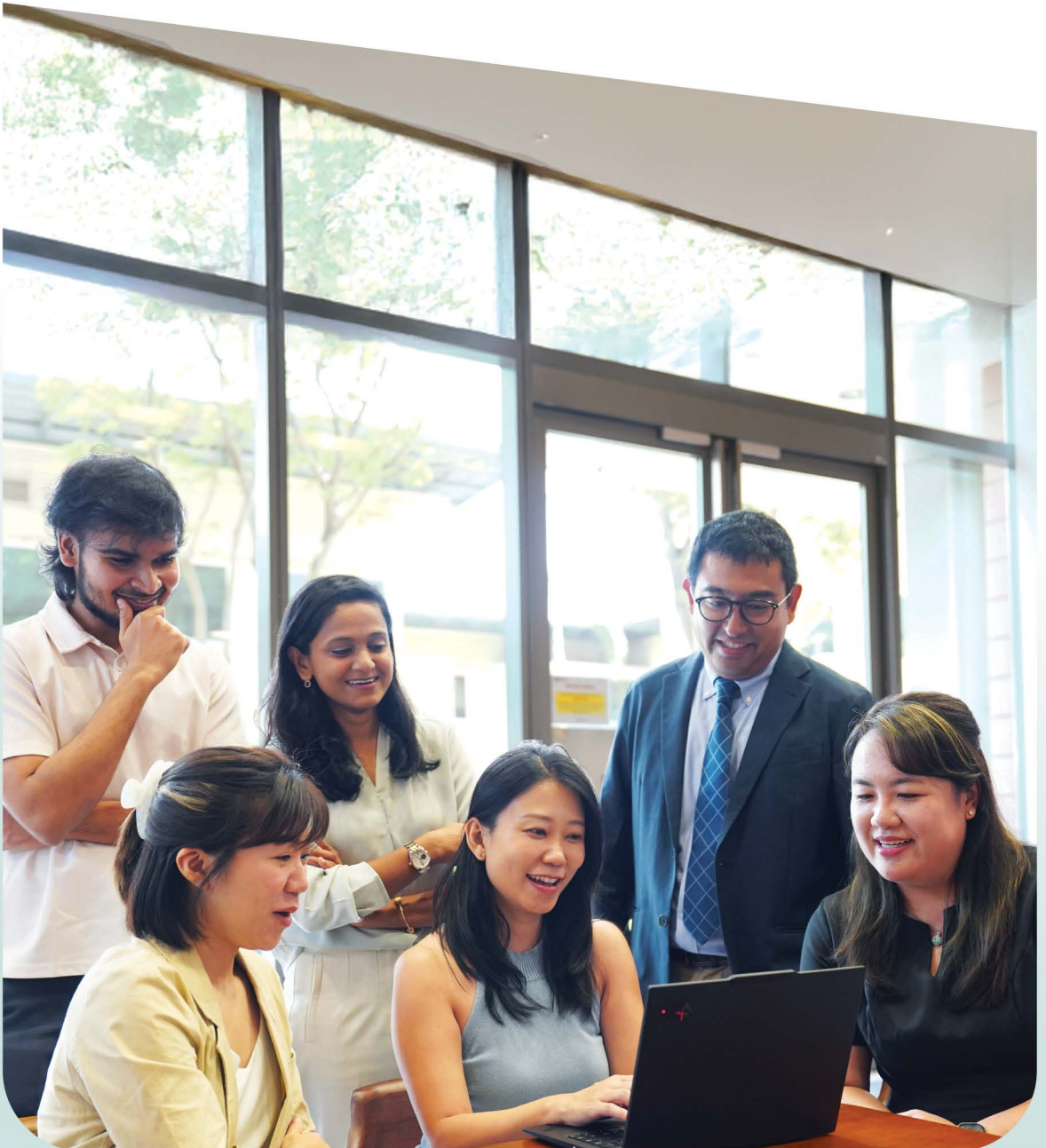


MAKING IMPACT. BUILDING CAPACITY.





Professor Marcus Ong (third from left)
with the HSRPH administrative team

DIRECTOR'S MESSAGE

Welcome to the Signature Research Programme in Health Services Research and Population Health (HSRPH).

Formerly established as the Signature Research Programme in Health Services and Systems Research (HSSR) in 2008, it is one of Duke-NUS' five Signature Research Programmes. HSRPH aims to bring the best in the field of health services research and population health to the SingHealth Duke-NUS Academic Medical Centre (AMC) and to Singapore. Over the years, HSRPH has established itself as a leader in the study of health systems and services for the population in Singapore and beyond.

