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COVER STORY

Nurturing the Next Generation of Doctors

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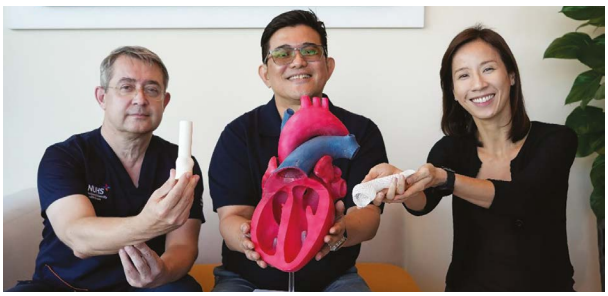


National University Heart Centre Singapore

NUHCS is an academic, national specialist centre that brings together the resources, expertise and capabilities in the areas of Cardiology, Cardiothoracic and Vascular Surgery to better meet the needs of the growing number of patients with heart disease and raise the future generation of medical professionals. As a national heart centre in Singapore, NUHCS has honed two Peaks of Excellence and six Core Clinical Programmes that provide leading care and treatment strategies for patients:

CORE CLINICAL PROGRAMMES

- Acute Coronary Syndrome Programme
- Congenital and Structural Heart Disease Programme
- Heart Failure & Cardiomyopathy Programme
- Heart Rhythm Programme
- Vascular Medicine and Therapy Programme
- Women's Heart Health Programme

INSTITUTIONAL PEAKS OF EXCELLENCE

- Minimally Invasive Cardiothoracic Surgery (MICTS)
- Aortic Centre

NUHCS SERVICES IN SINGAPORE

NUHCS Heart Clinic @ Ng Teng Fong General Hospital

NUHCS Heart Clinic @ Alexandra Hospital

National University Heart Centre, Singapore (NUHCS) at National University Hospital - Main Operations

NUHCS Heart Clinic @ Jurong Medical Centre

Cardiovascular Research Institute (CVRI): Research Pillar of NUHCS

Comprising a team of internationally-recognised cardiologists and surgeons from the cardiothoracic and vascular specialties, NUHCS serves as a referral national centre for cardiothoracic and vascular conditions and provides a comprehensive approach to the treatment of these patients.

The holistic patient-care approach is backed by leading translational research at the Cardiovascular Research Institute (CVRI) and Cardiovascular Metabolic Translational Program, all of which complements these advanced quaternary clinical services to deliver state-of-the-art treatment solutions to the most challenging heart, lung and circulatory diseases.

NUHS National University Health System

National University Health System (NUHS)

An integrated Academic Health System, serving as one of three public healthcare clusters

As a member of NUHS, NUHCS collaborates with professionals and centres across the health system to advance the tripartite missions of achieving clinical excellence for patients, developing the next generation of healthcare professionals, and changing the natural history of chronic diseases through research.

Editor's Message

Dear readers,

The role of a leading medical institution is defined not just by its accomplishments today, but by its vision for tomorrow. As we step into 2026, we embrace not just a new calendar year, but a fresh opportunity to advance our mission with focus and purpose. At NUHCS, our continued success and relevance depend on maintaining a steadfast strategic approach to development. From technological innovation and quality clinical care to training, service excellence, as well as cutting edge research, every initiative at NUHCS is aligned with our shared goals. The strategies mapped out by the Director of the Centre provide a steady compass, translating ambition into sustained excellence.

Education remains a cornerstone of our mission. Our **Cardiology** and **Cardiothoracic Residency** programmes equip the next generation of specialists with hands-on experience, and the skills to meet complex cardiovascular challenges. Our **Continuing Medical Education (CME)** initiatives help **General Practitioners (GPs)** stay up to date on the latest developments in cardiovascular health, strengthening the link between primary care and specialised heart treatments. We are also proud of our community cardiology efforts, bringing better care right to the grassroots level.

Innovation and quality improvement continue to drive our work. This year, our **Quality Improvement Project Awardees** introduced initiatives like **faster echocardiography appointments (FAST)** and **seamless, same-day discharge protocols,** streamlining patient care and workflow efficiency. Additionally, groundbreaking surgeries including the **Personalised External Aortic Root Replacement Surgery (PEARS)** and **Cryoablation**, continue to set new standards in the treatment of aortic aneurysms and heart rhythm disorders.

Beyond clinical excellence, NUHCS creates meaningful impact through public engagement initiatives. The **Small Gifts, Big Hearts Fundraising** supports the NUHCS Heart Fund, while the **Caring Hearts Support Group (CHSG)** provides emotional support to patients and families. We also take pride in recognising the achievements of our staff – Nurse Clinician Adeline and Enrolled Nurse Kelyn received the **SCDF Community First Responder Award,** Nurse Manager Kwee Fong was honoured with the **Nurses' Merit Award,** and several others earned top accolades in the **National Day Awards** - reaffirming the exceptional standard of care offered at NUHCS.

As we continue to push the boundaries of heart care, education, and community engagement, we remain deeply committed to our mission of improving lives through innovation, excellence and compassion. Together, we are shaping the future of cardiovascular health for generations to come. Happy New Year!

Tan Huay Cheem

Prof Tan Huay Cheem

Senior Advisor, NUHCS

Towards a Healthier Heart Nation

A vision for 2026 and beyond

I am often asked, in my role as Executive Director of the National University Heart Centre, Singapore (NUHCS), whether Singapore is doing well in preventing heart disease. In some respects, the answer is yes. When someone suffers a heart attack — specifically, an ST-Elevation Myocardial Infarction (STEMI)[1] — we are able to open the blocked artery within 90 minutes 96% of the time, with a median time of 59 minutes, meeting international benchmarks of quality care.

These feats of medical logistics and skilled manpower are now routine in our hospitals. Yet, 38% of these patients are under the age of 60 — individuals with long lives ahead of them and a high risk of future heart attacks and heart failure. The uncomfortable truth is that, as a system, we have failed these younger patients long before they arrive at our emergency departments.

Data from our National Population Health Survey in 2022 underscores this reality. About 8-10% of individuals aged 18-29 already have high blood pressure or high cholesterol. This rises sharply to 45-50% among those aged 50-59. Alarmingly, about half of those affected were unaware of their condition until screened. Even among those diagnosed with hypertension, only one in three had good blood pressure control.

This means that most people do not know they carry risk factors for heart attacks and strokes — and among those who do, only a minority are treated to target levels. Focusing solely on treating the consequences of cardiovascular disease is futile if we do not address its root causes.

Back to primary healthcare and the basics

Singapore's national push for Healthier SG[2] is a step in the right direction. Residents aged 40 and above are encouraged to be empanelled[3] to a family General Practitioner (GP), with government-funded screening for chronic disease. Those suspected of having genetically high cholesterol — Familial Hyperlipidaemia (FH)[4] — are also identified earlier, allowing timely intervention for both patients and their families. Together, these efforts signal a necessary shift in healthcare's focus: from secondary and tertiary care[5] back to primary prevention.

This is where Cardio4Cities comes in — an initiative that aims to identify 90% of residents with cardiovascular risk factors, treat 80% of them effectively, and achieve good risk-factor control in 70%, in partnership with government and community stakeholders. The goal is to reduce heart attacks and strokes by 30% over three to five years. If successful, the lessons learnt could be adapted for cities around the world.

Cardio4Cities aims to have:

90% of residents with cardiovascular risk factors identified.

80% of identified residents treated effectively.

70% of treated residents achieving good risk-factor control.

30% reduction in the incidence of heart attacks and strokes within three to five years.

How will NUHCS be involved in Cardio4Cities?

At NUHCS, we plan to launch Cardio4Cities @ NUHCS, exploring novel outreach strategies to reach younger, under-served and under-reached populations and anchor them to long-term primary care[6]. We envision simple, scalable health checks for blood pressure, cholesterol, and blood sugar in high-footfall community venues such as pharmacies, workplaces and places of worship. Results will be available on-site, with immediate counselling provided.

A common challenge is the check-to-treatment gap: many individuals delay or avoid follow-up after their health check due to inertia — or worse, denial. To address this, care coordinators will connect participants to health coaches[7] to support lifestyle change, and enroll them to CHAMP[8] — a WhatsApp-based chatbot — to encourage regular self-monitoring of their blood pressure.

On the backend, NUHCS will use CardioSight[9], an AI-enabled and geospatial monitoring platform, to track progress over time and send reminders for annual health checks via CHAMP or SMS.

While we may not eliminate cardiovascular disease entirely in our lifetime, we can delay its onset, especially among younger patients. Popularised by the documentary "Live to 100", Blue Zones[10] are regions with the healthiest and longest-living populations.

Singapore has the potential to become a Blue Zone society that deliberately engineers healthy longevity by enabling and encouraging the right lifestyle behaviours. Cardio4Cities is one experiment that may bring us closer to that vision — extending not just lifespan, but health span as well.

> **Singapore has the potential to become a Blue Zone society that deliberately engineers healthy longevity by enabling and encouraging people to adopt the right lifestyle behaviours.**

ARTICLE BY

A/Prof James Yip
Executive Director, NUHCS

A/Prof James Yip is the Executive Director of NUHCS. He has been the Principal Investigator for many international trials in pulmonary hypertension and has contributed to numerous peer reviewed journals and book chapters in cardiology and information technology. He was conferred the Public Administration Medal (Bronze) in 2018 and the Distinguished Senior Clinician Award in 2019.

References:

1. **ST-Elevation Myocardial Infarction (STEMI) –** a severe type of heart attack caused by a complete blockage of a coronary artery, leading to oxygen deprivation and damage of heart muscle tissue.
2. **Healthier SG –** a national preventive health initiative by the Ministry of Health (MOH). It represents a major shift in Singapore's healthcare approach — from treating illness to promoting health and preventing disease.
3. **Empanelment** – the act of assigning individual patients to individual primary care providers (PCP) and care teams with sensitivity to patient and family preference.
4. **Familial Hypercholesterolemia (FH)** – a genetic disorder characterised by extremely high levels of LDL cholesterol ("bad" cholesterol) in the blood from birth.
5. **Secondary and tertiary care** – secondary care involves specialised medical services for conditions needing experts like cardiologists or surgeons, while tertiary care provides highly specialised, advanced, and complex treatments using sophisticated equipment, usually in major medical centers for severe or life-threatening issues.
6. **Primary care** – healthcare provided in the community, by GPs or polyclinics, for people making an initial approach to a medical practitioner or clinic for advice or treatment.
7. **Health coach** – a healthcare partner who uses a personalised approach to help individuals develop healthy habits and achieve their nutrition and lifestyle goals.
8. **Population-based Chronic Disease Management Programme (CHAMP) –** a healthcare initiative that features a WhatsApp chatbot as one of the key components, allowing patients to track vital sign readings such as blood pressure and heart rate.
9. **CardioSight** – a real-time dashboard that can capture and showcase information about cardiovascular risk factors at both the individual and geographical level, facilitating preventive cardiology care.
10. **Blue Zones** – regions of the world where people live significantly longer than average, linked to common lifestyle habits including nutritious diets, natural movement, strong social connections, and purpose.

Nurturing the Next Generation of Doctors

At the National University Heart Centre, Singapore (NUHCS), a doctor's development extends beyond clinical training to include professional growth, ethical judgement, and compassion for patients. Through structured training, close mentorship, and real-world experience, NUHCS prepares the next generation of doctors to deliver high-quality cardiovascular care with confidence and accountability, ensuring patients remain central to every clinical decision.

Core Pillars of Expertise

Working as a multidisciplinary team, the NUHCS team provides coordinated patient care while offering junior doctors broad exposure to the full spectrum of cardiovascular medicine.

NUHCS at a Glance

Department of Cardiology

Focused on the diagnosis, medication or procedural treatment, and long-term management of heart conditions, from common heart diseases to complex and rare disorders.

Department of Cardiothoracic & Vascular Surgery (CTVS)

Training takes place across operating theatres, the Cardiothoracic Intensive Care Unit (CTICU), inpatient wards, and clinics.

- **Cardiac Surgery**: comprehensive care for a broad spectrum of heart diseases, including specialised care for children provided by the Paediatric Cardiac Surgery Team.
- **Thoracic Surgery**: advanced treatment for conditions affecting the lungs and chest, performed using minimally invasive techniques.
- **Vascular Surgery**: holistic management of diseases affecting blood vessels throughout the body, from aortic conditions to limb-saving procedures.

Department of Cardiology

Strengthening Foundations for Doctors-in-training: PACES Cardiology Postgraduate Programme

NUHCS supports doctors at all stages of their careers through structured learning opportunities, including the Practical Assessment of Clinical Examination Skills (PACES) Cardiology Postgraduate programme. This programme is designed to strengthen core clinical skills in cardiovascular medicine, focusing on bedside examination, diagnostic reasoning, and patient-centered communication.

Through structured teaching rounds, case discussions, and a dedicated PACES Cardiology course, essential competencies that are critical for postgraduate certification and real-world practice are refined, ensuring that medical students are prepared for examinations as well as the practical demands of patient care.

Training takes place across inpatient wards, catheterisation laboratories, coronary care units, and outpatient clinics, offering comprehensive learning across the continuum of care. Residents also rotate through NUHCS @ Ng Teng Fong General Hospital (NTFGH), gaining exposure to a diverse patient population and wide spectrum of cardiovascular conditions, all within the same high standards of clinical governance and academic culture. Daily bedside teaching, multidisciplinary discussions, and guided clinical decision-making allow doctors-in-training to develop technical competence while fostering professionalism, empathy, and teamwork.

Training Junior Doctors Through the Senior Residency Programme

The Cardiology Senior Residency Programme at NUHCS is a structured three-year programme that prepares junior doctors, or Residents, for independent practice in cardiovascular medicine. Residents gain broad clinical exposure across key cardiology subspecialities, including interventional cardiology, electrophysiology, advanced imaging, heart failure, and structural heart interventions.

> "NUHCS has been key to much of my formative years as a physician, from my medical school days to residency, and I'm grateful to be able to give back and hopefully inspire others as well."
>
> *- Dr Shaun Chook, Consultant, Department of Cardiology, NUHCS, and graduate of the Cardiology Senior Residency Programme*

> "My vision is to create a supportive and academically vibrant training environment at NUHCS, that empowers cardiology residents to excel in both clinical care and scholarship."
>
> *- Dr Robin Cherian, Programme Director of the Cardiology Senior Residency Programme, NUHCS*

Department of CTVS

Cardiothoracic Surgery Residency Programme

The Cardiothoracic Surgery Residency Programme at NUHCS trains residents to combine technical surgical skills with critical thinking and patient-centered care.

Structured mentorship, hands-on surgical practice, and participation in multidisciplinary teams form the core of the training. Residents are exposed to both cardiac and thoracic surgery specialties, each offering distinct learning opportunities and contributing to a comprehensive understanding of cardiothoracic care.

> "Structured training shapes the next generation of cardiothoracic surgeons to be professional and caring for patients, competent in various cutting-edge surgical procedures, innovative in research, and collaborative with other specialists."
>
> - *Dr Qian Qi, Associate Programme Director for Singapore Integrated Programme (SGIP) for Cardiothoracic Surgery (CTS) and Consultant, Division of Adult Cardiac Surgery, Department of CTVS, NUHCS*

Singapore Integrated Programme (SGIP) for Cardiothoracic Surgery (CTS)

A six-year training programme held across different hospitals within Singapore that equips residents aiming to be cardiothoracic surgeons with knowledge, clinical and surgical skills and professional practices related to CTS.

> "My goal is to nurture a residency programme that inspires excellence, sharpens surgical mastery, and support every resident in becoming the best clinician they can be."
>
> - *Dr Winn Maung Maung Aye, Education Programme Director, Department of CTVS, NUHCS*

Cardiac Surgery

Training includes:

- **Minimally invasive cardiac surgery**
  Performing cardiac surgery through keyhole incisions instead of opening the chest bone, reducing patient trauma and facilitating faster recovery.
- **Complex aortic surgery**
  Learning through international collaborations, providing exposure to global standards and best practices.

Thoracic Surgery

Training includes:

- **Uniportal Video-Assisted Thoracoscopic Surgery (UVATS)**
  NUHCS is the first centre in Singapore to perform UVATS and offers full mentorship from experienced thoracic surgeons.
- **Robotic-assisted surgery**
  Residents gain hands-on experience in robot-assisted thoracic surgery, demonstrating how technology can enhance efficiency and precision.

> "Surgery goes beyond technical skills. The residency programme reshaped me, and NUHCS gives me the opportunity to keep growing into a better surgeon."
>
> - *Dr Hari Kumar, Associate Consultant, Division of Thoracic Surgery, Department of CTVS, NUHCS, and graduate of the Cardiothoracic Surgery Residency Programme*

Vascular Surgery Training Programme

Vascular training at NUHCS adopts a multidisciplinary, team-based approach that equips residents to manage complex cases, balance risks and benefits, and work closely with specialists across disciplines. Trainees gain exposure to a wide range of vascular conditions – from complex aortic disease, to diabetic limb salvage.

- **Intersocial Accreditation Commission (IAC) Recognition**
  Residents will have the opportunity to work with the NUHCS Diagnostic Vascular Laboratory – Asia's first international IAC accredited vascular lab – to learn the ropes of exceptional vascular care with compliance to high quality clinical standards.
- **Heart–Vascular Team**
  Cardiac and vascular surgeons work together under one roof, providing seamless workflow from imaging and clinical management to post-surgical care for patients with aortic conditions.

NUHCS Educational Programmes offer more than technical training. Medical students and Residents develop leadership skills, gain exposure to innovative technology, and master the delivery of high-quality patient care – equipping them to lead the future of cardiothoracic and vascular care.

ARTICLE BY
NUHCS PULSE Editorial

Bridging Care Across the Community

Connecting specialists and primary care doctors for a smoother patient journey

As cardiovascular care becomes increasingly complex, seamless coordination between cardiac specialists and primary care providers[1] is more critical than ever. Keeping pace with advancements in cardiovascular medicine is essential to delivering high-quality patient care. The National University Heart Centre, Singapore (NUHCS) is strengthening this foundation by integrating specialist knowledge directly into primary care – ensuring General Practitioners (GPs), polyclinic doctors and nurses have real-time support and resources.

The Foundation: Continuous Professional Growth

At the core of this strategy is Continuing Medical Education (CME). These structured learning sessions are designed to help doctors consistently update their clinical knowledge, sharpen their skills, and stay current with the latest guidelines mandated by the Singapore Medical Council.

NUHCS as a national centre for the treatment of cardiovascular diseases also stands at the forefront of education, designing its CME sessions for primary care partners to receive the latest insights and practical know-hows when dealing with common cardiac situations. From learning how to accurately interpret Electrocardiograms (ECGs)[2] to managing conditions such as venous disorders[3], and receiving insights on updated treatment protocols, primary care teams are empowered to make informed decisions that directly improve patient outcomes.

These sessions also foster closer collaboration between specialists and primary care providers, creating a direct communication channel where primary care providers can clarify questions and discuss case studies with NUHCS cardiovascular specialists, building confidence in identifying when patients require specialised hospital referral.

Stay tuned to our pages and keep a lookout for future CME sessions:

Events & Registration Page

Latest Happenings on NUHCS LinkedIn

The Community Cardiology Team

Building on these collaborative efforts, the Community Cardiology team was established in 2022 to anchor cardiology care within the community and strengthen coordination with primary care colleagues. Since its inception, the team has introduced initiatives such as the NUHCS Shared Care programme for stable ischemic heart disease[4] and heart failure patients. This programme enables co-management between cardiac specialists and primary care teams, ensuring patients receive continuous and coordinated care.

What is the NUHCS Shared Care Programme?

The NUHCS Shared Care Programme supports patients with stable heart conditions by enabling coordinated care between NUHCS cardiologists and primary care doctors in the community. Through regular follow-ups with a trusted primary care provider and scheduled specialist reviews, patients receive high-quality, continuous care closer to home, making follow-up support more convenient without compromising safety.

Scan the code to find out more about the NUHCS Shared Care Programme!

Consulting Specialists in Seconds

Beyond Shared Care programmes, the Community Cardiology team introduced the Virtual Professional Care (VPC) chat groups. The VPC allows primary care doctors to obtain rapid expert opinions on complex cardiology queries, supporting timely and well-informed clinical decisions. It also serves as a channel for sharing educational updates and publicising upcoming events, further strengthening links between general practice and specialist care.

