SAS Virtual Afternoon Forum

Healthier SG: The ABCs – Capitation, its Benefits and How Actuaries can participate

Speakers

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12 May 2022 (Thursday)

4.00 – 5.30 pm

On behalf of the SAS – Health Insurance subcommittee.
2022 Healthier SG white paper response working group

SINGAPORE ACTUARIAL SOCIETY

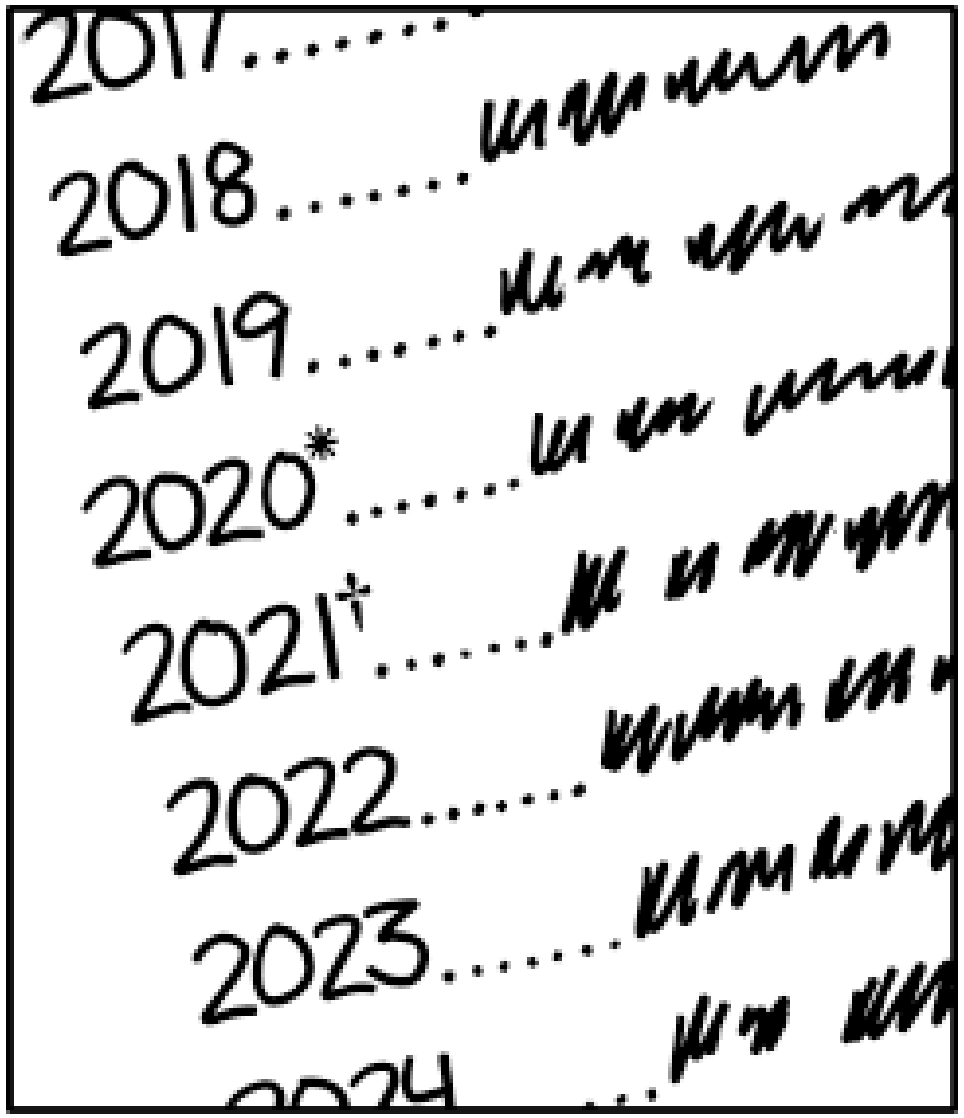
Disclaimer

This presentation sources from publicly available information. Although all effort has been made to ensure accuracy, we make no warranties or representations on the information contained herein. We have indicated the original sources, and we encourage self exploration and welcome informed debate.

We are presenting on behalf of the Healthier SG 2022 working group by the Singapore Actuarial Society's (SAS) Health Insurance subcommittee.

This does not represent the official response of the SAS to these proposed changes, but it is meant to contribute to the public discussion of these reforms. While the members of the SAS Healthier SG 2022 working group have been mindful of presenting a balanced view of the enhancements, it is acknowledged that the comments may not represent the views of the general membership. In addition, these comments by the working group are made in their personal capacity as members of the profession and do not represent the views of their employers.