Our research focuses on the organisation and delivery of health and social services in the context of an ageing population. It is undertaken to investigate whether services are effective, appropriate, scalable, and economically sustainable.

The Singapore healthcare system has been facing several challenges such as a rapidly ageing population, the increasing burden of chronic diseases, and the rising cost of healthcare. To address these challenges, the Ministry of Health (MOH) has shifted the focus of healthcare to the "3 Beyonds" and launched Healthier SG in 2023. The Academic Medicine Advisory Committee (AMAC) also recommended the AMC to develop and focus more on population health in their meeting in 2025.

As such, HSRPH has also placed more focus on population health to better address the challenges facing the healthcare system, and to align closer with the national shift and AMAC's recommendations.

We work closely with multiple stakeholders including government, regional health systems, and social service organisations to facilitate and advance a holistic research agenda. The policy-driven research Duke-NUS has implemented provides critical insights that guide healthcare system improvements throughout the region. In Singapore, we collaborate closely with the healthcare clusters, MOH, Ministry of Home Affairs, A*STAR, and etc. Globally, we have undertaken research projects in Bangladesh, Cambodia, Vietnam, Indonesia, Sri Lanka, Thailand, and with organisations like the World Health Organisation and the Global Resuscitation Alliance.

Besides cutting-edge research, HSRPH faculty are highly engaged in education. HSRPH is a track in the Integrated Biology and Medicine PhD, Quantitative Biology and Medicine PhD, and the Clinical and Translational Sciences PhD, to groom graduate students in health services research and population health.

Healthcare professionals can also choose to embark on our Graduate Certificate in Health Services Innovation, Masters, and PhD Programmes. With these programmes, we seek to engage a new generation of disruptive innovators who will improve the performance of health services.

If you are interested in our research, education and other initiatives, please feel free to contact us.

