicine				
	Getting Better (Faster): Thoughts About the (Near) Future of Medical Education Ruben R Puentedura, USA				
	Design Thinking in Healthcare: Discover, Define, Develop, Deliver Suranga Nanayakkara, Singapore Discussion				
	Chairperson: Clement Tan, Singapore				
5.15pm - 5.45pm	Award Presentation				
5.45pm - 6.00pm	Closing Ceremony				

Level 1					
Pisces 1	Pisces 2	Virgo 1	Virgo 2	Virgo 3	Virgo 4
	Symposium 10 Technology in Promoting Engagement, Evaluating the Knowledge Acquisition and Assimilation		E-Poster 22 & 23 E-Poster 24		
		Use of Mobile Simulation for Training Rural Health Professionals Kalyani Premkumar, Canada The Utilisation and Impact of Electronic Health Records in Patient Care Rani Kanthan, Canada Regulations for Sharing Electronic Patient Information Anurag Saxena, Canada Remote Presence Robotics and Virtual Reality: Medical Teaching Tools of the 21st Century Ivar Mendez, Canada	See Page 168 f	ior information	

VENUE: Pisces 3, Level 1, Resorts World Convention Centre

### Learning Lounge - Showcase of Technology in Medical and Healthcare Professional Education

#### Friday 12 January 2018

10.15am - 3.30pm

**Dental Simulation** 

Kelvin Foong and Frank Voon, Singapore

MediSIM - Medical Simulated Interactive Manikin

Erle Lim, Singapore

Mysticraft, The First Ever VR Open Platform, Bringing Reality Into Virtuality

Hoon Heh, P.R. China

#### Saturday 13 January 2018

#### 8.15am - 3.45pm

Mysticraft, The First Ever VR Open Platform, Bringing Reality Into Virtuality Hoon Heh, P.R. China

VENUE: MD1 - Tahir Foundation Building, Block MD1, NUS Yong Loo Lin School of Medicine, 12 Science Drive 2, Singapore 117549

#### Sunday, 14 January 2018

#### AM (9.00am - 12.30pm)

Essential Skills in Medical Education (ESME) Course (Session 4)

Ronald M Harden, Matthew C E Gwee, Dujeepa D Samarasekera, Goh Poh Sun and Tan Chay Hoon

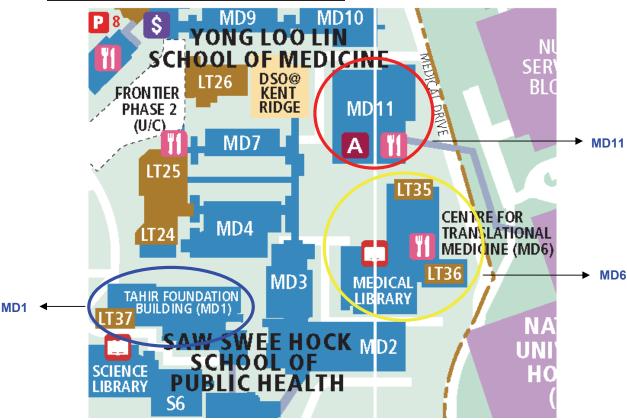
Venue: MD1, MPH 1

Health Professions' Education 'Leaders' Toolkit': 'Leadership In Threes' Course (Session 4)

Judy McKimm, Paul Jones, Kirsty Forrest and Greg Radu

Venue: MD1, MPH 2

#### **Pre-Conference and Post-Conference Workshops**



#### 10 and 11 January 2018

#### MD11

Level 1 Foyer

Registration and collection of conference bag and lanyard

Level 1

APME-Net 7<sup>th</sup> Niigata Meeting (By Invitation Only)

#### MD1

Level 3

Pre-Conference Courses/Workshops ESME, W1A1, W1A4, W1A9, W1P1, W1P9 RESME, HPEL, W2A1, W2A3, W2P4, W2P7

Level 8

Pre-Conference Workshop W1F1

#### MD6

Level 1

Pre-Conference Workshops W1A3, W1A8, W1P3, W1P4 W2A5, W2A6, W2P1, W2P2

Level 3

Pre-Conference Workshops

W1A2, W1A5, W1A6, W1A7, W1P5, W1P6, W1P7, W1P8 W2A2, W2A7, W2A8, W2P5, W2P6, W2P8

Level 4

Pre-Conference Workshops W1P2 W2A4, W2P3

#### 14 January 2018

#### MD1

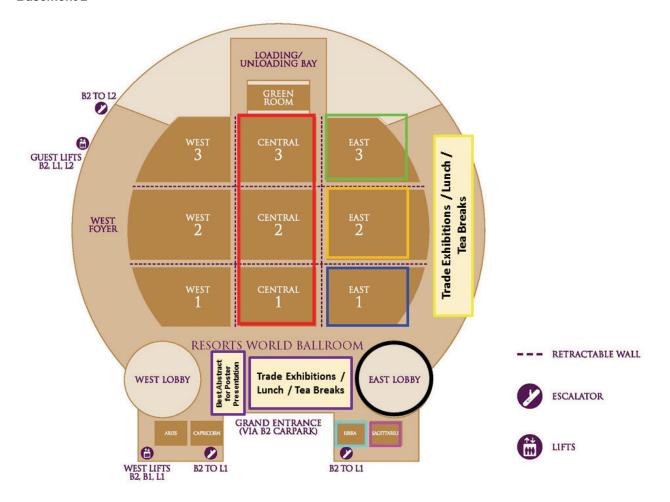
Level 3

Post-Conference Courses

ESME, HPEL

#### Main Conference 12-13 January 2018

#### **Basement 2**



#### **Central Ballroom**

Opening Ceremony Plenary 1 to 4 Leadership Forum Symposium 2 Panel Discussion 6 and 8

#### East Ballroom 1

Panel Discussion 1, 4, 7 and 9 SIG 1

#### **East Ballroom 2**

Symposium 3, 5 Panel Discussion 2 and 10 SIG 2

#### **East Ballroom 3**

Symposium 1, 4, 6 and 8

#### **Sagittaurus**

Slides Upload Counter for Presentations at Basement 2 MoM e-Notification

#### Libra

Secretariat Room

#### **East Foyer**

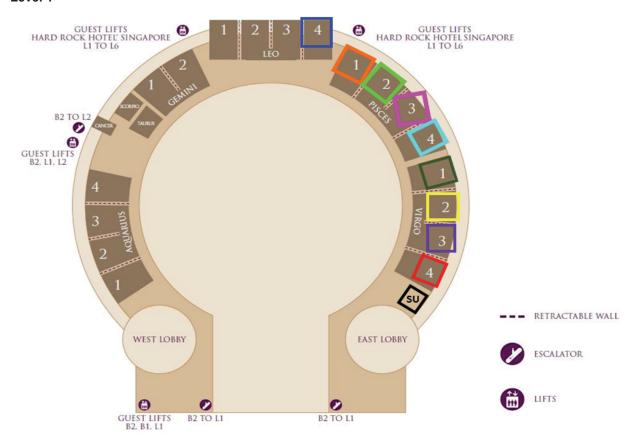
Trade Exhibitions / Lunch / Tea Breaks

#### East Lobby Registration & Help Desk

#### **Central Foyer**

Best Abstract for Poster Presentation Trade Exhibitions / Lunch / Tea Breaks

#### Level 1



#### Leo 4

Symposium 7 and 9
Panel Discussion 3 and 5
APME-Net Meeting
Feedback with Faculty – ESME

#### Pisces 1

Free Communications 1 and 3 E-Poster 1, 7 and 8 Feedback with Faculty – RESME

#### Pisces 2

Free Communications 2 and 4 E-Poster 2, 9 and 10 Symposium 10 Feedback with Faculty – HPEL

#### Pisces 3

Learning Lounge - Showcase of Technology in Medical and Healthcare Professional Education

#### Pisces 4

ASPIRE Board Meeting WPAME Board Meeting TAPS Advisory Board Meeting

#### Virgo 1

Free Communication 5 E-Poster 3, 11, 12 Symposium 11 HCTC<sup>TM</sup> Elsevier Hackathon

#### Virgo 4

Free Communication 8 E-Poster 6, 17, 18 and 21

#### Virgo 2

Free Communication 6 E-Poster 4, 13, 14, 19, 22 and 23

#### Virgo 3

Free Communication 7 E-Poster 5, 15, 16, 20 and 24

#### SII

Slides Upload Counter for Presentations at Level 1

#### The following teabreaks will be served at Level 1:

Fri 12 January 2018 Afternoon Tea Break Sat 13 January 2018 Morning Tea Break Chairman Dr Dujeepa D Samarasekera

**Members** Prof Matthew Gwee

Prof Emily Ang A/Prof Erle Lim

A/Prof Lau Tang Ching A/Prof Koh Dow Rhoon A/Prof Tan Chay Hoon A/Prof Goh Poh Sun A/Prof Mabel Yap Ms Koh Sei Keng

Secretariat Ms Lee Su Mei

Dr Gominda G Ponnamperuma

Dr Lee Shuh Shing

Dr Ashokka Balakrishnan

Ms Emily Loo
Ms Lee Ai Lian
Ms Ann Fong
Mr Yeo Su Ping
Ms Neo Hao Zhao
Ms Beatrice Li
Ms Kyna Liu

#### **Centre for Medical Education (CenMED)**

Dean's Office

NUS Yong Loo Lin School of Medicine

1E Kent Ridge Road

NUHS Tower Block, Level 11

National University Health System (NUHS)

Singapore 119228

Tel: 65 6516 2332 Fax: 65 6872 1454

Email: apmec@nuhs.edu.sg

http://medicine.nus.edu.sg/cenmed/apmec15

#### **PLENARY SPEAKERS**

Linda M Harasim, Canada

Ronald M Harden, United Kingdom

Brian D Hodges, Canada

Robert K Kamei, Singapore

Erle Lim, Singapore

Suranga Nanayakkara, Singapore

Ruben R Puentedura, USA

#### INTERNATIONAL FACULTY

Hatim Abdulrahman, Qatar

Ahmed Alhammadi, Qatar

Chinthaka Balasooriya, Australia

Sherlyn B. Celone-Arnold, USA

Chan Lap Ki, Hong Kong S.A.R.

Peter GM de Jong, The Netherlands

Pete Ellis, New Zealand

Er Hui Meng, Malaysia

Ardi Findyartini, Indonesia

Kirsty Forrest, Australia

Richard Fuller, United Kingdom

David Game, United Kingdom

Ryohei Goto, Japan

BK Manjunatha Goud, United Arab

Emirates

Junji Haruta, Japan

Manasik Kamil Hassan, Qatar

Richard Hays, Australia

Julie K Hewett, USA

Eric Holmboe, USA

Hoon Heh, P.R. China

Junko lida, Japan

Yan Jin, Hong Kong S.A.R.

Paul Kneath Jones, United Kingdom

Adeeba Kamarulzaman, Malaysia

Kang Yew Beng, Malaysia

Rani **Kanthan**, Canada

Indika Karunathilake, Sri Lanka

Sandra Kemp, Australia

Dale Robert Kummerle, USA

Joan Bryant Kumar, United Arab

Emirates

Shekhar Madhukar Kumta, Hong

Kong S.A.R.

Alvaro Margolis, Uruguay

Carl Matheson, Australia

William May, Fiji

Judy McKimm, United Kingdom

Ivar **Mendez**, Canada

Moi Kok Wah, United Kingdom

Don Moore, USA

Vishna Devi V Nadarajah, Malaysia

Balakrishnan R (Kichu) **Nair** AM, Australia

Ng Ho-Keung, Hong Kong S.A.R

Hiroshi **Nishigori**, Japan

Aruna Chanu **Oinam**, India

Neil Osheroff, USA

Sachiko Ozone, Japan

Elise Paradis, Canada

Kalyani Premkumar, Canada

Julie Quinlivan, Australia

Greg M Radu, Canada

Gandes Retno Rahayu, Indonesia

Alfaretta Luisa T Reyes,

The Philippines

Charlotte Ringsted, Denmark

Trudie Roberts, United Kingdom

Anurag Saxena, Canada

Albert Scherpbier, The Netherlands

Lambert Schuwirth, Australia

Yosuke **Shimazono**, Japan

Diantha Soemantri, Indonesia

Scott Stevens, USA

Lisa **Sullivan**, Australia

Anindya Pradipta Susanto, Indonesia

Yasuyuki Suzuki, Japan

Tran Diep Tuan, Vietnam

Theanne Walters, Australia

Michael Wan. Australia

Danai Wangsaturaka, Thailand

Jen-Hung Yang, Taiwan

Magda Ahmed Wagdy Youssef, Qatar

Alex L.K. Yung, Hong Kong S.A.R.

#### LOCAL FACULTY

Katharine Boursicot

Chen Fun Gee

Matthew Chen Zhixuan

Chen Zhi Xiong

Lita Chew

Jacqueline Chin

Chng Hui Ting

Sandy Cook

lan Curran

Dong Chaoyan

Kelvin Foong

Johan Geertsema

Goh Lay Hoon

Poh-Sun Goh

Matthew C E Gwee

Sergio Hernandez-Marin

Calvin Ho

Benjamin Hooi

Hor Chuen Yee

Terence **Huey** Cheong Wei

Kee Li Leng Janice

Koh Dow Rhoon

Serena Koh

Alfred Kow

Yanika Kowitlawakul

Charmaine Krishnasamv

Fatimah Lateef

Lau Tang Ching

Lee Ching Siang, Cindy

Lee Kheng Hock

Llewellyn Lee Kuan Ming

Lee Shuh Shing

Liaw Sok Ying

Aymeric **Lim** 

Lim Boon Leng

Keith Lim

Lim Teik Chung Michael

Lim Wee Khee

Lim Wee Shiong

Norman **Lin** 

Natalie **Ling** Victor **Loh** 

Naomi **Low-Beer** 

Sarah Lu Qinghui

Desmond  ${\bf Ng}$ 

Nicola **Ngiam** 

Jacqueline Ong
Poh Chee Lien

Gominda G Ponnamperuma

Habaabul Dabaaa

Habeebul Rahman

Vaikunthan **Rajaratnam**Dujeepa D **Samarasekera** 

Shen Liang

Shefaly **Shorey** 

Siau Chiang

Tai Yuen Ling Esther

Anna **Tan** Wee Tien

Tan Chay Hoon

Clement Tan

Tan Keng Teng

Tan Soh Chin

Tham Kum Ying

Winnie Teo

Frank **Voon** 

Wong Mun Loke

Wong Teck Yee Mabel Yap

Yeoh Khay Guan

Yip Chee Chew

Doris Young

Nabil Zary

#### **PLENARY SPEAKERS**



Linda M **Harasim** Professor of Communication Simon Fraser University Canada

Linda Harasim, a Professor of Communication at Simon Fraser University, Vancouver, Canada, is a pioneer in the field of online education and e-learning. She is one of the inventors of online education, specifically having conceptualized, designed and offered the first-ever credit course offered totally online via the Internet (1986, Graduate School of Education at the University of Toronto). She also developed the field of collaborative learning online. Harasim has been teaching online, conducting research, publishing, and building the field for 35 years. Drawing from the best of learning research and theory, she pioneered the pedagogy of online collaborative learning and developed the Collaborativist Theory of Learning. She has served as senior consultant for many large-scale online education programs, designing the University of Phoenix Online, designing the first online training system for the Bank of Montreal, consulting for UN Organisation of Labor, and providing training for universities and organisations worldwide. She is considered a luminary in the field of online education and e-learning, having published 6 books on the subject, 15 book chapters, 25 refereed articles, and delivered 30 keynotes as well as over 50 conference presentations around the world. Her works have been translated into Spanish, Portuguese, and Chinese.

In 1995, Dr. Harasim founded and became the Network Leader and CEO of Canada's TeleLearning Network of Centers of Excellence, a seven-year, \$50 million program to study, develop, and commercialize elearning technologies, pedagogies and knowledge. Following from that research program, she is currently studying how Collaborativist Learning Theory can be used to refocus the design of educational AI to augment, rather than replace, human intelligence in education and work.



Ronald M **Harden**Professor of Medical Education (Emeritus)
University of Dundee; and
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 to full time medical education. He is Professor of Medical Education (Emeritus) University of Dundee, Editor of Medical Teacher & General Secretary and Treasurer of the Association for Medical Education in Europe (AMEE). Professor Harden was formerly Teaching Dean & Director of the Centre for Medical Education at the University of Dundee.

He is committed to developing new approaches to curriculum planning, assessment and to teaching and learning. Ideas which he has pioneered include the Objective Structured Clinical Examination (OSCE) which has been universally adopted as a standard approach to assessment of clinical competence, the spiral curriculum and the SPICES model for curriculum planning and models for outcome-based education. He has published more than 400 papers in leading journals. He is co-editor of *A Practical Guide for Medical Teachers* and the *Routledge International Handbook of Medical Education* and author of *Essential Skills for a Medical Teacher* and *The Definitive Guide to the OSCE*.

His contributions to excellence in medical education have attracted numerous awards including the Karolinska Institutet Prize for Research in Medical Education. He was awarded by the Queen the OBE for his services to medical education. In November 2017 he was presented in Manila with the 2017 Gusi Peace Prize.



Brian D. **Hodges**Professor, Faculty of Medicine and Ontario Institute for Studies in Education, University of Toronto;
The Richard and Elizabeth Currie Chair in Health Professions Education Research, Wilson Centre; and Executive-Vice President Education, University Health Network

Canada

Brian D. Hodges, MD, PhD, FRCPC is Professor in the Faculty of Medicine and at the Ontario Institute for Studies in Education at the University of Toronto; the Richard and Elizabeth Currie Chair in Health Professions Education Research at the Wilson Centre and Executive-Vice President Education at the University Health Network (Toronto General, Toronto Western, Princess Margaret, Toronto Rehab Hospitals and the Michener Institute). He is a practicing psychiatrist and teacher. His research focuses on assessment, competence, compassion and the future of the health profession. His work has been recognised with the Association of American Medical Colleges Flexner Award (2015) and the Karolinska Institutet Prize for Research in Medical Education (2016).

He earned a Bachelor's degree in Psychology and an MD at Queen's University in Kingston, Ontario. He then pursued a residency in psychiatry at University of Toronto. He earned a Masters and then a PhD in Education at the Ontario Institute for Studies in Education in Toronto and he holds a Diploma in Health Economics and Social Sciences from the University of Paris.



Robert K Kamei
Associate Provost (Education),
Director, Institute for Application of Learning Science and Educational Technology (ALSET), and
Professor, Duke-NUS Medical School
National University of Singapore
Singapore

Professor Robert K. Kamei, MD, is Associate Provost (Education) and Director, Institute for Application of Learning Science and Educational Technology (ALSET) at the National University of Singapore; a position he has assumed in July 2016. This new institute focuses on helping adult learners learn better by the rigorous study of educational best practices and technology.

From 2006 to 2016, he served as the founding Vice Dean (Education) at Duke-NUS Medical School, in charge of starting up the School's new education programs. Under his leadership, Duke-NUS education team successfully transformed the curriculum from Duke University School of Medicine, to a "flipped classroom" (where students are required to come into the classroom already prepared), pairing it with in-class problem sets that the students solved in teams. This approach was one of the first of its kind in medical education and subsequently influenced curriculum development at Duke University School of Medicine and educational institutions across Singapore.

Born in Los Angeles, California, Professor Kamei holds an undergraduate degree in Human Biology from Stanford University and a medical degree from the University of California, San Francisco (UCSF). Prior to coming to Singapore, he was on the UCSF Department of Pediatrics faculty for 18 years.



Erle CH **Lim**Associate Provost (Undergraduate Education)
National University of Singapore; and
Associate Professor, Department of Medicine,
Yong Loo Lin School of Medicine
National University of Singapore
National University Health System
Singapore

Assoc Professor Erle CH Lim graduated from the National University of Singapore in 1990, and obtained his Masters in Medicine (Internal Medicine) from the same university in 1997. In 2009, he was appointed as a Fellow to the Royal College of Physicians. Glasgow. He trained in Neurology at the Singapore General Hospital, after which he completed his training in Movement Disorders at the Mount Sinai School of Medicine, New York, under Professors C Warren Olanow and Mitchell F Brin. He is currently Senior Consultant Neurologist at the National University Hospital and was Assistant Dean of Education at the Yong Loo Lin School of Medicine, NUS from 2007 to 2010. His subspecialty interest is in Movement Disorders, focusing on the clinical applications of Botulinum toxin, Parkinson's disease, Spasticity and Dystonia. He lectures on Neurology, Movement Disorders and Education (Medical Education and Technology in Education) regionally and internationally, and teaches techniques of Botulinum toxin injection using electromyographic guidance to neurologists and physiatrists, regionally and internationally. He has published over 100 papers in international journals, covering topics in general neurology, movement disorders, botulinum toxin, general medicine and medical education, and is reviewer for international journals in Medicine, Neurology, Movement disorders and Medical Education. He is Editor in Chief of the Annals, Academy of Medicine, Singapore, and was founding editor of the Journal of the NUS Teaching Academy (now the Asian Journal of the Scholarship of Teaching and Learning). He sits on the specialist training committee in Neurology and the Neurology MCQ Committee of the Royal College of Physicians, London. In 2006 and 2007, he was awarded both the faculty teaching excellence award and the university's annual excellence teaching award. In 2007, he was awarded the university's outstanding educator award. He was Chairman of the Executive Council of the NUS Teaching Academy and is now Associate Provost (Undergraduate Education) at the National University of Singapore.



Suranga **Nanayakkara**Assistant Professor
Singapore University of Technology & Design
Singapore

Suranga Nanayakkara is an Assistant Professor from the Engineering Product Development Pillar at Singapore University of Technology and Design (SUTD). He received his PhD in 2010 and BEng in 2005 from the National University of Singapore. In 2011, he founded the "Augmented Human Lab" to explore ways of creating 'enabling' human-computer interfaces as natural extensions of our body, mind and behaviour. For the totality and breadth of achievements, Suranga has been recognised with many awards, including young inventor under 35 (TR35 award) in the Asia Pacific region by MIT TechReview, Ten Outstanding Yong Professionals (TOYP) by JCI Sri Lanka and INK Fellow 2016.



Ruben R **Puentedura** Founder and President Hippasus USA

Dr. Ruben Puentedura is the Founder and President of Hippasus, a consulting practice based in Western Massachusetts, focusing on transformative applications of information technologies to education. He has implemented these approaches for over thirty years at a range of K-20 educational institutions, as well as health and arts organisations. He is the creator of the SAMR model for selecting, using, and evaluating technology in education, which currently guides the work of the Maine Learning Technology Initiative, as well as multiple other projects throughout the USA, Canada, Mexico, Europe, Australia, and Asia. He is also the author of the EdTech Quintet, a categorization of the core technology toolset required for education derived from the Horizon Report. His current work explores new directions in mobile computing, digital storytelling, learning analytics, and educational gaming, focusing on applications in areas where they have not been traditionally employed.

#### INTERNATIONAL FACULTY



Hatim **Abdulrahman** Senior Consultant Pediatrician Hamad Medical Corporation Oatar

I am a senior Paediatric Gastroenterologist, holding a master in medical education, interested in the field of postgraduate medical education together with my clinical commitments. I have special interest in in the area of research in medical education. I am graduated from Khartoum University, Sudan, got the Arab Board of Paediatrics, MRCP and FRCPCH, UK and the JMHPE.



Ahmed **Alhammadi**Hamad Medical Corporation
Weill Cornell Medical College
Oatar

Ahmed Alhammadi, MBChB, FRCPC. is the Chief, Division of General Academic Paediatric at Hamad Medical Corporation – Qatar and Sidra Medical and Research Centre, and Assistant Professor of Paediatrics at Weill-Cornell Medical College in Qatar. He has strong interests in medical education and supervises residents on the pediatric wards and clinics, while also serving as Assistant Program Director of Pediatric Residency Program.



Chinthaka **Balasooriya**Director of Medical Education Development
School of Public Health and Community Medicine
University of New South Wales
Australia

Dr Chinthaka Balasooriya is an inspirational medical educator who has excelled in educational practice and research. He has a background in Medicine and a PhD in Medical Education.

Chinthaka's expertise has been recognised at the highest levels in Australia. He has received the UNSW Medicine Teaching Excellence Award, the UNSW Vice-Chancellors Award for Teaching Excellence and an Australian Learning & Teaching Council Citation. He is a Fellow of the prestigious Scientia Education Academy and a Fellow of the Australian and New Zealand Association for Health Professional Education (ANZAHPE). He has a wide range of international experience.



Sherlyn B. **Celone-Arnold**Founder and CEO
Integrated Learning Partners, LLC.
USA

Sherlyn Celone-Arnold, Founder and CEO of Integrated Learning Partners, LLC. (ILP), is recognised for propelling companies to become industry pacesetters. Sherlyn has worked domestically and internationally holding management and senior leadership positions with major pharmaceutical and medical education companies such as Bayer Pharmaceuticals, Purdue Pharma, Boehringer Ingelheim, Quintiles, Grey Healthcare, and Physicians Academy for Clinical and Management Excellence. Over the last decade, Sherlyn's been retained as a management and educational leadership consultant to select academic centers and medical societies in the United States. Spanning her 24-year career working in the Healthcare and Life Sciences industry, she's been responsible for leading interprofessional teams and directing the design and development of innovative knowledge management, medical education, eHealth, quality improvement, and client engagement solutions that have demonstrated significant improvement in operational excellence, clinical and professional competencies as well as patient health outcomes.

In 2009, Sherlyn founded ILP, a boutique consulting firm that specialises in providing consulting services to academic centers, medical specialty societies, and medical education companies in the areas of: quality improvement coaching, educational strategy, CME/CE programming, patient experience research, needs assessments, patient engagement, and performance optimisation.

Sherlyn is in the process of completing her MS in Organisational Leadership in Healthcare Management at Quinnipiac University, and holds a BA in Business Management and Marketing from Mercyhurst University. She is an Executive Board Member of the Global Alliance for Medical Education (GAME), and remains active with societies such as: The Learning Guild, Association for Training and Development (ATD), Alliance for Continuing Education for Health Professions (ACEHP), Healthcare Business Women's Association (HBA), and the Project Management Institute (PMI). Sherlyn is also an administrator and patient advocate for two international support groups that serve more than 3,000 patients and caregivers living with or affected by brain cancer.



Chan Lap Ki Associate Professor The University of Hong Kong Hong Kong S.A.R.

Lap Ki Chan is currently an associate professor in the School of Biomedical Sciences, the coordinator of the Education Division of Anatomy, and the deputy director of the Bau Institute of Medical and Health Sciences Education, at the Li Ka Shing Faculty of Medicine at The University of Hong Kong. He has a background in orthopedics and physical anthropology and teaches gross anatomy to medical and healthcare students. His research interests include innovative pedagogies in anatomy education, problem-based learning (PBL), team-based learning (TBL), interprofessional education (IPE), and faculty development. He is an educator for the Asia Pacific region for the AO Foundation (Arbeitsgemeinschaft für Osteosynthesefragen). His teaching excellence has been recognized by such awards as the Thomas Henry Huxley Instructorship from Duke University, Outstanding Teaching Award from The University of Hong Kong, and the Bronze Discipline Award (Life Sciences) in the QS Stars-Wharton Reimagine Education Awards. He serves as an associate editor for Anatomical Sciences Education.



Peter GM de Jong Editor-in-Chief IAMSE The Netherlands

Peter de Jong is a staff adviser and assistant professor in the field of Technology Enhanced Learning at the Leiden University Medical Center in The Netherlands. In this position at the Center for Innovation in Medical Education, he has been managing several major programs within Medical School in the field of development, application and evaluation of educational technologies. He is also involved in the educational research program of LUMC. Peter has a Master degree in Medical Technology from Eindhoven University and a PhD in Biophysics/Physiology from Maastricht University. He has been a member of the Board of Directors and Executive Committee of the Netherlands Association for Medical Education (NVMO), he has been Chair of their national Special Interest Group on E-learning in Medicine and he chaired the 2000 NVMO Annual Meeting.

Since 2007 Peter is involved in the International Association of Medical Science Educators (IAMSE), an international organization with a focus on advancing medical education through faculty development while ensuring that the teaching and learning of medicine continues to be firmly grounded in science. He has served the organization as Board member and Vice President, and in 2009 as Program Chair and Site Host for the first IAMSE Annual Meeting outside North America. Currently he holds the position of Editor-in-Chief of Medical Science Educator, the online journal of IAMSE.



Pete Ellis
Associate Dean
Medical Education
University of Otago, Wellington
New Zealand

Prof Pete Ellis qualified in medicine at the University of Oxford, England and trained in psychiatry in Wellington, New Zealand. He was appointed Professor and Head of Department of Psychological Medicine at Otago University, Wellington in 1994, and Associate Dean, Medical Education in 2012. He has a range of research interests including affective disorders and mental health service delivery, and most recently, in how to reduce the stigma associated with mental illness as experienced by medical students. He has been closely involved in medical undergraduate and psychiatric postgraduate training and accreditation over a long period in national committees in New Zealand, Australia and the Western Pacific, including the Medical Council of New Zealand, the Royal Australian and New Zealand College of Psychiatrists, the Medical School Accreditation Committee of the Australian Medical Council and the Western Pacific Association for Medical Education.



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

A/Prof Er is the Associate Dean of Teaching and Learning at the International Medical University (IMU), 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 played a major role in the curriculum design and development of pharmacy and health sciences programmes in the university. Currently, she chairs the assessment committee which oversees the implementation and quality assurance of assessments in the university. Her research interests are in assessment and feedback.



Ardi Findyartini
Senior Lecturer in Medical Education
Department of Medical Education
Faculty of Medicine
Universitas Indonesia
Indonesia

Ardi Findyartini is a medical doctor graduated from Faculty of Medicine Universitas Indonesia (FMUI) in 2002. Her interest in high quality medical education process encouraged her to complete a doctoral program in Melbourne Medical School Faculty of Medicine, Dentistry and Health Sciences, The University of Melbourne in 2012. The highlight of her thesis on how clinical reasoning is taught and learned in Australia and Indonesia motivates her to learn further on how best practices in medical education can be implemented contextually. She is currently the Head of Medical Education Unit and academic staff member of Department of Medical Education at the Faculty of Medicine Universitas Indonesia. She has been teaching in undergraduate and postgraduate program in medical education and mentoring students and graduates interested in medical education. With her team, she's been very active in conducting workshops for faculty development in undergraduate and postgraduate medical education within the FMUI and in other institutions in Indonesia for the past 10 years, and is a nominated panel member for ASPIRE excellence in faculty development since 2014. She authored and co-authored several international publications in peer reviewed journals and conferences. She's also been involved as the reviewer of national and international medical education journals. Her research area of interest includes clinical reasoning and clinical teaching, curriculum development in undergraduate and postgraduate medical education, assessment, interprofessional education and socio-cultural factors underpinning approaches in medical and health professions education.



Kirsty Forrest
Deputy Head of Medicine
Bond University
Australia

Kirsty moved to Bond University in August 2016 to be Deputy Head of Medicine. Prior to this Kirsty was Director of Medical Education and Associate Dean, Learning and Teaching at Macquarie University.

Kirsty has been involved in medical educational research for 14 years and awarded funding via a University Fellowship and the Higher Education Academy. She is co-author and editor of a number of best-selling medical textbooks including 'Essential guide to educational supervision, in postgraduate medical education' and 'Essential Simulation in Clinical Education'.



Richard **Fuller**Director, Medical Education Programmes
Leeds Institute of Medical Education
University of Leeds
United Kingdom

Richard Fuller is a Consultant Geriatrician/Stroke Physician and Director of Medical Education Programmes at Leeds Institute of Medical Education. He is responsible for directing the MBChB degree programme, generating exciting new initiatives in curriculum design, mobile technology, assessment and personalised learning.

His main research interests focus on assessment, and he leads the Institute's Assessment Research Group. His current research focuses on the 'personalisation' of assessment, to support individual learner journeys. This is underpinned by work from the Group focusing on the application of intelligent assessment design in campus and workplace based assessment formats, assessor behaviours, mobile technology delivered assessment and the impact of sequential testing methodologies.

He publishes and speaks regularly at leading international medical education conferences and is a faculty member at a number of leading global assessment courses. He holds a number of national/UK advisory roles, including acting as an assessment expert for the General Medical Council - and undertakes a range of advisory and developmental work in relation to curriculum, senior faculty development and assessment for a number of international institutions



David **Game**Digital Product Director, Education
Elsevier Ltd
United Kingdom

David has spent the last sixteen years in e-product development and management in the higher education sector. Prior to working at Elsevier, David managed the Mastering platform, an innovative adaptive higher education science learning and assessment platform. He also took part in Elsevier Hacks as a product development mentor, guiding the participants and helping them to refine and develop their ideas.



Ryohei **Goto**Researcher
Faculty of Medicine
University of Tsukuba
Japan

Mr. Ryohei Goto is a physical therapist from University of Seijoh, Japan. He had worked at hospital for seven years, and is now working as a researcher at University of Tsukuba. His research topic is Interprofessional collaboration. As a part of it, he is collaborating with other profession in the community and facility to spread the viewpoint of rehabilitation. He graduated from the University of Seijoh, School of Rehabilitation, and was a PhD in Primary Care and General Medicine, University of Tsukuba.



BK Manjunatha **Goud**Associate Professor of Biochemistry
RAK Medical & Health Sciences University
United Arab Emirates

Dr.B.K.Manjunatha Goud completed his MBBS from Vijayanagar institute of medical sciences, Ballari and done MD Biochemistry from Kasturba medical college Mangalore, Karnataka. He has worked as Assistant Professor of Biochemistry in Melaka Manipal Medical College for 2 years and later joined RAKMHSU and working till date as Associate Professor.

During his academic career, he was involved in teaching various courses and has been forefront in medical education research. He has published various research works in reputed journals. He has also published two book chapters and been a reviewer for various journals. He was involved in preparing and implementing of integrated curriculum in his university.



Junji **Haruta**Assistant Professor
University of Tsukuba Hospital
Japan

#### **Education**

2015 Ph.D.(Doctorate of Internal Medicine), Department of International Research Center for Medical Education,

the University of Tokyo.

2004 M.D., Asahikawa University School of Medicine

#### **Professional Training and Employment**

2015 - Assistant Professor in Department of General Medicine and Primary care, Tsukuba University Hospital

2004 - 2015 Ouji Coop Hospital(Tokyo, Japan), Department of General Internal Medicine

#### **Societies**

A member of Committee in Certified Family Physician, Japan Primary Care Association, A member of Working Group in Medical Education Specialist, Japan Society for Medical Education, A member of Committee in Promoting of IPE, Japan Association for Interprofessional Education.



Manasik Kamil **Hassan** Senior General Pediatric Fellow Hamad Medical Corporation Qatar

Dr. Manasik Hassan senior general pediatric fellow at HMC and clinical instructor teacher at college of medicine Qatar university, Dr. Manasik received her medical training at Gezira University-sudan; she has worked as a general pediatrician on staff at Hamad Medical Corporation –Qatar since 2015. Dr Manasik areas of practice and interest include: inpatient medicine, Participating in designing and conducting clinical research, teaching, and supervising residents in pediatric residency, putting great effort in clinical and academic researches in pediatric program with wide variety of accepted abstracts and workshop speaker in multiple international conferences. She is instructor of different workshops including: communication, Simulation, Quality and professionalism.



Richard **Hays**Professor of Remote and Rural Health
James Cook University
Australia

Richard Hays was a rural procedural general practitioner in northern Australia before becoming a teacher and researcher, with roles in developing and quality assuring medical programs in Australia, the United Kingdom, Europe, North America and Asia working with the Australian Medical Council, the General Medical Council, the World Federation of Medical Education and regulators in Malaysia, Hong Kong and China. In addition to medical and clinical qualifications, he has a PhD in educational psychology and a higher MD in medical education. Along the way he has achieved several competitive research grants and developed a strong profile in academic publishing.



Julie K **Hewett** Journal Management Support IAMSE USA

Julie Hewett, owner of JulNet Solutions, is a graduate of Rochester Institute of Technology with a Bachelors 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 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.



Eric **Holmboe**Senior Vice President, Milestones Development and Evaluation
Accreditation Council for Graduate Medical Education (ACGME)
USA

Dr. Holmboe is Senior Vice President, Milestones Development and Evaluation at the Accreditation Council for Graduate Medical Education (ACGME). He is Adjunct Professor of Medicine at the Uniformed Services University of the Health Sciences and Feinberg School of Medicine at Northwestern University. His research interests include interventions to improve quality of care and methods in the assessment of clinical competence. He is an honorary Fellow of the Royal College of Physicians in London and the Academy of Medical Educators. Dr. Holmboe completed his residency and chief residency at Yale-New Haven Hospital, and was a Robert Wood Johnson Clinical Scholar at Yale University.



Hoon Heh Global Business Development Director Netdragon Websoft Holdings P. R. China

20 years of immense experience in the fields of ICT, Cloud services and Internet Ecosystems. 15 years in Greater part of China and has worked with or in International MNCs, China State Owned Enterprises and Major Chinese ISPs and Telecom Operators. Now leading the Global Business Development team in Netdragon Websoft Holdings who is big on mobile gaming and apps store. Netdragon over the past 8 years built and develop the next largest online education community with exciting new immersive learning tools. Netdragon has presence in more than 100 countries and are now connected to 30 million students, 2 million teachers and 1 million classrooms.



Junko **lida**Faculty of Health and Welfare
Kawasaki University of Medical Welfare
Japan

Junko lida, PhD is an anthropologist teaching students in medicine, nursing, social work, clinical psychology, occupational therapy, physical therapy, nutrition, etc. at Kawasaki University of Medical Welfare and Kawasaki Medical School. Her research interests include anthropology education for (future) health professionals, sensory experience of palliative care, physical examination and doctor-patient relationship in Japan, as well as traditional medicine in Thailand. She is a member of Professionalism and Behavioral Science Committee in the Japan Society for Medical Education, and of Collaborative Committee on Anthropology Education for Health Professionals in the Japanese Society of Cultural Anthropology.



Yan **Jin**Research Assistant
The Chinese University of Hong Kong
Hong Kong S.A.R.

Yan Jin is a Research Assistant in Office of Medical Education, Faculty of Medicine, The Chinese University of Hong Kong (CUHK). She obtained her medical degree from Capital Medical University, Beijing, China before she joined CUHK in 2005. She participates in the work of reviewing examination question for item quality control in CUHK. She is managing an item bank for both summative and formative assessment. Her areas of educational interests include designing eLearning courseware, constructing questions and standard setting for assessment. She is also active in facilitating different workshops, including item writing, item analysis, constructing eLearning materials, etc.



Paul Kneath **Jones**Programme Director, Graduate Entry Medicine Programme
Swansea University Medical School
Swansea University
United Kingdom

Paul was Deputy Director of Clinical Teaching prior to taking up the Programme Director role for the GEM course in June 2011. He has a background in clinical examination and consultation skills teaching. Paul jointly leads and teaches on the Swansea Masters' course in leadership and teaches on a joint Masters in education programme. His research interests lie predominantly, but not exclusively, in simulation, assessment and innovative teaching methods. Publications include mental workload measurement during student consultations, social learning theory, the predictive value of self-assessed clinical skills in medical students and an evaluation of the use of experiential learning in teaching clinical skills to trainee physicians.

Paul has a strong background in training, hospital management and leadership, gained from working in senior clinical, advanced practice roles and more recently from running leadership workshops in international conferences in Canada, Ireland, Singapore, Mexico, the UK and Saudi Arabia as well as presenting posters related to medical education in conferences both in Britain and internationally.



Adeeba **Kamarulzaman**Dean
Faculty of Medicine
University of Malaya
Malaysia

Professor Adeeba Kamarulzaman graduated from Monash University and trained in internal medicine and infectious diseases in Melbourne, Australia. She is presently the Dean of the Faculty of Medicine, University of Malaya and Adjunct Associate Professor at Yale University, USA.

Dr Kamarulzaman established the Infectious Diseases Unit at the University of Malaya Medical Centre, now one of Malaysia's leading infectious disease and HIV and HIV/AIDS tertiary referral centers, as well as the Centre of Excellence for Research in AIDS (CERiA) at the University of Malaya. She is presently an Executive Committee Member of the International AIDS Society and is a member of the UNAIDS Scientific Expert Panel on HIV and has had numerous consultation roles with both the WHO and UNAIDS. In April 2015 she was awarded an Honorary Doctor of Laws from her alma mater Monash University for her outstanding achievements in the field of Infectious Diseases and as a health advocate.



Kang Yew Beng Associate Dean of E-Learning International Medical University Malaysia

Kang Yew Beng is currently the International Medical University Associate Dean of E-Learning and is an Associate Professor in the Department of Pharmaceutical Chemistry. He is interested in synthetic preparative chemistry, which includes synthesis of both organic in inorganic compounds, including organometallic. He had been involved in catalytic, organometallic, and surfactant chemistry dealing with highly ring-strained molecules.

The past 15 years was spent in education and technology-related areas in enhancing education. Of current interest is how information in the curriculum can be mapped and used to derive data-informed decision making for academic administration.



Rani **Kanthan**Professor
College of Medicine
University of Saskatchewan
Canada

Dr Rani Kanthan is a full-time tenured Professor in the College of Medicine at the University of Saskatchewan. As a medical educator, she participates in the scholarship of teaching for the undergraduates, graduates and postgraduates. As a consultant Anatomical pathologist she pursues an active academic career buttressed by the three pillars of teaching, clinical and research portfolios through the scholarship of teaching, discovery, integration and application. She has published more than 120 peer-reviewed manuscripts indexed in PubMed /Google scholar and serves on the editorial board for various journals and continues to participate and present at various national and international meetings.



Indika **Karunathilake**Professor in Medical Education
Faculty of Medicine
University of Colombo
Sri Lanka

Indika Karunathilake is the Professor and Head of the Department of Medical Education at the Faculty of Medicine, University of Colombo. He is also the Head of the WHO Collaborating Centre for Medical Education, Faculty of Medicine, University of Colombo. He has conducted extensive research and authored many publications in medical education. Prof. Indika has been a resource person in Medical Education for many national, regional and international forums. Prof. Indika Karunathilake has made significant contribution towards medical education at the regional and global level through his involvement with several leading international organizations such as WHO, SEARAME, AAAH and APACPH.



Sandra **Kemp**Director of Learning and Teaching
Curtin Medical School, Curtin University
Australia

Sandra Kemp is Director of Learning and Teaching at Curtin Medical School, Curtin University in Perth, Australia and was formerly Assistant Dean for Course Evaluation at Lee Kong Chian School of Medicine in Singapore. She is an education scientist with extensive experience in assessment and evaluation. She completed her PhD in Educational Studies at the University of Sheffield, United Kingdom. Associate Professor Kemp has held senior leadership positions in education in Australia and Singapore and has worked extensively with educators in health professional education to develop and implement initiatives to ensure quality teaching, learning and assessment practices.



Dale Robert **Kummerle**Director of Medical Education
Bristol-Myers Squibb Company
USA

Dr. Dale Kummerle, a Pharmacist, currently leads the Independent Medical Education Department for Bristol-Myers Squibb (BMS). He has been involved in education his entire career, starting as a university assistant professor, to his 14 years in educating healthcare professionals and patients as a BMS Medical Science Liaison, working in the US and Europe. Dale has lectured internationally, including North America, Europe, China, and Japan, speaking at the EU CME Forum, Association of Medical Education in Europe (AMEE), the Alliance for Continuing Education of Healthcare Professionals and the Global Alliance for Medical Education (GAME). He is the current President for GAME.



Joan Bryant **Kumar** Associate Professor RAK Medical and Health Sciences University United Arab Emirates

Dr Joan Kumar have completed both MBBS and MD (Physiology) from Tamil Nadu Dr MGR Medical University, Chennai, Tamil Nadu, India. She worked in Gulf Medical University, UAE for 2 years and later joined RAKMHSU, UAE where she is working till date. She is involved in teaching physiology- basic and clinical –to various programs. She is also an active member of the Medical Education Unit at her university, having completed the ESME certificate course conducted by AMEE, Dundee, UK. She has conducted faculty development programs and published papers in reputed journals. She was also involved in preparing and implementing the integrated curriculum in her university.



Shekhar Madhukar **Kumta**Executive Director, Chinese University Centre for Bioethics
Assistant Dean, Medical Education
Faculty of Medicine
The Chinese University of Hong Kong
Hong Kong S.A.R.

Professor Shekhar Kumta is the Executive Director the Chinese University's CENTRE FOR BIOETHICS. He is also the Assistant Dean for Medical Education and is a passionate and award winning teacher. Professor Kumta manages an intensive Musculoskeletal Oncology programme involving state of art Computer Assisted Surgery, Palliative Surgery & Care as well as Molecular Research. Behavioural Ethics forms a key aspect of Prof. Kumta's responsibilities in assessing Interns and junior doctors at the workplace. He is also responsible for Clinical Ethics teaching and has been organising Ethics Rounds and Workshops for the healthcare fraternity.



Alvaro **Margolis** President and CEO EviMed. Uruguay

Dr. Margolis is an internist with a Master's degree in Medical Informatics from the University of Utah (USA). He has held academic positions at the Schools of Medicine and Engineering, University of the Republic, Uruguay.

Dr. Margolis was Vice President for Medinfos of the International Medical Informatics Association (IMIA) and is a Founding Member of the International Academy of Health Sciences Informatics. He has been and is a member of international and scientific committees, such as the Global Alliance for Medical Education Board, the Rome Group for CME/CPD, Medinfo 2007 and 2010 Scientific Program Committees, the International Journal of Medical Informatics (official journal of the European Federation of Medical Informatics), CME Congress 2008 (Canada) and 2016 (USA), and is Associate Editor of Applied Clinical Informatics, an official IMIA Journal.

He is the President and CEO of EviMed, a CME company working across Latin America. Dr. Margolis is an internist with a Master's degree in Medical Informatics from the University of Utah (USA). He has held academic positions at the Schools of Medicine and Engineering, University of the Republic, Uruguay.

Dr. Margolis was Vice President for Medinfos of the International Medical Informatics Association (IMIA) and is a Founding Member of the International Academy of Health Sciences Informatics. He has been and is a member of international and scientific committees, such as the Global Alliance for Medical Education Board, the Rome Group for CME/CPD, Medinfo 2007 and 2010 Scientific Program Committees, the International Journal of Medical Informatics (official journal of the European Federation of Medical Informatics), CME Congress 2008 (Canada) and 2016 (USA), and is Associate Editor of Applied Clinical Informatics, an official IMIA Journal.

