



INNOVATION STORIES



Enter the Dragon: An Age of Change



The Dragon made its majestic entrance this Lunar New Year to much pomp and celebrations!

Often seen as a symbol of good fortune and greatness, the Dragon's personality traits such as strength, intelligence, innovative mindset and ambition, are qualities that when embodied by innovators, would power up the latest developments in healthcare forward.

While we work on refining existing innovative technologies, engines are being fired up to bring new impactful solutions to the forefront of healthcare.

What will the Year of the Dragon bring for us in healthcare innovation? What are some areas in healthcare that will see new developments or strengthening enhancements?

Artificial Intelligence

Artificial Intelligence continues to reign high with the technology applied in healthcare, enabling healthcare professionals to deliver more personable care to the patients.

With AI, we are now able to organise and analyse data with more accuracy, predict needs based on individual's behaviour, and enable care to be designed more uniquely for individuals.

One of the hottest buzzwords in the AI realm is Generative AI. The technology relies on deep-learning algorithms, and has the ability to create new content in the form of text, audio, code and more. It enables the analysis of unstructured data sets like recordings, notes and images.

"Big data and AI's synergy takes individualised care forward through data collection for continuous monitoring of biomarkers, behavioural nudges leveraging on generative AI, and analytics of multimodal datasets ranging from simple demographic to complex genomic datasets for risk stratification and more accurate disease prediction," shares Associate Professor Tan Cher Heng, Executive Director of CHI.

On the frontier of innovative development at CHI, projects are already underway:

- Identify primary eye care conditions using a smartphone application developed using an artificial intelligence model with deep learning system.
- Establish a comprehensive callosity severity categorisation scale, and develop an image recognition model to accurately classify and predict pre-ulcerative signs from patients with history of diabetic foot ulceration from foot callus images.
- Develop a predictive model that can predict the trajectory of vascular wounds using imaging and patient characteristics. The machine will compute the possible healing trajectory and outcome of the wound at the set time-point.

INNOVATION STORIES



Sustainability

Ensuring sustainability has been a continuous concern globally, leading to pledges in reducing carbon footprint, recycling waste, and activating the global community to incorporate a sustainable lifestyle that promotes reduced waste and emissions from vehicles.

While the healthcare sector's mission is to protect and promote better health, it is ironically a major contributor to the climate crisis. Healthcare has a climate footprint equivalent to 4.4 percent of global net emissions, comparable to the annual greenhouse gas emissions from 514 coal-fired power plants.

In Singapore, dryer and warmer months include the higher incidence of dengue cases, heat waves and transboundary haze. This leads to a rise in hospital admissions and adds further strain to the hospital capacity.

CHI's commitment in cultivating sustainability in healthcare would strengthen even further this year with:

- Healthcare professionals engaged in meaningful conversations on "Sustainability in Healthcare" at CHI INNOVATE 2024, scheduled for 4-5 July 2024.
- The use of "Design Communications and Behaviour Change", where CHI and its collaborator have embarked on efforts to reduce the carbon footprint of inhalers. A substantial number of inhalers prescribed to asthma patients are Metered Dose Inhalers (MDIs). The propellants of MDIs emit a high carbon footprints as compared to Dry Power Inhalers (DPIs).
- Development of an app and website that matches patients with the available equipment required for their care. The well maintained equipment which would be donated, would have otherwise been disposed of by its previous owner.

Population Health

This year, the cogs will continue to spin in encouraging the community to change their habits for better health. To do this, it was important for health and social care to work closely, complementing each other's area of expertise to activate the community towards this shared goal.

The definition that "Health is Social" was central to the conversations held by the CHI Leadership Council when they convened in July 2023. The week of intense and invigorating conversations focused on the transformation required for a happier, healthier SG. There was much new knowledge, insights and wisdom gleaned from this series of discussions, conversations and meetings. These insights have culminated into a report that is made available to all on our website:

<https://for.sg/healthsocialreport>

In line with the Healthier SG initiative, CHI launched the CHI Health and Social Change Academy (HSC Academy) in mid-2023, with the aim to enable social and health care agencies to develop critical skills for building and sustaining Communities of Care (CoC).

