

# Hong Kong Society for Simulation in Healthcare Annual Scientific Conference 2023

## *Integration of Simulation into Training*

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## Welcome Message from Conference Chairs

It is our great pleasure to welcome you to the Hong Kong Society for Simulation in Healthcare (HKSSiH) Annual Scientific Conference 2023. After a few years of suspension of face-to-face simulation activities arranged by our society, we hope that this conference can gather friends who are interested in medical simulation as well as dedicated colleagues working in healthcare education together to enhance the quality of education and delivery of healthcare service through simulation-based training.

This year, our theme is “Integration of Simulation into Training”. We aim to connect clinicians and academicians in different healthcare professions who have great passion in simulation to share, exchange ideas and strive to develop better simulation education. We have invited medical experts in the simulation field and academics from different higher education institutions to share their expertise and insights on a wide range of topics from the macro level such as setup and running of the simulation center; up to micro level such as simulation design and implementation to debriefing. We will also have the chance to explore new technologies and innovations that are transforming the way we approach medical education.

By coming together to share ideas and best practices, we can continue to advance the field of medical simulation and improve the quality of healthcare for all.

So let us embrace this opportunity to learn, grow, and collaborate, as we work together to shape the future of medical education. Once again, welcome to the Hsieh Annual Scientific Conference.

We wish you all a productive and fulfilling experience.



Dr. Shirley NGAI  
Chairman, Organizing Committee



Dr. Benson LAU  
Co-Chair, Organizing Committee



Dr. Katherine YAU  
Co-Chair, Organizing Committee

## Welcome Message from HKSSIH Chairman

Dear esteemed guests, members, and delegates,

It is with immense pleasure and great honor that we extend a warm welcome to each one of you to the highly anticipated Annual Scientific Meeting of 2023. On this day of 16th of September, we are coming together to explore and celebrate the marvels of healthcare simulation.

This year's meeting has been meticulously crafted with two primary objectives. Firstly, we aim to forge meaningful connections between both seasoned simulation instructors and aspiring trainees. Our belief in the power of collaboration drives us to create an environment that fosters mutual learning and growth. Together, we will embark on a journey to elevate the realm of simulation in healthcare to new heights.



Secondly, this gathering shall serve as a vibrant platform for sharing knowledge and expertise in various facets of simulation. We have curated an array of topics to ensure a comprehensive exchange of insights, ranging from designing intricate scenarios to the seamless execution of simulations. Furthermore, discussions will encompass invaluable insights on organizing and managing simulation centers and upcoming development locally. The meeting will be adorned with the latest advancements and developments in the field, enabling us to collectively embrace the ever-evolving landscape of simulation science.

As we unite at this Annual Scientific Meeting, let us remember that we stand on the shoulders of giants – those who have tirelessly dedicated themselves to advancing simulation in healthcare. Their legacy drives us forward as we seek to improve patient outcomes, enhance medical education, and revolutionize our approach to healthcare through the art of simulation.

I extend my deepest gratitude to our organizing committee, whose unwavering dedication has brought this remarkable event to fruition. Moreover, I am grateful to each participant, whose presence enriches the fabric of this gathering and reinforces our collective commitment to excellence.

Be prepared for a memorable experience on this day of 16th of September 2023. The Annual Scientific Meeting of the Hong Kong Society of Simulation in Healthcare promises to be a momentous occasion, one that will shape the trajectory of simulation-based education and practice in healthcare.

Together, let us embrace the future of healthcare simulation!

Warm regards,

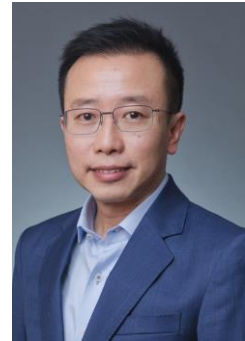
George Wong, MD LLM FRCSEd(SN) FCSHK FACS FAHA FESO CHSE  
Chairman, Hong Kong Society For Simulation in Healthcare

