

Overarching Focus: Population Health

Population Health is the health of a population as measured by health status indicators and as influenced by social, economic and physical environments, personal health practices, individual capacity and coping skills, human biology, early childhood development, and health services. As an approach, population health focuses on the interrelated conditions and factors that influence the health of populations over the life course, identifies systematic variations in their patterns of occurrence, and applies the resulting knowledge to develop and implement policies and actions to improve the health and well-being of those populations. A population health approach addresses the entire range of individual and collective factors that determine health. Population health strategies are designed to affect whole groups or populations of people. The overarching goals of a population health approach are to maintain and improve the health status of the entire population and to reduce disparities in health status between population groups.

As we aim to develop an integrated ecosystem that anchors preventive health efforts in primary care and care in the community with good system linkages to support citizens at different life stages, novel strategies and approaches will be needed to drive sustained behavioural modifications for individuals to adopt healthier behaviour and habits. This would include new 'Precision Health' models that shift away from broad-based interventions to interventions that are tailored to maximise impact on high-risk groups (e.g. by combining clinical/phenotypic data, genetic data, behavioural data, digital data). To achieve this, the Population Health Research Grant will fund research proposals that seeks to improve health outcomes through a population health approach under the following Research Areas.

Research Areas

Health Promotion and Preventive Health (HP/PH)	Health Services Research (HSR)
<p>Singapore's rising chronic disease burden threaten the long-term sustainability of the country's healthcare system. Upstream investment in health promotion and preventive health is a key move that would decrease the incidence and/or delay the onset of non-communicable diseases (NCDs) such as cardiovascular diseases, cancers, and diabetes, and reduce the burden on Singapore's healthcare system and finite resources. This area encompasses research devoted to the building of the scientific and economic evidence base for health promotion and disease prevention in the Singapore context. This includes applied etiological or determinant research, field or community-based research, and cost-effectiveness/ analysis research that are collaborative, interdisciplinary/multidisciplinary, problem-solving and solution-oriented, and translatable to practice for implementation.</p> <p>The research proposals submitted under this research area must lead to a better understanding of actionable, cost-effective and sustainable drivers of physical and mental health in the following areas of interest to promote healthy behaviour and address modifiable health risks across different life stages.</p>	<p>Health Services Research is the “multidisciplinary field of scientific investigation that studies how social factors, financing systems, organisational structures and processes, health technologies, and personal behaviours affect access to healthcare, the quality and cost of healthcare, and ultimately our health and well-being. Its research domains are individuals, families, organisations, institutions, communities, and populations”.</p> <p>Given our population ageing resulting in increasing prevalence of chronic diseases, multi-morbidity and demand for healthcare services, rising costs and manpower demand, there is a need to transform our care delivery model and enablers (e.g., financing approach, data sharing services across settings) to anchor care in primary care and community care, to operate a more sustainable and manpower-lean healthcare system. We should also continue to leverage on digital technologies to improve health delivery (e.g., to prevent disease by empowering consumers to make better-informed decisions about their health, tailor medicine/treatment to individual needs, and lower the cost of healthcare provision), and enable new ways (e.g., through inter-disciplinary application) of intervening to effect behaviour changes whilst allowing rich data to be collected. The Population Health Research Grant could contribute to this effort by supporting a) rigorous real-world evaluation of promising interventions and/or models of care, and b) research into Implementation Science to better understand and implement effective methods to bring about widespread transformation.</p>

PHRG – Research Themes

1. Mental Health
2. Care for Mothers and Children
3. Population Mobilisation and Improving Access and Adherence to Programmes on Prevention, Early Detection and Management of Non-communicable Diseases, especially those with Higher Burden of Disease and Disability
4. Use of Emerging Technologies to Improve Health
5. Care for Complex Patients
6. Sustainable, Efficient and Cost-Effective Care
7. Palliative Care
8. Traditional and Complementary Medicine (T&CM)
9. Health Systems Research
10. Rehabilitation (Rehab)
11. Caregiver Support
12. Real-world Safety and Effectiveness of Medicines, Vaccines and Other Health Technologies

PHRG – Research Themes

1) Mental Health

Details will be updated tentatively in Aug/Sep 2026 as they are still being worked out. Applications in the area of mental health may continue to be submitted under the PHRG Open category in the Jul 2026 grant call.

HP/PH

To be updated.

HSR

To be updated.