He is the President and CEO of EviMed, a CME company working across Latin America.



Carl **Matheson**Director of Assessment and Innovation
Australian Medical Council
Australia

Carl Matheson is the Director of Assessment and Innovation with the Australian Medical Council (AMC). The AMC's purpose is to ensure that standards of education, training, and assessment of the medical profession promote and protect the health of the Australian community. In leading the AMC Assessment & Innovation Team, his role includes responsibility for the application of technology to improve the reliability, validity, and fairness of assessment outcomes. This is coupled with a strong corporate background developing new opportunities to drive organisational strategy, manage risk, and address organisational financial sustainability.



William **May**Acting Dean
College of Medicine Nursing and Health Sciences
Fiji National University
Fiji

#### Education

2014: Fiji National University CMNHS - Graduate Certificate in Medical Education 2004: Fiji School of Medicine Suva, Fiji - Postgraduate Masters in Internal Medicine 2000: Fiji School of Medicine Suva, Fiji - Postgraduate Diploma in Internal Medicine 1994: Fiji School of Medicine - Bachelor of Medicine & Bachelor of Surgery Degree (MBBS) Suva, Fiji

### **Current Work**

- · Acting Dean, College of Medicine Nursing & Health Sciences, Fiji National University
- Associate Professor in Internal Medicine, CMNHS
- Senior Consultant Physician

#### **Interests**

- Internal Medicine Specialist with special Interest in Cardiology
- Special interest in Medical Education and Assessments.
- Undergone Training in Cardiology as Senior Cardiology Fellow Christchurch Hospital NZ
- Previously Head of School of Medical Sciences at CMNHS
- Deputy Head of Department of Internal Medicine Colonial War Memorial Hospital Suva Fiji
- Travelling
- Reading
- Sports



Judy **McKimm**Professor of Medical Education and
Director of Strategic Educational Development
Swansea University Medical School
United Kingdom

Judy has worked internationally in many senior management positions and on health reform projects in medical and health professions' education. For example, from 2011-2014, she was Dean of Medical Education at Swansea and before that worked in New Zealand from 2007-2011, at the University of Auckland and as Pro-Dean, Health and Social Care, United Institute of Technology. She writes and publishes widely on medical education and leadership, runs health professions' leadership and education courses and workshops around the world and is actively involved in developing curricula and programmes with a variety of organisations, including ASME, AMEE and medical schools.



Ivar **Mendez**Fred H. Wigmore Professor and Unified Head of Surgery,
University of Saskatchewan and the Saskatoon Health Region
Canada

Dr. Ivar Mendez is the Fred H. Wigmore Professor and Unified Head of Surgery at the University of Saskatchewan and the Saskatoon Health Region.

As a Clinician/Scientist, Dr. Mendez is an internationally recognised expert and pioneer in cell restoration procedures for brain repair and the use of remote presence robots for health care. Dr. Mendez is a fellow of the Canadian Academy of Health Sciences.

Dr. Mendez has focused on, and significantly advanced, the use of remote presence robots for medical care in neurosurgery and primary health care. In 2002, Dr. Mendez and his team performed the first long distance telementoring neurosurgery in the world. In 2010, his team established the first remote presence robotic program in the Canadian North to provide access to primary and specialized medical care to underserviced First Nations communities. At present, Dr. Mendez is leading the implementation of remote presence robotic technology for healthcare delivery to rural and remote communities in the Province of Saskatchewan. He is also using Remote Presence Technology for Surgical Mentoring and Teaching to undergraduate, postgraduate and CME learners.

For his pioneering work in the use of remote presence devices to deliver health care to underserviced populations, Dr. Mendez received the Canadian Red Cross Humanitarian Award in 2010 and in 2011 the Health Canada Award for Contribution to the Improvement of the Health of Canadians. In 2016, he received the Government of Canada Public Service Award of Excellence for the use of remote presence robotic technology to improve healthcare in the North.



**Moi** Kok Wah Asian Research Associate Work Psychology Group United Kingdom

Kok Wah is a management consultant in the Asian region specialising in the areas of leadership, innovation and human capital development. Working across industries and institutions of medical education, his work focuses on increasing human capital readiness in the fast changing landscape of Asia. As part of the Work Psychology Group network, Kok Wah has been actively involved in introducing and facilitating the development of situational judgement tests in medical education in Taiwan, Indonesia and Malaysia through conferences, item writing workshops and projects. He holds an MPhil from the Malaysia Multimedia University in personal innovativeness.



Don **Moore**Professor of Medical Education
Vanderbilt University
USA

Don Moore received his Ph.D. in education in 1982 and his Master's Degree in Chinese History in 1974 from the University of Illinois at Urbana-Champaign. Don has published more than 50 articles and book chapters and made over 200 presentations at US and international conferences. He received the Vanderbilt Excellence in Teaching Award for Contributions to Continuing Medical Education and was inducted into the Academy of Fellows of the Society for Academic CME in 2017. Don continues to work on a conceptual framework for planning and assessing learning activities and learning in the practice setting.



Vishna Devi V **Nadarajah**Dean, Teaching and Learning
International Medical University
Malaysia

Vishna Devi V Nadarajah is currently, Professor and Dean of Teaching and Learning at the International Medical University in Kuala Lumpur, Malaysia. She graduated with a First Class Honours degree in Biochemistry from the University of Malaya (1994) and obtained her PhD at the University of Cambridge in the field of microbial biochemistry (2000). She is also a graduate of the Masters in Health Professionals Education from Maastricht University (2014).

She has over 20 years of teaching experience in the medical, dentistry and pharmacy education. She has published and presented research papers in both biomedical sciences and medical education, supervises research students and reviews for indexed and international journals. She is a current member of the international editorial board of the journal Medical Education. She was recently awarded the Malaysian Womens Weekly (2012), Great Women of Our Time award for her contribution in Science and Technology in Malaysia.

Her areas of research in health professionals education is in Faculty development, Assessment and Innovative Teaching Learning methods. Vishna has shared her experience and expertise in health professionals education via invitations to speak at conferences, conducting faculty development workshops and collaborative research, appreciating that she has also learnt very much from these collaborative sessions with other educators.



Balakrishnan R (Kichu) **Nair** AM Professor of Medicine and Deputy Head School of Medicine and Public Health University of Newcastle Australia

Professor Nair is the Professor of Medicine and Deputy Head of School at the School of Medicine and Public Health, University of Newcastle, Australia. He holds the position of Director of the Centre for Medical Professional Development, Hunter New England Health Service at Newcastle.

He is a member of the National Panel of Examiners of the RACP and Assessment Committee of the Australian Medical Council. Professor Nair is the Director of the Workplace Based Assessment Project at Hunter New England Health. He is also the Chair the WBA committee of the AMC

He is the foundation Chair of the Hunter Institute of Ageing Research. In 2016, his team based at the HMRI obtained an NHMRC grant for 3.4 million dollars for research in dementia

Prof Nair is the Lead Clinician of the Academy of Clinical Educators at the University of Newcastle and is the Director of the Certificate Course in Clinical Teaching and Supervision. He is Director of the Masters' Program in Leadership and Management, which was launched in 2012 by the University of Newcastle.

Internationally, he has delivered Faculty development workshops in many countries. He is Emeritus Advisor for the Royal College of Physicians of Edinburgh.



Ng Ho-Keung Associate Dean (Education) Faculty of Medicine The Chinese University of Hong Kong Hong Kong S.A.R

H.K. Ng is Chair Professor (since 2000) at the Chinese University of Hong Kong. His interests are in the molecular genetics of brain tumours, especially medulloblastoma and glioma. He was Department Chairman from 1999 to 2011. H.K. Ng is both a neuropathologist and a general pathologist.

He is also Associate Dean (Education) of the Medical School of the Chinese University of Hong Kong (since 2004). He is an Associate Editor of Laboratory Investigation and is also on the Editorial Boards of Acta Neuropathologica, Brain Pathology, Journal of Clinical Pathology, Neuropathology and Applied Neurobiology, Clinical Neuropathology, Pathology.



Hiroshi **Nishigori**Associate Professor
Medical Education Center
Kyoto University
Japan

Dr. Hiroshi Nishigori is an Associate Professor at the Medical Education Center, Kyoto University, Japan. He graduated from Nagoya University School of Medicine in 1998 and became a Fellow of the Japanese Society of Internal Medicine (2004) and a Diplomate in Primary Care of the Japan Primary Care Association (2011). He obtained a Masters Degree in Medical Education from University of Dundee (2008). His research interests include BUSHIDO and medical professionalism and Hypothesis-driven physical examination (HDPE). He is working as an editor of the Journal 'Medical Education (Japan)', and a co-chair of the APME-Net (Asian Pacific Medical Education Network).



Aruna Chanu **Oinam** Former Librarian Delhi Public School India

Miss. Aruna Chanu Oinam completed her M.L.I.Sc with 1st rank from North Eastern Hill University, Shillong, Meghalaya, INDIA. She has worked in various schools/ institutions as librarian, Guest lecturer for more than 4 years. At present she is preparing for UPSC examinations. During her academic career she has done research in student's use of library and its impact on their studies and performance. Apart from that she is actively involved in medical education research in collaboration and enthusiastically working to find the ways for medical students to use library effectively. She has published various articles in national and international journals.



Neil **Osheroff** Professor Vanderbilt University School of Medicine USA

Neil Osheroff received a Bachelor's Degree in Chemistry from Hobart College in 1974 followed by a Ph.D. in Biochemistry and Molecular Biology from Northwestern University in 1979. His doctoral dissertation on the mechanism of action of cytochrome c was under the direction of Professor Emanuel Margoliash.

Following his doctoral studies, Dr. Osheroff moved to the Stanford University School of Medicine in 1980, where he was a Helen Hay Whitney Foundation postdoctoral fellow with Dr. Douglas Brutlag in the Department of Biochemistry. In 1983, he moved to the Vanderbilt University School of Medicine as an Assistant Professor of Biochemistry and he has been on the faculty since that time. Dr. Osheroff currently holds Professorships in the Departments of Biochemistry and Medicine and was endowed with

the John G. Coniglio Chair in Biochemistry in 2003. He has spent a combined 27 years on the editorial boards of The Journal of Biological Chemistry and Biochemistry and has authored over 245 publications.

Dr. Osheroff's research focuses on topoisomerases, enzymes that remove knots and tangles from the genetic material and modulate torsional stress in DNA. In addition to their critical physiological roles, human type I and II topoisomerases are the targets for a number of widely used anticancer drugs. Furthermore, bacterial type II topoisomerases are the targets for quinolones, a drug class that includes some of the most frequently prescribed antibacterials in the world. The Osheroff laboratory has made seminal contributions to our understanding of how topoisomerases function and how anticancer drugs, natural products, and antibacterial agents interact with these enzymes and alter their catalytic functions.

Beyond his research, Dr. Osheroff has a long-standing interest in mentoring and training young scientists and physicians. Twenty-seven Ph.D. students have graduated under his mentorship and he has been a course director in the School of Medicine since 1990. Dr. Osheroff holds a number of educational leadership positions in the Vanderbilt University School of Medicine. He is a member of the four-person faculty team that developed and implemented the Foundations of Medical Knowledge (FMK) pre-clerkship phase of Curriculum 2.0. He currently Co-Leads the FMK Phase, Chairs the FMK Phase Team, Chairs the Master Science Teachers, and Directs the Academy for Excellence in Education.

At the national/international level, Dr. Osheroff Chaired the NCI-I "Transition to Independence" study section from 2013-2016. He also is a founding member and the Past-President of the Association of Biochemistry Educators, an organisation of ~350 biochemistry and related faculty from nearly 200 schools of medicine, pharmacy, and dentistry (primarily from North American and the Caribbean). In addition, Dr. Osheroff is the Treasurer of the International Association of Medical Science Educators (IAMSE), an organisation with nearly 900 members worldwide, and sits on the Executive Committee of the IAMSE Board of Directors.

Finally, Dr. Osheroff has received awards for mentoring, teaching, curricular design, educational service, and affirmative action and diversity. Over the past five years, he has been invited to present more than seventy-five scientific and educational talks at fifty institutions/meetings in seventeen different countries.



Sachiko **Ozone**Assistant Professor
Faculty of Medicine
University of Tsukuba
Japan

Dr. Sachiko Ozone is a Japan Primary Care Association certified family physician from University of Tsukuba, Japan. She has been practicing medicine and teaching medical school students at a rural clinic for seven years. Her research themes focus on community medicine and primary care. Her most recent paper, "Comparison of blood pressure measurements on the bare arm, over a sleeve, and over a rolled-up sleeve in the elderly", can be found in the Journal of Family Practice. She graduated from the University of Tsukuba, School of Medicine, and is a PhD in Primary Care and General Medicine, University of Tsukuba.



Elise **Paradis**Assistant Professor
Leslie Dan Faculty of Pharmacy;
Department of Anesthesia, Faculty of Medicine; and
The Wilson Centre
University of Toronto
Canada

Elise Paradis, PhD holds a Canada Research Chair in Collaborative Healthcare Practice at the University of Toronto, with appointments at the Leslie Dan Faculty of Pharmacy, in the Department of Anesthesia (Faculty of Medicine), and at the Wilson Centre. Her research focuses on the rise of collaboration as a solution in healthcare, on collaborative care practices in tertiary settings, and on education for collaboration. She is an Associate Editor with Perspectives on Medical Education, and has published in many journals, including Medical Education, Advances in Health Sciences Education, Perspectives, Critical Care Medicine, Social Science & Medicine, and Body & Society.



Kalyani **Premkumar**Professor, Department of Community Health & Epidemiology
College of Medicine
University of Saskatchewan
Canada

Kalyani Premkumar MBBS, MD, MSc (Med Ed) PhD MBA is a medical educator with over three decades of experience in teaching. Trained as a physician, with a specialization in physiology, medical education & educational technology, she is currently a tenured Professor, in the Department of Community Health & Epidemiology and associate member of the College of Education. Academically, she is the Lead of the new Masters in Health Professions Education Program, College of Medicine. As a member of the Faculty Development team, she helps with faculty training across the medical education continuum. Her research focus includes development and use of technology in medical education, self-directed learning, simulation, complementary and alternative medicine.



Julie **Quinlivan**Professor, University of Notre Dame Australia; and Director, Professional Services Review of Australia Australia

Professor Quinlivan is currently Director of the Professional Services Review Statutory Government Agency and a Member of the Administrative Appeals Tribunal of Australia (General and SSCS Divisions). She is a senior consultant in High Risk pregnancy at Canberra Hospital and private gynecologist at Barton Specialist Centre. She is a former Pro Vice Chancellor and Executive Dean of Medicine, Non-Executive Director of North and South Metropolitan Health Services, Non-Executive Director of South Metropolitan TAFE and past Chair of the Clinical Senate in Western Australia. She has published over 250 books, book chapters, original research articles and conference proceedings.



Greg M **Radu**Associate Professor of Psychiatry
Director of Psychotherapy Training Program
Memorial University Faculty of Medicine
Canada

Greg Radu is an associate professor of psychiatry and director of psychotherapy training at Memorial University, the largest university in Atlantic Canada. He is an associate editor of the Canadian Medical Education Journal and also Co-Chair of the European Psychiatric Association Section of Psychotherapy.



Gandes Retno **Rahayu**Vice Dean for Academic and Student Affairs
Faculty of Medicine
Universitas Gadjah Mada
Indonesia

Dr. Gandes earned her Master and PhD degree in Medical Education from the Centre for Medical Education, University of Dundee, Scotland, UK. Before her appointment as Vice Dean, she was Head of the Department of Medical Education and Director of the Master Program in Medical Education. She served as an executive committee member for the LINQED educational network, based in Belgium for 6 years. She was very active in introducing OSCE for national examination in Indonesia. She served as Chair of the Division of Examination System Development, National Committee of Competency Examination for Indonesian Medical Students from 2014-2016. She is a speaker at hundreds of national workshops and conferences. She is a 2013 FAIMER Fellow. She is a member of the editorial board of the Indonesian Journal of Medical Education.



Alfaretta Luisa T **Reyes**Professor Emeritus and Past Dean, College of Medicine
University of the East Ramon Magsaysay Memorial Medical Center, Inc.
Philippines

Dr. Reyes is a Professor Emeritus in Pharmacology from the University of the East Ramon Magsaysay Memorial Medical Center, Inc. where she also earned her medical degree. She served as Chairman of the Department of Pharmacology for 15 years and as Dean of the College of Medicine from 2007 to 2016.

She was a visiting fellow in Clinical Pharmacology at Northwestern University Memorial Hospital in Chicago, Illinois and was a Josiah Macy – Harvard Scholar on Program for Leaders in Medical Education at the Harvard Macy Institute, Harvard Medical School, Boston, Massachusetts.

For over the past 20 years she has been involved in reforms in undergraduate medical education in the Philippines. She was the President of the Association of Philippine Medical Colleges, Inc. and a member of the Commission on Basic Medical Education of the Philippine Accrediting Association of Schools, Colleges and Universities. She has been a speaker on accreditation and medical education as well as written and published articles.

She is currently occupied with quality assurance of the medical education program offered by medical schools in the country as an accreditor. As the incumbent Chair of the Technical Committee for Medical Education of the Commission on Higher Education their group together with the Professional Regulatory Board of Medicine ensures that the basic standards of quality of the medical program set by the government regulatory body are met by these schools.

She is currently a member of the Advisory Board of the Western Pacific Association for Medical Education.



Charlotte **Ringsted**Professor, Vice-Dean, and
Director of Centre for Health Sciences Education
Faculty of Health
Aarhus University
Denmark

Professor Ringsted is dedicated to fostering research-based innovation in health sciences education. During 2004-2011 she served the executive board of Association of Medical Education in Europe (AMEE). She has been program director of the course Research Essential Skills in Medical Education (RESME) since 2007. Her personal research interest is training and assessment in clinical workplace and laboratory/simulation settings, and the role of students and patients as teachers. She has published extensively in medical education; been supervisor of many Master and PhD-students and served the editorial board of several scientific journals related to health science education.



Trudie **Roberts**Director, Leeds Institute of Medical Education,
University of Leeds, England; and
President, Association of Medical Education in Europe (AMEE)
United Kingdom

Professor Roberts graduated from Manchester with a degree in Medicine and a BSc in Anatomy. She undertook her early medical training in Manchester and her research in Manchester and the Karolinska Institute in Sweden. In 1995, she was appointed Senior Lecturer in Transplant Immunology at the University of Manchester.

In 2000, she was appointed Professor of Medical Education at the University of Leeds. She was awarded a National Teaching Fellowship in 2006. In 2009, she was appointed Director of the Leeds Institute of Medical Education. She was a council member of the General Medical Council from 2009 until 2012 and Chair of the Association for the Study of Medical Education until July 2013. She was a council member for the Royal College of Physicians of London from 2010 until 2013 and is currently a Censor for the College.

In September 2013, she became President of the Association for Medical Education in Europe. Professor Roberts's main interests and expertise are in the areas of assessment of competence, professionalism, and transitions in training and education. In 2013, she was awarded a Fellowship of the Academy of Medical Educators. In January 2017 she received the MILES award (\*) at the Asia Pacific Medical Education Conference.

(\*Mentoring, Innovation and Leadership in Educational Scholarship)



Anurag **Saxena**Associate Dean
Postgraduate Medical Education
College of Medicine
University of Saskatchewan
Canada

Dr. Anurag Saxena is the Associate Dean, Postgraduate Medical Education at the University of Saskatchewan and in this role is responsible for the oversight of all residency training programs in Saskatchewan. He is Professor of Pathology and a practicing pathologist in Saskatoon Health Region. Dr. Saxena completed his M.Ed. from the University of Saskatchewan and MBA from the University of Wales. He has leadership certification from the Canadian College of Health Leaders and the Canadian Society of Physician Executives.

A recipient of the Master Teacher Award of the University of Saskatchewan, he is passionate about teaching and is involved in undergraduate and postgraduate teaching and external teaching through workshops on various aspects leadership and change. His current research interest is in leadership in medical education and health services and in the medical education systems. One of his current projects is on assessment and changes to the learning environment in medical education.



Albert **Scherpbier**Professor, Dean, Vice Chair of Medical Centre
Faculty of Health, Medicine and Life Sciences
Maastricht University
The Netherlands

Professor Scherpbier's key interests are quality assurance of medical education, career prospects for medical teachers, involvement of medical students, and medical education research. He has published extensively: around 300 papers in international journals, 100 papers in national journals, 70 chapters in books and conference proceedings. He teaches medical education research at Maastricht School of Health Professions Education. He supervises national and international PhD students (51 finished) and has been a consultant to medical schools in various countries, including Indonesia, Uganda, Nepal and Ghana. He has been a driving force for curriculum innovation and involved in innovations in postgraduate specialist training.



Lambert **Schuwirth**Professor of Medical Education
Prideaux Centre for Health Professions Education
Flinders University
Australia

Lambert Schuwirth obtained his MD from Maastricht University. In 1991, he joined the Department of Educational Development and Research, with various roles in student assessment: with leadership in Progress Testing, OSCEs and Case-based Testing Committee. Since the early 2000s, he has been Chair 'Assessment taskforce'. He has been advisor to many Dutch and UK medical colleges. Since 2007, he has been a full-professor for Innovative Assessment at Maastricht University – currently as Adjunct. In 2011, he became Strategic Professor for Medical Education at Flinders University in Adelaide, Australia and the Director of the Flinders University Prideaux Centre for Research in Health Professions Education.



Yosuke **Shimazono**Assistant Professor
Center for Global Initiative
Osaka University
Japan

Yosuke Shimazono studied medical anthropology at Oxford University. His research interests include anthropological studies of organ transplantation and reproductive medicine and he has conducted a fieldwork in the Philippines and India. He is currently interested in application of medical anthropology in the medical research and medical practice and has been actively involved in collaborative works with medical doctors and medical educationists.



Diantha **Soemantri**Senior Lecturer in Medical Education
Faculty of Medicine Universitas Indonesia
Indonesia

Dr Diantha Soemantri is a senior lecturer in medical education in the Department of Medical Education, Faculty of Medicine Universitas Indonesia. Graduated as a medical doctor from Faculty of Medicine Universitas Indonesia in 2005, acquired Master in Medical Education title from University of Dundee in 2007 and a PhD in the same field from University of Melbourne in 2013. She is now the head of Master in Medical Education Program in the university and also responsible for the integrated curriculum of Health Sciences Cluster. She has published several journal articles both nationally and internationally and participated as invited speakers in international conferences on medical education. Her research interests are student assessment, reflection and feedback, interprofessional education and collaborative practice, and also professionalism development.



Scott **Stevens**Professor
Entertainment Technology Center
Carnegie Mellon University
USA

Scott Stevens, Ph.D. is a Professor in Carnegie Mellon University's Entertainment Technology Center. He has extensive experience in the areas of games for education and physical and cognitive/behavioural therapy as well as augmented and virtual reality for medical education. Dr. Stevens has been involved with pioneering multimedia research and development for over forty years.

Dr. Stevens was the principal investigator directing the Caremedia research project. This research looked to apply intelligent assistive technologies in dementia care. The dementia ward of a nursing home was instrumented with over 20 cameras and captured video 24 hours a day for one month. Computer vision, speech recognition, and machine learning was applied to the video to automatically identify behaviours. Caremedia resulted in the first system for the automatic collection, analysis, access, and archiving of individual and group psycho-social behaviour.

Dr. Stevens received his B.S. and M.S. degrees in physics from Northern Illinois University and his Ph.D. from the University of Nebraska-Lincoln. He has spoken internationally on computer science and artificial intelligence's impact on education and interactive entertainment and has written over one hundred professional papers, talks, and book chapters.



Lisa **Sullivan** Immediate Past President Global Alliance for Medical Education (GAME) Australia

Lisa Sullivan is the founder and Managing Director of In Vivo Academy Limited, an Australian registered not-for-profit education charity dedicated to the development and deployment of independent, accredited continuing education across the Australasian region. She is accredited by the Royal Australian College of General Practitioners as a provider of Quality Improvement and Continuing Professional Development (QI&CPD), is the immediate past president of the Global Alliance for Medical Education (GAME) and recently defended her MPhil at the University of Queensland, Australia, evaluating the effectiveness of online, face-to-face and blended learning in the delivery of CME/CPD to health care professionals.



Anindya Pradipta **Susanto**Research Assistant, Medical Technology Cluster
Indonesia Medical Education Research Institute (IMERI)
Faculty of Medicine
Universitas Indonesia
Indonesia

Dr. Nino Susanto graduated with Medical Doctor degree from Faculty of Medicine Universitas Indonesia and Bachelor of Biongineering from Nanyang Technological University Singapore. Currently, he works at Medical Technology Cluster, Indonesia Medical Education Research Institute (IMERI), Faculty of Medicine Universitas Indonesia. His research interest include Medical Device Clinical Trial regulatory framework, Quantitative EEG & Neurofeedback, Bioneurotropic, and innovation in Medical Technology. He also serves as General Practitioner at a private clinic in Jakarta. Dr. Susanto is an enthusiast volunteer in Para Sports to facilitate competition of athletes with disability, serving as Sports Director in ASEAN Para Sports Federation.



Yasuyuki **Suzuki** Professor of Tutorial Division Medical Education Development Center Gifu University Japan

Professor Suzuki is the President of Japan Society for Medical Education. He Graduated Gifu University School of Medicine in 1980 and has been working for patients with inherited metabolic disorders as a pediatrician. Since 1990th, he has been contributing to the curricular reform of Gifu University, nation-wide faculty development for medical teachers, and renovation of pediatric specialty training program in Japan.



Tran Diep Tuan
President
University of Medicine and Pharmacy
Vietnam

Associate Prof. Tran, Diep Tuan is the president of the University of Medicine and Pharmacy at Ho Chi Minh City (UMP), which is one of the two most influencing medical universities of Vietnam. Under his tenure, the UMP has demonstrated its strong commitment for innovation and quality improvement.

Associate Prof. Tran received his M.D. training at UMP with excellent qualification (1989), and then specialized in pediatrics (1990-1993) and later in pediatric neurology. He got his Ph.D. training at Tokyo University (1998-2003) and post-doctoral training at National Institutes for Physiological Sciences of Japan (2003) and at University of Michigan (2003-2005). He was a fellow of Asian Youth Fellowship (1997), Monbusho Fellowship (1998), 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), International Dean's Course in South East Asia (2011), Program for Leading Innovation with Harvard Macy Institute (2013), and Leadership Development Program (2016). His research interest is pain imaging, pediatric neurology, and children quality of life. He has published more than 30 articles in international peer review journals. As a president, his main agenda is to make UMP a leading health profession university in Vietnam and an internationally recognized institution in the region.



Theanne **Walters**Deputy Chief Executive Officer
Australian Medical Council
Australia

As Deputy Chief Executive Officer of the Australian Medical Council, Theanne Walters manages policy development, the accreditation of medical programs (particularly new functions), reviews of AMC accreditation processes, and external relationships relating to standards setting, accreditation and assessment of professional courses.

Theanne has contributed to external evaluations and accreditations internationally via the World Federation for Medical Education and the Regional Association, Association for Medical Education in the Western Pacific Region. In 2008-2009, Theanne was visiting professor at the World Federation for Medical Education, based at the University of Copenhagen. She is a senior advisor for WFME.

In Australia, Theanne is deputy chair of the Health Professions Accreditation Councils Forum, which is a coalition of the independent accreditation councils for the regulated health professions.



Michael **Wan**Head of Basic and Clinical Science Domain
School of Medicine
University of Notre Dame, Sydney
Australia

Associate Professor Michael Wan (MBChB, FRCP, FHKCP, FHKAM, GCUT, JP) is the Head of Basic and Clinical Science Domain and the former Head of Assessment in the School of Medicine, University of Notre Dame, Sydney. He is an interventional cardiologist by training. He received the Vice-Chancellor's award for Excellence in Teaching in 2011 and is recognised nationally by receiving the Citations for Outstanding Contributions to Student Learning from the Australia Office of Teaching & Learning in 2012. His current research is focusing on using online platforms to enhance medical education and assessment of clinical reasoning using Script Concordance Testing.



Danai **Wangsaturaka**Assistant Dean for Academic Affairs
Faculty of Medicine
Chulalongkorn University
Thailand

Danai Wangsaturaka is currently an assistant dean for academic affairs at the Faculty of Medicine, Chulalongkorn University, Thailand. After obtaining his MD degree, he furthered his study in Masters and PhD at Center for Medical Education, University of Dundee, Scotland.

He has been a key person in curriculum planning, curriculum evaluation, faculty development and student engagement at his institution. His long-standing contribution in student engagement has resulted in 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.



Jen-Hung **Yang**Dean, Tzu Chi University (TCU) College of Medicine, and Professor,
Department of Dermatology, TCU School of Medicine
Tzu Chi University
Taiwan

Jen-Hung Yang is a Professor of Dermatology and the Dean of College of Medicine at Tzu Chi University (TCU), Taiwan. He got his MD in 1985 and PhD in 1994 in National Yang Ming University. His dermatology training was at Veterans General Hospital Taipei. He had been the Chairman of Dermatology at China Medical University and Chung Shan Medical University (CSMU), and Director of Faculty Development, and the Dean of College of Medicine in CSMU, and the Vice-Superintendant of CSMU Hospital. He is currently a board member of the Taiwan Association of Medical Education (TAME), Dean of College of Medicine of TCU, Chairman of Medical Education and Research Council of Tzu Chi Medical System. His research interest is integrating humanities, culture competency and professionalism in medical curriculum. He is also actively engaged in accreditation and currently the Council Member of Taiwan Medical Accreditation Council (TMAC) and the Member of Taiwan Joint Committee of Hospital Accreditation.



Magda Ahmed Wagdy **Youssef**Senior Consultant Pediatrician
Hamad Medical Corporation; and
Assistant Professor of Clinical Paediatrics
Weill-Cornell Medical College
Qatar

Dr. Magda received her medical training at Cairo University -Egypt; she has worked as a general pediatrician on staff at Hamad Medical Corporation –Qatar since 2006.Dr Magda areas of practice include: inpatient medicine, Patient safety, detection of adverse events and was appointed to chairs pediatrics quality and patient safety Committee. Dr Magda has strong interests in medical education supervises residents on clinical setting; she is instructor and in charges of different workshops including; communication, APLS, quality, and professionalism.



Alex L.K. **Yung**Assistant Computer Officer
The Chinese University of Hong Kong
Hong Kong S.A.R.

Mr Yung has been joined Faculty of Medicine, The Chinese University of Hong Kong for 10 years. He provides the innovative technical solution for faculty to enhance the existing teaching and learning model to latest situation. For example, he manages the development of App-based elearning gadgets for medical students and re-development an medical assessment item bank system. He also participates on various teaching development grant projects for providing the most updated technical solution.

#### **LOCAL FACULTY**



Katharine **Boursicot**Director
Health Professional Assessment Consultancy
Singapore

Katharine Boursicot BSc MBBS MRCOG MAHPE NTF SFHEA FRSM, Director, Health Professional Assessment Consultancy, graduated from the University of London with an Honours BSc in Anatomy and MBBS from the Medical College of St Bartholomew's Hospital. She went onto train in Obstetrics and Gynaecology in London, Dublin and Hong Kong then worked as a Consultant Obstetrician and Gynaecologist at St Thomas', St Bartholomew's and Homerton Hospitals in London, with an Honorary Reader position at Barts and The London School of Medicine and Dentistry.

With an increasing interest in medical education, Katharine studied at the Institute of Education in London and was awarded a distinction in her Masters in Higher and Professional Education. As a full time medical educationalist, she has gained experience and expertise in medical education and has led the reform of curriculum and assessment at the undergraduate medical schools at Barts and the London, Cambridge University and St George's University of London. In 2014, she moved to Singapore to work as Assistant Dean for Medical Education Research and Assessment at the Lee Kong Chian School of Medicine. Since 2015, she has worked independently, to lead a consortium of health professional educationalists (Health Professional Assessment Consultancy: HPAC http://www.hpac.sg/index.html) to conduct internationally acclaimed assessment courses in London (http://www.hpac.sg/facourse) and Singapore (http://www.hpac.sg/siaac), as well as advise internationally on assessment, quality assurance, faculty development and reviews of assessment programmes.

She has published her research in the leading medical education journals and is an Associate Editor for the journals Advances in Health Sciences Education, BioMedCentral and is a regular reviewer for Medical Education, Medical Teacher, the BMJ, the Clinical Teacher, Higher Education Quarterly and Assessment and Evaluation in Higher Education. She is the Series Editor for the Oxford University Press companion volumes to their Handbooks of Medicine series, with six volumes published and another three in press (Oxford Assess and Progress series).

Katharine has been invited to advise on numerous national and international initiatives including several of the Royal Medical Colleges in the UK, the Colleges of Medicine of South Africa, the Association of Veterinary Schools in the UK, the General Medical Council, the General Dental Council, the Osteopathic Council, the Lawyers Regulatory Council, the Arab Board of Postgraduate Examinations, the National Assessment Group of Switzerland, the IDEAL Consortium, and has held visiting Professorships at the Universities of Cyberjaya (Malaysia), Hong Kong, Amman (Jordan) and Tromsø (Norway).

Currently, she is consultant to the Singapore Ministry of Health, Curtin Medical School (Australia), University College Dublin School of Veterinary Medicine (Ireland), the Colleges of Medicine of South Africa, and the General Medical Council (UK).



Chen Fun Gee
Director, Division of Graduate Medical Studies
Yong Loo Lin School of Medicine
National University of Singapore; and
Director, Division of Critical Care
National University Hospital
National University Health System
Singapore

Dr Chen Fun Gee graduated from the Faculty of Medicine National University of Singapore on April 1981. He completed his postgraduate training in Anaesthesia in Singapore in 1987. He underwent subspecialty training in Critical Care Medicine at St Vincent's Hospital Sydney in 1990. With an interest in medical education, Dr Chen underwent a 2-year Masters Health Professions Education course at Maastricht University Holland and graduated in 2016.

Dr Chen joined the Department of Anaesthesia National University Hospital in 1986 and became an academic staff of the Faculty of Medicine, National University of Singapore in 1989. He subsequently held positions as Director of Surgical Intensive Care Unit, Clinical Director Anaesthesia, Vice Chairman Medical Board (Quality Assurance) and Head of Department of Anaesthesia (NUS and NUH). He completed his term as head and started his current position as Director Division of Graduate Medical Studies, Yong Loo Lin School of Medicine in 2010.

Dr Chen is a member of the Singapore Medical Council, the Singapore Specialist Accreditation Board and the Family Medicine Accreditation Board. He is the Co-Chair, Joint Committee of Specialist Training and Chair, Joint Committee of Family Medicine Training. He sits in advisory panels in licensing assessments in Advance Practice Nursing and Pharmacy Residencies. For his contributions in education, he was awarded a Public Administration Medical (Bronze) during the Singapore National Day Awards 2016.

Dr Chen's research interest has been in the area of outcomes in critical care, airway devices, medical simulation as well as assessments in medical education, in particular residency training outcomes. He has been invited as a faculty internationally to talk on critical care management, use of airway devices as well as medical simulation in medical education. Dr Chen has also served as an anaesthesia examiner in postgraduate anaesthesia examinations in Singapore, Hong Kong and Malaysia.

Dr Chen's extracurricular interest is in Jazz music. He is a student of the saxophone and electric guitar and has performed publicly in D&Ds and celebratory events.



Matthew **Chen** Zhixuan Senior Resident, Division of Geriatric Medicine National University Hospital National University Health System Singapore

Dr Matthew Chen is a final year Senior Resident in Geriatric Medicine with the National University Health System (NUHS). He received his undergraduate medical degree from Barts and the London, Queen Mary University of London in 2010. In 2015, he was admitted as a Member of the Royal College of Physicians (London), and completed his Residency in Internal Medicine in NUHS. As a Senior Resident in Geriatric Medicine, he is dedicated to teaching medical students and junior doctors in both clinical/practical and classroom environments. Dr Chen is also actively involved in local and overseas humanitarian work, and is a regular volunteer at Care Community Services Society (CCSS), conducting home medical visits and participating in community engagement programmes for older people.



Chen Zhi Xiong
Assistant Dean of Students (NUS)
Lecturer and Integration Lead Educator
Yong Loo Lin School of Medicine
National University of Singapore
National University Health System
Singapore

Dr. Chen Zhi Xiong is the Deputy Programme Director at the Department of Physiology of Yong Loo Lin School of Medicine. He is also Principal Investigator of the Neurodevelopment and Cancer Laboratory and Joint Scientist at KK Women's and Children's Hospital. In addition, he is a Resident Fellow of King Edward VII Hall where he lives among students from various healthcare and life sciences disciplines. Sitting at the crossroads between biomedical sciences and health professions, Zhi Xiong is exploring ways to enhance medical and biomedical sciences education, with specific interests in biomedical sciences postgraduate education and the role of biomedical sciences in medical education.



Lita **Chew**Head, Pharmacy Department
National Cancer Centre Singapore
Singapore

A/Prof Lita Chew is the Head of Pharmacy Department at the National Cancer Centre Singapore. She holds concurrent positions as Associate Professor at the Department of Pharmacy, National University of Singapore and the Chief Pharmacist at Ministry of Health. She received her Pharmacy degree from the National University of Singapore and Masters in Medical Science from the University of Birmingham, United Kingdom. She completed her fellowship training in Pharmacy Practice at the University Illinois Chicago, USA. She has practiced in the area of oncology for more than 20 years and she sits in numerous boards and committees. Her practice and research interest includes medication management, medication adherence, pharmacy practice and workforce development.



Jacqueline **Chin**Associate Professor
Centre for Biomedical Ethics
Yong Loo Lin School of Medicine
National University Health System
Singapore

Dr Jacqueline Chin is Associate Professor at the Centre for Biomedical Ethics (CBmE), Yong Loo Lin School of Medicine, National University of Singapore. Her research addresses national and globally-relevant capacity-building in biomedical ethics including What Doctors Say About Care of the Dying, a study of doctors' perspectives on end-of-life decisions (2010–2011); Making Difficult Decisions with Patients and Families (2014), vol. 1 of an online casebook (www.bioethicscasebook.sg) featured in a collection of papers on Bioethics Education 2015 by the US Presidential Commission for the Study of Bioethical Issues; and vol. 2, Caring for Older People in An Ageing Society (2017), which engages with ethical challenges of eldercare in community care settings



Chng Hui Ting Instructor Department of Pharmacy Faculty of Science National University of Singapore Singapore

Hui Ting received her BSc (Hons) (Pharmacy) in 2008 and PhD in 2013 from the Department of Pharmacy, NUS. She is a registered pharmacist with the Singapore Pharmacy Council since 2009. She was a clinical editor with the National Healthcare Group Pharmacy & Therapeutics Office before joining the university in Dec 2014 to pursue her interest and passion in education. She aims to marry her training and experiences in the pharmaceutical sciences and pharmacy practice to answer pertinent research questions in the areas of pharmacy and interprofessional education, drug interactions, and medication adherence.



Sandy **Cook**Professor
Senior Associate Dean
Deputy Head, Office of Education
Duke-NUS Medical School
Singapore

Dr. Cook joined Duke - NUS Medical School in June 2006, as Associate Professor and Associate Dean for Curriculum Development as well as head of the Medical Education, Research, and Evaluation Department. In 2010 she was promoted to Senior Associate Dean and took on an expanded role in supporting the Vice Dean in managing the Education Office. She helped establish the Academic Medicine Education Institute (AM.EI), which was launched in 2012. It is a joint venture with Duke-NUS and SingHealth –designed to promote excellence in education for all Health Professional Educators. In 2014, she was accepted into the NUS Teaching Academy Fellows and 2016 received the Master Scholar Award from the International Association of Medical Science Educators (IAMSE). In 2016, she was appointed Interim Vice Dean and Interim Co-Chair of AM.EI. In 2017, appointed Deputy Head, Office of Education following the successful search for a new Vice Dean for Education.

Dr. Cook received her PhD from Cornell University in Adult and Continuing Education. Her Master's is in Research Methodology and her Bachelor's in Experimental Psychology, both from Ohio State University. Dr. Cook went to Chicago in 1985 to work as an education specialist for the Diabetes Research and Training Center (DRTC), a major NIH grant that was awarded to the University of Chicago in 1976 and continues to be funded. One of the major focuses on that grant has been the translation of diabetes research to the community, patients, and physicians. She continued on that grant and other diabetes related grants until 2003, when she needed to focus more of her time with University of Chicago Pritzker School of Medical and working with faculty to develop scholarly medical education research projects. She was appointed as the Associate Dean for Curricular Affairs, Senior Research Professional at The University of Chicago Pritzker School of Medicine from 2001-2006.

Dr. Cook's overall research in Chicago focused on developing and evaluating educational programs throughout the Division of Biological Sciences; health outcomes research in the area of diabetes, sleep medicine disorders, asthma, and geriatrics; and faculty development efforts in the area of the Scholarship of Education. Her work in the area of simulation and clinical assessment grew with the development of Clinical Performance Center at the University of Chicago for use in teaching and assessing the clinical skills of our medical students. Her research efforts has resulted in numerous publications, published abstracts, and one book chapter. Since coming to Singapore, she has focused much of her research on the development, implementation, and impact of Team-based Learning and faculty development.

She has been a member of the Society of Directors in Research in Medical Education since 2002 and served on the Board of Directors for 5 years until she moved to Singapore. She spent 8 years on the board of the Chicago Asthma Consortium, and served as President from 2003-2006. She also was the chair of the Curriculum and Evaluation committee of the 13-Schools Consortium from 2001-2006. She currently is a member of the Team-based Learning Collaborative, International Association of Medical Science Educators, Association of Medical educators of Europe, and is an associate editor for Medical Science Education Journal, the Proceedings of Singapore Health Care, and Annals, Academy of Medicine Singapore.



lan **Curran**Vice Dean, Education and
Co-Director of Academic Medicine Education Institute (AM.EI)
Duke-NUS Medical School
Singapore

Prof Ian Curran is currently the Vice Dean of Education at Duke-NUS Medical School, Singapore. Previously, he was Assistant Director of Education and Professional Standards at the UK General Medical Council where he leads education policy, regulatory and quality assurance work in post graduate medical education and training across the UK. His achievements at GMC include the development of the innovative Generic Professional Capabilities Framework, revision of the GMC Curriculum Standards and Assessment Systems "Excellence by Design", and development of the "Promoting Excellence" Education Standards for Undergraduate and Postgraduate Medical Education and Training for the UK.



Dong Chaoyan Senior Manager Education Office Sengkang Health Singapore

Dong Chaoyan, PhD, CHSE, AMEE Associate Fellow, leads Sengkang Health Education Office since July 2015. She was Assistant Director for Centre for Medical Education at NUS Yong Loo Lin School of Medicine until June 2015. Her responsibilities included continuing professional development, research in health profession education. Before joining NUS in 2013, she was an Assistant Professor in the Department of Emergency Medicine at New York University School of Medicine, where her focus was simulation-based medical education, drawing from her background in cognitive science, education technology, and psychology. She earned a PhD in Educational Communication & Technology from New York University, and has 10+ years' experience in curriculum design, eLearning and professional development in Singapore and USA. She has given more than 50 conference presentations and workshops on these topics, and has authored 25 peer-reviewed articles.



Kelvin **Foong**Associate Professor
Faculty of Dentistry
National University of Singapore
National University Health System
Singapore

Assoc Prof Kelvin Foong is the Discipline Director of Orthodontics and Paediatric Dentistry at the Faculty of Dentistry, NUS. He is also the Director of the Orthodontics Residency Programme and is a Fellow of the NUS Teaching Academy. His educational research interests focus on understanding (i) the novice to expert progression in learning and (ii) how technology contributes to this progression.



Johan **Geertsema**Director
Centre for Development of Teaching and Learning (CDTL),
National University of Singapore
Singapore

Johan Geertsema is the Director of the NUS Centre for Development of Teaching and Learning and an Associate Professor in the University Scholars Programme, National University of Singapore, where he has taught writing and critical thinking since 2001. His research focuses on academic development and is oriented towards the question of how higher education policies and practices can enhance teaching quality in order to foster learning outcomes and processes. He is particularly interested in recognition and reward of teaching achievement and consequently the relation between educational research and the scholarship of teaching and learning.



Goh Lay Hoon Consultant Division of Family Medicine National University Hospital National University Health System Singapore

Dr Goh Lay Hoon is a Consultant in the Division of Family Medicine, Department of Medicine at National University Health System. She is currently teaching medical students in the National University of Singapore and is a Physician Faculty in the NUHS Family Medicine Residency Program. Her interests are in curriculum development and assessment. She is also involved in the Well Program for the Alexandra Campus.



Poh-Sun **Goh**Associate Professor and Senior Consultant
Department of Diagnostic Radiology
Yong Loo Lin School of Medicine
National University of Singapore
National University Health System
Singapore

Dr Goh is a graduate of the Melbourne Medical School in Australia (1987), a Fellow of the Royal College of Radiologists in the UK (1993), Fellow of the Academy of Medicine in Singapore (1998), has obtained a Master of Health Professions Education from Maastricht University (2012), and is a Fellow of AMEE (2017). He has been practicing as a clinical radiologist for the last 26 years, and teaching at the National University of Singapore (NUS) and National University Hospital (NUH) for the last 23 years. He has a special interest in Neuroradiology, Chest Radiology, and Abdominal Radiology. Dr Goh has previously served as Radiology Department Clinical Director, Undergraduate Teaching Director, and Postgraduate Teaching Director; as well as serving NUH as the inaugural Chair of the hospital Risk Management and Patient Safety Committee. He has served as Honorary Secretary of the Singapore Radiological Society; a Council Member of the College of Radiologists of the Academy of Medicine, Singapore; and on organising committees for local and international scientific conferences in Radiology; Biomedical Engineering; and Medical Education; including being previous Chair, organising committee, of the 11th APMEC (Asia Pacific Medical Education Conference) 2014; and a member of the organising committee eLearning symposium for AMEE 2015, Glasgow.

He has been developing and evaluating eLearning platforms and solutions for undergraduate and postgraduate teaching and learning for the last 15 years; and has presented this work at conferences, invited symposia and workshops both locally and internationally. He has published papers on Technology enhanced learning / eLearning in Medical Education journals as well as online papers and reflection pieces. He was a member of the NUS task-force successful in developing a proposal for setting up the Interactive and Digital Media Institute at NUS.