"The Academy's curriculum is designed around the premise that building healthier, happier communities requires a collective commitment and effort. Hence, it aims to nurture the environment for various stakeholders to come together to understand one another's roles in the community, learn the new skills and concepts and take collective action to design care that will keep our people and future generations healthier and happier," said Associate Professor Wong Hon Tym, Clinical Director, CHI.

Since the Academy's launch, close to 80 health and social care professionals have signed up to upskill themselves in the modules "Population Health for Leaders", and "Getting Started on Preventive Health".

The Academy continues to grow from strength to strength in equipping professionals to drive a healthier population, with modules conducted throughout the year. This year, the Academy will embark on new modules for professionals, both clinical and non-clinical, to further equip themselves in enhancing care for the community:

- Population Health in Action – Understand how to incorporate population health thinking and apply population health tools in your new programme.
- Getting Started on Social Prescribing – Learn tools to perform social prescribing and link work, as well as the know-how to develop preventive health programmes.
- Leading as a Collective – Learn to build a shared vision, engage in trusting one-to-one relationships, team up with diverse partners, and network to access resources.
- Movement for Health & Social Impact – Learn how to design and lead large-scale change.

Find out more about the modules here.

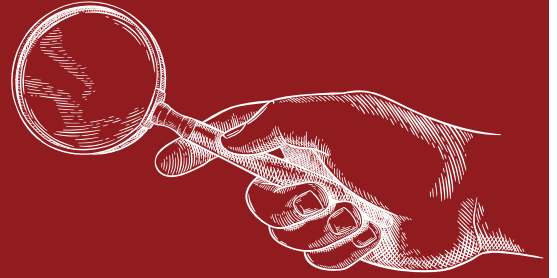
All Fired Up

These are just three "hot" areas the Year of the Dragon will weave through, with intelligence, innovation and ambition.

At the heart of the continuous developments is the hope that our community will have good health and wealth. May this Year of the Dragon bring positive changes and impact for all of us! [Click here for the full story.](#)



HIGHLIGHTS @CHI



CHI WELCOMES KPJ HEALTHCARE BHD

8 January 2024



Prof Eugene Fidelis Soh (7th from left), Chairman of CHI, and Mr Chin Keat Chyuan (6th from right), President and Managing Director of KPJ Healthcare Bhd, in this group photo with the visiting delegation at the TTSH Command Centre.

It was an exciting start to 2024 with a visit from Malaysia's KPJ Healthcare Bhd, focusing on technology implementation and digital adoption, particularly the Smart Ward solutions at Tan Tock Seng Hospital (TTSH).

The KPJ delegation was introduced to TTSH's digital journey, experiencing first-hand the impact on patient care through a presentation and virtual tour by the Smart Ward team. We wrapped up with an exploration of the TTSH Operations Command Centre, highlighting seamless technology integration for enhanced efficiency.

KPJ Healthcare's interest in patient journey value creation through technology is reflected in their commitment to understanding and adopting innovative solutions, a mutual dedication to advancing healthcare through technology.

We look forward to a future filled with collaborative learning, where we can exchange ideas, expertise, and best practices. Together, we can continue to shape the future of healthcare and enhance positive patient experiences.

[Click here for more.](#)

CHI HOSTS WORLD HEALTH ORGANIZATION'S DATA, STRATEGY AND INNOVATION TEAM

10 January 2024



Mr Kidong Park (5th from left), Director for Data Strategy & Innovation at WHO, is joined on his right by Dr Ng Yih Yng, Deputy Clinical Director of CHI. On his left is Ms Chen Mengji, Technical Officer at WHO, and A/Prof Tan Cher Heng, Executive Director of CHI.

