

THE GLOBAL ROOTS

Around the World

Deep dives into Regional Collaboration Centres in Medan (Indonesia), Jaffna (Sri Lanka) and Hanoi (Vietnam). **Pg 02-05**

From Singapore to the World

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“AI and pathogen genomics can work together to provide actionable intelligence for clinicians and public health authorities. By sharing only essential insights, countries can respond faster to outbreaks while strengthening trust and sovereignty.”

Professor Paul Pronyk, Director of Duke-NUS' Centre for Outbreak Preparedness at the PathGen Preview. **Pg 08**



Medan

A fellowship for the future: strengthening Asia's Pandemic Preparedness

Dr Fauzi Budi Satria - clinician, public health researcher, and coordinator of the [USU-SDGHI Regional Collaborating Centre \(RCC\) in Medan](#) (Indonesia) completed a two-week fellowship at SDGHI in June-July 2025 as part of the Global Health Fellowship Exchange Programme. His attachment focused on a joint study, conducted with Duke Kunshan University (China), the Duke Global Health Institute (US), and Universitas Sumatera Utara (Indonesia), to examine how Indonesia can strengthen pandemic preparedness through clearer governance structures, sustainable financing, and stronger cross-sector coordination. During his visit, Dr Budi also engaged with the Microbiology Laboratory and Singapore's Communicable Diseases Agency, offering him firsthand insight into how decentralised surveillance systems and mandate-driven public health agencies enable rapid, coordinated outbreak response.

The fellowship not only advanced his research but also deepened the institutional partnership driving the SDGHI-USU RCC. Dr Budi presented early findings at an SDGHI seminar, highlighting the importance of building trust, strengthening technical capacity, and ensuring local ownership in shaping more resilient health systems. Motivated by the exchange, he now plans to apply for the USU-SDGHI RCC pilot grant call to extend this work - reinforcing Medan's growing role in regional pandemic preparedness and contributing to a shared vision of a safer, more collaborative Asia.



Introduction visit at Duke-NUS Medical School with Asst Prof Vincent Pang.

Read more about Dr Budi's experience [here](#)



In northern Sri Lanka, trauma remains one of the leading causes of disability, yet many hospitals face severe resource constraints that limit their ability to provide timely and specialised care. Through a multi-year collaboration with the Teaching Hospital Jaffna (northern Sri Lanka), SDGHI and SingHealth clinicians have been working alongside local teams the past two years to strengthen trauma services through education, systems improvement, and the use of frugal yet high-impact innovations.

During recent visits, interprofessional teams from neurosurgery, orthopaedics, nursing, and rehabilitation led hands-on simulation sessions using low-cost training tools co-designed with Jaffna clinicians. These AEFIX models, created from affordable and locally available materials, allow trainees to practice lifesaving procedures with realism comparable to high-end simulators - a crucial advancement for local hospitals where commercial equipment is often inaccessible. The partnership also enabled shared case reviews, workflow mapping, and discussions on how to adapt guidelines to Jaffna's unique clinical realities.

What stands out from this collaboration is not only the technical skill-building, but the trust and shared purpose developing across teams. Local clinicians emphasised how the relationship has helped strengthen confidence, improve decision-making in emergencies, and foster interdepartmental

Jaffna

Fixing fractures, rebuilding lives: frugal innovation in trauma care

cohesion. For the Singapore team, the experience highlighted how solutions rooted in frugality, creativity, and local leadership can transform care in meaningful and sustainable ways.

As the collaboration grows, both sides are committed to expanding training, building specialised pathways, and co-creating innovations that can benefit other resource-constrained settings across the region.

Read the full article [here](#)

Hear Duke-NUS medical student's reflection [here](#)

Hanoi

Beyond the MOU: enhancing Vietnam's role in regional health resilience

The launch of [SDGHI-HMU Regional Collaboration Centre \(RCC\)](#) in Hanoi marks a significant milestone in Vietnam's growing leadership in health resilience across Southeast Asia. Built on years of partnership between SDGHI, Hanoi Medical University (HMU), and key ministries, the RCC formalises collaboration in areas such as mental health, infectious diseases, health systems strengthening, and pathogen genomics.



The Singapore General Hospital and SDGHI team with Dr Vu Quoc Dat at Hanoi Medical University main campus.



On the right, Dr Vu Quoc Dat, Deputy Head of Department of Tropical Diseases and Harm Reduction, HMU-H, meeting our team.

Together with SDGHI's RCCs in Jaffna and Medan, the Hanoi centre anchors a regional mission to strengthen Asia's ability to detect, prevent, respond to, and mitigate health threats. Leaders from both countries emphasised that collective expertise and co-created solutions are essential for preparing the region for current and emerging challenges.

By deepening institutional ties and building local capacity, the SDGHI-HMU RCC is poised to catalyse cross-border collaboration and accelerate progress toward a more resilient, interconnected Asia.

Read the full article [here](#)



Harvesting in the heat: listening to Sri Lanka's climate frontliners

Across Sri Lanka's dry zones, farming communities are experiencing climate change not as an abstract concept, but as a daily struggle. Rising temperatures, prolonged droughts, and increasingly unpredictable weather patterns are affecting not only crop yields but also the health, wellbeing, and livelihoods of farmers who depend on the land for survival.