Generic note to tables



Source: https://xkcd.com/2502

Objectives of this forum

- To introduce attendees (that are not health actuaries) about capitation models.
- To demonstrate how health actuaries add value to the design of capitation models

Agenda

Healthier SG – What is it about?

- What is Healthier SG?
- Singapore: Supply, demand, demographics and utilisation
- How much was spent?
- What has been the past initiatives?
- Performance as a Health System
- Tracking KPIs

Capitation Models – An Introduction and how it is applied to funding healthcare

- What is capitation?
- Comparison of capitation vs other payment arrangements
- Preventive care and cost management
- Proposed capitation in Singapore

Panel Discussion

Q & A

What is Healthier SG?

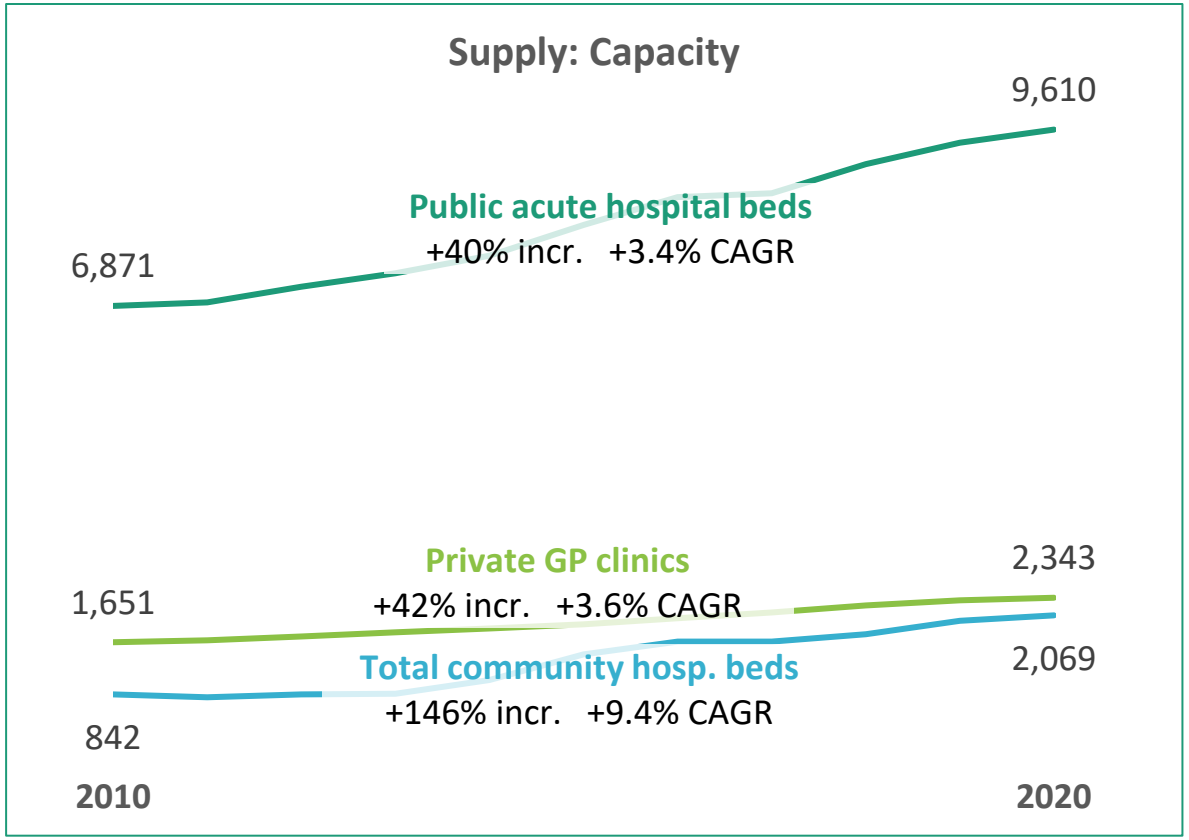
"major healthcare initiative to focus on preventive care" – Health Minister, Ong Ye Kung – 9 Mar 2022