Learning on the Go

Recognising the challenges of a busy clinic schedule, the Community Cardiology team also conceptualised the ***Common Encounters in Cardiac Care*** video series for primary care providers. These bite-sized educational videos covering relevant cardiology topics help doctors better understand and manage common heart-related conditions encountered in their everyday practice.

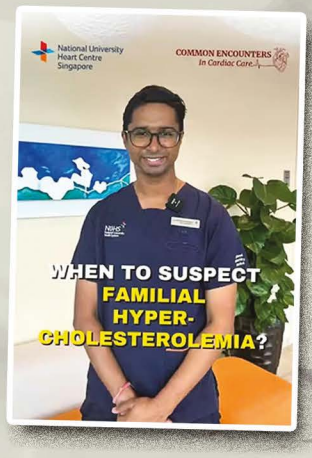
Primary care providers have responded positively to the series, valuing its concise, practical, and easy-to-follow format. Many find the videos particularly helpful for navigating common cardiology scenarios and applying actionable tips in their day-to-day work.

Through these combined efforts – structured education, specialist collaboration, and accessible digital learning – NUHCS remains committed to supporting primary care providers in delivering high-quality cardiovascular care. These integrative approaches ensure that advances in cardiology are translated meaningfully into everyday practice, leading to more timely and better patient outcomes across the care continuum.

Hear directly from NUHCS cardiac specialists in the Common Encounters in Cardiac Care series!

Adj A/Prof Lim Toon Wei, Head of Community Cardiology & Senior Consultant, Department of Cardiology, NUHCS, compares rate and rhythm control strategies in managing Atrial Fibrillation (AF)[5] and explains what this means for patients.

Dr Vinay Panday, Associate Consultant, Department of Cardiology, NUHCS, shares key signs that may point to Familial Hypercholesterolemia (FH)[6].



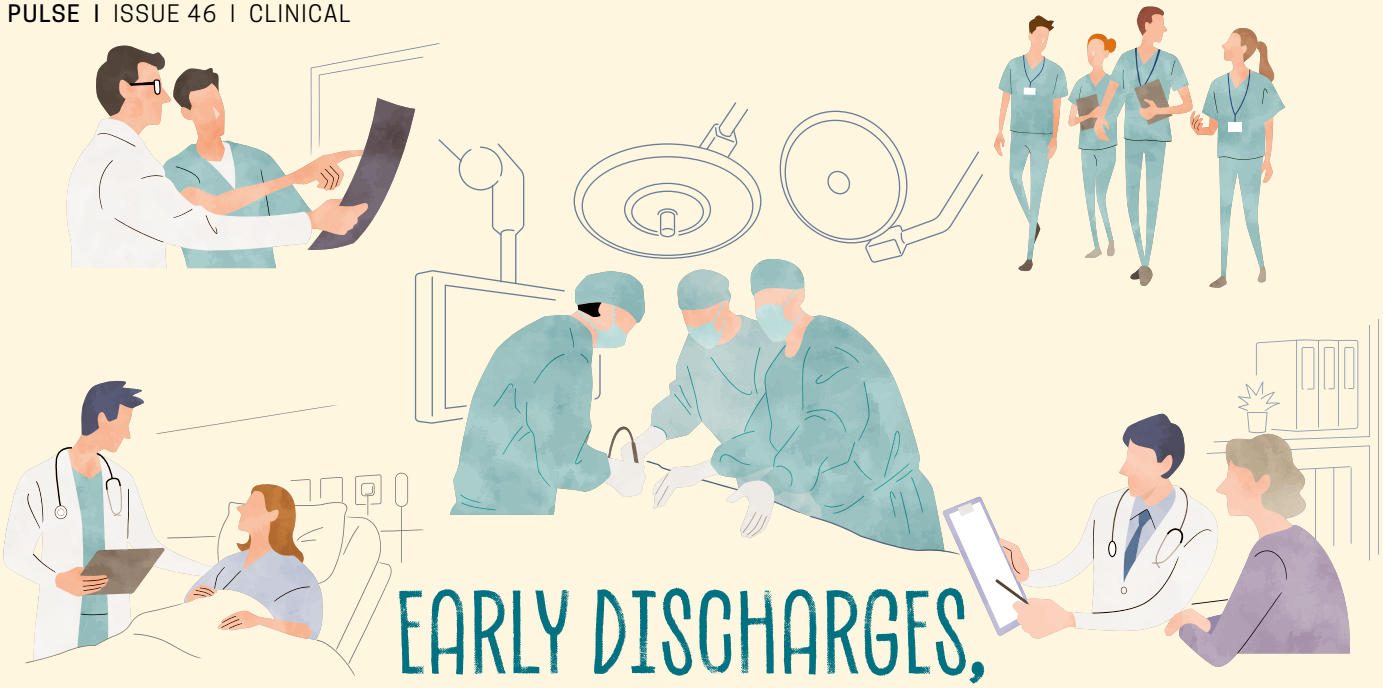
References:

1. **Primary Care Provider (PCP):** a doctor or other licensed medical professional, such as a nurse practitioner or physician assistant, who manages a person's health care over time.
2. **Electrocardiogram (ECG):** a recording of the heart's electrical activity.
3. **Venous Disorders:** valve or blood vessel abnormalities.
4. **Stable Ischemic Heart Disease (SIHD):** a chronic condition where the heart muscle does not get enough oxygen-rich blood, causing symptoms like chest pain, shortness of breath, and fatigue.
5. **Atrial Fibrillation (AF):** the most common heart rhythm disorder where the heart's upper chambers quiver chaotically instead of beating effectively, causing an irregular heartbeat, poor blood flow, and increased risk of blood clots, stroke, and heart failure.
6. **Familial Hypercholesterolemia (FH):** an inherited genetic condition that causes very high levels of "bad" cholesterol (LDL) from birth, significantly increasing the risk of heart disease.

ARTICLE BY

Dr Vinay Bahadur Panday
Associate Consultant, Department of Cardiology, NUHCS

Dr Vinay is an Associate Consultant with the Department of Cardiology at NUHCS. His clinical interests are in Preventive Cardiology, particularly in areas focusing on community-specialist integration and optimising health care delivery. He has a secondary interest in cardiac imaging in the fields of echocardiography and CT coronary angiogram.



EARLY DISCHARGES, SMARTER PLANNING, FASTER SCANS

Inside three projects that streamline care and enhance patient recovery

Healthcare innovation is not only about new technology or treatments; it is also about finding better ways for patients to receive care and recover safely. Across the wards, clinics, and diagnostic areas at the National University Heart Centre, Singapore (NUHCS), the team is always looking for ways to support patients more efficiently and meaningfully. Every improvement, no matter how small, can make a patient's journey feel safer, clearer, and more comfortable.

In recent months, three groups turned that commitment into tangible change. Their projects help patients return home earlier, receive essential heart scans without long waits, and feel supported throughout every step of their care.

The Same Day Discharge Service, the Accountable Discharge Care Model, and Project F.A.S.T. exemplify these improvements in action.

Going Home Sooner, Safely

For patients undergoing selected heart procedures such as angioplasty[1] or stenting[2], hospital stays traditionally lasted overnight for post-treatment observation. Today, many eligible patients can go home within hours of their heart treatment procedure through the Same Day Discharge service, while still staying safe and supported.

Introduced across NUHCS @ National University Hospital (NUH) and NUHCS @ Ng Teng Fong General Hospital (NTFGH), this service allows eligible patients to recover comfortably at home after their procedure. The NUHCS care team follows up the next day through a teleconsultation, ensuring patients continue to have access to cardiac rehabilitation and support services that can help them adjust back to their everyday lives.

"Same-Day Discharge service enhances the patient experience without compromising safety," says Dr Gavin Ng, Clinical Director of the Interventional Cardiology and Angiography Centre, NUHCS. "It also offers cost-saving benefits to our patients in terms of hospitalisation expenses and helps us manage inpatient bed capacity more efficiently."

Since its launch, more than 200 patients have benefitted from the service. A study led by Yap El Fuon, Assistant Nurse Clinician, NUHCS, found that rates of heart attack, vascular complications[3], and readmission were comparable between same-day discharge and overnight-stay patients, demonstrating that earlier discharge can be achieved safely.

Patients have responded positively, sharing that they feel more comfortable recovering at home while still feeling well supported by their care teams. Encouraged by these results, NUHCS is expanding the service to include selected pacing and electrophysiology procedures[4]. This expanded approach reflects NUHCS' commitment to helping patients recover comfortably and confidently, while maintaining the highest standards of safety and care.

Scan to learn more about the Same Day Discharge Service at NUHCS!

Building Accountability into Every Hospital Discharge

While some patients are ready to go home sooner, others may face delays in discharge even when they are medically ready. To make this process more coordinated, NUHCS developed the Accountable Discharge Care Model – a structured, nurse-led framework that supports timely and holistic discharge planning.

Implemented in one of the wards, the model adopts the 4M approach — Mobility, What Matters, Mentation, and Medication — to ensure that each patient's physical, mental, and social needs are addressed early during their hospital stay.

Previously, discharge planning often began near the end of a patient's admission. With this new approach, nurses now identify high-risk patients early in their stay and collaborate with other healthcare teams through a shared digital platform. This platform enables real-time updates and provides multidisciplinary access to discharge information, supporting timely and coordinated decision-making. This empowers nurses to take greater ownership of discharge planning and ensures that patients and caregivers receive clear guidance, prompt support, and well-coordinated follow-up care.

14%
Reduction in average length of hospital stay

36%
Fewer unplanned readmissions

5×
Increase in Community Care Team (CCT) referrals

Faster Access to Vital Heart Scans

Before treatment can begin, timely diagnosis is crucial — and for many heart patients, that starts with a Transthoracic Echocardiogram (TTE)[5] ultrasound scan.

To meet the growing demand for TTEs and shorten waiting times, NUHCS launched Project F.A.S.T. (Faster Appointment for Subsidised TTE). The goal was to help patients get their scans sooner.

The "Appropriate TTE Order Guide" was introduced to help prioritise resources for patients who are clinically urgent.

NUHCS also developed a "Limited TTE Protocol" for patients who do not require a full scan. These focused scans take about half the time of a standard TTE and cost less, while still providing sufficient diagnostic results.

From January to April 2025, 85 patients were offered earlier appointments for the Limited Echocardiograms, which then opened up capacity for additional scans for other patients. This increase in available appointments has allowed more patients to receive care. Consequently, the median wait time for subsidised TTEs has decreased, marking a significant improvement for patients in need of these crucial diagnostic tests.

Smarter, Seamless Care for Every Patient

Together, these three initiatives reflect NUHCS' ongoing commitment to improving the patient journey from admission to recovery and beyond. By enabling earlier discharges, improving better coordination of care, and reducing waiting times for essential heart scans, NUHCS teams are making care safer, more efficient, and more seamless for patients.

References:

1. *Angioplasty - a medical procedure used to open narrowed or blocked blood vessels, most commonly the coronary arteries that supply the heart.*
2. *Stenting - a surgical procedure to insert a small, mesh tube called a stent into a body passageway, such as a blood vessel or airway, to hold it open. This is often done to treat narrowed or blocked arteries.*
3. *Vascular complications - problems that affect the blood vessels, which can lead to conditions like stroke and heart attack.*
4. *Pacing and electrophysiology procedures - medical interventions used to diagnose and treat heart rhythm disorders. These include implanting a pacemaker under the skin to send electrical pulses and maintain a regular heartbeat.*
5. *Transthoracic Echocardiogram (TTE) - a non-invasive ultrasound scan that creates images of the heart to assess its structure and function.*

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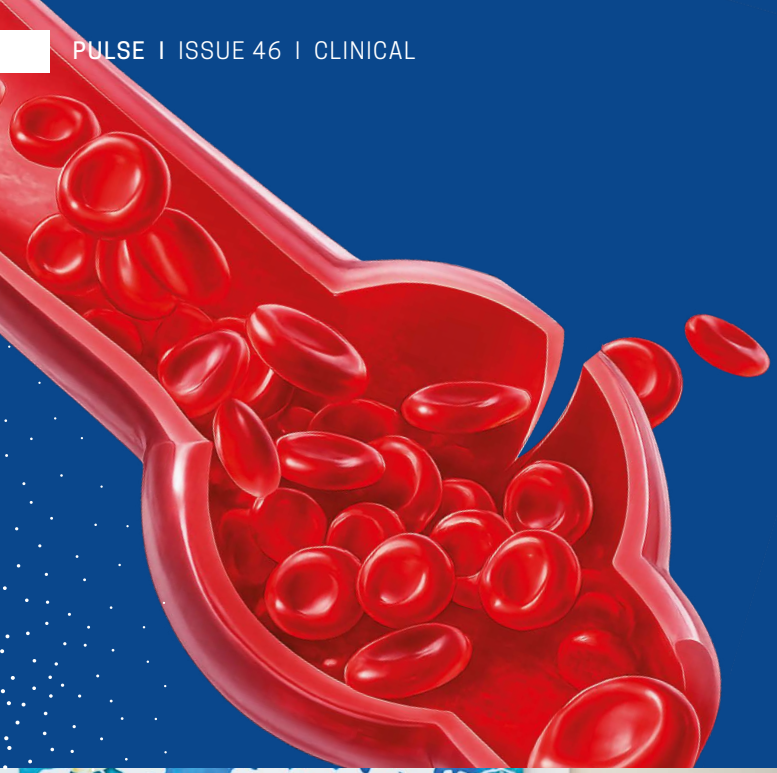


Ahead of the Rupture

NUHCS introduces a personalised preventive treatment for aortic patients – a first in Southeast Asia

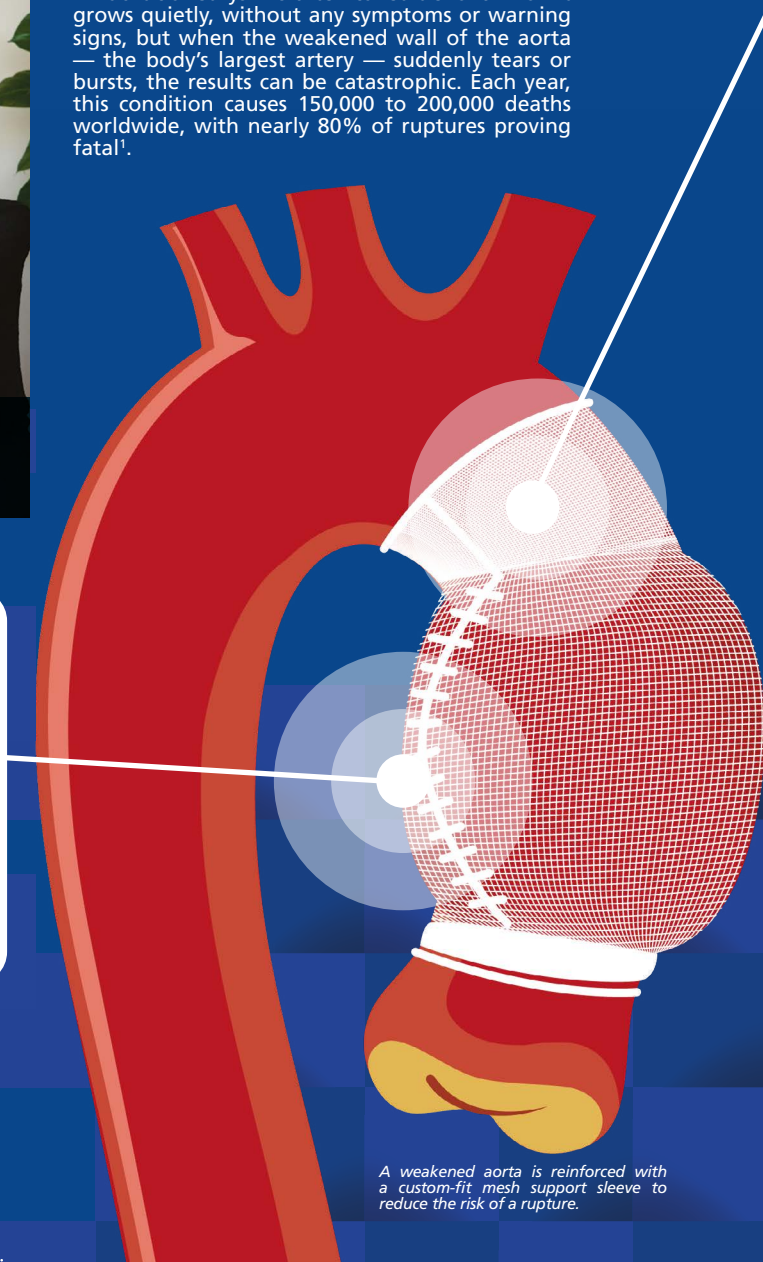
An aortic aneurysm is often called a *silent killer*. It grows quietly, without any symptoms or warning signs, but when the weakened wall of the aorta — the body's largest artery — suddenly tears or bursts, the results can be catastrophic. Each year, this condition causes 150,000 to 200,000 deaths worldwide, with nearly 80% of ruptures proving fatal[1].

Adj AProf Vitaly A. Sorokin (left), Head of Division of Adult Cardiac Surgery, Department of Cardiac, Thoracic and Vascular Surgery (CTVS), NUHCS, and Adj AProf Low Ting Ting (right), Senior Consultant, Department of Cardiology, NUHCS, holding custom-made, open-mesh support sleeves used in the PEARS procedure. With them is Mr Long Foo Pieng, who is among the first patients in Singapore to undergo this treatment.

What if it were possible to stop the aneurysm *before* it ruptures?

A new surgical procedure called Personalised External Aortic Root Support (PEARS) offers a preventive option for patients at risk of an aortic rupture.

The treatment reinforces the aorta early before it becomes severely enlarged, by using 3D printing and a customised external mesh sleeve that provides long-term support. At the National University Heart Centre, Singapore (NUHCS), the first PEARS procedure in Southeast Asia was performed by Adj A/Prof Vitaly A. Sorokin, Head, Division of Adult Cardiac Surgery, Department of CTVS, NUHCS.



A weakened aorta is reinforced with a custom-fit mesh support sleeve to reduce the risk of a rupture.

Understanding Aortic Aneurysms

The aorta carries oxygen-rich blood from the heart to the rest of the body. When part of its wall weakens and bulges, an aneurysm forms. Causes include genetic conditions (such as Marfan syndrome[2]), high blood pressure, valve disorders, or age-related degeneration.

Many aneurysms remain undetected until they reach a dangerous size. At NUHCS, around 300 patients with aortic aneurysms are seen each year, with nearly 30 requiring emergency surgery for an impending rupture.

Traditionally, patients with large or rapidly growing aneurysms undergo aortic root replacement — a major operation involving a heart-lung bypass and replacement of the affected section with a synthetic graft. While lifesaving, this is a complex and high-risk surgery.

The PEARS Procedure

PEARS provides an alternative, proactive approach for selected patients whose aortas are mildly enlarged. Instead of replacing part of the aorta, surgeons place a customised, open-mesh sleeve around the aorta. This sleeve acts like a supportive "glove", stabilising the aorta and preventing further dilation.

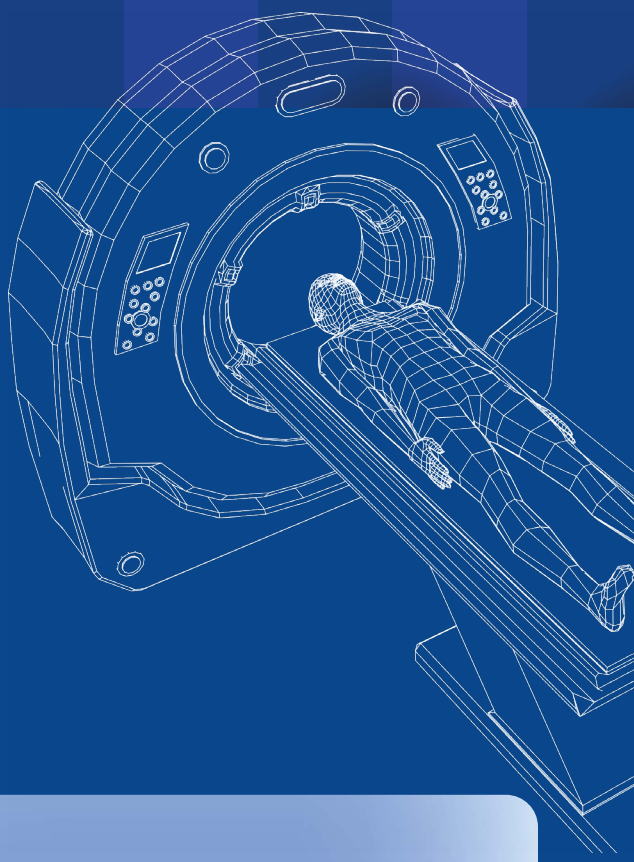
What makes the treatment unique is its personalisation. A Computed Tomography (CT) scan of the patient's heart and aorta is used to create 3D-printed model, which serves as a mould for crafting the custom-fit mesh sleeve. This ensures the sleeve conforms precisely to the patient's anatomy, providing long-term reinforcement and reducing the risk of rupture.