Time	Tentative Rundown	
08:40 – 09:05	<b>Registration</b>	
09:05 – 09:10	<b>Opening Remark</b> Dr. Shirley NGAI, Chairman of Organizing Committee	
09:10 – 09:15	<b>Presentation of souvenirs and certificates to guest speakers and sponsors</b>	
09:15 – 09:20	<b>Opening Speech</b> Prof. George WONG, Chairman of HKSSiH	
9:20 – 9:25	<b>Photos Taking</b>	
09:25 – 10:15	<b>Experience sharing regarding setting up and running of simulation centre I</b> <ul style="list-style-type: none"> <li>• Dr. Benny CHENG, Honorary Director, Hong Kong Jockey Club Innovative Learning Centre of Medicine, Hong Kong Academy of Medicine</li> <li>• Dr. Natalie LEUNG, Director (CSTC), Pamela Youde Nethersole Eastern Hospital</li> </ul>	
10:15 – 10:35	<b>Morning Tea Break</b>	
10:35 – 11:25	<b>Experience sharing regarding setting up and running of simulation centre II</b> <ul style="list-style-type: none"> <li>• Dr. Nam-Hung CHIA, Director (MDSSC), Queen Elizabeth Hospital</li> <li>• Dr. Winnie CHEE, Director, Simulation Training Centre, Hong Kong Children’s Hospital</li> </ul>	
11:25 – 12:25	<b>Parallel session (I) Main Hall</b> <ul style="list-style-type: none"> <li>• Free paper</li> </ul>	<b>Parallel session (II) Main room</b> <ul style="list-style-type: none"> <li>• AGM</li> </ul>
12:25 – 13:30	<b>Lunch</b>	
13:30 – 14:40	<b>Trends in simulation education</b> <ul style="list-style-type: none"> <li>• Dr. Hon-Wah WAI, Director of Industrial Centre, The Hong Kong Polytechnic University</li> <li>• Prof. Ka Ming CHOW, Associate Professor, The Nethersole School of Nursing, Faculty of Medicine, CUHK</li> <li>• Prof. Rick KWAN, Professor &amp; Association Dean (Programmes), School of Nursing, Tung Wah College</li> <li>• Dr. Veronica LAM, Principal Lecturer, Director of Bachelor of Nursing (FT) Programme, School of Nursing, The University of Hong Kong</li> </ul>	
14:40 – 15:00	<b>Afternoon Tea Break</b>	
15:00 – 16:50	<b>Symposium (Main Hall)</b> <b>How to design and run a simulation scenario</b> Speakers: Dr. PP Chen, Dr. Albert Chan, Dr. Irene Lo, Mr. Tacko Tsoi 1. Introduction and update to healthcare simulation 2. Design a simulation scenario 3. Tips and tricks to run a simulation scenario 4. Tips to conduct debriefing session	<b>Laerdal Sponsored Workshop</b> <b>Using video recording system and Artificial Intelligence (AI) as simulation education and research tools</b> Speaker: Dr. Jacky Chan, Mr. Wing-Chung KAN, Mr. Chun-kit MA
16:50 – 17:00	<b>Closing remark</b> Dr. Benson LAU, Co-Chairman of Organizing Committee	

## **Dr. Benny CHENG - MBBS FHKCA FHKAM (Anaesthesiology), Honorary Director, Hong Kong Jockey Club Innovation Learning Centre for Medicine**

### ***Biography***

Dr. Cheng Chun Pong Benny is an esteemed consultant anaesthesiologist who holds key leadership positions within the healthcare industry in Hong Kong. Currently serving as the Chief of Service at Tuen Mun Hospital, Pok Oi Hospital, and Tin Shui Wai Hospital, he has demonstrated exceptional expertise and dedication to advancing patient care. In addition, Benny serves as the Deputy Hospital Chief Executive at Tuen Mun Hospital, showcasing his ability to efficiently manage multiple responsibilities. With a focus on education and training, Benny holds the prestigious role of Honorary Clinical Associate Professor at the Department of Anaesthesia and Intensive Care in the Chinese University of Hong Kong (CUHK). His passion for teaching extends to his positions as Honorary Director of the Hong Kong Jockey Club Innovative Learning Centre for Medicine (HKJC ILCM) and Director of the Clinical Simulation Skills Training Centre in the New Territories West Cluster (NTWC). Leading the way in simulation-based education, he has pioneered the implementation of Crew Resource Management (CRM) and successfully integrated it into training programs. This innovative approach allows participants to engage in self-reflection, enhancing their learning experience.



Benny's commitment to simulation education is evident through his involvement as the chair of the Clinical Simulation Committee of the Hong Kong College of Anaesthesiologists (HKCA). He has extensive experience as a director of various simulation courses and is highly regarded as a credential simulation debriefer. As an active instructor, Benny continues to contribute to the development of simulation-based courses, ensuring healthcare professionals are well-equipped to deliver exceptional patient care. In pursuit of continuous improvement, Benny has diligently propagated CRM and quality improvement approaches. Recognizing the value of in-situ simulation, he has successfully introduced CRM to workplaces, further enhancing the safety and effectiveness of healthcare teams.

Through Benny's various roles and tireless efforts in education and training, he continues to shape the future of healthcare in Hong Kong.

### ***Abstract***

The successful establishment and operation of the Hong Kong Jockey Club Innovative Centre for Medicine (HKJC ILCM) requires a well-designed framework encompassing various aspects. A systematic approach is needed, focusing on infrastructure development, partnerships, staff recruitment, evaluation, and research.

Infrastructure development is critical, involving the provision of physical space, advanced equipment, and technology integration to create a solid foundation for effective training and assessment. Collaborating with medical schools, healthcare institutions, and stakeholders is vital to maximize the center's potential and facilitate the development of innovative medical education practices. Furthermore, recruiting qualified staff, such as simulation experts, educators, and technicians, is necessary to ensure the delivery of high-quality training and assessment.

Incorporating ongoing evaluation and research is crucial to continuously improve simulation techniques and identify areas for enhancement, keeping the center at the forefront of medical education practices.

Looking ahead, the center should expand its role into postgraduate medical education, with a focus on competency-based medical education and workplace-based assessment. E-learning platforms can enhance learning and accessibility, while faculty training programs should equip educators with specific teaching and assessment techniques. By implementing these measures, the HKJC ILCM can shape the future of medical education, delivering high-quality training and assessment to medical professionals.