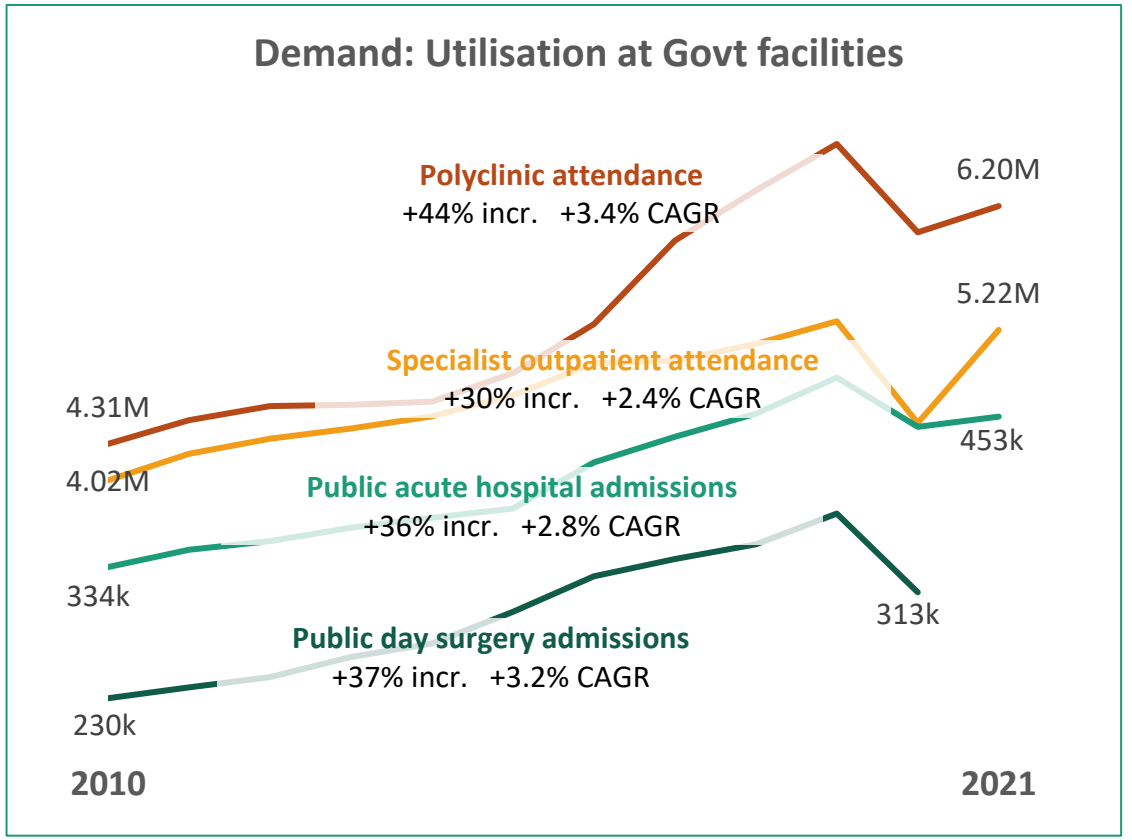
Activating network of family physicians	Transforming primary care to be an important pillar of our healthcare system
Care Plans	Following up with a family physician on preventive health plans, including regular screening and addressing risk factors
Community partnerships	Building an integrated health and social ecosystem to support residents
National Healthier SG Enrolment	Enrolling with a family physician as the first line of care
Necessary support structures	Manpower, financing and IT structures and policies to support healthcare reform

"We have been funding our healthcare clusters, largely by their workload … We will change this to a **capitation model**, where healthcare clusters get a **pre-determined fee for every resident** living in the region that they are looking after."

Source:
https://www.moh.gov.sg/cos2022
https://www.moh.gov.sg/news-highlights/details/speech-by-mr-ong-ye-kung-minister-for-health-at-the-ministry-of-health-committee-of-supply-debate-2022

