Core Capabilities

SPHERiC's Research Core Capabilities

PHAC — Population Health Analytics Core

Facilitate collection and analytics of data on health, social & behaviour

- Health Opinion Panel (HOP)
- Population Health Geographic Information System (GeoPISH)

HSMCC — Health Systems and Models of Care Core

Analyse how health systems and policies contribute to:
People-centered Accessible, equitable, safe
Effectiveness of Care Impact on Health

- International Hub for Health System and Policy Comparisons
- Health Systems and Policy Research Hub
- Capacity Building in Health Systems and Policy Research

ISC — Implementation Science Core

Facilitate testing and evaluation of new/ existing approaches to health programming and address major barriers that impede effective implementation

- Translation of Evidence-based Principles into intervention Models
- Formative and Summative Programme Evaluation
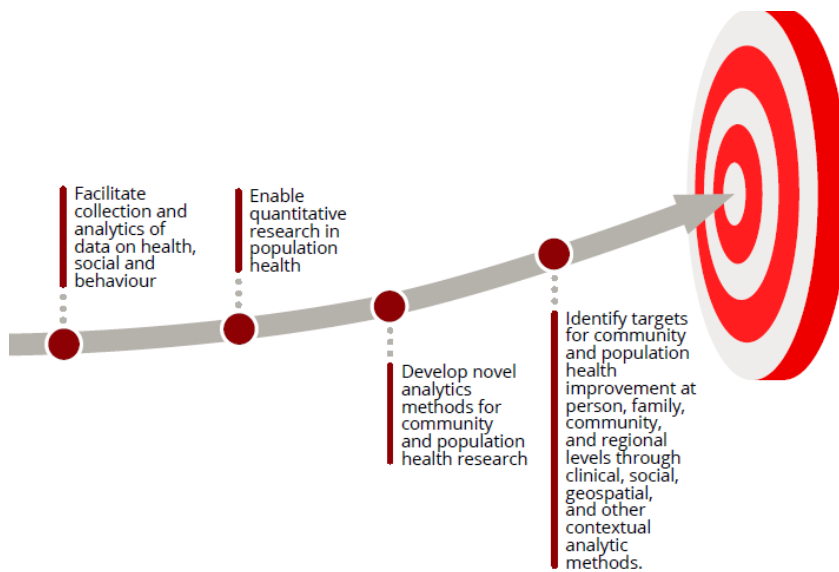
Introduction

The PHAC will house capability to poll a ready, online panel to obtain pertinent health, social and behavioural information, perform and visualize population level analytics layered with determinants of health, as well as develop applications for collection of data for population health analytics. The two resources available within this core, combined with the advanced analytics skills of this core will nurture, and facilitate quantitative research in population health both in the western region and across Singapore.

Objectives

Facilitate collection and analytics of data on health, social and behaviour

Enable quantitative research in population health

Develop novel analytics methods for community and population health research

Identify targets for community and population health improvement at person, family, community, and regional levels through clinical, social, geospatial, and other contextual analytic methods.

Capabilities

Health Opinion Panel (HOP)

A standing online cohort to field ad hoc survey requests rapidly and longitudinally. The cohort will permit health educational interventions to be fielded and assessed online.

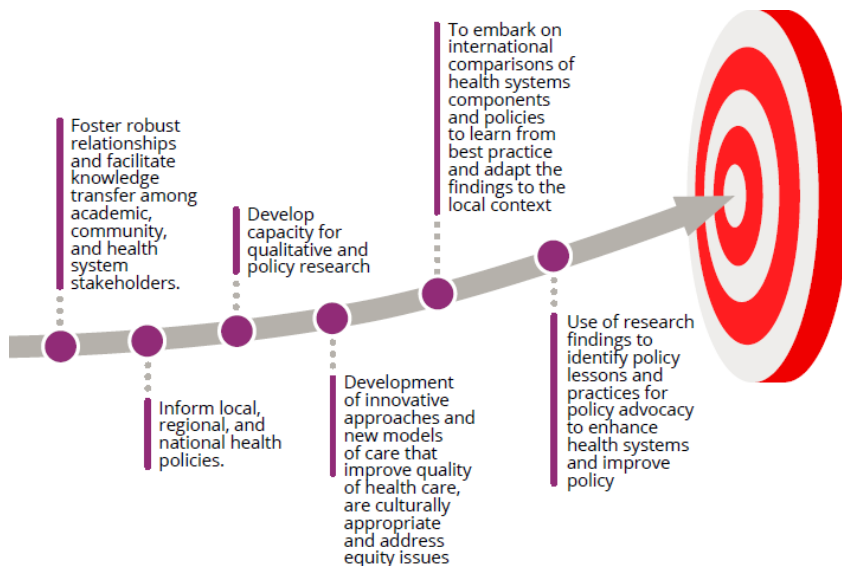**Population Health Geographic Information System (GeoPISH)**

A collation of GIS data on determinants of health and health indicators together with the software and expertise are available to researchers to answer questions about population health with a spatial component.

