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ASIA EDITION

Ã¢â?¬Å?We're facing a significant challenge with an unmet need for medical professionals due to the growing and ageing populationÃ¢â?¬Â•

July 31, 2024 | Opinion | By Ayesha Siddiqui

The Sydney Neuroimaging Analysis Centre (SNAC) is using artificial intelligence (AI) to better monitor brain diseases. iQ-Solutions, SNAC's flagship product, provides precise analysis of the brain through MRI imaging. It gives doctors a real-time view of any changes that can then be managed more readily. The firm received funding from the Australian government in July 2024 to commercialise iQ-Solutions. Dr Tim Wang, Director of Operations at SNAC, discusses the profound impact of this advancement and digital health technologies in general.



How does your flagship product iQ-Solutions leverage AI to provide analysis of the brain?

IQ stands for intelligent quantification. It provides robust, quantitative analysis of brain structures from MRI images, delivering personalised monitoring and precision management for people with chronic neurological diseases. With iQ-solutions, both radiologists and physicians can accurately assess changes in a patient's brain structure. For example, changes in the volume and location of 'lesions' in multiple sclerosis and cerebrovascular disease; and regional brain volume changes in Alzheimer's, dementia and other neurodegenerative diseases can be rapidly assessed, guiding management strategy and providing a quantitative evaluation of treatment response.

Another comparison that may help is how we go to a hospital to take a blood test and receive a report with various metrics that doctors use for diagnosis, monitoring disease progression, and evaluating treatment outcomes. Similarly, we analyse MRI scans using AI to obtain accurate and robust metrics of brain structures that are highly relevant to various neurological diseases and present the measurement to treating physicians to assist clinical management.

What specific goals and projects will the recent government funding support?

This project will support our commercialisation and rollout of IQ solutions across different jurisdictions. Currently, IQ-Solutions is TGA and FDA-approved. We are in the process of obtaining approval from other regions.

How do you see digital health technologies transforming the health system in the coming years, and what are your plans for further innovation and integration in the field of neuroimaging?

Digital health technologies, particularly AI-powered tools like IQ-Solutions, are positioned to play a transformative role in healthcare over the coming years. One of the primary objectives of these technologies is to enhance productivity and accuracy in medical practice.

We are facing a significant challenge with an unmet need for medical professionals due to the growing and ageing population. The rate at which new doctors are entering the workforce is not keeping pace with the increasing demand driven by these demographic changes. This gap is expected to widen, placing additional strain on healthcare systems worldwide.

AI and other digital tools offer a viable solution to this problem by assisting doctors in their work. These technologies can improve productivity by automating routine tasks, providing decision support, and enhancing diagnostic accuracy and efficiency. ultimately improving the quality of care delivered.

Ayesha Siddiqui