Some numbers on supply and demand



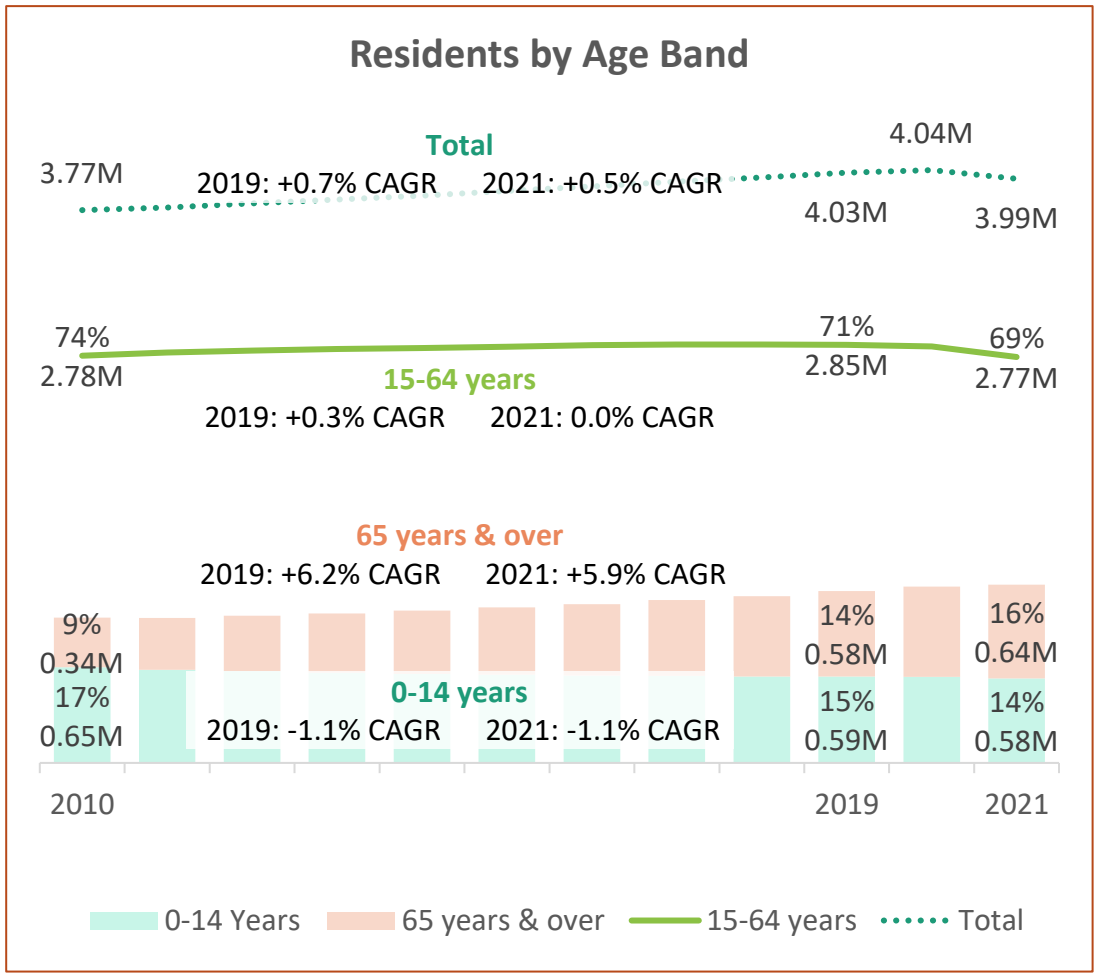


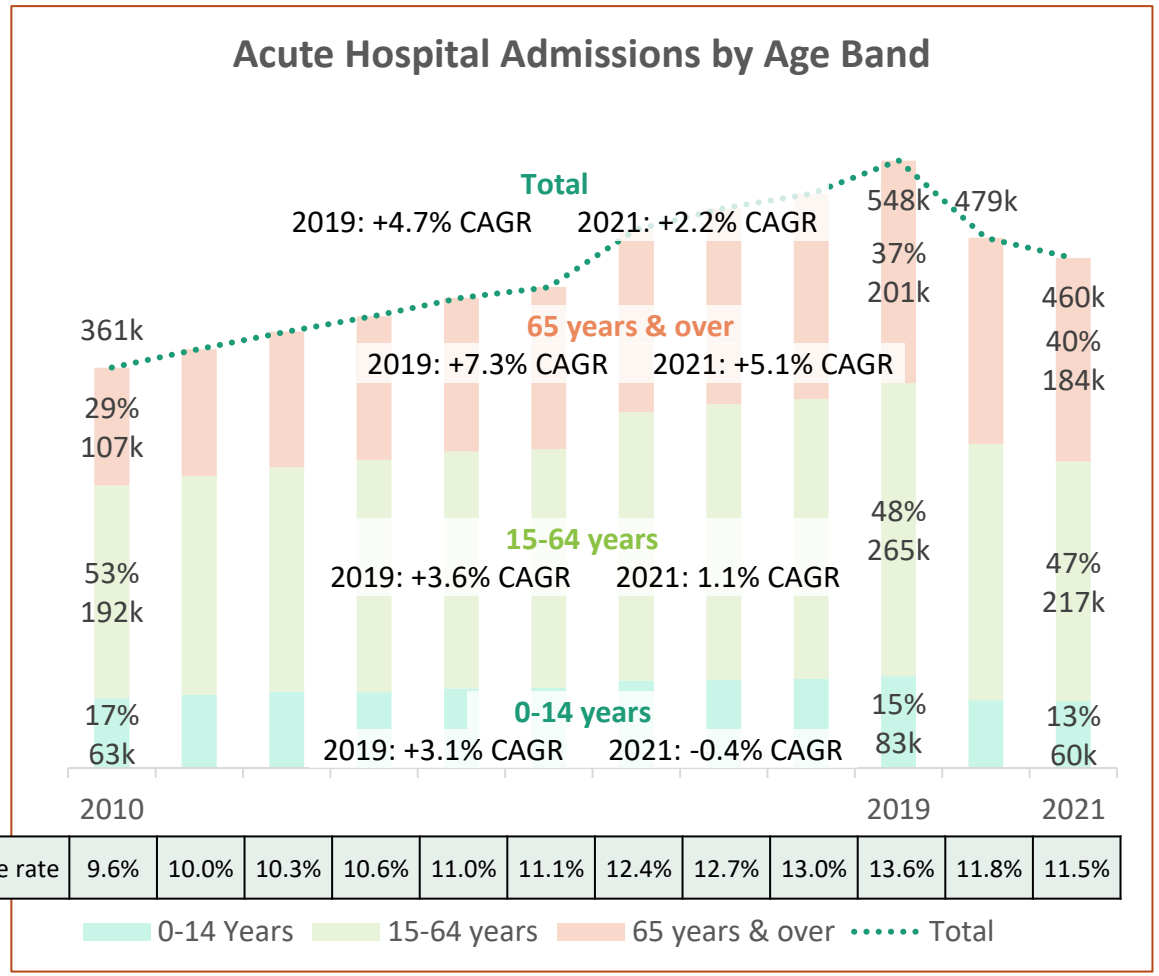
- Public capacity has increased by 3%+ CAGR,
- Large increase in sustainable community hospital (step down care).
- Private investments into Private GPs has kept pace.

Demand has increased at ~3%. Slightly less than capacity increases.
Absent COVID, the situation is worse, 2010-2019 CAGR:
Polyclinic attendance: +5.0%
Specialist OP attendance: +3.1%
Public acute hosp. admissions: +4.2%
Public day surg admissions: +5.6%

Source:
https://www.moh.gov.sg/resources-statistics/singapore-health-facts/beds-in-inpatient-facilities-and-places-in-non-residential-long-term-care-facilities
https://tablebuilder.singstat.gov.sg/table/TS/M870311 ; https://tablebuilder.singstat.gov.sg/table/TS/M810671