Dr Goh is currently core faculty of the NUHS Diagnostic Radiology Residency Program; as well as being local faculty and serving as Unit 7 co-ordinator for the MHPE-S program run conjointly by Maastricht University with the Academy of Medicine, Singapore. He is a current member of the AMEE (Association for Medical Education in Europe) eLearning committee.

"Passions - Technology enhanced learning, Education, Radiology. Technology as a tool, platform and enabler to support and augment face to face customised teaching and learning; with educational principles as the foundation; and Radiology, as well as Medical Education Faculty Development and Scholarship as my academic and clinical focus."

His current focus is on building and evaluating the use of hyperlinked radiology and educational case repositories in medical education.

http://medicaleducationelearning.blogspot.sg/2016/04/collected-medical-education-activities.html

(for Collected Medical Education Activities)



Matthew C E **Gwee**Professorial Fellow and
Chairman, International and Education Programmes
Centre for Medical Education
Yong Loo Lin School of Medicine
National University of Singapore
National University Health System
Singapore

Professor Gwee is currently a Professorial Fellow and Chairman, International and Education Programmes in the Centre for Medical Education of the Yong Loo Lin School of Medicine. Professor Gwee currently serves in several local, regional and international committees, Advisory Boards, as well as the Editorial Boards of Medical Teacher, Medical Education, International Journal of Medical Education and J Medical Education and Curriculum Development. Professor Gwee has been an invited speaker/panelist for several gold standard meetings in medical education in the Asia-Pacific region and beyond. He is a pioneer in the field of medical education in Singapore and obtained his MHPEd degree from the University of New South Wales in 1981 during the tenure of a WHO Fellowship. He received the prestigious MILES Award in the 3rd Asia Pacific Medical Education Conference 2006, in recognition of his many contributions to Mentoring, Innovation and Leadership in Educational Scholarship.

Professor Gwee has served as: Fellow of the NUS Teaching Academy; Member, University Committee on Educational Policy; Associate Director, CDTL (1997-2006); Foundation Member, Institutional Animal Care and Use Committee; inaugural Co-Chairman of the Nursing Curriculum Committee, Alice Lee Centre for Nursing Studies; Vice-Dean (1980-1992) and Head, Department of Pharmacology (1987-1997) and Chairman, PBL Committee (2000-2006) in the then Faculty of Medicine, NUS. Professor Gwee has also served as a Member of the Management Committee of the Association for Medical Education in Asia, and also Member, Board of Directors, International Association of Medical Science Educators.

Professor Gwee was recently invited by Nova Publications to contribute a Chapter in the book "Medical Education: Global Perspectives, Challenges, and Future Directions". Professor Gwee, together with D. Samarasekera and Chay-Hoon Tan contributed the chapter "Globalisation of Medical Education: An Asian Perspective." Recently, Professor Gwee also published two key papers in Special Issues to commemorate the centenary year (2010) of the Flexner Report in the Journal of Medical Education ("Medical and Health Care Professional Education in the 21st Century: Institutional, National and Global Perspectives") and the Journal of the International Association of Medical Science Educators ("Role of Basic Medical Sciences in 21st Century Medical Education."). Since then he has also contributed to other publications including a chapter ("Assessing Anatomy as a Basic Medical Science") in the book 'Teaching Anatomy: A Practical Guide' published by Springer.



Sergio **Hernandez-Marin** Business Analyst Lead Google Play APAC Business Operations & Strategy at Google Singapore

Dr. Sergio Hernandez Marin is a Business Analyst Lead Google Play APAC, Business Operations & Strategy at Google with more than 10 years experience in Big Data Analysis and Artificial Intelligence. Sergio joined Google Singapore office after spending some time in Google Toronto and Google Dublin where he has held a variety of roles involving Big Data analysis. Before Google Sergio has been involved in small and big companies in several industries: Defence, IT/Telecom, Aerospace, Healthcare, Renewable Energy.

Sergio holds three advanced master's degrees in Telecommunications Engineering from Spain and France, a PhD in Applied Statistics in Artificial Intelligence from the UK and an MBA from Copenhagen Business School. Originally from Spain, Sergio has lived in nine different countries and he is passionate about learning about different cultures.



Calvin **Ho**Assistant Professor, Centre for Biomedical Ethics
Yong Loo Lin School of Medicine
National University of Singapore
National University Health System
Singapore

Calvin WL Ho is Assistant Professor at the Centre for Biomedical Ethics in the Yong Loo Lin School of Medicine, National University of Singapore (NUS). He is also Co-Head of the Collaborating Centre for Bioethics of the World Health Organisation, and a Research Associate with The Ethox Centre, University of Oxford. In addition, he serves as a member of the Singapore Nursing Board, an Assistant Director with the Legal Aid Bureau (Ministry of Law), a member of the National Transplant Ethics Panel (Ministry of Health), a member of the Bioethics Committee of Alexandria Hospital, a member of the Paediatric Ethics and Advocacy Centre, National University Hospital and a member of NUS Inter-professional Education Steering Committee.



Benjamin **Hooi**Senior Resident
Division of Advanced Internal Medicine
National University Hospital
National University Health System
Singapore

Dr. Benjamin Hooi served as the Academic Chief Resident for the National University Health System's (NUHS) Internal Medicine Residency Program from July 2015 to June 2016. During his term, he planned and conducted a variety of teaching courses for both undergraduate medical students and postgraduate medical residents. He is currently a Senior Resident with NUHS's division of Advanced Internal Medicine (AIM), and remains a passionate educator and advocate for junior residents as teachers.



Hor Chuen Yee Standardised Patient Educator Centre for Healthcare Simulation Yong Loo Lin School of Medicine National University of Singapore National University Health System Singapore

Chuen Yee is a nurse by practice. She attained her RN qualification in 1998 and has since practiced clinical nursing in SGH, research nursing in KKHWCH and NUHS. She has assisted in mock exam practice sessions and multiple exams as a standardised patient since 2007. She is currently the Standardised Patient Educator for Yong Loo Lin School of Medicine, National University of Singapore, since 2012.

She taps on her past experience in clinical nursing and standardised patient to plan and build an effective NUS Standardised Patient Program together with Prof Nicola Ngiam.



Terence **Huey** Cheong Wei Consultant Tan Tock Seng Hospital Singapore

Dr Terence Huey is currently a Consultant Hepatopancreatobiliary Surgeon at Tan Tock Seng Hospital, Singapore. He is a keen educator and is currently the Associate Program Director for the NHG-AHPL General Surgery Residency Program. He also plays an active teaching role for medical students from both Yong Loo Lin School of Medicine, NUS and Lee Kong Chian School of Medicine, NTU. He looks forward to learning from other medical educators, teachers and students at this APMEC.



Kee Li Leng Janice Senior Nurse Educator National University Hospital National University Health System Singapore

Janice is a Senior Nurse Educator in the cardiac cluster at the National University Hospital (NUH) specialising in coronary and general intensive nursing care. She is actively involved in clinical teaching in NUH in-house nursing programmes: Critical Care and Cardiac nursing programmes.

Her main interest is in interprofessional simulation training. She conducts clinical simulation training and train-the-trainers workshops for nurses. She also supports clinical instructors in cardiac cluster Trigger Code Blue and conducts Cardiac Rehabilitation Outpatient Code Blue drill clinical simulation training.



Koh Dow Rhoon
Associate Professor, Department of Physiology,
Director, International Relations, Dean's Office
CenMED Associate, Centre for Medical Education (CenMED)
Yong Loo Lin School of Medicine, National University of Singapore, and
Visiting Senior Consultant, Division of Rheumatology, Department of Medicine, National University Hospital
National University Health System
Singapore

Dr Koh Dow Rhoon is an alumni of the Yong Loo Lin School of Medicine and completed his undergraduate training in medicine in 1981. He then went on to complete his postgraduate training in Internal Medicine, Rheumatology and Immunology. He has been active in medical education for more than a decade and has been the Vice-Dean (Education) from 2001 to 2010, driving medical education reforms in the school. He is currently Associate Professor in the Department of Physiology and Visiting Senior Consultant in the Division of Rheumatology, Department of Medicine, National University Health System (NUHS). He continues to contribute to medical education, fostering integrated learning strategies for undergraduate medical students and is active in faculty development and quality improvement for the school. Dr Koh is also involved in postgraduate training for Rheumatology trainees and is a member of the Rheumatology RAC and chairs the examination subcommittee. He also chairs the development of medical education standards and quality assurance framework for medical schools in Singapore under the MOH.



Serena Koh Siew Lin Associate Professor Alice Lee Centre for Nursing Studies Yong Loo Lin School of Medicine National University of Singapore National University Health System Singapore

A/Prof Koh had received her PhD in Medicine, Dentistry and Health Sciences, from the School of Nursing, University of Melbourne, Australia in 2008. She is currently Associate Professor at ALCNS, NUS, teaching undergraduates & postgraduates on research, evidence-based practice, patient safety and quality as well as supervision of the students for their research thesis. She worked in the Ministry of Health from 2009-2016, developing patient safety strategies and overseeing clinical quality in the hospitals. She previously worked in KKH as a midwife since 1995, and extended to research and teaching roles since 2001. Her research interests are in patient safety and maternal health.



Alfred **Kow**Assistant Dean (Education)
Yong Loo Lin School of Medicine
National University of Singapore
National University Health System
Singapore

Dr Kow is currently working as a Senior Consultant at the Department of Surgery at the National University Health System Singapore. His main areas of specialty are Hepatobiliary Surgery, Liver Transplantation and Minimally Invasive Surgery. Dr Kow also spends a large portion of his time on medical education, in teaching medical students and residents as well as developing medical curriculum for the YLLSoM. He has received numerous teaching awards at the hospital, faculty and the university over the past 10 years, including two time recipients of the NUS Annual Teaching Excellence Award (ATEA). He is a fellow at the NUS Teaching Academy.



Yanika **Kowitlawakul**Assistant Professor
Alice Lee Centre for Nursing Studies
Yong Loo Lin School of Medicine
National University of Singapore
National University Health System
Singapore

Dr. Kowitlawakul received her Ph.D in Nursing in 2008, from George Mason University, Virginia, USA. Her professional experiences have included critical care nursing and clinical teaching. Dr. Kowitlawakul has been working as an Assistant Professor at Alice Lee Centre for Nursing Studies, Yong Loo Lin School of Medicine, National University of Singapore, since July 2011. She has been involved in teaching undergraduate and graduate nursing program. Her research areas of interest are patient safety and quality and educational technology.



Charmaine **Krishnasamy**Senior Research Analyst
Health Outcomes and Medical Education Research (HOMER)
National Healthcare Group
Singapore

Charmaine Krishnasamy is a Senior Research Analyst at Health Outcomes and Medical Education Research (HOMER), National Healthcare Group, Singapore. She is involved in various projects with clinicians and academics, on research and evaluation pertaining to the teaching and learning environments of medical and allied health students and educators. Her research interests are in clinicians' research capacity, students' learning environments and rehabilitation outcomes research using both quantitative and qualitative methods.



Fatimah **Lateef**Director
Singhealth Duke NUS Institute of Medical Simulation; and Senior Consultant Emergency Physicians
Singapore General Hospital
Singapore

Associate Professor Fatimah Lateef is Senior consultant, Director of Undergraduate Training and Education as well as Director of Clinical Service and Quality at the Department of Emergency Medicine, Singapore General Hospital. She is also Adjunct Associate Professor at Duke-NUS Medical School and Yong Loo Lin School of Medicine, National University of Singapore. She teaches part-time at the School of Health Sciences, Nanyang Polytechnic. She is also the vice chair of Education in the Emergency Medicine Academic Clinical Programme at Singhealth and Director of The Singhealth Duke NUS Institute of Medical Simulation, the largest and most comprehensive simulation facilities in Singapore. Her area of sub-specialisation include Prehospital Care Medicine, Cardiovascular and Neurovascular Emergencies. She is also highly involved in medical education and research. She has worked in various countries including both the UK and USA, many Asian countries and served as an International Consultant to MaxHealthcare, India.

A strong advocate of life long learning and empowerment, she has presented more than 500 abstracts at international conferences, published over 300 scientific papers in peer-reviewed journals and is on the editorial board and reviewer for some 40 international journals. She leads various leadership groups, grooming youths and doctors to excel, which is also befitting her role as a core faculty, nurturing residents in Emergency Medicine.

For her work in the various fields, she has been conferred awards such as Young Investigator's Award (1998), Excellent Scientific Publication Award (2001), Best Teacher Award (2002), Laerdal Visiting Lectureship Award (2003), Courage Award (2004), National Healthcare Humanity Award (2005), The Outstanding Young Person of Singapore (2006), Good Mentor Award, Singhealth (2005), The Outstanding Young Person of the World Award (2006), Woman for Peace Award, Sokka Gakkai International, (2007), Dean's Award for Excellence in Teaching, NUS (2008), Singapore Medical Journal Recognition Award for Review with Distinction, (2007-2016), Critical Talent Retention Award, Singhealth, Excellent Educator Award 2016 and The Academy of Medicine, Gold Reviewer Award (2011), Deans Awards for Excellence in Clinical Training/ Teaching 2016 from The National University of Singapore and The National Day Long Service Award 2017, amongst others. She continues to work full time, with a fulfilling career in Emergency Medicine, balancing clinical work with research and education, as well as her political and community responsibilities as an elected Member of Parliament in Singapore. She has participated in three General Elections. For recreation, Fatimah enjoys mountain climbing, cooking, reading and she has completed 20 full marathons.



Lau Tang Ching
Senior Consultant, Division of Rheumatology,
National University Hospital and
Associate Professor, Department of Medicine
Vice Dean (Education), Yong Loo Lin School of Medicine
National University of Singapore
National University Health System
Singapore

Dr Lau Tang Ching is currently working as a senior consultant rheumatologist in the Division of Rheumatology, University Medicine Cluster in the National University Health System. He has been appointed as the Vice Dean (Education) of NUS Yong Loo Lin School of Medicine in June 2017. He graduated in 1991 from the National University of Singapore and obtained his Membership of the Royal College of Physician in United Kingdom and the Master of Medicine (internal medicine) degree in 1997. He is a fellow of the Academy of Medicine Singapore since 2001. He also holds a Master of Medical Science degree in Clinical Epidemiology (University of Newcastle, Australia), and a graduate diploma degree in acupuncture (Singapore). His main research interests are in osteoporosis, pharmacoeconomic evaluation, medical education and evidence based medicine. He has helped to coordinate the Health Service Development Program for osteoporosis (HSDP) in 2003 to 2007 in the NHG cluster, which was successful in improving adherence and reducing the recurrent fracture rates of patients who were at high risk of recurrent fractures. He is helping to coordinate the Osteoporosis Disease Management Program (OPTIMAL), which is an extension of the previous HSDP osteoporosis program. He is currently the chairman of the National Arthritis Foundation. His hobbies include photography, singing, cooking, jogging and taichi.



Lee Ching Siang, Cindy
Senior Lecturer
Alice Lee Centre for Nursing Studies
Yong Loo Lin School of Medicine
National University of Singapore
National University Health System
Singapore

Ms Cindy Lee has been involved in teaching undergraduate nursing students. Her teaching areas are Medical-Surgical Nursing, Maternal and Child Health Nursing, Fundamental of Nursing. She has integrated gamification for blood transfusion into nursing curriculum in the nursing laboratory.



Lee Kheng Hock Associate Professor Duke-NUS Medical School Singapore

A/Prof Lee Kheng Hock is the Family Medicine Clerkship Leader at Duke-NUS Medical School. Besides teaching medical students, A/Prof Lee is a faculty of the SingHealth Family Medicine Program as well as the Fellowship Program of the College of Family Physicians Singapore. A/Prof Lee's interest include research in medical education and his work had been published in international peer reviewed journals. A/Prof Lee is practicing as a Senior Consultant in the Department of Family Medicine and Continuing Care at the Singapore General Hospital. He is currently Co-Chair of the Joint Committee on Family Medicine Training, a committee that oversees family medicine training in Singapore.



Llewellyn **Lee**Adjunct Assistant Professor
Yong Loo Lin School of Medicine
National University of Singapore; and
Senior Consultant
Tan Tock Seng Hospital
Singapore

Dr. Lee plays an active role in the training and education of junior ophthalmologists in Singapore, being head of his department's Training and Education committee. He is an Adjunct Assistant Professor at NUS, and the inaugural Program Director for the National Healthcare Group Ophthalmology Residency Program. He is a member of the institution's Graduate Medical Education Committee, and currently serves as Member and Site visitor, Joint Committee on Specialist Training (JCST) Accreditation Committee of Singapore, as well as Member of the JCST Accreditation Process Workgroup. He also serves as Member of the Accreditation Council for Graduate Medical Education-International (ACGME-I) Review Committee.



Lee Shuh Shing
Medical Educationalist
Centre for Medical Education (CenMED)
Yong Loo Lin School of Medicine
National University of Singapore
National University Health System
Singapore

Dr Lee Shuh Shing is a medical educationalist in Centre for Medical Education (CenMED), Yong Loo Lin School of Medicine. Prior joining NUS, she was a Medical Educationalist attached to the Medical Education Research and Development Unit (MERDU) in University of Malaya, Malaysia. After obtaining her PhD in education, she has been actively involved in MBBS curriculum planning and provide staff training in University of Malaya. Her main research interests are in teaching and learning approaches, technology in teaching and learning, student learning and qualitative research.



Liaw Sok Ying Assistant Professor Alice Lee Centre for Nursing Studies Yong Loo Lin School of Medicine National University of Singapore National University Health System Singapore

Dr Liaw Sok Ying has been involved in a number of educational initiatives at ALCNS, including the development and implementation of simulation evaluation tools, Objective Structure Clinical Examination (OSCE), simulation-based interprofessional education and virtual patient simulation. She has created a website at www.rapids.nus.edu.sg to share her evidence-based educational resources on RAPIDS. Her research work on simulation education and RAPIDS has been recognised through publications in high impact journals (e.g. Resuscitation and Journal of Medical Internet Research). She has been invited as a speaker on simulation education by a number of institutions in Japan, Taiwan and Thailand.



Aymeric **Lim**Associate Professor
Vice-Dean, Leadership Development and Strategy
Yong Loo Lin School of Medicine
National University of Singapore
National University Health System
Singapore

Associate Professor Aymeric Lim is currently Vice-Dean, Leadership Development and Strategy, NUS Medicine. He oversees the development of leadership, professionalism, ethics, values and international outreach. He is also the Dean of the Healthcare Leadership College, MOH Holdings, which supports building leadership capacity and capabilities for our national public healthcare system, in line with the Ministry of Health's vision and strategic priorities.

A/Prof Lim served as the Chairman, Medical Board of the National University Hospital from 2008 to 2016. He oversaw the professional leadership in NUH, and governed the practice of patient care. Under his leadership, he established the hospital's Patient Safety Strategy which aims to eliminate harm and achieve zero preventable errors, along with integrating and optimizing patient experience to provide safe and clinically effective care.

A/Prof Lim was the Commanding Officer of 2 Combat Support Hospital from 2009 to 2015. He was a member of the SAF Safety Committee. As a veteran of humanitarian projects, he has led missions to places like Taiwan, Afghanistan and Bandar Aceh in Indonesia.

A trained hand and micro surgeon, A/Prof Lim's expertise includes flaps, peripheral nerve reconstruction and tendon transfers. His research on the intra-muscular innervation of the muscles of the forearm led to new clinical work in the field of tendon transfers, techniques useful for patients with severe forearm crush or nerve injuries. A/Prof Lim has published widely in local and international journals.



**Lim** Boon Leng Deputy Group Director, Education (Graduate), SingHealth Designated Institutional Official, SingHealth Residency Singapore Health Serves Pte Ltd Singapore

Assoc Professor Lim Boon Leng is Designated Institutional Official (DIO) for SingHealth Residency as well as the Deputy Group Director, Education (Graduate), SingHealth Academy. He is also Associate Professor of Duke-NUS Medical School, Clinical Associate Professor of YLL School of Medicine, NUS, Co-Chair of the Professional Development Committee of Academic Medicine Education Institute (AM.EI).

A/Prof Lim's portfolio includes - Director, Surgical ICU (1996-2002); Head, Department of Anaesthesia & Surgical Intensive Care (2004-2009); Chairman, Sub-Division of Anaesthesiology (2009-2011); President, Society of Intensive Care Medicine (1999-2001); President, Singapore Society of Anaesthesiology (2002-2003). He was member of the Specialist Training Committee (Anaesthesiology) from 2006-2011 and Subspecialty Training Committee (Intensive Care Medicine) from 2006-2014. His other works are in Bioethics and Transplant Ethics where he serves as member of SGH Transplant and Bioethics Committee Member since 2005 and MOH National Transplant Ethics Panel since 2009.



Keith **Lim**Assistant Dean
Dean's Office
Yong Loo Lin School of Medicine
National University of Singapore
National University Health System
Singapore

Dr Keith Lim graduated from the National University of Singapore and obtained his postgraduate fellowship in Radiation Oncology from the Royal Australian, New Zealand College of Radiology (RANZCR). He is presently a Senior Consultant and the Group Chief Value Officer for the National University Health System.

Dr Lim is an Assistant Dean with the Yong Loon Lin School of Medicine, National University of Singapore and a member of the Residency Advisor Committee for radiation oncology. He has previously served as the Vice President of the Singapore Society of Oncologists.



Lim Teik Chung Michael Consultant Department of Paediatrics National University Hospital National University Health System Singapore

Dr. Lim is a consultant at the Khoo Teck Puat-National University Children's Medical Institute, NUHS. He graduated from Imperial College School of Medicine, London, in 2000. Dr. Lim is dually-accredited in Paediatrics and Paediatric Respiratory Medicine in the UK, and gained specialist accreditation in Paediatric Medicine in Singapore in 2012. He is active in undergraduate medical education, and is a core faculty member in the postgraduate residency program for paediatrics at National University Hospital.



Lim Wee Khee Senior Lecturer and Consultant Digital Innovation and Design Practice Institute of System Science National University of Singapore Singapore

Lim Wee Khee is a senior lecturer and consultant with the Digital Innovation and Design practice at the Institute of System Science, National University of Singapore (NUS-ISS). She is currently teaching executive education courses for PMETs in the areas of Web Analytics and SEO, Digital and Social Engagement Strategy, Social Media Analytics and Social Media Marketing.

Wee Khee is a customer-centric digital marketing practitioner with years of industry experience in digital marketing, customer experience and brand communications across Asia Pacific. Prior to joining NUS-ISS, she has held various leadership positions with global organisations from consumer technology, electronics, telecommunications industries and government sectors. Her expertise includes marketing strategy, integrated communications across multiple channels, digital marketing (search, social media, email, mobile), ecommerce and web analytics.

Wee Khee graduated from the National University of Singapore with Bachelor of Business Administration (marketing major). She also completed ACTA (Advanced Certificate in Training and Assessment) from IAL (Institute of Adult Learning) and Executive Education from INSEAD.

A people developer at heart, Wee Khee is passionate about leveraging both the creative and analytics aspects of digital into teaching practices.



Lim Wee Shiong Senior Consultant Department of Geriatric Medicine, Institute of Geriatrics and Active Aging Tan Tock Seng Hospital Singapore

A/Prof Lim Wee Shiong is Senior Consultant in the Department of Geriatric Medicine, Tan Tock Seng Hospital. He is faculty advisor to National Healthcare Group Health Outcomes Medical Education Research (NHG-HOMER); Adjunct Associate Professor of Yong Loo Lin School of Medicine, NUS; Fellow of the American Geriatric Society; and Associate Fellow of the Association for Medical Education in Europe (AMEE). He is the course lead for the Atelier Wilson Centre@HOMER Course in Qualitative Research Methods 2017. He was awarded the outstanding alumni award 2016, Health Professions Education Program, MGH Institute of Health Professions, Boston, USA. His research interests in health professions education include interprofessional teams and leadership; outcomes-based program evaluation; and mixed methods research.



Norman **Lin**President, NUS Medical Society, and Medical Undergraduate
Yong Loo Lin School of Medicine
National University of Singapore
Singapore

Norman is a doctor-in-training at the National University of Singapore, Yong Loo Lin School of Medicine. Currently into his fourth year, he has been an active member of the school, serving as the President of the NUS Medical Society. He has been actively involved in school in the areas of medical education by helping to mentor his juniors, as well as community outreach, through organising community service projects and empowering his schoolmates to better serve the community previously in the capacity of the Community Service Director in the Medical Society. Besides this, he continues to broaden his horizons by exploring other interests, and hopes to be able to serve his patients well when he graduates.



Natalie **Ling**Senior Resident
Division of Geriatric Medicine
National University Hospital
National University Health System
Singapore

Dr Natalie Ling is a first year Senior Resident in the Division of Geriatric Medicine with the National University Health System (NUHS). She graduated from the Yong Loo Lin School of Medicine in 2013 and obtained her postgraduate qualification from the Royal College of Physicians (London) in 2016. As Chief Resident during her training in Internal Medicine, she has participated in the teaching of medical students and junior residents in a clinical setting, as well as facilitated local internship programs for medical students trained overseas



Victor Weng Keong **Loh**Assistant Director and Education Director, Undergraduate Family Medicine, Yong Loo Lin School of Medicine, National University of Singapore, and Consultant Family Physician, Division of Family Medicine, University Medicine Cluster, National University Hospital National University Health System Singapore

Dr Victor Loh is posting director of undergraduate family medicine at NUSMed. Since taking on the role, learning activities introduced into the curriculum include the use of standardized patients in consultation skills training, motivational interviewing workshops, the use of student created videos, and the facilitating trainee encounters with the distressed, the differently-abled, and the migrant worker out in the community. The overarching focus of curriculum design has been in facilitating trainee competency in the art and skill of the consultation, the central arena where evidence-based medicine meets clinical uncertainty and complexity. His research interests range from topics closely related to family medicine: doctor-patient communication, antibiotic stewardship, care of the elderly, accessibility to healthcare services, to subjects related to medical education: professional identity formation, the training of family physicians, self-regulated learning, practitioner and trainee wellness, and the role of technology in medical education.



Naomi **Low-Beer** Professor Vice-Dean Education Lee Kong Chian School of Medicine Nanyang Technological University Singapore

Professor Naomi Low-Beer is Vice-Dean, Education and Professor of Medical Education at the Lee Kong Chian School of Medicine (LKCMedicine), responsible for the MBBS programme, taught graduate programmes, and the development of LKCMedicine's Medical Education Research and Scholarship Unit (MERSU). She has published on a number of areas of medical education, including curriculum development, assessment and task analysis. Having combined a career in Obstetrics and Gynaecology with medical education at Imperial College, she relocated to Singapore in December 2014 in order to focus completely on medical education and the training of Singapore's next generation of doctors.



Sarah **Lu** Qinghui Consultant, General Surgery Program Director, NHG General Surgery Residency Program Tan Tock Seng Hospital Singapore

Dr Sarah Lu is a Consultant in Breast Surgery, in the Department of General Surgery, Tan Tock Seng Hospital. She completed her undergraduate medical degree in University College Medical School, London. Dr Lu completed her basic and advanced surgical training in Singapore and did her fellowship in Oncoplastic Breast Surgery in Korea and France. As Program Director of the NHG General Surgery Residency Program, she is actively involved in educating and training the next generation of surgeons. Dr Lu is also involved in undergraduate medical education and has been appointed as Adjunct Assistant Professor in Lee Kong Chian School of Medicine and clinical lecturer in the Yong Loo Lin School of Medicine, National University of Singapore.



Desmond **Ng**Director
Business Development
EON Reality
Singapore

Desmond is responsible for the company's business development, focused on virtual reality training in sectors e.g. the government, educational, and aerospace. He anchored a significant relationship with Accenture, by deploying VR training concepts for Rio Tinto mining workers, and VR shopping concepts for Procter & Gamble. He was also a two-time InnovPlus winner (2016 & 2017), awarded by SkillsFuture Singapore, focused on VR in Safety Training, and Anti-Terrorism. Other portfolios include Singapore Tourism Board, Ascott Residences, Building & Construction Authority of Singapore, and 313 Somerset. In 2011, he was Head of Product in Magellan, Sydney, managing smart wearables, and IoT-enabled products. In 2010, as the Head of e-Publishing, Media Development Authority of Singapore, Desmond formed a consortium to develop an open digital publishing platform to build an ecosystem of digital assets, for education in Japan, China and London. Desmond is also Chairman of AR VR Special Interest Group, under the Singapore Computer Society. He holds a dual Masters in Human Factors Engineering from Linköping Institute of Technology, Sweden and Nanyang Technological University, Singapore.



Nicola **Ngiam**Senior Consultant Paediatrician
National University Hospital
National University Health System
Singapore

Dr Nicola Ngiam graduated from the National University of Singapore and subsequently attained higher academic qualifications in the Masters of Medicine in Paediatrics (NUS) and MRCPCH (UK). She received postgraduate training in the field of Paediatric Critical Care at the Hospital for Sick Children in Toronto, Canada. She is currently the Director of the Standardised Patient Program, Yong Loo Lin School of Medicine, National University of Singapore as well as a consultant in the Paediatric Intensive Care Unit, Khoo Teck Puat – National University Children's Medical Institute, National University Health System.

She is actively involved in undergraduate paediatric education as well as programs for paediatric postgraduate students and nurses in the field of paediatric acute care. She has a special interest in the field of standardised patient training, communication skills and the use of simulation-based teaching methods.



Jacqueline **Ong**Head and Consultant
Division of Paediatric Critical Care
Khoo Teck Puat - National University Children's Medical Institute
National University Hospital
National University Health System
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Dr Jacqueline Ong is currently head and consultant in the Division of Paediatric Critical Care, Khoo Teck Puat - National University Children's Medical Institute, NUH. She graduated from the University of Cambridge in 2003 and received her post-graduate paediatric training in NUH. She attained her Masters of Medicine (Paediatrics) and Membership in the Royal College of Paediatrics in 2007. She underwent further specialist training in the Division of Paediatric Critical Care, Hospital for Sick Children, Toronto, Canada from 2011-2012. She has a myriad of teaching responsibilities to medical students, residents and nurses and is a Pediatric Advanced Life Support (PALS).



**Poh** Chee Lien Assistant Director of Nursing National Healthcare Group Singapore

Ms Poh Chee Lien is the Assistant Director of Nursing at the National Healthcare Group Education Office, Singapore; Senior Project Administrator at the Ministry of Health, Singapore; and Tutor at the University of Adelaide - Ngee Ann Education Centre. Before her appointment at NHG Education Office, she was the Assistant Director, Nursing (Education) and Head of Nursing Training Department at the Institute of Mental Health (IMH), Singapore. She is an Evidence-Based Practice Clinical Fellow of Joanna Briggs Institute, Adelaide, Australia. She holds a Master of Health Science (Education) from the University of Sydney, Australia; Advanced Diploma in Nursing (Gerontology) from Nanyang Polytechnic, Singapore; and a Diploma in Nursing from Nanyang Polytechnic, Singapore.



Gominda G **Ponnamperuma**Assistant Director
Centre for Medical Education (CenMED)
Yong Loo Lin School of Medicine
National University of Singapore
National University Health System
Singapore

Dr. 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 two international medical education journals. He is a postgraduate tutor, examiner, and resource material developer for national and international medical education courses. Gominda has served as an advisor, visiting professor, consultant and fellow for several academic institutes and educational projects. He is a founder co-chair of the Asia Pacific Medical Education Network (APME-Net). His research interests are on assessment (including selection for training), and curriculum development and evaluation.



Habeebul **Rahman** Senior Consultant Tan Tock Seng Hospital Singapore

Dr Habeebul works as a Senior Consultant Psychiatrist at the Department of Psychological Medicine in Tan Tock Seng Hospital. He is a Member of the Royal College of Psychiatrists, and has a Diploma in Psychotherapy, which is his area of interest. He is also Assistant Professor at Lee Kong Chian School of Medicine and Yong Loo Lin School of Medicine, National University of Singapore.



Vaikunthan **Rajaratnam** Senior Consultant Khoo Teck Puat Hospital Singapore

Dr Vaikunthan Rajaratnam has 35 years' experience as a hand surgeon, medical educator, instructional designer and medical entrepreneur in the Asian and European health care environment. In 2011, Dr Rajaratnam moved to Singapore as Senior Consultant. He is core faculty for the Orthopaedic and Hand Surgery Residency program and advisor to the Hand Surgery Exit Exam Committee and examiner for the Royal College of Surgeons of Edinburgh, Masters in Orthopaedics Surgery, National University of Singapore and External Examiner, Conjoint Orthopaedic Board Exams, Malaysia. He sits on the National Transplant Ethics Committee and the National Medical Ethics Committee.



Dujeepa D **Samarasekera**Director, Centre for Medical Education
Yong Loo Lin School of Medicine
National University of Singapore
National University Health System
Singapore

Dujeepa Samarasekera is the Director, Centre for Medical Education, Yong Loo Lin School of Medicine, National University of Singapore. Dujeepa has been involved in curriculum planning, evaluation, and student assessment at both undergraduate and postgraduate level health professional education courses.

Dujeepa serves on the editorial advisory boards of South East Asian Journal of Medical Education (SEAJME), Korean Journal of Medical Education and is a peer reviewer for Medical Teacher, Medical Education, Annals of Academic Medicine, Singapore Medical Journal, Asia Pacific Journal of Public Health and serves as faculty to local and international health professional education programs.

He is also the Vice-President of the Western Pacific Association for Medical Education (WPAME) and a board member of Asian Medical Education Association, AMEE Ambassador and member of ASPIRE panel for Medical School Assessment and Faculty Development, and Asia Pacific Network for Scholarship in Medical Education (APNetSME).

His main research interests are in effective teaching/learning behaviours and assessment and has published in peer reviewed journals as well as authored book chapters relating to Medical and Health Professional Education.



Shen Liang Senior Manager, Biostatistics Unit Yong Loo Lin School of Medicine National University of Singapore National University Health System Singapore

Liang received her PhD in Statistics from National University of Singapore, and is currently working as senior biostatistician at the Biostatistics Unit in the Yong Loo Lin School of Medicine. She is actively involved in conducting research and statistical courses to help researchers in their aims of publication and to enhance their understanding of reading published articles. She serves as statistical reviewer for the international journal Disease of Colon and Rectum.



Shefaly **Shorey**Assistant Professor
Alice Lee Centre for Nursing Studies
Yong Loo Lin School of Medicine
National University of Singapore
National University Health System
Singapore

Dr Shorey is an Assistant Professor at Alice Lee Centre for Nursing Studies, National University of Singapore. Her research areas focus on family and women health as well as nursing education. She has designed psychosocial and educational interventions for varied group of populations. She has conducted both quantitative (e.g. Randomized controlled trials, descriptive quantitative studies) and qualitative (e.g. descriptive qualitative) studies. Her research studies involve national and international collaborations. Dr Shorey's research focus is on enhancing health outcomes, quality of care and students' satisfaction in nursing education. Dr Shorey has received various awards for her academic and research excellence. She has been invited at various conferences and the findings of her research has been presented in national, regional and international conferences. She has published in high impact factor journals.



Siau Chiang Senior Consultant Department of Anaesthesia National University Hospital National University Health System Singapore

Dr Siau Chiang is a Senior Consultant with Department of Anesthesia, National University Health System and Associate Professor with the Yong Loo Lin School of Medicine, National University of Singapore. He is a Core Faculty and Program Evaluation Committee member of the NUHS Anaesthesiology Residency Program. Dr Siau has a keen interest in the growth and adoption of simulation in healthcare education. He is actively involved in the development, implementation and evaluation of medical undergraduate and postgraduate simulation-based curricula, interprofessional and patient safety education, simulation faculty development and debriefing courses. His clinical interests include peri-operative pain management and ultrasound-guided regional anaesthesia.



**Tai** Yuen Ling Esther Principal Occupational Therapist National University Hospital Singapore

Esther graduated from the Hong Kong Polytechnic University in 2001 and obtained her Masters in Health Science from the University of Sydney in 2007. She has worked as an occupational therapist in Hong Kong, United Kingdom and Singapore. She is a training leader and expert level "Developmental, Individual difference and Relationship based" (DIR) floortime provider under the Interdisciplinary Council on Development and Learning (ICDL). She has taught DIR floortime professional courses in Singapore and overseas. Esther has been actively involved in clinical teaching, as well as promoting Interprofessional Education (IPE) and Interprofessional Collaboration (IPC) at National University Hospital. She is currently pursuing a Masters in Clinical Education at the University of Edinburgh.



Anna **Tan** Wee Tien
Senior Consultant and Head
Cornea & Refractive Surgery Services
Department of Ophthalmology, and
Program Director, Ophthalmology Residency Program
National University Hospital
National University Health System
Singapore

Dr Anna Tan is an assistant professor in the Department of Ophthalmology, Yong Loo Lin School of Medicine. Her clinical area of expertise is in Cornea and External Eye diseases as well as Refractive Laser Surgery like femtosecond laser LASIK and SMILE. She is also the Program director of Ophthalmology Residency Program at the National University Health System. Her special interest is in surgery simulation through wet laboratories and currently conducts 4 wet lab sessions annually to teach cataract surgery. She is involved in curriculum development for the undergraduates and examination and assessments for post graduates.



Tan Chay Hoon
Associate Professor, Department of Pharmacology
Member, Centre for Medical Education (CenMED)
Yong Loo Lin School of Medicine, National University of Singapore; and
Consultant Psychiatrist, National University Hospital
National University Health System
Singapore

Professor Tan serves as a Consultant Psychiatrist at National University Hospital and an Associate Professor in 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 Educational Task Force, Professional Development, Mentoring Program, and Longitudinal Patient Program in the School of Medicine, National University of Singapore.

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.



Clement Woon-Teck **Tan**Senior Consultant and Head
National University Hospital
National University Health System
Singapore

Associate Professor Clement Tan took over Headship of Ophthalmology Department, National University Hospital and National University Singapore in 2014. He obtained his MBBS from the National University of Singapore in 1993. After completing his basic and advanced Ophthalmology training in Singapore, Associate Professor Tan completed a fellowship in Neuro-ophthalmology at King's College Hospital and the National Hospital for Neurology and Neurosurgery in London. He received his Masters in Health Professions Education from University of Maastricht in June 2014.

Apart from general clinical ophthalmology and general neuro-ophthalmology, he has special interests in eye movement and pupil disorders. Associate Professor Tan heads the Neuro-ophthalmology service at the National University Hospital. He also plays a significant role as NUHS Associate Designated Institutional Official in Residency Program. He is passionate about teaching and has been recipient of National University Hospital Postgraduate Teaching Excellence Award for 5 consecutive years (2011-2015). As such he was awarded the NUH Eminent Teacher Award in 2016 an award that is given to educators who have won the Teaching Excellence Award 5 times.



Tan Keng Teng Principal Pharmacist (Clinical) Tan Tock Seng Hospital Singapore

Ms Tan Keng Teng has a Bachelor's degree in Pharmacy and a Masters in Health Professions Education. She is a board certified geriatric pharmacist and has completed 1-year advanced training in geriatric pharmacy with the University of Southern California in the United States. She works closely with geriatricians, nurses and allied health professionals in Tan Tock Seng Hospital to optimize care to older adults.



Tan Soh Chin Chief Nursing Officer Ministry of Health Singapore

The Ministry of Health, Singapore appointed Ms Tan Soh Chin as the nation's Chief Nursing Officer (CNO) in Jan 2015. As CNO, she takes on a strategic national staff function with policy oversight and accountability for the nursing profession. Her office oversees the strategic development of nurses in Singapore, evaluates nursing policies and standards, and provides professional input to the Ministry on all nursing policy matters and development. Concurrent with her appointment as CNO, Soh Chin is also the Registrar of the Singapore Nursing Board, which regulates nursing registration and education.



Tham Kum Ying
Education Director and Senior Consultant Emergency Physician
Tan Tock Seng Hospital; and
Assistant Dean Year 5 and Lead for Emergency Medicine
Lee Kong Chian School of Medicine
Nanyang Technological University
Singapore

Associate Professor Tham Kum Ying graduated in 1988 with MBBS from the National University of Singapore (NUS) and obtained her FRCSEd (A&E) from the Royal College of Surgeons of Edinburgh in 1993. She became a Fellow of the Academy of Medicine, Singapore in 1999. She completed her Master of Science in Training and Human Resource Management (Distinction) from the University of Leicester, UK in 2006 and Doctorate in Education in July 2016. She has been teaching medical students, junior doctors, nurses and paramedics since 1994.

Through the years, she is a much sought after teacher and lecturer and has won numerous teaching awards. Moving beyond her specialisation in emergency medicine, resuscitation and trauma, she is now widely consulted on clinical education matters e.g.

curriculum innovation and improvement, faculty development. Her research interests include students' learning of professionalism, professional identity formation and development of teaching culture in an organisation. From 2008 onwards, she has been involved in the setting up, organisation and launch of the Lee Kong Chian School of Medicine, Singapore's newest medical school for the inaugural intake in August 2013.



Winnie **Teo**Manager
National Healthcare Group
Singapore

Ms Winnie Teo graduated from the School of Biological Sciences, National University of Singapore with a Ph.D. in Molecular Biology. After her post-doctoral research stint, she joined an educational consultancy group, helping Singapore schools set up and implement molecular biology education programmes. A keen educator, she also lectured part-time in the School of Chemical and Life Sciences, Nanyang Polytechnic.

Winnie is excited about being in health professions education and research, and much of her current work at the National Healthcare Group revolves around developing capabilities for grooming the Professionals for Tomorrow's Healthcare.



Frank **Voon**Associate Professor, Department of Anatomy
Yong Loo Lin School of Medicine
National University of Singapore
National University Health System
Singapore

Dr Frank CT Voon teaches medical and dental students, doctors, dentists and surgeons at the National University of Singapore. His background as a medical doctor and specialization in Anatomy, Embryology, Information Technology, Central Administration and Psychotherapy has led to his interest in the growth of human beings from gestation to old age brought about by the technological evolution in human culture and civilization. These convergences have a foundation in neurocognition and the mind in relation to attention, awareness, communication and engagement, and are relevant to the understanding of memory, forgetfulness and learning.



Wong Mun Loke Vice Dean (Academic Affairs) Faculty of Dentistry National University of Singapore National University Health System Singapore

In addition to his role as the Vice Dean of Academic Affairs in the Faculty of Dentistry, A/P Wong Mun Loke is actively involved in the undergraduate teaching of Dental Public Health, Preventive Dentistry and Behavioural Science. He is also a member of the NUS Inter-professional Education Steering Committee. His interest in inter-professional teaching has also led to his engagement in various teaching activities beyond the dental faculty. Mun Loke received his MSc, with Distinction, in Dental Public Health from the Eastman Dental Institute, University College London, in 2002.



Wong Teck Yee
Family Physician, Senior Consultant
Dept of Continuing and Community Care,
Tan Tock Seng Hospital; and
Associate Professor & Assistant Dean (Year 4 & Family Medicine)
Lee Kong Chian School of Medicine (LKCMedicine),
Nanyang Technological University
Singapore

Teck Yee is a Family Physician, Senior Consultant, in TTSH and Associate Professor & Assistant Dean (Year 4 & Family Medicine) in LKCMedicine. He also holds the appointment of Dy Education Director for NHG Pre-Professional Education Office. He obtained his MBBS (1995), Masters in Family Medicine (2001), MPH (2009) & Masters in Health Professions Education (2013).

After completing his Family Medicine residency training, he worked in Choa Chu Kang Polyclinic as a Family Physician (2001-04) and later as Head/Senior Family Physician (2004-06). He was awarded the Human Manpower Development Programme (HMDP) scholarship to the Dept of General Practice in Monash University, Melbourne (2005). He joined the Yong Loo Lin School of Medicine as an Assistant Professor (2006-11), holding the post of FM Undergraduate Education Director.

He joined Tan Tock Seng Hospital was appointed Assistant Dean of LKCMedicine (2011) and Deputy Education Director of NHG (2017). He is an examiner for the Graduate Diploma of FM and the MMed (FM) in Singapore. He was a member of the National Undergraduate Curriculum Committee and is currently on the FM Residency Advisory Committee.

He remains active in clinical practice and has contributed articles in numerous peer-reviewed journals. He also actively participates in both local and international conferences, with numerous oral and poster presentations.



Mabel **Yap**Director
Professional Training and Assessment Standards Division
Ministry of Health
Singapore

A/Prof Mabel Yap is currently Director, Professional Training and Assessment Standards Division, MOH, where she oversees policies related to training and assessment standards from pre-registration to post-registration for healthcare professionals. A/Prof Yap has a PhD in Nutrition and a Master's degree in Science (Public Health). She also has a Post Graduate Diploma in Human Nutrition and medical degree from the National University of Singapore.



Yeoh Khay Guan
Dean
Yong Loo Lin School of Medicine
National University of Singapore
National University Health System
Singapore

Dr Yeoh is concurrently Dean of the School of Medicine, National University of Singapore and Deputy Chief Executive of the National University Health System. He practises as a Senior Consultant at the Department of Gastroenterology and Hepatology, National University Hospital, Singapore.

His research interest is in enhancing the early detection of gastric and colorectal cancers. He is the Lead Principal Investigator of the Singapore Gastric Cancer Consortium, a national flagship research group. He also chairs the National Colorectal Cancer Screening Committee of the Health Promotion Board, Ministry of Health. He has published over 160 peer-reviewed papers in international journals.



Yip Chee Chew Head and Senior Consultant Ophthalmology and Visual Sciences Department Khoo Teck Puat Hospital Singapore

Adj. A/Prof Yip is Head and Senior Consultant at the Ophthalmology & Visual Sciences Department of Khoo Teck Puat Hospital; and Clinical Director at Admiralty Medical Centre. He is also an Adjunct Associate Professor at Yong Loo Lin School of Medicine, National University of Singapore as well as Lee Kong Chian School of Medicine, Nanyang Technological University. He received the American Academy of Ophthalmology Achievement Award (2008), the American Academy of Ophthalmology International Ophthalmologist Education Award (2011) and the Eye and Visionary Award (2012) for his contributions in ophthalmic education. He has an educational research interest in effective teaching and learning.



Doris **Young**Professor
Division of Family Medicine
Yong Loo Lin School of Medicine
National University of Singapore
National University Health System
Singapore

Doris Young graduated from Faculty of Medicine, University of Melbourne and completed Family Medicine training in Australia. Over the last 35 years, Doris has been involved extensively in educating and training medical students, registrars, general practitioners and other health professionals in adolescent medicine, general practice and primary care research. Doris Young has published widely in the area of General Practice integration models with the wider health care system and her research focused on trialing innovative models of care in the primary care setting to improve health outcomes for people with chronic diseases in culturally and linguistically diverse and disadvantaged communities.