PHRG – Research Themes

2) Care for Mothers and Children

This theme spans the continuum of care from pre-conception, pregnancy and childbirth to infancy, childhood, and adolescence, and research should address metabolic health, mental health and cognitive development of children and their mothers.

HP/PH

- How do we optimise maternal health in order to achieve better child development outcomes?
- How do we optimise child health to ensure good health/development outcomes?
- What is the impact or role of the following in child development/health outcomes: (a) parents, specifically fathers when appropriate, (b) grandparents, (c) domestic helpers and (d) pre-school attendance?
- Research into sustainable approaches (e.g., peer influence) to help children and youth sustain healthy habits (e.g., sleep, screen use and sufficient physical activity) into adult hood for better health outcomes.
- How can we enhance early preventive dental health interventions and oral hygiene practices in children to improve long-term dental health outcomes in adulthood?
- Research on the efficacy and impact of enrolling families and those of a younger age group (e.g., children) with a primary care provider.

HSR

- Research into models of care that 'right-sites' maternal and child health conditions within primary or community-based care.
- Research related to developmental screenings conducted in childhood and approaches to optimise turnout, parameters screened, and follow-up.
- Research related to addressing antenatal care disparities and improving access for vulnerable communities.
- Research on the efficacy of various channels/models of digital platforms to support parents in adopting and reinforcing healthy habits and behaviours at home.

PHRG – Research Themes

3) Population Mobilisation and Improving Access and Adherence to Programmes on Prevention, Early Detection and Management of Non-communicable Diseases, especially those with Higher Burden of Disease and Disability

As Singapore population ages, the burden of non-communicable and chronic diseases is expected to continue rising. To address this, proposals can include those that:

1. Develop new models of care; 2. Appropriately right-site preventative and chronic care in primary and community care settings; 3. Development risk prediction models, tools and strategies to facilitate early detection of disease, especially in high risk populations; 4. Understand and address the social determinants of health and encourage sustainable societal and behavioural changes to optimize health; 5. Create supportive environments in support of making healthy choices the default option for Singaporeans.

HP/PH

- Research into how we can better instil and/or sustain healthy eating and lifestyle behaviour among Singaporeans, including setting-specific research (workplaces, homes).
- How can we better nudge industry in providing more healthier food options or influence consumer's purchasing behaviour towards healthier food options?
- How can we leverage primary and community care (e.g., Community Health Post) to promote healthy behaviour and address modifiable health risks (including social and environmental factors) at different life stages to prevent or delay the onset of chronic diseases?
- How can we motivate smokers to quit smoking and/or remain smoke-free?
- How can we better encourage Singaporeans to undergo recommended health screening tests?
- Research into the impact and effect of upstream interventions such as proactive lifestyle modifications in driving better health outcomes (e.g., in management of common chronic diseases in primary care).
- What motivational and behavioural change techniques are most effective for obesity prevention and management? Are there specific culturally appropriate strategies that would be effective for ethnic minority communities?
- How can we better design, customise, and/or target health programmes at ethnic minorities to support and sustain engagement in healthy lifestyle behaviours (e.g., HSG engagement, screening, physical activity, healthy eating, smoking cessation)?

PHRG – Research Themes

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HSR

- Studies looking at current patient knowledge and health literacy regarding common chronic diseases.
- How can we better identify high-risk individuals for early detection and management of diseases?
- How to motivate patients diagnosed early in their disease course to be compliant to treatment (e.g., asymptomatic diabetics, hypertension and hyperlipidaemia patients who do not present noticeable symptoms).
- Research accessing the most effective and cost-effective ways to help at-risk populations begin and sustain health actions.
- Implementation research on adoption and scaling up of successful initiatives.
- Studies looking at how improvements in individuals' chronic disease management arising from population health programmes (e.g., HealthierSG) results in societal gain (e.g., reduced caregiver burden, increased economic productivity).
- Studies looking at impact of caregivers on the health outcomes of their dependents (e.g., the young and elderly).

PHRG – Research Themes (6)

4) Use of Emerging Technologies to Improve Health

Advances in technology offer new opportunities to transform healthcare outcomes by enabling more effective, accessible, and personalised care. This theme supports research projects that leverage technology advances and/or novel applications of existing technologies to support care models that strengthen clinical decision-making, enable earlier diagnosis and monitoring of health, and/or improve care delivery. Key interest areas include artificial intelligence, robotics, sensors & wearables. Proposals should demonstrate potential for real-world adoption, including clinical and cost-effectiveness, scalability, secure and streamlined implementation.