Some numbers on demographics and utilisation



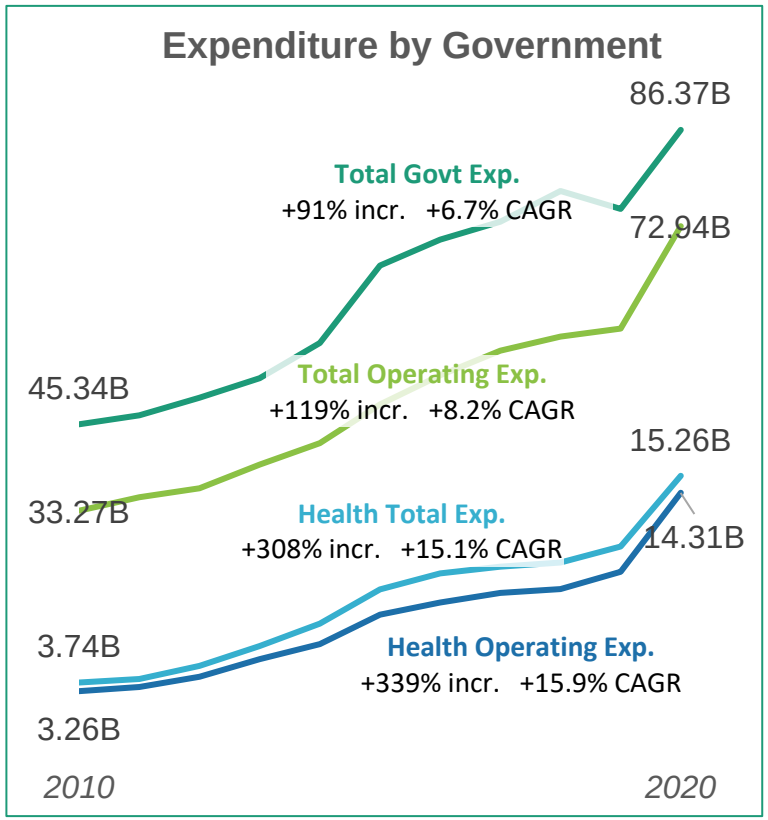


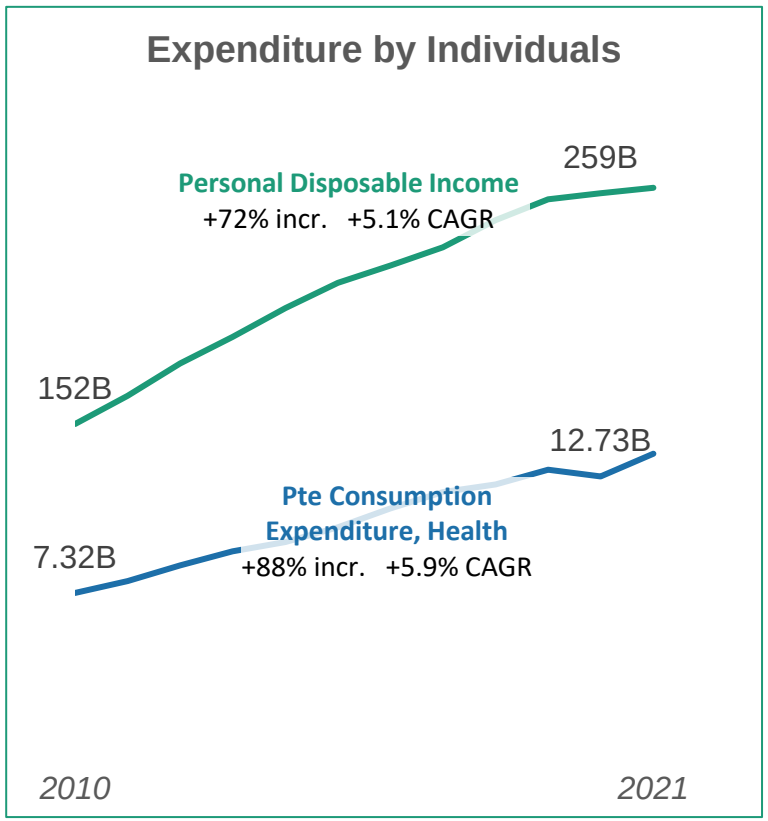
- Demographics continue to be a major challenge.
- Now, 16% of citizen population is above 65 years old.
- Population is aging is faster than capacity.

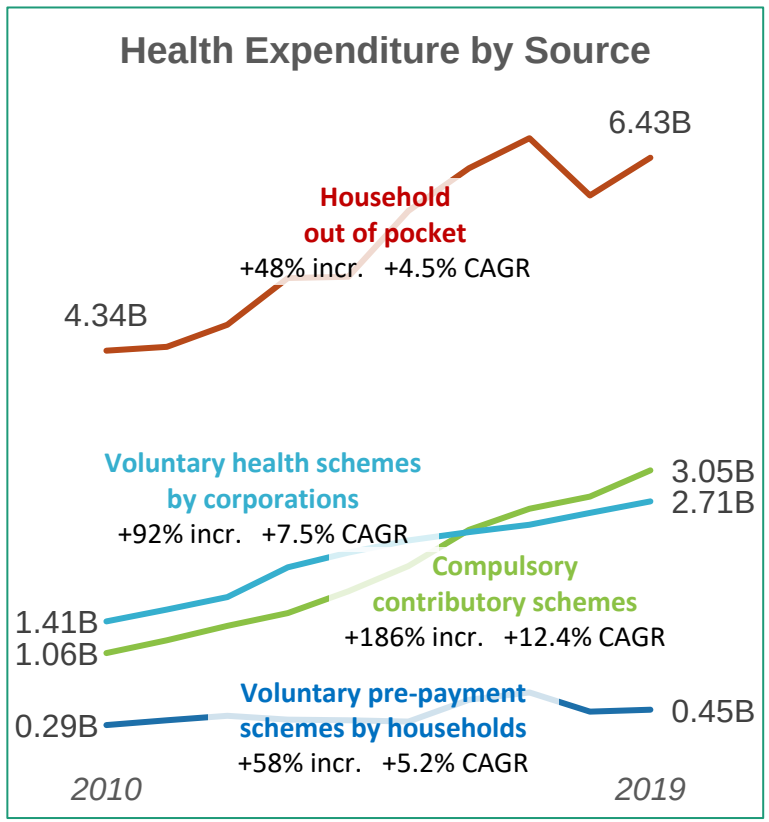
- Those 65 & older form 16% of pop. but 40% of admissions
- Average admissions per year is 11.5% (min 9.6% - max 13.6%)