Compared with conventional aortic root replacement, PEARS is less invasive, preserves the patient's own aortic tissue, and reduces operating time by half, thus lowering surgical risk and supporting faster recovery.

A Swift Return to Everyday Life

Since late 2024, six patients at NUHCS have successfully undergone the PEARS procedure. One of them, Mr Long Foo Pieng, 56, was diagnosed with a congenital bicuspid aortic valve[3] condition that caused progressive dilation of his aorta. He underwent PEARS in 2024 and was discharged within a week. Six months later, he resumed his regular activities.

"I was very happy (to be) back at the golf course again, going to the driving range almost two or three times a week like I used to," said Mr Long.



More Than Just Prevention

While PEARS is suitable only for selected patients, it represents an important advancement in the management of aortic aneurysm. By intervening early and preserving the patient's own anatomy, it helps patients avoid complex major surgery in the future and live life fully, without the constant fear of rupture.

> **"These patients can now experience life just like their peers without constantly worrying about their aortic health and the risk of a sudden rupture. The tremendous improvement in their quality of life cannot be discounted."**
>
> - Adj A/Prof Vitaly A. Sorokin, Head, Division of Adult Cardiac Surgery, Department of CTVS, NUHCS

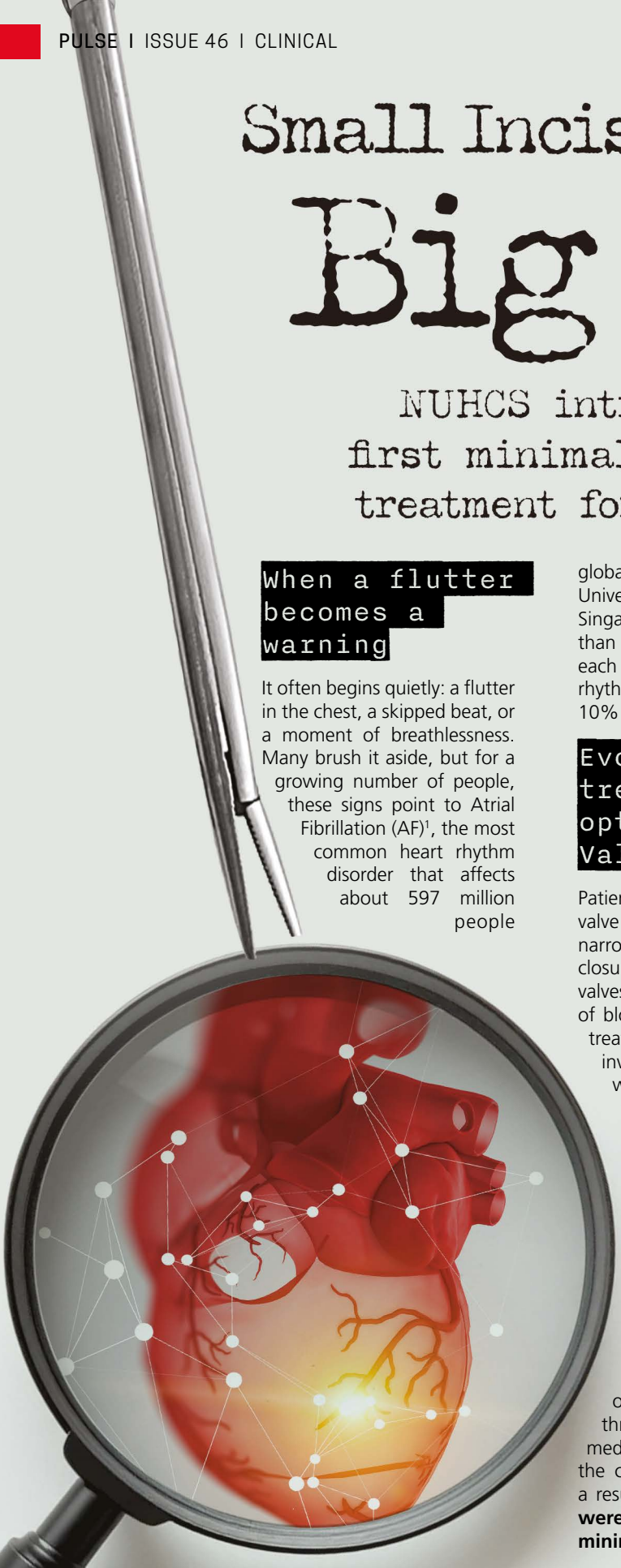
As the technology and expertise continue to evolve, PEARS is poised to change not only how doctors treat aortic aneurysms — but how patients experience life after diagnosis.

References:
1. Cho, M.J., Lee, MR. & Park, JG. Aortic aneurysms: current pathogenesis and therapeutic targets. Exp Mol Med 55, 2519–2530 (2023). https://doi.org/10.1038/s12276-023-01130-w
2. Marfan syndrome is a genetic disorder that affects the body's connective tissue and can weaken the aorta's walls.
3. A bicuspid aortic valve is a heart valve with only two leaflets instead of the usual three.

ARTICLE BY
NUHCS PULSE Editorial

Small Incision, Big Impact

NUHCS introduces Singapore's first minimally invasive CryoMaze treatment for Atrial Fibrillation



When a flutter becomes a warning

It often begins quietly: a flutter in the chest, a skipped beat, or a moment of breathlessness. Many brush it aside, but for a growing number of people, these signs point to Atrial Fibrillation (AF)[1], the most common heart rhythm disorder that affects about 597 million people globally[2]. At the National University Heart Centre Singapore (NUHCS), more than 80% of patients seen each year are affected by heart rhythm disorders, with about 10% related to AF[2].

Evolving treatment options for Valvular AF

Patients who suffer from heart valve conditions – including narrowed valves, improper closure of valves or floppy valves that causes leakage of blood flow – can often be treated through minimally invasive keyhole surgery, which avoids opening the chest and allows for faster recovery.

However, this changes once AF enters the picture.

Patients who require heart valve surgery and have AF become ineligible for minimally invasive approaches, as complete surgical ablation for AF could only be performed through a conventional median sternotomy – where the chest is fully opened. As a result, **even patients who were ideal candidates for minimally invasive valve repair previously had to undergo open-chest heart surgery if AF was involved.**

Conventional open-chest surgical ablation – using heat (radiofrequency) or cold (cryoablation) energy – has a documented success rate of over 70% in preventing AF recurrence[2]. However, the fully open-chest approach involves a significantly longer recovery time, often requiring two to four months before patients can return to their usual activities.

First to offer minimally invasive keyhole surgery

With AF cases getting more prevalent especially in this ageing population, NUHCS is spearheading the field of cardiac surgery by offering safer, less invasive options that reduce surgical risks and accelerate recovery.

In July 2024, NUHCS performed Singapore's first minimally invasive CryoMaze ablation for eligible patients with both valve conditions and AF. Since then, nine patients have undergone this procedure, also known as minimally invasive CryoMaze.

How the minimally invasive CryoMaze works

The CryoMaze technique uses extreme cold to create controlled scar lines that block abnormal electrical signals in the heart. Through a small keyhole incision between the ribs, a medical probe is guided into the heart, allowing surgeons to perform a complete CryoMaze pattern without opening the chest. By targeting a complete block of affected tissue, including areas that traditional thermal ablation may miss, the procedure offers a more reliable restoration of the heart's natural rhythm.

This **minimally invasive approach enables faster recovery and shorter hospital stays, allowing patients to return to their daily routines sooner.** The advanced CryoMaze technique can also be used to numb surgical wounds, reducing post-operative discomfort and enabling patients to move more freely shortly after surgery.

An AF patient's journey to recovery

Mdm Chen, a 70-year-old housewife, was unaware she had a heart condition until she began experiencing breathlessness while walking and swelling in her legs. Dr Chang Guohao, Consultant, Division of Adult Cardiac Surgery, Department of Cardiac, Thoracic and Vascular Surgery (CTVS), NUHCS, diagnosed her with tricuspid valve prolapse[3] which disrupted normal blood flow and triggered an irregular heartbeat – AF. Given her age and pre-existing conditions, traditional open-chest heart surgery would have posed significant risks. Following Dr Chang's recommendation, Mdm Chen underwent minimally invasive CryoMaze ablation. She experienced minimal post-operation pain, required only an eight-day hospital stay, and subsequent follow-ups showed no abnormalities, with her heart rhythm fully restored.

Redefining what heart surgery can be

By combining this cutting-edge keyhole surgery with other minimally invasive procedures in one seating, minimally invasive CryoMaze offers hope to patients suffering from both valve conditions and AF.

> ***"With minimally invasive CryoMaze now available at NUHCS, not only is the AF treatment safer and less traumatic for eligible patients with valvular heart conditions and requiring surgical ablations, but their recovery time is also reduced by about half."***
> ***– Dr Chang Guohao***

This innovative procedure provides a glimpse into the future of AF treatment, where smaller incisions can deliver bigger outcomes in reducing the global burden of this heart rhythm disorder.

Unlocking a new treatment pathway for patients whom previously had no option but open-chest heart surgery, CryoMaze embodies NUHCS' commitment to advancing cardiovascular care in step with evolving healthcare needs.

SCAN TO READ MORE ON MINIMALLY INVASIVE CRYOMAZE

Dr Chang with Mdm Chen

References:

1. ***Atrial Fibrillation** - Irregular, and often very rapid, heartbeat on the upper chambers, causing abnormal blood flow.*
2. *National University Heart Centre Singapore. (2025, October 17). NUHCS is first in Singapore to offer minimally invasive surgical alternative for patients suffering from dangerous heart rhythm disorder [Media Release]. https://www.nuhs.edu.sg/docs/default-source/newsroom-document/nuhs/2025/10-oct/final-media-release---nuhcs-mis-cryomaze-(002).pdf*
3. ***Tricuspid valve prolapse** - Where the heart valve leaflets bulge into the right atrium, during each heartbeat, causing backflow of blood.*

ARTICLE BY
NUHCS PULSE Editorial

Prof Tan Huay Cheem (third from left) opens AICT-AsiaPCR 2025 with an inspiring call to advance heart care across the region

CHARTING NEW HORIZONS AT AICT-ASIAPCR 2025

Driving collaboration and innovation in interventional cardiology

AICT-AsiaPCR 2025 opened in Singapore with energy, curiosity, and a shared mission to advance heart care across the Asia-Pacific region and beyond. The meeting brought together cardiologists, surgeons, nurses, trainees, and industry partners, creating a vibrant community focused on learning, sharing and innovating.

From its beginnings at the National University Hospital two decades ago, the meeting has grown into the official scientific conference of the Asia-Pacific Society of Interventional Cardiology (APSIC). Now partnering with the National University Heart Centre, Singapore (NUHCS), it is held alongside EuroPCR, the European Association of Percutaneous Coronary Intervention (EAPCI)'s main event[1], making it a truly international gathering.

About AICT-AsiaPCR

Formed in 2019, AICT-AsiaPCR is an educational platform built by local practitioners, with the support of centres of excellence in Asia Pacific and Europe, to focus on the diverse needs of patients in the landscape of interventional cardiology[2].

A global meeting hosted in the Asia Pacific region, this platform allows knowledge exchange between peers and the opportunity for healthcare professionals to showcase research and innovation, aimed at contributing to the latest developments in treatment and care possibilities to better serve the region's patients.

1027 Participants

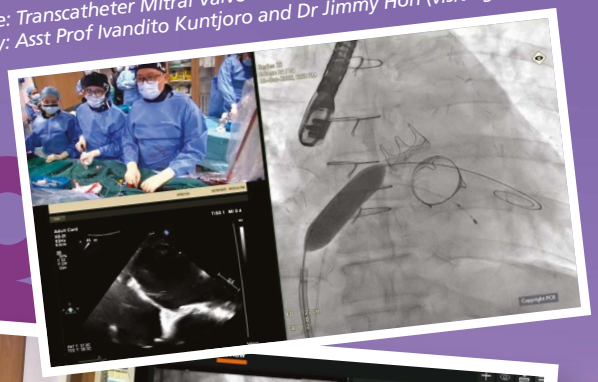
177 Faculty

112 Presenters

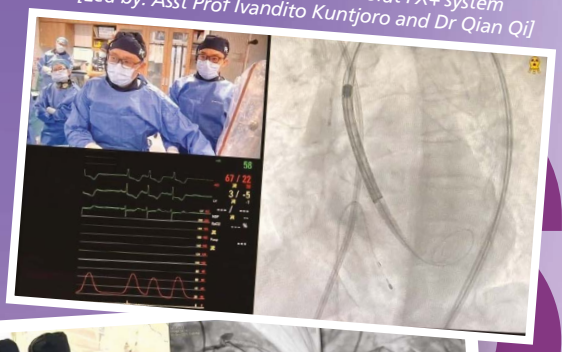
21 Industry partners

6 LIVE cases from 3 LIVE Centres

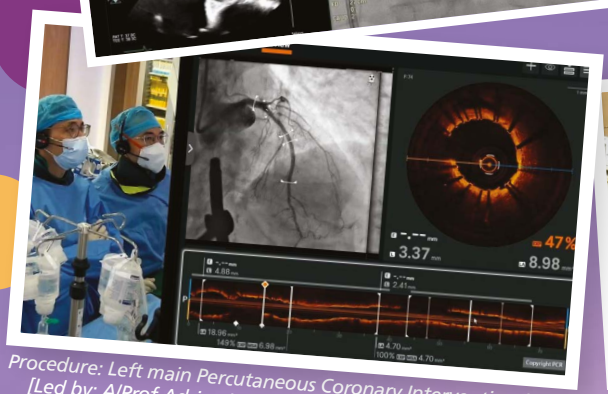
325+ Submissions



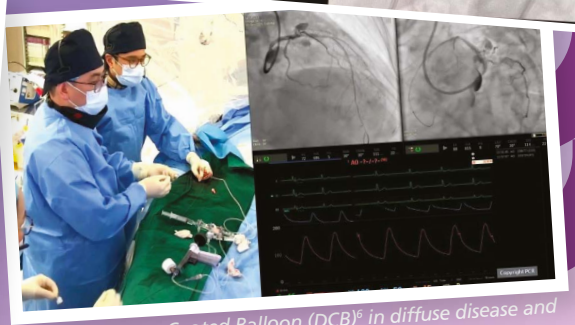
Procedure: Transcatheter Mitral Valve-in-Valve[3] in prior degenerated mitral valve [Led by: Asst Prof Ivandito Kuntjoro and Dr Jimmy Hon (visiting consultant)]



Procedure: Redefining precision and performance in Transcatheter Aortic Valve Implantation (TAVI)[4]: advancing clinical outcomes with the Evolut FX+ system [Led by: Asst Prof Ivandito Kuntjoro and Dr Qian Qi]



Procedure: Left main Percutaneous Coronary Intervention (PCI)[5] [Led by: AProf Adrian Low and Adj AProf Loh Poay Huan]



Procedure: Drug-Coated Balloon (DCB)[6] in diffuse disease and small vessels [Led by: AProf Mark Chan and Dr Gavin Ng]

Learning beyond the lecture hall

Over two days, delegates navigated a packed programme covering coronary, structural[7], and peripheral interventions. Formats ranged from symposia and case-based discussions to hands-on simulation labs, designed to deliver practical insights for both seasoned specialists and early-career clinicians to take away insights relevant to their daily practice.

Highlights included sessions on artificial intelligence and robotics, where speakers explored how big data and automation are shaping precision and safety in interventional cardiology. Complementing this were sessions on imaging advancements, lesion preparation[8] techniques, and mechanical circulatory support[9], showing just how fast the field is evolving.

Hands-on simulation remained a highlight. Participants practiced complex procedures, from TAVI implantation to PCI complication management, under expert guidance.

Bringing Real-World Practice to the Stage

Live case demonstrations are a signature feature of AICT-PCR. This year, institutions from Singapore, India, and Malaysia showcased cases that highlighted cutting-edge cardiovascular intervention techniques.

NUHCS, Singapore's only live transmission centre, presented four complex heart procedures, including coronary interventions, valve procedures, and advanced imaging-guided treatments. Delegates saw expert decision-making and teamwork unfold in real time, providing a rare and valuable learning experience.

Collaboration Across Borders

More than a scientific meeting, AICT-AsiaPCR 2025 fosters collaboration across borders by uniting faculty from diverse healthcare systems, creating opportunities for shared learning and cross-cultural exchange. Collaborative sessions with international professional societies further enriched the programme, each offering unique perspectives on techniques, technologies, and patient management strategies.

These interactions underscore the event's role not only as a scientific meeting, but as a regional bridge, linking countries, disciplines, and generations of clinicians in the shared mission of improving cardiovascular care.

Mark your calendars for 23–24 October 2026 when AICT-AsiaPCR returns to Singapore. It promises another year of learning, collaboration, and innovation that can make a difference in patient care.

References:

1. **European Association of Percutaneous Cardiovascular Interventions (EAPCI)** - a registered branch of the European Society of Cardiology (ESC).
2. **Interventional cardiology** - diagnosis and treatment of heart and blood vessel conditions using catheters.
3. **Transcatheter Mitral Valve-in-Valve** - a minimally invasive procedure to replace a failing surgical mitral heart valve by implanting a new valve inside the old one, avoiding open-heart surgery.
4. **Transcatheter Aortic Valve Implantation (TAVI)** - procedure used to treat severe aortic stenosis, a condition in which the aortic valve becomes narrowed and obstructs the outflow of blood from the heart.
5. **Percutaneous Coronary Intervention (PCI)** - a minimally invasive procedure whereby a catheter is inserted into one of the arteries through a small incision, also commonly known as stenting or ballooning.
6. **A Drug-Coated Balloon (DCB)** - a device used in Percutaneous Coronary Intervention (PCI) to treat narrowed heart arteries by delivering medication directly to the vessel wall. This prevents the vessel from re-narrowing without leaving a permanent implant.
7. **Structural interventions in cardiology** - minimally invasive procedures using catheters to fix problems with the heart's structure (valves, walls, vessels) without open-heart surgery, leading to faster recovery.
8. **Lesion preparation** - a medical procedure to modify a lesion, such as a plaque buildup in an artery, before a stent is implanted.
9. **Mechanical Circulatory Support (MCS)** - medical devices to help a weakened heart pump blood, either temporarily or permanently.

ARTICLE BY

Prof Tan Huay Cheem
Senior Advisor, NUHCS

Prof Tan is a Professor of Medicine at the Yong Loo Lin School of Medicine, National University of Singapore and holds a Master of Medicine in Internal Medicine. He is an active clinical researcher, visiting professor at several hospitals in China, and an invited speaker at many international cardiology meetings.

Bringing Cardiac Care Beyond Borders

NUHCS at the ESC Congress 2025

The packed main auditorium of the ESC Congress 2025 at IFEMA Madrid, teeming with excitement.

The world of cardiovascular medicine came alive once again at the European Society of Cardiology (ESC) Congress 2025 – the largest global gathering of heart specialists and researchers. Held from 29 August to 1 September 2025 at the impressive IFEMA in Madrid, the congress marked the 75th anniversary of ESC, drawing more than 33,000 participants and 6390 presenters from 169 countries under the theme of "Global Health: Cardiology Beyond Borders".

Highlights of Scientific Research Presentation

This year's congress was a showcase of scientific breakthroughs, with over 190 simultaneous publications and 10 Hot Line plus 42 Late-Breaking Science sessions, revealing findings that could redefine cardiovascular care.

Redefining Cardiovascular Risk Control

In line with the congress theme, emerging therapies for lipid (cholesterol) lowering and resistant hypertension took the spotlight. The ESSENCE CS9 TIMI 73b and BaxHTN trials introduced new approaches to managing these key cardiovascular factors.

