



Sreenivasan Oration

Population Health:

An Opportunity for Family Medicine

Professor Thomas Coffman Dean, Duke-NUS Medical School



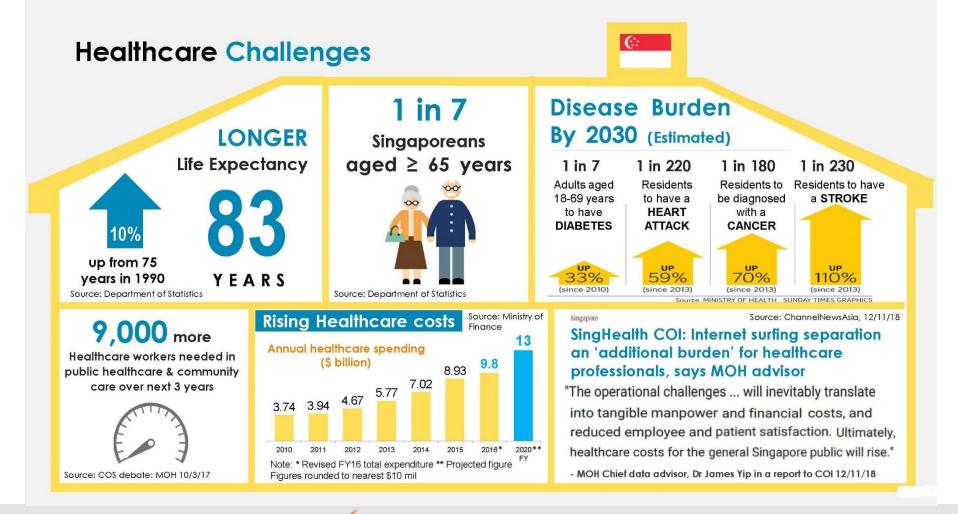
Dr Baratham Ramaswamy Sreenivasan



- Dedicated general practitioner who spent >40 years in clinical practice
- First President of the College of General Practitioners Singapore
- Founding President of Singapore Medical Association
- First Singaporean Vice-Chancellor of University of Singapore
- Founding member of Singapore Anti-Tuberculosis Association



Singapore's Healthcare Challenges









Ministry of Health's 3 Beyonds

MOH BUDGET 2018 INITIATIVES



- Beyond HOSPITAL to COMMUNITY
- Beyond QUALITY to VALUE
- Beyond HEALTHCARE to HEALTH

Definitions

Population Health

The **health outcomes of a group of individuals**¹ in a defined population.

Underpinned by 3 foundational concepts:

- Health and well-being develop over a lifetime
- Social determinants drive health and well-being outcomes throughout the life course
- Place (i.e., where they live, learn, play, work and pray) is a determinant of health, well-being and equity





¹Kindig D, Stoddart G. Am J Public Health. 2003 March; 93(3): 380–383

It is geared towards
equal health care
delivery to an
anticipated group of
people in a particular
geographical location.

It entails effective and efficient running of a population health management system to cater for the health needs of the people.

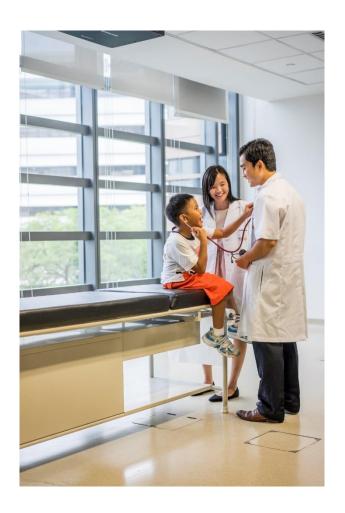
Population health is an art, process, science and a product of enhancing the health condition of a specific number of people within a given geographical area.

Akarowhe (2018)

Health is directed toward overall health performance of people through health satisfaction within the said geographical area.

It adopts scientific approach of preventive, therapeutic, and diagnostic service in proffering medical treatment to the health problem of people.





"The good physician treats the disease; the great physician treats the patient who has the disease."

William Osler



Complex Nature of Healthcare

Health & Social Divide

Less Coordinated
Approach

Limited
Capabilities &
Resources

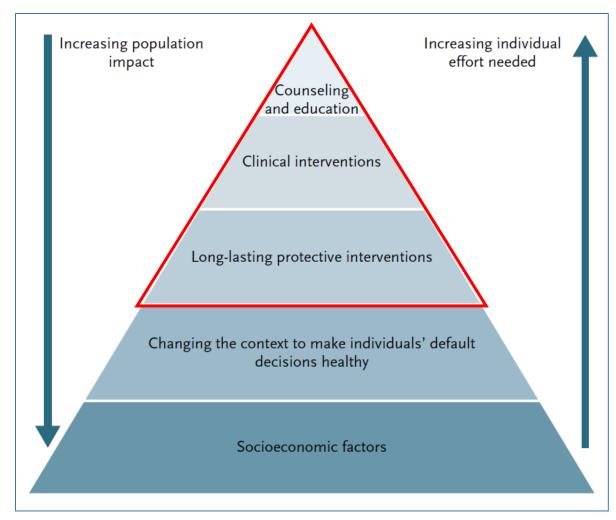
Unreached Population

The 3 Don'ts:

