PMAC PRINCE MAHIDOL AWARD CONFERENCE 2021

# WS404

## WILL THE HEALTHCARE TECHNOLOGIES FROM COVID-19 LEAD TO A PERMANENT SHIFT IN HOW GLOBAL HEALTHCARE IS DELIVERED?

## | BACKGROUND

**COVID-19 is the first pandemic where the rapid deployment of technology solutions became a core component of the race to understand, contain and deliver a potential treatment. Many of these technologies failed, but like past global crises, many will also evolve to play a permanent role in healthcare beyond COVID-19.**

**In this session, we'll take a high-level look at the technology trends which were developed or matured during the pandemic and how they will likely impact the future of global health over the next decade. The focus will be on four key technologies**

1. Vaccines - The global race to produce a COVID-19 vaccine led to innovations at each stage of development. We saw significant advances in mRNA vaccine development, repurposing of AI technology to analyse the complex structure of the virus, huge efficiencies in clinical trial processes, and digital reimagining of the supply chain management. What impact will these technologies have for future vaccine development?

2. Telemedicine - Due to physical distancing and pressures on clinical facilities, telehealth scaled massively during COVID-19 as video consultations became the default for primary and non-urgent care. Government regulations were relaxed and privacy concerns took second priority to clinical need. In low-income countries device and connectivity challenges meant although there wasn't a jump to video there were significant innovations in SMS and telephony services. Will virtual care persist after COVID-19? And can we balance the desire for digital technologies in health against regulation and privacy concerns?

3. Big data and AI - COVID-19 accelerated already rapidly evolving AI technologies and the use of big data. It was an AI algorithm that first recognised an unusual cluster of pneumonia cases in Wuhan before official sources and then went on to successfully predict 10 out of the first 12 cities to be affected. We saw pivoting of machine learning from outside healthcare to aid track and trace, case diagnosis, outbreak monitoring and also to identify potential treatments. What did we learn about the future roles of AI in health from COVID-19?

4. Social media health misinformation - Effective public health messages on social media were a key factor in the success of some countries, such as Vietnam, in controlling the initial outbreak. More commonly, however, governments struggled to control misinformation. For the first time, the major social networks took joint steps to limit the spread of false information and validate trusted sources. What are the key lessons for governments and industry in the use of this technology for public health? And how do we use social media to build trust during the vaccine rollout?

## | OBJECTIVES

By attending this webinar you will

- Hear about real-world examples of how technology-assisted and failed during the COVID response
- Understand how these technologies have scaled, evolved, and adapted during the pandemic
- Learn how these solutions will have a lasting impact on global health delivery and how they will continue to evolution
- Have the opportunity to ask technology experts for their opinions on whether these technologies will lead to a permanent shift in how global healthcare is delivered

Speaker

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Prof. Kelvin Tsoi is a Digital Epidemiologist, currently serving in both School of Public Health and Primary Care as well as Big Data Decision Analytics Research Centre in The Chinese University of Hong Kong. His research interests focus on digital innovation in chronic disease management, including mobile and telecare application for hypertension management, and technological implementation and social engagement for cognitive screening. He also works on traditional research on electronic health records for population cohort studies.

Prof. Tsoi is the founding President of The International Society for Digital Health (ISDH) since 2019. The ISDH was being established through global collaboration with researchers from The Stanford University, The University of British Columbia, The University of Sydney and University of Leeds. It aims to encourage interdisciplinary research with innovative technology between medicine and engineering. The Society also organized annual symposium in connecting professionals from different sectors to promote digital health.