Challenging existing treatment standards

Long-held practices were re-examined with new evidence. The REBOOT-CNIC and BETAMI-DANBLOCK trials (published in the New England Journal of Medicine) presented mixed results on the benefits of beta-blockers for post-myocardial infarction (heart attack) patients with heart function [Left Ventricular Ejection Fraction (LVEF)] of at least 40%.

Meanwhile, the DAPA ACT HF-TIMI 68 trial (published in Circulation[1]) remained the safety of starting Sodium-Glucose coTransporter-2 (SGLT-2) in-hospital inhibitors[2].

Revisiting anti-platelet therapy patients after a heart attack

Studies such as the NEO-MINDSET, TARGET-FIRST and DUAL-ACS trials highlighted the potential feasibility of shortening the duration of Dual Anti-Platelet Therapy (DAPT)[3] for patients after a heart attack. A *Lancet* meta-analysis also found clopidogrel monotherapy to be just as safe as aspirin.

Advances in Hypertrophic Cardiomyopathy (HCM)[4]

In the field of HCM, MAPLE-HCM trial (NEJM) showed Aficamten monotherapy to be superior to Metoprolol monotherapy, whilst the ODYSSEY-HCM trial (NEJM) reported the lack of benefit of *Mavacamten* in non-obstructive HCM.

New Guidelines, New Directions

ESC 2025 also introduced several new clinical guidelines and major clinical updates, shaping the next chapter of cardiovascular care.

Myocarditis[5] and Pericarditis[6]
Established definitions and terminology (including the new umbrella term "inflammatory perimyocardial syndrome"), along with stages of disease and diagnostic–treatment algorithms of these entities.

Cardiovascular Disease and Pregnancy
A shift from discouraging pregnancy in high-risk women towards a personalised, multi-disciplinary and shared decision-making approach across all pregnancy stages (pre-conception, pregnancy, delivery, post-partum and long-term).

Valvular Heart Disease[7]
Emphasis on accurate assessment of disease mechanisms, advanced imaging, and refined decision-making for managing aortic stenosis[8].

Dyslipidaemia[9]
Recommendations of new risk prediction algorithms (SCORE2 and SCORE2-OP), updated Low-Density Lipoprotein Cholesterol (LDL-C) lowering therapies, and tailored recommendations for specific patient groups, such as cancer patients with high chemotherapy-related cardiovascular toxicity risk, human immunodeficiency virus infection and immediate post-acute coronary syndrome period.

Mental Health and Cardiovascular Disease
A consensus statement highlight the multi-directional relationship between mental health conditions and cardiovascular disease.

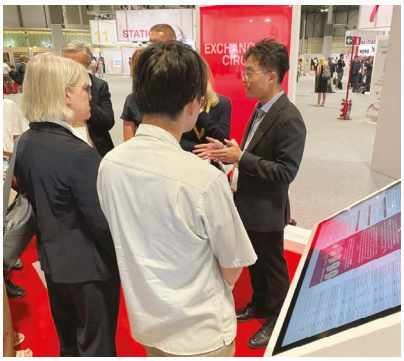
Leading in Strength and Science

The growing contingent representing National University Heart Centre, Singapore (NUHCS), once again made a strong impact at the ESC Congress 2025. Building on last year's achievements, the team led by Adj A/Prof William Kong, Senior Consultant, Department of Cardiology, NUHCS, Dr Sia Ching Hui, Consultant, Department of Cardiology, NUHCS, and Dr Benjamin Tung, Consultant, Department of Cardiology, NUHCS, co-authored over 25 abstracts and delivered 14 presentations, showcasing groundbreaking research that advances cardiovascular science and patient care.

NUHCS experts were also featured prominently in discussions and panels. Dr Sia Ching Hui joined renowned global expert Prof Greg Lip in a session on Atrial Fibrillation[10] management, while Adj A/Prof William Kong, Dr Sia Ching Hui and Dr Sim Hui Wen from the Department of Cardiology, NUHCS, served as faulty moderators for various abstract and poster sessions – reflecting NUHCS' growing international recognition in cardiovascular research and care.

▲ *NUHCS representatives ready to showcase their research at the ESC conference.*

Contingent of clinicians, researchers and collaborators at the ESC Congress 2025!



▲ *Senior and Junior Residents (Dr Elizabeth Thong, left image, and Dr Teo Yao Hao, right image) presenting their research on aortic stenosis and cognitive function in post-myocardial infarction patients respectively.*

Milestones and Renewed Inspiration

This year's congress held special significance as Dr Sia Ching Hui was conferred the title of Fellow of the European Society of Cardiology (FESC) – a proud moment for NUHCS.

After four inspiring days in Madrid, the NUHCS team returned energised and grateful, ready to channel the same passion and momentum from the global stage into advancing patient care at home.

Dr Sia Ching Hui (left) in a discussion on "Managing of Atrial Fibrillation: A Global Perspective".

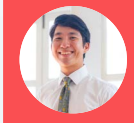
References:

1. **Circulation** – One of the world's top peer-reviewed scientific journal publications in cardiovascular research, by the American Heart Association (AHA).
2. **SGLT-2 inhibitors** – Medications that block proteins in the kidneys from reabsorbing glucose from the urine back into the bloodstream.
3. **Dual Anti-Platelet Therapy (DAPT)** – A treatment using two types of blood-thinning medications to stop platelets from forming clots.
4. **Hypertrophic Cardiomyopathy (HCM)** – A condition where the heart muscle becomes abnormally thick, making it harder for the heart to pump blood properly.
5. **Myocarditis** – A condition where the heart muscle becomes inflamed, typically from infections or viruses, making it harder for the heart to pump blood properly.
6. **Pericarditis** – A condition where the outer sac lining of the heart is inflamed, typically from viral infections or post-heart attacks, causing friction and pressure around the heart.
7. **Valvular Heart Disease** – A condition where one or more of the heart's valves are damaged and/or loses function.
8. **Aortic Stenosis** – A condition where aortic valves in the heart becomes narrowed, making it harder for blood to flow.
9. **Dyslipidaemia** – Abnormal levels of fats (lipids) in the blood, posing a risk factor for cardiovascular disease.
10. **Atrial Fibrillation** – A heart rhythm disorder where the heart's upper chambers beat irregularly and often very rapidly.

ARTICLE BY

Dr Elizabeth Thong
Senior Resident, Department of Cardiology, NUHCS

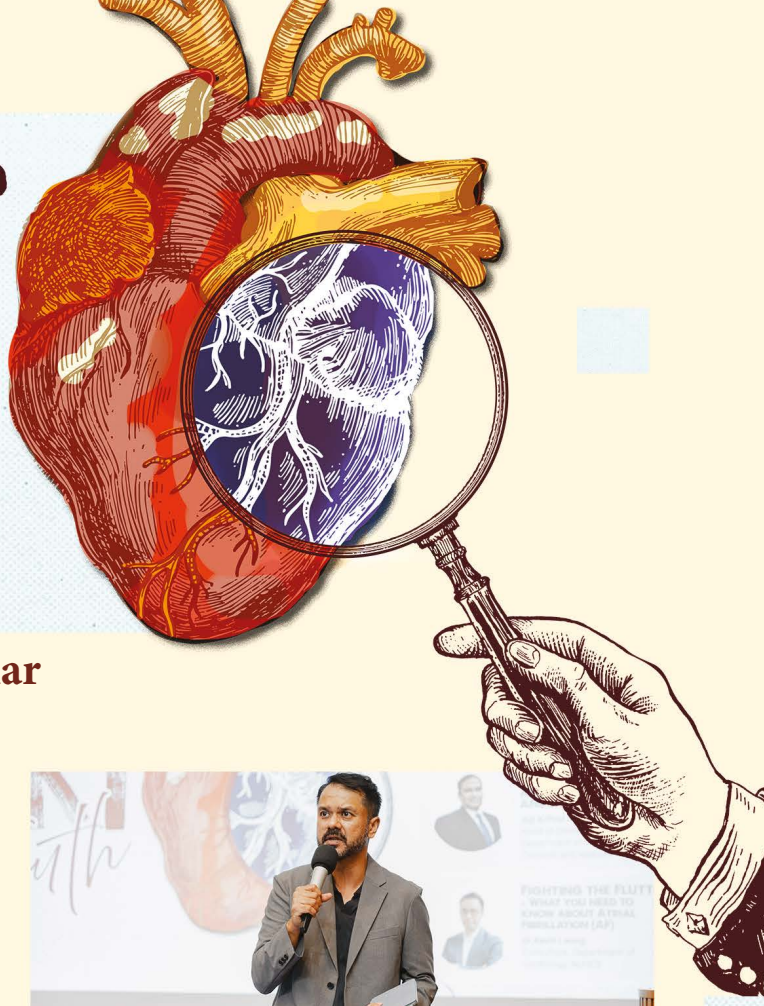
Dr Elizabeth Thong is currently in her second year of training. She is a happy mother to a lovely one-year-old son and enjoys baking, going on long walks and spending time with her family when she is not busy saving lives in the hospital!



Dr Christopher Low
Junior Resident, NUHS

Dr Christopher Low is currently in his second year of training. He enjoys going for runs and harbours hopes to hike all of the world's most scenic routes. Coffee is essential to start his day, and wine often accompanies the end of his week.

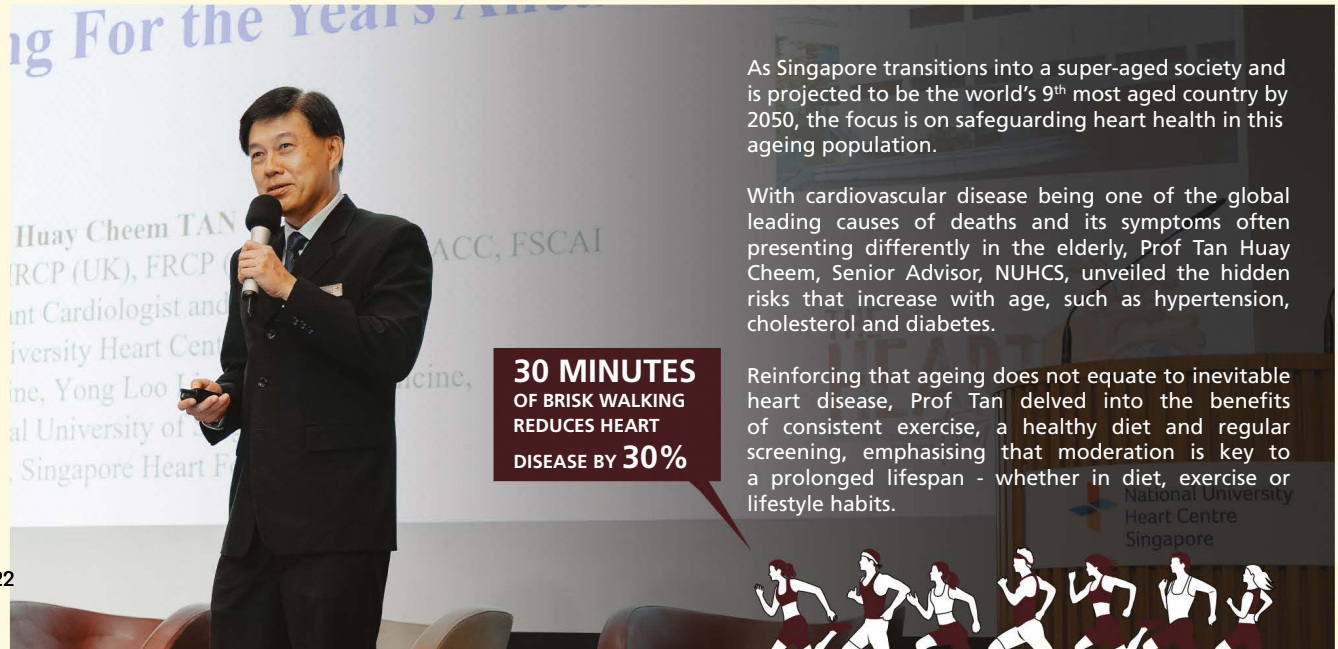
"THE HEART TRUTH" SYMPOSIUM 2025



Uncovering hidden cardiovascular risks to protect one's health

The National University Heart Centre, Singapore (NUHCS) spotlighted cardiovascular care with its annual public health talk, "The Heart Truth", held on 26 July 2025. Designed to uncover the hidden, but harsh realities of cardiovascular conditions, the event delivered a powerful mix of expert insights and practical tips on heart health, led by NUHCS' cardiologists and surgeons.

Conducted in English and hosted by CNA938 presenter Daniel Martin, this year's edition pulsed with vital conversations on cardiovascular wellness, analysing crucial topics on keeping an ageing heart strong, exercising safely with heart disease, and recognising the telltale signs of common heart conditions.



As Singapore transitions into a super-aged society and is projected to be the world's 9th most aged country by 2050, the focus is on safeguarding heart health in this ageing population.

With cardiovascular disease being one of the global leading causes of deaths and its symptoms often presenting differently in the elderly, Prof Tan Huay Cheem, Senior Advisor, NUHCS, unveiled the hidden risks that increase with age, such as hypertension, cholesterol and diabetes.

Reinforcing that ageing does not equate to inevitable heart disease, Prof Tan delved into the benefits of consistent exercise, a healthy diet and regular screening, emphasising that moderation is key to a prolonged lifespan - whether in diet, exercise or lifestyle habits.

Can you exercise after a heart attack, or is working out too risky for those with heart disease?

Dr Yeo Tee Joo, Director, Cardiac Rehabilitation Unit, NUHCS, tackled these pressing concerns by busting common misconceptions and revealing how regular physical activity is not just safe for many heart patients, but can be a powerful ally in recovery and long-term heart health.

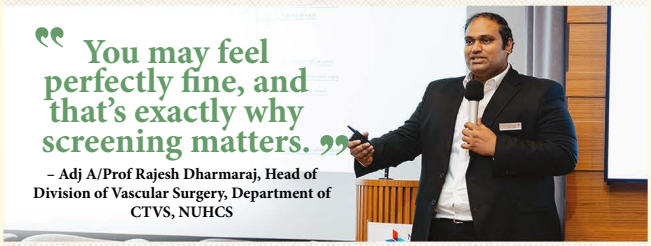
Bringing his insightful advice to life, Dr Yeo guided participants through a quick stretch amidst his talk to promote the importance of blood circulation and shared how exercise intensity can be measured through one's ability to converse, whereby the harder it is to sing or talk, the more vigorous the exercise is.

Citing the inspiring story of 87-year-old Dr C. K. Murthy who completed a half-marathon after undergoing two heart surgeries in 2024, Dr Yeo highlighted the vital role of the **NUHCS Cardiac Rehabilitation Programme** in supporting safe and effective recovery with personalised exercise plans, restoring physical strength and confidence in heart patients.

(To find out more about Dr Murthy's remarkable journey, check out PULSE Issue 44!)

Not every heart flutter in your chest is just a passing thrill – it could signal Atrial Fibrillation (AF), the most common heart rhythm disorder worldwide. Often silent, AF can lead to the formation of blood clots and quietly increase your risk of stroke.

Dr Kevin Leong, Consultant, Department of Cardiology, NUHCS, explained that 15-30% of people with AF show no symptoms, making awareness and early detection essential. He also demonstrated simple ways to check your own pulse for irregular heartbeats, empowering participants to take proactive steps. "Prevention is always better than cure." Dr Leong stressed, equipping the audience with actionable tips to manage their heart health before problems arise.



> "You may feel perfectly fine, and that's exactly why screening matters."
>
> – Adj A/Prof Rajesh Dharmaraj, Head of Division of Vascular Surgery, Department of CTVS, NUHCS

One of the silent threats to your heart and blood vessels is an Abdominal Aortic Aneurysm (AAA), where a section of the aorta – the body's main blood vessel – swells quietly, often without warning. If unnoticed, the swell can become life-threatening with a risk of rupture.

Adj A/Prof Rajesh Dharmaraj, Head of Division of Vascular Surgery, Department of Cardiothoracic and Vascular Surgery (CTVS), NUHCS, explained how early detection is crucial. He also introduced a complimentary aortic screening study for men aged 65 and above with certain risk factors, including coronary artery disease, hypertension, and a history of smoking. This study could catch AAA early before it becomes critical and allow timely intervention.

"AAA is a ticking time bomb, but it is preventable if detected early," he reminded the audience, urging eligible participants to take advantage of the screening.

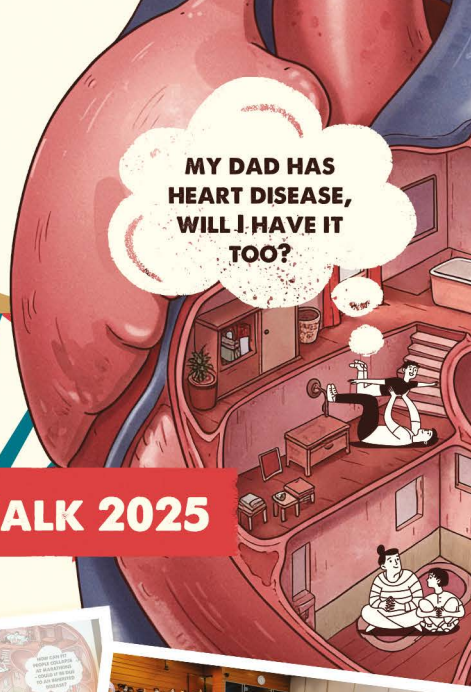
Concluding on a high note, the symposium ended with an engaging Q&A session, where participants eagerly posed questions and tapped into the expertise of the speakers. The event ended on a cheerful note as five lucky participants were invited on stage for a lucky draw. Every attendee also left with a hearty goodie bag and bento set, courtesy of NUHCS and their various supporting partners.

Year after year, NUHCS' "The Heart Truth" symposium continues to do more than simply share medical facts. It empowers the community to understand their heart health, take preventive steps, and make informed choices. Through expert discussions, real patient stories, and practical tips, participants leave having gained not just new knowledge but also the confidence to build healthier habits that last.

NUHCS remains committed to supporting the public in staying heart-healthy. The next public symposium in mid-2026 will be conducted in Mandarin. Keen to be part of the audience? Stay tuned to NUHCS' social pages for the latest update!

ARTICLE BY
NUHCS PULSE Editorial

IS HEART DISEASE IN YOUR GENES?



INHERITED CARDIAC CONDITIONS HEALTH TALK 2025

Heart disease does not always announce itself. For some, a serious cardiac event can strike without warning – but sometimes, the clues are hidden in our genes.

On 4 October 2025, the National University Heart Centre, Singapore (NUHCS) invited the public to uncover these hidden risks at the Inherited Cardiac Conditions (ICC) health talk, drawing a full house of participants keen to understand how family history and genetics can shape heart health. Bringing together experts in cardiovascular genetics and preventive care, the session shed light on inherited cardiac conditions that often remain silent until it is too late.

GENETICS AND THE HEART: WHAT RUNS IN THE FAMILY

"Inherited cardiac conditions can affect the heart's structure, rhythm, or blood vessels, often long before symptoms appear," shared Dr Tony Li, Associate Consultant, Division of Cardiology, Department of Medicine, NUHCS @ Ng Teng Fong General Hospital (NTFGH). These conditions may be passed down through generations, sometimes without obvious warning signs.

Common examples include inherited cardiomyopathies, heart rhythm disorders, and genetic cholesterol disorders. While they differ in presentation, many share a troubling trait – the potential to cause sudden cardiac events, even in seemingly healthy individuals.

Dr Li emphasised that understanding one's family history is often the first and most powerful step. Knowing who in the family has experienced early heart disease, fainting episodes, or sudden cardiac deaths can offer critical clues long before symptoms surface.