Nabil **Zary**Acting Director
Medical Education Research and Scholarship Unit
Lee Kong Chian School of Medicine
Singapore

Associate Professor Nabil Zary is the acting director of the Medical Education Research and Scholarship Unit (MERSU) at the Lee Kong Chian School of Medicine (LKCMedicine) in Singapore and the Founding Academic Director of the Games for Health Innovations Centre (ALIVE). Associate Professor Zary's mission is to advance the contribution of emerging technologies, in order to benefit healthcare education and the general health of our society. He is also Associate Professor of Medical Simulation and eLearning at Karolinska Institutet, Sweden. He leads the European branch of the ANSI accredited Medbiquitous standards for health professions that advance life-long learning, continuous improvement and better patient outcomes.

#### **ABSTRACT REVIEWERS**

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Richard Hays, Australia Wayne Hazell, Australia

Marcus A Henning, New Zealand

Harivelle Charmaine T. Hernando, Philippines

Anita Ho, Singapore Yera Hur, South Korea

Indika Karunathilake, Sri Lanka

Makoto Kikukawa, Japan

Chi-Wan Lai, Taiwan

Kosala Marambe, Sri Lanka

Judy McKimm, United Kingdom

Hiroshi Nishigori, Japan

Jørgen Nystrup, Denmark

Asela Olupeliyawa, Sri Lanka

Wojciech Pawlina, USA

Joachim Perera, Malaysia

Gopalakrishnakone Ponnampalam, Singapore

Megan Quentin-Baxter, United Kingdom

Lambert Schuwirth, Australia

Ivan Silver, Canada

Diantha Soemantri, Indonesia

Yvonne Steinert, Canada

Kevin Tan, Singapore

Nigel Tan, Singapore

T. Thirumoorthy, Singapore

Michael Wan, Australia

Wong Mun Loke, Singapore

Jen-Hung Yang, Taiwan

#### **JUDGES**

Overall Chief Judge - Koh Dow Rhoon

# Friday 12 January 2018 11.15am - 12.30pm and 2.00pm- 3.30pm

# Best Abstract for Poster Presentation (BP01-BP10, BP31-BP40)

Jason Yap, Singapore\* Greg Radu, Canada Darren Seah, Singapore

# Best Abstract for Poster Presentation (BP21-BP30, BP51-BP60)

Chen Fun Gee, Singapore\* Ho Keung Ng, Hong Kong S.A.R. Keh-Min Liu,Taiwan

# Best Abstract for Poster Presentation (BP11-BP20, BP41-BP50)

Abhilash Balakrishnan, Singapore\* Hugh John Fardy, Australia Ma. Cristina e. Zulueta, Philippines

### Friday 12 January 2018

# 11.15am- 12.45pm Free Communications Session 1

Chintaka Balasooriya, Australia\* Anette Jacobsen, Singapore Pete Ellis, New Zealand

#### Free Communications Session 2

Hiroshi Nishigori, Japan\* Shirley Ooi, Singapore Ravindran Jegasothy, Malaysia

#### 2.00pm- 3.30pm Free Communications Session 3

Anurag Saxena, Canada\* Jason Chan, Singapore Soracha Thamphiwatana, Thailand

#### Free Communications Session 4

Diantha Soemantri, Indonesia\* Chiam Peak Chiang, Singapore Indika Karunathilake, Sri Lanka

#### Free Communications Session 5

Vishna Devi V Nadarajah, Malaysia\* Danai Wangsaturaka, Thailand Anthony Buzzard, Australia

#### Free Communications Session 6

Kalyani Premkumar, Canada\* Tanya Tierney, Singapore Richard Fuller, UK

#### Free Communications Session 7

Lambert Schuwirth, Australia \* Malcolm Mahadevan, Singapore Lim Ki-Young, Korea

# Free Communications Session 8

Don Moore, USA \*
Kathy Brotchie, Australia
Harumi Gomi, Japan

\*Chief Judge for the respective sessions

#### **JUDGES - E-POSTER PRESENTATION**

#### Saturday 13 January 2018

#### 8.15am-9.00am

Session 1 – Yanika Kowitlawakul, Singapore Session 2 – Chen Zhi Xiong, Singapore Session 3 – Yasushi Matsuyama, Japan Session 4 – Koh Kwang Fah, Singapore Session 5 – Amila Punyadasa, Singapore Session 6 – Harumi Gomi, Japan

#### 11.15am-12.45pm

Session 7 – Tay Sook Muay, Singapore
Session 8 – Junji Haruta, Japan
Session 9 – Amy Gray, Australia
Session 10 – Makoto Kikukawa, Japan
Session 11 – Chan Lap Ki, Hong Kong
Session 12 – Balakrishnan Kichu Nair, Australia
Session 13 – Yip Chew Chee, Singapore
Session 14 – Roberto SJ Tan, Philippines
Session 15 – Sophia Archuleta, Singapore
Session 16 – Kang Yew Beng, Malaysia
Session 17 – Bettina Lieske, Singapore
Session 18 – Low Seow Ping, Singapore

#### 1.00pm - 1.45pm

Session 19 – Michael Wan, Australia Session 20 – James Thomas, Japan Session 21 – Raymond Ngo, Singapore

#### 2.15pm-3.45pm

Session 22 – Ikuo Shimizu, Japan Session 23 – Manjari Lahiri, Singapore Session 24 – Lucy Victora, Singapore

# ESSENTIAL SKILLS IN MEDICAL EDUCATION (ESME) COURSE RESEARCH ESSENTIAL SKILLS IN MEDICAL EDUCATION (RESME) COURSE

#### **ESME COURSE**

Wednesday 10 January 2018 (8.30am)	Multipurpose Hall 1, Level 3, Tahir Foundation Building, Block MD1, NUS Yong Loo Lin School of Medicine
Thursday 11 January 2018	ESME Course participants should register for one or two 15th APMEC pre-conference workshops (cost not included).
Friday 12 (1.00pm) and Saturday 13 January (1.00pm) 2018	Leo 4, Level 1, Resorts World Convention Centre
Sunday 14 January 2018 (9.00am)	Multipurpose Hall 1, Level 3, Tahir Foundation Building, Block MD1, NUS Yong Loo Lin School of Medicine

# **RESME COURSE**

Wednesday 10 January 2018	RESME Course participants should register for one or two 15th APMEC pre-conference workshops (cost not included).
Thursday 11 January 2018 (8.30am)	Multipurpose Hall 1, Level 3, Tahir Foundation Building, Block MD1, NUS Yong Loo Lin School of Medicine
Friday 12 (1.00pm) and Saturday 13 January (1.00pm) 2018	Pisces 1, Level 1, Resorts World Convention Centre

#### Rationale

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 accredited 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 in the context that all doctors in any branch of medicine or field of practice are likely to have some teaching responsibilities for undergraduates, postgraduates, peers, other healthcare workers or patients. ESME's novel course structure combines a purpose-built course on teaching with an international medical education Conference.

ESME is accredited by AMEE and approved by an international Advisory Board.

Since the introduction of the original ESME course in 2005, several other courses have been developed to meet specific needs:

- Essential Skills in Medical Education Assessment (ESMEA)
- · Research Essential Skills in Medical Education (RESME)
- Essential Skills in Medical Education Simulation (ESMESim)
- Essential Skills in Computer-Enhanced Learning (ESCEL)
- Essential Skills in Continuing Education and Professional Development (ESCEPD)
- Essential Skills in Medical Education Online (ESME Online)
- Essential Skills in Medical Education Leadership Online (ESME Leadership Online)

# **ESME at 15th APMEC**

Two ESME Courses are offered at this Conference: (1) the original Essential Skills in Medical Education and (2) Research Essential Skills in Medical Education. Please note: it is not possible to attend more than one course at APMEC due to timing conflicts.

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#### 1. Essential Skills in Medical Education

This broad-based course has been designed around a set of competencies that all practising teachers should possess. These include: Effective Teaching, Skilled Educational Planning and Informed Assessment and Evaluation.

#### **ESME Course schedule**

Wednesday 10 January 0830-1730 - 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;

Thursday 11 January: Attend other Pre-conference Workshops (cost not included)

Friday 12 January: Attend 15th APMEC Conference; lunch meeting with ESME Facilitators

Saturday 13 January: Attend 15th APMEC Conference; lunch meeting with ESME Facilitators

#### Sunday 14 January 0900-1230 - 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 Harden, formerly Director of the Centre for Medical Education, University of Dundee, UK, and currently General Secretary/Treasurer of AMEE and Editor of Medical Teacher;

### Faculty members:

**Professor Matthew C. E. Gwee**, Professorial Fellow and Chairman, International and Education Programmes, Centre for Medical Education, Dean's Office, NUS Yong Loo Lin School of Medicine, National University Health System

**Dr Dujeepa Samarasekera**, Director, Centre for Medical Education, NUS Yong Loo Lin School of Medicine, National University Health System

Associate Professor Tan Chay Hoon, Associate Professor, Department of Pharmacology, Member, Centre for Medical Education, NUS Yong Loo Lin School of Medicine, and Consultant Psychiatrist, National University Hospital, National University Health System

Associate Professor Poh-Sun Goh, Member, Centre for Medical Education, Associate Professor, Diagnostic Radiology, NUS Yong Loo Lin School of Medicine, National University Health System

#### **ESME Course Fee: SGD825**

Included in the course fee is:

- One full-day pre-conference session
- Two lunchtime discussion sessions with faculty during APMEC
- · One half-day post-conference session
- Printed course programme
- Set of resource materials provided on USB memory stick
- 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 15th APMEC and pay the registration fee, and pay to attend one or two pre-conference workshops of their choice.

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# **ESME & RESME COURSES**

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#### 2. Research Essential Skills in Medical Education (RESME)

The RESME Course provides an introduction to the essential principles and methods of conducting research in medical education: formulating research questions, choosing a research approach, selecting an appropriate global methodology and constructing a research plan. Through a series of short presentations and small group work, this highly interactive course will introduce basic concepts and principles using a variety of examples relating to theory. After completing the course, participants will have acquired a framework for understanding and application of essential concepts and principles for research in medical education. Within six months of completion of the course, participants may choose to submit a short research proposal on a topic of their interest describing the application of concepts and principles covered in the course, leading to award of the RESME Certificate in Medical Education.

#### **RESME Course Schedule**

Wednesday 10 January: Attend other Pre-conference Workshops (cost not included)

Thursday 11 January 0830-1730: RESME Pre-conference Session

Friday 12 January: Attend 15th APMEC Conference; lunch meeting with RESME Facilitators

Saturday 13 January: Attend 15th APMEC Conference; lunch meeting with RESME Facilitators; In-conference workshop

#### **RESME Course Faculty**

Charlotte Ringsted (Aarhus University, Denmark) (Course Leader)

Albert Scherpbier (Maastricht University, Netherlands)

Elise Paradis (University of Toronto, Canada)

#### **RESME Course Fee: SGD825**

Included in the course fee is:

- One full-day pre-conference session
- Two lunchtime discussion sessions with faculty during APMEC
- One in-conference workshop
- Printed course programme
- Set of resource materials
- · Certificate of participation
- · Optional submission and assessment of a post-course report, details of which will be given during the Course
- Award of RESME Certificate in Medical Education if the post-course report is assessed as meeting the requirements of the Certificate.

Please note: In addition to the RESME course fee, participants are required to register for 15th APMEC and pay the registration fee, and pay to attend one or two pre-conference workshops of their choice.

# How to register for ESME or RESME

Participants should register for either ESME or RESME by selecting the appropriate option on the 15th APMEC registration form. It is not possible to attend more than one course due to scheduling conflicts.

### **Questions about the Courses**

For queries specifically about ESME or RESME course content please contact AMEE:

AMEE, 12 Airlie Place, Dundee DD1 4HJ, UK

# W1F1

Wednesday 10th January 2018, 9.00am – 5.00pm Computer Lab 1, Level 8, MD1 Yong Loo Lin School of Medicine National University of Singapore

#### **USING SPSS FOR DATA ANALYSIS**

**Shen Liang** Singapore

#### **Workshop Description**

In this workshop, SPSS software will be introduced in the use of data analysis. A short discussion on proper form design and data collection will be highlighted. Participants will be informed of how to present the relevant descriptive statistics, the statistical techniques for quantitative and qualitative outcomes using Univariate and Multivariate analyses.

# W1A1

Wednesday 10th January 2018, 8.30am – 12.30pm Multipurpose Hall 2, Level 3, MD1 Yong Loo Lin School of Medicine National University of Singapore

#### **DISCOURSE ANALYSIS: AN INTRODUCTION**

# Brian D Hodges

Canada

#### **Workshop Description**

This introductory workshop introduces Discourse Analysis as a research methodology. Three forms of discourse analysis are explored: linguistic, empirical and critical/Foucauldian. Participants will then, through interactive and group work, have hands-on experience in creating a mini-discourse analysis of a health professions education phenomenon.

#### **Workshop Objective**

- 1. Outline various approaches to discourse analysis
- 2. Explore different uses of discourse analysis
- 3. Practice one type of discourse analysis

#### W1A2

Wednesday 10th January 2018, 8.30am – 12.30pm Learning Room 03-06, Level 3, MD6 Yong Loo Lin School of Medicine National University of Singapore

### MEDICAL EDUCATION THROUGH THE LENS OF SAMR: AN APPLIED WORKSHOP

**Ruben Puentedera** USA

#### **Workshop Description**

The challenge facing us as educators today is not just for students to master a rapidly growing array of medical technologies - it is to transform their critical thinking and problem solving patterns through tools such as computer visualization and digital storytelling. In this workshop, we will see how to use SAMR and the EdTech Quintet to accomplish this goal. Examples will be drawn from medical education and practice, including patient safety and communication. Our approach throughout will be hands-on: participants in this workshop will design a SAMR ladder that they can put to use in an area of their interest right away.

# W1A3

Wednesday 10th January 2018, 8.30am – 12.30pm Learning Room 01-01B, Level 1, MD6 Yong Loo Lin School of Medicine National University of Singapore

#### USING SIMULATIONS TO LEARN ABOUT TEAMWORK IN HEALTHCARE

Winnie Teo, Tan Keng Teng, Poh Chee Lien, and Wong Teck Yee Singapore

# **Workshop Description**

Teamwork and interpersonal communication issues have often been cited as major reasons underlying professional issues in healthcare such as burnout, as well as preventable errors in patient safety lapses. However, effective team building skills are seldom explicitly included in medical education curricula. We have devised an interactive session where learners first participate in activities designed to surface important principles in teamwork and collective decision-making, reflect on their teamwork skills, and finally, are introduced to principles and practical tools to enable them to become effective leaders and members of healthcare teams. In addition to experiencing a hands-on activity about team skills, we will also discuss the complexities and challenges associated with integrating teamwork and other "soft skills" in a medical education curriculum.

#### **Workshop Objective**

This workshop will enable participants to experience common team dynamics in healthcare, learn about principles and frameworks for building and enabling effective teams, and gain an appreciation of the major issues associated with teaching teamwork in medical education.

#### Who Should Attend

All who are interested in curriculum design, experiential learning activities or teamwork skills.

# W1A4

Wednesday 10th January 2018, 8.30am – 12.30pm Multipurpose Hall 3, Level 3, MD1 Yong Loo Lin School of Medicine National University of Singapore

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

<sup>1</sup>Peter GM de Jong and <sup>2</sup>Julie K Hewett

<sup>1</sup>The Netherlands and <sup>2</sup>USA

#### **Workshop Description**

In publishing scholarly work, not only the writing skills of the author are important. At least as important is choosing the right strategy in submitting the work to the most appropriate journal. It is also useful to know how the Editorial Office and Editorial Board of a journal handle the manuscripts received. Knowledge of these last two aspects can significantly increase the chances for acceptance of the manuscript.

The workshop will give the attendees more insight in the editorial processes of a journal and several concrete strategies to increase the chances of acceptance of their work. First an overview of several journals for Medical Education will be presented and the differences in focuses will be discussed. As an example, the presenters will showcase the internal procedures of one of those journals to explain the attendees what is happening behind the scenes of a journal. Characteristics of several manuscript types available will be discussed and some general advice will be given in order to make the process of submission as successful as possible.

During the session the participants will get a few think-pair-share assignments in order to help clarify the several steps in submitting and the organization of a journal. Based on several brainstorm exercises and actual experiences from the audience, the presenters will provide tips and recommendations.

# **Workshop Objective**

At the end of the workshop the participants will have a better understanding of scientific publishing and the way in how a manuscript should be submitted. The workshop is intended for those with no or little experience in submitting manuscripts to international journals.

# W1A5

Wednesday 10th January 2018, 8.30am – 12.30pm Learning Room 03-05, Level 3, MD6 Yong Loo Lin School of Medicine National University of Singapore

#### **DEVELOPMENT OF E-LEARNING IN NURSING EDUCATION: TRENDS AND STRATEGIES**

Yanika Kowitlawakul, Liaw Sok Ying, Lee Ching Siang, Serena Koh and Shefaly Shorey Singapore

#### **Workshop Description**

To enhance students' learning outcomes, use of information communication technology has been on the rise, specifically in higher education. Many resources have been invested worldwide to incorporate information technology in the curriculum. One such example is the development of computer applications to assist students to learn. A variety of terms have been used to describe these applications, such as e-learning and technology enhanced learning (Phillips et al., 2012). Littlejohn and Pegler (2007) defined e-learning as "the process of learning and teaching with computer and other associated technologies, particularly through use of the internet" (p.15). However, in nursing education, teaching methods have been evolved to the blended learning that incorporates face-to-face and e-learning. As a result, e-learning has become part of curriculum to deliver core contents in both theory and clinical skills to nursing students. E-learning allows students to study at their own pace and time and achieve learning outcomes similar to face-to-face learning. This is supported by literature, which reported there was no significant difference in the level of knowledge gained by students between face-to-face and e-learning methods (Hugeholtz et al., 2008; Rozar et al., 2011).

The development and design of e-learning must be based on the course objectives and expected students' learning outcomes. The development of e-learning is a complex, multidisciplinary process, that proceed through multiple design and evaluation cycles (Philips et al., 2012). It consists of numerous phases, such as analyzing the requirements, specifying the design, development, and evaluation. However, many studies found that the e-learning has lacked interactive component. It has been suggested that effective e-learning should have the following components; 1) organized that address the particular needs of the learners, 2) interactive, 3) presenting real-life situations, 4) involving pedagogy, 5) user friendly, and 6) having technical and organization support (Cheng, 2013; Dariel, Wharrad, & Windle, 2012; Button, Harrington, & Belan, 2014). In summary, the development of e-learning must be well planned for the effective e-learning. It is important that faculty members and educators gain more understanding of trends and strategies in developing effective e-learning in nursing education to achieve the optimal students learning outcomes.

### **Workshop Objective**

The aim of this interactive workshop is to enable participants to share and discuss trends and strategies for developing and integrating e-learning into their curriculum. After attending this workshop, participants will be able to:

- · Reflect on and to identify challenges in developing and implementing e-learning in their own countries
- Discuss global trends of using e-learning in nursing education
- Formulate strategies to evaluate e-learning in the 21st Century
- Explore opportunities for education and research collaboration

### **Who Should Attend**

Nurse educators/faculty/stakeholders of nursing education will benefit by attending this workshop. The principles learned in this workshop can be applied to policy and practice related nursing education and curriculum development. There will be in-depth discussion about issues related to e-learning in nursing.

# W1A6

Wednesday 10th January 2018, 8.30am – 12.30pm Learning Room 03-04, Level 3, MD6 Yong Loo Lin School of Medicine National University of Singapore

#### OPTIMISING YOUR EDUCATIONAL ACTIVITY INVOLVING SIMULATED PATIENTS

Nicola Ngiam and Hor Chuen Yee Singapore

#### **Workshop Description**

Simulated Patients (SPs) are individuals who are trained to mimic the signs and symptoms of real patients. Engaging SPs is a useful avenue to promote realism and encourage experiential learning in medical education. Because the student is not scripted in the interaction between a student and a simulated patient, unexpected events may occur. This may result in a negative impact on learning objectives or an unexpected teachable moment. This workshop aims to highlight the common pitfalls in educational activities involving SPs and participants will discuss how to avoid or overcome these.

SPs are not only able to behave as a real patient, they are also able to observe the interaction with the learner and provide valuable feedback. This feedback frequently leads to a deeper understanding of the doctor patient relationship by the learner. These observation by the SP can be used as formative or summative assessment or feedback. These forms of assessment and feedback will be explored in the workshop and participants will be provided with exposure to various tools that could be modified for use at their local institutions.

#### **Workshop Objective**

- 1. Increase awareness of common pitfalls in educational session involving SPs
- 2. Explore feedback from SPs
- 3. Explore SP input in assessment

#### **Who Should Attend**

Educators who are just starting out with standardised or simulated patients and who have encountered challenges in running such sessions. Some experience with SPs is necessary.

### W1A7

Wednesday 10th January 2018, 8.30am – 12.30pm Learning Room 03-07, Level 3, MD6 Yong Loo Lin School of Medicine National University of Singapore

# WE PASS WITH A: A COMPREHENSIVE APPROACH FOR DESIGNING COMPETENCY-BASED ASSESSMENT

Gandes Retno Rahayu Indonesia

#### Workshop Description

Student assessment is a crucial aspect for successful teaching and learning. When designing an assessment system, we have to base on assessment principles: 1) validity; 2) reliability; 3) transparency; 4) fairness; 5) comparability; 6) fitness for reflection; 7) educational impact; 8) feasibility and acceptability

To assist in designing good assessment, we have developed a comprehensive approach, named as **WE PASS** with **A**. **WE PASS** with **A** consists of 6 basic steps and 1 step for quality assurance: **W**riting, **E**diting, **P**reparing assessment, **A**ssessment process, **S**tandard setting, **S**pecific feedback and **A**ssessing the assessment.

Interactive approach will be applied throughout the workshop. There will be individual, in pairs and small-group working, as well as brief interactive lecture. A handout about **WE PASS** with **A**, short power point and video will be used to support the interactivity of the workshop.

#### **Workshop Objective**

After this workshop, it is expected that the participants will be able to apply the WE PASS with A approach in their own contexts.

#### **Who Should Attend**

Medical and health professional educators, who are interested to learn about designing a comprehensive assessment.

# W1A8

Wednesday 10th January 2018, 8.30am – 12.30pm Learning Room 01-02, Level 1, MD6 Yong Loo Lin School of Medicine National University of Singapore

#### WORK PLACE BASED ASSESSMENT: TRAIN THE TRAINER WORKSHOP

#### Kichu Balakrishnan R Nair and Carl Matheson

Australia

#### **Workshop Description**

In this workshop, we will train the participants to assess performance using these tools. We will use calibration videos and train them in various assessments. The participants will have the opportunity to use the validated scoring sheets to mark the candidates in the calibration videos

This will be a very interactive workshop with small group discussions.

### **Workshop Objective**

- To introduce the philosophy of the workshop based assessment and train the participants to use the various tools including MiniCex, DOPS, CBDs and MSF
- To understand the reliability of individual tools and the composite reliability of the tool box

#### Who Should Attend

Medical educators and senior residents.

# W1A9

Wednesday 10th January 2018, 8.30am – 12.30pm LT37, Level 3, MD1 Yong Loo Lin School of Medicine National University of Singapore

# **ASSESSMENT DIAGNOSTICS USING PSYCHOMETRICS**

#### Gominda G Ponnamperuma

Singapore

#### **Workshop Description**

How often have you heard examinees, and sometimes even examiners, opining that an exam was too easy, too difficult, asked questions that were outside the curriculum, assessed too much of one content area at the expense of another, etc.? These are all subjective opinions. How can we objectively know how true these subjective opinions are? To answer the foregoing question with certainty, we need to use a battery of investigations to diagnose whether an exam is suffering from one or more ailment/s that would have led to these subjective opinions/allegations. This workshop will take the participants through several such basic investigative tools (within the domain of assessment psychometrics), using easy to understand examples, to identify problematic items/questions of an examination. There will be opportunity for participants to try out some of these tools and interpret their findings, so that more fit-for-purpose exams could be designed.

Note: It would be easier for the participants to go through this workshop, if they could bring with them a fully charged laptop with Microsoft Excel or its Open Office/Mac equivalent. However, this is not a must.

#### **Workshop Objective**

At the end of the workshop, the participants should be able to implement and interpret the basic psychometric measurements with a view to improving the validity and reliability of examinations in health professions education courses.

#### **Who Should Attend**

- Heath Professions Educators (e.g. teachers, examiners of both undergraduate and postgraduate education programmes)
- Administrators of Health Professions Education programmes (e.g. Deans, Directors of Health Professions Education Institutes)
- Healthcare professionals who would like to know how validity and reliability of examinations could be improved using assessment psychometrics

# W1P1

Wednesday 10th January 2018, 1.30pm – 5.30pm Multipurpose Hall 2, Level 3, MD1 Yong Loo Lin School of Medicine National University of Singapore

# RESILIENCE, GRIT AND EMOTIONAL INTELLIGENCE: KEY PERSONAL QUALITIES FOR EFFECTIVE LEADERSHIP

<sup>1</sup>Judy McKimm, <sup>1</sup>Paul Jones, <sup>2</sup>Kirsty Forrest and <sup>3</sup>Greg Radu

<sup>1</sup>United Kingdom, <sup>2</sup>Australia and <sup>3</sup>Canada

#### **Workshop Description**

The workshop aims to provide an introduction to contemporary theories and practices in leadership, management and followership in health professions' education and healthcare through a consideration of three key personal qualities found in successful and effective leaders. In rapidly changing, fluid and complex environments, leaders need to demonstrate their resilience (the ability to bounce back); their emotional intelligence (so they can control their own and others' emotions) and 'grit': a mix of passion, focus, determination and long term goals that is the subject of recent research and discussion. In the workshop, we will explore these inter-related qualities and work with you on strategies to help you be more effective in leadership situations.

#### Workshop Objective

As a result of participating in this workshop, delegates will be able to:

- Define some key concepts in leadership, management and followership
- Identify specific skills, behaviours and activities in relation to resilience, emotional intelligence and grit that promote effective leadership and management
- Apply theories and models to your own practice and that of others
- Construct a leadership development plan

### Who Should Attend

All those involved in health professions' education, management and clinical practice will benefit from this workshop, which is designed to be applicable to people at different levels working within organisations, as well as to students and professionals in training. The course has been designed by a highly experienced, international faculty to meet the needs of those who are in leadership or management positions, however junior or senior, and who feel they would like to develop their personal leadership qualities and improve their practice. All our courses are theory informed; practice driven; context specific, interactive, supportive and fun!

### W1P2

Wednesday 10th January 2018, 1.30pm – 5.30pm SMART Classroom, Level 4, MD6 Yong Loo Lin School of Medicine National University of Singapore

# HOW TO BEST ENGAGE LEARNERS DURING PRE-AND PARA-CLINICAL SCIENCES YEARS IN AN ERA OF TECHNOLOGY-ENHANCED LEARNING?

<sup>1</sup>Chen Zhi Xiong, <sup>2</sup>Peter GM de Jong and <sup>3</sup>Neil Osheroff

<sup>1</sup>Singapore, <sup>2</sup>The Netherlands and <sup>3</sup>USA

#### **Workshop Description**

This workshop is intended for medical educators involved in the undergraduate curriculum who are keen on learning best practices in the teaching and learning of pre-and para-clinical sciences. Educators involved in clinical years are encouraged to share their input and reflection on how to shape some of these practices. Medical school administrators are also welcome to discuss the feasibility of these pedagogies in terms of planning and resources. The workshop will centre around the theme of developing and harnessing of technological platforms and tools to enhance learning.

# **Workshop Objective**

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

- · Apply best practices in their own teaching and learning contexts for pre-and para-clinical sciences
- Reflect on personal teaching and learning practices in the context of own learners' profiles
- Develop and implement faculty development strategies to enhance learning

#### Who Should Attend

Medical educators involved throughout the undergraduate curriculum, pre-and para-clinical educators for other health professions and medical school administrators. New faculty or educators who are starting to teach are also welcome to join.

### W1P3

Wednesday 10th January 2018, 1.30pm – 5.30pm Learning Room 01-01B, Level 1, MD6 Yong Loo Lin School of Medicine National University of Singapore

# LESS IS MORE: THE BASIS, VALUE AND PRACTICALITY OF FOCUSED WORKPLACE PLACEMENT ASSESSMENTS IN BUSY DISCIPLINES

Yip Chee Chew, Clement Tan, Anna Tan Wee Tien and Llewellyn Lee Kuan Ming Singapore

#### **Workshop Description**

Direct observation to assess a student's performance is common in medical education. Well-known validated assessment tools as such as mini-CEX and DOPS have been used in many disciplines. However, in a busy surgical discipline like Ophthalmology, the application of these tools is often challenging and not well received by the faculty. Also, increasing the complexity of the judgments increases fallibility and reduces reliability. The long assessment rubrics of some assessment tools pose significant cognitive and multi-task overload to the student and teacher. This workshop provides an insight into the principles and challenges to develop shorter and feasible assessment tools (micro-CEX, OCEX and ODOPS) to evaluate undergraduate and post-graduate students of a surgical discipline (Ophthalmology).

The workshop will commence with an account of how educational concepts such as the cognitive load theory, "less is more", "assessment drives learning" and outcome-based medical education can be applied in the formation of an assessment tool. Practical tips on the implementation of the assessment tools in a surgical discipline will be shared. The participants will engage in small group, table exercises to design an assessment tool for their surgical specialty applying the principles taught to them under the guidance of the faculty. A brief account on how to derive at relevant EPAs for inclusion into the curriculum in an undergraduate teaching program will also be shared.

After the workshop, the participant will be expected to achieve the following outcomes:

- 1. Advances the knowledge and skills in the design of a focused WPA.
- 2. Applies relevant educational concepts to develop an effective WPA.
- 3. Understands the challenges in the implementation of a WPA.
- 4. Learns practical tips to overcome some of these challenges.

#### **Workshop Objective**

- 1. To apply the cognitive load theory in workplace based assessment (WPA).
- 2. To appreciate the value of re-designing instruction and assessments to reduce extraneous cognitive load in high element interactivity clinical tasks and procedures.
- 3. To understand the concept of "less is more": the use of "'frequent minimal observations" approach is better than more comprehensive, longer assessment tools.
- 4. To learn the principles in the development of the entrusted professional activities (EPA) for the curriculum of a surgical discipline.
- 5. To understand the principles in the development of focused, EPA-based WPAs such as the micro-CEX, Ophthalmic CEX (OCEX) and Ophthalmic Directly Observed Procedural Skills (ODOPS) for surgical procedures.

#### Who Should Attend

The target audience will be faculty or educators of undergraduate and post-graduate training programs.

# W1P4

Wednesday 10th January 2018, 1.30pm – 5.30pm Learning Room 01-02, Level 1, MD6 Yong Loo Lin School of Medicine National University of Singapore

# DESIGNING AN EFFECTIVE IPE COURSE/ACTIVITY – A COMPETENCY- AND THEORY-BASED APPROACH, WITH CASE STUDY ON HOW TO RUN A HEALTH CARE TEAM CHALLENGE (HCTC) $^{\text{TM}}$

Wong Mun Loke, Chng Hui Ting, Liaw Sok Ying, Lim Hsiu Chin Keith, Lim Teik Chung Michael, Tai Yuen Ling Esther and Kee Li Leng Janice

Singapore

#### **Workshop Description**

Interprofessional education (IPE) is recognised as an important means to prepare current and future health workforce to be collaborative-practice ready, which in turn would provide optimal health services for the patients. How does one design an effective IPE course or activity to achieve its objectives? There are two parts in this workshop. The first part of the workshop will equip educators and practitioners with the knowledge and skills to design IPE courses or activities via a competency- and theory-based approach.

The second part of the workshop is a sharing of the NUH experience in organizing a Healthcare Team Challenge (HCTC). The HCTC is a clinical team based competition for in-flight students/ staff from the Medical, Nursing and Allied Health professions. It provides participants with an opportunity to demonstrate their expertise in teamwork and collaboration as they develop a management plan for a person with complex health and social care needs. This workshop will enable workshop participants to understand the challenges in organizing a HCTC utilise distinct criteria in choosing suitable clinical scenario for IPE use and provide tools for institutions willing to adopt the HCTC to further interprofessional collaboration and practice.

#### **Workshop Objective**

IPE in Curriculum

- Introduction on outcomes-based curriculum design and its application in IPE
- Competencies-based approach in designing IPE courses/activity with shared examples from NUS IPE
- · Theory-based approach in designing IPE courses/activity with shared examples from NUS IPE
- Hands-on workshop for participants to design an IPE course/activity relevant to their context and needs, based on the principles learnt

IPE in Action - The Healthcare Team Challenge

- Purpose and objective of a Healthcare Team Challenge (HCTC)
- Principles in choosing suitable cases
- Planning and preparation
- Sharing of the Singapore experience Challenges and achievements

#### Who Should Attend

Educators, faculty, instructors, practitioners, students and administrators.

# W1P5

Wednesday 10th January 2018, 1.30pm – 5.30pm Learning Room 03-04, Level 3, MD6 Yong Loo Lin School of Medicine National University of Singapore

### QUALITATIVE RESEARCH: THE INTERVIEW TECHNIQUE, CODING AND DATA ANALYSIS

**Lee Shuh Shing, Yanika Kowitlawakul and Calvin Ho Wai Loon** Singapore

#### **Workshop Description**

Qualitative research methods have becoming widely accepted in health professions education and many researchers in health professions education are increasingly using this method themselves. However, wider acceptance does not necessarily mean that the qualitative methods are well understood particularly the practical aspect in qualitative studies. There are some researchers assume conducting face-to-face interview and focus group discussion are similar while most are still struggling with analysing qualitative data. Few years back, Skype interview was introduced as one of the methods in collecting qualitative data. Yet, very few workshops were conducted to sensitise researchers on this method.

This workshop aims at offering a practical experience in qualitative research to participants. This workshop consists of two parts. First part of the workshop will provide guidance and practice conducting interview and focus group in small groups. Tips on how to carry out a Skype interview will also be introduced in this first part of the workshop. The second part will begin with the description of analysis of qualitative data and follow by practising coding and analysing qualitative by hand.

#### **Workshop Objective**

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

- 1. plan and conduct an in depth interviews
- 2. plan and conduct a focus group discussion
- 3. differentiate an interview and a focus group discussion
- 4. describe the process in carrying out a Skype interview
- 5. code and thematically analyse the qualitative data

### **Who Should Attend**

This workshop is suitable for anyone with/without experience in qualitative research - this would include Doctors, Nurses, Allied Health workers, Dentists and administrative staff.

# W1P6

Wednesday 10th January 2018, 1.30pm – 5.30pm Learning Room 03-05, Level 3, MD6 Yong Loo Lin School of Medicine National University of Singapore

### WHEN THINGS DON'T GO AS PLANNED: A SIMULATION-BASED WORKSHOP

**Nicola Ngiam and Jacqueline Ong** Singapore

# **Workshop Description**

Medical simulation is used increasingly to provide experiential learning environments. Despite preparation and planning, sometimes things don't go as expected. When this happens, the learning objectives for that session are in jeopardy.

We will explore the following areas in terms of common derailments and the possible solutions to troubleshoot:

1. Session not going as it should:

Reasons for this could include the learner doing something completely unexpected, the scenario feels to difficult or too easy for the level of learner or a technical glitch/error occurs.

2. Debriefing gone wrong:

A disinterested, emotional or antagonistic learner can disrupt the learning for himself and for the rest of the group during debriefing.

#### **Workshop Objective**

At the end of the workshop, participants will have:

- 1. Experienced common practical problems that can occur while running medical simulations
- 2. Developed solutions that can be applied to their local programs
- 3. Learnt to anticipate problems that might occur with specific simulation situations

#### Who Should Attend

Intermediate simulation users with at least 1 year of experience as faculty in simulation-based healthcare education.

### W1P7

Wednesday 10th January 2018, 1.30pm – 5.30pm Learning Room 03-06, Level 3, MD6 Yong Loo Lin School of Medicine National University of Singapore

# CARING FOR OLDER PEOPLE IN AN AGEING SOCIETY: AN ETHICS CASE DEVELOPMENT AND ANALYSIS WORKSHOP

**Jacqueline Chin, Natalie Ling and Matthew Chen Zhixuan** Singapore

### **Workshop Description**

Participants will be guided to use the open access tools for teaching and learning ethics available in Caring for Older People in an Ageing Society: A Singapore Bioethics Casebook vol 2 (available at www.bioethicscasebook.sg), a ground-breaking educational resource for the teaching of clinical ethics and the ethics of care for older people living at home and in the community. Participants will learn about the design features of this free online resource for educators working in health care and allied health professions, and work in groups and lead case presentations moderated by the workshop facilitators.

#### **Workshop Objective**

This workshop aims to equip healthcare and allied health professionals with skills to facilitate a multidisciplinary team or handover discussion on the care of older patients with long-term chronic health conditions in which difficult challenges are faced by the patient and his/her professional and informal caregivers.

# Who Should Attend

Healthcare and allied health professionals who have clinical experience with elderly patients, with an interest in peer education on ethical issues in the care of older people.

# W1P8

Wednesday 10th January 2018, 1.30pm – 5.30pm Learning Room 03-07, Level 3, MD6 Yong Loo Lin School of Medicine National University of Singapore

# PROMOTING COMMUNICATION AND TEAM COLLABORATION AMONG HEALTH CARE PROVIDERS IN A MULTICULTURAL CLINICAL SETTING

Manasik Hassan, Ahmed Alhammadi, Hatim Abdulrahman and Magda Ahmed Wagdy Youssef Qatar

### Workshop Description

Effective team communication among Health Care Providers (HCPs) in a hospital setting associated with better patient care, increase teamwork and job satisfaction, such collaboration is challenging and often requiring unplanned communication among busy healthcare providers. Differences in training, communication styles and multi-cultural background of nurses and physicians contributes to communication problems.

The workshop will use didactics and small group discussion to address the importance of communication and collaborations among (HCPs) in a multicultural healthcare environment, share decision and putting plan together, known challenges faced or perceived. Interactive video clips will illustrate different communication gaps in clinical workplace.

Afterwards, through analyzing videos and using role-play, participants will identify different barriers to implement effective communication in culturally diverse healthcare environment. In small groups, participants will then exposed and practice use different tool and strategies to support communication and team collaboration.

#### **Workshop Objective**

- 1. Highlights the importance of effective communication and collaboration among healthcare professionals in a cultural difference clinical environment
- 2. Identify challenges for promoting communication among health care providers
- 3. Use different communication tools and strategies to promote such collaboration

#### **Who Should Attend**

The workshop welcomes all stakeholders in medical education, physicians, nurses, other allied health working in any multicultural clinical environment, and educators interested in faculty development.

# W1P9

Wednesday 10th January 2018, 1.30pm – 5.30pm Multipurpose Hall 3, Level 3, MD1 Yong Loo Lin School of Medicine National University of Singapore

# A CONCEPTUAL FRAMEWORK FOR PLANNING LEARNING ACTIVITIES AND ASSESSING LEARNERS IN CONTINUING PROFESSIONAL DEVELOPMENT (CPD)

**Don Moore** USA

#### **Workshop Description**

An outcomes framework will be described that incorporates recent findings in the learning sciences drawing on the work on Ambrose and colleagues (How Learning Works) as well as Cervero and Gaines (Synthesis of Systematic Reviews in CPD).

Next, participants will be asked to engage in an inquiry-based approach to learning that follows the challenge cycle developed by Bransford and colleagues (How People Learn). The approach includes presentation of a challenge, individual reflection about addressing the challenge, sharing among the participants in small groups and then larger groups, reaction and mini-lectures by faculty, reconvening small groups to synthesize what has been presented in the groups and by faculty, and proposing syntheses in the large group. This approach operationalizes an important principle of instructional design: tell people what they need to learn (outcomes framework), provide a worked example, give them an opportunity to practice what they are learning, and provide expert feedback. This approach (inquiry-based and problem-based learning) is a crucial component of the conceptual framework and participants will have an opportunity to practice what they are learning.

After the small groups have proposed their syntheses to the larger group, each participant will be asked to create an action plan for using what they have learned in their work. Each participant will be asked to commit to implementing their action plan.

#### **Workshop Objective**

There has been considerable concern expressed in the scientific and popular literature that healthcare routinely fails to deliver potential benefits to patients. Furthermore, the literature also suggests that doctors and other health professionals are not consistently providing the best possible care because they are not being adequately prepared in either academic or continuing education venues. An article by Frenk and his colleagues in the Lancet in 2010 describes this situation well.

On the other hand, there has been significant findings in the learning sciences over the last several years that have significant promise for addressing first the gap between training and practice and secondly the gap between practice and the provision of high quality care. The aims of this session are to report those findings and show how they can provide a framework for planning learning activities in CPD.

#### Who Should Attend

It is anticipated that some of the participants will implement some of what they have learned to planning learning activities in CPD and will be able to report changes in their learner's competence or performance, and perhaps improvements in patient health status. While the focus of the workshop will be on learning activities in CPD, individuals who have responsibilities for planning and evaluating CPD activities will benefit from participating. With a little thought, however, the approach can be used in graduate and undergraduate medical education, especially as the movement towards population health becomes more widespread.

#### HEALTH PROFESSIONS' EDUCATION 'LEADERS' TOOLKIT': 'LEADERSHIP IN THREES'

Thursday 11th January 2018 (9.00am)	Multipurpose Hall 2, Level 3, Tahir Foundation Building, Block MD1, NUS Yong Loo Lin School of Medicine
Friday 12th (1.00pm) and Saturday 13th January (1.00pm) 2018	Pisces 2, Level 1, Resorts World Convention Centre
Sunday 15th January 2018 (9.00am)	Multipurpose Hall 2, Level 3, Tahir Foundation Building, Block MD1, NUS Yong Loo Lin School of Medicine

#### Rationale

Health professions' educators, whether they work in academic or clinical environments, have some level of management or leadership responsibility. These range from overseeing a project, leading a team or running a module to managing a programme, department or school. A variety of courses and programmes exist that teach management and leadership but these do not always focus on the specific needs of health professions' educators and the contexts in which they work.

The Leaders' Toolkit has been designed by a highly experienced, international faculty to meet the needs of those who are in leadership or management positions, however junior or senior, and who feel they would like to learn some theory, skills and approaches to improve their practice. The Toolkit comprises courses run in a highly interactive, supportive, workshop-style sessions on different topics, models and approaches to leadership, management and followership relevant to contemporary health professions' education. Course design means that, if they choose, delegates can take one or two courses at any one conference with very little overlap between the individual courses or prior knowledge needed. All our courses are:

- Theory informed
- Practice driven
- Context specific
- Interactive, supportive and fun!

#### **'LEADERSHIP IN THREES'**

This course aims to provide an introduction to contemporary theories and practices in leadership, management and followership in health professions' education and healthcare. 'Leadership in threes' is a new developmental model we have presented which brings together key elements from leadership literature and research and applies them to practical, real life situations. We all live and work in a VUCA world: a Volatile, Uncertain, Complex and Ambiguous environment – where part of the complexity arises from our cultural and social diversity. We need therefore to have leade3rshop approaches that are flexible, inclusive and person-centred. In healthcare and health professions' education, we have to work directly with and in two complex systems (that of education and health) each of which are made up of many, often competing, elements. This can be challenging for leaders grappling with uncertainty and rapid change but an understanding of the theories and related approaches can help us be more effective. Topics include:

- Leadership, management and followership: exploring the differences and interrelationships between each of these approaches;
- Theory in practice: how an understanding of key theories, models and concepts help us to be more effective;
- Leaders as change agents: an introduction to change models and their approaches;
- Adaptive leadership for complex systems: VUCA and RUPT; how to use these approaches in leadership and management;
- Change and complexity: models and frameworks that help stimulate and generate change in a complex world;
- Inclusive and person-centered leadership; putting people at the heart of what we do; working with diversity and how to recognise and address unconscious bias;
- Identifying and developing personal qualities for effective leadership: the Immunity to Change model;
- · Developing and communicating the vision: creative ways of setting a vision for change and communicating this to others;
- Post-course report: Participants may choose to submit, within six months of completion of the course, a short report describing the application of the concepts and principles to their own practice

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#### Course schedule at APMEC:

Thurs 11 Jan 2018 – 0900 – 1600 Fri 12 Jan & Sat 13 Jan 2018 – facilitated session during lunch Sunday 14 Jan 2018 – 0900 – 1230

### **Course Faculty:**

Professor Judy McKimm, Wales, UK Associate Professor Paul Jones, Wales, UK Professor Kirsty Forrest, Australia Associate Professor Greg Radu, Canada

#### Course fee: SGD725

Includes:

- One full-day pre-conference session (11 January 2018)
- Printed course programme
- Workbook
- · Set of additional resource materials accessed electronically
- · Certificate of participation
- Two facilitated lunchtime meetings during the main conference (12 and 13 January 2018)
- A half day post conference workshop (14 January 2018)

Please note: In addition to the Leaders' Toolkit 'Leadership in threes' course fee, participants are required to register and pay the registration fees for 15th APMEC main conference.

# W2A1

Thursday 11th January 2018, 8.30am – 12.30pm Multipurpose Hall 3, Level 3, MD1 Yong Loo Lin School of Medicine National University of Singapore

# INNOVATIVE PRACTICE IN MOBILE TECHNOLOGY TO ENHANCE LEARNING, ASSESSMENT AND PROFESSIONAL DEVELOPMENT IN THE CLINICAL WORKPLACE

<sup>1</sup>Katharine Boursicot, <sup>2</sup>Trudie Roberts, <sup>3</sup>Sandra Kemp and <sup>2</sup>Richard Fuller

<sup>1</sup>Singapore, <sup>2</sup>United Kingdom and <sup>3</sup>Australia

#### **Workshop Description**

In this workshop, we will set the scene with a review of the theoretical and empirical evidence from the literature about mobile technology and feedback for learning, present some examples of applied mobile technology enhancement, and engage the participants in experiential activities using mobile technology.

There will be opportunities for the participants to consider how to apply the principles of best practice to the design, delivery, feedback, evaluation and outcomes of workplace assessment using novel ways of mobile technology enhancement to their own situations.

#### **Workshop Objective**

To highlight modern practice with examples of mobile technology enabled assessment and feedback for learning and development in the clinical workplace.

