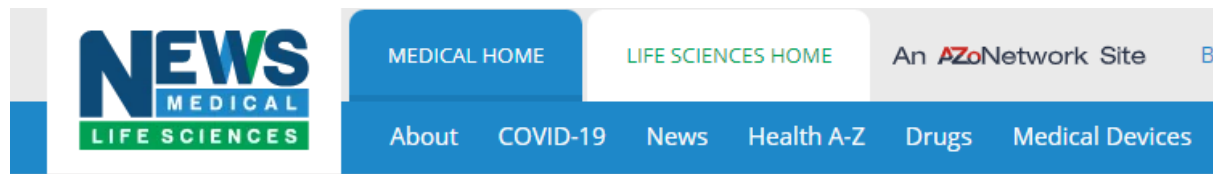



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New center established to bridge AI technology and healthcare applications

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 Reviewed

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To advance artificial intelligence (AI) in healthcare, Nanyang Technological University, Singapore (NTU Singapore) and the National Healthcare Group (NHG) are pioneering a new center to bridge the gap between innovative AI technologies and their practical applications in medicine.

The new Centre of AI in Medicine (C-AIM), spearheaded by NTU's Lee Kong Chian School of Medicine (LKCMedicine), aims to revolutionize patient care and inform public health policies through its research activities.

The new center will focus on four key clinical domains: mental health, elderly frailty, medical imaging, and cancer screening, to drive its research and innovation efforts. This is in line with Singapore's second National AI Strategy (NAIS 2.0) to encourage the roll-out of AI-driven healthcare solutions and tools.

The center was officially launched today by Senior Minister of State, Ministry of Digital Development and Information, Mr. Tan Kiat How.

NTU Senior Vice-President (Health and Life Sciences), Distinguished University Professor and Co-Director of C-AIM, Professor Joseph Sung said: "While Singapore has a strong foundation for the safe growth of AI in healthcare, more needs to be done to bridge the gap between technology development and real-world clinical application."

"Our unique multidisciplinary research across fields will ensure that AI solutions are not only innovative but also accessible, affordable, and scalable. C-AIM will help build the trust, evidence, and integration needed for widespread AI adoption," said Prof Sung, who is also Dean of LKCMedicine.

Senior Deputy Dean of the College of Computing & Data Science, Associate Vice President, Capability Building and Co-Director of C-AIM, Professor Miao Chun Yan said: "In addition to technological advancements, it is crucial to prioritise human-machine interactions to create

human centred AI systems that healthcare professionals can trust and use in a natural and intuitive way. This will ensure that AI solutions are both impactful and widely adopted."

Ultimately, the patient remains on the centre-stage. The true test for AI is how its deployment in the hospital, clinic or community impacts health outcomes for patients and the population. We would want to see its impact and value in a real-world setting."

Professor Benjamin Seet, Group Chairman Medical Board (Research), NHG

Leveraging leading expertise in healthcare

C-AIM brings together local and international academic and industry partners such as Yale School of Medicine and Olympus Singapore, to engage in multidisciplinary research across fields like medicine, computer engineering, data analytics, social science and ethics, as well as implementation science.

The collective expertise of these partners and over 100 researchers and clinicians under C-AIM will enable the centre to effectively study and translate AI solutions into clinical practice, ensuring their clinical relevance and benefit to patients and the wider population.

President and Chief Executive Officer of Olympus Corporation, Stefan Kaufmann, said: "I am excited to commence this partnership with NHG and the NTU. We believe that AI technologies have a growing role to play in MedTech and will ultimately assist in elevating the standard of care delivered to patients throughout the world and the Asia Pacific region. Together, we aim to study, accelerate, and achieve breakthroughs to grow our understanding of how to best apply AI in the medical field, as we seek to improve healthcare outcomes at scale with our partners and products."

Yale School of Medicine's Deputy Dean for Biomedical Informatics, Chair, Department of Biomedical Informatics and Data Science, Professor Waldemar von Zedtwitz Lucila Ohno-Machado, said: "We look forward to being part of this critical work to increase AI's impact on human health and transform the health care system. In addition to enhancing research and discovery and improving patient outcomes, AI will create more space for humans to be humans. By automating documentation processes and the mechanical aspects of health care, AI will provide more time for listening and interaction between clinicians and their patients."

Accelerating AI adoption in healthcare

Digital technologies such as generative AI and machine learning have already made significant strides in diagnostics and treatment.

For example, AI is used to detect abnormalities in chest X-rays, mammograms, and brain CT scans, and deep-learning models like SELENA+ are used to detect diabetic retinopathy. Despite these advancements, the adoption of AI in clinical practice in Singapore has been slower than in other industries.

C-AIM aims to address several key challenges that have hindered the full integration of AI in healthcare. These include the lack of clinical data demonstrating the effectiveness of AI in improving patient outcomes, the uncertainty surrounding the ethical and legal aspects of AI, and the need for evidence that AI can reduce manpower and healthcare costs.

To achieve its objectives, C-AIM will conduct AI simulation and implementation studies, allowing healthcare professionals to rigorously test AI tools before they are deployed in real-world settings.

Equipped with cutting-edge GPU infrastructure, C-AIM will conduct research for accelerating AI and machine learning applications, while maintaining dedicated research facilities to ensure data privacy.

The studies will offer critical insights into how AI can be effectively integrated into clinical workflows, with a focus on addressing the specific needs of local healthcare systems.

More information about C-AIM's research projects can be found in Annex A.

Creating better healthcare in Singapore

By leveraging Singapore's AI capabilities and fostering collaboration across academia, healthcare, and industry, C-AIM is poised to transform the healthcare landscape and position Singapore as a global leader in AI-driven medicine.

The launch of C-AIM represents a significant milestone in Singapore's journey toward digital healthcare transformation.

As AI becomes increasingly integrated into clinical practice, the Centre's work will ensure that both healthcare professionals and patients benefit from the best that technology has to offer.