



PRESS RELEASE

Singapore launches world's first advanced degrees in sustainable healthcare for low-carbon healthcare future

Established by the Centre for Sustainable Medicine at the Yong Loo Lin School of Medicine, National University of Singapore, the world's first Master's programme in sustainable healthcare will address critical climate challenges, alongside a new Executive Fellowship for senior professionals. Applications are open today for the first batch of intake, set to begin in August 2025.

Singapore / Baku, Azerbaijan, 18 November 2024 — Climate change poses a direct and urgent threat to the health of patients and the viability of health systems in Asia, and across the world. Singapore is tackling this challenge head on, with the Centre for Sustainable Medicine (CoSM) at the Yong Loo Lin School of Medicine, National University of Singapore (NUS Medicine), announcing the launch of the world's first Master of Science in Sustainable Healthcare, and an accompanying Executive Fellowship, at the Singapore Pavilion of the 29th session of the Conference of the Parties (COP29) to the United Nations Framework Convention on Climate Change (UNFCCC). The COP29 is held at Baku, Azerbaijan, from 11 to 22 November 2024.

Record high temperatures have seen a rise in the severity of floods and storms across the world. Left un-mitigated, South-East Asia will see an estimated 12.7% increase in excess mortality from extreme heat, leading to issues such as congestive heart failure, kidney disease, and dehydration. Compounding issues for health systems, the climate suitability for the transmission of dengue fever has risen by over 28% over the last 50 years.ⁱ

The new postgraduate programmes will fill gaps in the healthcare sector that were identified in a recent study by the Centre. More than eight in 10 (82%) of clinicians surveyed said they support action to tackle climate change in Singapore's healthcare system, while nine in 10 want Singapore to be a champion of net zero healthcare. With 85 out of 120 of the world's top publicly listed companies in biotech, health, and pharma sectors having climate pledges or strategies in place, healthcare sustainable jobs are expected to be on the rise.ⁱⁱ

Professor Nick Watts, Director of CoSM at NUS Medicine, said, "The future of healthcare and medicine lies in the fine balance between two critical factors. First, we have to ensure patients are protected from the devastating impacts of climate change. At the same time, health systems need to be transformed to deliver care in a more sustainable way, from the surgeon's reprocessed scalpel to the general practitioner's online clinic. With the healthcare sector responsible for over 10% of the international economy, changes made at home have far-reaching impacts that scale to make a global difference. Our education programmes will nurture a generation of sustainability leaders in healthcare who are equipped and ready to pioneer this transition into a low-carbon future."

Students will be taught by world-leading faculty at CoSM, as well as experts and partners from the World Health Organization, Médecins Sans Frontières, and The Lancet. In addition, students will participate in a first-of-its-kind knowledge exchange programme between Singapore, the United Kingdom (represented by the National Health Service), and the United States, where a network of clinical fellows will share best practices from around the world. Graduates of the programmes will also have the opportunity to collaborate with or be mentored by an international network of healthcare sustainability champions and draw on real-world experiences to guide their decarbonisation efforts within existing organisations and future vocations.

Dr Jessamy Bagenal, Senior Executive Editor at The Lancet, and an affiliate faculty member at CoSM said, “We are at a pivotal moment, facing intertwined health and climate crises, and the need for transformation in healthcare is urgent. Equipping professionals with the right tools at every level can lead to a reimagined, resilient healthcare system that meets these challenges head-on.”

The world’s first Master of Science in Sustainable Healthcare

Designed for early-career professionals and graduates with relevant exposure to the healthcare or sustainability space, the one-year full-time Master of Science in Sustainable Healthcare delivers comprehensive training in climate-smart healthcare. Core modules cover practical skills such as conducting life cycle assessments, strategies to manage the low-carbon transition in healthcare and the application of ISO14040 standards.

Students will be offered the flexibility to customise their own learning pathways, with a list of electives covering evidence-informed practice and policies in healthcare; programme evaluation in health; climate and environmental science; advanced quantitative and qualitative research methods; and health system operations and management. Conducted in-person at NUS Medicine, from August 2025, the programme will include capstone projects designed for students to apply the knowledge they have gained in real-world situations, aligning with their career goals.

An Executive Fellowship for emerging leaders in sustainable healthcare

The Executive Fellowship in Sustainable Healthcare, on the other hand, is designed to empower experienced professionals to drive meaningful change within their organisations. The year-long part-time hybrid graduate certificate offers flexibility to learn at their convenience (online or in person), making it ideal for emerging clinical leaders, national policymakers, and seasoned professionals and executives from healthcare and sustainability.