## **Dr. Natalie LEUNG - Director, CSTC, Pamela Youde Nethersole Eastern Hospital**

### ***Biography***

Dr Natalie Leung is a graduate of The Chinese University of Hong Kong. She is a specialist in Critical Care Medicine. Dr Leung has been practising in the Department of Intensive Care of Pamela Youde Nethersole Eastern Hospital since 2005. She is the Associate Consultant of the ICU.

Besides, she is also a qualified Simulation Instructor and her special interest is about Crew Resource Management and Human Factor. She is the Director of Nethersole Clinical Simulation Training. She designs and organises simulation training to improve teamwork, communication and patient safety.



### ***Abstract***

#### **How to run a simulation centre: PYNEH experience and future perspective.**

Simulation refers to the replication of real-world processes or systems. It has proven useful in several areas, such as training, education, testing, and safety engineering.

A simulation training centre has facility that enables people to acquire or train skills and procedures in a safe and protected environment. Running a simulation centre to fulfil its purpose requires careful planning. It is essential in providing effective training and helps improve patient safety.



## Section II – Experience Sharing Part II

### Dr. Nam-Hung CHIA - Director (MDSSC) and Consultant (SURG), Queen Elizabeth Hospital

#### *Biography*

Dr. Chia serves as a Director of MDSSC and Consultant of the Department of Surgery in the Queen Elizabeth Hospital. Regarding professional background, Dr. Chia is a specialist in General Surgery and his subspecialty is in hepatobiliary and pancreatic surgery and endoscopy.

Dr. Chia was appointed as the Director of MDSSC in November 2016 to oversee the overall Centre's operation and lead MDSSC in accomplishing its vision and mission. He has given tremendous and valuable inputs in the planning and execution of simulation training activities and insights for evidence-based practice in simulation education. He is also a devoted and experienced educator in medical education and simulation training.

Dr. Chia has expanded his knowledge and practice in simulation education by obtaining an accredited simulation train-the-trainer certification. He has instructed in various simulation training courses, such as HA Intern Simulation Training Boot Camp, Advanced Surgical Trauma Course (ASTC), etc. He is also actively involved in the curriculum development of training courses including training modality, such as the development of the customized Transcatheter-Aortic Valve Implantation (TAVI) simulation training model for the Trans-catheter Cardiac Intervention Course. He gave distinctive comments from a surgeon's perspective to enhance the model design and facilitate the trial runs.

Dr. Chia endeavors to apply cutting-edge knowledge in the planning and execution of simulation training and research activities. Apart from simulation course development, he kept enriching his knowledge in simulation based education by participating in different simulation forums and conferences. In 2021 and 2023, he shared his research experience in inventing a state-of-the-art "Emergency Surgical Airway Simulator" and "Multi-Purpose Pulsatile Vascular Simulator (MPVS) for Femoral Vascular Puncture Access and Closure" at the International Meeting on Simulation in Healthcare (IMSH) organized by the Society for Simulation in Healthcare.



#### *Abstract*

MDSSC is one of the full-motion simulation training centres under the Hong Kong Hospital Authority (HA). To facilitate the improvement of medical efficiency and safety, we have developed various specialized and cross-specialty training with different departments. Our training aims to optimize the standard of the healthcare professionals to meet the service needs and bridge the gaps between clinical and quality & safety issues.

The MDSSC also places great emphasis on innovation development and academic research. We have been working closely with other clinical departments in exploring and applying 3D printing and virtual reality technologies to medical training. We anticipate that these technologies will significantly improve the realism in simulation training.

In future, we will continue the advancement and development of our simulation training by collaborating with different clinical teams on course development.

## **Dr. Winnie Chee Yuet Yee, Consultant (Paediatrics), HKCH, Director, HKCH Simulation Training Centre**

### ***Biography***

Dr. Winnie Chee Yuet Yee is a Consultant in Paediatrics at Hong Kong Children's Hospital. Concurrently, she was entrusted with the responsibility as the Team Head in charge of Critical Care Transport at the same hospital, showcasing her expertise and dedication to child healthcare. Her commendable journey in paediatrics was further acknowledged in 2023, when she was appointed the Director of the HKCH Simulation Training Centre.



Furthermore, Dr. Winnie Chee Yuet Yee has been serving as a Clinical Associate Professor (honorary) in the Department of Paediatrics at The Chinese University of Hong Kong, and Honorary Assistant Professor, Department of Paediatrics & Adolescent Medicine, University of Hong Kong, evidencing her commitment to academic pursuits and nurturing the next generation of paediatricians.

### ***Abstract***

#### **Sharing from HKCH Simulation Training Centre, the past and the future.**

Hong Kong Children's Hospital Simulation Training Centre is established since 2018. It offers simulation training and education to all paediatric healthcare professionals in Hong Kong. In this talk, HKCH Simulation Training Centre will share their past experience in the establishment of the simulation centre, and the challenges in the future.

