



Australian
Academy of Health and
Medical Sciences

Media Release

Australian Academy of Health and Medical Sciences calls for a national conversation on the future role of artificial intelligence in health

Under embargo until 23.59 AEST, 3 June 2020

Artificial intelligence (AI) is already starting to transform healthcare and Australia must act now to set our own path through this new landscape. That is the conclusion of a report published today by the Australian Academy of Health and Medical Sciences (AAHMS).

The Academy's President, Professor Ingrid Scheffer, said: 'There is a real opportunity for AI technologies to improve healthcare and we are already seeing other countries actively pursuing these prospects. Australia needs to initiate a national conversation to agree on where we *should* use AI in health, not simply where we *can* use it. Decisions now will determine the pathway for harnessing the benefits as part of an ethical, equitable and responsible future for AI development and implementation in health'.

Artificial intelligence tools, i.e. computer technologies that perform tasks that would otherwise require human cognition, could help deliver more efficient and effective healthcare. We are already seeing technologies emerge that can diagnose some eye conditions from images of the retina at least as well as doctors. Similar tools are being developed in other areas, such as for skin and breast cancer. The COVID-19 pandemic has demonstrated the potential for AI to enhance infectious disease tracking, support diagnosis and facilitate drug discovery and development. There are even examples of technologies being developed that use AI to monitor patients remotely.

Use of these tools could free up health professionals to spend more time with patients and potentially reduce stressful workloads. However, there are also challenges associated with these new technologies, including issues around validity and accountability for decision-making.

The Academy's report (produced following a roundtable in 2019) reveals the complexity of this emerging landscape – where AI often presents a double-edged sword. For instance, while some uses of AI might deliver efficiencies that lower the costs of care, others could increase costs due to the extra demands on resources and infrastructure. Similarly, AI technologies have the potential to empower patients, offering greater choice and access to information about their health. However, for some, this may bring unwanted complexity and an unwelcome awareness of their future health, leading to anxiety or other mental health problems.

Professor Scheffer added: 'AI-driven technologies could be a powerful tool in addressing the many challenges facing health systems the world over, but as with any new technology, there are both opportunities and challenges. The successful use of AI in health will depend on our readiness as a nation to develop and use it. The health sector must consult and plan to assess the aspirations and concerns related to these technologies. We need a national conversation involving patients, the public, healthcare professionals, researchers, industry, health systems and governments.'

Academy Fellow and roundtable participant, Professor Enrico Coiera, said: 'Around the world the level of interest and investment in AI in healthcare is enormous. Australia has the opportunity to learn from those nations that have moved early, but we still need to move quickly.'



Australian
Academy of Health and
Medical Sciences

Media Release

'These technologies are already becoming available. This emerging world in which AI is part of routine healthcare delivery is one where doctors and patients need to be trained to safely and effectively use the technology. We have seen this play out in the context of the coronavirus pandemic, where AI is helping with diagnosis, disease surveillance and drug development.

This demands preparation in Australia to invest in building the workforce we need to take advantage of what is to come.'

The Academy's report is based on a roundtable meeting that took place in July 2019 and brought together 34 participants from health, technology, academia, industry and government.

The report and associated summary are attached and will be published on our website on 4 June 2020: <https://aahms.org/news/roundtable-report-ai-in-health>.

For further information, please contact Catherine Luckin, Chief Executive Officer:
Catherine.Luckin@aahms.org; press@aahms.org; 07 3102 7220.

About the Academy:

The Australian Academy of Health and Medical Sciences is the impartial, authoritative, cross-sector voice of health and medical science in Australia. We are an independent, interdisciplinary body of 398 Fellows – elected by their peers for their outstanding achievements and exceptional contributions to health and medical science in Australia. Collectively, they are a representative and independent voice, through which we engage with the community, industry and governments.

The Academy is uniquely positioned to convene cross-sector stakeholders from across Australia to address the most pressing health challenges facing society.

Our purpose is to advance health and medical research in Australia and its translation into benefits for all, by fostering leadership within our sector, providing expert advice to decision makers, and engaging patients and the public.

www.aahms.org

Further information:

Professor Ingrid Scheffer is Chair of Paediatric Neurology Research at the University of Melbourne and Florey Institute of Neuroscience and Mental Health. She is a physician-scientist whose work as a paediatric neurologist and epileptologist at the University of Melbourne and the Florey Institute has led the field of epilepsy genetics over more than 25 years, in collaboration with Professor Samuel Berkovic and molecular geneticists. This resulted in identification of the first epilepsy gene and many



Australian
Academy of Health and
Medical Sciences

Media Release

genes subsequently. Her major interests are in the genetics of the epilepsies, epilepsy syndromology and classification, and translational research. She collaborates on research on the genetics of speech and language disorders, autism spectrum disorders, cortical malformations and intellectual disability. She led the first major reclassification of the epilepsies in 28 years, published in March 2017, for the International League Against Epilepsy. In 2014, she was elected as a Fellow of the Australian Academy of Science. She is also a Foundation Fellow of the Australian Academy of Health and Medical Sciences and has been its President since October 2019. She was a co-recipient of the 2014 Prime Minister's Prize for Science and in 2018 was elected to the Royal Society (London).

Professor Enrico Coiera is Director of the Centre for Health Informatics, Australian Institute of Health Innovation, Macquarie University. Trained in medicine with a computer science PhD in Artificial Intelligence (AI), Professor Coiera is Foundation Professor in Medical Informatics at Macquarie University and Director of the Centre for Health Informatics, a group he co-founded in 2000. With a research background in industry and academia, he has a strong international research reputation for his work on decision support and communication processes in biomedicine. He spent 10 years at the prestigious Hewlett-Packard Research Laboratories in Bristol UK where he led numerous health technology projects. He has overseen the development and trial of multiple e-Health interventions, including the Healthy.me consumer system and clinical decision support systems. His textbook *Guide to Health Informatics* is in its 3rd edition, is widely used internationally, and is translated into several languages. He has over 330 publications, over 15,000 citations in Google Scholar with an H-index of 60 (Google Scholar). 38 of these publications have more than 100 citations, 8 more than 300 and one is over 1,900.

The Academy's roundtable took place on 5 July 2019 in Melbourne and was hosted in kind by Findex.