Participants will:

- Learn about the theoretical and empirical evidence around feedback and mobile technology
- · Try out some teaching and learning using mobile device-based assessment
- Gain insights into designing programmes of workplace-based assessment
- Learn about using electronic portfolios and other learning platforms effectively
- Consider possibilities for the future of workplace learning and assessment using innovative mobile technology

#### Who Should Attend

People involved in teaching and assessment in undergraduate and postgraduate contexts, who want to update on the latest contemporary best practices, and possible future developments, in mobile technology enhanced education.

#### W2A2

Thursday 11th January 2018, 8.30am – 12.30pm Learning Room 03-07, Level 3, MD6 Yong Loo Lin School of Medicine National University of Singapore

# WHAT IS ONLINE COLLABORATIVE LEARNING? WHY IS IT IMPORTANT? AND HOW TO (EASILY) ENHANCE ONLINE MEDICAL EDUCATION COURSES WITH THESE NEW PEDAGOGIES

### Linda M Harasim

Canada

### **Workshop Description**

Online networked education, since its earliest days, was based on collaboration and discussion. The earliest and most effective credentialed and/or continuing professional education courses to be delivered online were based on collaborative learning. The pedagogies included group discussion, debate, role-play, teamwork scenarios, and conferring with others to brainstorm and then converge towards a solution, a plan, a product or a perspective.

The pedagogy of an online collaborative learning course or activity based on a discussion forum software is not difficult to implement and results in very positive rates of student satisfaction and learning effectiveness, outcomes critical to medical educators.

This workshop will introduce online collaborative learning as a pedagogy, specifically focusing on SOS: Student-led Online Seminars. The SOS design will be presented in terms of overall goals and anticipated outcomes, role of the educator, student roles, scheduling, moderating an online seminar, intellectual convergence, grading, and how to prepare student participation. Ways to assess online learning will also be demonstrated. Discussion and questions are very welcome in this workshop.

# W2A3

Thursday 11th January 2018, 8.30am – 12.30pm LT37, Level 3, MD1 Yong Loo Lin School of Medicine National University of Singapore

# THE SMORGASBOARD OF TECHNOLOGY-DRIVEN TEACHING STRATEGIES TO ENHANCE LEARNING

Rani Kanthan and Kalyani Premkumar Canada

# **Workshop Description**

This workshop will provide an overview on the various technology driven strategies that are available to enhance the learning environment with a hands on approach to demonstrate such examples in facilitated small groups. Active participation of the attendees is expected and will be facilitated to their creation of an educational module incorporating such strategies with ongoing peer evaluation by the participants. This session will end with a summation of the benefits/ drivers/challenges/barriers faced during this process. Participants are required to bring their mobile devices [smart phones/lpads/Laptop] for this workshop. This workshop will be of interest to all personnel involved and interested in medical education

# **Workshop Objective**

By the end of this workshop, participants will be able to

- 1. Provide a repertoire of technology-driven teaching strategies available to enhance the educational encounter
- 2. Appropriately incorporate such strategies for teaching and learning in medical education
- 3. Develop a self \*preferred\* menu of these strategies and design a teaching module incorporating at least one/two strategies
- 4. Peer evaluate the effectiveness of the 'onsite designed' teaching modules
- Discuss the benefits/drivers /challenges / barriers faced while incorporating technology-driven strategies for learning

#### Who Should Attend

All personnel involved/interested in education/medical education (experts and novices).

#### **W2A4**

Thursday 11th January 2018, 8.30am – 12.30pm SMART Classroom, Level 4, MD6 Yong Loo Lin School of Medicine National University of Singapore

#### **MOBILE LEARNING FOR HEALTHCARE EDUCATORS**

**Vaikunthan Rajaratnam and Dong Chaoyan** Singapore

### **Workshop Description**

The ubiquity of mobile phones makes it possible to create and deliver learning programmes at our fingertips. Learning happens at time and location convenient to learners. It is timely to explore how to tap on the potentials of mobile technologies to facilitate healthcare education. The workshop will focus on the following components:

- 1. overview of mobile technology in healthcare education,
- 2. how to set up educational digital presence,
- 3. mobile learning at the workplace,
- 4. how to create Open Educational Resources (OERs), and
- 5. mobile applications for healthcare educators.

The delivery formats include: interactive lectures, demonstration, group activities, and discussions.

#### **Workshop Objective**

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

- Explore the benefits of mobile learning in healthcare education
- Practice and share types of programmes that can be used to develop and deliver healthcare education on the mobile platform
- Create a basic mobile learning programme and deploy it for target audience
- Discuss issues and challenges of mobile learning in healthcare

#### Who Should Attend

Healthcare educators.

### W2A5

Thursday 11th January 2018, 8.30am – 12.30pm Learning Room 01-01B, Level 1, MD6 Yong Loo Lin School of Medicine National University of Singapore

#### DEVELOPING AND ASSESSING RESILIENCE IN MEDICAL AND HEALTHCARE PROFESSIONALS

Moi Kok Wah

United Kingdom

#### **Workshop Description**

Resilience can be understood as 'the ability to bounce back or positively adapt to ongoing stress or adversity'. Many resilienceenhancing interventions have shown improvements in developing resilience resources in employees so that they can better cope with workplace stressors that lead to increases in goal attainment, productivity, and improved performance.

Drawing from theories of stress inoculation, it is possible that exposing individuals to simulated challenging workplace scenarios, through Situational Judgment Scenarios (SJS), can promote the development of resilience to future workplace challenges. The SJS approach aims to build competence in harnessing resilience resources to deal with workplace stressors relevant to healthcare with the provision of immediate feedback, time for problem-solving, evaluation, and reflection.

The workshop will begin with an overview of different approaches to developing and assessing resilience, to provide participants with an understanding of metrics in this context. Participants will then be introduced to the features involved in developing an effective situational judgement scenario for use in developing and assessing resilience utilising text based or video-based scenarios. Working in small groups, participants will practice developing situational judgement scenarios, as well as developing 'expert' rationales for feedback. In the final part of the workshop, groups will consider developing these scenarios into scripts, suitable for the use in a video format.

# **Workshop Objective**

By the end of the session, participants will:

- · Understand the importance of developing resilience effectively within a healthcare setting
- · Consider the different approaches to developing and assessing resilience
- Understand the features important in developing effective situational judgement scenarios for developing and assessing resilience (e.g., designing items, response formats and 'expert' rationales)
- Practice the development of situational judgement scenarios for developing resilience
- Consider the pros and cons of using a 'low fidelity' text based SJS with 'medium fidelity' video-based sit u at i o n a l
  judgement scenarios

# Who Should Attend

This workshop is relevant for all health professional educators interested in the development and in particular the assessment of resilience at work.

# W2A6

Thursday 11th January 2018, 8.30am – 12.30pm Learning Room 01-02, Level 1, MD6 Yong Loo Lin School of Medicine National University of Singapore

#### PROFESSIONALISM IN PRACTICE

**Shekhar Kumta, Ng Ho-Keung, Alex Yung and Yan Jin** Hong Kong S.A.R.

#### **Workshop Description**

We expect our graduates and residents trainees to show professionalism during their training and their subsequent independent practice. What constitutes "professionalism" is often described in broad philosophical contexts and richly centred around concepts such as altruism, empathy and compassion.

The transition from a student to a professional is a difficult period and professionalism involves not only the internalization of norms and values but also their expression in the context of professional conduct with patients and other actors that constitute the healthcare environment.

In this workshop we discuss some of the essential elements that constitute professionalism.

We also introduce the concept of Behavioral Anchors based on a simple template which may help students and assessors identify professional expectations and their failures

#### **Workshop Objective**

- 1. Develop an Understanding of Professional Behaviors in Practice across healthcare disciplines.
- 2. Develop a Generic Template against which Behaviors can be mapped
- 3. Define and Exemplify Behavioral Anchors that underpin professional or unprofessional behaviors

#### **Who Should Attend**

This workshop is suitable for anyone working in the health care environment - this would include Doctors, Nurses, Allied Health workers and administrative staff.

#### W2A7

Thursday 11th January 2018, 8.30am – 12.30pm Learning Room 03-05, Level 3, MD6 Yong Loo Lin School of Medicine National University of Singapore

# FROM CONCEPTUALISATION TO IMPLEMENTATION: DEVELOPMENT OF AN ONLINE ASSESSMENT SYSTEM

**Vishna Devi Nadarajah and Er Hui Meng** Malaysia

#### **Workshop Description**

Assessment is the process of making a judgment on whether the learning outcomes are achieved through a systematic collection, review and use of information. An effective assessment system will enhance learning, and can provide feedback to the teachers for instructional improvement and give a valid indicator on the learner performance in the competency areas intended in the programme. However, the efficiency and effectiveness of assessments can be limited by operational challenges, such as inadequate assessment blueprinting during item development, long results processing time and tedious manual psychometric analysis, which consequently affect the quality of feedback (i.e. timeliness, specificity). An online assessment system (OAS) that is reliable, secure, valid, and can cater for a range of assessment tools including workplace based assessment provides practical solutions to the limitations mentioned above.

In this workshop, the development approaches and features for an online assessment system, contextualised to the institutional needs will be discussed. We will share practical tips from our experience in developing an integrated OAS for outcome-based education with a range of assessment tools for health professions education. To successfully develop an OAS that is aligned with the institutional governance system, continuous stakeholder inputs is necessary. However, the process involves balancing and managing the expectations and practicalities. Participants will be further engaged by working in groups, identifying resources and how to overcome challenges using checklists developed from stakeholders' perspectives.

#### Workshop Objective

Participants will be able to propose, project manage and develop online assessment system (OAS) for multiple stakeholders based on educational frameworks with a checklist for anticipating and overcoming challenges.

#### Who Should Attend

This workshop will be useful for faculty, clinicians, exam and IT administrators, students, e-learning designers and enthusiast alike.

### W2A8

Thursday 11th January 2018, 8.30am – 12.30pm Learning Room 03-06, Level 3, MD6 Yong Loo Lin School of Medicine National University of Singapore

#### USING THE FOUR QUADRANT MODEL TO ENGAGE THE FACULTY MEANINGFULLY

#### <sup>1</sup>Danai Wangsaturaka and <sup>2</sup>Indika Karunathilake

<sup>1</sup>Assistant Dean for Academic Affairs, Faculty of Medicine, Chulalongkorn University, Thailand, and <sup>2</sup>Professor in Medical Education, Faculty of Medicine, University of Colombo, Sri Lanka

#### **Workshop Description**

Faculty development in medical education is a process through which medical school faculty works systematically to improve their competency as teachers. It is a complex, multifaceted process due to the diverse roles and responsibilities of a medical educator as a clinician, facilitator, administrator assessor, mentor, researcher, and educational leader. High quality faculty development programs will result in competent faculty who can not only inspire and nurture students and prepare them to deliver high-quality health care, but also cultivate a culture of continued self and institutional development.

However, challenges for implementing high quality Faculty development are multiple and include; the multi-dimensional roles of health professionals; attitudes towards teaching; conflicting opportunities; the shortage of teachers; the increased demand for physicians, nurses and midwives; developing health professionals for a teaching role; and rewards for teaching. In resource-constrained settings, heavy teaching loads, a shortage of educators, limited infrastructure and competing demands for research and clinical services further complicates these challenges.

This workshop will discuss Four Quadrant Model as a conceptual framework to overcome the above challenges and engage the faculty meaningfully. In planning faculty development, this model acknowledges four agendas (directions) from various stakeholders: Strategies (N), Competencies (E), Resources (S) and Wish lists (W). The model then describes four avenues for faculty development offerings (quadrants): Foundation (NE), Innovation (SE), Response (SW) and Motivation (NW) (i.e. outputs, activities).

During the workshop, participants will share their experiences in implementing faculty development in the Asia Pacific region.

#### W2P1

Thursday 11th January 2018, 1.30pm – 5.30pm Learning Room 01-02, Level 1, MD6 Yong Loo Lin School of Medicine National University of Singapore

# HOW TO CREATE AND USE DEVELOPMENTAL ASSESSMENTS TO GUIDE RESIDENTS TO BECOME EFFECTIVE PRACTITIONERS

**Eric Holmboe** USA

#### **Workshop Description**

The rise of outcomes-based medical education (OBME), also known as competency-based medical education (CBME), has forced educators to rethink approaches to curriculum and assessment. Competency frameworks such as CanMEDS and the ACGME General Competencies are being used to implement OBME in many countries.

A major aspect of CBME is greater attention to the developmental process in becoming a healthcare professional. This more explicit focus on the developmental process is leading to innovative and much needed new approaches to assessment. This 4 hour pre-course will focus on the important shift to developmental assessments using competencies, milestones and EPAs. This pre-course will highlight the important role of work-based assessments and group process in developmental models of assessment.

# W2P2

Thursday 11th January 2018, 1.30pm – 5.30pm Learning Room 01-01B, Level 1, MD6 Yong Loo Lin School of Medicine National University of Singapore

#### **MASTERCHEF FOR RESIDENCY SELECTION**

Sarah Lu Qinghui, Tham Kum Ying, Habeebul Rahman and Terence Huey Cheong Wei Singapore

#### **Workshop Description**

The literature on residency selection shows a lack of correlation between performance and exam scores, letters of references and interviews. Most of us know that selection is as much a science as it is an art. Hence for our surgical residency we developed a novel way of selection, leveraging on principles from MasterChef whereby teamwork, dexterity, ability to follow instructions, ability to adapt and a focus on outcome are interwoven into the exercise.

This workshop will be an interactive session with videos and audience participation in hands-on tasks to execute the most critical steps of a recipe ala MasterChef. The link between the tasks and the attributes we are looking for in the residency-applicants will be explained.

We will guide the participants to innovate and develop their own selection process.

#### **Workshop Objective**

- 1. To share the framework and educational principles we used to design our own selection process
- 2. To demonstrate the use of practical/hands-on tasks to assess non-technical attributes
- 3. To assist our participants to develop their own unique selection process

#### **Who Should Attend**

Faculty and program coordinators involved in residency selection.

#### W2P3

Thursday 11th January 2018, 1.30pm – 5.30pm SMART Classroom, Level 4, MD6 Yong Loo Lin School of Medicine National University of Singapore

# HOW TO USE DATA (ANALYTICS) TO INFORM ETEACHING AND ELEARNING

**Poh-Sun Goh, Sergio Hernandez-Marin and Lim Wee Khee** Singapore

#### **Workshop Description**

The workshop will be based on actual case studies from an experienced medical educator (GPS), who has been using Google Blogger (with in built data analytics), exclusively (rather than PowerPoint) for clinical teaching, and medical education faculty development over the last 6 years (in undergraduate, postgraduate and CME/CPD settings). Co-facilitators in the workshop (SHM and LWK) will share added insights from a technical-strategic (SHM) and market-engagement (LWK) perspective. Participants will have the opportunity to build their own prototype teaching blog (with use of Google Blogger as an illustrative freely available, and free to use platform), together with seeing how embedding additional online tools into a teaching blog (like Slideshare, SurveyMonkey, and Padlet) can give educators further data and visibility of student engagement, and actual learning within an eLearning process and platform. Participants will be expected to have engaged in one to two hours of pre-reading, and a pre-workshop exercise. Participants should bring a WiFi enabled laptop or tablet computer to the workshop.

#### **Workshop Objective**

To illustrate and demonstrate the utility of off the shelf/free(ly available) data analytics to inform eTeaching and give visibility of eLearning (activities) by our students.

# **Who Should Attend**

Health professions educators (Medical, Nursing and Allied Health), and staff who have an administrative and leadership role in supporting and working with eLearning/Technology enhanced learning teams.

# W2P4

Thursday 11th January 2018, 1.30pm –5.30pm LT37, Level 3, MD1 Yong Loo Lin School of Medicine National University of Singapore

# HOW DO WE APPLY EVIDENCE OF INTERPROFESSIONAL EDUCATION AND COLLABORATION IN ASIA?

Junji Haruta, Sachiko Ozone and Ryohei Goto Japan

#### **Workshop Description**

The necessity of interprofessional education (IPE) and collaboration (IPC) is globally recognised. There are few evidence of IPE or IPC in Asia, however, we cannot help applying the evidence in the Western culture even if different background. For example, to enhance respect for different professional roles clearly through IPE, we need to be more conscious of explicit communication because Asian countries have a higher context than the West. Thus, the workshop aims to acquire a cultural relative viewpoint at the application of appraisal IPE or IPC evidence to practice.

#### **Workshop Objective**

Participants will be able to:

- 1) Recognise and discuss cultural context through Cultural Map
- 2) Overview evidence of IPE or IPC in Asian and Western countries based on cultural difference
- 3) Understand how to apply evidence of IPE and IPE by adopting a cultural perspective

#### Who Should Attend

All those who are engaged or planning IPE and IPC and researchers interested in IPE and IPC.

### W2P5

Thursday 11th January 2018, 1.30pm – 5.30pm Learning Room 03-05, Level 3, MD6 Yong Loo Lin School of Medicine National University of Singapore

# TECHNOLOGY ENHANCED LEARNING AND DESIGN THINKING PROCESS: THINK GLOBALLY, ACT LOCALLY AND INNOVATE!

Ardi Findyartini, Diantha Soemantri and Anindya Pradipta Susanto Indonesia

#### **Workshop Description**

Transformation of healthcare requires dynamic improvements in medical and health professions education. In a globalized and 'flat world' nowadays, teaching and learning processes are borderless. Medical and health professions students who are the member of current generation are capable of exploring unlimited knowledge and evidence for their future. The use of technology enhanced learning has been widely adopted and adapted, and it requires further holistic evaluation to provide evidence of its effectiveness for students' learning and motivations for learning (Pickering JD & Joynes VCT, 2016).

Any new teaching-learning approaches, including those utilize technology, should also consider the characteristics of the users, i.e students, teachers, course organizers, etc, and the available resources. The design thinking process which has been widely used in areas such as business, commerce and engineering, can be used to guide innovations in technology enhanced learning in medical and health professions education. The approach highlights the need to empathize the users, define the problem to be solved, ideate the broadest range of solution possibilities, build the prototype, and test the innovation. Therefore, medical and health professions educators can challenge themselves to innovate and find the best solutions for their practices. Those innovations at the same time should also consider the learning processes that will take place and be enhanced.

This interactive workshop will include individual and collaborative activities in:

- 1. exploring key principles of learning theories and technology enhanced learning;
- 2. identifying challenges in current teaching and learning practices in own setting;
- 3. identifying the steps of design thinking process;
- 4. discussing examples of technology enhanced learning innovation that used the design thinking process;
- 5. implementing the steps of design thinking process by considering local wisdom and resources;
- 6. developing a draft for technology enhanced learning innovations.

#### **Workshop Objective**

At the end of the workshop, the participants will be able to discuss the principles of learning processes that can be enhanced by technology, and explore technology enhanced learning innovation using design thinking process approach. This workshop will also encourage participants to elaborate their local wisdom and resources in developing cost effective and sustainable technology enhanced learning innovations.

#### Who Should Attend

Medical and health professional educators with interest in technology enhanced learning and innovations. Workshop participants will be invited to engage in an active discussion and also share their own ideas in developing technology enhanced learning innovations. The lessons learned identified during the workshop as well as the blueprint for innovation will be highly useful as take-home messages for workshop participants to apply in their own medical and health professions education institutions.

#### **W2P6**

Thursday 11th January 2018, 1.30pm – 5.30pm Learning Room 03-06, Level 3, MD6 Yong Loo Lin School of Medicine National University of Singapore

# CHANGES IN THE TEACHING METHODS AN ESSENTIAL NEED OF THE HOUR: AN INTEGRATED TEACHING TO MEDICAL STUDENTS BY WHO, WHOM, HOW AND WHERE

<sup>1</sup>BK Manjunatha Goud, <sup>1</sup>Joan Kumar and <sup>2</sup>Aruna Chanu Oinam

<sup>1</sup>United Arab Emirates and <sup>2</sup>India

### **Workshop Description**

The pace of changes in medical education has increased dramatically driven by exponentially increased knowledge and need to train a large group of learners using limited resources. The modern medical education requires changes to suit the needs of the current learning aspects. The medical education stands on the three pillars; Education, Patient care and Research, but now a days the first two aspects have become less relevant to our students and research area has been focused more by the faculties. In our institute the traditional teaching such as horizontal integration has been replaced with vertical integration. The advantage is that, the student will have the content which will be similar to clinical years. This can be achieved by focusing on student oriented teaching method rather that lecture based. Teaching has been recognised not only for providing information and the exchange of experiences, but also for creating the atmosphere and facilitating the learning environment.

This is achieved by revamping and restructuring medical curriculum with teaching, learning approaches so designed as to ensure that students acquire appropriate clinical and scientific knowledge along with practical, procedural and communication skills. So, overall outcome of introducing changes in medical education is to make a competent doctor.

#### **Workshop Objective**

To teach various subjects from first year with clinical co relations

To achieve integration across the subjects

To make students more attentive in the class

To encourage students to have discussion in the form of cases

To make an competent doctor

#### Who Should Attend

All graduates who have done MBBS (Compulsory) and / or MD (Doctor of medicine) and involved in teaching medical students.

# **W2P7**

Thursday 11th January 2018, 1.30pm – 5.30pm Multipurpose Hall 3, Level 3, MD1 Yong Loo Lin School of Medicine National University of Singapore

# FAMILY PRACTICE PRECEPTORSHIP: FROM THEORY TO PRACTICE

**Doris Young, Goh Lay Hoon and Victor Loh** Singapore

#### **Workshop Description**

Doctors need to impart their knowledge, attitudes and skills to the next generation of learners. As family practitioners, this obligation to teach and act as roles models is particularly important because well trained family practitioners are much needed in the community. However, being a teacher or preceptor in family practice offers unique challenges as family physicians deal with a heavy patient load and having learners in their consultations slow down and affect their one to one relationship with their patients. Moreover, many tutors lack confidence in their own 'teaching' abilities are uncertain about the 'curriculum'.

This workshop addresses teachable family medicine moments ranging from problem solving, preventive medicine, relationship and continuity care to family and community aspects and how to deal with uncertainty and indecision. The changing dynamics of the doctor patient relationship with a learner present in the consultation will result in a triadic relationship between GP preceptor, patient and learner. These changing roles can be incorporated into the consultation without interrupting clinical care and the Doctor-Patient relationship. The learner can be an observer, deliver partial care and/or collaborative care. The preceptor can provide supervised care and also act as a facilitator when the learner becomes more confident and independent. Strategies on how to organise the clinic appointment systems and engage the clinic staff and patients will be shared. Finally, characteristics of effective role modelling, supervision, engaging the learners and providing constructive feedback to leaners will also be discussed and demonstrated.

### **Workshop Objective**

This workshop will address how family medicine may be taught in the busy family practice setting. Strategies to address the teaching of problem solving, preventive medicine, relationship and continuity care, family and community aspects, to how to deal with uncertainty and indecision will be shared.

#### Who Should Attend

Family physicians who interested in the craft of imparting knowledge, attitudes and skills to the next generation of doctors will enjoy the role plays, the discussion of ideas, and the sharing of experiences in this interactive workshop.

# W2P8

Thursday 11th January 2018, 1.30pm – 5.30pm Learning Room 03-07, Level 3, MD6 Yong Loo Lin School of Medicine National University of Singapore

# USING A WEB-BASED PLATFORM (EMEDICI©) TO ENHANCE STUDENTS' LEARNING AND IMMEDIATE FEEDBACK ACROSS THE HEALTHCARE PROFESSION

#### Michael Wan

Australia

#### **Workshop Description**

The aim of the workshop is to guide the participants in developing high quality and authentic case scenarios online; to produce interactive questions for immediate feedback to students; and to share online e-resource with other institutions worldwide. The workshop format will be very interactive in ways where participants could have hand-on experience in developing new cases, immerse themselves as candidates answering the questions followed by discussions on further collaboration and research into medical education.

#### **Workshop Objective**

By attending the workshop, attendees will be able to:

- understand the educational theories underpinning the use web-based interactive platform to develop authentic case scenarios to enhance students' learning in the health profession
- develop high quality questions with appropriate explanatory information designed to provide immediate feedback to students online
- embed clinical images, radiological images & videos to facilitate students' interpretation of investigation findings
- have hands-on practice of using the web base platform to develop, edit and publish cases online for sharing with other institutions
- collaborate with other institutions in sharing and researching of online case-based learning.

### Who Should Attend

Academics and clinical educators in medical education who are interested in developing and sharing online case based learning resources in the health profession (medicine, dentistry, nursing, physiotherapy, pharmacy, etc.) as faculty development.

### PLENARY 1 - TECHNOLOGY IN HEALTH PROFESSIONAL EDUCATION: BOON OR BANE?

# TECHNOLOGY, COMPASSION AND HEALTHCARE EDUCATION IN AN INTERCONNECTED WORLD

#### **Brian D Hodges**

Professor, Faculty of Medicine and Ontario Institute for Studies in Education, University of Toronto; The Richard and Elizabeth Currie Chair in Health Professions Education Research, Wilson Centre; and Executive-Vice President Education, University Health Network, Canada

#### Goals for the talk

- 1. Explore the challenges of sustaining compassionate care in an increasingly technical healthcare education environment
- 2. Consider factors that tilt health professionals and healthcare settings either toward burnout and compassion fatigue or in the direction of engaged, compassionate, patient centred care

The 21st century is already characterised by profound discussions about what health professionals are and should be. Unprecedented levels of burnout among clinicians is coupled with growing demands for equitable, safe and compassionate care - the delivery of which is more often systems-based than under the control of individual clinicians.

Simultaneously the explosion of technological advances including computers that increasingly solve problems and display forms of empathy, challenges us to question what a health professional of the future will be.

This presentation argues that while healthcare will continue to be underpinned by cognitive skills and technical prowess, it is an anchor in humanism and compassion that will prove the value of the (human) health professional of the future.

#### **TECHNOLOGY ENHANCED EDUCATION: GOOD THING OR FLASH IN THE PAN?**

#### Erle Lim

Associate Provost (Undergraduate Education), National University of Singapore; and Associate Professor, Department of Medicine, Yong Loo Lin School of Medicine, National University of Singapore, National University Health System, Singapore

With the advent of new "tech toys", there has renewed interest in incorporating such cool technology into clinical training and medical education, with the result that some faculty are like workmen brandishing hammers looking for nails, rushing to incorporate them into curricula without the right pedagogical and conceptual framework. Such an ungrounded approach could lead to the unproductive consumption of meagre resources.

In this talk, the presenter will discuss the educational environment which has necessitated the development and use of VR and AR devices to enhance the students' learning experiences, whilst being mindful of learners' outcomes, and asks – is it good or bad that we use tech devices in teaching, and when should we use them?

Central Ballroom, Basement 2, Resorts World Convention Centre

# LEADERSHIP FORUM - THE FUTURE OF MEDICAL EDUCATION IN A TECHNOLOGY ADVANCED WORLD

How We Can Strategise for the Future of Medical Education in a Technology Advanced World Yeoh Khay Guan, Singapore

Moving Beyond the Cerebral Hard Drive: Leveraging Technology to Improve Medical Education and Clinical Care Through Co-production

Eric Holmboe, USA

Preparing the Future Medical Workforce for the Use of Technology Across Their Career Lifespan Julie Quinlivan, Australia

Medical Education in an Information Technology- Empowered Age: The Philippine Experience Alfaretta Luisa T Reyes, Philippines

Effective Use of Technology to Benchmark and Set Standards in Health Professions Education Programs for the Future Adeeba Kamarulzaman, Malaysia

# HOW WE CAN STRATEGISE FOR THE FUTURE OF MEDICAL EDUCATION IN A TECHNOLOGY ADVANCED WORLD

### Yeoh Khay Guan

Dean, Yong Loo Lin School of Medicine, National University of Singapore, National University Health System, Singapore

We live in an era of technology unprecedented in history. In order to prepare tomorrow's doctors, medical education must be bold and innovative in order to develop their skills and mindsets.

Technology can enhance learning and experience, enhance access to knowledge, support skills training by simulation, and by learning portals to electronic libraries, simulation training and continuing education. We must prepare our students to practice in a technologically advanced world, this includes skill sets for informatics and to understand and adopt technology.

Students at the National University of Singapore use online learning portals, simulation and virtual reality training and receive hand-on experience with electronic health records. In our ASEAN community, there is a diversity of settings in terms of resource, contexts and culture. Technology can be easily shared and will be a leveller. Using an online link, users may gain access to electronic libraries, simulation training and continuing education, overcoming physical or site resource limitations.

Above all we must remember that technology may facilitate care, but it cannot replace the heart of medical practice, the doctorpatient relationship and our ethos of care. More than ever, our patients want our care, compassion and reassurance and this cannot be given by machines.

# MOVING BEYOND THE CEREBRAL HARD DRIVE: LEVERAGING TECHNOLOGY TO IMPROVE MEDICAL EDUCATION AND CLINICAL CARE THROUGH CO-PRODUCTION

#### Eric Holmboe

Senior Vice President, Milestones Development and Evaluation, Accreditation Council for Graduate Medical Education (ACGME), USA

The solo expert physician is a nostalgic hallmark of 20th century medicine, the physician who brought their deep expertise to the bedside to diagnose and treat complex conditions. We now know that this was perhaps too much a romantic notion, a conception of clinical practice clearly insufficient for current health care needs and systems. No health professional can carry all knowledge in their head or possess all the skills needed to care for patients and populations. Health care is an interprofessional team activity that must now embrace emerging technologies that can support both patients and health care teams in coproducing health and health care.

In this session the presenter will review the growing impact of technology in supporting co-production of healthcare and education, managing uncertainty, supporting clinical decisions (e.g. artificial intelligence), and supporting better educational and assessment processes to promote professional growth.

# PREPARING THE FUTURE MEDICAL WORKFORCE FOR THE USE OF TECHNOLOGY ACROSS THEIR CAREER LIFESPAN

#### Julie Quinlivan

Professor, University of Notre Dame Australia; and Director, Professional Services Review of Australia, Australia

Students currently studying to enter a career in medicine must be prepared for the use of technology across their future working lifespan.

In undergraduate medical education, technology enables lectures and learning resources designed to impart knowledge to be available on line to provide students with flexibility to increase their knowledge at a pace relevant to their clinical rotations, exposure to patients and timetable. This means University faculty resources can be directed to those activities where face to face learning is beneficial such as supervision of history taking, clinical examination skills, bedside teaching and clinical reasoning.

In postgraduate medical education, technology is now used to deliver compulsory core training modules in areas identified by health service boards as relevant for their staff. This can include modules in organisational culture, occupational health and safety, safe prescribing, record keeping and other identified areas. Technology will also be used for staff credentialing, to facilitate access across multiple hospital sites, and to monitor past and future continuing medical education activities and performance reports.

Technology will also be used to assess clinical performance by benchmarking length of stay, hospital acquired complications, SAC 1 events and other selected measures to drive improvements in quality and safety at the individual, organisational, hospital and wider health service levels.

Finally, technology will be used at governmental level to identify clinicians who fall out of step with peers in terms of billing, prescribing or clinical activity. This can help reinforce messages about continuing to practice in an appropriate manner.

# MEDICAL EDUCATION IN AN INFORMATION TECHNOLOGY- EMPOWERED AGE: THE PHILIPPINE EXPERIENCE

#### Alfaretta Luisa T Reyes

Professor Emeritus and Past Dean, College of Medicine, University of the East Ramon Magsaysay Memorial Medical Center, Inc., Philippines

There is an increasing global interest and activity in enhancing the healthcare workforce to better address the changing healthcare needs of society. Educational institutions are now urged to align their curricula with the patient and population needs and to provide medical education that assures smooth transition at all points to continuing professional development.

Today's generation of millennial learners are accustomed to technology-enhanced learning environments. They expect the contents and methods to be coherent with technology applications. Technology integration as an instructional tool for delivering the subject matter in the medical curriculum is now in place.

A study by CPJ Bagain, ALT Reyes, RMG Macaraig entitled "Keeping Up with a Technology-Advanced World: A Descriptive Study on How Philippine Medical Schools Integrate Technology in Medical Education" was conducted to describe how Philippine Medical schools cope in an advancing technology world. The Survey consisting of 10-item questionnaire were generated and were distributed to 50 Philippine medical schools through their respective Deans.

The results of the survey were categorised in the following domains: role of technology in medical education, the administrative support in embracing technology used for medical education, technological sources of teaching-learning activities, problems or challenges in using technology for medical education, and the strategies being applied when technology resources are limited.

Results have shown that all schools that responded to the survey have been using technology as part of the teaching learning activities. With the support of the school administration, internet have been provided for both students and teachers to apply innovative methods in the learning process. Common challenges such as inadequate budget, lack of training with the software, and poor internet connectivity were noted. However, despite the challenges mentioned, Philippine medical schools have been resourceful in utilising other strategies that made learning successful and have nurture and produced competent, compassionate, ethical, civic-minded and socially responsive physicians.

# EFFECTIVE USE OF TECHNOLOGY TO BENCHMARK AND SET STANDARDS IN HEALTH PROFESSIONS EDUCATION PROGRAMS FOR THE FUTURE

#### Adeeba Kamarulzaman

Dean, Faculty of Medicine, University of Malaya, Malaysia

Existing and emerging technologies have the potential to enhance health professionals' teaching, learning, and performance assessment across the learning continuum—from undergraduate to graduate education, continuing professional development, and maintenance of lifelong competency.

The use of educational technologies will enable the transformation of health professions education to a system that is competency-driven, affordable, and accessible to each learner. Increasingly educational technologies are utilised to document formative and summative assessments, and track continuing professional development activities of health professionals' practices across their careers. In turn, this will allow education programs to develop systems to measure and aggregate data assessing the performance of individuals, cohorts, curricula, and institutions over time, and use this information to intervene in cases of poor performing individuals and facilitate program improvements. Additionally educational technologies can be leveraged to enable innovation and greater efficiency in fulfilling health professions accreditation standards and licensure, certification, and regulatory requirements. Using examples from the undergraduate medical curriculum and the postgraduate medical curriculum project, we will illustrate how the use of educational technology has the potential to transform undergraduate and postgraduate medical education in Malaysia.

East Ballroom 1, Basement 2, Resorts World Convention Centre

# PANEL DISCUSSION 1 - THE FUTURE ROLE OF THE BIOMEDICAL SCIENCES IN TEACHING AND LEARNING MEDICINE

Can Future Learning and Practice of Medicine Benefit from 'Biomedical Science Thinking' As a Way of Life? Chen Zhi Xiong, Singapore

Integration of Biomedical Sciences into the Post-Clerkship Curriculum Neil Osheroff, USA

Will Future Technology Replace the Biomedical Science Educator? Chan Lap Ki, Hong Kong S.A.R.

# THE FUTURE ROLE OF THE BIOMEDICAL SCIENCES IN TEACHING AND LEARNING MEDICINE

Over the years medicine has evolved into a modern profession using numerous new biomedical technologies. In this high-tech clinically oriented healthcare arena, is there still a role for the basic sciences? Is there any value left for the foundational sciences in teaching our students and in learning medicine? In this international panel the presenters will share their views on the importance of the basic sciences in the overall training of our healthcare students. Short presentations will be followed by a general discussion with the audience.

# CAN FUTURE LEARNING AND PRACTICE OF MEDICINE BENEFIT FROM 'BIOMEDICAL SCIENCE THINKING' AS A WAY OF LIFE?

#### Chen Zhi Xiong

Assistant Dean of Students (NUS), Lecturer and Integration Lead Educator, Yong Loo Lin School of Medicine, National University of Singapore, National University Health System, Singapore

The learning of biomedical sciences has always served as the foundation for the understanding of medicine. A cornerstone that resides at the bottom of the scaffold - under-appreciated, overlooked, misunderstood. In this session, we will discuss the 'meta-purpose' for the learning of biomedical sciences, why it is important in enhancing the future learning and practice of medicine, and potential ways for implementation.

### INTEGRATION OF BIOMEDICAL SCIENCES INTO THE POST-CLERKSHIP CURRICULUM

#### **Neil Osheroff**

Professor, Vanderbilt University School of Medicine, USA

It is important for physicians to have a strong understanding of the biosciences that underlie clinical practice. To address this issue, many medical schools are attempting to introduce foundational sciences into the clinical years. Although most modern undergraduate medical curricula have successfully integrated clinical materials into the pre-clerkship curriculum, the overt integration of foundational sciences into clinical courses has proven to be challenging. Effective incorporation of foundational sciences into the post-clerkship curriculum requires a commitment to integration at the program, course, and session levels, which will be addressed during this panel discussion.

#### WILL FUTURE TECHNOLOGY REPLACE THE BIOMEDICAL SCIENCE EDUCATOR?

### Chan Lap Ki

Associate Professor, The University of Hong Kong, Hong Kong S.A.R.

Our world is transforming at an unbelievable speed due to advances in digital technology. Quantum computing is on the horizon and one can only guess what further explosive changes it can bring. Even now, it is already predicted that many human jobs will be lost to artificial intelligence in the not too distant future. Is biomedical science educator one of them? In this talk, examples of how biomedical educators have introduced technology into teaching and learning will be examined. Technology assists and enriches teaching and learning, and in some cases, even creates learning opportunities that were not possible before such technology. However, in all cases, the educator is not replaced, but in fact needs to takes on even more responsibilities to ensure that technology is incorporated effectively to support learning. Moreover, an analysis of the work of biomedical science educators makes it plain clear that they possess many characteristics that are beyond what technology can offer, at least at this time of the digital revolution: innovativeness, creativity, and perhaps most importantly, the human touch.

East Ballroom 2, Basement 2, Resorts World Convention Centre

# PANEL DISCUSSION 2 - USE OF SIMULATION AND STANDARDISED PATIENTS - CURRENT TRENDS AND SCOPE FOR THE FUTURE

Use of Simulation - Strengths and Pittfalls

Siau Chiang, Singapore

Simulated Patients: Essential for the Education of a New Generation

Nicola Ngiam, Singapore

**Shaping Simulation Learning for the Future** 

Fatimah Lateef, Singapore

The Future of Simulation for Rural and Remote Practice Training

Richard Hays, Australia

#### **USE OF SIMULATION - STRENGTHS AND PITTFALLS**

#### Siau Chiang

Senior Consultant, Department of Anaesthesia, National University Hospital, National University Health System, Singapore

Simulation-based training is an education technique that provides experiential learning opportunities for psychomotor, cognitive and team-working skills. With repeated deliberate practice and guided feedback, learners can hone their skills in a safe environment. Standardised clinical encounters can be simulated and further tailored to meet the needs of learners. This on-demand training has been shown to be effective in skills training and translation to improved patient care and safety.

There are potential pitfalls when using simulation-based training. Logistics constraints, scheduling conflicts and faculty concerns are some of the challenges that may be encountered when developing simulation-based learning activities. The integration of simulation-based training into existing curriculum will need a programmatic approach and close collaboration between all stakeholders.

#### SIMULATED PATIENTS: ESSENTIAL FOR THE EDUCATION OF A NEW GENERATION

#### Nicola Ngiam

Senior Consultant Paediatrician, National University Hospital, National University Health System, Singapore

Communication skills are sine qua non to good patient care and outcomes. In the face of changing communication needs in this digital age, effective face-to-face communication is still integral to the establishment of appropriate doctor-patient and inter-professional relationships. There are many benefits of using simulated patient methodology in healthcare education. Importantly, they contextualise the theory that many curriculums are laden with. Simulated patients provide an opportunity for safe practice of skills and allow the learner to receive constructive feedback. They could arguably be more important than before in the training of communication skills in a new generation of students who have grown up in an age where cyber-conversations are their predominant mode of communication. As real patients become less accessible for ethical and patient safety reasons, simulated patient experiences will continue to provide a transition from simulation to real practice for students. The challenge would be to identify the new learning needs of these students and develop meaningful learning encounters.

### SHAPING SIMULATION LEARNING FOR THE FUTURE

#### Fatimah Lateef

Director, Singhealth Duke NUS Institute of Medical Simulation; and Senior Consultant Emergency Physicians, Singapore General Hospital, Singapore

Simulation has become increasingly embedded into medical education over the last 2 decades. Many healthcare and educational institutions are including simulation in their *blueprint and curriculum*. In discussing how simulation will continue to influence and shape our thinking and practice we have to also consider the *future of healthcare* and the direction we are taking.

Simulation, up to now, is still very much based in institutions, teaching hospitals, resuscitation suites, operating rooms and specialist care area. In future, it is more likely that simulation will also come to be based in community and primary care, as we make the move towards more *community based* and *primary care* as well as more patient self-management and empowerment. Simulation centres will also become more *open access* so that learners at all levels can use them as they need to. With the cost being driven down and enhanced technology making simulation tools very accessible, *home based learning* and more *online simulations*, may become a reality.

Simulation will also be likely to be more closely linked to assessment in the future. This will focus on *assessment for learning*. This can be the test bed for simulation as well. The learner of the future will even have the capacity to being continually assessed through simulation and this can be done either by machine or man.

The future is exciting and limitless and is going to be directed by ourselves, the "*medical futurists*". It is up to us to utilise simulation, simulation based learning and tools to help *optimise efficiency*.

#### THE FUTURE OF SIMULATION FOR RURAL AND REMOTE PRACTICE TRAINING

#### Richard Hays

Professor of Remote and Rural Health, James Cook University, Australia

Medical practice in rural and remote communities is more 'generalist' in almost all specialties and includes a broader scope of practice than in larger communities. This broader scope usually includes procedures, which vary according to the specialty concerned, but often are at the more acute care end of the spectrum. This is because patients are more likely to be encountered in more acute presentations and helpers may be less likely to be close by. These skills are likely to be used less frequently than in larger centres, because of the smaller populations and the broader scope of practice. Further, procedures are more likely to be performed by all members of the health care teams, requiring an interprofessional approach. This context means that health professionals working in rural and remote communities benefit from having close by a range of simulation equipment for not just initial training, but also regular and frequent practice close to their normal work environment. In Australia, where there are many rural and remote communities, small skills labs are located in many smaller locations, supported by technicians, telehealth and mobile units. There is strong support for these facilities at Governmental, health department and university level.

East Ballroom 3, Basement 2, Resorts World Convention Centre

# SYMPOSIUM 1 - LEVERAGING TECHNOLOGY TO OPTIMISE CME/CPD, CLINICAL CARE AND PATIENT ENGAGEMENT

How Can Backward Planning in CME/CPD Help Align the Needs Assessment and Program Outcomes? Lisa Sullivan, Australia

Taking an Integrated Approach to CME, CPD, and Patient Engagement: Deploying a Blended Learning Model to Optimise Clinical Performance and Patient Engagement

Sherlyn B. Celone-Arnold, USA

Applying Facebook and Other Social Network Approaches into Interprofessional Continuing Education Alvaro Margolis, Uruguay

The Rise of Digital Engagement of the Physician and their Patients
Dale Robert Kummerle. USA

# LEVERAGING TECHNOLOGY TO OPTIMISE CME/CPD, CLINICAL CARE AND PATIENT ENGAGEMENT

In this symposium, the faculty will explore a model that develops a strategic approach to developing innovative CME/CPD through an eLearning and Performance Ecosystem within the workplace. Starting from an organisational performance focus, this session pulls together the problems seen and responds to the underlying causes. Throughout the session the faculty and learners will proceed through the strategic components, indicating principles, tools, examples and trade-off of this model. This will provide a systematic way of viewing the goals of eLearning, which can guide in developing strategies that makes sense of and integrates tactics (like asynchronous and synchronous courses, web 2.0, mobile, simulations, portals and more) into an integrated, coherent and comprehensive whole.

# HOW CAN BACKWARD PLANNING IN CME/CPD HELP ALIGN THE NEEDS ASSESSMENT AND PROGRAM OUTCOMES?

#### Lisa Sullivan

Immediate Past President, Global Alliance for Medical Education (GAME), Australia

The planning of any educational event needs to start with the identification of the gap between what is and what should be.

A needs assessment is a systematic process for determining and addressing needs, or "gaps" between the current situation and the desired situation. A needs assessment in CME forms part of the planning process and can be an effective tool to clarify problems and help identify appropriate interventions.

Describing the gap, particularly practice gaps, enables CME planners to make decisions about content, learning and assessment strategies which are organised to reduce the gap.

Backwards planning is where we start with the end in mind. What change in knowledge or performance or patient health status do we need to fill the gaps that our needs assessment found? How does defining the gaps help us to identify the nature of the interventions required and whether they can achieve what we want them to achieve?

This presentation will cover some of the key elements in the process for backward planning using the constructs of the expanded outcomes frameworks from Don Moore and his colleagues and will provide insights into how summative assessment should be designed to determine if desired results ~ "what should be" were achieved, and how a formative assessment approach should be designed to measure the progress of learners towards reducing or eliminating the gap.

# TAKING AN INTEGRATED APPROACH TO CME, CPD, AND PATIENT ENGAGEMENT: DEPLOYING A BLENDED LEARNING MODEL TO OPTIMISE CLINICAL PERFORMANCE AND PATIENT ENGAGEMENT

#### Sherlyn B. Celone-Arnold

Founder and CEO, Integrated Learning Partners, LLC., USA

In this session participants will learn practical strategies to develop integrated learning programs for providers, staff and patients. Building off the foundation of a comprehensive needs assessment, we will explore how to develop a multi-modal blended learning program that is grounded in adult learning principles and drives change in knowledge, skills, competence, confidence and behaviors. We will examine "high and low tech" learning formats, while developing an understanding that successful solutions require may be lower-tech and higher-touch.

We will discuss adult learning preferences and tools that continuing medical education and continuing professional development departments can use to optimize learner engagement. Faculty will review examples of live and enduring activities that are designed for healthcare providers and their patients, and share examples of programs that significantly impact clinical performance and educational outcomes.

Lastly, we will review outcomes methodologies and appropriately match outcomes plans to various formats to more efficiently and effectively measure change in learners' knowledge, skills, confidence, competence and performance.

As a result, in participating in this session, participants will be better able to:

- 1. Build and deploy rapid needs assessments to determine clinical and professional competency gaps
- 2. Design and manage blended learning activities that incorporate a mix of live and eLearning activities to optimize learner engagement for providers, staff and patients
- 3. Develop effective outcomes plans to measure change in knowledge, skills, competence, confidence and performance.

# APPLYING FACEBOOK AND OTHER SOCIAL NETWORK APPROACHES INTO INTERPROFESSIONAL CONTINUING EDUCATION

#### Alvaro Margolis

President and CEO, EviMed., Uruguay

This presentation will showcase how Facebook and other social network concepts and approaches can be used to promote social learning in health care teams, both for online and for combined online and face-to-face learning.