## Section III - Free Paper Session

### Nursing students' experiences of using virtual simulation in acquiring clinical reasoning skills

Bronya H. K. LUK<sup>1</sup>, Joanna W.Y. YEUNG<sup>2</sup>, Oi Kiu PAU<sup>3</sup>, Pan Kin WONG<sup>3</sup>, Janette C. L. FAN<sup>3</sup>, Katherine K. Y. YAU<sup>3</sup>

1 School of Nursing and Health Studies, Hong Kong Metropolitan University

2 The Nethersole School of Nursing, The Chinese University of Hong Kong Hong Kong

3 School of Nursing, Tung Wah College

#### **Abstract**

**Purpose:** Nurses with poor clinical judgment fail to detect impending changes in patients' conditions. Reportedly, virtual simulation in nursing education is positively associated with improvement in the clinical reasoning skills of undergraduate students. This study explored students' perspectives on clinical reasoning development and their experiences of learning through virtual simulation.

**Methods:** An exploratory, descriptive qualitative study design was used. Twenty-eight nursing students studying in a bachelor's program received a 2-hour virtual simulation training with a debriefing session. Six semi-structured focus group interviews were conducted after the training. Thematic analysis was used to explore and analyze the students' perspectives on clinical reasoning development and their experiences of learning through simulation training.

**Results:** Three main themes emerged: engagement in and satisfaction with learning, enhancement of clinical reasoning skills, and preparedness for clinical practice.

**Conclusion:** Virtual simulation training with debriefing sessions increased students' engagement in and satisfaction with learning, developed their clinical reasoning skills, and enabled them to reflect on their own preparation for clinical practice. Our findings suggest that virtual simulation could be adopted in current nursing curricula to enhance the competencies of future nurses.

# A School-based Research Agenda for Healthcare Simulation: A Consensus Building Process

**Baljit Kaur Gill**

School of Nursing and Health Studies, Hong Kong Metropolitan University

## ***Abstract***

**Introduction:** Healthcare simulation had been widely used as a pedagogical strategy in nursing education. It had been well documented that simulation was adopted in nursing education in order to enhance the students' various skills, such as clinical judgement and critical thinking. Recent study also showed a positive impact on replacing clinical placement with simulation. Nevertheless, there was limited discussion regarding evaluating the present development and application of simulation in healthcare and developing a research agenda to guide the future directions. The aim of this study was to develop a school-based research agenda for healthcare simulation.

**Method:** A modified Delphi technique was adopted to reach consensus by surveying nursing faculties in one local university. Iterative five rounds had been gone through and 52 questions were derived from 112 questions.

**Results:** Three themes were emerged, 1) embedding simulation into Baccalaureate Nursing (BN) curriculum; 2) designing effective simulation-based education and 3) simulation education in the broader world (adolescents). The three themes were categorized into two areas which were using simulation in educational settings and community settings. Findings suggested extending the use of simulation in replacing clinical placement and promoting role transition. Moreover, different strategies to enhance the effectiveness of simulation-based education were emphasized, in particular briefing, debriefing, and use of innovative technology such as virtual reality. It also introduced the use of simulation to promote health literacy in the community.

**Conclusion:** This study adds understanding to incorporation of simulation-based education in nursing curriculum and provides insights for future research.

# Use of High-fidelity Simulation in Improving Technical and Non-technical Skills of Airway Management among Final Year Nursing Students: An Exploratory Study

Baljit Kaur Gill

School of Nursing and Health Studies, Hong Kong Metropolitan University

## **Abstract**

**Introduction:** Airway management is a crucial step in a life threatening condition and for a cardiopulmonary resuscitation to be successful (Rosenthal et al., 2006). Both technical and non-technical skills are important components in airway management of a deteriorating patient. Technical skills includes the assessment of the patient, ensembles of equipment and others. Non-technical skills namely leadership, teamwork and task management are important components in medical emergency teams (Chalwin & Flabouris, 2013). A prior study demonstrated that undergraduate nursing students' technical skills of airway management was improved, practicing with high fidelity simulation (Kaur, 2015). No prior study, have explore non-technical skills among nursing students in airway management of a patient.

**Aim:** This study aim to evaluate the use of high fidelity simulation in improving final year nursing students' technical and non-technical skills in airway management of a deteriorating patient.

**Methods:** 30 final year undergraduate nursing students were voluntary recruited and were grouped three students in each group. They had attended four-hour theory session on airway management in Advanced Cardiac Life Support (ACLS). Three sessions of airway management was given to the students for three consecutive weeks. Students were assigned different roles in each session. Each session consist of 10 minutes hands-on session, follow with a 30-40 minutes debriefing. They were evaluated using a validated OSCE airway management checklist measuring their technical skills and the Team Emergency Assessment Measure (TEAM), measuring their non-technical skills.

**Results:** The completion rate of the technical skills OSCE checklist increased from 36% to 76%. There was a significant improvement ( $p < 0.05$ ) in both the technical and non-technical skills after the completion of all of the three sessions.

**Conclusions:** A comprehensive training using simulation demonstrated benefits in participants' technical and non-technical skills in airway management.