During recent field engagements, SDGHI's [Planetary Health team](#) met with farmers in the Northern and Eastern provinces to understand the human dimensions of these environmental shifts. Many shared experiences of heat stress, dehydration, reduced productivity, and the emotional toll of trying to sustain families amid worsening conditions. These conversations revealed a recurring theme: climate impacts are deeply interconnected - touching food security, income stability, mental health, and community resilience.

Yet amid the challenges, farmers also described practical adaptations they have developed: shifting planting schedules, experimenting with drought-resistant crops, and working collectively to conserve water. Their ingenuity underscores an important truth - that frontline communities are not just

vulnerable, but essential partners in shaping effective, locally grounded climate solutions.

These insights will guide SDGHI's ongoing work to co-design interventions that prioritise lived experience, equity, and resilience in Asia's climate-affected regions.



The joint Duke-NUS/Duke/Jaffna/Ruhuna study team engages in initial discussions with paddy farmers.

Read the full article [here](#)

Being Family: when a film speaks louder than words



On 1 August 2025, SDGHI's [Global Mental Health team](#) hosted a special screening of *Being Family*, a research-backed film co-designed with refugees and migrants. The film offers an intimate look at the emotional, social, and financial realities faced by families, highlighting the gaps in community understanding and the need for accessible, compassionate support systems.

Following the screening, a panel featuring the film-maker, caregivers, clinicians, and youth advocates reflected the themes of stigma, resilience, and the importance of listening to caregiving voices. Audience members shared how the film deepened their appreciation for the unseen labour of families and underscored the urgency of strengthening mental health literacy and community-based support across Singapore and the region.

The event is part of SDGHI's ongoing efforts to amplify lived experiences and promote inclusive conversations on mental wellbeing.

Learn more [here](#)



Amanda Sim, Co-Principal Investigator, *Parenting on the Thailand/Myanmar border*.



Panelist for the *Being Family* film discussion. Left to right: Pearlyn Tseng, Amanda Sim, Mary Soan, Anne-Claire Stona and Li Woon Churdboonchart.

From ideas to impact: how three ASEAN innovators are reimagining health and climate resilience



In October 2025, nine months after the [inaugural Asia Pacific Global Health Innovation Hackathon](#) that took place in January 2025, the three winning teams - **RodentWatch** (Indonesia), **Lung Guardian** (Thailand, Malaysia & Mongolia), and **MyHeartAir** (Malaysia) returned to Singapore for a three-day Fellowship Visit hosted by SDGHI. The visit marked the culmination of a 22-week incubation journey designed to turn bold concepts into real-world solutions addressing climate-related health risks.

During the fellowship, teams worked closely with clinicians, entrepreneurs, industry mentors, investors and ecosystem partners to refine prototypes, strengthen business models, and explore pathways to pilot deployment. Their innovations tackle pressing regional challenges: early prediction of zoonotic outbreaks, child-friendly air-quality monitoring for respiratory protection, and AI-powered cardiovascular coaching adapted for Asian populations.

The programme demonstrated how academic incubators can accelerate impact by bridging research excellence, user-centered design, and market readiness. Participants shared that the structured mentorship helped them translate complex science into actionable solutions grounded in community needs.

As the teams prepare for field trials, regulatory conversations, and potential scale-up, their journey reflects a growing movement of young innovators building resilient, climate-smart health systems for ASEAN.

Read the full article [here](#)

Find out more about SDGHI's [Innovation programme](#).



SingHealth Duke-NUS launches two new global health centres to advance allied health and pharmacy practices in Asia

On 5 November 2025, SingHealth and Duke-NUS launched two new centres - the Centre for Global Allied Health (CGAH) and the Centre for Global Pharmacy (CGP) - to build workforce capacity and strengthen health systems across Asia. These centres will support training, education, and collaborative programmes with regional partners, focusing on critical areas such as rehabilitation, medical social services, nutrition, pharmacy practice, and medication safety.

The double launch reflects Singapore's commitment to advancing equitable health outcomes through capability development and cross-border partnership. Leaders highlighted that strengthening allied health and pharmacy systems is essential for improving patient care, especially in low-resource settings where workforce gaps remain a major barrier to quality healthcare.

Through co-designed curricula, skills exchange, and regional faculty development, the two centres aim to empower local professionals, enhance service delivery, and contribute to resilient health systems across the region.

Find out more about the [Centre for Global Allied Health](#) and the [Centre for Global Pharmacy](#)

Read the press release [here](#)

Asia PGI and partners unveil preview of PathGen: new AI-powered outbreak intelligence tool



On 1 December 2025, Singapore launched [PathGen](#), a next-generation, AI-enabled pathogen intelligence platform to strengthen early detection and response across Asia. Housed within Asia PGI and led by the Duke-NUS Centre for Outbreak Preparedness (COP), PathGen was developed with support from IXO and partners Amazon Web Services (AWS), Sequentia Biotech, and Sydney ID at the University of Sydney. The platform integrates genomic, clinical, mobility, environmental, and health-system data into a secure, sovereign system that enables rapid, evidence-based public health action.