Source:
https://tablebuilder.singstat.gov.sg/table/TS/M810011 ; https://data.gov.sg/dataset/hospital-admission-rate-by-age-and-sex ;
https://www.moh.gov.sg/resources-statistics/healthcare-institution-statistics/hospital-admission-rates-by-age-and-sex/hospital-admission-rates-by-age-and-sex-2021

How much was spent?







Expenditure on Health is growing at 2x general overall govt. exp. Health used to be 8% of total govt. exp. In 2010, and is now 18% in 2020 (or 15% in 2019).

Private Expenditure on Health is growing faster at 5.9% CAGR vs
Personal Disposable Income at 5.1% CAGR.

Household out of pocket continues to be the largest, and the national schemes are now larger than company spending on health.

Source:
https://tablebuilder.singstat.gov.sg/table/TS/M130581 ; https://tablebuilder.singstat.gov.sg/table/TS/M130591 ; https://tablebuilder.singstat.gov.sg/table/TS/M016081 ;
https://tablebuilder.singstat.gov.sg/table/TS/M015041 ; https://tablebuilder.singstat.gov.sg/table/TS/M212931 ; https://apps.who.int/nha/database/ViewData/Indicators/en

What has been the past initiatives by Ministry of Health?

Introduction to "Healthcare 2020" Masterplan to enhance the **accessibility, quality and affordability** of healthcare.

Introduce the "Three Beyonds":
Beyond Hospital to Community, to provide better care closer to home;
Beyond Quality to Value, to help Singaporeans stretch their dollar; and
Beyond Healthcare to Health, to help Singaporeans stay healthy.

Enhanced Community Health Assist Scheme (CHAS) **subsidies at private GPs** for all Singaporeans with the introduction of CHAS Green tier and CHAS for Merdeka Generation

2012

2014

More support on outpatient care including higher subsidies (up to 70%) for services for lower/middle income group and additional 50% off subsidies treatments for Pioneer Generation

2016

2018

$80 million injection to the Healthcare Productivity Fund (HPF) to sustain efforts in **healthcare productivity**.

2019

2021

$180 million fund to complete the rollout of 200 Active Ageing Centres and Active Ageing Care Hubs by 2024.

There has been a theme of looking past costly inpatient/hospital care, Healthier SG appears to be a re-packaging, and changing to funding by capitation instead, to align financial incentives to stated goals.

Source:
https://www.moh.gov.sg/docs/librariesprovider5/cos-2021/cos2021-media-factsheet---striving-for-better-health-for-all.pdf
https://www.moh.gov.sg/docs/librariesprovider5/pressroom/current-issues/cos-2018-media-factsheet-beyond-quality-to-value.pdf
https://www.moh.gov.sg/docs/librariesprovider5/resources-statistics/educational-resources/flyer_english_27052014_01.pdf
https://www.moh.gov.sg/news-highlights/details/speech-by-minister-for-health-mr-gan-kim-yong-at-the-moh-committee-of-supply-debate-2016
https://www.moh.gov.sg/images/librariesprovider5/press-room/st---chas-subsidies-for-all-s'poreans-with-chronic-illnesses.png
https://www.moh.gov.sg/news-highlights/details/moh-2012-committee-of-supply-speech-healthcare-2020-improving-accessibility-quality-and-affordability-for-tomorrow-s-challenges-(part-1-of-2)

As a Health System, Singapore has high performance vs spending

Singapore's life expectancy is high and is improving, but chronic (lifestyle) diseases remain a challenge