Thrilled to host the World Health Organization (WHO)'s Data, Strategy and Innovation team at the Centre for Healthcare Innovation (CHI) as we shared insights on driving healthcare innovation for systemic change. It was an enriching experience to learn about WHO's work and interest in the healthcare innovation ecosystem, aligning with our mission to drive systems change through innovation to achieve better care for our population.

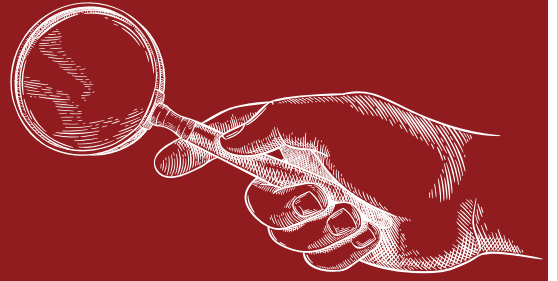
During the visit, we had the privilege of showcasing some of CHI's innovation platforms, including CHI Start-up Enterprise Link (CHISEL), CHI Evaluation Framework (CHIEF), CHI Learning & Development System (CHILD) and our digitalisation strategy, illustrating our commitment to pushing the boundaries of healthcare advancement. These platforms serve as a testament to our dedication to fostering innovation across the healthcare landscape.

Special thanks to our partners, Synapse and Temasek Foundation, for co-hosting our WHO guests. Their contributions added depth to the discussions, creating a collaborative ecosystem that amplifies our collective impact.

Looking ahead, we are excited about opportunities to continue our partnership with WHO. By fostering global collaborations, we aim to contribute to the collective pursuit of better healthcare for all.

[Click here for more.](#)

HIGHLIGHTS @CHI



CHI AND THE SINGAPORE INSTITUTE OF TECHNOLOGY CONCLUDES ANOTHER SUCCESSFUL INNOVATION SESSION

12 January 2024



The collaborators from SIT and CHI engaged in an energising session filled with discussions and knowledge sharing.

CHI and the Singapore Institute of Technology (SIT) concludes a successful collaborative innovation session, centred around the themes of Sustainability, IoT, and Healthcare Engineering.

The atmosphere for this second collaborative session was electric with interactive discussions, knowledge sharing, and the exchange of expertise among passionate professionals. It was incredible to witness the synergy that emerged when diverse minds come together to tackle complex challenges.

A standout moment during the session was when one of our participants joyfully shared that her problem was ingeniously solved through the collaborative brainstorming.

This real-time success story emphasises the power of collaborative thinking and the potential for transformative solutions.

Our heartfelt thanks to everyone who contributed their ideas, insights, and enthusiasm. This innovation session has not only deepened our understanding of the challenges at hand, but has also sparked the flame of collaboration.

Stay tuned for the exciting collaborations that will emerge from this session, as we eagerly look forward to turning ideas into action.

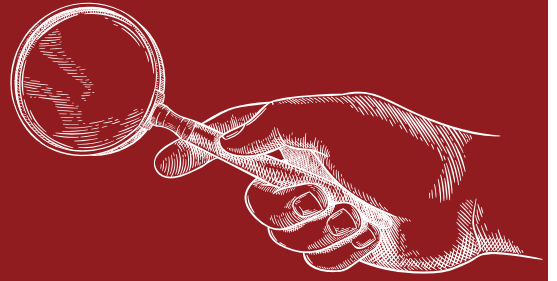
[Click here for more.](#)



Tune in to CHI AMPED, the official podcast channel, which feature interviews with leading experts and innovators in the field, providing valuable insights and inspiration for healthcare professionals!

Listen to the series on Spotify: <https://spoti.fi/40f8q9U>
To suggest conversation topics, email us at chi@ttsh.com.sg.