Dr Tony Li
Associate Consultant, Division of Cardiology, Department of Medicine, NUHCS @ NTFGH

Read more about ICC in our 'Genetic Testing For Inherited Cardiac Conditions' brochure:

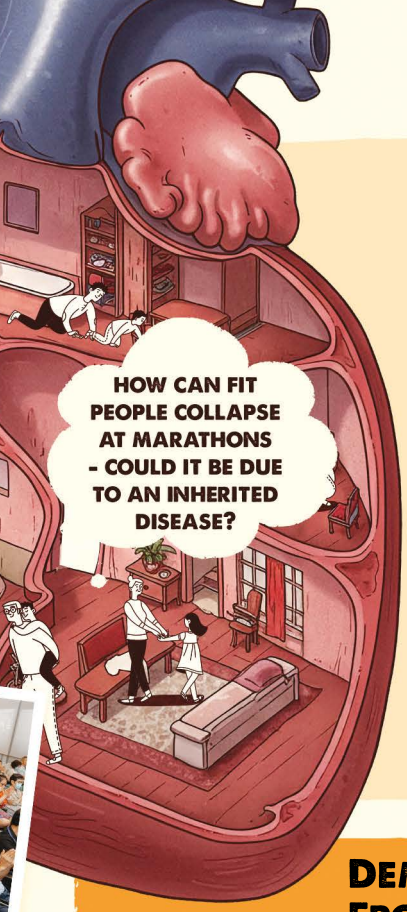
HIDDEN RISKS: WHEN A HEALTHY HEART ISN'T WHAT IT SEEMS

Many inherited heart conditions can remain undetected for years. Dr Kevin Leong, Consultant, Department of Cardiology, NUHCS @ National University Hospital (NUH), highlighted that individuals may feel perfectly well until a sudden cardiac event occurs.

Early risk assessment involves looking beyond routine health checks. Family history, unexplained blackouts, palpitations, breathlessness, or fainting spells may signal the need for further evaluation.

The good news? Treatment options have advanced significantly. From medications and lifestyle adjustments to Implantable Cardioverter Defibrillators (ICDs), today's treatments can alter the trajectory of ICCs, especially for high-risk individuals, such as survivors of cardiac arrest. Dr Leong also shared how newer ICD technologies are becoming safer and more tailored to individual patient needs, offering protection with improved comfort and quality of life.

Dr Kevin Leong
Consultant, Department of Cardiology, NUHCS @ NUH



Family First: How Heart Conditions Can Travel Through Generations

Heart conditions can travel through families in different inheritance patterns, explained Ms Jessica Gan, Senior Case Management Officer, NUHCS. Some affect men and women equally, while others may be more severe in males or passed down through the maternal line.

To identify family members at risk, cascade screening of family members of affected individuals plays a crucial role. Regular heart screenings such as Electrocardiograms (ECGs), echocardiograms, or cardiac Magnetic Resonance Imaging (MRI) scans can also help detect early signs of heart disease, even in those who seem healthy.

CASCADE SCREENING

Begins with genetic testing of the affected individual

If a disease-causing gene is found:	if positive:
First-degree relatives (parents, siblings, children) will be offered counselling and testing	**Second-degree relatives** (aunts, uncles, nieces, nephews) are screened next

Ms Jessica Gan
Senior Case Management Officer, NUHCS

Demystifying Genetic Testing: From DNA to Diagnosis

Genetic testing helps identify the underlying causes of inherited heart disease. The testing process involves analysing DNA from a saliva sample, cheek swab or blood test. Results can guide personalised care, inform family members, and support preventive strategies.

Importantly, a positive genetic result does not mean disease is inevitable. Even within the same family, symptoms and severity can vary widely.

Ms Yanni, Senior Case Management Officer, NUH, also addressed **common myths:**

Myth: "Inherited heart diseases can skip generations."

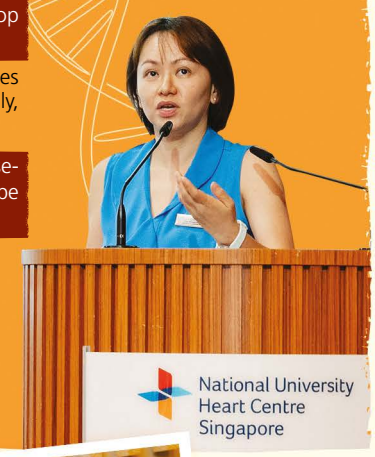
Truth: When symptoms are silent, it may seem that the disease has skipped a generation, but this is rarely the case. Anyone with a family history is recommended to be tested.

Myth: "A positive result means I'll definitely develop a heart condition."

Truth: Carrying a gene variant increases risk but does not guarantee disease. Even within the same family, symptoms can differ widely.

Myth: "My father tested positive for the disease-causing gene. I look like him so my result will be positive too."

Truth: Physical resemblance does not determine gene inheritance. Each child has a 50% chance of inheriting a variant.



Ms Yanni Chen
Senior Case Management Officer, NUH

The session concluded with an engaging Q&A, where participants sought clarity on genetic risks, testing, and next steps. Many left with a renewed understanding that while genetics may shape risk, awareness and early action can make a life-saving difference.

Key takeaways from the ICC Health Talk:

- ***Know your family's heart health history***
- ***Watch for warning signs, even subtle ones***
- ***Consider genetic testing when recommended***
- ***Keep up with regular heart screenings***

Silent heart conditions are real, but they do not have to remain hidden. Through education, early detection, and proactive care, lives can be protected across generations. Follow NUHCS on social media for updates on future talks and initiatives promoting better cardiovascular health!

ARTICLE BY
NUHCS PULSE Editorial

Small Gifts, Big Hearts 2025

Raising funds to bring hope to financially disadvantaged patients

A special moment captured: the mother of a nurse (back row, middle) joined the NUHCS family in this meaningful initiative.

Each day, the Medical Technologists[1] at the National University Heart Centre, Singapore (NUHCS) perform ultrasound scans, operate complex equipment, and work closely with cardiologists, researchers, and fellow staff to ensure patients receive the highest quality care.

But their dedication doesn't stop when the clinic doors close. Every year, these professionals organise Small Gifts, Big Hearts — a fundraising event celebrating community, creativity, and compassion. For the third instalment of the event on 28 November 2025, they teamed up with the NUHCS administration team to crochet over five hundred pouches and keychains to distribute as tokens of appreciation for in-person donations made at the fundraising booth.

The 2025 event was a remarkable success, with generous donors redeeming every single item and raising over $15,000 for financially disadvantaged patients. More than just a fundraising activity, Small Gifts, Big Hearts 2025 celebrated unity, gratitude, and the shared belief that every contribution, no matter how small, helps make every heartbeat count.

Stay tuned for the next fundraising event in November 2026! Join us in continuing to spread compassion and support the hearts that need it most.

About the NUHCS Heart Fund

A sub-fund of the NUHS Fund, the NUHCS Heart Fund was established to assist financially disadvantaged patients in their journey towards better heart health. 69% of applications[2] to the NUHCS Heart Fund came from the community's lowest 20% per capita income group, emphasising the need for financial support.

The generosity of donors to the NUHCS Heart Fund provides renewed hope to financially disadvantaged patients. With 100% of every donation going directly towards supporting the healthcare needs of our NUHCS financially disadvantaged patients, every donation matters to empower patients in rebuilding a healthier, better tomorrow!

Keen to make a difference?

Scan the QR code to make a donation!

Donations of $10 or more are eligible for tax deductions of 2.5 times the donated amount. 100% of your donations go towards helping our patients in financial need.

For further queries, please contact **nuhcs@nuhs.edu.sg**

References:

1. **Medical technologist:** A healthcare professional who performs laboratory tests and procedures to assist in diagnosing and treating diseases. They analyse bodily fluids, tissues, and operate laboratory equipment to provide doctors with the information needed for accurate diagnoses.
2. Data as of Aug 2024 - Jul 2025 Donor Report.

ARTICLE BY
NUHCS PULSE Editorial

A support group like no other

What kept the Caring Hearts Support Group (CHSG) curious, connected, and excited

About CHSG

A volunteer initiative *by* patients *for* patients at NUHCS, this support group was launched with the vision to build an inspiring and caring heart patient support group that stays connected, while supporting fellow cardiac patients and the community through each other's journey to remain heart healthy.

Join CHSG!

Membership is open to heart patients who have completed the Basic Cardiac Rehabilitation Programme at NUHCS. For more information about CHSG or to join CHSG, please contact Magdalene Chia, Volunteer Lead, at **mchia@kucinta.com**.

"It's hard to believe how quickly the months have flown by. 2025 has been filled with meaningful milestones, enriching events, and valuable training opportunities — all rooted in our shared commitment to better health and compassionate care.

Building confidence for CPR through hands-on practice

Strengthening Life-Saving Skills

In July 2025, 17 of our members successfully completed the CPR + AED[1] certification course — our highest participation yet. This strong turnout gives us confidence that more of our community is prepared to act swiftly in the face of cardiac emergencies, reinforcing the simple truth that every trained individual can make a life-saving difference.

Staying Informed on Heart Health

As we strengthened our emergency response skills, we also deepened our understanding of heart health. In July, we attended The Heart Truth public symposium event by NUHCS, a series of talks that highlighted practical ways to stay heart-healthy. Sessions on ageing, safe exercise, and often silent conditions like Atrial Fibrillation[2] reminded us of the value of early detection and the importance of simple, consistent lifestyle habits in preventing complications.

Eager to broaden our perspective, we also joined the 12th HTAsiaLink Conference 2025 in August, where regional leaders discussed how Health Technology Assessment (HTA)[3] guides better healthcare decisions. The emphasis on collaboration and evidence-based evaluation gave us, as heart patients ourselves and an overall support group for fellow patients, a deeper appreciation of how new technologies are reviewed for safety, effectiveness, and value — insights that help us understand the broader system shaping patient care.

Driven by the same curiosity, we attended the talk "Is Heart Disease in Your Genes?" The session deepened our understanding of how inherited cardiac conditions can remain silent, renewing our commitment to raising cardiovascular awareness within our community.

Equipping Ourselves for Dementia Support

Continuing our education beyond heart health, we turned our attention to dementia — an increasingly important concern in our ageing population. To better support those affected, a number of our members completed dementia care courses, with some even earning certifications. These efforts empower us to make a meaningful difference in the lives of individuals and families facing dementia.

CHSG explores heart wellness together at The Heart Truth Symposium

Celebrating SG60 with members who marked their own 60th milestone this year

Celebrating SG60

We don't just learn, we have fun too! Beyond being a support group, we are first and foremost friends, brought together by shared experiences and a genuine sense of belonging. In August, we marked Singapore's 60th National Day with a heartfelt gathering made extra special by honouring members who also turned 60 this year! It was a time of music, reflection, and gratitude, as we celebrated not just a national milestone but also personal journeys of overcoming heart conditions and embracing life.

Sustainable Wellness in September

Building on these moments of introspection, we continued to nurture well-being through mindful and engaging activities. During World Heart Month in September, our members took part in an eco-friendly workshop. This hands-on session taught us how to repurpose used coffee grounds into natural body scrubs, promoting both self-care and sustainability. Our senior members especially enjoyed the activity, which beautifully combined wellness with environmental awareness.

Repurposing coffee grounds for eco-friendly self-care

A Fitting Finale

We ended the season on a high note by taking part in the Singapore Prevention and Cardiac Rehabilitation Symposium (SPCRS) on 4 October.

CHSG brings heart and energy to SPCRS 2025

Our community delivered a spirited performance under the theme "Championing Heart Health Through Movement." The warm response from the audience reaffirmed our belief in the power of connection, creativity, and shared purpose.

Looking Ahead

2025 has been a year of learning, connection, and steady progress. Through training, shared experiences, and community initiatives, we've continued to support one another in health and in life. As we look ahead, we remain committed to advancing heart health and strengthening our community. Guided by the principle "*Caring begins with me*," we will keep taking small, meaningful steps that create a kinder and healthier community for all.

ARTICLE BY
Magdalene Chia
Volunteer Lead, Caring Hearts Support Group (CHSG)

References:

1. **Cardiopulmonary Resuscitation (CPR)** is a technique to manually pump blood and provide air to the lungs. An **Automated External Defibrillator (AED)** is a portable device that uses electric shocks to restore a normal heart rhythm during a sudden cardiac arrest. Together, CPR and AED are critical emergency skills that significantly increase the chances of survival for someone in cardiac arrest.
2. **Atrial Fibrillation** is the most common heart rhythm disorder where the heart's upper chambers quiver chaotically instead of beating effectively, causing an irregular heartbeat, poor blood flow, and increased risk of blood clots, stroke, and heart failure.
3. **Health Technology Assessment (HTA)** is a multidisciplinary process that systematically evaluates the properties, effects, and impacts of health technologies, such as drugs, devices, and procedures.

TAKING HEART HEALTH TO THE HEARTLANDS

Inside NUHCS World Heart Month 2025 at Keat Hong Community Club

Cardiovascular disease remains the leading cause of death worldwide, claiming one in five lives prematurely. In Singapore, the impact is even greater — nearly one in three deaths is due to heart disease or stroke. Alarming statistics reveal that heart attacks among younger adults are on the rise, with up to 20 per cent of people under 40 already suffering from high blood pressure, high cholesterol, or both.

Recognising this urgent public health challenge, the National University Heart Centre, Singapore (NUHCS) partnered with community organisations to organise World Heart Month 2025. By bringing vital heart health education and screenings directly to the heartlands, the event empowered Singaporeans to understand their cardiovascular health and take small, practical steps toward prevention.

Guest-of-Honour Dr Tan See Leng, Minister for Manpower, Minister-in-charge of Energy and Science and Technology & Adviser to Chua Chu Kang GRC GROs, kicks off the event with an inspiring address on the importance of regular health screenings

Guest-of-Honour Mr Zhulkarnain Abdul Rahim, Minister of State for Foreign Affairs, and Minister of State for Social and Family Development & Member of Parliament for Chua Chu Kang GRC (Keat Hong)

On 13 September 2025, more than 800 participants gathered at Keat Hong Community Club for World Heart Month 2025. The event featured a lively mix of health checks, educational talks, and interactive activities designed to engage people of all ages. Participants left not only better informed but also motivated to incorporate healthier habits into their daily lives.

Health Checks for Early Detection

Early detection can save lives. NUHCS offered a range of assessments, including Electrocardiogram (ECG)[1] tests, blood pressure, cholesterol, and blood sugar checks.

The NUHCS nursing and vascular medical technologist team also screened for Peripheral Arterial Disease (PAD)[2] on-site. Physical

A participant undergoing an ABI test that assesses blood flow in legs

examinations of participants' legs and feet helped identify signs of PAD, and those with abnormal findings could undergo an Ankle-Brachial Index (ABI) test[3] to assess for narrowed arteries in the limbs.

Following the assessments, nurses provided personalised advice on foot care and referred participants to polyclinics or General Practitioners (GPs) for further medical follow-up when necessary.

A nurse measures a participant's blood pressure as part of the health checks provided to the community

Talks and activities for better heart health

Beyond health screenings, the event featured an engaging line-up of informative health talks and fitness activities. Adj A/Prof Lim Toon Wei, Head of Community Cardiology, NUHCS, delivered a talk titled "When Your Heart Misses a Beat — Should You Worry?", where he shed light on irregular heart rhythms, when to seek medical attention, and the importance of timely intervention.

Adj A/Prof Lim Toon Wei explains various heart rhythm disorders and provides valuable insights on recognising symptoms that warrant immediate medical attention

Did you know that your feet can reveal the state of your heart?

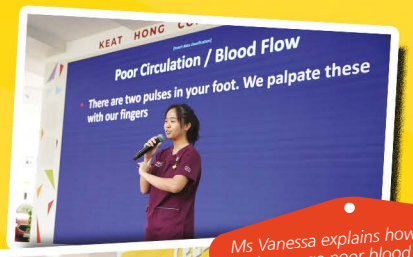
Foot health and heart health are closely linked. Poor circulation, often associated with heart disease, can manifest in the feet as swelling, coldness, numbness, slow-healing sores, or cramping.

At the same time, healthy feet help support good circulation, making proper foot care both an important indicator of heart health and a way to boost cardiovascular well-being.

Complementing this, Ms Vanessa Teo, Senior Podiatrist[4], Department of Rehabilitation, National University Hospital (NUH), presented "Caring For Your Feet — Practical Tips For Good Foot Health", offering practical advice on maintaining healthy feet as part of overall cardiovascular care.

After the talks, participants were encouraged to put knowledge into action. Mr Qamaruzaman Bin Syed Gani, Principal Physiotherapist, Cardiac Rehabilitation Unit, NUHCS, led a heart-healthy aerobic session, introducing simple yet effective exercises that participants could easily incorporate into their daily routines to support long-term heart health.

The World Heart Month event ended on an inspiring note, with participants walking away not only better informed but also motivated to take small, practical steps towards a healthier lifestyle. Mark your calendars – World Heart Month returns in September 2026 with more exciting activities and opportunities to learn, move, and live heart-healthy!



Ms Vanessa explains how to spot and manage poor blood circulation in one's foot

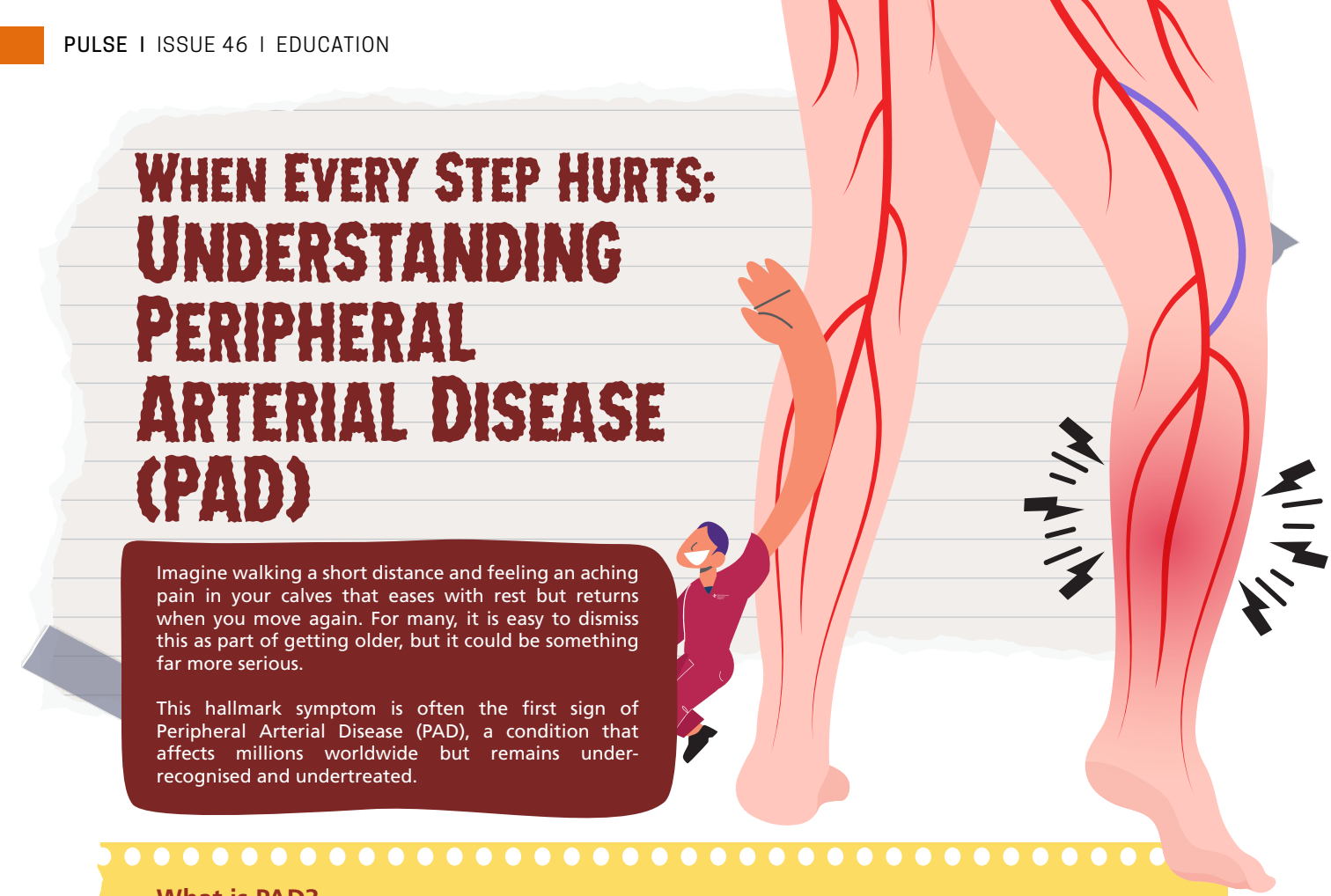
Mr Qamaruzaman (left) leads participants through simple stretches

References:

1. **Electrocardiogram (ECG)** – a non-invasive medical test that records the electrical activity of the heart over time. This helps diagnose various heart conditions, including abnormal heart rhythms and the effects of a heart attack.
2. **Peripheral Arterial Disease (PAD)** – a common condition in which narrowed arteries - usually caused by a buildup of fatty deposits in the arteries - reduce blood flow to the arms or legs. This may cause leg pain when walking, numbness, and possible limb amputation in severe cases.
3. **Ankle-Brachial Index (ABI) test** – a simple, non-invasive diagnostic tool that compares the blood pressure in the ankles to that in the arms to detect Peripheral Arterial Disease.
4. **Podiatrists** – allied health professionals who specialise in treating and preventing disorders of the foot, ankle, and lower leg.