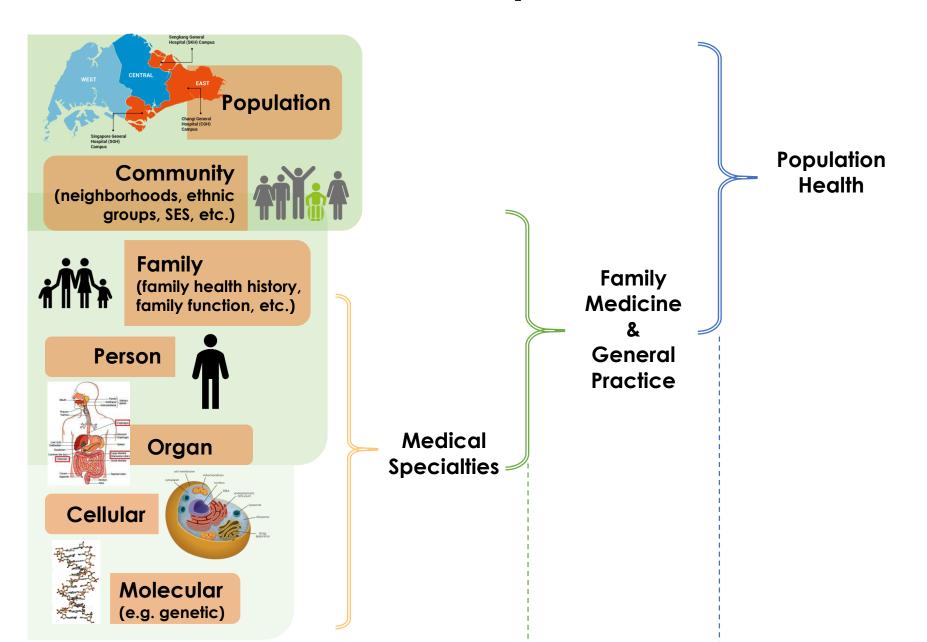
- Don't Know
- Don't Want
- Don't Care



The Health Impact Triangle



From Individual to Family as the Unit of Health





Asthma Improvement Collaborative

Key drivers

- Pediatric Asthma
 - Complex chronic condition
 - 14.2 M office visits/yr (US)
 - \$USD50B/yr (US)
 - Major impact of socioeconomic factors

Outcomes Strategic goal

Smart alm: Reduce the number of asthma-related emergency department visits and admissions by 20% for Hamilton County, Ohio, patients aged 2-17 years by June 30, 2015

- 1 Decrease the rolling 12-month average number of admissions per 10,000 Hamilton County Medicaid patients aged 2-17 years by June 30, 2015
- 2 Decrease the rolling 12-month mean number of emergency department visits per 10000 Hamilton County Medicaid patients aged 2-17 years from 20.9 to 16.7 by June 30, 2015

Global alm: Reduce asthma care utilization in Hamilton County in pediatric patients aged 2-17 years

(high-prioritized processes and system elements) Reliable preventive services Effective management and comanagement of active Cincinnati Children's Hospital Medical Center patients during and after asthma-related visits Effective patient and family engagement in self-management Effective, continuous, and appropriate use of prescribed medications by patient Mitigation of socioeconomic and psychosocial, home environmental barriers to optimal asthma care Effective partnerships with community agencies (schools and school-based health centers, clinics, and pharmacies) Reliable contact and communication with patient and family Reliable access to medication in the patient's home Community engagement and awareness about asthma

Kercsmar et al. JAMA Pediatrics 171:1073, 2017

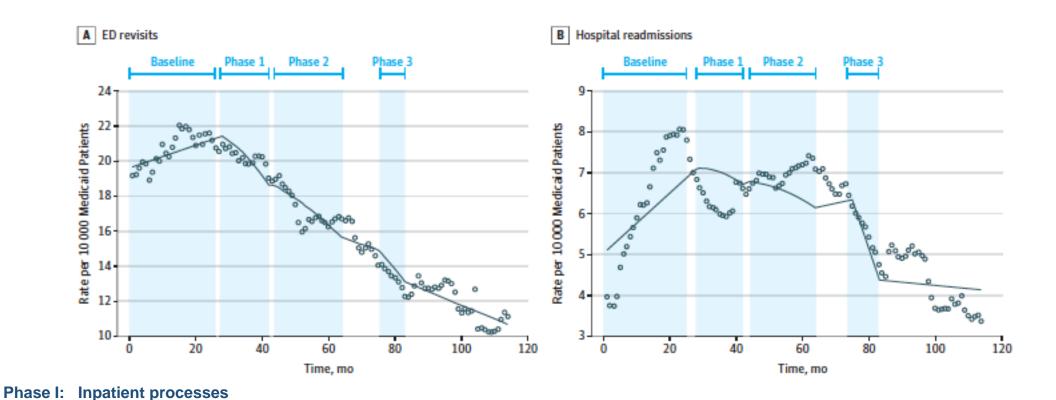




Phase II: Outpatient care processes

Phase III: Community-based social determinants of health

Integrated, multi-level approach using quality improvement methods <u>improved</u> asthma outcomes and reduced costs