## PAInT away the pain!

**Dr Alice KY Siu<sup>1</sup>, Dr Albert SW Ku<sup>2</sup>, Dr Jacky FW Lo<sup>3</sup>, Dr Victor Abdullah<sup>3</sup>, Dr Bill HB Chan<sup>4</sup>**

**1** Clinical Associate Professor (Honorary), Department of Otorhinolaryngology, Head and Neck Surgery, The Chinese University of Hong Kong

**2** Consultant-in-charge, Paediatric Intensive Care Unit, Hong Kong Children's Hospital

**3** Associate Consultant and Consultant-in-charge, Department of Otorhinolaryngology, Hong Kong Children's Hospital

**4** Clinical Professional Consultant & Professor of Practice in Paediatrics (by Courtesy), Department of Paediatrics, The Chinese University of Hong Kong

Corresponding: Dr Alice KY Siu, +852 60371374, sky167@ha.org.hk, siukwaiyee@gmail.com

### ***Abstract***

P.A.I.n.T (Paediatric Airway Intervention and Tracheostomy) Simulation Training Course is an original course designed collaboratively by the Hong Kong College of Otorhinolaryngologists and the Hong Kong Children's Hospital Paediatric Simulation Centre. The PAInT course is a one-day course and has been running since 2019. The course has trained over a hundred medical and nursing practitioners to handle the dreaded situation: Cannot-Intubate, Cannot-Ventilate (CICV) in children.

PAInT course features a multi-disciplinary teaching faculty and participants from mixed specialties to encourage communications, mutual understanding and team building. The course begins with three online lectures pre-course, then four skill stations and seven simulation cases. The simulation sessions features CICV scenarios, such as acute infective airway obstruction, dislodged tracheal tube and asphyxiating foreign bodies aspiration, in different clinical settings with patients of diverse background. The course received positive appraisals for its originality, practicality and relevance. Since year 2021, the Hong Kong College of Otorhinolaryngologists has made PAInT a recommended training course for all higher surgical trainees receiving fellowship ENT training. We conducted a retrospective review regarding the organisation, material development and educational outcome of the PAInT course, and to present our results.

### **Acknowledgement**

We would like to acknowledge Dr Maria Chan, Dr Brigitta YH Wong, Dr TC Chu, Ms Alice Ho, Dr PY Lo, Ms Chan Yin Ling, Dr Eric Ng, Dr Rowena SM Lee and Ms Antonia Wei for their devotion in clinical education as our course instructors, Dr Eddy Wong from the Hong Kong College of Otorhinolaryngologists and Dr Winnie Chee, director of Hong Kong Children's Hospital Paediatric Simulation Centre for the organisation and substantial support of the PAInT course.

## Section IV – Trends in Simulation Education

### Dr. Hon-Wah WAI, Director of Industrial Centre, The Hong Kong Polytechnic University

#### **Biography**

Dr WAI Hon-wah is the Director of the Industrial Centre at The Hong Kong Polytechnic University (PolyU). He has 10 years of design experience and has run a design, prototyping and production business. He started teaching at the PolyU in 1999 and has been involved in aircraft maintenance, automotive, robotics, and innovation management research projects. His research focus is immersive technologies for teaching and academic entrepreneurship.



#### **Abstract**

##### **Title:**

From Experiment to Experience: PolyU's Journey with Immersive Technologies in Health Education

##### **Abstract:**

This presentation provides an insightful exploration of the adoption and integration of immersive technologies in the healthcare curriculum at the Hong Kong Polytechnic University (PolyU). It showcases the transformative journey from initial experimentation to a comprehensive experiential learning environment, demonstrating how virtual and augmented reality tools have enabled more immersive, interactive, and effective learning experiences. Our discussion will highlight key challenges, innovative solutions, and notable outcomes, and will share lessons learned. Attendees will gain an understanding of the potential of immersive technologies to revolutionize healthcare education and the practicalities of implementing such technologies in a real-world educational setting.

## **Prof. Ka Ming CHOW, Associate Professor, The Nethersole School of Nursing, Faculty of Medicine, CUHK**

### ***Biography***

Dr Ka Ming CHOW is an Associate Professor of the Nethersole School of Nursing, Faculty of Medicine, The Chinese University of Hong Kong. She is also the Deputy Chair of Asia-Pacific Genomic and Genetic Nursing Centre, and Vice-President of Hong Kong College of Education and Research in Nursing and Pi Iota at-Large Chapter of Sigma Theta Tau International Honor Society of Nursing. As an advanced nurse practitioner and active researcher, Dr Chow has strived to improve nursing care, particularly sexuality care, in her native city Hong Kong, China through research, advocacy and health promotion. She has obtained a total amount of HKD7.5 million from various research funding agencies including government and private grants, and extensively translated research findings into high-quality clinical practice and applied her professional knowledge and skills in developing practice model of sexuality care.



Dr Chow is also an outstanding teacher recognized by nursing students. She obtained several teaching awards from the Faculty and University. In recent years, she has obtained exceeding HKD19 million from teaching and learning grants to support and develop active teaching and learning pedagogies in nursing education. She has also contributed to the development of education curriculum, licensure and practice guidelines of general nursing, and reviews of research proposals/publications in national nursing council and national/international funding bodies.

Dr Chow has also served as an academic editor or reviewer for a number of peer reviewed nursing journals. She has published research findings in peer-reviewed international nursing and midwifery care journals, as well as conference papers, newspaper clips and book chapters. She has also been invited to present at various local and regional conferences.