ARTICLE BY
NUHCS PULSE Editorial

When Every Step Hurts: Understanding Peripheral Arterial Disease (PAD)



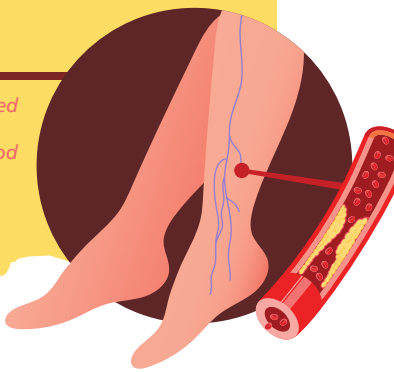
Imagine walking a short distance and feeling an aching pain in your calves that eases with rest but returns when you move again. For many, it is easy to dismiss this as part of getting older, but it could be something far more serious.

This hallmark symptom is often the first sign of Peripheral Arterial Disease (PAD), a condition that affects millions worldwide but remains under-recognised and undertreated.

What is PAD?

PAD occurs when the arteries supplying blood to the limbs – most commonly the legs – become narrowed or blocked by a buildup of fatty deposits along the vessel walls, known as atherosclerosis. This reduces blood flow, depriving leg muscles and tissues of oxygen, especially during physical activity.

While PAD primarily affects the legs, it is also a red flag for widespread Cardiovascular Disease (CVD). Individuals with PAD are at higher risk of heart attack, stroke, and if left untreated, can even lead to limb loss.



In PAD, narrowed arteries restrict the flow of blood to the limbs.

PAD and Diabetes: A Dangerous Duo

Diabetes significantly increases the risk of developing PAD. Over time, high blood sugar can damage blood vessels and nerves, leading to poor circulation and reduced sensation in the legs and feet.

This combination makes PAD particularly dangerous for people with diabetes:

- Diabetics may not be able to feel when they have classic leg pains, as nerve damage (neuropathy) can mask symptoms.
- Wounds and ulcers on the feet heal more slowly, raising the risk of infections.

If left unchecked, these small wounds can turn into serious complications that are difficult to heal. Hence, it is crucial to recognise the early warning signs before complications develop.

Spotting the Warning Signs

Early detection is critical, yet PAD often goes unnoticed until advanced stages. Common symptoms include:

- Leg pain when walking
- Numbness or weakness in the legs
- Change in the colour of the legs (pale or bluish)
- Muscle pain or cramping in the arms or legs, often in the calf
- Slow-healing wounds or ulcers on feet or legs
- Weak or absent pulse in the legs or feet

Up to half of all people with PAD may experience no symptoms, making early screening especially important for individuals aged 50 and above, or those with risk factors such as diabetes, smoking, hypertension, or high cholesterol.

Why PAD is a Serious Concern

Reduced blood flow in the legs means less oxygen reaches your tissues. Even small cuts or blisters can struggle to heal, raising the risk of infection, gangrene[1] and, in severe cases, amputation.

Without proper treatment, PAD can:

- **Delay wound healing**
- **Cause infections that are difficult to treat**

Diagnosis and Treatment

Accurate diagnosis is key, and at NUHCS, patients benefit from the Intersocietal Accreditation Commission (IAC) accredited Diagnostic Vascular Laboratory, ensuring the highest standards in vascular imaging and testing. A simple, non-invasive Ankle-Brachial Index (ABI) test, which compares the blood pressure in the ankle and arm, often serves as the first step. For more detailed assessments, further imaging such as ultrasound or Computed Tomography (CT) scan may be recommended by the vascular specialist.

Treatment focuses on improving blood flow through a combination of:

- Lifestyle changes, including quitting smoking, exercising regularly, and keeping blood sugar, cholesterol, and blood pressure under control.
- Medications that help prevent blood clots and lower harmful cholesterol.
- Procedures or surgery, if blood flow remains severely restricted.

At NUHCS, patients are cared for by a multidisciplinary team, including vascular specialists, podiatrists, wound-care nurses, and physiotherapists. Together, they help patients regain mobility, heal better, and avoid limb loss.

When to seek help?

If you notice leg pain while walking or persistent non-healing wounds on your feet, do not ignore the signs. PAD can be managed, especially when detected early.

A Step Towards Healthier Feet

PAD does not have to slow you down. With early diagnosis, proper foot care, and a healthier lifestyle, most people can walk comfortably and stay active for years to come.

Awareness is key: understanding your risks, taking preventive action, and seeking help early. Protecting your feet today can mean safeguarding your independence tomorrow.

SCAN QR CODE
to learn more about taking care of your feet!

References:
1. Gangrene is the death of body tissue due to a lack of blood supply or a serious bacterial infection.

ARTICLE BY
NUHCS PULSE Editorial

EVERYDAY HEROES

Honouring the recipients of the SCDF Community First Responder Award

When emergencies strike, it is often the courage and initiative of those in the vicinity that make all the difference. To honour such selfless acts of the everyday heroes, the Singapore Civil Defence Force (SCDF) presents the Community First Responder Award in recognition of their quick thinking and compassion. It is an honour to have two of NUHCS' nurses be conferred this award for their exemplary life-saving actions.

A MOTHER AND SON ON A MISSION

It was an ordinary evening for NUHCS' Nurse Clinician, Adeline, and her teenage son, Dylan, when an emergency alert suddenly buzzed on Adeline's mobile phone via the *myResponder app*. Ironically, they had just been discussing on hospital-related emergency situations moments before the notification arrived. Without hesitation, the pair sprang into action and rushed toward the location as directed by the app.

Trained in basic Cardiopulmonary Resuscitation (CPR) and first aid through the St. John Brigade, Dylan reacted swiftly, dashing out to offer help even before his mother could respond. For Adeline, who had initially downloaded the app with the intention of contributing back to the community, naturally got into action as well - fully aware as a healthcare professional that every second counted in such critical cardiac situations.

myResponder App

The *myResponder* app by the SCDF alerts nearby members of the public, known as Community First Responders (CFRs), to cardiac arrest and fire cases within 400 metres. CFRs can then step in to perform Cardiopulmonary Resuscitation (CPR), use an Automated External Defibrillator (AED), put out minor fires, or provide vital information before help arrives.

Upon arrival at the scene, a woman was found lying unconscious, with a family member performing CPR. The mother-son pair immediately took over with Dylan administering chest compressions while Adeline maintained the airway. Soon, other responders joined in with an AED, working together to sustain the patient until paramedics took over. There was no room for hesitation; only a shared spirit of teamwork, urgency and compassion.

Filled with pride for Dylan's composure and focus in the heat of that critical moment, Adeline describes this experience as something intense yet meaningful – a rare opportunity for a parent and child to bond and grow closer in a shared purpose and achievement.

> **Skills are important, but so is the courage to act.**
>
> – Adeline Teo, Nurse Clinician, NUHCS

For Dylan, this experience left a lasting impression on him. Despite initially feeling stressed from being a first-timer facing a real-life emergency, he remained confident and calm because he knew exactly how to handle the situation. Working alongside his mother, they formed an effective team in managing the high-pressure scenario.

A mother-son duo united by a first responder mission

Adeline and Dylan (fourth and fifth from left) pictured with other recipients of the Community First Responder Award

> **You can't save every life, but you can give someone their only chance.**
> – Dylan Goh, son of Adeline Teo

Adeline and Dylan were honoured with the SCDF Community First Responder Award – a recognition that celebrates their swift response and shared commitment to helping others. Their quick and synergised actions that evening proved how compassion and preparedness can turn ordinary people into lifesavers.

Passion in Action

Kelyn Tjong, Enrolled Nurse, NUHCS, was also among the SCDF Community First Responder Award recipients, who went the extra mile to make a life-changing impact on someone's life.

One morning after her nursing shift, Kelyn and her boyfriend, a National Serviceman (NSF), were heading for breakfast when an alert from the *myResponder* app sounded. Knowing that she had no access to any medical team or equipment, Kelyn was initially hesitant to step up but recognised that every second and every effort counted to potentially saving a life. With the support and encouragement of her boyfriend, both of them rushed down to the emergency scene.

They arrived to an unresponsive woman and her family in distress. Using her first aid knowledge, Kelyn immediately began doing chest compressions, before she was joined by another responder who brought an AED. Together, they continued life-saving efforts until the SCDF paramedics took over.

Kelyn's calm and decisive actions earned her the SCDF Community First Responder Award, honouring her courage and composure in an emergency setting, even without professional staff or clinical tools available.

> **Every small action makes a big difference. You don't need to be perfect to help others.**
> – Kelyn Tjong, Enrolled Nurse, NUHCS

This experience reminded Kelyn of what it means to carry the values and mission of a nurse beyond clinical settings, and how important community resilience is.

With the belief that helping others is not merely a choice, but a calling, Kelyn was honoured to have been able to put her passion in nursing into action and make a real difference to her community.

Dr Tan See Leng, Minister for Manpower, Minister-in-charge of Energy & Science & Technology & Adviser to Chua Chu Kang GRC GROs (left) presents Kelyn (middle) with the Community First Responder Award on Community Resilience Day

Ordinary People, Extraordinary Spirit

Whether it was a mother-son duo responding together, or an off-duty nurse stepping up alone, the stories of Adeline, Dylan and Kelyn prove that heroism is not always limited to statuses or uniforms. It is often found in ordinary individuals who courageously step forward and come together with knowledge and compassion, to make a difference in the lives of others during such emergencies.

ARTICLE BY
NUHCS PULSE Editorial

NURSES' MERIT Award 2025

Celebrating EXCELLENCE IN NURSING

Established in 1976, the Nurses' Merit Award, presented by the Ministry of Health (MOH), has stood as a hallmark of excellence in nursing. It honours individuals who exemplify outstanding professional performance, a steadfast commitment to continuous learning, and meaningful contributions to the advancement of nursing. Each year, recipients are nominated by their healthcare institutions and selected by an esteemed MOH panel. In 2025, Hoe Kwee Fong, Nurse Manager, Angiography[1] Centre at the National University Heart Centre, Singapore (NUHCS), was honoured with this prestigious accolade, a testament to her exceptional leadership and devotion to nursing excellence.

Excelling in a Specialised Field

Kwee Fong began her journey in critical care nursing before finding her calling in heart and vascular care. Today, she leads the NUHCS Angiography Centre, where she oversees diagnostic and interventional procedures that often make the difference between life and death. Her responsibilities extend well beyond day-to-day operations. She plays a pivotal role in shaping the future of cardiac services, from driving clinical planning to contributing to the development of new facilities. Among her many initiatives are new patient care approaches based on evidence-based research and same-day discharge protocols[2]. These changes not only improve patient comfort and recovery, but also enhance efficiency for the care team.

A Mentor and Advocate for Nursing Development

For Kwee Fong, nursing is as much about nurturing people as it is about delivering care. She dedicates her time in mentoring colleagues and raising the next generation of nursing leaders, equipping them with the necessary confidence and skills in managing specialised or complex cardiac care cases.

Her influence extends beyond the Angiography Centre. As a credentialed Next Generation Electronic Medical Records[3] trainer and a regular speaker at healthcare conferences, Kwee Fong actively shares her expertise to other healthcare professionals, contributing to the growth of angiography nursing on a national stage.

Leadership with Heart

What sets Kwee Fong apart is her rare blend of clinical mastery and human warmth. She combines deep technical expertise in angiography with the ability to connect meaningfully with patients seeking reassurance. From guiding junior nurses under her care to working with colleagues across various job groups, her approachable nature and respect for others easily build trust and unity, creating a work environment where every member of her team feels supported, valued, and inspired to perform at their best.

Kwee Fong embodies the very spirit of the Nurses' Merit Award, uniting professional excellence with admirable personal integrity. Through her visionary leadership, dedicated mentorship, and unwavering commitment to patient well-being, she has left a profound impact on both NUHCS and the wider nursing community.

The Nurses' Merit Award 2025 celebrates not only her exceptional achievements in angiography nursing, but also the kindness and passion that continue to define her career.

"I am truly honoured to receive this merit award as it reflects my dedication, hard work, and passion for excellence."

– Hoe Kwee Fong
Nurse Manager, NUHCS Angiography Centre

References:

1. Angiography is a medical imaging technique used to visualise the inside of blood vessels and organs in the body.
2. Same-day discharge protocols allow patients to return home just hours after their heart procedure, eliminating the traditional need for an overnight stay for monitoring. Despite the shortened stay, the same standards of care are maintained.
3. NGEMR is an initiative by the Ministry of Health to put in place an advanced centralised medical record system for the Singapore population.

ARTICLE BY
NUHCS PULSE Editorial

CONFRONTING A GROWING HEART THREAT

Why ischaemic heart disease is rising and how small daily changes make a big difference

Ischaemic Heart Disease (IHD) occurs when the arteries supplying the heart become narrowed or blocked. This reduces the flow of oxygen-rich blood to the heart muscle and can lead to chest pain, heart attacks, heart failure, or sudden death. Around the world and in Singapore, IHD remains one of the leading causes of death, particularly in ageing and urban populations.

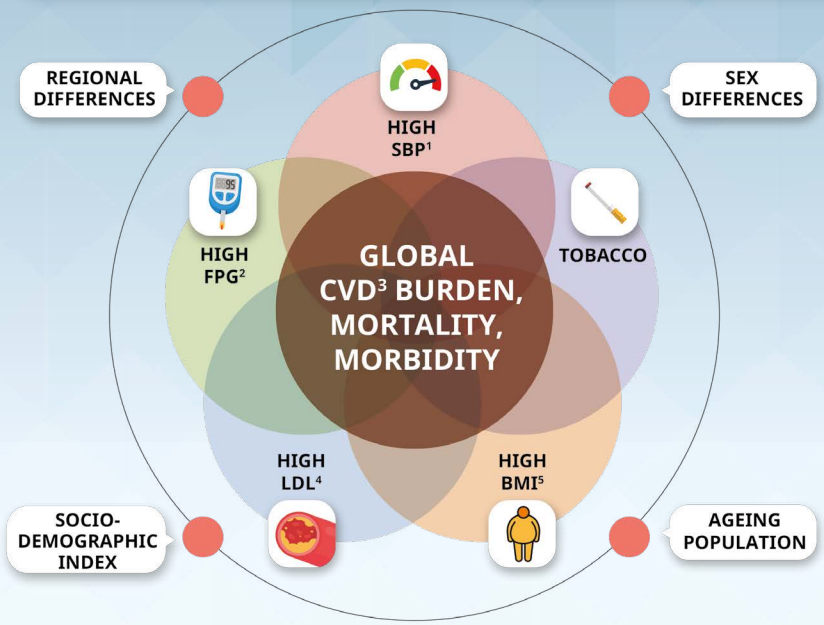
The Global Syndemic

To better understand why IHD continues to rise, A/Prof Mark Chan, Deputy Executive Director, NUHCS, and Dr Nicholas Chew, Associate Consultant, Department of Cardiology, NUHCS, co-authored a research paper on long-term trends in cardiovascular risks.

Their research describes a global "syndemic", where conditions like hypertension, obesity, diabetes, and high cholesterol interact with social and environmental forces to increase risks across populations. Large-scale modelling shows that these metabolic factors will remain as the main drivers of IHD. At the same time, tobacco use, high salt intake, low wholegrain consumption, and air pollution adds extra strain.

The study also found differences between men and women. Men are expected to face rising exposure to smoking and hypertension, whereas women may experience faster increases in obesity and diabetes.

The good news is that measures like reducing salt, controlling tobacco use, managing blood pressure, and treating high cholesterol could prevent millions of cardiovascular problems worldwide.



Why is Singapore at Risk?

These global trends are especially relevant in Singapore. Age is the strongest risk factor for IHD, and as Singapore's population gets older, the risk naturally increases.

At the same time, lifestyle factors are creating additional problems. Long working hours, prolonged sitting, high stress, and lack of sleep increase the likelihood of weight gain, high blood pressure, and diabetes. Singapore's convenience-driven food culture with frequent dining out and readily available meals high in salt, saturated fat, and added sugars — accelerates the risk of obesity and IHD. Air pollution, including traffic-related particles and periodic haze, adds another layer of risk, especially for those who already have existing risk factors. Without earlier detection and stronger prevention, IHD rates in Singapore are expected to continue rising.

How to Protect Your Heart?

The good news is that small, consistent changes can make a big difference. Here are some simple steps you can take:

KNOW YOUR NUMBERS
Check your blood pressure, cholesterol, blood sugar, and waist circumference regularly.

MOVE MORE
Aim for 150 minutes of moderate activity each week (brisk walking, cycling, swimming). Avoid sitting for long periods; try to move every 30 – 60 minutes.

EAT BETTER
Focus on vegetables, fruits, whole grains, beans, nuts, and fish. Limit your intake of salt, sugary drinks, ultra-processed food, and fried food.

STOP SMOKING
Benefits start immediately.

SLEEP AND MANAGE STRESS
Both are important for a healthy heart.

FOLLOW MEDICAL ADVICE
Treatments only work if you take them consistently.

IHD in Singapore is rising because of age, lifestyle, and environmental factors, but these risks can be reduced. Early detection, healthier daily habits, and community support can help protect heart health and give future generations a better chance at a healthy life.

References:

1. ***High Systolic Blood Pressure (SBP)*** *means that there is increased force in the arteries when the heart beats and pumps blood out, which raises the risk for heart attack, stroke, and heart failure.*
2. ***High Fasting Plasma Glucose (FPG)*** *means that the blood sugar is elevated after not eating, usually indicating prediabetes or diabetes.*
3. ***Cardiovascular Disease (CVD)*** *is a group of disorders affecting the heart and blood vessels, caused by issues like narrowed arteries and high blood pressure, which can lead to serious conditions such as heart attacks and strokes.*
4. ***High Low-Density Lipoprotein (LDL)*** *indicates an excess of "bad" cholesterol, which can adhere to artery walls and form plaque, significantly increasing the risk of heart attacks and strokes.*
5. ***A high Body Mass Index (BMI)*** *indicates excess body fat, which significantly increases the risk of serious health issues such as heart disease, type 2 diabetes, stroke, and certain cancers.*

ARTICLE BY
Dr Nicholas Chew
Associate Consultant,
Department of Cardiology, NUHCS

Dr Chew is the Principal Investigator of several studies that uncover hidden risk factors of heart attack.

Congratulations!

DOCTORS' PROMOTIONS AT NUHCS

with effect from Jul and Dec 2025

Adj A/Prof Ooi Oon Cheong

Senior Consultant,
Division of Thoracic Surgery, Department of Cardiac, Thoracic and Vascular Surgery (CTVS), NUHCS @ National University Hospital (NUH)

Dr Lim Yoke Ching

Senior Consultant,
Department of Cardiology,
NUHCS @ NUH

Dr Andie Hartanto Djohan

Consultant, Division of Cardiology,
Department of Medicine,
NUHCS @ Ng Teng Fong General Hospital (NTFGH)

Dr Chen Jianye

Consultant, Division of Thoracic Surgery,
Department of CTVS,
NUHCS @ NUH

Dr Vinay Bahadur Panday

Associate Consultant,
Department of Cardiology,
NUHCS @ NUH

Dr Liew Choon Tang

Resident Physician,
Department of CTVS,
NUHCS @ NUH

Dr Thei Nwe Myet Shu Htwe

Resident Physician,
Department of Cardiology,
NUHCS @ NUH

ACADEMIC APPOINTMENTS

Prof John Tam Kit Chung

Head, Division of Thoracic Surgery,
Department of CTVS,
NUHCS @ NUH

Adj A/Prof Anand Ambhore

Head, Division of Cardiology,
Department of Medicine,
NUHCS @ NTFGH

Adj A/Prof Tan Li Ling

Senior Consultant,
Department of Cardiology,
NUHCS @ NUH

Adj A/Prof Ooi Oon Cheong

Senior Consultant, Division of Thoracic Surgery, Department of CTVS, NUHCS @ NUH

Congratulations!
NATIONAL DAY AWARDS 2025

Established in 1962, the annual National Day Awards recognises Singaporeans and non-Singaporeans alike for their outstanding contributions to the nation. NUHCS is proud to showcase the institute's 2025 award recipients who are honoured for their excellent performance in their own field.

