'Ten Years Down the Line': a roundtable on the progress and advancement of medical education and training

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This editorial provides a concise summary of the roundtable titled 'Ten Years Down the Line' at the Tripartite Medical Education Conference on 14 January 2023 co-organised by the Hong Kong Academy of Medicine, Faculty of Medicine of The Chinese University of Hong Kong, and Li Ka Shing Faculty of Medicine of The University of Hong Kong, Hong Kong SAR, China.

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In 2023, the first-ever Tripartite Medical Education Conference, with the theme 'Actualising the Curriculum Continuum, gathered medical experts from Hong Kong and other countries to share their experience and insights regarding medical education. The 2-day conference, held from 14 to 15 January 2023, comprised plenary sessions, symposia, debate sessions, and workshops; one of the main events was a roundtable discussion titled 'Ten Years Down the Line' held on 14 January 2023. In this roundtable discussion chaired by Prof Paul Bo-san Lai, four speakers-Prof Gilberto Ka-kit Leung, President of the Hong Kong Academy of Medicine; Prof Francis Ka-leung Chan, Dean, Faculty of Medicine, The Chinese University of Hong Kong; Dr Pamela Pui-wah Lee, Assistant Dean (Clinical Curriculum), Faculty of Medicine of The University of Hong Kong; and Dr Tony Pat-sing Ko, Chief Executive of the Hospital Authority—joined together to discuss medical education, specialty training, workforce planning, and other important topics.

Prof Chan highlighted the perceived threats to young doctors in Hong Kong, including a shortage of medical professionals, a potential influx of mainland doctors, and the impact of 'medical negligence' cases on morale. He then addressed challenges in medical education and training, including the impacts of population ageing, digital health, and genomic medicine on medical curriculum reform. To address these issues, there have been suggestions that young doctors could be encouraged to remain in the public sector by enhancing their knowledge of artificial intelligence, big data, and genomics; emphasising the clinical and societal impacts of ageing; establishing more exchange programmes; and providing better housing benefits and medicolegal protection. In contrast, Prof Chan stressed the importance of quality assurance to meet the public's expectations in the future; he noted that, because patients have become better informed, medical knowledge is no longer possessed by healthcare professionals alone.

He also stated that role modelling is essential for nurturing, maintaining, and restoring compassion in young doctors.

Dr Ko expressed concern about demographic shift that will lead to a larger population of older adults in the next 10 to 20 years, with fewer young people to care for those older adults. On a more positive note, he observed that young doctors have a longer life expectancy, can easily adapt to new technologies and changes, and can develop innovative ideas; in contrast, senior doctors have more clinical practice experience. Therefore, senior doctors and young doctors can benefit from each other's knowledge and experience. Furthermore, Dr Ko highlighted the need for confidence in the next generation of doctors, as well as the Hong Kong healthcare system, despite challenges such as population ageing and workforce shortages. For instance, it would have been difficult to predict that the coronavirus disease 2019 pandemic would contribute to the adoption of new healthcare technologies such as telemedicine, which is increasingly convenient and accessible. He stated that it is time to reconsider the medical practice model, shifting its focus away from hospitals, inpatients, and subspecialisation, then reorienting towards primary and integrated care approaches. Although skills and technology are important, he noted that the well-being of young doctors is essential. Young doctors, who are expected to have longer careers because of increased life expectancy, require assistance with managing various risks and adverse events; they also need guidance that helps to build resilience. Concerns about work-life balance among young doctors (eg, gap years or part-time work) require further analysis. He favoured training focused on stress reduction, mindfulness, and research skills, which can facilitate career planning and job matching. He concluded by emphasising the importance of collaboration among senior doctors, trainers, and students, echoing Prof Chan's view that young doctors should be nurtured by role models.