HP/PH

- Research and interventions that leverage advances in technology and data science, e.g., to provide customized just-in-time feedback/nudging, that lead to greater ownership of healthy behaviour by individuals; to also aid in tracking of health outcomes for the general population as well as vulnerable population e.g., elderly and disabled.
- Tools or models which predict risk of chronic diseases of concern (e.g., DHL, ischaemic heart disease, stroke, lung cancer, Alzheimer's, COPD, falls, and stomach cancer).

HSR

- Quantitative or qualitative research on provider and patient factors and experiences pertaining to novel applications of technology.
- Research into cost-effective healthtech solutions that meet security, confidentiality and interoperability considerations while improving care delivery.
- Implementation research on adoption and scaling up of novel applications of new technologies in health.

PHRG – Research Themes

5) Care for Complex Patients

With the increasing chronic disease burden, patients with multiple morbidities have become the norm and often have poor clinical outcomes. They often require care across multiple care sites (e.g., SOC's, home-based care), and face significant challenges navigating the healthcare system. Research submitted under this theme should address the needs of this patient population, including healthcare access, self-management, and care coordination. This theme will also support research targeted towards allied health and multi-disciplinary team-based care pertaining to the delivery of integrated care, including both medical and non-medical professionals. Strategies that have a community-based focus will be prioritised.

HSR

- Research on challenges faced by complex care patients (e.g., polypharmacy) and innovative ideas on how to better coordinate their care.
- Studies on care models with increased focus on allied health professionals and nursing professionals, e.g., effectiveness of a community pharmacy.
- Evidence of integrated care (IT systems, data registries, shared care plans, care coordinators, multi-disciplinary teams, telemonitoring etc.) and their qualitative and/or quantitative impact on our local healthcare system.
- Studies evaluating the strengths and weaknesses of current transitional and home care services and recommendations on improvements.
- New models for how to integrate home care with existing tertiary and primary care structures.
- Implementation research on adoption and scaling up of successful initiatives.

PHRG – Research Themes

6) Sustainable, Efficient and Cost-Effective Care

This theme addresses the need to improve the sustainability and efficiency of our healthcare delivery system through the robust application of cost-effectiveness analysis (CEA) to Population Health programmes and policies, as well as improvement in resourcing and allocation, and use of approaches such as **Value-Based Care**. This theme will support research that seeks to evaluate the impact of Population Health programmes and policies, optimize resource allocation, improve healthcare manpower productivity, and increase the efficiency of healthcare delivery without compromising quality.

HP/PH

- Empirical and modelling research to estimate the downstream, longer-term cost and effectiveness of Health Promotion and Population Health programmes and policies.

HSR

- [Value-based care outcomes] Research on how funding mechanisms (e.g., funding flows, models, accompanying governance structures) can be designed between government, regional health systems and community partners/service providers to promote the delivery of integrated and coordinated care in the community.
- [Health equity and access] Research into how value-based care models affect different population groups and whether they reduce or exacerbate health disparities.
- [Resource optimisation] Research into optimal staffing models, skill-mix strategies, and workflow redesign that maximise healthcare worker productivity and enhance multidisciplinary team effectiveness to promote resource optimisation and workforce efficiency across different settings (e.g. acute hospital and community care sector).
- [Integrated care] Research on care models that focus on reducing care fragmentation and optimise care outcomes and integration across settings.
- [Resource allocation and capacity planning] Research on predictive modelling and analytics to improve and optimise resource utilisation of acute hospitals and resource capacity forecasting to maximise healthcare infrastructure use.
- [Patient and community engagement] Research into patient engagement strategies, shared decision-making, or community participation in care design.
- [Cost effectiveness] Research into Cost Effectiveness Analysis methods to support the evaluation of Population Health Policies and programmes.

PHRG – Research Themes

7) Palliative Care

As our population ages, palliative care will become increasingly important as we seek to enable patients to live out their final days in a dignified manner. Over the years, Singapore has been enhancing the quality, affordability and accessibility of palliative care services. We have a variety of palliative care options such as the inpatient hospice palliative care, home palliative care and day hospices to cater for different needs and preferences of treatment and places of death. However, with evolving palliative (and end-of-life (EOL)) care models, in addition to challenges such as the current COVID-19 pandemic significantly altering traditional views on care delivery, we are keen on exploring how we can adopt and/or adapt existing palliative care models to offer more holistic, person-centric and cost-efficient options.