PUBLIC ADMINISTRATION MEDAL (BRONZE)

Adj A/Prof Chai Ping
Head & Senior Consultant, Department of Cardiology, NUHCS

Mr Tan Teck Chong
Assistant Chief Operating Officer, NUHCS

EFFICIENCY MEDAL

Ms Ee Seow Choon
Medical Technologist

Ms Lai Lee Wah
Case Manager

Ms Lai Shuet Ming
Senior Case Manager

Ms Mary Joyce Yu Galupo
Senior Principal Medical Technologist

Ms Ong Azlin Binte Mohd Sani
Service Executive

Ms Tee Pei Wei
Patient Service Associate Executive

Ms Tew Kai Mei
Assistant Manager

Ms Toh Lay Cheng
Senior Nurse Clinician (NUHCS @ NTFGH)

LONG SERVICE MEDAL

A/Prof Chan Yan Yee Mark
Deputy Executive Director of NUHCS

Ms Chew Mei Ling Doreen
Head of NUHCS Nursing

Ms Chin Chew Hoon
Patient Service Associate Executive

Ms Fauziah Binte Azizi
Assistant Director

Ms Fun Yoke Chang Shermaine
Senior Principal Medical Technologist

Ms Lapitan Rowena Pidot
Senior Staff Nurse

Ms Perdon Catherine Martagon
Assistant Nurse Clinician

Ms Poh Lay Sim
Nurse Educator

Ms Siti Rahimah Bte Syed Nahood
Senior Enrolled Nurse

Ms Yang Jinghui
Advanced Practice Nurse

Congratulations!
STANFORD UNIVERSITY'S WORLD'S TOP 2% SCIENTISTS 2025

Stanford University's World's Top 2% Scientists list is a globally recognised ranking that highlights researchers whose work has made significant impact based on citation influence. Developed using standardised metrics from Stanford University and Elsevier, it evaluates both career-long and single-year citations across 22 fields and 174 subfields, serving as a key resource for acknowledging excellence and tracking influential, cutting-edge research.

A/Prof Mark Chan Yan Yee
Deputy Executive Director, NUHCS

Adj Prof Graeme MacLaren
Head, Division of Cardiothoracic Intensive Care Unit (CTICU), Department of Cardiac, Thoracic and Vascular Surgery (CTVS), NUHCS

Prof Roger Foo
Director, Cardiovascular Research Institute (CVRI), NUHCS

Adj A/Prof Ramanathan K.R.
Senior Consultant, Division of CTICU, Department of CTVS, NUHCS

Dr Sia Ching Hui
Consultant, Department of Cardiology, NUHCS

Dr Nicholas Chew
Associate Consultant, Department of Cardiology, NUHCS

PUBLICATIONS

A comparative analysis on the latest international and local guidelines for the management of hypertension. Singapore Med J. 2025 May 1;66(5):240-243. doi: 10.4103/singaporemedj.SMJ-2025-094. Epub 2025 May 19. **Leow AST,** Sule AA, Tay JC, Teong HH, Moy WL, Handa PK, Wu YT, Chadachan VM, Oh VMS, **Sia CH, Poh KK,** Teo BW, Puar TH.

A Qualitative Study Examining the Unintended Consequences from Implementing a Case Management Team to Reduce Avoidable Hospital Readmission in Singapore. Health Serv Insights. 2025 May 1;18:11786329251337533. doi: 10.1177/11786329251337533. Surendran S, So S, **Lim TW,** Matchar DB.

A rare cause of MINOCA: embolism of a thrombus arising from accessory mitral valve tissue. Eur Heart J Case Rep. 2025 May 6;9(5):ytaf222. Chan EZ, **Kang GS,** Goh AXC.

Acute Kidney Injury in Cardiac Intensive Care Units: Is it the Next Frontier for Precision Critical Care? Indian J Crit Care Med. 2025 Jun;29(6):477-478. Sahoo TK, Guru PK, **Ramanathan K.**

Advancing cardiovascular health: prevention, risk management and emerging insights. Singapore Med J. 2025 Mar 1;66(3):120-121. doi: 10.4103/singaporemedj.SMJ-2025-035. Epub 2025 Mar 21. **Poh KK, Sia CH.**

Amino Acid Infusion for Kidney Protection in Cardiac Surgery Patients with Chronic Kidney Disease: A Secondary Analysis of the PROTECTION Trial. Anesthesiology. 2025 May 1;142(5):818-828. Baiardo Redaelli M, Monaco F, Bradic N, Scandroglio AM, Ti LK, Belletti A, Viscido C, Licheri M, Guarracino F, Pruna A, Pisano A, Pontillo D, Federici F, Losiggio R, Serena G, Tomasi E, Silvetti S, Ranucci M, Brazzi L, Cortegiani A, Landoni G, Mastroroberto P, Paternoster G, Gaudino MFL, Zangrillo A, Bellomo R; for the **PROTECTION Study Group Collaborators*.**

Artificial intelligence in clinical thrombosis and hemostasis: A review. Res Pract Thromb Haemost. 2025 Jul 24;9(5):102984. Kuan YKI, Kok YJ, Liu NSH, Ong BJA, Chee YJ, Xu C, Chow M, **Ramanathan K,** Dalan R, Ho P, Fan BE.

Cardiology in the community: integrating care through professional communication in Singapore. Singapore Med J. 2025 Mar 1;66(3):127-129. doi: 10.4103/singaporemedj.SMJ-2024-164. Epub 2025 Mar 21. **Lim TW,** Lim YW.

Chronic kidney disease is no longer a 'non-traditional' cardiac risk factor: a call to action for cardiovascular-kidney-metabolic health. Singapore Med J. 2025 Mar 1;66(3):122-124. doi: 10.4103/singaporemedj.SMJ-2025-012. Epub 2025 Mar 21. Fong JMN, **Sia CH,** See KC.

Clinical and echocardiographic differences between rheumatic and degenerative mitral stenosis. Ann Acad Med Singap. 2025 Apr 4;54(4):227-234. doi: 10.47102/annals-acadmedsg.2024351. **Leow R, Sia CH, Li TYW,** Chan MW, **Lim EH,** Ng LMJ, **Yeo TC, Poh KK, Tan HC, Kong WKF.**

Clinics in diagnostic imaging (223). Singapore Med J. 2025 Jun 1;66(6):343-347. doi: 10.4103/singaporemedj.SMJ-2023-248. Epub 2025 Jun 13. Lau WK, Lim NLX, **Kuntjoro I,** Teo LLS.

Comparative Evaluation of Resting and Hyperemic Angiography-Derived Index of Microcirculatory Resistance in Chronic Coronary Syndrome. J Am Heart Assoc. 2025 Aug 5;14(15):e040173. doi: 10.1161/JAHA.124.040173. Epub 2025 Jul 21. Zhang Y, Li Q, Ye Y, Zhao X, Zhang L, Li Z, Wang T, Ding Y, Lin L, Ye Y, Han J, Fu G, Xiu J, Wang Y, An G, Guo N, Zhang C, Wang C, Zhao Q, **Tan HC,** Zeng Y.

Comprehensive Introduction to ASIAN-HF Registry. JACC Asia. 2025 Sep;5(9):1206-1216. doi: 10.1016/j.jacasi.2025.05.020. Epub 2025 Jul 29. Teng TK, Lam CSP; **ASIAN-HF Executive Committee and Investigators.**

Computed Tomography Guided Coil Localization and Uniportal Video-Assisted Thoracic Surgery Resection of Small Lung Lesions. Cureus. 2025 May 18;17(5):e84355. **Li Y,** Ong SJ, Anil G, Mithiran H, Rajendran PC, Yap CW, **Tam JK,** Wee BB.

Concurrent Use of Kidney Replacement Therapy and Temporary Left Ventricular Assist Device in Cardiogenic Shock: A Systematic Review and Meta-Analysis. Blood Purif. 2025;54(8):497-512. Lim O, Anbalakan K, Ruiyang Ling R, Tan B, Mak V, Chen Y, Kaushik M, Chakaramakkil MJ, **Ramanathan K.**

Contemporary Incidence of Cognitive Impairment or Dementia in Patients Undergoing Coronary Artery Bypass Grafting: A Systematic Review and Meta-Analysis. Dement Geriatr Cogn Disord. 2025;54(1):52-66. doi: 10.1159/000540450. Epub 2024 Jul 24. Lo HZ, Wee CF, Low CE, Teo YH, Teo YN, Yun CY, Syn NL, Tan BYQ, **Chai P,** Yeo LLL, **Yeo TC,** Chong YF, **Poh KK, Kong WKF, Wong RCC, Chan MY, Sia CH.**

Coronary artery calcium scoring in primary care. Singapore Med J. 2025 Mar 1;66(3):163-166. doi: 10.4103/singaporemedj.SMJ-2024-211. Epub 2025 Mar 21. **Lee ECY,** Koh S, **Sia CH.**

Creation of a National Chronic Wound Registry-Challenges and Opportunities. Int Wound J. 2025 Mar;22(3):e70146. Bishnoi P, Wang Z, Lo ZJ, Yong E, Chong TT, Carmody D, **Ho P,** Aloweni FAB, Ang SY, Ng YZ, Graves N, Harding K.

Diagnosing Nosocomial Infections During Pediatric Extracorporeal Membrane Oxygenation. Pediatr Crit Care Med. 2025 Apr 1;26(4):e556-e558. O'Neil ER, Marcus JE, **MacLaren G.**

Early Lung Cancer Patient Journey in Singapore: Challenges and Recommendations. Asia Pac J Clin Oncol. 2025 May 8. Teo L, Koh MS, Chua KLM, **Leow L,** Lim CH, Lim DW, Lim HL, Kong HL, Ooi G, Samol J, Tan CS, Soo RA.

Effects of sacubitril/valsartan on hypertensive heart disease: the REVERSE-LVH randomized phase 2 trial. Nat Commun. 2025 Jul 30;16(1):6981. doi: 10.1038/s41467-025-62203-0. Lee V, **Dalakoti M,** Zheng Q, Toh DF, Boubertakh R, Bryant JA, Aw TC, **Lee CH,** Richards AM, Butler J, Díez J, **Foo R,** Cook SA, Lam CS, Le TT, Chin CW.

Evaluating the Prognostic Value of Kansas City Cardiomyopathy Questionnaire (KCCQ) Scores for 6-Month Readmissions in Southeast Asian Populations With Heart Failure. Clin Cardiol. 2025 Jul;48(7):e70136. doi: 10.1002/clc.70136. **Ong JS,** Kham MF, Goh J, Phng F, Chan PF, **Loh PH,** Wu C.

Extracorporeal cardiopulmonary resuscitation for refractory cardiac arrest. Lancet Respir Med. 2025 May 30:S2213-2600(25)00122-5. Supady A, Bělohlávek J, Combes A, Hutin A, Lorusso R, **MacLaren G,** Magnet I, van de Poll M, Price S, Staudacher DL, Taccone FS, Yannopoulos D, Brodie D.

Extracorporeal life support for adult patients with ARDS. Intensive Care Med. 2025 Aug 6. Combes A, Supady A, Abrams D, Agerstrand C, Badulak J, Camporota L, Fan E, Ferguson ND, Fraser JF, Hodgson C, Jaber S, **MacLaren G,** Patel BV, Peek GJ, Schmidt M, Shekar K, Slutsky AS, Brodie D.

Feasibility and effectiveness of an integrative cardiac rehabilitation employing smartphone technology (I-CREST): a pilot randomized controlled trial. Eur J Cardiovasc Nurs. 2025 Sep 5;24(6):959-970. doi: 10.1093/eurjcn/zvaf053. Ramachandran HJ, **Yeo TJ,** Seah CWA, Yeo TM, Chua MCH, **Syed Gani Q, Lim PS, Lai SM,** Teo JYC, Wang W.

Frequency of residual combined dyslipidemia and hypertriglyceridemia in patients with coronary heart disease in 13 countries across 6 WHO Regions: Results from INTERASPIRE. Atherosclerosis. 2025 Jun;405:119215. doi: 10.1016/j.atherosclerosis.2025.119215. Epub 2025 Apr 24. Santos RD, Ray KK, De Bacquer D, Jennings C, Kotseva K, Rydén L, Lip GYH, Erlund I, Ganly S, Vihervaara T, Adamska A, Abreu A, Almahmeed W, Ambari AM, Ge J, Hasan-Ali H, Huo Y, Jankowski P, Jimenez RM, Li Y, Mahmood Zuhdi AS, Makubi A, Mbakwem AC, Mbau L, Navarro Estrada JL, Ogah OS, Ogola EN, Quintero-Baiz A, Sani MU, Sosa Liprandi MI, Chieh Tan JW, Urina-Triana MA, **Yeo TJ,** Wood D, McEvoy JW, Libby P; **INTERASPIRE Investigators.**

Frontiers in subclinical atherosclerosis and the latest in early life preventive cardiology. Singapore Med J. 2025 Mar 1;66(3):141-146. doi: 10.4103/singaporemedj.SMJ-2024-169. Epub 2025 Mar 21. **Dalakoti M,** Chen CK, **Sia CH, Poh KK.**

Full-Thickness Chest Wall Resection and Reconstruction for Locally Invasive Phyllodes Tumors: A Systematic Review. Cancers (Basel). 2025 Jun 8;17(12):1907. Lim YS, Goh RTH, Ang BWN, Lee AWX, Leong EKF, **Leow L,** Ng QX, Goh SSN.

Gender-specific cardiovascular risks in sleep apnoea syndrome: a call for precision medicine. Eur J Prev Cardiol. 2025 Feb 14:zwaf077. doi: 10.1093/eurjpc/zwaf077. Ou YH, **Lee CH.**

Global Variation in Lipoprotein(a) Levels Among Patients With Coronary Heart Disease: Insights From the INTERASPIRE Study and Implications for Emerging Lp(a)-Lowering Therapies. J Am Coll Cardiol. 2025 Jun 3;85(21):2028-2042. doi: 10.1016/j.jacc.2025.04.010. Barkas F, Brandts J, De Bacquer D, Jennings C, De Backer GG, Kotseva K, Ryden L, Lip GYH, Santos RD, Libby P, Erlund I, Ganly S, Vihervaara T, Adamska A, Abreu A, Almahmeed W, Ambari AM, Ge J, Hasan-Ali H, Huo Y, Jankowski P, Jimenez RM, Li Y, Mahmood Zuhdi AS, Makubi A, Mbakwem AC, Mbau L, Navarro Estrada JL, Ogah OS, Ogola EN, Quintero-Baiz A, Sani MU, Sosa Liprandi MI, Tan JWC, Urina Triana MA, **Yeo TJ,** Wood D, McEvoy JW, Ray KK; **INTERASPIRE Investigators.**

Graphene-Based Oscillators for Biomimetic Neuro-Interfaces. Adv Electron Mater. 2025 Jul 17; e00219. [Epub ahead of print]. Nikolaev KG, Grebenchuk S, Zhao J, Yang K, Zhang Y, Ong MS, **Sorokin V,** Chen S, Wang Q, Bong JH, Novoselov KS, Andreeva DV.

Impact of coronary revascularization on clinical outcomes of postacute myocardial infarction patients with left ventricular thrombus. Res Pract Thromb Haemost. 2025 May 21;9(4):102897. doi: 10.1016/j.rpth.2025.102897. Seah AW, **Leow AST, Goh FQ,** Tan BY, Yeo LL, **Kong WKF, Poh KK, Yip JWL, Wong RCC, Chai P, Yeo TC, Chan MY,** Zhou X, Lip GYH, **Sia CH.**

Impact of Height Exponents on the Diagnosis and Prognosis of LVH: The REMODEL Study. JACC Asia. 2025 Mar;5(3 Pt 1):350-357. doi: 10.1016/j.jacasi.2024.12.006. Epub 2025 Feb 18. Lee C, Chan R, Toh DF, Kui M, Lee V, Bryant JA, Boubertakh R, **Lee CH,** Le TT, Chin CWL.

Impact of mechanical pulmonary thrombectomy for intermediate-risk pulmonary embolism: Results from a prospective multicenter, multi-ethnic Asian registry. Thromb Res. 2025 Jul;251:109357. doi: 10.1016/j.thromres.2025.109357. Epub 2025 May 18. **Teo TW, Tan SML, Chiang YY, Oh JR, Chan SP, Kuntjoro I, Low TT,** Chang P, Ong JHA, **Loh PH, Sim HW, Djohan AH, Cherian R,** Yap ES, Chee YL, Kojodjojo P, **Lim Y.**

Incidence, kinetics, and clinical impact of thrombocytopenia in venovenous ECMO: insights from the multicenter observational PROTECMO study. Crit Care. 2025 Aug 7;29(1):349. Buchtele N, Tanaka K, Tuzzolino F, Agerstrand C, Ait Hssain A, Riera J, Schellongowski P, Schmidt M, Ramanan R, Balik M, Broman LM, Rizzitello N, Szułdrzyński K, Gannon WD, Fanelli V, Trethowan B, Buscher H, Alfoudri H, Giani M, Combes A, Grasselli G, Lorusso R, Arcadipane A, Brodie D, Martucci G; **PROTECMO Study group*.**

Infective endocarditis: it takes a team. Eur Heart J. 2025 Jun 23;46(24):2275-2288. doi: 10.1093/eurheartj/ehaf219. Lau L, Baddour L, Fernández Hidalgo N, Brothers TD, **Kong WKF,** Borger MA, Duval X, Tribouilloy C, Obadia JF, Golian M, Corrales-Medina VF, Auclair F, Mazighi M, Chan KL, Prendergast B, Habib G, Rubens FD, Messika-Zeitoun D.

Kidney replacement therapy during extracorporeal membrane oxygenation: pathophysiology, technical considerations, and outcomes. Ren Fail. 2025 Dec;47(1):2486557. Lau MPXL, Ling RR, Ong BJA, Cho HJ, Jeong IS, Sahoo TK, Chua HR, Shekar K, **Ramanathan K.**

Large language model comparisons between English and Chinese query performance for cardiovascular prevention. Commun Med (Lond). 2025 May 16;5(1):177. doi: 10.1038/s43856-025-00802-0. Ji H, Wang X, **Sia CH,** Yap J, Lim ST, **Djohan AH,** Chang Y, Zhang N, Guo M, Li F, Lim ZW, Wang YX, Sheng B, Wong TY, Cheng S, Yeo KK, Tham YC.

Left Atrial Myocardial Mechanics: Association With Cognitive Dysfunction, Cerebrovascular Disease, and Circulating Biomarkers. J Am Heart Assoc. 2025 Apr 15;14(8):e036931. doi: 10.1161/JAHA.123.036931. Epub 2025 Apr 7. **Tan ESJ,** Hilal S, **Chan SP,** Sim MA, Lai MKP, Chong J, Robert C, Hazli H, **Gong L,** Berboso JL, Venketasubramanian N, Tan BY, Richards AM, Chen C, **Ling LH.**

Left ventricular decompression in paediatric veno-arterial extracorporeal life support: Reviewing the evidence. ESC Heart Fail. 2025 Aug;12(4):2711-2725. Veronese G, Meani P, Sirico D, Di Salvo G, Ammirati E, Varrica A, Di Dedda U, Bianchi P, Isgrò G, Giamberti A, Aloisio T, Dickstein M, Bonanomi E, Alsoufi B, Thiagarajan RR, Alexander PMA, McMullan DM, Barbaro RP, **MacLaren G,** Ranucci M, Kapur NK, Lorusso R.