### ***Abstract***

Interprofessional education (IPE) has demonstrated significant effects on learning outcomes among students. However, IPE has not been formally integrated into current curriculum. There are challenges and barriers encountered when initiating and embedding IPE into curriculum. Several IPE activities have been conducted for nursing students in local context. Challenges and strategies to initiating such teaching pedagogy will be explored and discussed.



**Prof. Rick Yiu Cho KWAN, Professor & Association Dean (Programmes),  
School of Nursing, Tung Wah College**

***Biography***

Rick Kwan is a nursing professor at the School of Nursing, Tung Wah College. His research is specialized in Gerontological nursing with a strong focus on employing technologies to promote the health behaviours of older people with cognitive frailty and enhance the independence and health of older people with dementia. In education, he is also specialized in developing innovative teaching and learning methods for the student to learn various topics in the field of Gerontological nursing. He is often invited as a speaker at international conferences and local elderly service providers on topics related to e-health, gerontechnology, cognitive frailty, and dementia care.



***Abstract***

Simulation has long been used as an effective teaching method to train nurses' various competencies. However, in the last decades, simulation has mostly been utilized to train nurses' psychomotor skills. The complexity of the clinical environment is increasing (e.g., interprofessional challenges). The pace of curriculum updates could not meet the hasty change of service demands. The conventional linear training protocols focusing on psychomotor skills cannot effectively solve complex clinical problems nowadays. With the advance of simulation technologies (e.g., extended reality, high fidelity simulators), simulation can render more advanced technologies to equip nurses with a higher level of learning (e.g., decision-making and problem-solving). The involvement of clinical partners also plays an important role in instilling updated and valid clinical problems into the training to make the outcomes more ecologically valid. The evolutionary simulation should employ a collaboration among educators, technologists, and clinical partners throughout all stages of simulation in nursing education.

## Dr. Veronica LAM, Principal Lecturer, Director of Bachelor of Nursing (FT) Programme, School of Nursing, The University of Hong Kong

### **Biography**

Dr. Veronica Lam is a Principal Lecturer and the Director of Bachelor of Nursing (FT) Programme in the School of Nursing in the University of Hong Kong. She is the external examiner for nursing schools in Hospital Authority. She received her BAppSc (Nursing) from the University of Sydney, MHS from the University of NSW and Master of Nursing in Professional Studies, major in nursing education in UTS in 2000. She obtained her Doctoral degree in 2014 from the University of Hong Kong. Veronica is a Registered Nurse and specializes in Paediatric and Neonatal ICU Nursing. She worked in P&NICU in Hong Kong and Sydney for many years before moving to the academic sector for more than 15 years ago.



Veronica current leads a team dedicated to promoting and enhancing various teaching paedagogies and technologies, such as. simulation, virtual reality (VR\_ and robots. Additionally. she serves as the chairperson of the Quality and Safety Education Sub-committee in the School of Nursing which focuses on using simulation activities to enhance a high-quality and safety nursing care for nursing students. She obtained few Teaching and Development Grants which mainly related to using advanced technology in nursing education.

### **Abstract**

**Title:** The viewpoint and self-confidence of nursing students with respect to the efficacy of interactive hybrid teaching mode.

**Background and aim/objective:** Lecturing often views as passive learning, impacting engagement, critical thinking, and knowledge retention. To enhance nursing students' clinical competence, teachers use diverse strategies, including clinical practicum. The pandemic's suspension of clinical practice affected students' learning and knowledge application. Therefore, this project integrates an 'interactive hybrid teaching mode' to promote nursing students' engagement in lecturing and also applying knowledge to a scenario. **Method or activity:** 'Interactive hybrid teaching mode' is the combine of interactive teaching and simulation activity. According to the scenario, students were required to choose the nursing action. They then visualized the consequences of their choice. Lastly, the course teacher conducted a debriefing.

A total of 317 undergraduate nursing from various years were recruited. To assess the effectiveness of the intervention, students' self-satisfaction and self-confidence were evaluated and focus group interviews was conducted. **Results and conclusion:** The mean of students' self-satisfaction was 4.15 ( $p < 0.05$ ) and their self-confident were 4.01 ( $P < 0.05$ ). During the focus group interview, three main themes emerged in which students expressed that the practicality of the hybrid simulation lecture. It is another alternative teaching strategy that enhances students' engagement in lectures, and most importantly, they can apply what they have learnt and preview the consequence before actual practice.

# Section V – Symposium/ Workshop

## Symposium – How to design and run simulation scenario

### **Biography – Mr. Tacko Tsoi**

Mr. Tacko TSOI is currently Nurse Coordinator (Nethersole Clinical Simulation Training Centre), Advanced Practice Nurse (Nursing Services Division) of Pamela Youde Nethersole Eastern Hospital, and former executive Partner (Cluster Quality & Safety Office, HKEC). He received his critical care nursing specialty training and awarded his nursing fellowship. He had qualification in Health Informatics, Nursing, Health Services Management, Patient Safety and Clinical Human Factors. He is an associate member of Chartered Institute of Ergonomics & Human Factors, United Kingdom.