HIGHLIGHTS @CHI



ADULT LEARNING XCHANGE CONFERENCE: FUTURE OF LEARNING IN HEALTHCARE

19 January 2024



Mr Ronnie Yang shared his insights and CHI's efforts in contextualising learning to support workforce transformation.

Grateful for the opportunity to share more about CHI's workforce transformation and innovation efforts at the Adult Learning Xchange conference held from 18-19 January, at the Raffles City Convention Centre.

Speaking on the first day of the conference, Mr Ronnie Yang, Deputy Executive Director of CHI, delivered his keynote speech on the "Future of Learning in Healthcare", highlighting the initiatives and ongoing efforts around the adoption of CHI's Innovation Cycle, contextualising learning to support workforce transformation, support from our Collective Leadership, and the CHI Learning & Development System - CHILD to spread learning.

Further citing examples of learning and innovation in Tan Tock Seng Hospital, Ronnie urged the audience to take action in order to add value for the work they do, and for themselves.

Continuing to inspire learning, Ronnie was among the panellists for "Visions of our Learning Future", that discussed how to take learning out of "Learning & Development", choosing instead to encourage entrepreneurship and innovation.

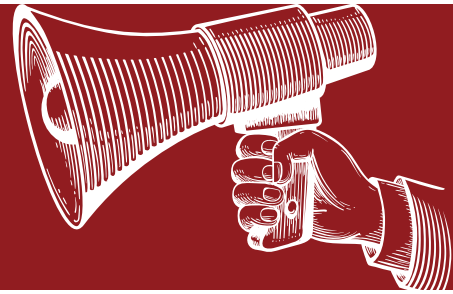
Organised by Institute for Adult Learning Singapore, the two-day conference had over 600 attendees from Institutes of Higher Learning, workforce upskilling agencies and the industry. [Click here for the Business Times coverage.](#)

“Want to reduce the long and endless waiting time at Emergency Department (ED)?”

SEARCH **CHILD** NOW FOR INNOVATIVE IDEAS AND SOLUTIONS, GENEROUSLY CONTRIBUTED BY YOUR FELLOW COLLEAGUES ACROSS ALL 3 PUBLIC HEALTHCARE CLUSTERS AND COMMUNITY INSTITUTIONS!

TOGETHER, WE STRIVE TO EFFECTIVELY ALLEVIATE CONGESTION AND SLASH WAITING TIMES AT THE ED!

UPCOMING EVENTS



CHISEL HEALTHCARE INNOMATCH 2024

Information Sessions: 19 Feb (Online), 8 Mar (In-Person)
Application Closing Date: 5 Apr 2024

CHISEL PRESENTS HEALTHCARE INNOMATCH 2024
INNOVATION, ADOPTED AT SPEED, AT SCALE

Organised by: CHISEL (Centre for Sustainable Medicine)
Supported by: TEMASEK FOUNDATION
In Partnership with: National Healthcare Group, NUHS, SingHealth

CALLING ALL START-UPS AND SMES!
We are looking for market or near market ready solutions in:
Strengthening Care for a Healthier and Resilient Ageing Society!

APPLY WITH EASE USING
JUST A 7-SLIDE PITCH DECK!

Apply and look forward to these opportunities:

- Up to **\$500,000** Per solution for test-bed opportunity
- Potential adoption by local healthcare institutions

OPEN UNTIL 05 APR 2024, 2359 (SGT)

APPLY TODAY! [www.for.sg/chisel2024](https://for.sg/chisel2024)

JOIN OUR INFO SESSIONS [www.for.sg/chisel2024rsvp](https://for.sg/chisel2024rsvp)

Healthcare InnoMatch 2024 is looking for SMEs and Startups with near market-ready solution for "Strengthening Care for a Healthier and Resilient Ageing Society"!

Get funding and testbed opportunities, with potential adoption by partner healthcare clusters!

Submissions are now open, but before that find out more at any of our information sessions (Online: 19 February, In-Person Networking: 8 March).