Left ventricular unloading during extracorporeal cardiopulmonary resuscitation: a target trial emulation of the ELSO registry. Crit Care. 2025 May 8;29(1):186. Ling RR, Chen Y, Low CJW, Agerstrand C, Jung JS, **Lim SL,** Lorusso R, Müeller T, Okada Y, Tonna JE, Shekar K, Brodie D, **MacLaren G, Ramanathan K.**

Longitudinal associations of carotid artery stiffness with progression of cerebrovascular disease, incident dementia and cognitive decline in older adults. J Prev Alzheimers Dis. 2025 Jun;12(6):100127. doi: 10.1016/j.tjpad.2025.100127. Epub 2025 Mar 9. Robert C, **Ling LH, Tan ESJ,** Venketasubramanian N, **Lim SL, Gong L,** Berboso JL, Richards AM, Chen C, Hilal S.

Longitudinal Outcomes of Left Ventricular Outflow Tract Obstruction in Aortic Stenosis Versus Hypertrophic Obstructive Cardiomyopathy. Medicina (Kaunas). 2025 May 23;61(6):971. doi: 10.3390/medicina61060971. **Ong JY, Li TYW, Leow AST,** Quek SC, **Kong WKF, Lin W, Chai P, Yeo TC, Wong RCC, Sia CH, Poh KK.**

Missing the target in target trial emulation: the authors reply. Crit Care. 2025 Jul 18;29(1):311. Ling RR, Chen Y, Shekar K, Brodie D, **MacLaren G, Ramanathan K.**

Multidisciplinary international expert consensus on perioperative airway management. Transl Lung Cancer Res. 2025 Apr 30;14(4):1042-1060. Liang H,

Che G, Cui F, Dong J, Gu W, Gu C, Xu S, Ba Y, Cai K, Cao Q, Chen C, Chen C, Chen Q, Cheng L, Feng G, Gou Y, Guo W, He J, He J, Hu J, Huang Y, Wang W, Jiao W, Jiang S, Liu J, Lan L, Li W, Li X, Li Z, Li Y, Liang Z, Liu H, Liu Y, Mei X, Song X, Sun D, Tian H, Tian Z, Wang J, Wang G, Xu X, Xiang X, Xu G, Xue T, Yang C, Yan X, Yang N, Yao F, Yin D, Yin X, Yu B, Zhai W, Zhang Y, Zhang G, Zhang X, Zhang Q, Zhang Y, Zhao J, Zhong H, Brunelli A, Ploenes T, Bertolaccini L, **Tam JKC,** Kim MP, Refai M, Gonzalez M, Dyas AR, Ardò NP, Fernando HC, Maurizi G, Kocher GJ, Marulli G, Fuentes-Martín Á, Perroni G, Kim KS, Rodriguez M, Taylor M, Zou X, Wang W, He J.

Non-invasive scoring systems of liver fibrosis predict prognosis in the cohort with myocardial infarction. Sci Rep. 2025 Jul 21;15(1):26499. doi: 10.1038/s41598-025-12583-6. Wong E, Chen Y, Kong G, Chia J, **Zhang A,** Mehta A, Jayabaskaran J, Chong B, Cao G, Nah B, **Chan MY,** Muthiah M, **Loh PH,** Mamas MA, **Chew NWS.**

Obesity and nutrition risk in patients admitted to intensive care after cardiac arrest: A multicentre cohort study. Resuscitation. 2025 Aug 15:110773. [Epub ahead of print]. **Lim SL,** Ling RR, Lim O, Ueno R, Jones D, Low C, Ong ME, Ridley EJ, Sundararajan K, Pilcher D, **Ramanathan K,** Subramaniam A.

Persistent critical illness and long-term survival in cardiac surgery: A multicentre cohort study. Anaesth Crit Care Pain Med. 2025 Jul 9:101593. Subramaniam A, Ling RR, Bonavia W, **Ramanathan K,** Ramanan M, Shekar K, Pilcher D.

Positive airway pressure therapy and all-cause and cardiovascular mortality in people with obstructive sleep apnoea: a systematic review and meta-analysis of randomised controlled trials and confounder-adjusted, non-randomised controlled studies. Lancet Respir Med. 2025 May;13(5):403-413. doi: 10.1016/S2213-2600(25)00002-5. Epub 2025 Mar 18. Benjafield AV, Pepin JL, Cistulli PA, Wimms A, Lavergne F, Sert Kuniyoshi FH, Munson SH, Schuler B, Reddy Badikol S, Wolfe KC, Willes L, Kelly C, Kendzerska T, Johnson DA, Heinzer R, **Lee CH,** Malhotra A; medXcloud Group.

Postcardiotomy extracorporeal membrane oxygenation after elective, urgent, and emergency cardiac operations: Insights from the PELS observational study. JCTVS Open. 2025 Apr;24:280-310. Mariani S, Perazzo A, De Piero ME, van Bussel BC, Di Mauro M, Wiedemann D, Lehmann S, Pozzi M, Loforte A, Boeken U, Samalavicius R, Bounader K, Hou X, Bunge JJ, Sriranjan K, Salazar L, Meyns B, Mazzeffi MA, Matteucci S, Sponga S, **MacLaren G,** Russo C, Formica F, Sakiyalak P, Fiore A, Camboni D, Raffa GM, Diaz R, Wang IW, Jung JS, Belohlavek J, Pellegrino V, Bianchi G, Pettinari M, Barbone A, Garcia JP, Shekar K, Whitman G, Lorusso R; **PELS Investigators*.**

Postcardiotomy extracorporeal membrane oxygenation in patients older than 70 years: Characteristics, outcomes, and variables associated with mortality. JTCVS Open. 2025 May 3;25:163-172. Makhoul M, Mariani S, van Bussel BCT, Wiedemann D, Saeed D, Di Mauro M, Pozzi M, Botta L, Boeken U, Samalavicius R, Bounader K, Hou X, Bunge JJH, Buscher H, Salazar L, Meyns B, Mazzeffi MA, Sacha Matteucci ML, Sponga S, **MacLaren G,** Russo C, Formica F, Sakiyalak P, Fiore A, Camboni D, Raffa GM, Diaz R, Wang IW, Jung JS, Belohlavek J, Pellegrino V, Bianchi G, Pettinari M, Barbone A, Garcia JP, Shekar K, Whitman G, Bolotin G, Lorusso R; PELS-1 Investigators.

Practice Variation in the Evaluation and Management of Asymptomatic Wolff-Parkinson-White Pattern Among Competitive Athletes. JACC Adv. 2025 Aug;4(8):101971. doi: 10.1016/j.jacadv.2025.101971. Epub 2025 Jul 11. Petek BJ, Moulson N, Phan F, Baggish AL, Baranchuk A, Chung EH, Elliott AD, Papadakis M, **Yeo TJ,** Churchill TW.

Prevalence of Depression, Anxiety and Post-Traumatic Stress Disorder (PTSD) After Acute Myocardial Infarction: A Systematic Review and Meta-Analysis. J Clin Med. 2025 Mar 7;14(6):1786. doi: 10.3390/jcm14061786. Chong RJ, Hao Y, Tan EWQ, Mok GJL, **Sia CH,** Ho JSY, **Chan MY,** Ho AFW.

Primary Prevention of Cardiovascular Disease in Asia: Challenges: A Narrative Review. JACC Adv. 2025 Apr;4(4):101670. doi: 10.1016/j.jacadv.2025.101670. Epub 2025 Mar 21. **Dalakoti M,** Lin NHY, Yap J, Cader A, Dipanker P, Lee D, Raja Shariff RE, Cuenza L, Honda S, Malis V, Jiang H, Hirachan A, Chimura M, **Yeo TJ,** Yeo KK, Tan JWC, Tromp J, **Loh PH, Chew NWS,** Wong S, **Sia CH,** Tan BYQ, Johar S, Lip GYH, Yang E, Virani SS, Hageman S, Liu H, Di Angelantonio E, Dorairaj P, Koh AS, Chin C, Al Mahmeed W, **Chan MY, Foo R.**

Primary Prevention of Cardiovascular Disease in Asia: Opportunities and Solutions: A Narrative Review. JACC Adv. 2025 Apr;4(4):101676. doi: 10.1016/j.jacadv.2025.101676. Epub 2025 Mar 22. **Dalakoti M,** Lin NHY, Yap J, Cader A, Dipanker P, Lee D, Raja Shariff RE, Cuenza L, Honda S, Malis V, Jiang H, Hirachan A, Chimura M, **Yeo TJ,** Yeo KK, Jack Wei Chieh T, Tromp J, **Loh PH, Chew NWS,** Wong S, **Sia CH,** Tan BYQ, Johar S, Lip GYH, Yang E, Virani SS, Hageman S, Liu H, Di Angelantonio E, Dorairaj P, Koh AS, Chin C, Al Mahmeed W, **Chan MY, Foo R.**

Prognostic Value of the Global Left Ventricular Contractility Index in Patients with Severe Mitral Regurgitation and Preserved Left Ventricular Ejection Fraction. J Cardiovasc Dev Dis. 2025 Jun 13;12(6):227. doi: 10.3390/jcdd12060227. **Li TYW, Panday VB,** Lai J, Gao N, Lim B, **Leow AST, Tan S,** Chye QS, **Sia CH, Kong WKF, Yeo TC,** Tan RS, Zhong L, **Poh KK.**

Recurrent ischemic stroke in young adults: A multicenter cohort study, systematic review, and meta-analysis. Int J Stroke. 2025 Apr 28:17474930251340799. doi: 10.1177/17474930251340799. [Epub ahead of print]. Kwok GYR, Chen RWR, Leow TA, Kok C, Yeong N, Teo YH, Low CE, Wright S, Fink J, Sharma VK, Teoh HL, **Loh PH, Sia CH,** Yeo LL, Ahmad A, Wu T, Tan BK, Tan BY.

Relation of Low-Density Lipoprotein Cholesterol, High-Sensitivity C-Reactive Protein, and Lipoprotein(a) Each to Future Cardiovascular Events and Death After Acute Coronary Syndrome on High-Intensity Statin Therapy: An Analysis of the Placebo Arm of ODYSSEY OUTCOMES. Circulation. 2025 Apr 8;151(14):1047-1050. doi: 10.1161/CIRCULATIONAHA.124.071269. Epub 2025 Apr 7. Steg PG, Szarek M, Jukema JW, Bhatt DL, Bittner VA, Diaz R, Fazio S, Garon G, Goodman SG, Harrington RA, White HD, Zeiher AM, Schwartz GG; **ODYSSEY OUTCOMES Investigators.**

Relative Hyperglycemia and In-Hospital Bleeding Across Glycemic Status in Patients on High-Intensity Antithrombotic Therapy. Circ J. 2025 Jul 25;89(8):1228-1237. doi: 10.1253/circj.CJ-25-0017. Epub 2025 Jun 6. Zhang C, Liu J, Liu W, Liu H, Sun P, Fang Y, Yang J, Sun H, Li Y, **Foo R, Sia CH,** Fonarow GC, Yang Q, Liu Y, Zhou X; CCC-ACS Investigators.

Role of ChatGPT in interventional cardiology. Singapore Med J. 2025 Mar 31. doi: 10.4103/singaporemedj.SMJ-2024-139. [Epub ahead of print]. Sule AA, **Poh KK,** Srinivasan DK.

Sarcopenia and sarcopenic obesity in cardiovascular disease: a comprehensive review. Singapore Med J. 2025 Aug 1. doi: 10.4103/singaporemedj.SMJ-2024-233. [Epub ahead of print]. Tan LF, **Sia CH,** Merchant RA.

Short- and Long-Term Outcomes of Obstructive and Non-Obstructive Hypertrophic Cardiomyopathy: A Systematic Review and Meta-Analysis. Heart Lung Circ. 2025 Sep;34(9):e104-e124. doi: 10.1016/j.hlc.2025.03.011. Epub 2025 Jul 23. Lo HZ, Low CE, Yau CE, Teo YH, Teo YN, **Li TYW,** Syn NL, **Chai P, Lin W, Yeo TC, Kong WKF, Wong RCC, Sia CH.**

Stress Echocardiography in Patients With Moderate or Severe Myocardial Ischemia: Insights From the ISCHEMIA Trial. J Am Soc Echocardiogr. 2025 Jun;38(6):465-481. doi: 10.1016/j.echo.2025.03.006. Epub 2025 Mar 18. Picard MH, Saysana K, Cyr DD, Zeng X, Scherrer-Crosbie M, Shaw LJ, Senior R, **Poh KK,** Bangalore S, Leipsic JA, Mancini GJ, Budoff MJ, Hague CJ, Min JK, O'Brien SM, Hochman JS, Maron DJ, Reynolds HR; ISCHEMIA Research Group.

The Effect of Obstructive Sleep Apnea on Subclinical Target Organ Damage in Patients With Resistant Hypertension. Arch Bronconeumol. 2025 Mar;61(3):147-155. English, Spanish. doi: 10.1016/j.arbres.2024.07.018. Epub 2024 Sep 3. Dalmases M, Sánchez-de-la-Torre M, Martinez D, Minguez O, Vaca R, Pascual L, Aguilá M, Gracia-Lavedan E, Benitez ID, Pinilla L, Cortijo A, Gort-Paniello C, Bascompte Claret R, Martinez-Garcia MÁ, Mediano O, Romero Peralta S, Fortuna-Gutierrez AM, Ponte Marquez P, Drager LF, Cabrini M, Masa JF, Corral Peñafiel J, Vázquez S, Abad J, García-Rio F, Casitas R, **Lee CH,** Barbé F, Torres G.

The Heart-Brain Axis: Key Concepts in Neurocardiology. Cardiol Discov. 2025 Jun;5(2):162-177. doi: 10.1097/CD9.0000000000000156. Epub 2025 Apr 17. **Goh FQ,** Tan BYQ, Yeo LLL, **Sia CH.**

The Prognostic Implication of Left Atrial Strain Parameters with Conventional Left Atrial Parameters for the Prediction of Adverse Outcomes in Asian Patients with Hypertrophic Cardiomyopathy-An Echocardiographic Study. J Cardiovasc Dev Dis. 2025 Jul 8;12(7):261. doi: 10.3390/jcdd12070261. Seah A, **Li TYW,** Sari NY, **Lee CH, Yeo TC, Yip JWL, Lim YC, Poh KK, Kong WKF, Lin W, Sia CH, Wong RCC.**

The risks of out-of-hospital cardiac arrest and mortality on public holidays and weekends: A time-series study. Resuscitation. 2025 Aug 5;215:110749. doi: 10.1016/j.resuscitation.2025.110749. Ho JSY, Earnest A, Siddiqui FJ, Hong D, Chia MYC, **Poh KK,** Leong BS, Ng YY, Ong MEH, Ho AFW; Singapore PAROS Investigators.

Treatment and outcomes of chronic coronary syndromes: the EORP EURECA imaging registry. Eur Heart J. 2025 Aug 19:ehaf594. doi: 10.1093/eurheartj/ehaf594. Liga R, Gimelli A, Podlesnikar T, Cvijić M, Pontone G, Miglioranza MH, Guaricci AI, Seitun S, Clemente A, Sumin A, Vitola J, Saraste A, Paunonen C, **Sia CH,** Paleev F, Sade LE, Zamorano JL, Maroz-Vadalazhskaya N, Sredojević M, Anagnostopoulos C, Macedo F, Knuuti J, Edvardsen T, Cosyns B, Petersen SE, Magne J, Laroche C, Popescu BA, Delgado V, Neglia D; **EURECA Investigators.**

ABSTRACTS

31st Annual National Conference of the Indian Society of Critical Care Medicine, Kochi, India, 7-9 March 2025

An unusual complication of catheter embolectomy in a patient with massive acute pulmonary embolism on VA ECMO. Katare M, **Qi Q,** Lim Y, **MacLaren G, Ramanathan K.**

American College of Cardiology 2025, 29-31 March 2025, Chicago

Clinical Characteristics and Longitudinal Outcomes of a 10-year Asian Transcatheter Aortic Valve Implantation Registry. **Ong J,** Ramero V, **Soh RYH, Chew NWS, Leow AST, Zhang A, Low TT, Yip JWL,** Hon JKF, Tay T, **Kuntjoro I, Lim Y.**

Longitudinal Characteristics and Outcomes of Normal-Flow Low-Gradient Aortic Stenosis in Asian Patients. **Ong J, Yeung W, Leow AST, Kong WKF, Yeo TC, Sia CH, Poh KK.**

Heart Valve Society 2025 Annual Meeting, Cairo, Egypt, 16-19 April 2025

Evaluation of Postoperative Outcomes of Aortic Root Repair in Type A Aortic Dissection Over a Decade: Insights From a Single Centre's Specialized Aortic Team. Sazzad F, Vijayakumaran V, **Qian Q, Sule JA, Sorokin V.**

Asian Pacific Society of Cardiology (APSC) 2025, Busan, Korea, 17-19 April 2025

Sex Disparities in Outcomes in Patients with ST-segment Elevation Myocardial Infarction (STEMI): A Global Meta-Analysis. **Ong JSY,** Ong X, Lee F, Koh LP, Cheo HM, Lee A, Wee IJY, **Sia CH.**

The Participation of Women in Cardiovascular Clinical Trials in ASEAN From 2010 to 2025. **Ong JSY,** Wee IJY, Cheo HM, Lee A, Ong X, Lee F, Koh LP, **Sia CH, Tyebally SM, Low TT.**

Heart Failure 2025, Heart Failure Association of European Society of Cardiology, Belgrade, Serbia, 17-20 May 2025

Clinical and safety outcomes of a pharmacist-led medication therapy management clinic (MTM) for heart failure patients in a tertiary hospital in Singapore. **Lin W,** Tan SJ, Soh PX, Wong P, **Chai P, Wong RCC, Ambhore A, Lim YC, Cherian R,** Yong ML, Low PC, CY Ong CY, Kong ST, Saw YS.

Clinical characteristics, mortality outcomes and survival predictors of transthyretin cardiac amyloidosis in an Asian registry. **Ong J, Li TYW, Tan E,** Putri VKP, Tulod F, **Ng P, Cherian R, Chai P, Sia CH, Wong RCC,** Ng K, **Lim YC, Lin W.**

Comparing diagnostic modalities and time to diagnosis in transthyretin amyloidosis: insights from a multi-ethnic asian registry. Putri VKP, **Ong J, Tan E, Li TYW, Foo R, Ng P, Chai P, Sia CH, Wong RCC, Lim YC, Lin W.**

Comparison of inferior vena cava wall thickness in patients with cardiac amyloidosis versus hypertrophic cardiomyopathy, a new diagnostic tool. **Li TYW,** Sari NY, **Yeo TC, Yip JWL, Poh KK, Kong WKF, Chai P, Lim YC, Ng P, Lin W, Wong RCC, Sia CH.**

Echocardiographic Indices of Right Ventricular Function to Predict Cardiovascular Outcomes in Asian Patients with Cardiac Amyloidosis. NY Sari, **Li TYW, Leow AST, Yeo TC, Poh KK, Kong WKF, Chai P, Lim YC, Wong RCC, Sia CH, Lin W.**

Left ventricular global deformation index, evaluating a novel echocardiographic marker for prediction of heart failure in asian patients with hypertrophic cardiomyopathy. **Li TYW, Wong RCC,** Sari NY, Chung BK, Seah A, **Lim YC, Ng P, Yip JWL, Poh KK, Kong WKF, Lin W, Sia CH, Yeo TC.**

Prognostic value of left atrial strain in patients with transthyretin amyloid cardiomyopathy. **Tan E, Ong J,** VKP, **Li TYW, Lim YC, Ng P, Kong WKF, Poh KK, Yeo TC, Sia CH, Chai P, Wong RCC, Lin W.**

Prognostic value of right ventricular longitudinal strain in patients with transthyretin amyloid cardiomyopathy. **E Tan, Ong J,** VKP Putri, **Li TYW, Lim YC, Ng P, Kong WKF, Poh KK, Yeo TC, Foo R, Sia CH, Chai P, Wong RCC, Lin W.**

Use of systemic thrombolysis for widespread intracardiac thrombus in a patient with VA ECMO following cardiogenic shock. Putri VK, Ong YS, **MacLaren G, Cherian R.**

The 9th International Congress on Cardiac Problems in Pregnancy (CPP) 2025, Vienna, Austria, 24-27 April 2025

Pregnancy outcomes in women with cardiovascular disease (CVD): The Pregnancy and Cardiac Disease Registry in Singapore (PACRIS). **Ong JSY,** Wee IJY, **Tioh C, Ong J, Yip JWL, Lim YC, Wang LYT,** Chan WX, Tan JL, Yan L, Su LL, Biswas A, Choolani M, Tan LK, **Low TT.**

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