Kercsmar et al. JAMA Pediatrics 171:1073, 2017

SingHealth's Whole of Life Approach

to preventative health care for different life stages

Earlier intervention on women's and children's health

Maternal and Child Health Clinic

Pilot @ Punggol Polyclinic



Empowering the young as health ambassadors

Millennia Kids Programme



Detection and management of gestational diabetes

Gestational Diabetes Screening



Early detection of chronic disease conditions for early intervention

Community
Health
Screening



Falls
Prevention/F
railty
Screening



≥ 55 years old

Identification and proactive management of frailty syndromes through systematic screening Functional Screening (Level 1 & 2)



≥ 60 years old

Early detection
of functional
impairment in
the community
to provide timely
follow-up and
affordable
assistive devices

Example of How Primary Care Providers Play an Important Role in Population Health Research

A Mobile Lifestyle Management Program (GlycoLeap) for People with Type 2 Diabetes

Objective

Assess the potential effectiveness and feasibility of GlycoLeap, a mobile lifestyle management program for people with T2DM, as an add-on to standard care.

Study subject

100 patients with T2DM and HbA1c levels of ≥7.5% from one of the SingHealth Polyclinics

Intervention

- Single arm feasibility study
- 6-month mobile lifestyle management program, GlycoLeap, comprising online lessons and the Glyco mobile phone app with a health coaching feature

Evaluation using RE-AIM Framework

REACH

 13.2% consented to participate out of 785 patients approached

EFFECTIVENESS

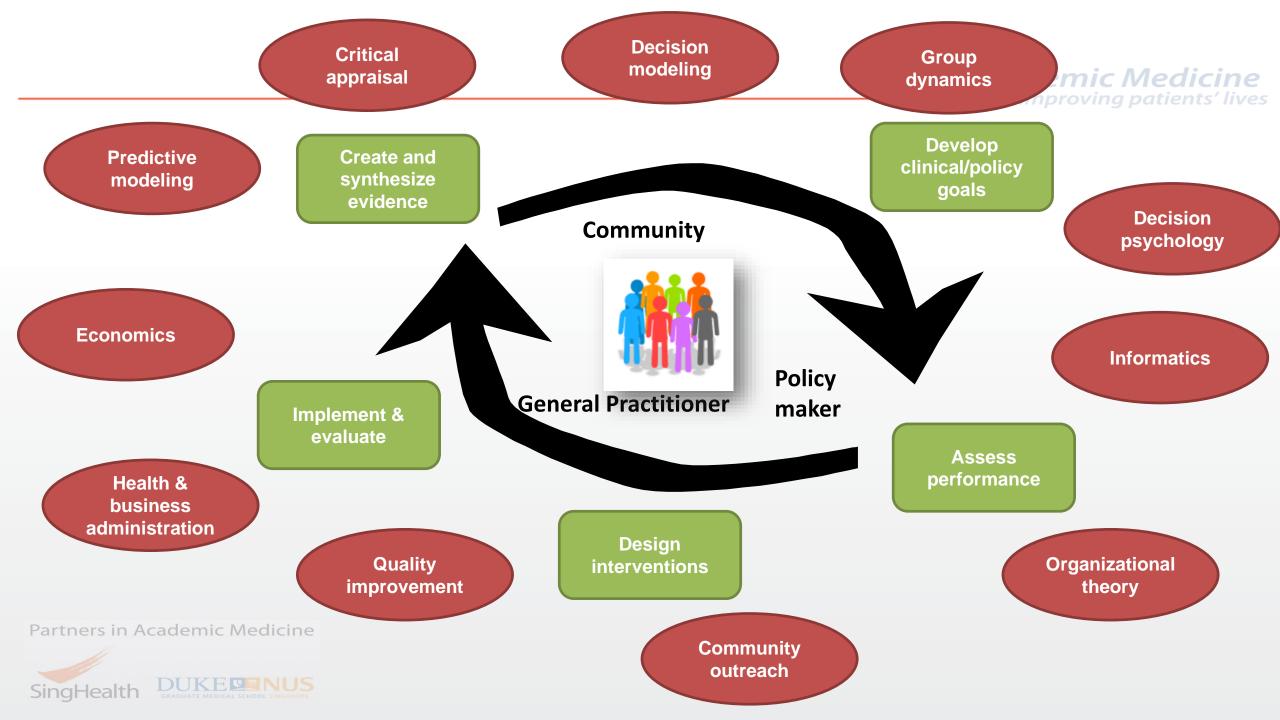
- Statistically significant improvement in HbA1c
- 2.3% reduction in baseline weight

IMPLEMENTATION

- High participant engagement in all intervention components for the 1st week
- Decreased gradually over time

MAINTANENCE

High user satisfaction – over 70% rated the app good or very good





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"It is better to ask some of the questions than to know all of the answers"

James Thurber



Thank you!