He is enthusiastic in clinical simulation and education. Currently, he is a visiting lecturer of MSc & PgD Nursing in the Hong Kong Polytechnic University, Associate lecturer (HD and BSc Nursing) in the Hong Kong Metropolitan University; Visiting lecturer of PRCC (Primary Health Care Nursing – DHC Module) in the HKAN and HKCCPHN; organizing committee of CMSC-BPT & AMSC-HPT of HKCP; Member of Simulation Trainer Certification Subcommittee, HKJC ILCM, HKAM; Program advisor of KWC CRM TTT Workshop, Visiting instructor of NTWC CRM Simulation Workshop, etc. He has extensive experience in curriculum design for simulation trainings of different healthcare professionals. Apart from his centre operations management, he participated in commissioning of training centre expansion and renovation projects.

As awarded young achiever of his working cluster, he is passionate in different perspectives including eye-tracking technology in healthcare, mixed reality in clinical service and education, clinical human factors, artificial intelligence, and aerodynamic in infection control. For eye-tracking technology and clinical human factors, he introduced and implemented for clinical education, evaluation of performance, and workplace revamp for clinical effectiveness as the first application in the Asia region, he delivered related presentations and abstracts in the international conferences. For artificial intelligence, he developed a conversational AI system during COVID-19. Currently, he is working on various projects of clinical conversational AI, robotics, and mixed reality in the public hospitals. For aerodynamics, he is a co-investigator of a HKSAR Government-funded project and collaborating with Department of Mechanical Engineering of City University of Hong Kong to design high performance ventilated tent for contagious diseases. The design was received Silver Award in Innovation Geneva 2022.



### **Workshop Abstract - Introduction and Update to Healthcare Simulation**

Healthcare simulation is a powerful tool in training and educating healthcare professionals, offering a safe environment to practice clinical skills and enhance decision-making abilities. This abstract provides an overview of the introduction and recent advancements in healthcare simulation. Simulation-based training has revolutionized medical education by bridging theory and practice. It enables learners to acquire and refine clinical skills, fostering a culture of patient safety and continuous professional development. Recent updates in healthcare simulation are driven by technological advancements. High-fidelity mannequins, virtual reality, augmented reality, eye tracking technology, and serious gaming provide realistic scenarios and lifelike patient interactions, enhancing learners' competence and confidence. Simulation has extended beyond education, integrating into healthcare systems for assessments, evaluations, and quality improvement. It ensures competency, identifies system vulnerabilities, and promotes evidence-based practices.

This presentation explores the introduction and recent updates in healthcare simulation, discussing its impact on education, patient safety, and quality improvement. It highlights key advancements, challenges, and future directions, emphasizing the need for continued innovation and collaboration to optimize healthcare simulation's potential in global patient care.

***Biography – Dr. PP Chen***

PP is a specialist in Anaesthesiology & Pain Medicine. He is a now part-time clinical specialist at AHNH/NDH and in private sector. He was formerly the Hon Director of HKAM's HKJCILCM and the Director of HA NTEC Simulation & Training Centre. Previously he had led the development of Simulation-based learning in Hong Kong College of Anaesthesiologists, Hospital Authority and Hong Kong Academy of Medicine, and assisted several Colleges in faculty development and the development of simulation-based courses for their trainees. PP is still very active in the training of simulation trainers in Hong Kong. In his free time, he is the Course Director for HKJCILCM's DSSI course and a faculty of CSEC.

***Workshop Abstract - Design a simulation scenario***

This presentation will take the audience through the principles of scenario development, followed by a discussion of the practical aspects of designing a scenario for the training of healthcare professionals.

**Biography – Dr. Irene LO, Consultant Surgeon, QEH Surg HBP, MBChB, FRCS, FCSHK, FHKAM, Dip Biostat**

Clinical Posts:

1. Kowloon Central Cluster (KCC) Trauma Director (1/2021 till present)
2. Consultant Surgeon, Hepatobiliary & Pancreatico- Surgery and Trauma surgery (2016- present)
3. Clinical Assistant Professor (honorary), Department of Surgery, CUHK (2010 to present)
4. Clinical Assistant Professor (honorary), Department of Surgery, HKU (2010 to present)



Trainer posts:

1. Qualified Simulation Trainer (2015- present)
2. Advanced Trauma Life Support (ATLS) instructor (present)
3. QEH Advance Surgical Trauma Course Instructor (ASTC) (present)
4. Course Director of:
  - a. Trauma Team Leadership training course (QEH)
  - b. HK College of surgeon Trauma course, course director
5. Dedicated ERCP, OGD, colonoscopy Trainer, QEH

**Workshop Abstract - Tricks & Tips of Running Scenarios**

To compose a scenario from draft to on stage performed, a long journey of steps, meetings and coordination are involved. What are the thorns and stones on the path?

As a course director; a practical trainer; an inspector; a facilitator; a modulator, what are our inner struggle when we were in different roles of the “fake show”?

As a participant, what is the mind and emotion inside you when you are performing this “fake show”?

Let’s explore and hear the inner voices from the crew.