Unveiled at an event graced by Minister for Health Ong Ye Kung, PathGen addresses a critical regional need: advanced analytics and cross-border collaboration without compromising national data control. It features real-time genomic surveillance, AI-driven outbreak risk modelling, and decision-support tools for epidemiologists, laboratories, policymakers, and ministries of health. Early partners - including the Philanthropy Asia Alliance, Temasek Foundation, and regional public health

agencies - highlighted its potential to transform how countries anticipate, investigate, and contain emerging threats.

Stay tuned as PathGen progresses from proof-of-concept towards a launch-ready platform for phased regional deployment in 2027.



Dr Michael Barber, PathGen's Chief Data Scientist, at the preview event.

Read the press release [here](#)



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Beyond charity: a clinician's call for deep, lasting change in global health



Jai Prashanth Rao

Clinical Assistant Professor,
Head & Senior Consultant
National Neuroscience Institute

For Clinical Assistant Professor [Jai Prashanth Rao](#), who heads the Department of Neurosurgery at National Neuroscience Institute at Singapore General Hospital, global health was never about “doing good” from afar. It was about recognising shared humanity and asking how Singapore’s strengths could be used to strengthen health systems across the region.

“I used to think global health was like humanitarian work - very charity-based that offered help where it was needed,” he reflected. “But over time, as I grew as a clinician, educator, and researcher, I began to see the deeper disparities in care across our region. That changed how I understood global health. It’s really about system building; moving from episodic aid to enduring partnerships that strengthen local resilience and promote equity.”

That question stayed with him. In March 2019, a chance conversation with [Professor Michael Haglund](#), a Duke neurosurgeon renowned for his work in Uganda, became a turning point. “He showed me what long-term commitment looks like and how to bring together people, departments, even ministries, to make a sustained difference. That really inspired me.”

Since then, Prof Jai has been deeply involved in regional collaborations under SDGHI, from [strengthening Vietnam's](#)

[role in regional health resilience](#) to [building a bridge between Singapore and Jaffna, Sri Lanka](#). But his motivation is not driven by scale, it is grounded in something more human.

“I’ve seen paediatric neurosurgery wards where children are treated like adults. Not because anyone doesn’t care, but because the system can’t do more,” he shared quietly. “Simple interventions could have changed those lives. Seeing that kind of loss... it lights a fire inside you.”



With the HMU Hospital with Dr Nguyen Lan Hieu, Director and Dr Duong Dai Ha, Deputy Director

Despite a full clinical load, Prof Jai dedicates his early mornings and evenings to this work. “It’s not about work-life balance,” he smiled. “It’s about finding meaning. Many young doctors think they need to be senior before they can contribute. But you don’t know your strengths until you see and experience the world. Start by being curious.”

That curiosity has guided his teaching too. He often encourages Duke-NUS medical students to join overseas projects, to “see for themselves” what healthcare looks like in different contexts. “You learn humility when you step into another system,” he said. “It’s not about bringing our way of doing things. It’s about understanding their realities and building trust.”

For Prof Jai, collaboration is not just between countries — it’s between professions. “In Singapore, we’ve come far in flattening hierarchies between doctors, nurses, and allied health

colleagues. But in many places, that’s still a big challenge. Sometimes the biggest barriers to change are not resources, but structures.”

His advice to those starting out? Be humble, be patient, and stay the course. “Global health is not about touching many places; it’s about making deep, lasting change in a few. It takes time, commitment, and a willingness to listen.”

As Singapore continues to play a bridging role in the region, Prof Jai hopes to see more clinicians step forward — not just to teach or treat, but to learn. “We have so much to offer,” he said, “but also so much to learn from our neighbours. That’s the beauty of global health — it’s not one-way giving. It’s shared growth.”

Find out more about our [Regional Collaborating Centres](#).



Capacity building visit to Teaching Hospital Jaffna, Sri Lanka by the SingHealth Duke-NUS interprofessional neurosurgery team.

Connect and Collaborate

SDGHI works with partners in the region to advance health and wellbeing in Asia and beyond. Reach out to our faculty for collaboration opportunities [here](#).

Be Featured as A Global Health Warrior

If you would like to be featured as our Global Health Warrior, or know one who should be featured, connect with us at sdghi@duke-nus.edu.sg

Stay connected with our work

The **SingHealth Duke-NUS Global Health Institute (SDGHI)** is an enabling platform for global health activities across the Singhealth Duke-NUS Academic Medical Centre. Bringing together partners from across the region and beyond, we work to address current and emerging health challenges in our region. Want to stay updated on our work?

Subscribe to our newsletter via duke-nus.edu.sg/sdghi/contact-us.



The **Duke-NUS Centre for Outbreak Preparedness (COP)** was established in 2022 to advance the application of pathogen genomics for early disease detection and response. By bridging research, training, policy, and practice, COP aims to strengthen regional health security across South and Southeast Asia.



Have thoughts or suggestions for Global Roots? Is there something you'd like to see in future issues? Let us know at sdghi@duke-nus.edu.sg