Professor Marcus Ong
Director, Health Services Research and Population Health

ABOUT THE PROGRAMME



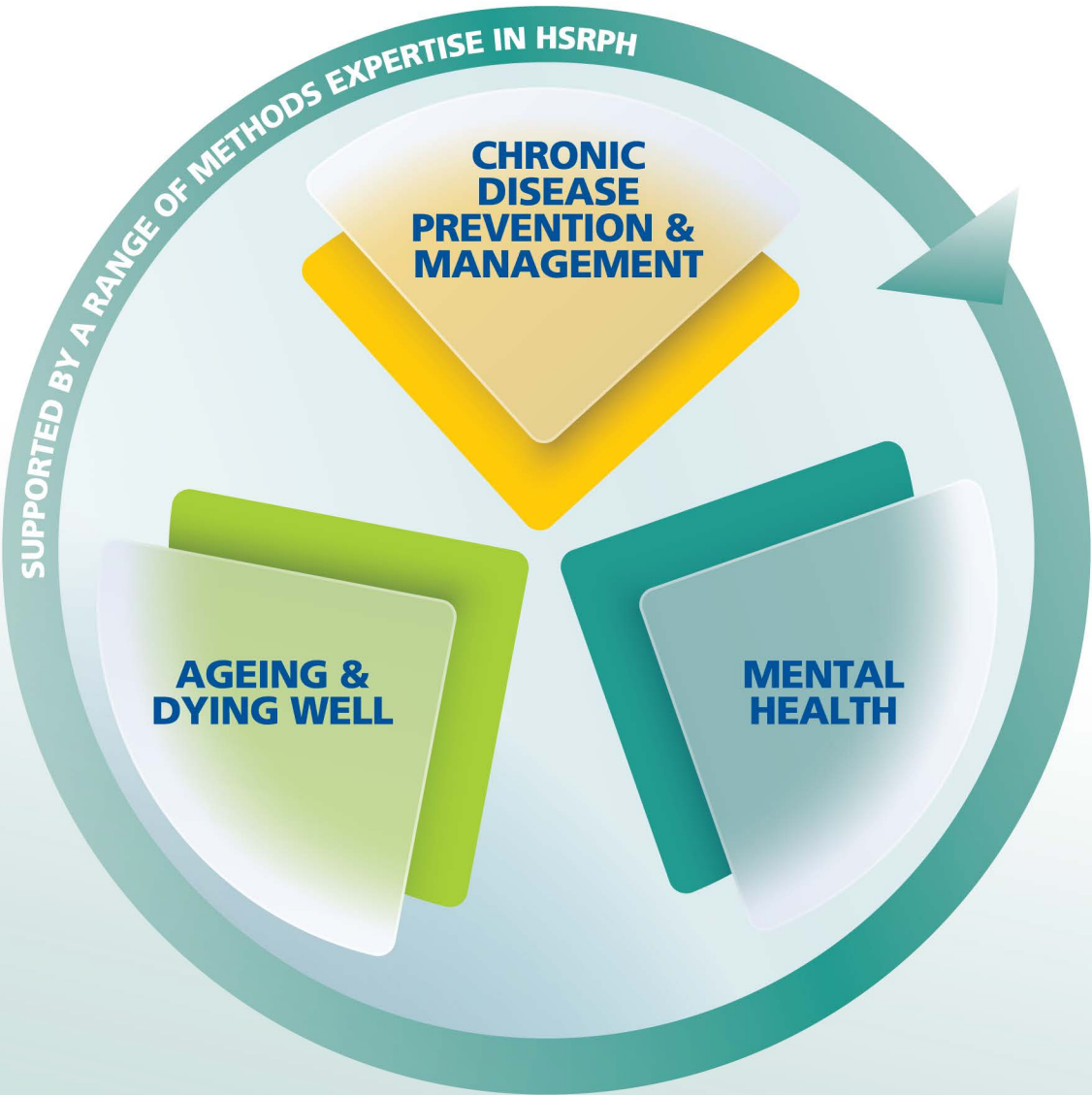
VISION

To be a world-leading centre of excellence for health services and population health research, through cutting-edge, innovative and pragmatic research methods.

MISSION

- Advance the state of the science in health services and population health research
- Promote capacity for healthcare professionals to do and use health services and population health research
- Improve patient and population health outcomes and quality of life from research and implementation of best practices in Singapore and globally
- Enable evidence-based optimisation of value-based health
- Provide world-leading education and training for health services professionals and academics in health services and population health research and related fields

OUR
RESEARCH
FOCUS



EVOLUTION OF HSRPH



Emeritus Professor David Matchar,
Founding Director, HSSR



Celebrating the 10th
Anniversary of HSRI - October 2025

- CARE
- CQM
- HSRI
- IAU
- LCPC
- PERC

**PROGRESSIVELY
RECRUITING FACULTY
OF DIVERSE &
COMPLEMENTARY
EXPERTISE**

**ESTABLISHING
RESEARCH
CENTRES
TO ADDRESS
NATIONAL
HEALTH
PRIORITIES**

**DEVELOPING
AN
INTERNATIONAL
WING**

- HSRPH VSP
- IPEC



Celebrating the 10th Anniversary
of CARE - February 2026



Making impact beyond Singapore -
Establishing the Jinan Resuscitation
Academy in China



Unveiling of HSRPH logo - October 2025

**EDUCATING
AND TRAINING
HEALTHCARE
PROFESSIONALS -
GCHSI**

**RESPONDING
TO SHIFT
IN MOH'S FOCUS
TO POPULATION
HEALTH**



Research on ageing - one of HSRPH's three
research focuses

Legend

CQM - Centre for Quantitative Medicine
IAU - Impact Assessment Unit
LCPC - Lien Centre for Palliative Care
SDGHI - SingHealth Duke-NUS Global Health Institute
CARE - Centre for Ageing Research and Education

VSP - Visiting Scholar Programme
PERC - Pre-hospital & Emergency Research Centre
IPEC - International Pre-hospital and Emergency Care Fellowship Programme
HSRI - Health Services Research Institute
GCHSI - Graduate Certificate in Health Services Innovation

IMPACT OF RESEARCH

BEYOND GRANTS & PUBLICATIONS

Research conducted by HSRPH faculty has influenced healthcare policy, service delivery, disease management, and patient outcomes internationally, nationally, and within healthcare institutions and communities.

Examples of these impacts are presented here.



COVID-19 PANDEMIC & CHRONIC DISEASES MANAGEMENT

Study

COVID-19 Virtual Disease Health System Outbreak Model for Singapore (CoViD-SOS)

End-Stage Kidney Disease Interactive Decision Aid for the Elderly

**'SingHypertension'
Reducing High Blood Pressure using Primary Care Services**

A Community-Based Intervention for Managing Hypertension in Rural South Asia (COBRA)

Impact/Adoption

Informed policy and operational decisions locally, nationally, and internationally.

Used by the Singapore General Hospital (SGH) and National University Hospital.

The intervention was implemented in four SingHealth Polyclinics and nationwide rollout is planned.