The underlying problem is that frequent chronic conditions such as diabetes, ischaemic heart disease, asthma or depression account for most of the burden of disease of the population, including outpatient visits, hospitalisations, health-related quality of life, mortality and health care costs. The chronic care model provides a framework to address chronic conditions, and it requires teamwork. Interprofessional practice-based learning of health care professionals and teams is therefore necessary.

How can we address training of large numbers of professionals and teams in frequent conditions, such as the ones mentioned above, in a manner that allows for reflection and practice change? One possibility is to include qualitative and quantitative information about contacts of course participants, and then use this information the same way Facebook and other social networks use it, to automatically allow for an exchange with your closest peers, rather than with a random selection of group members. This also allows to scale up the size of online courses, since the number of tutors required to foster exchange may diminish, as discussions occur among known peers.

This session is based on the methodology published in JCEHP by one of the panelists (1).

1. Margolis A, Parboosingh J. Networked Learning and Network Science: Potential Applications to Health Professionals' Continuing Education and Development. J Contin Educ Health Prof. 2015 Summer;35(3):211-9.

#### THE RISE OF DIGITAL ENGAGEMENT OF THE PHYSICIAN AND THEIR PATIENTS

#### Dale Robert Kummerle

Director of Medical Education, Bristol-Myers Squibb Company, USA

The use of technology to enhance education has been around for many years, but it is utilised to varying degrees around the world. Webinars and online meetings are popular in Latin America. Streaming technology provides a much wider audience to provide learning across India. In Europe and the US, the strategic focus in providing quality education will not change, but tactics around digital engagement, such as apps, patient simulation, AI, and other online education, will continue to mature. While some medical education companies are embracing the new focus on digital, others are waiting to see what happens, as utilisation of these technologies is not inexpensive. I will provide concrete examples of the current use of technology in CME, and with the increased reach of digital media, provide some of the outcomes that demonstrate the power to educate for a fairly inexpensive cost per learner.

I will explore questions that have been asked many times by key stakeholders and maybe even yourself, providing answers to questions such as:

- 1) How will increasing the use of digital technology enhance the level of engagement of physicians?
- 2) Will these technologies help to change behavior towards improved patient care?
- 3) What is the cost of live meetings as compared to digital initiatives, and
- 4) Just how is digital CME more cost effective?

So come learn about the current state of medical education in other parts of the world and the movement to provide quality medical education to HCP's to improve patient health through digital technologies.

Leo 4, Level 1, Resorts World Convention Centre

# PANEL DISCUSSION 3 - DEVELOPMENT OF TECHNOLOGY FOR EDUCATION - PRACTICAL APPROACHES: ACADEMIC-PRIVATE PARTNERSHIP

How to Foster the Academic-Private Partnership in Developing Technology for Education – A Perspective from an Academic Clinician

Kelvin Foong, Singapore

The Application of Digital Technology in Medical Education

Frank Voon, Singapore

Virtual Reality and Augmented Reality for Medical Training

Desmond Ng, Singapore

Capitalising on Opportunities for Developing Technological Resources for Learning: Lessons Learned

Kalyani Premkumar, Canada

# HOW TO FOSTER THE ACADEMIC-PRIVATE PARTNERSHIP IN DEVELOPING TECHNOLOGY FOR EDUCATION – A PERSPECTIVE FROM AN ACADEMIC CLINICIAN

#### Kelvin Foong

Associate Professor, Faculty of Dentistry, National University of Singapore, National University Health System, Singapore

The basis for a healthy and thriving academic-private partnership is reciprocity. Because time and resources, both scarce and expensive, are most needed in developing educational technology, the partnership must be grounded on the principle of reciprocity. One perspective on cultivating the academic-private partnership is academic leadership, which in turn fosters a culture of cooperation where there is a willingness from both partners to commit and share expertise. Three examples of healthy academic-private partnerships in developing technology for education will be shared. These focus on how simple ideas of educational need grew into collaborative partnerships between the NUS Faculty of Dentistry and industry.

### THE APPLICATION OF DIGITAL TECHNOLOGY IN MEDICAL EDUCATION

#### Frank Voon

Associate Professor, Department of Anatomy, Yong Loo Lin School of Medicine, National University of Singapore, National University Health System, Singapore

Advances in information technology can be applied towards enabling a better understanding of the spatial relationships of structures in the human body. One approach is for academics to combine knowledge of their field of specialisation with the technological expertise of industry and commercial partners. This was the way used in a project aimed at helping dental students attain a conceptual and confident mastery of the knowledge of relevant nerves, blood vessels, connective tissue and muscles that were located in a specific region of the oral cavity frequently used as a site for local anesthesia, with the used of augmented reality and 3-D technology.

#### VIRTUAL REALITY AND AUGMENTED REALITY FOR MEDICAL TRAINING

# Desmond Ng

Director, Business Development, EON Reality, Singapore

Medical VR applications, such as augmented surgery, remote VR medical training, are becoming increasingly common worldwide. In Singapore, new techniques are being pioneered that go further to help provide non-invasive and completely safe learning outcomes without consequences if mistakes are made. The new VR and AR technologies today will enable trainees to experience realistic 3D medical scenarios, allowing digital feedback and overlay information to be integrated with existing medical images. In other words, trainees will be able to experience and practice fully immersive, on-the-spot decision-making scenarios.

# CAPITALISING ON OPPORTUNITIES FOR DEVELOPING TECHNOLOGICAL RESOURCES FOR LEARNING: LESSONS LEARNED

### Kalyani Premkumar

Professor, Department of Community Health and Epidemiology, College of Medicine, University of Saskatchewan, Canada

With the rapid advances in technology, there are ample, ongoing opportunities for the creation of innovative learning techniques by both faculty and students. In this presentation, Dr. Premkumar will share her experiences and lessons learned in partnering with national and international players, and the process involved in the creation of learning games, annotated video player, and OSCE software authored by her.

Virgo 1, Level 1, Resorts World Convention Centre

# **ELSEVIER HACKATHON**

# **INNOVATING MEDICAL EDUCATION**

#### **David Game**

Digital Product Director, Education, Elsevier Ltd, United Kingdom

Creatively brainstorming solutions to critical challenges faced by faculty; building on insights from the recent medical education hackathon Elsevier Hacks @AMEE.

### SYMPOSIUM 2 - TECHNOLOGY IN ASSESSMENT: CONTEMPORARY BEST PRACTICES AND FUTURE DEVELOPMENTS TO ENHANCE EDUCATION FOR THE IMPROVEMENT OF PATIENT CARE

Where is Assessment Going? An Overview of Latest Developments and Future Directions in Assessment Katharine Boursicot, Singapore

The Extended Mind - Knowledge Tests of the Future

Trudie Roberts, United Kingdom

Personalised Immersive Testing: The OSCE of the Future?

Katharine Boursicot, Singapore

A BAN on Big Testing: Behaviours, Adaptations and Nudges

Richard Fuller, United Kingdom

# TECHNOLOGY IN ASSESSMENT: CONTEMPORARY BEST PRACTICES AND FUTURE DEVELOPMENTS TO ENHANCE EDUCATION FOR THE IMPROVEMENT OF PATIENT CARE

As advances and innovations in both technology and assessment are rapidly changing the landscape of health professional assessment, this symposium is designed to provide a perspective on contemporary best practices and give a preview of possible future directions.

### WHERE IS ASSESSMENT GOING? AN OVERVIEW OF LATEST DEVELOPMENTS AND FUTURE DIRECTIONS IN ASSESSMENT

#### Katharine Boursicot

Director, Health Professional Assessment Consultancy, Singapore

This introductory presentation will set the scene for the symposium, with a summary overview of the most significant developments in assessment and related technology in the last 10 years, and a look at possible future directions using modern technology.

#### THE EXTENDED MIND - KNOWLEDGE TESTS OF THE FUTURE

#### **Trudie Roberts**

Director, Leeds Institute of Medical Education, University of Leeds, England; and President, Association of Medical Education in Europe (AMEE), United Kingdom

In recent decades, an intriguing view of human cognition has been postulated. Accordingly, to this view, - 'the hypothesis of extended cognition,' human cognitive processing extends into the environment of a person. Clark and Chalmers put this hypothesis forward in a seminal publication in 1998. In this paper, the authors present the idea of active externalism in which objects within the environment function as a part of the mind. They argue that it is arbitrary to say that the mind is contained only within the boundaries of the skull.

Given the explosive increase in medical knowledge what should we expect medical students commit to memory ie within the skull and what information would we expect them to obtain from the Internet, say via a mobile phone?

These questions are important as they will shape our knowledge tests in the future and may mean that rather than preventing students taking their smart phones into assessments we actively promote this.

#### PERSONALISED IMMERSIVE TESTING: THE OSCE OF THE FUTURE?

#### Katharine Boursicot

Director, Health Professional Assessment Consultancy, Singapore

OSCEs have changed considerably since their first description over 40 years ago. The fundamental basis of a fair and objective test of clinical and communications remains, but there have been substantial changes to the design, implementation, scoring, examiner recruitment and training and methods of standard setting, as well as innovative technological enhancements, which bring OSCEs into the 21st century as a powerful assessment tool. With the development or VR and AR, the possibilities of individualised tests are becoming reality and these possibilities will be explored.

#### A BAN ON BIG TESTING: BEHAVIOURS, ADAPTATIONS AND NUDGES

#### Richard Fuller

Director, Medical Education Programmes, Leeds Institute of Medical Education, University of Leeds, United Kingdom

The rise of competency based education and growth in Health Professions Courses worldwide has led to a 'massification' of education and assessment. This has resulted in large scale, high stakes tests with a greater focus on psychometric rigour than learner feedback and development

With the rise of more workplace and programmatic approaches to assessment, can we support learners more effectively? Can we provide more customised forms of assessment based on learner ability? Is the era of large scale 'one size fits all' testing coming to an end?

This concluding presentation within the symposium will focus on some of the emerging approaches to more customised, personalised assessment via sequential and adaptive testing. Using behaviour change models, the presentation will conclude with an exploration of educational nudges and the impact on 'at risk' learners and their assessment outcomes.

East Ballroom 1, Basement 2, Resorts World Convention Centre

### PANEL DISCUSSION 4 - MENTORING IN HEALTH PROFESSIONAL EDUCATION: HOW TO APPROACH THE MILLENIALS

**Building Health Professional Students Through Multi-Model Mentoring** Tan Chay Hoon, Singapore

**Building Empathy, Resilience and Professionalism in the Millenials** Jen-Hung Yang, Taiwan

**Developing Resilience and Emotional Intelligence through Mentoring**Judy McKimm, United Kingdom

Mentoring, Reverse Mentoring and Collegial Conversations: Agile Strategies to Meet Changing Needs Chinthaka Balasooriya, Australia

#### BUILDING HEALTH PROFESSIONAL STUDENTS THROUGH MULTI-MODEL MENTORING

#### Tan Chay Hoon

Associate Professor, Department of Pharmacology, Member, Centre for Medical Education (CenMED), Yong Loo Lin School of Medicine, National University of Singapore; and Consultant Psychiatrist, National University Hospital, National University Health System, Singapore

Research has shown that those who have multiple mentors have received greatest benefits in their career and professional development. Mentors listen, advise, and make appropriate referral to appropriate specialist when needed. Mentoring is a multiple faceted role. Therefore, it is logical to have Multi-Model Mentoring.

In Medical School, we have endeavoured to provide mentors to medical students from the time they are accepted to medical school. School assign both pre-clinical and clinical faculty who have volunteered as mentors to take care of the newly enrolled students in a formal way. Student affair too provide mentoring guidance. On the other hand, there are countless willing faculty, who mentor students when the latter initiate, seek for advice and guidance. The students are able to bring up their personal fear and frustrations, to discuss with mentors academic challenges as well as professional development. This informal mentoring see the students grow over the years. Many students are able to actively seek the counsel of more than one mentor at various part of their educational journey.

Through the multi-model mentoring structure, many of our students progress happily and continue to maintain mentor-mentee relationship over years.

#### BUILDING EMPATHY, RESILIENCE AND PROFESSIONALISM IN THE MILLENIALS

#### Jen-Hung Yang

Dean, Tzu Chi University (TCU) College of Medicine, and Professor, Department of Dermatology, TCU School of Medicine, Tzu Chi University, Taiwan

Traditionally, medical students and physicians are trained to be knowledgeable, dutiful, altruistic, and are accustomed to exonerating personal and family time in service to patients. Medical students to junior doctor are highly stressful, and could lead to burnout because of poor stress management skills. The prevalence of physician burnout was 38%-60%, and was significantly higher than the general population (27%) in USA, and burnout prevalence was 42.9% from a survey in Taiwan. Burnout has been known as an important risk factor in patient safety, and the patients might suffer serious medical errors. Empathy is the ability to understand and share the feelings of another, and informal and hidden curriculum is more effective to learn from, e.g., experiential service learning and the Silent Mentor Program of Tzu Chi University (TCU). Resilience is the ability to adapt to and bounce back from the stress of the training and/or clinical environment. An appeal of self-care, mindfulness, and relationships are primary factors to build physician's resiliency. Appreciative inquiry is an example to construct positivity culture in our institution, and is of value to build resilience to cope with stress and to balance quality of work (patient care) and life (self-care). I will share our experiences on silent mentor program, reflective writing, and appreciative inquiry to provide insights into the longitudinal development of professional identity and professionalism.

#### **DEVELOPING RESILIENCE AND EMOTIONAL INTELLIGENCE THROUGH MENTORING**

#### **Judy McKimm**

Professor of Medical Education and Director of Strategic Educational Development, Swansea University Medical School, United Kingdom

Whilst much has been written about the need for health professionals to have good coping strategies to handle the emotional labour of working in busy, often under-resourced health services, relatively little attention has been paid to the role of the mentor or supervisor in helping to nurture resilience and emotional intelligence in their mentees. This presentation will draw from the leadership and other literature to highlight models and strategies that mentors can adopt to support the health professionals and students with whom they are working.

# MENTORING, REVERSE MENTORING AND COLLEGIAL CONVERSATIONS: AGILE STRATEGIES TO MEET CHANGING NEEDS

#### Chinthaka Balasooriva

Director of Medical Education Development, School of Public Health and Community Medicine, University of New South Wales, Australia

We live in exciting times which pose new and exciting challenges. To remain relevant in a rapidly changing world, education needs to adapt quickly and embrace new thinking. We have boldly re-imagined learning and teaching; mentoring deserves some re-imagining too.

Traditional mentoring, where a senior executive advises a junior staff member, with the intention of guiding them to succeed in their careers, still has an important role to play. Recent reports however suggest that there is a need for a wider range of strategies that can cater to the needs of the next generation. This is driven in part by the changing preferences of our younger colleagues and in part by the changing values and beliefs of a global community. Questioning traditional hierarchies and the assumptions that underlie them, is an example of change in values that drives such change. As we let go of assumptions linked to hierarchies, we allow ourselves to embrace a new range of mentoring strategies. These include reverse-mentoring, where relatively junior colleagues are encouraged to lead mentoring conversations in their areas of expertise, and collegial conversations, where peers exchange feedback with no perceived hierarchy.

We will explore these ideas in more detail and engage in a collegial discussion that will broaden our perspectives on mentoring.

#### SYMPOSIUM 3 - USING NEW TECHNOLOGIES IN BIOMEDICAL SCIENCE TEACHING

**Applying MOOC Technology in Biomedical Science Education** 

Peter GM de Jong, The Netherlands

The Use of Novel Technologies to Enhance Student Assessment

Neil Osheroff, USA

The Role of Technology in Active Learning

Sandy Cook, Singapore

#### **USING NEW TECHNOLOGIES IN BIOMEDICAL SCIENCE TEACHING**

The last decade the role of new educational technologies in medical education has increased. New teaching methodologies and online materials bring new opportunities for educators to use high quality teaching materials and techniques in their own classroom teaching. In this symposium an international panel of presenters will address current developments in educational technologies in teaching the biomedical sciences. Short presentations will be followed by a general discussion with the audience.

#### APPLYING MOOC TECHNOLOGY IN BIOMEDICAL SCIENCE EDUCATION

#### Peter GM de Jong

Staff Adviser and Assistant Professor, Technology Enhanced Learning, Leiden University Medical Center, The Netherlands

Nowadays, more and more course materials and training programs are offered and shared online. One of the latest technical innovations in medical education is the Massive Open Online Course (MOOC). MOOCs are a new way of delivering interactive online learning activities providing free access to academic courses for an unlimited number of participants worldwide. Learners can study the content at their own pace with interactive learning materials and asynchronous online forums with international peers. Within medicine, the number of MOOCs worldwide has markedly increased in the last few years. In this presentation an overview will be provided of the current MOOC technology and the opportunities for teaching the biomedical sciences.

#### THE USE OF NOVEL TECHNOLOGIES TO ENHANCE STUDENT ASSESSMENT

#### Neil Osheroff

Professor, Vanderbilt University School of Medicine, USA

Because clinicians require skills and attitudes beyond medical knowledge, many medical schools are moving to the use of competency-based assessments. In these systems, students are assessed in domains that include knowledge, behavior, and communication skills. Although the use of competency-based milestones provides students with rich and holistic feedback, it requires considerable logistical support in order to catalog a myriad of quantitative and qualitative data. Thus, the use of computer-based systems to accumulate and monitor assessment data greatly enhances the ability to use competency-based strategies. This presentation will describe how resources that currently are being used in the Vanderbilt University School of Medicine and enhance student assessment.

#### THE ROLE OF TECHNOLOGY IN ACTIVE LEARNING

#### Sandy Cook

Professor, Senior Associate Dean, Deputy Head, Office of Education, Duke-NUS Medical School, Singapore

More and more educators are trying to move to a more engaged and active learning environment. However, the logistics of coordinating and running such activities can sometimes overwhelm a teacher, making the process less attractive or feasible. In this presentation, I will review the various technologies that Duke-NUS has used to facilitate the implementation one type of active learning (Team-based Learning (TBL)), that can be also used in other active learning strategies.

East Ballroom 3, Basement 2, Resorts World Convention Centre

### SYMPOSIUM 4 - DEVELOPMENT OF NATIONAL STANDARDS AND CORE CLINICAL TRAINING CURRICULUM FOR MEDICAL SCHOOLS IN SINGAPORE

**Developing the National Medical School Standards for Singapore** 

Koh Dow Rhoon, Singapore

**Developing a National Core Clinical Training Curriculum for Medical Schools – The Burning Platform** Mabel Yap, Singapore

A Medical School's Perspective on the Development of the National Medical School Standards Lau Tang Ching, Singapore

The Importance of Education Standards, Quality Assurance and Quality Improvement - Local and International Perspectives

Ian Curran, Singapore

Standards for Medical Education in Singapore: An Opportunity to Enhance Collaboration and Promote Excellence Naomi Low-Beer, Singapore

Setting Standards for Medical Schools Programs for Quality Assurance and Quality Improvement Theanne Walters, Australia

# DEVELOPMENT OF NATIONAL STANDARDS AND CORE CLINICAL TRAINING CURRICULUM FOR MEDICAL SCHOOLS IN SINGAPORE

Singapore has three medical schools which are distinctly different from each other due to their affiliation and pedagogies. While diversity is valued, a set of national standards is needed to ensure alignment with healthcare needs and international best practices. There is also a need for a common set of clinical training curriculum to guide schools and training institutions on the core skills and knowledge students would require to meet Singapore's evolving healthcare needs. The aim of this symposium is to provide various perspectives on the development of a set of national standards for medical schools in Singapore as well as the core clinical training curriculum - the processes involved, the challenges faced, and the lessons learnt.

#### **DEVELOPING THE NATIONAL MEDICAL SCHOOL STANDARDS FOR SINGAPORE**

#### Koh Dow Rhoon

Associate Professor, Department of Physiology, Director, International Relations, and CenMED Associate, Centre for Medical Education (CenMED), Yong Loo Lin School of Medicine, National University of Singapore, and Visiting Senior Consultant, Division of Rheumatology, Department of Medicine, National University Hospital, National University Health System, Singapore

The primary purpose of Singapore's three medical schools is to nurture fit-for-purpose doctors for Singapore. By design, the three medical schools have different aspirations and philosophies with distinctive design and delivery of their respective education programmes. While we embrace diversity, it is imperative for the schools to fulfil a core set of educational standards to ensure quality medical education is delivered. The development of the National Medical School Standards for Singapore is in-line with international practices, and it sets the broad parameters for the schools' mission and objectives, curriculum and assessment, student, staff, and programme management, as well as its educational resources and governance, within which the schools could design their own educational initiatives. This presentation discusses the broad implications to the management of medical schools in Singapore, and the areas still to be addressed in the implementation.

# DEVELOPING A NATIONAL CORE CLINICAL TRAINING CURRICULUM FOR MEDICAL SCHOOLS - THE BURNING PLATFORM

#### Mabel Yap

Director, Professional Training and Assessment Standards Division, Ministry of Health, Singapore

To meet the future challenges in our healthcare landscape and the changing model of healthcare, a set of core clinical training curriculum has been developed to guide medical schools on the development of key training outcomes and educational programmes to ensure that our students are equipped with the right skills to meet Singapore's evolving healthcare needs. The focus areas would include health promotion and disease prevention, provision of appropriate cost-effective care throughout the healthcare continuum and care for the elderly patient. The core curriculum prepares medical students for postgraduate year 1 and residency training. This presentation covers the framework and processes used to develop the core curriculum by all the stakeholders.

# A MEDICAL SCHOOL'S PERSPECTIVE ON THE DEVELOPMENT OF THE NATIONAL MEDICAL SCHOOL STANDARDS

#### Lau Tang Ching

Senior Consultant, Division of Rheumatology, National University Hospital and Associate Professor, Department of Medicine, Vice Dean (Education), Yong Loo Lin School of Medicine National University of Singapore, National University Health System, Singapore

Achieving the National Medical Schools Standard (NMSS) should be a meaningful and enjoyable process. After all, medical schools and NMSS are aligned in their purpose to deliver quality healthcare professionals to serve the needs of the country. The processes and delivery of quality education in medical schools should be imbued with the ideals of the NMSS such that achieving these ideals becomes natural. The medical schools were in existence before the NMSS. Therefore, effective communication and relationship building amongst the stakeholders will ensure the alignment of purpose and collaboration for success during the formative stage of the framework and standards. At the same time, standards are yardsticks to measure the attainment of "acceptable quality". In a world where resources are precious commodities, we have to go beyond standards, and consistently improve by sharing, learning and improving together, so that we can have better value in our quality education.

# THE IMPORTANCE OF EDUCATION STANDARDS, QUALITY ASSURANCE AND QUALITY IMPROVEMENT - LOCAL AND INTERNATIONAL PERSPECTIVES

#### Ian Curran

Vice Dean, Education and Co-Director of Academic Medicine Education Institute (AM.EI), Duke-NUS Medical School, Singapore

Prof Curran will explore how Duke-NUS Medical School supports the new national standards for medical schools and clinical training to promote and encourage the highest quality medical education and training in Singapore. Drawing on his experience at the UK medical professional regulator, the General Medical Council, Prof Curran will make some general observations about the challenges and opportunities when developing or revising national education standards. He will explore how in his new role as Vice Dean for Education, the revision of the Duke-NUS curriculum presents an interesting case study to explore and test the new standards and strategic objectives in practice. The new standards will be deemed successful if they enable Singapore's medical schools to train high quality doctors that meet the current and future needs of Singapore, and if they allow an innovative and progressive culture of educational innovation and excellence to develop across Singapore's healthcare system. Duke-NUS Medical School seeks to play its part in this ambitious and important policy initiative.

# STANDARDS FOR MEDICAL EDUCATION IN SINGAPORE: AN OPPORTUNITY TO ENHANCE COLLABORATION AND PROMOTE EXCELLENCE

#### Naomi Low-Beer

Associate Professor, Vice-Dean Education, Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore

The Lee Kong Chian School of Medicine (LKCMedicine) is Singapore's newest medical school. Its first cohort of students will graduate this year, receiving a degree awarded jointly by its parent universities, Imperial College London and Nanyang Technological University (NTU), Singapore. Rather than a 'lift and shift' of the Imperial MBBS programme, all aspects of LKCMedicine's programme – admissions, curriculum, pedagogy, assessment, evaluation and student welfare – were developed bespoke through collaboration between teams in Singapore and in London. In this talk I will describe the challenges and opportunities afforded by development and delivery of the LKCMedicine MBBS programme, with a focus on meeting the necessary academic and regulatory standards, ensuring a distinctive and relevant curriculum, and providing learning outcomes that prepare doctors for the future practice of medicine. The advent of national medical school standards and core clinical training curriculum provide an important opportunity to strengthen the collaboration between Singapore's medical schools, to enhance medical training nationally and to provide a framework for excellence in medical education that should have an impact locally, regionally and internationally.

# SETTING STANDARDS FOR MEDICAL SCHOOLS PROGRAMS FOR QUALITY ASSURANCE AND QUALITY IMPROVEMENT

#### Theanne Walters

Deputy Chief Executive Officer, Australian Medical Council, Australia

The Australian Medical Council is the national standards and accreditation authority for medical programs in Australia, and collaborates the Medical Council of New Zealand to apply its standards to New Zealand medical programs.

The AMC works in a national system of accreditation and regulation that has both quality assurance objectives (protecting the public by ensuring that only practitioners who are suitably trained and qualified to practise in a competent and ethical manner are registered) and quality improvement objectives (enabling innovation in the education of health practitioners and the development of a flexible, responsive and sustainable health workforce).

This presentation will outline how the AMC sets and applies standards to manage the tension between setting minimum requirements that remain up to date and satisfy quality assurance objectives, and encouraging and facilitating diversity and innovation.

#### PANEL DISCUSSION 5 - INTERPROFESSIONAL EDUCATION FOR THE FUTURE

Incorporating IPE in an Academic Medical Centre

Lim Boon Leng, Singapore

Preparing Nurses for Future Interprofessional Collaborative Practice: Tips and Pitfalls

Serena Koh, Singapore

Findings and Cultural Characteristic of IPE in Japan - Experience from Japan and Asia

Junji Haruta, Japan

Incorporating IPE Strategies in Health Professional Education: Lessons Learnt from the Indonesia Experience Ardi Findyartini, Indonesia

#### **INCORPORATING IPE IN AN ACADEMIC MEDICAL CENTRE**

#### Lim Boon Leng

Deputy Group Director, Education (Graduate), SingHealth, Designated Institutional Official, SingHealth Residency, Singapore Health Serves Pte Ltd, Singapore

A strong team of physicians, nurses, pharmacists, and allied health professionals is akin to a well-orchestrated symphony performed by competent musicians in harmony. The care continuum for patients, likewise should be aligned to defined clinical pathways, which are comprehensive and systematic, to enable best health outcomes. In Singapore, most of the health organisations are Academic Medical Centres (AMCs) stepping into maturity. As AMCs mature, it is important to discourage practices in silos, and establish interprofessional teams around patient-centric care, as well as care pathways of high volume, complexity and impact. With the new model of collaborative care, it is also essential for different health professionals to learn together (IPE), to attain excellence in medicine and patient care.

# PREPARING NURSES FOR FUTURE INTERPROFESSIONAL COLLABORATIVE PRACTICE: TIPS AND PITFALLS

#### Serena Koh

Associate Professor, Alice Lee Centre for Nursing Studies, Yong Loo Lin School of Medicine, National University of Singapore, National University Health System, Singapore

The presentation in the Moderated Panel Discussion will provide a broad overview of the interprofessional education (IPE) Curriculum, which comprises Interprofessional Core Curriculum (ICC) and Interprofessional Enrichment Activity (IEA). The curriculum is designed around the six core competencies such as Roles & Responsibilities, Communication, Patient, Family & Community Focus, Learning & Reflection, Ethical Practice and Teamwork. The different (IPE) programmes for NUS Nursing which includes Effective Communication, Patient Safety, Joint Ethics on Principle of Respect, Consolidated Clinical Simulation Practice and Advanced Cardiac Life Support will be shared. The Patient Safety Workshop will be highlighted as an example of an ICC developed for Medical, Nursing and Pharmacy students and insights into the development, implementation as well as challenges will be shared.

### FINDINGS AND CULTURAL CHARACTERISTIC OF IPE IN JAPAN - EXPERIENCE FROM JAPAN AND ASIA

#### Junji Haruta

Assistant Professor, University of Tsukuba Hospital, Japan

In Japan, Interprofessional Education (IPE) and collaboration (IPC) are needed to cope with the rapid aging of the population. We developed an Interprofessional Competency Framework based on IPE and clarified the findings of IPE and IPC in the Japanese context. Therefore, we shared knowledge about the research and emerging cultural characteristic served in Asian countries.

First, we developed the interprofessional competency framework in Japan in 2016. Our competency framework included two core domains of "Patient-/Client-/Family-/Community-centered" and "Interprofessional Communication", and four peripheral domains of "Role Contribution", "Facilitation of Relationships", "Reflection" and "Understanding of Others". It is clarified that each healthcare professional should focus on the roles and functions of their profession as domains of "Role Contribution" and "Understanding of Others". Moreover, we had to recognize the difference between "interprofessional collaboration" and "team as group cohesiveness" deliberately.

#### **PANEL DISCUSSION 5**

Second, we created the Interprofessional Facilitation Scale (IPFS) which we translated into Japanese. The original factor "Encouraging interprofessional interaction" was divided into two factors. Through this result, we found that most Japanese might understand that "facilitation" encourages relationships as contextual belonging that is distinct from relationships based on respect for others.

Third, we explored the doctor socialisation in Japan. This study indicated that doctors integrated personal role and identity into organisation or/and professional group. Through the socialisation, they adapted as a member of the hospital doctors or professional group, and they tended to participate in the organisation fully when they regarded their speciality as clear as "an extremally, public persona".

These findings indicated that we might unconsciously define the interests of the group as our own professional interests and place the group's needs above their own. When the rules of communication in a group would be primarily transmitted using contextual elements, we frequently would not explicitly state. This mindset is likely based on the notion of "relationalism" and "high-context". Considering these cultural characteristic, individuals in our culture come to intentionally understand the concepts, performance, emotions, and values of other professionals. Additionally, we should be explicit regarding professional and interprofessional roles but also own cultural context comparing to Western countries.

Finally, IPE and IPC in Japan is likely to affect the "high-context" and "relationalism" taken root in the healthcare organisation. Japan could be identified as within the Confucian Asia cluster. Therefore, these findings might be helpful for other Asian countries developing IPE and IPC.

# INCORPORATING IPE STRATEGIES IN HEALTH PROFESSIONAL EDUCATION: LESSONS LEARNT FROM THE INDONESIA EXPERIENCE

#### Ardi Findyartini

Senior Lecturer in Medical Education, Department of Medical Education, Faculty of Medicine, Universitas Indonesia, Indonesia

Interprofessional Education (IPE) has been considered as an important strategy to enable health professions students to learn and develop commitment to collaborate for better Interprofessional Collaborative Care (IPC) in the future. Interprofessional collaboration in healthcare cannot be initiated later once the health professional graduates come into workplace. Ability to work in the interprofessional team and to collaborate in fulfilling the aim of healthcare indeed requires multiple competencies on the health system, competence and authority of health professionals, ethical practice, interprofessional communication, self-reflection and teamwork. Therefore, IPE should incorporate the building blocks of knowledge, skills and attitude in the relevant areas and enable health professions students to learn with and for each other early in their academic life as well as in the workplace.

The philosophy and basic principles of IPE has been implemented in the formal curricula of some medical and health professions education in Indonesia. Success stories in the implementation are supported by students' and faculties' satisfaction and evidence on the learning results. Further challenges in the Interprofessional Education in Indonesia centralised in the needs to provide good Interprofessional Collaborative Care role model in practice both in hospital and community settings. The Ministry of Health and Ministry of Research and Higher Education have been supporting the Interprofessional Collaborative Care and the Interprofessional Education initiatives strongly. This support shows a great political will which is necessary in the IPE implementation in various settings in Indonesia. Some studies highlighting the success as well as the challenges of the implementation of Interprofessional Education in Indonesia setting and future direction will be highlighted in this talk. In addition, another key challenge in the IPE implementation is the different sociocultural aspects of individuals, groups and professions involved in the program. Learning with and for each other requires deep understanding of how health professions students and practitioners perceive each other professions' roles and responsibilities. Finally, IPE implementation in Indonesia should strengthen future evidence by evaluating the translation of IPE competencies into practice. This effort has to still realize the richness of sociocultural contexts in IPE implementation in Indonesia as well as great variations in leadership, faculty readiness and competences and facilities across health professions education schools in Indonesia.

Central Ballroom, Basement 2, Resorts World Convention Centre

#### PLENARY 2 - LEARNING AND TECHNOLOGY NOT LEARNING TECHNOLOGY

#### Ronald M Harden

Professor of Medical Education (Emeritus), University of Dundee; and General Secretary and Treasurer, Association for Medical Education in Europe (AMEE), United Kingdom

Previous APMECs addressed important issues relating to curriculum planning, teaching and learning methods, approaches to assessment and teachers in the context of a medical school. The 15th APMEC explores the key aim of medical education – to improve patient care – and looks at how technology can help. This is an exciting and important time to examine in the context of patient care the transformative role of technology and learning. The intelligent use of technology allows us not just to do better what we were already doing but to challenge our current approach to education.

To appreciate this, we need to look at the continuum of education from undergraduate through postgraduate to continuing or lifelong education and how technology can contribute to the curriculum of the future. The multifaceted aspects of this challenge include:

- The use of technology to deliver an authentic curriculum where students learn in the context of the practice of medicine using virtual patients, virtual reality, augmented reality, gamification, learning analytics and other technologies.
- A move from "just-in-case" learning, where students are overwhelmed with information about more than 60,000 possible
  medical diagnoses and 6000 practical procedures, to "just-in-time" learning or "on-the-job" learning, where as a doctor they
  practice as a doctor with performance support tools, acquiring information as they need it. Students are provided with core
  information and are taught how to ask a question, how to access sources of information and how to evaluate the answers
  they receive.
- A collaborative approach to education involving all of the stakeholders, including teachers, educationalists, educational technologists, students and, importantly, patients. Students and patients should be partners in the process.
- A recognition that the role of the teacher changes from an information provider where they are the conduit or transmitter
  of information to one where they are a curator of information and an information coach developing in the student a digital
  literacy. The role of the teacher also changes from an emphasis on information provider to one of a facilitator of learning.
- The need to train students who are master adaptive learners.

The transformative application of technology to education will move education from the "Ivory Tower" to the "Real World" and is likely to benefit patient care.

#### SPECIAL INTEREST GROUP (SIG) SESSION

East Ballroom 1, Basement 2, Resorts World Convention Centre

# SIG 1: ARTIFICIAL INTELLIGENCE, ROBOTICS AND THE CHALLENGES OF ADAPTING HEALTH PROFESSIONS EDUCATION

#### **Brian D Hodges**

Professor, Faculty of Medicine and Ontario Institute for Studies in Education, University of Toronto; The Richard and Elizabeth Currie Chair in Health Professions Education Research, Wilson Centre; and Executive-Vice President Education, University Health Network. Canada

Everywhere we look, dramatic shifts in technology are changing the way we conduct our lives. Banking and buying are on line. We enter a concert, a movie or board a flight with a barcoded piece of paper printed at home. Inside our clinics and operating rooms, robotics and systems that employ artificial intelligence are augmenting, and in some cases will one day replace, the work of human health professionals. The word often used to describe this changing landscape is "disruption".

Despite this, health professions education is proving very slow in preparing for the changes ahead. Though ripe for their own disruption, education models seem oddly resistant to change. Yet our students will be practicing in 2050 and need an education that will prepare them for this rapidly changing context. Equally important, healthcare professionals in practice today need help to prepare for what will be a very different workplace. Professional scopes of practice are going to change significantly and some professions may be reconfigured or made obsolete. It is time to take a hard look at what aspects of health care should remain firmly in the heads, hands and hearts of human health professionals.

East Ballroom 2, Basement 2, Resorts World Convention Centre

#### SIG 2: THE FUTURE ROLE OF ONLINE LEARNING IN BIOMEDICAL SCIENCE EDUCATION

#### Peter GM de Jong

Staff Adviser and Assistant Professor, Technology Enhanced Learning, Leiden University Medical Center, The Netherlands

The number of available online learning opportunities is increasing rapidly. Following the text and lecture based online learning materials such as Massive Open Online Courses, new technologies like virtual and augmented reality and 360 degree interactive video are being introduced in biomedical science education. These new technologies provide opportunities for students to engage in unique learning experiences which were not available before. The session will discuss some recent examples of these technologies and will explore its value for the future.

Central Ballroom, Basement 2, Resorts World Convention Centre

### ADDRESS BY PRESIDENT, 69TH MEDICAL SOCIETY, NUS YONG LOO LIN SCHOOL OF MEDICINE

#### TECHNOLOGY AND STUDENTS: YEA OR NAY? - A STUDENT'S PERSPECTIVE

#### Norman Lin

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

Educators around the world are increasingly tapping into the power of technology to augment students' learning. In recent years, many universities around the world have initiated new educational programmes like mobile learning and virtual reality to improve teaching, engagement and efficacy. However, what does it mean to be a student on the receiving end? Do the digital natives necessarily benefit from technology? Hear from a student about what technology means to him and how learners can be better involved in the design and implementation of educational technology

Saturday 13th January 2018, 9.15am

Central Ballroom, Basement 2, Resorts World Convention Centre

#### ADDRESS BY CHIEF RESIDENT, NATIONAL UNIVERSITY HOSPITAL, NATIONAL UNIVERSITY HEALTH SYSTEM

#### **RESIDENCY - A SINGAPOREAN PERSPECTIVE**

#### Beniamin Hooi

Senior Resident, Division of Advanced Internal Medicine, National University Hospital, National University Health System, Singapore

In 2010, Singapore adopted an American-based Residency system. This has met with considerable controversy since it started, with many raising the concern that medical students were being pushed into sub-specialty training too early on in their careers. My presentation centres around my own journey as a resident in Internal Medicine, and how it shaped my views towards medical training of the future. First, I will talk about key aspects of an effective Residency Program. Next, I will provide a perspective on the value of generalist-driven care, and how it can meet the changing healthcare needs of an ageing population. Finally, I will conclude with an exhortation to inspire this generation of doctors to practice medicine with compassion.

#### PLENARY 3 - INCORPORATING TECHNOLOGY INTO CURRICULA AND LEARNING

### AI (ARTIFICIAL INTELLIGENCE) AND COLLABORATIVIST LEARNING FOR MEDICAL EDUCATION

#### Linda M Harasim

Professor of Communication, Simon Fraser University, Canada

Medical educators today stand at the forefront of human destiny in many profound ways. Both the field of medicine and of education are facing immense disruptions by the rapid advance of Artificial Intelligence (AI), which seeks to automate and replace the human educator and reduce learning to the simple repetition of content. Augmented Human Intelligence (AHI) technologies and pedagogies, on the other hand, seek to advance and augment human cognitive ability rather than replace it. Educators have the historical role of promoting human intelligence. Today we need to be able to understand and choose between two opposing technological and intellectual trends: one which replaces human intelligence, the second which advances it.

This keynote introduces Medical Educators to the two trends, Al and AHI, and the implications of each. Al is being developed with immense investment by companies such as Facebook and Google, to automate instruction; the educator is replaced by a proprietary software algorithm that transmits content and generates and auto-corrects quizzes. This approach is evident in such Al-based technologies and pedagogies as MOOCs, courseware, Personalized Learning Systems, and Adaptive Learning Systems. The human educator is replaced by Al.

The second trend, AHI is characterised by technologies and pedagogies that promote collaboration and knowledge building through such pedagogical approaches as peer discussion, argumentation, and team projects, rather than transmission/repetition of a "correct answer". The AHI approach is to develop technologies and pedagogies that augment but not replace human thinking. The value and need of such an approach in medical education, and education in general, is far-reaching.

# A LEARNER'S EXPERIENCE DOES NOT MEAN LEARNING EFFECTIVENESS: LESSONS FROM THE LEARNING SCIENCES

#### Robert K Kamei

Associate Provost (Education), Director, Institute for Application of Learning Science and Educational Technology (ALSET), and Professor, Duke-NUS Medical School, National University of Singapore, Singapore

We often assume that the job of teachers (and education technology) is to make learning easy and fun for the learner. We believe that asking our students how well they learned using a particular pedagogical approach; how satisfied they are with their lessons or how happy they are with their instructor is directly related to how well they learned. In fact, we often rely heavily on our student's judgements about our faculty and our pedagogical approaches in making important decisions, such as faculty promotion or curriculum/pedagogical development.

"Make the technology do the hard work, so that learners can learn more!" is a common mantra. We assume that our new generation of "digital native" learners not only prefer learning using technology but they also learn better that way.

In this talk I will present some interesting and sometimes counter-intuitive research findings from the science of learning.

Central Ballroom, Basement 2, Resorts World Convention Centre

### PANEL DISCUSSION 6 - GAMIFICATION IN HIGHER EDUCATION - USEFULNESS AND IMPACT ON LEARNING AND PRACTICE

#### Should Learning be Fun?

Scott Stevens, USA

Trials and Tribulations of Developing Gamifications for Medical Students Alfred Kow, Singapore

Gaming and Learning - Learning to Game or Gaming to Learn Hoon Heh, P.R. China

#### **SHOULD LEARNING BE FUN?**

#### Scott Stevens

Professor, Entertainment Technology Center, Carnegie Mellon University, USA

Marshal Mcluhan claimed, "Anyone who tries to make a distinction between education and entertainment doesn't know the first thing about either."

Today's technology that will "transform" education is gamification. However, simply overlaying a game on educational content is seldom very effective. Educational games that have been designed based on theories of learning and fun go back to the early 1980. As William Butler Yeats said, "Education is not filling a bucket, but lighting a fire." This talk will give a brief overview of the game design pillars that create engaging, challenging, fun environments and enable deep learning, experiences that will 'light a fire' in students.

#### TRIALS AND TRIBULATIONS OF DEVELOPING GAMIFICATIONS FOR MEDICAL STUDENTS

#### Alfred Kow

Assistant Professor and Assistant Dean (Education), Yong Loo Lin School of Medicine, National University of Singapore, National University Health System, Singapore

Serious games is a well-established tool in education of technical related arenas. Areas such as airplane simulation training has seen the great ability in driving innovative learning behavior among trainee pilots to learn in a safe environment until competency is achieved. On a similar note, this can also be used in medical training for both the undergraduate and postgraduate medical education.

Key concepts of using gaming in medical educations include – portability, reproducibility and mobile – games can be created on large machine using simulators or small mobile devices such as IPAD or mobile phone to allow easy connectivity and big group experience concurrently.

We have created Ipad games to teach concepts of patient safety through gaming. It was shown to increase the understanding of patient safety concepts among undergraduate medical students.

The crucial step to start identifying if gaming a possible pedagogy to enhance teaching and learning is by careful analysis of existing curriculum and identifying gaps that may potential b filled using new educational methods. In this case, gaming can be an alternative. It has been shown that students learn better by taking tests, i.e. embedding questions in games, we can actually evaluate the ability of the students applying concepts that have been taught in conventional classrooms. It is important to recognize that not all modules or learning encounters can be achieved using gaming methods.

One of the key challenges is renewal of game modules. Novelty of the games will be important to keep learners interested. Students who experience the game at later modules compared to those who did earlier may already know the contents and will try to "game' the game scores. Leakage of contents will spoil the novelty for the subsequent students. However, as long as the game scores are not used in a formative manner, this issue will be less of a concern in the larger picture. Ultimately, as long as the students have learnt the concepts well and applied them, the objectives have been achieved.

Gaming is an exciting avenue to make learning fun and interactive. Educators who are keen to explore this must put in careful planning to ensure that it fits the overall educational pedagogy. It is a journey that is enjoyable and worth exploring.

#### **GAMING AND LEARNING - LEARNING TO GAME OR GAMING TO LEARN**

#### Hoon Heh

Global Business Development Director, Netdragon Websoft Holdings, P.R. China

Everyone love to play games; computer games, board games, sport games, card games, all types of games. Not everyone love to learn, pre-school, K1-K12, higher learning, and even corporate learning. Why is that so? Understand the traits and touch points behind the brain enjoying games will pave us some interesting directions how these reactions can be used in the learning environment.

# PANEL DISCUSSION 7 - INNOVATION IN EDUCATION TECHNOLOGY: INSIGHTS FROM GLOBAL LEADERS IN CME, CPD, AND PATIENT ENGAGEMENT

#### CME/CPD Learning Insights from Around the Globe

Lisa Sullivan, Australia

Disruptive Innovations in CME, Helped by IT. Examples from Latin America Alvaro Margolis, Uruguay

Seven Strategies to Elevate and Enhance the Virtual Classroom Experience Sherlyn B. Celone-Arnold, USA

**Future of Virtual Reality in Healthcare and Educating Healthcare Professionals**Dale Robert Kummerle, USA

# INNOVATION IN EDUCATION TECHNOLOGY: INSIGHTS FROM GLOBAL LEADERS IN CME, CPD, AND PATIENT ENGAGEMENT

Ms. Lisa Sullivan (Moderator) will open the panel discussion and set the stage for the faculty and participants to reflect on what innovation in education means to them. We will review a series of video clips from thought leaders around the globe as they present innovative solutions that are designed to impact CME, CPD and patient engagement. The panelists will then talk about their experiences in Disruptive Innovations, Use of New Learning Technologies and Formats from Virtual Classrooms, to Virtual and Augmented Reality solutions that use artificial intelligence and engage learners in 3-D educational experiences. Each panelist will share his/her experiences and practical strategies or key points to ponder if learners wish to leverage these technologies in their educational program. Time will be allocated for the audience to ask questions of the panelists throughout the session.

#### CME/CPD LEARNING INSIGHTS FROM AROUND THE GLOBE

#### Lisa Sullivan

Immediate Past President, Global Alliance for Medical Education (GAME), Australia

A video presentation will set the stage as we review innovative learning technologies and how they are being used to optimise educational impact, learner engagement, clinical performance and patient experiences. Leaders from the US, Europe, South America and Asia will present innovative tools and applications being used in training and clinical practice settings to improve team-based care, shared decision-making and patient engagement. The panelists will have had experience working or collaborating with the solutions being presented and can discuss ways in which they have integrated select solutions into their CME/CPD learning programs.