HSR

- Innovative palliative care models which emphasise an integrated, patient-centred approach, involving cross-agency collaboration whilst also allowing patients to transit seamlessly across different settings (e.g., from institutions to the community) and providers according to their individual needs. These approaches should demonstrate cost-effectiveness, as well as sustainability and scalability to deliver holistic, person-centric palliative and EOL care.
- Improved methods of identifying and supporting persons who can benefit from early introduction to palliative care approach. This may include proposals on training or equipping generalist health and social care professionals with skills to identify persons who can benefit from the palliative care approach.
- New models of palliative care that employ approaches which optimise utilisation of local assets (including the strengths, skills and resources of the community and family).
- Scaling up existing models of care including home palliative services in a sustainable manner, leveraging technology where possible, while ensuring sufficient flexibility to cater to patients' preferences.
- New models of engagement and communication with staff, patients and their families to enable a more person-centric EOL care, including encouragement of early consideration/thinking about palliative care. It can also include new engagement modes in reaching out to the public on having more open and meaningful dialogue about issues surrounding the end of life and palliative care.
- Implementation research on adoption and scaling up of successful initiatives.

PHRG – Research Themes

8) Traditional and Complementary Medicine (T&CM)

As a multi-racial, multi-cultural society, Singapore remains home to individuals of different ethnicities and religions. This diversity plays out in health seeking behaviours as well, with the presence of traditional Chinese medicine (TCM), traditional Malay medicine (TMM), and traditional Indian medicine (TIM), although only TCM practitioners are statutorily regulated. This theme will fund research that seeks to understand the prevalence, attitudes and health seeking behaviour of our population with regard to T&CM, with a focus on how Western medicine and T&CM can be used safely together.

HSR

- Studying the reasons and prevalence of T&CM use as an alternative or together with mainstream healthcare services.
- Studying care coordination mechanisms and approaches between TCM and mainstream healthcare in managing chronic disease in the primary care settings and in disease prevention.

PHRG – Research Themes

9) Health Systems Research

Besides improving various care models serving different groups of patients, research at a health systems-level could potentially yield important insights into system-level interventions or policies that may impact health on a wider or deeper scale.

HSR

- Research on the effectiveness of regional-level population health interventions across subsystems (e.g., primary care, mental health, long-term care) for target groups and the conditions/factors that influence the effectiveness.
- Research into healthcare governance structures, decision making processes and leadership models that improve system performance. Studies could focus on regulatory frameworks, accountability mechanisms and organisational culture in healthcare settings.
- Research into healthcare financing models, cost-effectiveness methodologies and economic evaluation frameworks. For example, topics on insurance mechanisms, subsidy optimisation, and long-term financial sustainability of the health system.
- Research on benchmarking methodologies, comprehensive health system performance indicators and comparative effectiveness frameworks that assess overall health system functioning and efficiency. To also consider more specific research on developing and validating patient-reported outcome measures (PROMs), patient-reported experience measures (PREMs), and quality metrics that truly reflect value from the patient perspective.
- Research on the barriers and facilitators to implementing value-based care models, including change management and organisational transformation.

PHRG – Research Themes

10) Rehabilitation (Rehab)

Disability is an important and common health and social determinant in population health impacting significantly on outcomes such as Disability and Quality Adjusted Life Years, morbidity, institutionalisation and mortality. The prevalence of severe disability, such as stroke, OA and hip fractures will increase with the aging population and better medical care. Rehabilitation is the principal core intervention for disability. MOH has launched the National One-Rehab Framework aimed at enhancing patient outcomes for six major rehab conditions. Population health research is a key component to evaluate the characteristics, systems, outcomes and trajectories to develop precision-guided population health. Health services research will encourage cross-collaboration between the acute, primary and community care providers to develop novel ways of improving rehabilitation care across the care continuum including Interprofessional Care, Extended and Expanded Care provision, Rehab Outcomes Research, Pre-Habilitation in the Healthier SG construct, Early Supported Discharge, Return to Employment, Technology leverages and Telerehabilitation.

HP/PH

- Research on National Rehabilitation and Disability Frameworks in the context of disability as a important health determinants. This includes study on rehab outcomes, tiering (siting) and diagnostic coding systems, cost-effectiveness and care trajectories to develop precision directed population health.