HSMCC
Health Systems and
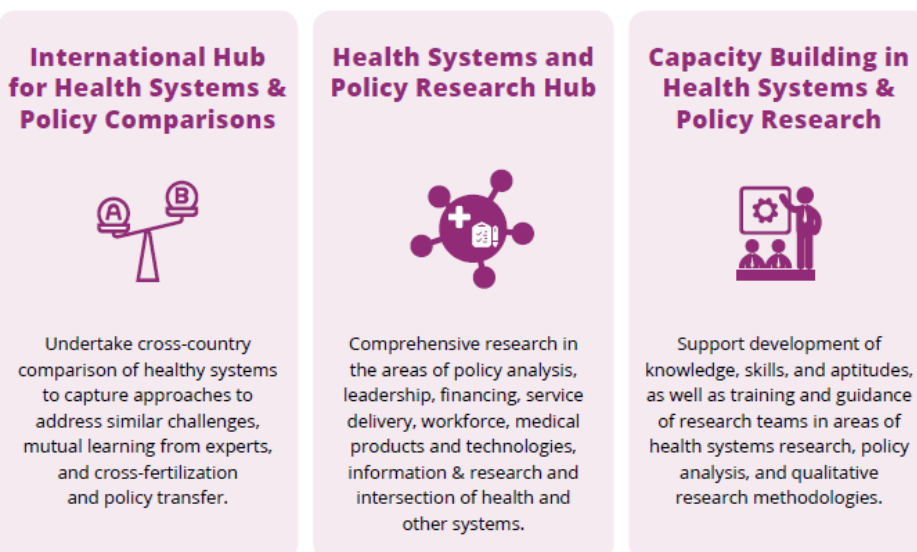Models of Care Core

Introduction

The central aim of the Health Systems and New Models of Care Core (HSMCC) is to build a strong and robust evidence base through research and capacity-building initiatives to create health systems that are more resilient, people-centred, and innovative for improved health outcomes. The HSMC Core will facilitate better understanding of how health systems and health policies affect access, delivery and effectiveness of care and its impact on health, current care models and their gaps, and the development of new care models. This core will also contribute towards developing local expertise in health systems and policy research, and generate innovative and effective solutions to enhance health systems through cross-national comparative research.

Objectives

Foster robust relationships and facilitate knowledge transfer among academic, community, and health system stakeholders.

Develop capacity for qualitative and policy research

To embark on international comparisons of health systems components and policies to learn from best practice and adapt the findings to the local context

Inform local, regional, and national health policies.

Development of innovative approaches and new models of care that improve quality of health care, are culturally appropriate and address equity issues

Use of research findings to identify policy lessons and practices for policy advocacy to enhance health systems and improve policy

Capabilities

International Hub for Health Systems & Policy Comparisons

Undertake cross-country comparison of healthy systems to capture approaches to address similar challenges, mutual learning from experts, and cross-fertilization and policy transfer.

Health Systems and Policy Research Hub

Comprehensive research in the areas of policy analysis, leadership, financing, service delivery, workforce, medical products and technologies, information & research and intersection of health and other systems.

Capacity Building in Health Systems & Policy Research

Support development of knowledge, skills, and aptitudes, as well as training and guidance of research teams in areas of health systems research, policy analysis, and qualitative research methodologies.
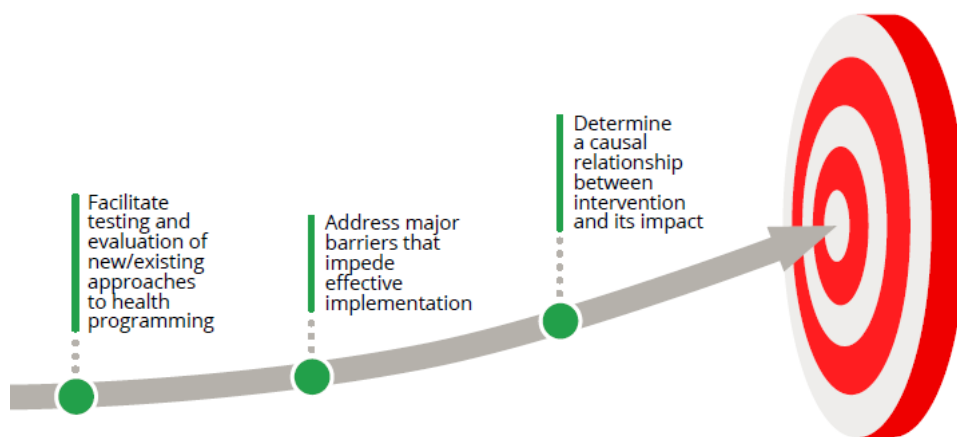
ISC
Implementation
Science Core

Introduction

The Implementation Sciences Core (ISC) is an interdisciplinary team dedicated to rigorous yet pragmatic evaluation of programmes and policies and their impact on the Singapore population. The ISC core will focus its attention on both formative evaluation to determine the best and most feasible design choices for the healthcare system, and summative evaluation to assess outcomes and cost-effectiveness of ongoing efforts and initiatives.

The team includes qualitative analysts, health services researchers and economists working together to provide holistic insight for improving health care in Singapore.

Objectives

Facilitate testing and evaluation of new/existing approaches to health programming

Address major barriers that impede effective implementation

Determine a causal relationship between intervention and its impact

Capabilities

Translation of Evidence-based Principles into Intervention Models

Aims to foster collaboration with national experts and key opinion leaders to refine designs to maximize translation of evidence into interventions.

Formative and Summative Programme Evaluation

Advise on appropriate study design for impact evaluations, with a mixed-methods perspective, integrating qualitative research to provide insight and depth.

Economic Evaluation and Decision Analysis

Promote a harmonized approach to various evaluations that adhere to international best practises and also include capacity to conduct single or multi-criteria decision analysis and focus on optimization of resources.