Click here to register for the information session, or scan the QR codes on the left.

With 3 successful runs since 2021, more than 500 companies from over 30 countries have participated in Healthcare InnoMatch - an initiative under the CHI Start-up Enterprise Link (CHISEL) programme that aims to accelerate the adoption of market-ready healthcare innovations that are fit for mainstream use, at speed, at scale.

PUBLIC PLENARY: DRIVING NET ZERO HEALTHCARE

13 Mar 2024

PUBLIC PLENARY
DRIVING NET ZERO HEALTHCARE

Dr Richard Horton
Editor-in-chief of the Lancet

Event Details

- 13 March 2024
Wednesday
- 5- 7.30pm
Registration starts at 4.30pm
- NUHS Tower Block
Auditorium, Level 1

Register now

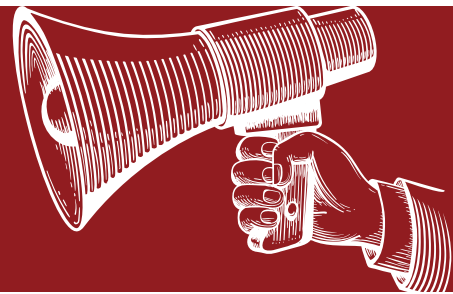
Organised by the Centre for Sustainable Medicine, join the session as they engage leading experts from the Lancet Commission on Sustainable Healthcare as well as local leaders across healthcare and sustainability to understand the links between health, healthcare, and climate change.

Dr Richard Horton, Editor-in-Chief of The Lancet, will also be giving a guest lecture at the event.

This event will be followed by a cocktail and networking session.

Register now to secure your spot!

UPCOMING EVENTS



NATIONAL HEALTHCARE INNOVATION AND PRODUCTIVITY MEDALS AWARD 2024

Submission Deadline: 22 March 2024

NATIONAL HEALTHCARE INNOVATION AND PRODUCTIVITY 2024 MEDALS

CALL FOR SUBMISSION!

DEADLINE
22 MAR 2024 NOON!

All TISH applications should be submitted to TISH Award Secretariat for internal clearance at an earlier deadline (01 March 2024). Please look out for updates by the TISH Award Secretariat.

Calling for ALL local and private healthcare; community/ intermediate and long-term care institutions!

The 8th National Healthcare Innovation & Productivity Medals Award invites applications from teams that have demonstrated exemplary innovation and productivity in the categories below:

AWARD CATEGORIES

- CARE REDESIGN**
- AUTOMATION, IT & ROBOTICS INNOVATION**
- WORKFORCE TRANSFORMATION**
- BEST ADOPTER**

\$ 50,000 Seed Fund
For each eligible winning team*
to kick start next, new innovation project



SCAN FOR APPLICATION & INFO PACK DETAILS

ORGANISED BY
CENTRE FOR HEALTHCARE INNOVATION

SUPPORTED BY
MINISTRY OF HEALTH SINGAPORE

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*Terms & conditions apply.

CHI INNOVATE 2024

4 - 5 Jul 2024

REGISTER YOUR INTEREST TODAY

4-5 JULY 2024

CHI INNOVATE
SUSTAINABILITY IN HEALTHCARE

Healthcare's sacred duty is to "Do No Harm" as we provide care for our patients; But this very duty has inflicted harm on the environment. If Healthcare were a country, we would be Earth's 4th largest carbon emitter. At the same time, the climate crisis is also a healthcare crisis.

CHI INNOVATE 2024, under the banner of "Sustainability in Healthcare", will explore our relationship with our environment, while seeking innovative solutions to inspire and galvanise us to be 'good ancestors'.

Join us on 4 & 5 July 2024 as we pledge our oath to extend our healing touch not just to patients but to the planet we call home. **Stay tuned to the latest updates by registering your interest here.**

This newsletter is proudly brought to you by:

CENTRE FOR HEALTHCARE INNOVATION

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