HSR

- Innovative and improved interdisciplinary models of care that evaluate interventions to support the population including Persons with Disability (PwD) who may be undergoing rehab to improve function and prevent future or recurrent rehab episodes.
- Research on patient-centric, innovative, cost-effective, sustainable and scalable rehab care models that:
 - (a) adopt a goal-oriented approach, and involve cross-agency collaborations that enable patients to transit seamlessly across different settings (e.g., from public healthcare institutions to the community) and providers; OR
 - (b) optimise utilisation of resources; OR
 - (c) leverage technology (e.g., deep learning, machine learning and predictive analytics).
- Quantitative or qualitative research on provider and patient factors and experiences pertaining to improving effectiveness of rehab.
- Quantitative or qualitative research on patient motivations pertaining to improving patients' adherence to rehab programmes (e.g., gamification and motivational psychology).
- Implementation research on adoption and scaling up of successful initiatives.

PHRG – Research Themes

11) Caregiver Support

This theme recognises caregivers of seniors and persons with disabilities/mental health conditions as a vital component of Singapore's integrated care model and seeks to fund research that addresses the multifaceted needs of caregivers across different care contexts. Research under this theme should contribute to developing evidence-based interventions, policies, and support systems that enhance caregiver well-being, improve care quality, and create sustainable caregiving models that benefit both caregivers and care recipients.

HP/PH

- What are the key determinants of caregiver burden and well-being across different caregiver populations?
- How can we develop targeted interventions to promote health and wellbeing of caregivers, to prevent physical and emotional burnout?
- What are the long-term health impacts of caregiving across the different caregiver populations?
- How can community resources and social networks be leveraged to create supportive environments for caregivers?

HSR

- Research into innovative caregiver training programmes that enhance care competency whilst reducing caregiver burden.
- Studies evaluating technology solutions designed to support caregiving activities and reduce caregiver workload.
- Research on caregiver segmentation and identification of high-risk caregiver populations requiring enhanced support.
- Evaluation of integrated care models that incorporate formal caregiver support services within existing healthcare systems.
- Studies assessing the impact of caregiver support programmes on caregiver and care recipient outcomes and healthcare utilisation.
- Implementation research on adoption and scaling up of successful caregiver support initiatives.

PHRG – Research Themes

12) Real-world Safety and Effectiveness of Medicines, Vaccines and Other Health Technologies

As medicines, vaccines and other regulated health technologies are increasingly used across the life course and in diverse patient populations, important questions frequently arise after approval regarding their real-world safety, effectiveness and long-term impact. Pre-market trials establish efficacy under controlled conditions; however, routine use often involves older patients, multi-morbidity, polypharmacy, variable adherence, and heterogeneous care settings.

To ensure that health technologies deliver value while remaining safe, effective and sustainable within Singapore's healthcare system, there is a need for rigorous post-market evaluation using high-quality real-world data, robust causal methods, and pragmatic trial designs. Evidence generated under this theme should inform regulatory, clinical, value-driven practice, as well as population-level decision-making.

HP/PH

- What is the real-world effectiveness of antivirals, vaccines, screening/diagnostic tests and preventive therapies in reducing disease incidence, complications, and transmission at the population level?
- What is the population-level impact of risk-minimisation measures, safety advisories, or labelling changes?
- How do uptake, adherence, and behavioural factors influence real-world outcomes of preventive medicines and health technologies?
- What upstream strategies can optimise appropriate use of medicines and vaccines to prevent avoidable morbidity?

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HSR

- What is the comparative safety and effectiveness of approved therapies used for the same indication in routine care?
- How do multi-morbidity and polypharmacy influence treatment outcomes and adverse events?
- How do real-world outcomes compare with those observed in pre-market trials?–What are the system-level implications (cost, utilisation, hospitalisations, manpower demand) of adopting new health technologies?
- How can pragmatic or cluster-randomised trials be embedded in routine care to answer high priority questions efficiently?
- What data infrastructure, governance models, and methodological standards are needed to support sustainable post-market evaluation capacity?
- How can post-market evidence be translated into regulatory action, funding decisions, guideline updates, or de-implementation strategies?
- How do real-world utilisation patterns for health technologies align with established evidence-based guidelines/recommendations?
- What is the long-term durability of clinical outcomes after administering the health technology such as gene therapies, and which factors affect the maintenance of clinical response over time?