

Driving Net Zero Healthcare in Asia and beyond

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In conversation with Professor Nick Watts, Director, Centre for Sustainable Medicine (CoSM), Yong Loo Lin School of Medicine, National University of Singapore (NUS Medicine)



Planetary health is an essential aspect of healthcare, and the urgency of reducing carbon emissions in healthcare and driving towards net zero is critical. Health professionals in Singapore deeply echo this view, as 82% of them support action towards a more sustainable healthcare system. At the same time, two-thirds believe that Singapore should be a role model for the international community – according to findings from a research survey commissioned by the Centre for Sustainable Medicine (CoSM), Yong Loo Lin School of Medicine, National University of Singapore (NUS Medicine).

To facilitate this into action, the CoSM at NUS Medicine hosted its inaugural public plenary at its launch, serving as a platform in which local leaders, and distinguished guests from the Lancet Commission on Sustainable Healthcare (LCSH) shared about steps towards a sustainable, carbon-free healthcare system.

As the first research centre in Asia and the largest in the world to lead and support healthcare decarbonisation and climate resilience, the CoSM at NUS Medicine will be the vanguard of an emerging multidisciplinary field of practice dedicated to improving the health of our patients in the face of climate change, and driving the transition to net zero healthcare.

Under the theme “Driving Net Zero Healthcare in Asia and Across the World”, Yong Loo Lin School of Medicine, National University of Singapore (NUS Medicine) held a Panel discussion at Singapore’s NUHS featuring local and international leaders from healthcare, health policy, and the sustainability sectors. Dr Amy Khor, Senior Minister of State for Sustainability and the Environment, had graced the event in support of the launch of the CoSM and its inaugural public plenary. Biospectrum Asia explored this crucial topic further with **Professor Nick Watts**, Director, Centre for Sustainable Medicine (CoSM), Yong Loo Lin School of Medicine, National University of Singapore (NUS Medicine).

How do you define the urgency of climate action in healthcare? How significant is Singapore's launch of the Centre for Sustainable Medicine to support the cause?

Climate change is the biggest health threat of the 21st century. It will impact our ability to deliver care and it will increase the need for healthcare. As a result, if we're not careful, we will see further increase in healthcare-related emissions. Singapore, like the rest of Asia-Pacific, is seeing an increase in the effects of climate change that lead to direct impacts on health, like vector-borne diseases and heat-related illnesses. Climate change is also causing more wildfires which are worsening ambient air quality. We have seen, during periods of transboundary air pollution from forest fires, substantial increases in asthma-related presentations. Singapore's launch of the Centre for Sustainable Medicine (CoSM) is highly significant as it addresses this urgency by integrating sustainability into medical education, research, and policy, thereby fostering a culture of sustainability within healthcare.

The CoSM will pioneer and lead the health profession's response to climate change in Singapore, Asia and across the world. The Centre is dedicated both to decarbonising healthcare and developing climate resilient health systems to accelerate the transition to net zero.

During the inaugural public plenary held on 13th March 2024, held as part of the official launch of the Centre, we had over 375 attendees. This speaks to the urgency that health professionals in Singapore feel in relation to climate change, and their willingness to be part of the solution.

As the first research centre in Asia and the largest in the world, how will CoSM lead and support healthcare decarbonisation and climate resilience?

The Centre for Sustainable Medicine aims to deliver change in healthcare sustainability through:

Preparing and training future healthcare leaders by:

- Transforming medical education and embedding sustainable clinical practice as a core foundation into everything we teach
- Empowering the next wave of health leadership, with advanced educational opportunities for senior health and sustainability professionals
- Providing the practical tools to support clinical and policy decision making towards sustainable, net zero healthcare.

Accelerating the delivery of net zero healthcare by:

- Providing direct analytical and decision-support for health policymakers and health systems responding to climate change across Asia
- Utilising our delivery and analytical expertise to broker trust and assurance between clinicians, Governments, and industry partners
- Growing the field of sustainable medicine with opportunities for clinicians at every stage in their journey to engage in interdisciplinary research and direct service improvement;

Equipping clinicians with the best available evidence by:

- Mapping the carbon impact of key clinical pathways, drugs, and medical devices to identify new opportunities for rapid decarbonisation
- Bringing new approaches and methods to the field that leverage expertise from across artificial intelligence, digital healthcare, and the behavioural sciences.

How is the healthcare industry impacting climate change, and how does a warming planet exacerbate global inequality? Could a collective effort alleviate the burden?

Healthcare is a significant carbon emitter, contributing between 5-7% of global carbon emissions— that is more emissions than shipping and aviation combined. Health systems are exacerbating the threat to human health, undermining their central mission to deliver care for our patients and the public.

Greenhouse gas emissions in the healthcare system come from a variety of sources. They come from the electricity that is purchased to power hospitals and healthcare centres – which are far more energy intensive than regular buildings, from petrol

combusted in ambulances from transporting patients and staff to and from hospitals. A good chunk of carbon comes from the production and movement of drugs and medical supplies. Supply chains represent the most significant part of healthcare-related emissions, but the good news is that the healthcare industry is responding – quickly.

Anaesthetists are phasing out desflurane, an anaesthetic gas and increasingly replacing it with other clinically equivalent gases with a lower global warming potential. Our use of single-use items in clinical settings is also under increased scrutiny, and we're seeing innovations around this take place.

Climate change is an immense driver of global inequity. Wealthy nations, to some extent, will have the ability to adapt, but in no way can we completely adapt to unmitigated climate change. It is critical to adapt to the climate impacts that are coming at us, and to prepare our healthcare services to be able to continue delivering during acute events (i.e. floods, storms, supply chain or electrical grid disruptions, etc.) but also endure more chronic impacts.

A collective effort is absolutely necessary. What is promising is that various governments, health systems and health professionals are starting to organise towards seriously decarbonising, both from a top-down and bottom-up approach. They increasingly appreciate the significant cost savings and health co-benefits that decarbonisation will bring. Bearing witness to this in Singapore— in real time— is incredibly exciting. Markets respond acutely to these shifts. We have seen a sliver of this with inhaled anaesthetics, inhalers, single use devices etc; I trust we will continue to see more positive signals from an industry that indicate a desire to respond synergistically to these developments. After all, carbon literacy among health professionals is fast escalating, disclosure standards are increasingly rigorous; there will be less and less breathing space for greenwashing to exist comfortably, if at all.