The International Society of Hypertension has proposed a 'Global Hypertension Care Taskforce' based on the results of this study.



HEALTHCARE DELIVERY

Study

Impact/Adoption

Evaluating a Novel Enhanced Community of Care (ECoC) Model for High-Risk Elderly in Public Rental Housing in Singapore: What Works, Why and For Whom? [ECoC-WoW]

Motivational Interviewing-based health coaching is now implemented as part of training and orientation for new community nurses in SingHealth.

Diagnosing Chest Pain in Outpatients "Faster, Better, Cheaper"

This diagnostic pathway has been implemented at the Cardiology Outpatient Clinic at SGH.

4 Dimensional Disease Outbreak Surveillance System (4D-DOSS)

4D-DOSS is a novel digital twin automated surveillance system. The findings of the study are now used to guide the implementation of 4D-DOSS for infection surveillance in all SGH wards.

Community-Based Venous Leg Ulcers (VLU) Compression Bandaging

Enhanced community access to compression bandaging relieved SGH of approximately 7800 outpatients seeking such treatment there.

This has evolved into a nation-wide offering as Home Nursing Foundation expanded its compression bandaging services nation-wide.

Pan Asian Resuscitation Outcome Study (PAROS)

Improving outcomes for pre-hospital and emergency care across the Asia-Pacific region, developing research infrastructure and strengthening Emergency Medical Services treatment capability.

Prehospital Emergency Care (PEC) Systems Evaluation Tool

Tool was co-developed and used in regional countries as part of initiatives to strengthen their PEC systems to improve patient outcomes.

Alcohol-related Frequent Attenders in the Emergency Department (ED)	Establishment of referral pathway from ED to community-based intervention.
'Hands on Abdomen'	Recommendation incorporated in Singapore Civil Defence Force's practice.

POPULATION & COMMUNITY HEALTH	
Study	Impact/Adoption
Transitions in Health, Employment, Social Engagement and Inter-Generational Transfers in Singapore Study (THE SIGNS Study)	This has contributed to the development of the Duke-NUS Enhanced Primary Care (EPC) systems dynamics model. The EPC model forms the base case for the Healthier SG utilisation simulation model being developed by the MOH Health Analytics Division.
An Evaluation of the Care Close to Home (C2H) Programme: A Social Care Service for Disadvantaged Older Adults in the Community	MOH made operational improvements to services to increase participation in the initial screening as well as follow-up services.
Singapore's National Advance Care Planning Programme	To be adopted by the Agency for Integrated Care in primary care, acute care, and nursing homes.
An Evaluation of the National Silver Academy: Assessing the Impact of Senior Learning in Singapore	The Singapore Standard 693 Geragogy Guidelines on Training Senior Learners was launched in 2023.

**Prescription Medication Label
Improvement for Singaporean Elderly
(PROMISE)**

Woodlands Health has started using the pictograms on medication labels dispensed in its pharmacy and plans to use them on other patient-facing materials. Discussions about the use of pictograms are ongoing with other public healthcare institutions.

**Evaluation of Active Ageing Centres
(AACs)**

The findings will inform the development of a practical toolkit to guide AACs in the implementation of the Active Ageing/Befriending/Care Services model.



GLOBAL HEALTH CONTRIBUTIONS

BY HSRPH FACULTY ➤



Associate Professor Sanjeewa Kularatna and Professor Nicholas Graves (first and second from left respectively) meeting with the Sri Lankan Health Minister (third from left)



Assistant Professor Cai Yiyang

Professor Nicholas Graves and Assistant Professor Cai Yiyang are leading Duke-NUS' participation in the Advancing Clinical Evidence in Infectious Diseases (ADVANCE-ID) network, a clinical research consortium with 49 sites across 20 countries in the Asia-Pacific region. The network aims to transform the diagnosis, treatment, and prevention of community- and healthcare-acquired infections through trials of new antimicrobial therapies; rapid diagnostic technologies; and improved infection prevention strategies. The Duke-NUS team leads the cost-effectiveness and implementation science components of several trials within this consortium.



Professor Nicholas Graves



Professor Tazeen Jafar

Professor Tazeen Jafar leads major global health research programmes addressing non-communicable diseases, including National Institutes of Health (USA) and Fogarty-funded projects in Tanzania and Pakistan.



Associate Professor Taufique Joarder

Associate Professor Taufique Joarder leads health systems research collaborations across South and Southeast Asia, including major projects in Bangladesh examining primary healthcare delivery and workforce policy.