The programme acts as a platform to establish important networks to rapidly advance their healthcare sustainability knowledge and professional careers. The course provides advanced technical training in three key areas—namely, the skills needed to conduct a comprehensive carbon footprint on every healthcare-related tool, from an intravenous therapy (IV) bag to a new pharmaceutical innovation; hands-on teaching on how to implement change at the individual, hospital, and national health system levels; and bespoke leadership mentoring and training to accelerate the careers and ambitions of students. The programme is set to begin from August 2025.

Dr Amanda Zain, Deputy Director of CoSM at NUS Medicine emphasised, “To truly accelerate the shift to sustainable healthcare, professionals need to be fluent in designing new workflows in their spheres of influence, with data-backed strategies. Our vision is for the programmes to act as a springboard in their careers, preparing and positioning them as catalysts to drive measurable change.”

Prof Yeoh Khay Guan, Chief Executive of the National University Health System (NUHS) added, "Our work in healthcare generates significant greenhouse gas emissions, and we bear the responsibility to address the large environmental footprint of our healthcare operations. The new Master's and Executive Fellowship programmes offered by the Centre for Sustainable Medicine at NUS Medicine will build the capability we urgently need in healthcare, to engender a culture of sustainability in the way we care for our patients. In this way, we can fulfil our responsibilities to both our patients and the planet."

Applications for the programmes open today at <https://medicine.nus.edu.sg/cosm/education>.

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About National University of Singapore (NUS)

The National University of Singapore (NUS) is Singapore's flagship university, which offers a global approach to education, research and entrepreneurship, with a focus on Asian perspectives and expertise. We have 16 colleges, faculties and schools across three campuses in Singapore, with more than 40,000 students from 100 countries enriching our vibrant and diverse campus community. We have also established more than 20 NUS Overseas Colleges entrepreneurial hubs around the world.

Our multidisciplinary and real-world approach to education, research and entrepreneurship enables us to work closely with industry, governments and academia to address crucial and complex issues relevant to Asia and the world. Researchers in our faculties, research centres of excellence, corporate labs and more than 30 university-level research institutes focus on themes that include energy; environmental and urban sustainability; treatment and prevention of diseases; active ageing; advanced materials; risk management and resilience of financial systems; Asian studies; and Smart Nation capabilities such as artificial intelligence, data science, operations research and cybersecurity.

For more information on NUS, please visit <http://www.nus.edu.sg/>

About the NUS Yong Loo Lin School of Medicine (NUS Medicine)

The NUS Yong Loo Lin School of Medicine is Singapore's first and largest medical school. Our enduring mission centres on nurturing highly competent, values-driven and inspired healthcare professionals to transform the practice of medicine and improve health around the world.

Through a dynamic and future-oriented five-year curriculum that is inter-disciplinary and inter-professional in nature, our students undergo a holistic learning experience that exposes them to multiple facets of healthcare and prepares them to become visionary leaders and compassionate doctors and nurses of tomorrow. Since the School's founding in 1905, more than 12,000 graduates have passed through our doors.

In our pursuit of health for all, our strategic research programmes focus on innovative, cutting-edge biomedical research with collaborators around the world to deliver high impact solutions to benefit human lives.

The School is the oldest institution of higher learning in the National University of Singapore and a founding institutional member of the National University Health System. It is one of the leading medical schools in Asia and ranks among the best in the world (Times Higher Education World University Rankings 2024 by subject and the Quacquarelli Symonds (QS) World University Rankings by subject 2023).

For more information about NUS Medicine, please visit <https://medicine.nus.edu.sg/>

About the Centre for Sustainable Medicine (CoSM)

As the first-of-its-kind institution in Asia and the largest in the world, the Centre for Sustainable Medicine is dedicated both to decarbonising healthcare and developing climate-resilient health systems to accelerate the net zero transition in healthcare.

The Centre's three pathways to deliver change include: preparing future healthcare leaders, accelerating the delivery of net zero healthcare, and equipping clinicians with the best-available evidence.

Launched in March 2024, the Centre brings together leading experts and clinicians from around the world to establish a new field of medicine and transform clinical practice. For more information about CoSM, visit: <https://medicine.nus.edu.sg/cosm>

References:

ⁱ Gasparrini, A., Guo, Y., Sera, F., Vicedo-Cabrera, A. M., Huber, V., Tong, S., de Sousa Zanotti Stagliorio Coelho, M., Nascimento Saldiva, P. H., Lavigne, E., Matus Correa, P., Valdes Ortega, N., Kan, H., Osorio, S., Kyselý, J., Urban, A., Jaakkola, J. J. K., Rytí, N. R. I., Pascal, M., Goodman, P. G., Zeka, A., ... Armstrong, B. (2017). Projections of temperature-related excess mortality under climate change scenarios. *The Lancet. Planetary health*, 1(9), e360–e367. [https://doi.org/10.1016/S2542-5196\(17\)30156-0](https://doi.org/10.1016/S2542-5196(17)30156-0)

ⁱⁱ Net Zero Tracker, Data Explorer