#### DISRUPTIVE INNOVATIONS IN CME, HELPED BY IT. EXAMPLES FROM LATIN AMERICA

#### Alvaro Margolis

President and CEO, EviMed., Uruguay

Latin America is a diverse region with one million physicians, living in over 20 middle-income countries, who speak Spanish and Portuguese.

Some global trends in CME, such as the increasing use of the Internet, the need for accountability through recertification and the change in sources of funding with a decrease from commercial sponsors, allow for disruptive innovations in the educational and funding models, through international interactive online CME.

An introductory analysis of the topic will be done, to foster interaction among panelists and with the audience, and discuss transfer issues to other regions, including Asia and globally.

#### SEVEN STRATEGIES TO ELEVATE AND ENHANCE THE VIRTUAL CLASSROOM EXPERIENCE

#### Sherlyn B. Celone-Arnold

Founder and CEO, Integrated Learning Partners, LLC., USA

Over the past 15-years, there has been a significant decrease in traditional classroom didactic presentations. The larger the institution, the less likely that it is continuing to rely on this face-to-face delivery method for training healthcare provider teams. Training has increasingly moved online and is becoming more mobile. In some industries, almost 32% of training is now delivered using blended learning techniques while about 26% of training is delivered completely online, including virtual, instructor-led training. In this session, expert faculty will discuss how to use web conference platforms to reduce training time and travel costs, and how you can optimize virtual classrooms efficiently and effectively with modest budgets both for institutions and external CME/CPD.

If you want to lead virtual training sessions that participants clamor to attend, then join us to explore the design techniques used by the best virtual facilitators. You will learn to capitalise on the visual strengths of web conferencing, rethink interactive participation, increase collaboration, and captivate with a good story.

# FUTURE OF VIRTUAL REALITY IN HEALTHCARE AND EDUCATING HEALTHCARE PROFESSIONALS

#### Dale Robert Kummerle

Director of Medical Education, Bristol-Myers Squibb Company, USA

As the adaptation of virtual reality (VR) and augmented reality (AR) continues to unfold, it could prove to be a godsend for the healthcare industry. VR could be the link that connects the massive amount of data with the evolution of artificial intelligence, sensors, bio-feedback and increased computing power.

In some educational programs, VR and AR experiences allow learners to speak in natural language to avatars in the virtual world and have them reply in kind. In this segment, you will learn how VR and AR are being used in CME/PCD and the data that is being collected to measure outcomes. Some examples of VR solutions also assist nurses at the point of care to manage healthcare decision-making.

BMS' Global Independent Medical Education team is exploring solutions that leverage IBM Watson technology with cloud-based learning to provide extraordinary results.

East Ballroom 2, Basement 2, Resorts World Convention Centre

### SYMPOSIUM 5 - TEACHING FAMILY MEDICINE: CHALLENGES OF COMPETENCIES AND COMPLEXITIES

Teaching Patient Centeredness in the Context of Family Medicine Lee Kheng Hock, Singapore

The FM Video Project: The Family Medicine Perspective Through the Lens of the Medical Student Victor Loh, Singapore

Workplace-Based Assessment (WBAs) in the Family Medicine Setting Wong Teck Yee, Singapore

#### TEACHING FAMILY MEDICINE: CHALLENGES OF COMPETENCIES AND COMPLEXITIES

Family Medicine (FM) has at its core, the tenets of patient care which is personal, primary, preventive, comprehensive, continuing and coordinated. The three local medical schools in Singapore faced challenges in teaching Family Medicine in the following:

- 1. Embedding the competencies into the Entrustable Professional Activities, which are more complex to apply in FM curriculum than procedures such as in surgery.
- 2. Balancing clinical content in depth versus the breadth of diagnostic and management skills required to be a quality FM practitioner.
- 3. Knowing the rare diseases versus the presentations of common problems, the masquerades and common things common.
- 4. Teaching students doing their FM terms when they vary in their clinical exposures
- 5. What to teach in the Department of FM vs the GP placements in e.g. polyclinics, private GPs and community hospitals.

Having identified the complexities, we use technology to deliver our curriculum to have more self-directed learning, online case discussions, standardising what is learnt in the various clinical placements, connecting up the curriculum and facilitating students to find their own gaps in knowledge.

This symposium will highlight the solutions used in the 3 local medical schools to deal with the competencies and complexities of FM teaching and how the schools help the students to learn Family Medicine more effectively and efficiently so that they are able to complete EPAs.

#### TEACHING PATIENT CENTEREDNESS IN THE CONTEXT OF FAMILY MEDICINE

#### Lee Kheng Hock

Associate Professor, Duke-NUS Medical School, Singapore

Patient centeredness is a universal virtue in medicine that is shared across disciplines. In family medicine, it is a core concept and we seek to teach this in our family medicine clerkship through a modular course. The objective of the module is to help students appreciate the illness experience from the perspective of the patient and their care-givers. Each student is assigned 2 patients with chronic illnesses that are complex and requires long term follow up. The students clerk the patients in the hospital, perform home visits and follow them up over a period of one academic year. Each student keeps an on-line electronic journal of the experience which is shared with a team of peers and a faculty member. Interaction and sharing of experiences is achieved through peer group discussions.

# THE FM VIDEO PROJECT: THE FAMILY MEDICINE PERSPECTIVE THROUGH THE LENS OF THE MEDICAL STUDENT

#### Victor Loh

Assistant Director and Education Director, Undergraduate Family Medicine, Yong Loo Lin School of Medicine, National University of Singapore, and Consultant Family Physician, Division of Family Medicine, University Medicine Cluster, National University Hospital, National University Health System, Singapore

What is it about family medicine and the role of the family physician that differentiates it from other specialties? We posed this as a question to our students. In addition to facilitated observations and reflections of their experience at family medicine placements, we added the challenge of scripting shooting, and then screening what they learnt using digital-videos. The FM project videos celebrate what we most treasure in family medicine. We share our experience in this presentation.

#### WORKPLACE-BASED ASSESSMENT (WBAs) IN THE FAMILY MEDICINE SETTING

#### Wong Teck Yee

Family Physician, Senior Consultant, Dept of Continuing and Community Care, Tan Tock Seng Hospital; and Associate Professor and Assistant Dean (Year 4 & Family Medicine), Lee Kong Chian School of Medicine (LKCMedicine), Nanyang Technological University, Singapore

In LKCMedicine, Family Medicine is a rotation in Year 4 involving attachment to both polyclinics and private FM practitioners. Due to the multiple community-based locations of students, a mobile solution was conceived to support the tracking of student progress with regards to WBA's. Students are expected to complete the following WBA's: mini-CEX, direct observed procedures (DOPS) and multi-source feedback (MSF) during their FM rotation. To meet these diverse geographic and progress challenges, LKCMedicine students are all issued iPads which features a customized iFolio app specifically developed to ensure 'on-the-spot' completion and recording of all WBAs performed. This has the advantage of minimizing paperwork for the administrative staff, while also providing Immediate and timely feedback to the posting Leads on the progress of their students' WBA.

East Ballroom 3. Basement 2. Resorts World Convention Centre

#### SYMPOSIUM 6 - REQUIRED RESOURCES FOR LEARNING: A WESTERN PACIFIC REGIONAL PERSPECTIVE

Required Resources for Learning: An Australasian Perspective

Pete Ellis, New Zealand

Educational Resources for Medical Education in Japan: Strengths and Weaknesses

Yasuyuki Suzuki, Japan

Medical Curriculum Innovation at University of Medicine and Pharmacy at Ho Chi Minh City

Tran Diep Tuan, Vietnam

The College of Medicine Nursing and Health Sciences (CMNHS) in Fiji: 133 Years Old with Its Challenges- Update 2018 William May, Fiji

#### REQUIRED RESOURCES FOR LEARNING: A WESTERN PACIFIC REGIONAL PERSPECTIVE

Medical schools around the world are increasingly adopting sophisticated technologies in the delivery and assessment of the curriculum, but there are a range of other resources which are involved in supporting student learning. In setting standards for medical school accreditation, the World Federation for Medical Education lists a number of requirements under the area of Educational Resources, including physical facilities, clinical training resources and educational expertise, as well as Information Technology.

In this Symposium, the Western Pacific Association for Medical Education (formerly AMEPWR) will present several perspectives on these required resources for learning, illustrating how they are met in a number of different national and cultural settings, which are limited to a varying extent by the overall availability of financial resources to support medical school programs. From this discussion, insight will be provided into the range of resources available for medical education in countries of the WHO Western Pacific region, and a focus will be brought on the relative importance of each.

#### REQUIRED RESOURCES FOR LEARNING: AN AUSTRALASIAN PERSPECTIVE

#### Pete Ellis

Associate Dean, Medical Education, University of Otago, Wellington, New Zealand

Medical schools in Australia and New Zealand must meet the standards of the Australian Medical Council for basic medical training. These are based on the World Federation for Medical Education standards.

While the essence of medical education is the triad of student, patient and doctor educator, physical facilities are necessary for learning of both clinical and foundation medical sciences. Changes patterns of health care delivery, with increased community-based care, and fewer but sicker inpatients, and increased awareness of patient safety and patient rights, has seen a considerable increase in utilisation of simulation, to facilitate learning of both technical skills and communication skills prior to direct patient contact. The increasing complexity of health care, requiring an integrated team approach, has led to a requirement for interprofessional learning. A particular feature of the Australian standards is a requirement for students to gain some understanding of indigenous cultures and skills in culturally appropriate health care delivery.

Information technology has become central not only to health care delivery and learning, but to the underpinning educational framework. Schools are expected to have a curriculum map and assessment blueprint, so the learning objectives for the program and related assessment are transparent to students, staff and accreditation authorities, and provide those responsible for the program with a mechanism to ensure comprehensive but efficient delivery of integrated learning. Closely aligned to this is medical educational expertise, to ensure curriculum development and review, and to support all those involved in helping our students learn in their educational roles.

This presentation will review current expectations and practice in these areas in Australia and New Zealand.

# EDUCATIONAL RESOURCES FOR MEDICAL EDUCATION IN JAPAN: STRENGTHS AND WEAKNESSES

#### Yasuyuki Suzuki

Professor of Tutorial Division, Medical Education Development Center, Gifu University, Japan

Since 2012, Japan started a pilot accreditation program for medical education, and the official organization, Japan Accreditation Council for Medical Education (JACME), was established in 2016. Of six standards in Area 6 (educational resources), physical facilities of medical schools and related sites are generally well prepared in Japan. The level of research activities and scholarship of faculties is beyond the standard, however, the number of faculty staff is not enough, and many of them devote mainly on the research. Hospitals as clinical training sites are increasing, however, many of them are acute care hospitals. We need to expand the training sites to the ones for general care, chronic diseases, disabilities, and disease prevention. The infrastructure of ICT is generally well prepared, however, development and utilization of learning materials (mostly in Japanese) is still underway. As for the educational expertise, 80 out of 82 medical schools have education centers and more than 600 full- or part-time faculties in total are working. Japan Society for Medical Education (JSME) have also started a certification system for education expert since 2014.

# MEDICAL CURRICULUM INNOVATION AT UNIVERSITY OF MEDICINE AND PHARMACY AT HO CHI MINH CITY

#### Tran Diep Tuan

President, University of Medicine and Pharmacy, Vietnam

The Faculty of Medicine of the University of Medicine and Pharmacy at Ho Chi Minh City (FM-UMP) is one of the largest medical faculties in Vietnam, highly regarded for its medical education, training, research and services. As FM-UMP prepares itself to educate the next generation of Vietnamese physicians and leaders, FM-UMP has recognized the need for a comprehensive reform of its 6-year medical education curriculum.

To address the identified weaknesses, the main goals/ objectives of the project are to (1) revise the current 6-year curriculum towards a more integrated, competency-based, community-oriented curriculum, (2) to reinforce students' abilities in knowledge application, problem-solving, clinical competence, and soft-skills, (3) develop a comprehensive students assessment program, (4) introduce a series of faculty development workshops to assist the Faculty to carry out the project objectives and activities, (5) set up a Medical Education Unit to accompany and assist the Faculty in its development and implementation of the reform project, and (6) introduce the needed curriculum governance and working infrastructures to accompany, facilitate, and implement the reform process and activities.

In addition, quality assurance implementation in medical schools is still weak and sporadic. To address MOET's last decision, the present project proposes a comprehensive and continuous quality-monitoring program that would provide FM-UMP with a good opportunity to follow its reform process and achievements as well as to establish a needed database for its future self-evaluations. This will also ready UMP to address the standards and criteria set by the MOET's higher education institution review process.

Overall, the success of FM-UMP project will help overcome challenges facing the FM-UMP, MOH, and MOET in improving health professional education. In addition, this project will help FM-UMP be on par with other regional and international institutions.

# THE COLLEGE OF MEDICINE NURSING AND HEALTH SCIENCES (CMNHS) IN FIJI: 133 YEARS OLD WITH ITS CHALLENGES- UPDATE 2018

#### William May

Acting Dean, College of Medicine Nursing and Health Sciences, Fiji National University, Fiji

The CMNHS was formed after amalgamation of five separate tertiary institutions in Fiji in 2010 under the umbrella of the Fiji National University. There are now five colleges in the university. The College of Medicine Nursing and Health Sciences, College of Humanities and Education, College of Business, Hospitality and Tourism, College of Agriculture Fisheries and Forestry and the College of Engineering, Science and Technology.

We were formerly known as the Fiji School of Medicine and this year would have been our 133 years of existence making us one of the oldest medical training institutions in the region. We serve Fiji and the Pacific Island countries including the United States Affiliated Sates in the Northern Pacific region. I intend to discuss our existing infrastructure, staffing and students learning environments. There are five schools in our College namely the school of nursing, school of oral health and dentistry, school of health sciences, school of medical sciences and school of public health and primary care. We run about 65 programs annually across the five schools at postgraduate and undergraduate levels.

Our enrolments numbers have increased by 60-70% in the last seven years. As such it has implications on our physical and human resources capacity and challenges. We will discuss current IT and learning technology and the directions we are taking to improve student learning environments and experience.

This presentation will discuss our resources and latest update on our programs, mode of delivery and challenges in a classical country of low resource setting.

Leo 4, Level 1, Resorts World Convention Centre

### SYMPOSIUM 7 - INFLUENCE OF CULTURE IN HEALTH PROFESSIONAL EDUCATION AND HEALTHCARE DELIVERY

#### Teaching and Learning in Confucius Culture

Hiroshi Nishigori, Japan

#### Influence of Culture in Education Decision Making

Matthew C E Gwee, Singapore

#### **Teach to Serve**

Aymeric Lim, Singapore

#### **Cultural Competence in International Collaboration in Education and Healthcare**

Lambert Schuwirth, Australia

#### TEACHING AND LEARNING IN CONFUCIUS CULTURE

#### Hiroshi Nishigori

Associate Professor, Medical Education Center, Kyoto University, Japan

Discussing cultural influence in medical education, the presenter from Japan focuses on Confucianism. For more than 1000 years, people living in far east, like Japan, Korea, Taiwan and China, have been teaching and learning, partly but surely, based on Confucian philosophy. It can explain, for example, why students are listening to lectures without asking questions, which may be perceived "not active". Valuing "being" rather than "doing" is also another features of medical professions in this region. The presenter will talk general picture of Confucianism and discuss how it influences medical education in the 21 century's context.

#### INFLUENCE OF CULTURE IN EDUCATION DECISION MAKING

#### Matthew C E Gwee

Professorial Fellow and Chairman, International and Education Programmes, Centre for Medical Education, Yong Loo Lin School of Medicine, National University of Singapore, National University Health System, Singapore

Disruptive forces have made it imperative for, both, healthcare practice and education (two inter-dependent systems) to undertake major reforms. In education, academic faculty from various institutions (organisations) will necessarily be actively engaged in intense argumentation and negotiations to decide whether to accept and implement or to reject the reforms strongly advocated for 21st century healthcare education and training. Such education decisions will determine the outcome of the overall education which healthcare students receive.

This presentation will elaborate on how potentially powerful hierarchical forces existing among academic faculty can strongly influence the decision making process and, consequently, its outcome as well. More importantly, the powerful hierarchical forces can influence the quality of the education programmes accepted and implemented and, therefore, the quality of the end-products of education (the healthcare practitioners) and, ultimately, the quality of healthcare of a nation.

#### **TEACH TO SERVE**

#### Aymeric Lim

Associate Professor, Vice-Dean, Leadership Development and Strategy, Yong Loo Lin School of Medicine, National University of Singapore, National University Health System, Singapore

The purpose of teaching medical students and doctors is for them to be able to serve patients better. Medical tradition calls for a certain amount of sacrifice on the part of healthcare professionals. It is enshrined in their duty to their patients. This paper examines the tensions in the hospital between service and teaching when teaching becomes an end in itself.

### CULTURAL COMPETENCE IN INTERNATIONAL COLLABORATION IN EDUCATION AND HEALTHCARE

#### Lambert Schuwirth

Professor of Medical Education, Prideaux Centre for Health Professions Education, Flinders University, Australia

Two aspects that are currently gaining popularity in education and healthcare are complexity and situativity.

Complexity implies, amongst other things, that much of our practice is largely unpredictable and that there are fuzzy boundaries between acceptable and unacceptable practices.

Situativity implies that an approach/method or instrument has certain affordances – what you can do with the instrument/ approach - and that the user has certain effectivities – the ability of the user to use the affordances.

The utility of education and healthcare lies in the continual and successful interactions between affordances and effectivities in a complex context.

The conduit for these interactions in the complex context is communication which in intercultural collaborations is reliant on intercultural competence. However, cultural upbringing with its values, norms, beliefs, and heroes and symbols shapes and colours the interpretations between communication partners in this complex process.

This has implications for training of cultural competence with a firm grounding in the cognitive psychology on learning and expertise development

In this presentation the educational implications for the development of cultural competence will be discussed from situativity and complexity perspectives

#### PANEL DISCUSSION 8 - LEARNING SPACE: CLASSROOM OF THE FUTURE

#### **Build Bridges, Not Walls\***

Trudie E Roberts, United Kingdom

#### Fostering Complex Learning through a Connected Curriculum

Johan Geertsema, Singapore

Let's Get Down to Basics: What is the Role of the Technology in Learning? And What Does that Mean for Medical Education?

Linda M Harasim, Canada

Pathways Towards the Classroom of the Future: Incremental vs Sustaining vs Disruptive

Nabil Zary, Singapore

#### **BUILD BRIDGES NOT WALLS\***

#### Trudie E Roberts

Director, Leeds Institute of Medical Education, University of Leeds, England; and President, Association of Medical Education in Europe (AMEE), United Kingdom

The days of classrooms where a teacher desk sits at the front of the classroom and students' desks are neatly aligned in rows are over. Learning technologies, and changing pedagogical methods, are not only changing the way we teach but also the physical environments we teach in. As education moves well into the 21st century, the ways in which we learn and the things we use to learn are constantly changing and evolving. One of the most far-reaching changes is the easy and increasingly inexpensive access to information technology.

The flattened classroom is the idea of Vicki Davis and Julie Lindsay based on Thomas Friedman's book The World is Flat. They have developed a project to 'flatten' or lower the classroom walls so that instead of each class working isolated and alone, two or more classes are joined virtually to become one large classroom that can be across the globe.

However, maybe even the idea of a classroom at all is obsolete and in the future there will be no classrooms at all only, personalized learning spaces. So that learning spaces in the 21st century should foster discovery, innovation and scholarship and not merely contain them; thereby allowing provision to change from basic access to integrated services.

In my allotted ten minutes I will explore these two concepts and their contribution to student learning and pedagogy.

\*adapted from Isaac Newton

#### FOSTERING COMPLEX LEARNING THROUGH A CONNECTED CURRICULUM

#### Johan Geertsema

Director, Centre for Development of Teaching and Learning (CDTL), National University of Singapore, Singapore

The fast-changing higher education landscape compels us to reconsider how best to design learning environments that can foster complex learning. As new technologies take over routine tasks, machines move towards artificial intelligence, and information becomes obsolete more and more quickly, it is imperative that institutions of higher education find ways of better supporting those abilities, skills, and competencies that would enable students to engage in creative problem solving. One way in which this might happen is by rethinking the curriculum in such a way as to connect its different components to one another so as to enable students to combine what they learn into an integrated whole that links theory and practice within authentic, research-rich learning environments. These brief remarks will elaborate on how one might foster complex learning through a more integrated, connected curriculum.

#### References:

- 1. Fung, D. A Connected Curriculum for Higher Education. London: UCL Press, 2017.
- 2. van Merriënboer, J. J. G. & Kirschner, P. A. Ten Steps to Complex Learning: A Systematic Approach to Four-Component Instructional Design. New York: Routledge, 2013.

# LET'S GET DOWN TO BASICS: WHAT IS THE ROLE OF THE TECHNOLOGY IN LEARNING? AND WHAT DOES THAT MEAN FOR MEDICAL EDUCATION?

#### Linda M Harasim

Professor of Communication, Simon Fraser University, Canada

Technology and human learning have had a symbiotic relationship since the dawn of human civilisation. Humans are defined by our ability to collaborate, and the technologies that we have developed to promote learning also promote collaboration: Speech, Writing, Printing, Internet working. However, in recent years social technology is being replaced by digital technology, and that shift is making a world of difference in the role of technology in learning, and the role of humans overall. This panel will discuss and explore the implications of digital technology and pedagogy in promoting individualised learning but also seriously consider how digital technologies might support and augment collaborative knowledge building in medical education.

### PATHWAYS TOWARDS THE CLASSROOM OF THE FUTURE: INCREMENTAL VS SUSTAINING VS DISRUPTIVE

#### Nabil Zary

Acting Director, Medical Education Research and Scholarship Unit, Lee Kong Chian School of Medicine, Singapore

My presentation will focus on a continuum of plausible scenarios for the classroom of the future. From an incremental evolution oriented scenario building on ongoing learning space innovations identified by an increased use of technology and stronger alignment with the intended curriculum experience. To a scenario defined by niche innovations already in the works and with the potential to significantly disrupt the learning space ecosystem with interesting implications on how we learn and who we learn with.

East Ballroom 1, Basement 2, Resorts World Convention Centre

#### PANEL DISCUSSION 9 - CULTURAL ANTHROPOLOGY AND MEDICAL EDUCATION

Collaborating in Teaching Behavioural and Social Sciences –Clinical Case Conference with Cultural Anthropologists Junko lida, Japan

Collaborating in Qualitative Research –Collaborative Ethnography in Medical Education Research Yosuke Shimazono, Japan

Collaborating in Faculty Development -Cultural Anthropology in Medical Education Certificate Programme Hiroshi Nishigori, Japan

#### **CULTURAL ANTHROPOLOGY AND MEDICAL EDUCATION**

Cultural anthropology, a field of social science, is a discipline which can offer collaborative opportunities for medical educators. For example, we medical educators often apply teaching and assessment strategies used in other institutions (and sometimes in other countries) to our own ones. In this process, contextual adjustment is the key for success, which we can (and should) learn from cultural anthropology. Another example is qualitative research in medical education. Collaboration with cultural anthropologists who are experts in ethnography can inspire those who are involved in qualitative research in medical education. Final example is teaching behavioral and social sciences. Collaboration between medical doctors and cultural anthropologists in clinical education can be a practical and transferrable educational model. In this panel discussion, we will share our experiences of collaboration between cultural anthropologists and medical educators in Japan.

# COLLABORATING IN TEACHING BEHAVIORAL AND SOCIAL SCIENCES -CLINICAL CASE CONFERENCE WITH CULTURAL ANTHROPOLOGISTS

#### Junko lida

Faculty of Health and Welfare, Kawasaki University of Medical Welfare, Japan

While the social sciences are seen to play an important role in medical education, barriers to their implementation remain in many countries. To overcome these barriers, previous studies have suggested that a collaboration between social scientists and health professionals is necessary. As an example of such collaboration, I introduce a case conference that we have been developing, where anthropologists participate in discussing clinical cases with medical students and doctors, and participants learn anthropology in a clinical context. In 2015 and 2016, we conducted four case conferences for medical students at two universities and four case workshops as part of wider conferences for family physicians in Japan. Before each conference, one or several of the medical students or physicians chose a case that they felt was difficult to deal with due to the social and cultural background of the patients and families. At each conference, after the presentation of each case, the audience including anthropologists participated in a group discussion concerning the questions raised in the presentation. This was followed by comments about the case given by the anthropologists, a further question-and-answer session, and a short introductory lecture on anthropology. The active discussions deepened the examination of the sociocultural aspects of the cases. For example, an exploration of the patient's background helped participants to understand that the patient's narratives and behaviour had meaning within the context of the patient's life story and social relationships. Both medical students and physicians found that the anthropologists' questions, comments and conceptual frameworks offered them eye-opening experiences. The conferences were also an opportunity for anthropologists to learn about clinical practice and to be inspired by the discussion. It is suggested that this clinical case conference could provide both medical educators and anthropologists with a model for collaborating with each other for teaching anthropology in clinical contexts.

# COLLABORATING IN QUALITATIVE RESEARCH -COLLABORATIVE ETHNOGRAPHY IN MEDICAL EDUCATION RESEARCH

#### Yosuke Shimazono

Assistant Professor, Center for Global Initiative, Osaka University, Japan

Individuals who are involved in the field of medical education are divided into two groups: those who are practically involved in medical education, namely clinical-teachers who usually do not receive formal training in social science, and social scientists who bring their own academic agenda in their research on the medical education practice. Although there are some exceptions, few individuals can cross the boundary between them and 'theories' and methods in social scientists appear esoteric and pedantic for medical practitioners. Medical anthropology has developed as a discipline through cross-over between medicine and cultural anthropology. Some of renowned medical anthropologists are also medical practitioners. In fact, medical anthropology can be considered not so much a social scientific discipline as a place for dialogue and translation between medicine and anthropology. However, even in medical anthropology, there is not a serious discussion on collaboration between medical doctors and anthropologists thereby alienating many medical practitioners from it. Here, I consider the meaning of collaboration between medical doctors and anthropologists in the context of medical education research and what form this collaboration can take and how they can be made fruitful both for clinical teachers and anthropologists. I particular explore various forms of collaborative ethnography.

# COLLABORATING IN FACULTY DEVELOPMENT -CULTURAL ANTHROPOLOGY IN MEDICAL EDUCATION CERTIFICATE PROGRAM

#### Hiroshi Nishigori

Associate Professor, Medical Education Center, Kyoto University, Japan

In medical education, we experience a variety of cultural conflicts, because we often "import" educational strategies or methods from other institutions, and sometimes even from other countries. For example, Ho argued whether patient-centered cultural competency could be effective in non-Western countries (Ho, et al. 2008). Gwee discussed difficulties in implementing problem-based learning in Asian countries (Gwee. 2008). When applying them to our own institutions, contextual adjustment is necessary, which we medical educators may not be good at. Considering this background, in the Medical Education Certificate Program at Kyoto University, we develop and implement a "cultural anthropology" module for our participants who are clinician educators. In this module, first, we ask them to present their experiences of cultural conflicts when they apply educational strategies or methods used in other institutions to their own ones. Then cultural anthropologists analysed and commented on them with anthropological perspectives. Among all the contents in our Medical Education Certificate Program, the cultural anthropology module has been evaluated with very high satisfactory comments. In this talk, I will share our experiences with available evidences in this theme and discuss how medical educators can collaborate with cultural anthropologists in faculty development or medical education program.

East Ballroom 2, Basement 2, Resorts World Convention Centre

### PANEL DISCUSSION 10 - POSTGRADUATE HEALTHCARE PROFESSIONAL EDUCATION - SHIFTING THE PARADIGM

#### **Transforming Nursing Education for the Future**

Tan Soh Chin, Singapore

The Changing Paradigm in Training Advance Pharmacy Practitioners

Lita Chew, Singapore

Challenges in Residency Training in Singapore: A Perspective from the Joint Committee of Specialist Training (JCST) and the Division of Graduate Medical Studies, NUS Medicine

Chen Fun Gee, Singapore

Postgraduate Medical Education – Moving Towards Competency-Based Education and Programme of Assessment Mabel Yap, Singapore

#### TRANSFORMING NURSING EDUCATION FOR THE FUTURE

#### Tan Soh Chin

Chief Nursing Officer, Ministry of Health, Singapore

As our healthcare system transforms to meet future needs, care will shift from hospitals to the community. Today's emerging health care challenges require nurses to think and act beyond institution-based care to enlarge the boundaries of community-based practice. Nurses who form the core of our healthcare workforce play a key role in partnering healthcare professionals in different settings to ensure patients remain well-supported in the community and home.

As nurse leaders and educators, our role in Nursing Education is to ensure the Nursing Education and Training system is preparing our nurses with the right competencies and skills required to practise in a transformed health care system to meet increasingly complex health needs across settings. We need to transform nursing education to strengthen nursing curriculum, competency-based assessment methods and quality of education.

#### THE CHANGING PARADIGM IN TRAINING ADVANCED PHARMACY PRACTITIONERS

#### Lita Chew

Head, Pharmacy Department, National Cancer Centre Singapore, Singapore

Pharmacists are expected to acquire advanced level competencies to enhance their professional and clinical skills through postgraduate education and clinical training programmes as they progress in their career. In cases where management of mediations is complex, advanced practice pharmacists are needed to ensure safe and appropriate medication use and also to complement the clinical care delivery together with other healthcare professionals towards a shared passion to provide the best care for patients.

Pharmacy residency training is one of the most effective method for an entry-level pharmacist to attain advanced level clinical skills. Pharmacy Residency is designed to train pharmacists in a systematic fashion for the purpose of achieving professional competence in delivery of team based patient-centred care. The residents will be prepared to provide high quality pharmaceutical care as clinical pharmacists in an acute, tertiary care facility and/or continue into an advanced residency in an area of pharmacy practice. They will also learn to demonstrate professional leadership and to develop life-long learning skills that will lead to greater career satisfaction.

To support the specialised pharmaceutical care provided by pharmacists, MOH has started giving out overseas Pharmacy Residency Training Scholarships since 2008. The pharmacist scholars are now serving as Programme Directors and preceptors of the National Pharmacy Residency Programmes. MOH has also appointed the Office of Residency Training in NUS Pharmacy Department from January 2016, to support the 6 MOH-funded National Pharmacy Residency Programmes. As of September 2017, a total of 19 pharmacists have enrolled in the 12-month accredited national programmes and nine of them have completed their training as at June 2017.

MOH is also developing pharmacy practitioners through the Advanced Practice Competency Framework, which articulates a pharmacist's scope of practice and defines the knowledge, skills and attributes that are required in advanced practice. This framework serves as a broad-based developmental tool to enable pharmacists to systematically identify needs for continuous professional development and to acquire new competencies to advance their practice.

# CHALLENGES IN RESIDENCY TRAINING IN SINGAPORE: A PERSPECTIVE FROM THE JOINT COMMITTEE OF SPECIALIST TRAINING (JCST) AND THE DIVISION OF GRADUATE MEDICAL STUDIES, NUS MEDICINE

#### Chen Fun Gee

Director, Division of Graduate Medical Studies, Yong Loo Lin School of Medicine, National University of Singapore; and Director, Division of Critical Care, National University Hospital, National University Health System, Singapore

Postgraduate medical training in Singapore started in 1969 with the setup up of the School of Postgraduate Graduate Medical Studies, National University of Singapore. Training and examinations were conducted in collaboration with the Royal Colleges in the United Kingdom and Australia / New Zealand. In 2010, postgraduate training was modified and followed the requirements as stipulated by the Accreditation Council of Graduate Medical Education (ACGME) of the United States.

The ACGME is a private non-profit council that evaluates and accreditates medical residency training. Its main focus is on competency-based education. Residents were trained and assessed on competencies in patient care, medical knowledge, practice based learning and improvement, system based practice, professionalism and interpersonal skills and communication. Training changed from being opportunistic to one of being structured where resident education supersedes that of service. Training hours were limited to 80 hours per week of supervised practice, and yet required fulfilment of a specified number of cases before they were allowed to move to the next phase of training. Simulation training was allowed, if there were insufficient clinical cases.

The transition from an existing training system that has been in existence for 40 years to the ACGME program necessitated reorganisation in the training system. There was a requirement of the residents to pass the ABMS MCQs in addition to the existing MMed and exit examinations that were the summative examinations before the transition. In the presentation, these challenges will be discussed.

A very positive effect of the incorporation of ACGME into Singapore was the structured training, the introduction of formative assessments as well as examiner training. We are not able to ascertain currently if the residency produced better doctors, but it certainly raised the standard of teaching and assessments in our postgraduate programmes, and created a lot of interest in medical education in Singapore.

# POSTGRADUATE MEDICAL EDUCATION - MOVING TOWARDS COMPETENCY-BASED EDUCATION AND PROGRAMME OF ASSESSMENT

#### Mabel Yap

Director, Professional Training and Assessment Standards Division, Ministry of Health, Singapore

Postgraduate medical education in Singapore has undergone major reforms in the past decade in response to evolving healthcare needs. An aging population and changing disease patterns require a right mix of specialists and generalists to meet the needs of both the acute and primary care sectors. In addition, development of new care model and subsequently, the training curriculum, is crucial to ensure that learners are equipped with the relevant skills and knowledge to practice safely and competently. It is also critical that the whole spectrum of professional training in Singapore, from the undergraduate to postgraduate programs, remain responsive to the national healthcare needs.

Singapore has moved towards adopting the Competency-Based Medical Education (CBME) approach in professional education and training. CBME focuses on a learner's demonstration of desired training outcomes as central to the learning process using a competency framework. The use of Entrustable Professional Activities (EPAs) and programme of assessment are core elements of CBME. The aim of this presentation is to discuss the journey of developing CBME in Singapore, its challenges and future directions.

East Ballroom 3, Basement 2, Resorts World Convention Centre

#### SYMPOSIUM 8 - USING DATA (ANALYTICS) TO INFORM eTEACHING AND eLEARNING

#### USING DATA (ANALYTICS) TO INFORM eTEACHING AND eLEARNING

<sup>1</sup>Poh-Sun Goh, <sup>2</sup>Sergio Hernandez-Marin and <sup>3</sup>Lim Wee Khee

<sup>1</sup>Associate Professor and Senior Consultant, Department of Diagnostic Radiology, Yong Loo Lin School of Medicine, National University of Singapore, National University Health System, Singapore, <sup>2</sup>Business Analyst Lead Google Play APAC, Business Operations & Strategy at Google, Singapore, and <sup>3</sup>Associate Senior Lecturer and Consultant, Digital Innovation and Design Practice, Institute of System Science, National University of Singapore, Singapore

The central thesis of this symposium will be to demonstrate and illustrate how data (analytics) can inform an educational practitioner (in their educational practice), and anchor scholarly teaching and educational scholarship.

The three panelists bring (to the audience) long standing practical frontline and academic experience in their roles as a clinical teacher and in medical education faculty development (GPS), in data analytics and strategic thinking (SHM), and in the real world application of social media analytics in business (LWK).

This interactive symposium and panel discussion (with the audience) will be anchored by a purpose built dedicated presentation online blog (for approximately 30 minutes to one hour of pre-session online review BEFORE the session), each symposium presenter giving a (maximum) 10 minute short overview presentation, followed by ONE HOUR of interactive live discussion (during the session) with the audience (who should bring a WiFi enabled mobile phone, Tablet or Laptop to the session to engage with the panelists – both synchronously and asynchronously, the day before, during, and day after the symposium).

### SYMPOSIUM 9 - CONCEPTUAL FRAMEWORKS THAT ILLUMINATE AND MAGNIFY: HOW THEORY CAN DRIVE SIMULATION DESIGN AND DELIVERY

**Overview of Theoretical Frameworks in Simulation-Based Education** Lim Wee Shiong, Singapore

How Do Theories of Motor Skills Learning Inform Simulation-Based Education Charlotte Ringsted, Denmark

**Sim-Round: Easing Transition into the Clinical Clerkship** Tham Kum Ying, Singapore

**Debriefing: Taking Relational Aspects into Consideration**Charmaine Krishnasamy, Singapore

# CONCEPTUAL FRAMEWORKS THAT ILLUMINATE AND MAGNIFY: HOW THEORY CAN DRIVE SIMULATION DESIGN AND DELIVERY

<sup>1</sup>Lim Wee Shiong, <sup>2</sup>Charlotte Ringsted, <sup>3</sup>Tham Kum Ying and <sup>4</sup>Charmaine Krishnasamy

<sup>1</sup>Senior Consultant, Department of Geriatric Medicine, Institute of Geriatrics & Active Aging, Tan Tock Seng Hospital, Singapore, <sup>2</sup>Professor, Vice-Dean, and Director of Centre for Health Sciences Education, Faculty of Health, Aarhus University, Denmark, <sup>3</sup>Education Director and Senior Consultant Emergency Physician, Tan Tock Seng Hospital; and Assistant Dean Year 5 and Lead for Emergency Medicine, Lee Kong Chian School of Medicine, Nanyang Technological University, Singapore, and <sup>4</sup>Senior Research Analyst, Health Outcomes and Medical Education Research (HOMER), National Healthcare Group, Singapore

Conceptual frameworks are like lighthouses that illuminate and lenses that magnify the scholarship of simulation-based education. When used to underpin the design and delivery of the simulated clinical experience, theories of learning and instruction help to enhance effectiveness of learning acquisition, affirm educational credibility, and develop appropriate research questions. Yet, challenges abound in the consistent, thoughtful and explicit application of theory to inform the design and delivery of simulation based education. In the area of simulation research, the field should aspire to move beyond descriptive ("What was done?") and justification ("Did it work?") research, toward conducting clarification studies that address "Why or how did it work?" questions.

In this symposium, four panelists will explore how clarification studies using conceptual frameworks as a foundation can inform the design and delivery of simulation-based education. After an overview of common theoretical frameworks used in simulation-based education, we will share specific strategies in three different settings, namely using theories to optimize the learning of motor skills, simulation rounds to ease transition of junior medical students into clinical clerkship, as well as the critical role of rapport management in optimizing learning during the debriefing session. In a concluding panel discussion, the opportunities and challenges of actively incorporating theory-driven strategies to illuminate and magnify simulation design and delivery, with faculty development at the vanguard of these initiatives, will be discussed.

Pisces 2, Level 1, Resorts World Convention Centre

### SYMPOSIUM 10 - TECHNOLOGY IN PROMOTING ENGAGEMENT, EVALUATING THE KNOWLEDGE ACQUISITION AND ASSIMILATION

Augmented Reality for Palpation Training: MediSIM, Marrying a Medical Mannequin with a Virtual Patient Using a HoloLens Scott Stevens, USA

Knowledge Management through Curriculum Mapping

Kang Yew Beng, Malaysia

The Use of Technology in Medical and Health Professions Education: Bridging Different Generations and Preparing Future Medical and Health Practitioners

Ardi Findyartini, Indonesia

The Role of Technology in Ensuring Clinicians Are Fit to Practice

Ian Curran, Singapore

# AUGMENTED REALITY FOR PALPATION TRAINING: MEDISIM, MARRYING A MEDICAL MANNEQUIN WITH A VIRTUAL PATIENT USING A HOLOLENS

#### Scott Stevens

Professor, Entertainment Technology Center, Carnegie Mellon University, USA

Learning is a constructive task where learners assimilate information into existing schemes and simultaneously accommodate those schemes to reality. No two people assimilate an experience in precisely the same way as no two people bring to the task the same history. One of the most important roles of educators is to provide students with purposefully designed experiences that acknowledge an individual's apperception and promotes their self-regulation, i.e. the change of patterns of reasoning, advancing from one level of understanding to another.

This talk will briefly outline technology-based educational design that applies challenge, sensory and cognitive curiosity and fantasies (story), especially intrinsic fantasies where the fantasy depends crucially on the task under study. The goal is to find ways to aid students to construct their own knowledge and to give them opportunities to generalise that knowledge. The outcome is engaging, challenging, fun environments that enable deep learning.

The notion of 'stealth' evaluation will be introduced, where, in part, successfully completion of an experience is evidence of learning. Finally, a case study, MediSIM will be presented. MediSIM married a medical mannequin (ABE) used to teach palpation, with a virtual patient registered to the mannequin as viewed through a HoloLens. This allows medical students to inspect a patient visually, with context aware information available, while getting a realistic tactile experience of palpation.

#### KNOWLEDGE MANAGEMENT THROUGH CURRICULUM MAPPING

#### Kang Yew Beng

Associate Dean of E-Learning, International Medical University, Malaysia

Technology is used everywhere around us and had been offered as a panacea for education. This is a romanticised view of technology, and although technology has great potential in teaching and learning, it is only effective if used appropriately. One such appropriate use is to leverage how technology can be used to manage knowledge that resides in a curriculum, or in the case of the International Medical University, the curricula of 1 foundation programme, 12 undergraduate and 5 postgraduate programmes. The use of knowledge management through curricula mapping allows us to locate and analyse the curriculum of any programme, facilitating curriculum review, administrative management of resources, generation of student learning plans, and identification of learning outcomes and constructive alignment of assessments.

# THE USE OF TECHNOLOGY IN MEDICAL AND HEALTH PROFESSIONS EDUCATION: BRIDGING DIFFERENT GENERATIONS AND PREPARING FUTURE MEDICAL AND HEALTH PRACTITIONERS

#### Ardi Findyartini

Senior Lecturer in Medical Education, Department of Medical Education, Faculty of Medicine, Universitas Indonesia, Indonesia

Future medical and health practitioners will face a completely different landscape of healthcare in which society has more access to health information and may rely more on self-management before coming to health professionals. In addition, current students are all millenials who have been engaging with social media and networks at a very early age, hence are technology

savvy and have certain characteristics which should be considered in facilitating their learning processes. The use of technology enhanced learning in any platforms possible both in preclinical and clinical years is expected to motivate the learning of current generation of students. Utilisation of online learning, redesigning of learning spaces which incorporates 'smart rooms', increased focus on open educational resources, and exploration of data for personalised learning experience are currently happening. Future efforts should cultivate more widespread and cost effective innovations and collective actions among medical and health professions education institutions. This talk will highlight current implementation of technology-enhanced learning in undergraduate medical and health professions education with several examples considering range of available resources and contextual challenges. A more empathetic approach in embarking technology enhanced learning is emphasised in the presentation by pinpointing necessary faculty development to support medical teachers in optimising the approaches. The talk will also reflect on the advantage of blended learning in medical and health professions education given the need of close interaction between medical and health professions teachers and students especially in facilitating the development of professionalism. Finally, further challenges in enabling students and teachers to work in an interconnected world of semantic web, big data, modeling technologies and innovations in which they may use as well as contribute in the advancement of the resources, will also be elaborated. Regardless approaches and innovations used in the medical and health professions education curricula, the aims are to provide meaningful learning experiences, and to develop competencies and wisdom for medical and health professions students as future global citizen and practitioners.

#### THE ROLE OF TECHNOLOGY IN ENSURING CLINICIANS ARE FIT TO PRACTICE

#### Ian Curran

Vice Dean, Education and Co-Director of Academic Medicine Education Institute (AM.EI), Duke-NUS Medical School, Singapore

Prof Curran will explore some of the challenges and opportunities of employing technology in the training and accreditation of professionals. Using examples, he will describe approaches where technology can be used to improve learning and performance. He will also outline some of the limitations and how they might be mitigated.

#### SYMPOSIUM 11 - INNOVATIVE eHEALTH TOOLS FOR CHANGING THE CULTURE OF PATIENT CARE

Use of Mobile Simulation for Training Rural Health Professionals

Kalyani Premkumar, Canada

The Utilisation and Impact of Electronic Health Records in Patient Care

Rani Kanthan, Canada

**Regulations for Sharing Electronic Patient Information** 

Anurag Saxena, Canada

Remote Presence Robotics and Virtual Reality: Medical Teaching Tools of the 21st Century

Ivar Mendez, Canada

#### INNOVATIVE eHEALTH TOOLS FOR CHANGING THE CULTURE OF PATIENT CARE

Rapid changes in technology have affected the medical education continuum and patientcare tremendously. To keep up with the changes, a large number of innovative tools have been developed and are continuing to be developed. In this symposium, the audience will be introduced to some of the innovative eHealth tools used in patient care such as electronic health records; robotics, medical training using virtual reality, mobile simulation and regulations for sharing electronic patient information, among others. The benefits and challenges of utilising these tools and its impact on the culture of patient care will be discussed.

#### **USE OF MOBILE SIMULATION FOR TRAINING RURAL HEALTH PROFESSIONALS**

#### Kalyani Premkumar

Professor, Department of Community Health & Epidemiology, College of Medicine, University of Saskatchewan, Canada

Rural health care professionals often find themselves in professional isolation with limited opportunities for formal continuing education or professional support, and scarce opportunities for interaction, shared experiences and mutual support with colleagues. To promote safe patient care and address concerns expressed by health care providers, programs have been organised in support of continuing professional learning that includes practical, case-based training using mobile medical simulation. In this presentation, the resources required, implementation, challenges and outcomes of using mobile simulation will be explored.

#### THE UTILISATION AND IMPACT OF ELECTRONIC HEALTH RECORDS IN PATIENT CARE

#### Rani Kanthan

Professor, College of Medicine, University of Saskatchewan, Canada

The use of electronic health records (EHR) provides quick access to important information about a person's health not only to health-care team members, but also to the patient thus providing transparency of clinical decision-making process using a single repository of information. Benefits of EHR include better patient centered-personalised health care by improving all aspects of patient care including safety, effectiveness, communication, education, timeliness, efficiency and equity. Besides being a static repository by combining data, knowledge and technology patients can become active participants in their own care. In this presentation, definitions with system characteristics, technical architectures, benefits, barriers to adoption and implementation challenges to the global role of EHR in transforming health care in Canada will be discussed.

#### REGULATIONS FOR SHARING ELECTRONIC PATIENT INFORMATION

#### Anurag Saxena

Associate Dean, Postgraduate Medical Education, College of Medicine, University of Saskatchewan, Canada

The focus of this presentation will be on using social media with a dialectic approach to balancing optimal and timely patient care with ethical approach to patients' privacy and confidentiality rights. Effective use of social media leads to rapid and accurate answers, however, there have been many instances of violations of privacy on Facebook and Twitter. Social media has the potential to educate and conduct research and the professionals need to understand and manage ethical concerns. Limiting access and having strict regulations are likely to negatively affect the potential of social media and adversely impact patient care. Conscientious use based upon proper education and appropriate regulations will have a positive outcome for the patients, health care professionals and health care.