### ***Biography – Dr. Albert Chan, FHKCA FANZCA FHKAM Anaesthesiology***



Albert is a Consultant Anaesthetist at the Department of Anaesthesia and Intensive Care in Prince of Wales Hospital, and Honorary Clinical Associate Professor at the Chinese University of Hong Kong. He has special interests in cardiac anaesthesia, perioperative medicine and cardiac catheterization lab procedures, particularly minimally invasive structural heart procedures. He is an accredited cardiac anaesthetist and has obtained echo certification through the NBE Advanced Perioperative Transesophageal Echocardiography examination. He is also an accredited Cardiopulmonary exercise testing trainer from the Perioperative Exercise Testing & Training Society (POETTS) in UK. With a background in computer science, he is also interested in developing smart hospital solutions to help enhance patient engagement and safety, as well as improve clinical processes.

His greatest passion lies in medical education, especially simulation-based medical education, and is currently the chair of the Board of Education of Hong Kong College of Anaesthesiologists (HKCA), and member of the Hong Kong Academy of Medicine (HKAM) Education Committee. He is a senior faculty member for Comprehensive Simulation Educator Course at the HKAM Hong Kong Jockey Club Innovative Learning Centre for Medicine (HKJC ILCM), and has taught in numerous faculty development and clinical simulation courses for HKCA and HA (Hospital Authority). Internationally, he is adjunct faculty with Center for Medical Simulation in Boston which is affiliated with Harvard Medical School, and has also been involved in various simulation workshops in international conferences.

With regards to medical education, he completed his Masters of Health Professions Education at Maastricht University, Netherlands – with a focus on feedback literacy amongst anaesthesia residents, particularly in the context of workplace-based assessment. He is also heavily involved with Simulation and Clinical Debriefing, Interprofessional Education and Faculty Development, and using in-situ simulation to enhance clinical workflows and processes. He is also actively engaged in well-being initiatives with the college and exploring the role of positive psychology in enhancing clinician well-being and resilience.

### ***Workshop Abstract - Tips for Conduction Simulation Debriefing***

How should we conduct debriefing after clinical simulation scenarios? We aim to provide an overview of the nuances of conducting debriefing sessions in clinical simulation settings to maximize learning outcomes. Through discussion of relevant educational theories, and the vital role of debriefers, including the importance of curiosity and the art of listening, we aim to provide a concise yet comprehensive guide for healthcare educators and simulation facilitators, aiding them in enhancing debriefing techniques for improved participant performance and, ultimately, enhanced patient care. Finally, tips on how to conduct an effective debriefing session will be shared.

## Laerdal Sponsored Workshop – Using video recording system and artificial intelligence (AI) as simulation education research tools

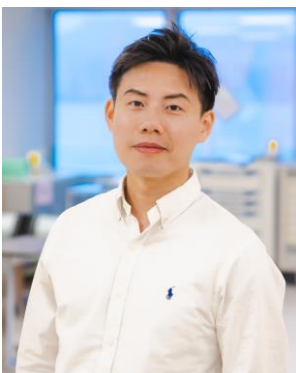
### ***Biography – Dr. Jacky Chan, Honorary Treasurer, Hong Kong Society for Simulation in Healthcare***

Jacky is an emergency care nurse and commissioning project officer in Hong Kong and specializes in healthcare simulation. He is Adjunct Assistant Professor in Prehospital and Emergency Care at The Chinese University of Hong Kong. He has been recognized as a FSSH (fellow of the Society of Simulation in Healthcare Academy) and FHKAN(Education). He has published 14 full papers and abstracts in international peer-reviewed medical journals focusing on health simulation and emergency care.



Additionally, he is a member of the systemic review task force for in-situ simulation at SSH and serves on the editorial board of the official journal of INASCL. In addition to his research involvement, Jacky has been managing simulation centers full-time for 12 years and teaching various courses for 17 years with 11 international instructor / faculty qualifications.

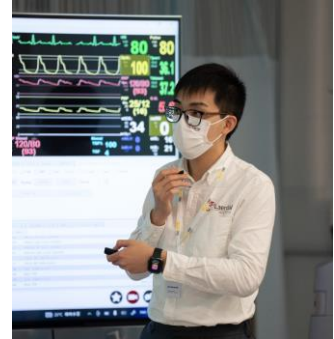
### ***Biography – Mr. Wing-Chung Kan, Simulation Officer, Hong Kong Sanatorium & Hospital***



Mr Kan brings over 10 years of experience in the simulation training field in both Hospital Authority and Private hospitals.

***Biography – Mr. Chun-Kit Ma, Lead Field Service Engineer, Laerdal China Limited***

Vincent is primarily responsible for the technical services business in Hong Kong, Macau, and Taiwan. He is dedicated to leveraging his expertise in developing and implementing technical solutions and simulation-related technologies within the simulation sector.

***Workshop Abstract -******Using Video recording system and Artificial Intelligence (AI) as simulation education and research tools.***

The engaging workshop will have three parts. It starts with sharing insights on how to effectively utilize video recording systems in simulation education. Discover how to extract valuable research data from the video recording systems and transform it into meaningful analysis using AI tools. The second part features a live demonstration of setting up a state-of-the-art video recording system. Finally, participants will form in few groups, to gain hands-on experience under guidance. Using the American Heart Association's Basic Life Support (BLS) as an example, you will experience how to extract research data using the video recording system.





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