Dr Lee stated that connectivity and convergence are the main trends that will shape healthcare delivery and training in the next decade; the hyperconnected world of big data and artificial intelligence will have the greatest transformative influence on medicine and the patient experience by helping patients to access health data that allows them to become more informed and proactive. The convergence of data modalities (eg, genomics and electronic health records) could facilitate the hospital-at-home concept, thereby decentralising healthcare from hospitals to community locations. As family medicine evolves to focus on comprehensive health and preventive care, there may be a reduced need for subspecialists to manage advanced diseases; in the future, more medical students may pursue primary and preventive care avenues. Consistent with her focus on preparing graduates for postgraduate training and specialisation in the changing healthcare environment over the next 5 to 10 years, Dr Lee presented the redesigned and reformed curriculum of the medical school of The University of Hong Kong that reinforces core competencies for professional practice, thereby strengthening concepts of primary care, preventive medicine, and systems-based practice. A key aspect of the curriculum, the 140+ CORE programme (in combination with point-of-care gadgets and the Internet of Things) contextualises the curriculum into common situations, ordinary clinical settings, relevant knowledge, and appropriate skills and behaviour; it also covers essential considerations of competent and ethical professional practice, avoiding excessive subspecialisation in the early stages of medical training. The redesigned curriculum is informatics-driven and personalised, with support from tools such as Moodle and curriculum maps; learning opportunities are recorded in e-portfolios. Although the digital health revolution is transforming medical care and training, Dr Lee emphasised the continuing need for humanistic aspects of medicine, including empathy and connectedness, which require collaboration between medical schools and healthcare professionals.

Prof Leung called for improved communication and collaboration among medical schools, the Hospital Authority, and the Academy to support the 'continuum' of medical education and training in Hong Kong. Although specialisation can be beneficial, excessive subspecialisation in healthcare may lead to a shortage of generalists and fragmented care, where patients with multiple diseases are treated by multiple specialists. He argued that although the development of primary care is important, this approach may not resolve the problem of excessive specialisation in the public sector. The Government's proposed solution of mandatory service can be

incorporated before specialist training, but it is challenging to train generalists because medical knowledge is rapidly expanding. To address this challenge, Prof Leung advocated for combined efforts involving medical schools and the Academy to provide doctors with sufficient general knowledge. The Academy is organising a strategic workshop to address these issues, with the goal of establishing a pathway for development over the next 5 to 10 years. He concluded by asserting that future doctors must have greater versatility, a wider knowledge base, and multiple skill sets; these aspects can be facilitated by collaborative efforts among medical schools, the Academy, and the Hospital Authority to maintain institutions and improve communication in a timely manner.

Regarding medical student selection criteria, Dr Lee emphasised the importance of passion: the ability to connect with people and demonstrate empathy is a requirement for trainee doctors and medical students. Prof Chan agreed with Dr Lee's view that strong academic ability is not necessarily an indicator of whether an individual will become a good doctor; teachers must help students to become the right doctors for their patients. With respect to clinical training, Dr Ko noted that medical students should receive early education to ensure an appropriate attitude towards the medical profession.

Although Prof Leung generally supported the notion of requiring trainee doctors to teach medical students, he stated that the implementation methods and teaching criteria should be carefully considered. Prof Chan observed that some doctors may be enthusiastic about teaching, whereas others may be reluctant. Prof Leung commented that teaching should be regarded as an opportunity for trainee doctors to practise and improve their clinical skills, rather than a job-related obligation. Dr Ko also emphasised the importance of service, teaching, and research in patient care because an individual's knowledge comprehension can be improved when they teach others. Dr Lee stated that it is challenging for trainee doctors to accommodate additional time commitments. Instead of teaching, she recommended that-after they have gained sufficient background knowledge-students learn from teachers in an authentic clinical setting.

Prof Lai recognised efforts made by both medical schools, the Hospital Authority, and the Academy to address resilience and well-being among young doctors, despite the burnout reported by some of those doctors. Prof Leung stated that it remains challenging to measure resilience, but he agreed that well-being programmes should continue and timely progress monitoring should be explored. Dr Lee highlighted the importance of welcoming and including colleagues and students with diverse

personalities, which can facilitate adaptation to various learning and personal needs upon entry into the medical profession. Dr Ko agreed that the demanding and stressful nature of modern clinical practice has increased the need for resilience; thus, young doctors should receive psychological support, crisis management training, and character building guidance throughout their careers. Prof Chan acknowledged that the next generation of doctors will experience substantial new challenges and difficult realities that require resilience. Prof Leung mentioned that there is a difference between helping someone to overcome adversity and allowing them to entirely avoid it; an avoidance approach does not encourage resilience.

At the conclusion of the roundtable discussion, Prof Lai stated that young and future doctors are

fortunate because major stakeholders are proactively addressing the issues and challenges they are likely to encounter; thus, young and future doctors will be better prepared for their roles and able to provide more effective patient care.

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