# REMOTE PRESENCE ROBOTICS AND VIRTUAL REALITY: MEDICAL TEACHING TOOLS OF THE 21ST CENTURY

#### Ivar Mendez

Fred H. Wigmore Professor and Unified Head of Surgery, University of Saskatchewan and the Saskatoon Health Region, Canada

We will focus in the use of remote presence robotic technology that enables teaching of clinical and surgical skills to learners located in any geographical area with regular cellular or Wi-Fi connectivity. This innovative technology enhances a distributed medical education model and places the clinician teacher at the bedside with the students in real-time regardless of their location. The technology also utilises peripheral diagnostic tools such as digital stethoscope, dermatoscope, otoscope and ultrasound.

The use of virtual reality (VR) for teaching neuroanatomy will also be presented. A virtual brain has been created from the MRIs of human brains that allow the student to virtually enter the brain and study its structures. Early indications suggest that VR significantly enhances textbook learning.

#### PLENARY 4 - TECHNOLOGY IN HEALTH PROFESSIONAL EDUCATION: FUTURE OF MEDICINE

# GETTING BETTER (FASTER): THOUGHTS ABOUT THE (NEAR) FUTURE OF MEDICAL EDUCATION

#### Ruben R. Puentedura

Founder and President, Hippasus, USA

In 1968, Doug Engelbart demoed all the key computer features that have come to define modern information technology. His goal was not to show off technology for technology's sake - rather, it was to identify the necessary toolset for "getting better at getting better", i.e. augmenting human intellect. Fifty years later, how does the ubiquitous presence of this toolset help us rethink the path that leads from medical education to physician practice? And what new cognitive and problem-solving skills will be required of today's medical students so that they can make the best use of new diagnostic and treatment tools such as those afforded by machine learning tomorrow?

#### DESIGN THINKING IN HEALTHCARE: DISCOVER, DEFINE, DEVELOP, DELIVER

#### Suranga Nanayakkara

Assistant Professor, Singapore University of Technology & Design, Singapore

The power of computers and technology has reached a critical point compared to the generations before. Machines are now capable of new skills – speaking, hearing, seeing, understanding and answering. These, on one hand, will be a disruption to the process oriented jobs across. On the other hand, creativity, discovery and innovations will be thriving in such a society. This talk offers a fresh perspective on design innovation with the goal of helping technically sound professionals to appreciate, understand and apply design innovation in their efforts to identify and solve problems that impact positively on our daily activities

### LEARNING LOUNGE - SHOWCASE OF TECHNOLOGY IN MEDICAL AND HEALTHCARE PROFESSIONAL EDUCATION

#### **Dental Simulation**

Kelvin Foong and Frank Voon, Singapore

**MediSIM - Medical Simulated Interactive Manikin** 

Erle Lim, Singapore

Mysticraft, the First Ever VR Open Platform, Bringing Reality into Virtuality

Hoon Heh, P.R. China

Friday 12th January, 10.15am - 3.30pm

#### **DENTAL SIMULATION**

#### <sup>1</sup>Kelvin Foong and <sup>2</sup>Frank Voon

<sup>1</sup>Associate Professor, Faculty of Dentistry, National University of Singapore, National University Health System, Singapore, and <sup>2</sup>Associate Professor, Department of Anatomy, Yong Loo Lin School of Medicine, National University of Singapore, National University Health System, Singapore

The Faculty of Dentistry at NUS leverages a variety of technology platforms for simulation training of dental students in operative skills and clinical decision making. These comprise stereoscopic and non-stereoscopic virtual reality (VR) haptic and non-haptic simulation technologies, and 3D printed anatomic models and Augmented Reality for sharpening visualisation and operative skills.

Friday 12th January, 10.15am - 3.30pm

#### **MEDISIM - MEDICAL SIMULATED INTERACTIVE MANIKIN**

#### Erle Lim

Associate Provost (Undergraduate Education), National University of Singapore; and Associate Professor, Department of Medicine, Yong Loo Lin School of Medicine, National University of Singapore, National University Health System, Singapore

Hololens MediSIM is a holographic avatar superimposed on abdominal manikin to simulate various disease states, and to teach the abdominal examination.

Palpation skills are paramount to effective osteopathic practice, but teaching students how to palpate and learning palpation is a real pedagogical challenge as it requires the right combination of knowledge, skills, and attitude.

By visually simulating a 3-D, CG interactive patient and with the HoloLens superimposed on the Abe, including the simulated patient's facial and auditory reactions to palpation, students will see a moving, interactive person – lending greater verisimilitude to the experience. The student may also need to make decision on what organs need to be palpated by the corresponding medical records.

Friday 12th January, 10.15am – 3.30pm Saturday 13th January, 8.15am – 3.45pm

#### MYSTICRAFT, THE FIRST EVER VR OPEN PLATFORM, BRINGING REALITY INTO VIRTUALITY

#### Hoon Heh

Global Business Development Director, Netdragon Websoft Holdings, P.R. China

Netdragon Websoft Holdings is excited to share the first global open VR platform in APMEC this year. We understand most of VR images, videos, games or even learning materials requires sophisticated software and tools to develop, processed and even consumed. Only the privileged ones with the right skills and knowledge can get to work on the VR space. Netdragon wants to bring VR to the rest of the world, we developed the first global VR Open platform, MystiCraft, where everyone can edit, play with, create their own VR images, videos, games and even learning materials to share with all the friends they know.

Foyer, Central Ballroom, Resorts World Convention Centre

11.15am – 12.30pm (Poster Judging)

# BEST ABSTRACT FOR POSTER PRESENTATION FINALISTS (SESSION 1)

BP01	Using Nedelsky, Angoff, Modified Angoff and Cohen Methods in Standard Setting– A Comparison in an Australian Undergraduate Medical Program Michael Siu Wan, Australia
BP02	Students' Interactions and Team Working in Team-Based Learning: A Systematic Literature Review Ikuo Shimizu, Japan
BP03	A Six-Year Experience to Assess Infectious Diseases Fellows in Training by Utilising Infectious Diseases Society of America Examinations from 2012 to 2017 in Japan Harumi Gomi, Japan
BP04	Pilot Testing Teaching Module on Neglected Tropical Diseases Amongst Medical, Nursing and Physical Therapy Students in a Private and Public University in Metro Manila: A Mixed Methods Research Milagros Rabe, Philippines
BP05	Clinical Observership and E-Learning in 2nd Year Optometry Students in Singapore Si Qi Chua, Singapore
BP06	Can Anonymised Competition Influence Neurology Faculty Feedback Scores in GME? Yasmin I Jion, Singapore
BP07	A Review of Undergraduate and Postgraduate Mentoring – Studying the Mentoring Relationship in its Environment Simone Quek, Singapore
BP08	Junior Resident Led OSCE Workshop Enhances Preparation for Transition to a First Year Doctor David Ng, Singapore
BP09	Facilitating the Mentoring and Supervisory Skills of Faculty in the National Psychiatry Residency Program Lay Ling Tan, Singapore
BP10	Clinical Skills Training and Supervision Framework and Effectiveness in Medical Internship – Evidence on Catheter-Associated Urinary Tract Infection Rates Shu-Hung Huang, Taiwan
BP11	Does Student Feedback Improve the Quality of Teaching Among the Clinical Tutors in the Middle East? Kathryn Strachan, Bahrain
BP12	Doctors' Professional Socialisation from Medical Students to Staff Doctors in Japan Junji Haruta, Japan
BP13	Medical Students' Peer Role-Playing for Education of Psychosocial Approach Sachiko Ozone, Japan
BP14	Current Practice of Verbal Handover Using SBAR Modality Among Paediatric Residents in ACGME-I Program Qatar, How We Can Communicate Better?  Manasik Hassan, Qatar
BP15	An International Study Exploring What Medical Students Desire from Student Welfare Provision at Lee Kong Chian School of Medicine and Imperial College London Claire Ann Canning, Singapore
BP16	Transforming Medical Students' Knowledge, Attitudes and Practice of Hand Hygiene Rathi Mahendran, Singapore
BP17	Tri-generational Homecare: The Educational Outcomes of a Longitudinal Student-Initiated Homecare Programme on Secondary School Student Participants Yao Chi Gloria Leung, Singapore
BP18	Residents in Difficulty: Deficiencies and Outcomes of Remediation Faith Chia, Singapore
BP19	<b>Using Simulation and Inter-Professional Education to Teach Infection Control During Resuscitation</b> Kah Wei Tan, Singapore

BP20	Stress Level vs Gender, Study Program. Is it Significantly Different? Inthat Assawawethmongkon, Thailand
BP21	Promoting Diversity Using Situational Judgement Tests Christopher Zou, Canada
BP22	Pre-Clinical OSCEs May Predict Low Performance But Not Unprofessional Behaviour of Medical Students in Clinical Placement Seiichi Ishii, Japan
BP23	Framework for Integrating Massive Open Online Courses into Classroom Teaching Peter GM de Jong, The Netherlands
BP24	The "Pitfalls" Approach to Diagnostic Expertise: A Novel Theory and Evidence-Based Strategy Chia Meng Teoh, Singapore
BP25	Factors Associated with Performance in Clinical Reasoning Tests of Neurological Localisation: A Study in Internal Medicine Residents Nigel Tan, Singapore
BP26	Guidelines for Mentoring in Undergraduate Medicine Yin Shuen Tan, Singapore
BP27	Focused Cardiovascular Ultrasound (FoCUS) for Medical Students. A Pilot Teaching Module Suresh Paranjothy, Singapore
BP28	Self-Awareness, Supervised Learning and Savoir-Faire for Psychiatrists: A Qualitative Exploration of Residents' Experiences and Perspectives Towards Psychotherapy Wen Phei Lim, Singapore
BP29	Nursing Supervisors' Perceptions on New Recruited Registered Nurses' Performances in Clinical Areas Nor Syafawati Jumaat, Singapore
BP30	Holistic Obstetrics and Gynaecology Mind Maps (HOGMMs) Teaching: Easy to Use Tool Provides Equality of Learning, Teaching and Assessments Hassan Karali, Malaysia

Foyer, Central Ballroom, Resorts World Convention Centre

2.00pm – 3.30pm (Poster Judging)

# BEST ABSTRACT FOR POSTER PRESENTATION FINALISTS (SESSION 2)

BP31	The New Innovative Pedagogy: Refinements in Training Biomedical Students in the Handling of Experimental Mice Using Virtual Reality Technology Florence Tang, Hong Kong S.A.R.
BP32	A First-Year Anatomy-Integrated Hybrid Cardiac/Abdominal Echography Basic Procedure Medical Education Strategy for Deepening Clinical Reasoning Skills  Mai Shimbo, Japan
BP33	E-Learning: Perceptions of Medical Students at Newcastle University Medicine Malaysia (NUMed) Palika Mokool, Malaysia
BP34	Teaching the Torchlight Eye Screening Test (TEST) to Nurses and Opticians to do Community Eye Screening: Is it Feasible?  Chee-Chew Yip, Singapore
BP35	Dissecting the Medical Consultation With Authentic Data Ni Eng Lim, Singapore
BP36	Factors Supporting Self-Reflective Learning in Portfolio Assessment; From the Perceptions of Internal Medicine Residents and Supervisors in Singapore Huma Jaffar, Singapore
BP37	Pre-Student Internship Program Bootcamp for Paediatrics – What Can be Gained from This? Nicholas Beng Hui Ng, Singapore
BP38	Applications of Medical Consultation Conversational Analysis Jia Lun Kwok, Singapore
BP39	The Balance of Social Expectation and Self-Care in a Good Doctor: The Perspectives from the Third-Year Undergraduate Medical Students in Kaohsiung Medical University Yu Chih Lin, Taiwan
BP40	Developing a National Mentoring Scheme for Trainee Physicians: Benefits, Challenges and Pitfalls Catherine Mathews, United Kingdom
BP41	Manual Dexterity and Career Choice Observed in a Laparoscopic Surgery Simulation Training for Medical Students Gen Kobayashi, Japan
BP42	Applications to Medical Schools in Japan, Considering City Size and School Type: From a Nationwide Survey of High School Guidance Counsellors Junji Otaki, Japan
BP43	A Practitioner's Inquiry: Teaching Pre-Clinical MBBS Students Using a Question Based Instructional Design with Clickers  Jhoram Nufable, Malaysia
BP44	Simulated Task Trainer to Teach Minor Surgical Procedures – Moving from 'Learn One, See One, Do One' to 'Learn One, See One, Practice One, Do One' Gayathri Nadarajan, Singapore
BP45	The Dialectics of Interprofessional Care and Education: A Meta-Ethnography Issac Lim, Singapore
BP46	Delivering Values-Based Education through Experiential Learning in a Residency Outdoor Orientation Camp: A Mixed-Method Study Woon Li Seo, Singapore
BP47	"Two Minutes of Silence" - A Pilot Study for Mindfulness Yuhan Chee, Singapore
BP48	Factors Influencing Learners' Confidence in Performing Patient Handling Activities after Workplace Training Yu Ting Joanna Giam, Singapore

BP49	House Officers' Approaches to Learning Medicine and Clinical Performance Pin-Jung Chen, Taiwan
BP50	Hidden Curriculum: Do Tutor Hopes for Characteristics Achieved by International Masters in Medical Education Students Increase the Number of Transitions to be Managed?  Afnan Khoja, United Kingdom
BP51	Contextual Professional Challenges Promote or Hinder Self-Regulated Learning: A Qualitative Study Contrasting Rural Physicians with Undergraduate Learners in Japan Yasushi Matsuyama, Japan
BP52	A Longitudinal Analysis of Readiness of Healthcare Students for Interprofessional Education at Keio University Toshiaki Monkawa, Japan
BP53	Perception of the Spiral Curriculum Among Newcastle University Medicine Malaysia (NUMed) Medical Students Kanesh Rajoo Paramasevon, Malaysia
BP54	In-Training Examinations and Outcomes of an Anaesthesia Residency Programme Li Hoon Tan, Singapore
BP55	Exploring the Relationship Between Medical Students' Internship Location and their Performance During Residency Lian Dee Ler, Singapore
BP56	What Has the Predictive Brain Got To Do with Medical Education? Tow Keang Lim, Singapore
BP57	Reinventing the Traditional Lecture through Sequential-Release Clinical Cases Jie Ming Nigel Fong, Singapore
BP58	Simulation-Based Teaching of Adult Oncologic Emergencies for Medical Undergraduates and Junior Residents in a Tertiary Cancer Centre Singapore Guan Wei Samuel Ow, Singapore
BP59	Know Before You Go: Students' Perceptions of Early Clinical Experiences by Self-Determined Learning Jo Hsin Chao, Taiwan
BP60	Discussion Boards as Facilitators of Global Communities of Practice to Support Development of Clinical Teaching Stuart Cable, United Kingdom

Free Communications 1 – General Education 1 – Pisces 1, Level 1 Free Communications 2 – Teaching and Learning – Pisces 2, Level 1

#### FREE COMMUNICATIONS 1 - GENERAL EDUCATION 1

Facilitating Physicians' Reflection on Their Professional Performance: Exploring the Developmental Appreciative Navigation Approach

Kiki Lombarts, The Netherlands

The Doctor is in the House: Improving Wellness for Internal Medicine Residents

Shi Min Jasmine Lee, Singapore

Learning Prioritisation: A Study to Understand the Relationship Between Learning Approaches and Motivation Using Assist and Achievement Goal Questionnaire Among Rakmhsu Students

Joan Bryant Kumar, United Arab Emirates

Professional Identity Formation of Female Doctors in Japan – Gender Stereotype and Gap Between the Married and Unmarried

Tomoko Matsui, Japan

Burnout in Internal Medicine Residents: A Study on Prevalence and Factors in a Three-Year Junior Residency Program Sabrina Lau, Singapore

Influences of Healthcare Career Choice and Perceptions of Nursing Among Healthcare Students in a Singapore University: A Cross-Sectional Study

Ling Ting Wu, Singapore

#### FREE COMMUNICATIONS 2 - TEACHING AND LEARNING

How Do They Learn and Want To Learn? A Cross-Sectional Study of Learning Preferences to Define Medical Education Priorities in Lao PDR

Amy Gray, Australia

Integrating Clinical Reasoning into Pre-Clinical Teaching for Future-Ready Medical Students Suzanne Goh, Singapore

Students' Experiences of Digital Rectal Examination (DRE): How Can They be Better Prepared for Practice? Lucy Victoria Rosby, Singapore

'Hot Seat' and 'Observer' Perspectives on Important Aspects of Feedback in Clinical Communications Practicum Jianping Chen, Singapore

Peer, Near-Peer and Group Mentoring in General Medicine

Benjamin Jia Xing Tan, Singapore

Do Team Size and Team Cohesiveness Matter in Interprofessional Team-Based Learning? A Peer Assessment Study Involving Health and Social Care Students in Hong Kong

Lap Ki Chan, Hong Kong S.A.R.

Free Communications 3 – Technology Enhanced Learning I – Pisces 1, Level 1 Free Communications 4 – Assessment – Pisces 2, Level 1

#### FREE COMMUNICATIONS 3 - TECHNOLOGY ENHANCED LEARNING I

Psychiatry Clinical Simulation Initiative (CSI) Modules for Medical Education: An Update

Martin Klapheke, United States of America

Facilitators and Barriers of a Cross-Cultural Geriatric Education Distance Training Programme – The Singapore-Uganda Experience

Lynette Ha Ngoc Huong Lien, Singapore

Serious Games in Medical Education: Current Knowledge of, Use and Perceived Implementation Barriers Among Clinical Educators

Kimberly Pei Rui Chan, Singapore

Leveraging on Database Management Tools, Cloud-Based Applications and Mobile App Development Platform to Administer the Curriculum Design Process Effectively and Accurately

Ching Man Liu, Singapore

The Inaugural Neuro-Localisation Pokemon Hunt: A Marriage of Lesion Localisation and Geography with Technology as The Priest

Derek Soon, Singapore

**New Way to Learn Alzheimer Using Augmented Reality** 

Gisella Anastasia, Indonesia

#### FREE COMMUNICATIONS 4 - ASSESSMENT

Developing a Comprehensive Checklist of Essential Dental Consultation Components into the Calgary Cambridge Framework and its Psychometric Testing

Sunila Sangappa, India

**Using Eye Tracking to Evaluate Medical Assessment Question Types** 

Jia Rui Kwan, Singapore

Involving Students in Assessment: Development of a Student Question Bank

Kirsty Forrest, Australia

Relationships Between Scores on the Biomedical Admissions Test (BMAT) and Later Stages of the Selection Process: Findings from a UK Medical School

Amy Devine, United Kingdom

**Developing and Validating Script Concordance Testing for ENT Undergraduates** 

Sivaraman Ganesan, India

**Educational Benefit of Peer-Assisting Mock OSCE Among Medical Students** 

Warinrumphai Vanichranun, Thailand

Free Communications 5 – Faculty Development – Virgo 1, Level 1 Free Communications 6 – Curriculum – Virgo 2, Level 1

#### FREE COMMUNICATIONS 5 - FACULTY DEVELOPMENT

What Should Residents Learn to Teach? A Modified Delphi Survey to Define Competencies of Resident-As-Teacher Tadayuki Hashimoto, Japan

Preparing Medical Students in Asia for International Clinical Elective Placements James Thomas, Japan

Understanding the Response Process of Residents Evaluating Clinical Teachers – Influences of Instrument and National Culture

Makoto Kikukawa, Japan

Comparison between the Teaching Performance Indicator Data and Teaching Hospital Accreditation Results Mei Yi Chou, Taiwan

Quality of Clinical Learning Environment and its Association with Taiwanese National Cultural Values between Medical Trainees and Clinical Teachers

Jer-Chia Tsai, Taiwan

Towards a Consistent Approach to the Mentoring of Novices by Senior Physicians in Palliative Medicine Wesley, Teck Wee Loo, Singapore

#### FREE COMMUNICATIONS 6 - CURRICULUM

Improving Awareness of Quality Improvement Concept Among Paediatric Residents in Hamad Hospital, Qatar: Successful Story

Magda Youssef, Qatar

Randomised Prospective Study Comparing the Effectiveness of Spaced Learning to Mass Learning in Microsurgical Procedures

Wendy Teo, Singapore

Positive Outcomes of Simulation-Based Learning in Critical Care Physiotherapy Geetha Kayambu, Singapore

Effects on Student Results and Course Evaluations of Reduction in Teaching Hours in an Undergraduate Medical Course Richard Hays, Australia

Workplace Based Assessment – Learner and Assessor Perspective Lessons from a 7 Year Project Balakrishnan R (Kichu) Nair AM, Australia

Development of Values-Based Practice Workshop to Improve Patient-Centred Interprofessional Collaboration Hirotaka Onishi, Japan

Free Communications 7 – General Education II – Virgo 3, Level 1 Free Communications 8 – Technology Enhanced Learning II – Virgo 4, Level 1

#### FREE COMMUNICATIONS 7 - GENERAL EDUCATION II

Walking the Footsteps and Feeling the Pain: Patientisation

Jamie Lim, Singapore

The Main Considerations of Faculty and Residents When They Evaluate the Appropriateness of Facebook Posts and Their Negotiation of Conflicting Considerations

May Eng Loo, Singapore

Improving Clinician Compliance with a National Healthcare System Using Peer Review

Julie Quinlivan, Australia

The Challenges of Developing Informal Mentorships in the Medical Field

Heba Mohtady, Saudi Arabia

Improving Preclinical Students' Cultural Competence by Cross-Cultural Service Learning, Critical Reflection and Narrative Interview

Po Wei Chen, Taiwan

#### FREE COMMUNICATIONS 8 - TECHNOLOGY ENHANCED LEARNING II

Using New Technologies and Best Evidence to Unburden Medical Schools' Admissions and Student Affairs Offices, Without Sacrificing Diversity or Predictive Validity

Christopher Zou, Canada

An Ethnographic Study of Health Information Technology Use in Three Intensive Care Units

Elise Paradis, Canada

Culminating Projects - Academic Innovation to Improve Pedagogic Competence

Anbarasi K, India

Three Dimensional (3D) Printed Knee Joint Simulator for Medical Education

Bohong Cai, Singapore

'It's on my IPad': Mobile Devices to Support and Augment and Transform the Learning Experience of Medical Students in the Clinical Workspace

Jagrati Chopra, United Kingdom

Technology in Medical Education: Facets of Using Google Classroom in Pharmacology

Carolynn Pia Bagain, Philippines

E-Poster Presentation Session 1 - Pisces 1, Level 1 E-Poster Presentation Session 2 - Pisces 2, Level 1

# **E-POSTER PRESENTATION SESSION 1**

D1001	Impact of a Novel Learning Tool on Educational Outcomes in Orthopaedics Residents: A Prospective Pilot Study Jing Yuan, Singapore
D1002	Impact of Library Usage on Academic Learning Process by Medical Students at Ras Al Khaimah Medical and Health Sciences University- A Comparative Questionnaire Study Aruna Chanu Oinam, India
D1003	The UERMMMCI Pharmacology Students' Perception of the Objective Structured Examination (OSEP) as an Assessment Tool Chiara Marie Dimla, Philippines
D1004	Are General Surgical Residents Happy with Their Training Program? Ee Ling Serene Tang, Singapore
D1005	Factors Related to Medication Errors Among Registered Nurses in an Acute Hospital, Singapore Fang Qi Koh, Singapore
D1006	Teaching Medical Error Disclosure Using Simulation Jun-Bean Park, South Korea

D1007	Experience of our Journey Through the Inaugural Medical Grand Challenge 2017 Wenqi Chiew, Singapore
D1008	Evaluation of Education Strategies for Occupational Centred Practice Julia Chong, Singapore
D1009	Cricothyroidectomy Training Model Feifan Wang, Singapore
D1010	Student Perception of Teaching Their Peer Sulistiawati Sudarso, Indonesia
D1011	Integrated Cross-Specialty Medical Education Beginning with First-Year Case-Based Medical Interview OSCE: Importance of a Continuous Graded Performance Evaluation Naoko Hasunuma, Japan
D1012	How Do Electives Influence Career Choices of Undergraduate Medical Students at NUMed?  Dineth Umanda Wijesiriwardena, Malaysia

E-Poster Presentation Session 3 - Virgo 1, Level 1 E-Poster Presentation Session 4 - Virgo 2, Level 1

# **E-POSTER PRESENTATION SESSION 3**

D1013	A Pilot Study Investigating the Efficacy of Near Peer Led Teaching for Breaking Bad News Angela Pang, Singapore
D1014	Through the Lens of Complexity: What Are the Implications for How We Develop Faculty in the Health Professions? Koshila Kumar, Australia
D1015	An Interactive Journey Through the Nephron: How an Animated Medical Courseware Package Helps to Deliver Complicated Physiological Mechanisms to a Large Medical Class Isabel Hwang, Hong Kong S.A.R.
D1016	The Role of Coaching in Enhancing Staff Compliance with Quality Requirements in a Private Medical Science College in Saudi Arabia Heba Mohtady, Saudi Arabia
D1017	Exploring Local Nursing Students' Perceptions on Receiving Feedback on Clinical Performance: A Pilot Study Jonathan Lim, Singapore
D1018	Reflection as a Learning Tool Amongst Inter-Professional Frontline Leaders Lawrence, Eng Huat Lim, Singapore

D1019	Patients and Accompanying Persons Opinions About the Quality Services of Medical Students During Clerkship Siska Nia Irasanti, Indonesia
D1020	OSCE Simulation as a Tool to Enhance Learning in Musculoskeletal Undergraduate Teaching Yuhan Chee, Singapore
D1021	CTSP: An Internal Medicine Survival Guidebook for Residents by Residents Vanessa Cui-Lian Chong, Singapore
D1022	Using a Holistic Approach to Engage Clinical Faculty and Adjunct Clinician Educators on Initiatives Launched and Gather Feedback on Improvements  Michelle Lim, Singapore
D1023	The Role of Chief Medical Residents in Japanese Internal Medicine Programs: A Pilot Survey In Japan Shunsuke Kosugi, Japan
D1024	The Perception of Medical Students at Newcastle University Medicine Malaysia (NUMed) Towards Medical Research as a Career in Malaysia Rucchira Wickramasinghe, Malaysia

E-Poster Presentation Session 5 - Virgo 3, Level 1 E-Poster Presentation Session 6 - Virgo 4, Level 1

# **E-POSTER PRESENTATION SESSION 5**

D1025	Enhancing E-Learning by Curriculum Design Caroline Choo Phaik Ong, Singapore
D1026	Evaluating the Effectiveness of Near-Peer Simulation-Based Teaching Among Junior Residents in a Residency Program Benjamin Yong-Qiang Tan, Singapore
D1027	Residents' Expectations and Perceptions of Clinical Teaching Activities in National Dental Centre Singapore (NDCS)  Marianne Ong, Singapore
D1028	Enhancing Integration in the First Phase of the MBBS Curriculum, Faculty of Medicine, University of Colombo through an Innovative Model Dikshaladevi Pathmanathan, Sri Lanka
D1029	It's Not Too Early to Start Simulation Training in Premedical Basic Science Education Chikako Kawahara, Japan
D1030	Promoting Student Engagement in Large Group Teaching: A Practitioner Inquiry Ma. Brenda Pancho, Malaysia

D1031	Standardisation of Minor Surgical Procedure Teaching in Yishun Polyclinic Fung Yee (Jeremy) Foo, Singapore
D1032	Are We Teaching High Value, Cost-Conscious Care in Our Curriculum? – A Singapore Medical School's Perspective Desmond Boon Seng Teo, Singapore
D1033	Relevance of Learning Surface Anatomy for Clinical Examination of Patients: A Pilot Study involving Standardised Patients (SPs) to Teach Surface Anatomy to Year-1 Medical Students Satish R.L, Singapore
D1034	Bond University Medical Program - Introducing an Online Assessment Platform Kirsty Forrest, Australia
D1035	Essential Procedural Skills Required for a Basic Doctor Working in Remote Locations Solomon Sathishkumar, India
D1036	Factors Associated with Dropout Thoughts Among Students at a Government Medical School Khulood AlEnezi, Saudi Arabia

E-Poster Presentation Session 7 - Pisces 1, Level 1 E-Poster Presentation Session 8 - Pisces 1, Level 1

# **E-POSTER PRESENTATION SESSION 7**

D1037	Five Year Development of the First Pharmacy Residency Post-Graduate Year One (PGY1) Programme, at an Academic Medical Centre- University Hospital, in Singapore Siew Woon Lim, Singapore
D1038	Skill Day: Enhance the Accuracy of Operating Medical Instrument of the ICU Nurse by Authorised Mechanism Pei-hui Tsai, Taiwan
D1039	Multiple Mini Interviews for Undergraduate Allied Health Programmes in Singapore Meredith Yeung, Singapore
D1040	Use of the Quizup Trivia Game App for Provision of Quizzes Gavin Dawe, Singapore
D1041	Improved Reliability of Summative Portfolio Assessment for Family Medicine Certification by Japan Primary Care Association Hirotaka Onishi, Japan
D1042	Morning Rounds: A Simulation Experience for Second Year Medical Students to Promote Clinical Reasoning Grzegorz Plochocki, Netherlands Antilles

D1043	The Teacher's Perspectives on Their Roles as a Medical Educator and Blended Learning Inthrani Raja Indran, Singapore
D1044	The Learning Environment and Its Application to Mentoring Zheng Xuan Ong, Singapore
D1045	A Narrative Review of Mentoring Programs in Family Medicine Charmaine Qiao Ting Low, Singapore
D1046	A Successful Introduction of a Wide Variety of Technologies Purposefully Prepares Faculty to Teach Good Patient Care Helen Batty, Canada
D1047	An Innovative Micro-Module Platform for Flipped Classrooms in Medical Education: The Elearning Clinical Skills (EC Skills) Channel Florence Tang, Hong Kong S.A.R.
D1048	Preparing Senior Residents to Be Faculty Evangeline Lim, Singapore

E-Poster Presentation Session 9 - Pisces 2, Level 1 E-Poster Presentation Session 10 - Pisces 2, Level 1

# **E-POSTER PRESENTATION SESSION 9**

D1049	Perceptions and Attitudes of Undergraduates (in Clinical Years of Medical School) vs Postgraduates on Effectiveness of Role Play in Teaching Haematology-Oncology Emergencies Hon Lyn Tan, Singapore
D1050	From Clinician to Educator: Perceptions of How Occupational Therapists Learn to Become Clinical Educators in a Public Hospital Yi Jin Eileen Lim, Singapore
D1051	Using Eye Tracking to Evaluate a New Curriculum Mapping Resource Claire Ann Canning, Singapore
D1052	Correlation Between Fresno Test and Berlin Questionnaire on the Assessment of Appraisal Skills in Evidence-Based Medicine Chee Siong Lee, Taiwan
D1053	Correlation Between Academic Performance and Stress Level Among Preclinical Medical Students of Thammasat University, Thailand Thuchanun Junprung, Thailand
D1054	A Questionnaire Survey of Awareness of Physical Activity Among the Faculties of Medical College B K Manjunatha Goud, United Arab Emirates

D1055	How Medical Students Begin to Do Clinical Problem Solving Adrian Kee, Singapore
D1056	ReCallections: Increasing Reflections and Learning on Call John Hsu, Singapore
D1057	Working Hour Reduction Program of Junior Doctors in Kaohsiung Medical University Hospital Hui-Hua Hsiao, Taiwan
D1058	Pilot Study: Acceptance of Smart Home Monitoring Technology Among Older Adults in Singapore Cecilia Chen, Singapore
D1059	Teaching Opioid Risk Mitigation Strategies and the Steps of Opioid Overdose Resuscitation Martin Klapheke, United States of America
D1060	Development of a Clinical Decision Support System for Diabetes Care: A Pilot Study in Final Year Medical Students Kenneth Ban, Singapore

E-Poster Presentation Session 11 - Virgo 1, Level 1 E-Poster Presentation Session 12 - Virgo 1, Level 1

# **E-POSTER PRESENTATION SESSION 11**

D1061	A Visual Mnemonic for Learning ACGME Six Core Competencies – The "ACGME Core Competencies Body Mind Map" Cheng-Yuan Wang, Taiwan
D1062	Role and Educational Value of Emerging Technologies in Health Professionals' Education: Virtual Reality in CPR Marie Ann Mae En Wong, Singapore
D1063	Improving General Internal Medicine Continuing Medical Education Using Curricular Development and Change Management Constructs – Division of Advanced Internal Medicine, National University Health System, Singapore Khin Saw Myint, Singapore
D1064	Sexual Medicine Education: Confidence Levels of Singaporean Doctors in Sexual Medicine Yi Heng Seow, Singapore
D1065	Beyond the Lamppost—A Proposal for a Fourth Wave of Education for Collaboration Elise Paradis, Canada
D1066	Exploring the Experience of Undergraduates in E-Tutoring Chee Fen Chia, Malaysia

D1067	Motivation, Mindset and Grit of Residents Preparing for PACES  Darius Beh, Singapore
D1068	Using Instructional Online Web-Page to Enhance Visual Recognition of Hydronephrosis and Its Severity Khalid Mohammed Ali, Singapore
D1069	Clinical Educators' Perceptions of the Role and Educational Value of Augmented Reality in Medical Education Benedict Tan, Singapore
D1070	Medical Students' KCSE Grade and Their Relationship to Academic Performance: A Case of Egerton and Moi Universities, Kenya Ronald Obwoge, Kenya
D1071	Nature or Nurture - A Cyclic Action Research Report on Collective Competence Anbarasi K, India
D1072	I Didn't Sign Up for This! The Experience of Disillusionment in Medical Education Victor Loh, Singapore

E-Poster Presentation Session 13 - Virgo 2, Level 1 E-Poster Presentation Session 14 - Virgo 2, Level 1

# **E-POSTER PRESENTATION SESSION 13**

D1073	Creating Classroom Interaction by Interactive Questioning: An Action Research Study Eugenie Phyu Thwin, Singapore
D1074	Evaluation of the Constructing Care Collaboration Tricia, Liting Chew, Singapore
D1075	Understanding and Practice of Self-Regulated Learning in Newly Graduated Physiotherapists in Singapore Hwee Kuan Ong, Singapore
D1076	Therapeutic Reasoning and Context Learning by Simulation: A New Approach in Teaching Antibiotic Prescribing in Clinical Pharmacology Thilanka Seneviratne, Sri Lanka
D1077	Barriers and Challenges Towards Use of Self-Directed Learning in ACGMEI Multi Cultural Paediatric Residency Program: The Residents Perspective Manasik Hassan, Qatar
D1078	Faculty and Senior Resident Mentorship in Orthopaedic Surgery Residency: A Bane or Boon? Min Jia Chua, Singapore

D1079	Perception of Educational Roles Among Faculty of a Tertiary Level Hospital in Singapore  Jason Chang, Singapore
D1080	Gamification of Medical Education Eng-Tat Ang, Singapore
D1081	Temporomandibular Disorders and Orofacial Pain: Knowledge Gaps Among Dental Undergraduates and Postgraduates and Their Preferred Mode of Learning Hee Hon Tan, Singapore
D1082	An Attempt to Develop Teaching Materials Using Virtual Wards in Nursing Education Tomoko Hagiwara, Japan
D1083	Virtual Patients in Massive Open Online Courses: A Randomised Controlled Trial Exploring Learner Interaction Patterns and Drop-Out Behaviours  Marcel Scully, Singapore
D1084	Do Line-Group Reinforce Learning in Surgical Program? Pongsatorn Asanasak, Thailand

E-Poster Presentation Session 15 - Virgo 3, Level 1 E-Poster Presentation Session 16 - Virgo 3, Level 1

# **E-POSTER PRESENTATION SESSION 15**

D1085	Medical Oncology Residency Exit Viva Voce Examinations in Singapore - Are Mock Examinations Useful in Gauging Candidate Readiness?  Nagavalli Somasundaram, Singapore
D1086	Mentoring Guidelines for Postgraduates in Internal or General Medicine Shao Wen Amanda Teo, Singapore
D1087	Developing a Holistic Student Support Infrastructure: The LKCMedicine House System Tanya Tierney, Singapore
D1088	Analysis of Standardised Patient Ratings and Examiner Pass-Fail Marks of History Taking at End of Year Professional Exam Stations in 4 Specialties Carmen Wong, Hong Kong S.A.R.
D1089	Can Structured Oral Examination (SOE) Replace Standard Oral Examination in Our MBBS Curriculum? Suresh Roy Laiphangbam, India
D1090	Role Models' Proverbs and Self Reflection Integrated with Flip-Classroom Technique, A More Fun Professionalism Class While Inspiring Medical Students Kalyanee Asanasak, Thailand

# **E-POSTER PRESENTATION SESSION 16**

**Supervision in Post-Graduate Internal Medicine Training** 

D1091

	Rachel Huidi Peh, Singapore
D1092	Using Eye Tracking to Evaluate Students' Needs and Usability of a Visualised Curriculum Min Kuan Chua, Singapore
D1093	Enhanced Transition Framework for Local-Trained New Graduates in Tan Tock Seng Hospital: Aiming Towards Early Confirmation for Potential Nurses Mary, Jan Mui Leong, Singapore
D1094	Development of Teachers' Instructional Competence in Team-Based Learning Using Children's Fairy Tale in Teaching Demonstration Ke-Li Tsai, Taiwan
D1095	Oral Hygienists' Experiences of a Blended Learning Course in Local Anaesthesia Nashreen Behardien, South Africa
D1096	New Approach in Developments of Clinical Practice Guidelines in Ministry of Health Primary Care Increases the Value and Reduce the Waste Zulfa Alrayess, Saudi Arabia

E-Poster Presentation Session 17 - Virgo 4, Level 1 E-Poster Presentation Session 18 - Virgo 4, Level 1

# **E-POSTER PRESENTATION SESSION 17**

D1097	Using Learning Management System Functionality to Augment Early Warning Systems in a Face To Face Foundation Year of a Medical Programme  Declan Gaynor, Bahrain
D1098	Burning Questions: What Are the Students Asking in TBL? Nandini Rao, Singapore
D1099	Comparison of Psychometric Qualities of Two Clinical Examination Formats Used in A Final MD Examination Nadia Al Wardy, Oman
D1100	There Were No Association Between Knowledge and Practice of Standard Precaution Among Students of Atma Jaya Medical School Jean Valeria, Indonesia
D1101	Children Perception on Volunteer Dental Clinic and Mini-Educational Programs- A Questionnaire Study Yu-Ting Huang, Taiwan
D1102	Systematic Review of Tools for Measuring Medical Professionalism Hendra Goh, Singapore

D1103	Learning Beyond the Classroom for Medical Oncology Trainees at National Cancer Centre, Singapore (NCCS)  Eileen Yi Ling Poon, Singapore
D1104	Undergraduate Medical Research Outreach and Project Matching (ROPM) Programme to Support Research Activities Among Medical Students at the National University of Singapore (NUS) Yi Ping Ren, Singapore
D1105	Relational Elements of Mentoring - An Approach Using Complex Adaptive Systems Theory Simone Quek, Singapore
D1106	Ethanol-Glycerin-Acetic Acid- Saturated Salt Solution Fixation with Traditional Herbal Conservation Method: A Novel and Useful Wet Lab Specimens Embalming for Surgical Skills Training Huu Ta Nguyen, Vietnam
D1107	Usage and Impacts of Medical Smartphone Apps Among the Medical Students in Tamil Nadu, India Shenaz Fathima Akbar Ali, India
D1108	Candidates' Use of Online Resources in Preparation for the Biomedical Admissions Test (BMAT)  Amy Devine, United Kingdom

E-Poster Presentation Session 19 - Virgo 2, Level 1 E-Poster Presentation Session 20 - Virgo 3, Level 1 E-Poster Presentation Session 21 - Virgo 4, Level 1

# **E-POSTER PRESENTATION SESSION 19**

D1109	Validation of Collaborative Practice Assessment Tool (CPAT) in Indonesian Healthcare Setting Rezki Yeti Yusra, Indonesia
D1110	Pitching of Language Barrier in "Little Shared Language" Interactions with Simulated Patients Tanya Tierney, Singapore
D1111	Towards Online Case Study Repositories for Healthcare Institutions Hwee Sing Khoo, Singapore
D1112	Utilisation of E-Learning for In-Service Training – 5-Year Results Yan Jin, Hong Kong S.A.R.
D1113	Are There Specialty Differences in Physicians' Impression of a Good Clinical Teacher? Guan Luan Ng, Singapore
D1114	Online Interactive Decision Support Tools (IDST): A Scalable Educational Resource to Impact the Management of Diseases with Complex Treatment Algorithms  Jim Mortimer, United Kingdom

# **E-POSTER PRESENTATION SESSION 20**

D1115	Teaching of Medical Biochemistry in a 3-Step Approach: Hook, Mount and Interpret Yun Chau Long, Singapore
D1116	Provoking Cognitive Medical Errors Using Virtual Patients Wen Da Seah, Singapore
D1117	Effect of Stress on Thai Medical Students Phuangphet Siriloetthananon, Thailand
D1118	Research on Improvement Quality of Practical Medicine Training at Vietnam Military Medical University Than Son Le, Vietnam
D1119	NUS Medicine Attempt at Curriculum Development: The Curriculum Outcomes Definition and Curriculum Rationalisation Exercise Ching Man Liu, Singapore
D1120	What's Next? Call Doctor or? Yen Chi Choa, Taiwan

# **E-POSTER PRESENTATION SESSION 21**

D1121	Demonstration of a Sustainable Resident-Led Internal Medicine Post-Graduate Examination Preparatory Course Benjamin Yong-Qiang Tan, Singapore
D1122	Cross Sectional Study of Perceptions of Qualities of a Good Medical Teacher Among Medical Students from First to Final Year Matthew Low, Singapore
D1123	Interactive and Participatory Sessions to Facilitate Biostatistics Learning By Medical Undergraduates Mahalakshmy Thulasingam, India
D1124	Impact of Night Float System on Patients Care: Perceptions of Paediatric Staff In ACGME-International Program in Qatar Eman Al Muslemani, Qatar
D1125	Setting Up an Area Wide Simulation Centre: Getting The Building is Just the Beginning! Hugh Fardy, Australia
D1126	Learning Differently During Simulation – The Different Takeaways by Doctors and Nurses from In-Situ Simulation Sessions in an Emergency Department

Jing Jing Chan, Singapore

E-Poster Presentation Session 22 - Virgo 2, Level 1 E-Poster Presentation Session 23 - Virgo 2, Level 1 E-Poster Presentation Session 24 - Virgo 3, Level 1

# **E-POSTER PRESENTATION SESSION 22**

D1127	The Influence of Learning Styles of Orthopaedic Residents and Their Orthopaedic In-Training Examination Performance Xi Chen, Singapore
D1128	Augmented Reality for Sirenomelia Dinesh Kumar Srinivasan, Singapore
D1129	Inter-Professional Education: The Pharmacist Shadowing for Interns Wan-Chen Lu, Taiwan
D1130	Hacking Hackathons: Preparing the Next Generation for the Multidisciplinary World of Healthcare Technology Mataroria Lyndon, New Zealand
D1131	Dental Student Feedback on a Blended Learning Approach in the Teaching of Surgical Removal of Impacted Lower Wisdom Teeth Marcelle Cupido, South Africa
D1132	Simulation Training for Medical Emergencies in Dentistry Intekhab Islam, Singapore

# **E-POSTER PRESENTATION SESSION 23**

D1133	How Does Community Medical Training Influence Resident Doctors' Professionalism?  Junichi Tanaka, Japan
D1134	Residents and Faculty Perception and Attitudes Toward Self-Directed Learning in ACGMEI Paediatric Residency Program-Qatar Khaled Siddiq, Qatar
D1135	Radiopath Museum - A First-Ever Visual Resource Integrating Gross Pathology with Diagnostic Imaging Gwyneth Shook Ting Soon, Singapore
D1136	Use of Computerized Manikin in Summative Assessments Provides Better Quality of Evaluation in Summative Test for Basic Life Support Skills Tsu-Yi Hsieh, Taiwan
D1137	Mentoring Environment - A Proposed Model from a Thematic Review Jia Min Hee, Singapore
D1138	Effect of Adding Descriptors to Resident Competency Assessment Forms Thun How Ong, Singapore

D1140	A Study on Finding Solutions to Improve the Quality of Teaching Some Fundamental Medical Subjects in Vietnam Military Medical University Minh Hai Nguyen, Vietnam
D1141	Stakeholders' Perspective on Curriculum of the Medical Faculty: A Pilot Project to Create the Prototype Instruments of Evaluation Mia Kusmiati Koswara, Indonesia
D1142	Night Float System and Medical Errors; Perceptions of Paediatric Staff in ACGME-International Program In Qatar Eman Al Muslemani, Qatar
D1143	Enhancing Surgical Confidence By Delivery of Point-Of-Care Anatomy for Everyday Practice Wojciech Pawlina, United States of America
D1144	Focused Subcostal Echocardiography by Intensive Care Unit Residents: Learning Trajectory of Dyad Versus Individual Training Joo Wei Chua, Singapore

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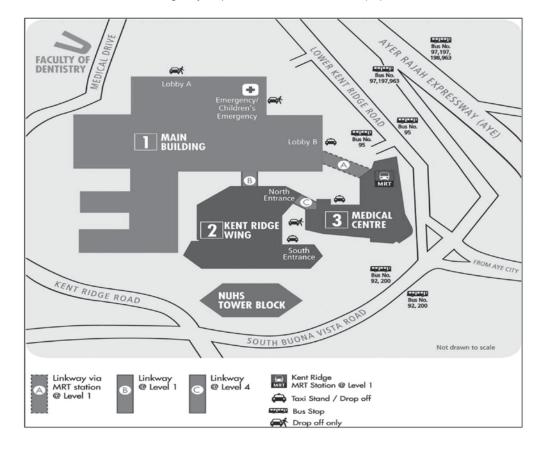
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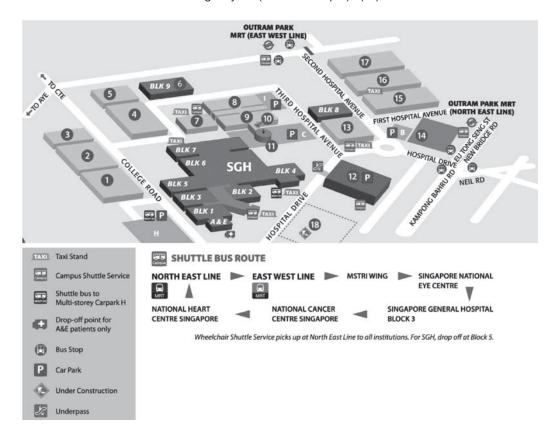
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