Professor Marcus Ong

Professor Marcus Ong leads the PAROS, which involves 16 countries across Asia participating in this pre-hospital and emergency care research network.



Professor Truls Ostbye

Professor Truls Ostbye has played a key role in global health training and faculty development through collaborations spanning Sri Lanka, the Philippines, Duke University, and Duke Kunshan University.



Assistant Professor Vincent Pang

Assistant Professor Vincent Pang contributes to global infectious disease surveillance as part of the World Health Organisation Global Outbreak Alert and Response Network and conducts research on zoonotic diseases within the One Health framework.



GLOBAL HEALTH **INITIATIVES BY HSRPH**

ENHANCING INTERNATIONAL
VISIBILITY AND COLLABORATIONS

THE VISITING SCHOLAR PROGRAMME (VSP)

The VSP provides a unique opportunity for self-funded overseas clinicians, researchers, and students to engage in collaborative research and knowledge exchange in HSRPH



Dr Faisza Abdul Aziz,
Emergency Physician, Hospital
Sultanah Aminah, Malaysia



Associate Professor Tomas
Barry, University College
Dublin, Ireland



Dr Bob Mutalov,
Kyoto University, Japan



Professor Robert Neumar,
University of Michigan, USA



Dr Haruka Takahashi, Nippon Sport
Science University, Japan



THE INTERNATIONAL PRE-HOSPITAL AND EMERGENCY CARE FELLOWSHIP PROGRAMME (IPEC)

IPEC is a four-week programme for healthcare professionals and paramedics from developing countries in the region. It aims to provide an insight into the clinical practice/procedures, patient care management protocols, and ethical and cultural context of Singapore's emergency medical care system. IPEC is funded by donations from industrial partners.

These initiatives strengthen HSRPH's global research partnerships and international visibility.

OVERARCHING VISION: **EDUCATION AND CAPABILITY DEVELOPMENT**



HSRPH's education programmes aim to build system-wide capability for healthcare innovation. Modern health systems must deliver care that is efficient, evidence-based, and equitable. Yet innovation cannot rely on academics and senior clinicians alone.



Across disciplines, many healthcare professionals identify problems and generate ideas but lack the training, tools, and support to translate them into evaluated, scalable solutions. Our postgraduate programmes are designed for busy professionals, offering accessible, practical, and applied training.

We focus on population health, health economics, data science, implementation science, and related health services research methods to ensure innovations are rigorously tested and adoption decisions are evidence-informed. From Graduate Certificate to PhD, our programmes are deliberately aligned to build a shared language, skill-set, and pathway for sustainable healthcare innovation.

THE GRADUATE CERTIFICATE IN HEALTH SERVICES INNOVATION

OFFERS FOUR COURSES

Course 1 4 Units

Implementation Science

Introduces principles for translating evidence into clinical and health system practice. Students learn how to design, adapt, implement, and evaluate evidence-based interventions in real-world settings.

Students will be able to:

- Design interventions informed by patients, clinicians, and organisations
- Design evaluations for evidence-to-practice initiatives
- Develop stronger implementation and dissemination proposals
- Design implementation and evaluation research projects

Course 2 4 Units

Research Methods for Health Services Research

Covers core research principles applied to health services research, including hypothesis testing, inference, causality, qualitative methods, and survey design

Students will be able to:

- Articulate the research process and formulate hypotheses
- Understand Type I and II errors
- Critically appraise studies using different designs
- Assess causality and associations in health services research
- Apply qualitative methods and design robust surveys

Course 3 4 Units

Research Methods for Health Services Research

Focuses on health technology assessment, cost-effectiveness analysis, and economic evaluation to support evidence-based decision-making in resource-constrained settings.

Students will be able to:

- Conduct a health technology assessment
- Understand welfare economics and market failures in healthcare
- Build and evaluate cost-effectiveness models
- Interpret published economic evaluations and collaborate with health economists
- Understand competing paradigms of decision-making in health systems

3



Course 4 4 Units

Healthcare + Data Science

Introduces foundational data science concepts, methods, and healthcare applications, including model development, validation, and interpretation.

Students will be able to:

- Understand the role of data science in health services
- Independently conduct applied health data science projects
- Apply data science to prediction, risk assessment, and service improvement

4



Find out more!



If you wish to make a donation
to HSRPH, please contact:
hsrph@duke-nus.edu.sg

THE PROGRAMME IN
**HEALTH SERVICES RESEARCH
& POPULATION HEALTH**

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