LIFE EXPECTANCY AT BIRTH

YEAR 2010 — 82.8 YEARS

YEAR 2019 — 84.9 YEARS

HEALTH-ADJUSTED LIFE EXPECTANCY

YEAR 2010 — 72.9 YEARS

YEAR 2019 — 74.5 YEARS

Source: 2019 Global Burden of Diseases Study

Age-Standardised Prevalence for Residents Aged 18 to 74

High LDL Cholesterol

YEAR 2010 — 26.2%

YEAR 2019 -20 — 36.9%

High Blood Pressure

YEAR 2010 — 19.8%

YEAR 2019 -20 — 31.7%

Diabetes Mellitus

YEAR 2010 — 8.6%

YEAR 2019 -20 — 7.9%

Source: National Health Survey 2010; National Population Health Survey 2019, 2020

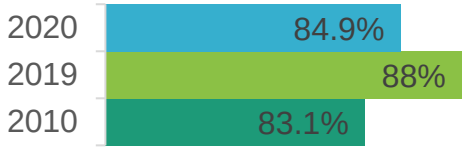
Source:
https://www.primarycarepages.sg/GPRepository/Circular%20Documents/0404%20Presentation%20Deck%20Outline_V8_Updated%20QR.pdf

Other KPIs that Singapore is tracking publicly

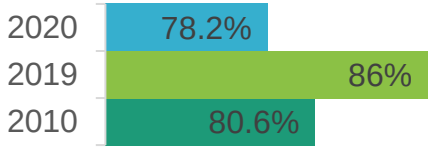
Accessibility

% of Patients who waited ≤ 100 minutes for consultation at polyclinics

% of Patients who waited ≤ 60 days for new subsidised Specialist Outpatient Clinics appointment

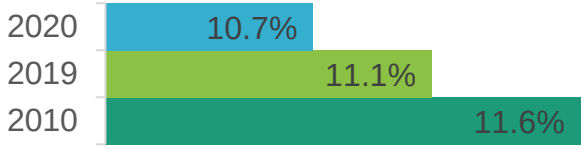


Bed occupancy rate (public acute beds)



Quality

Adjusted Acute hospital 30-day readmission rate (%)

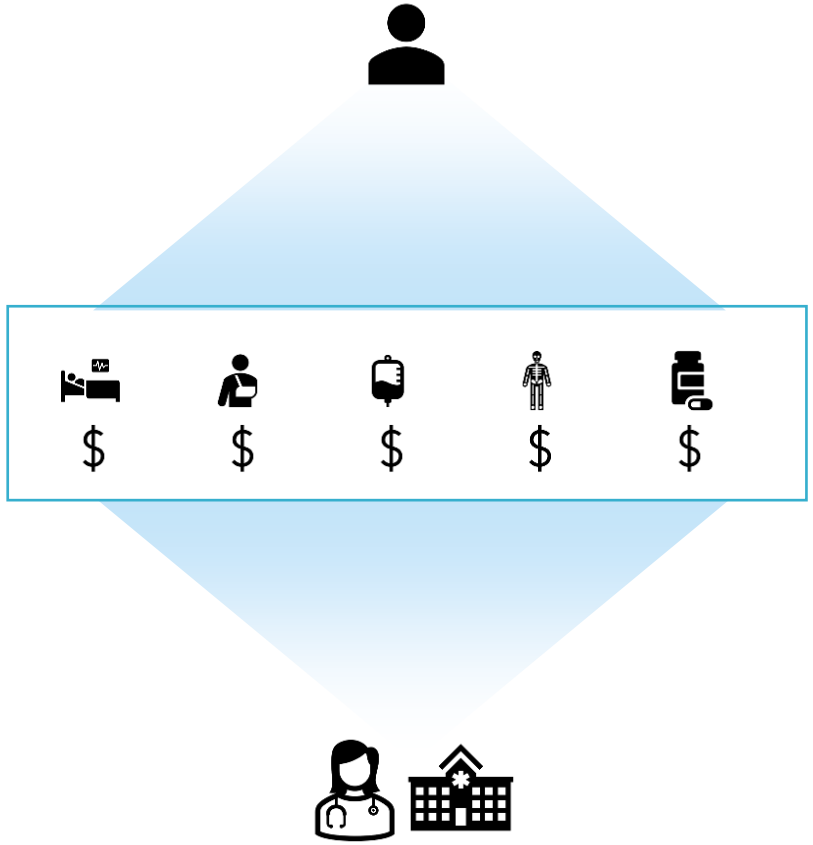


There are efforts by the various hospitals, around quality measurements, mortality rates, complication rates, etc. Tracking health outcomes, and other quality measurements is critical, especially in the context of capitation, where care rationing, may emerge as an unintended consequence from a public and policymaker's standpoint.

What is capitation?

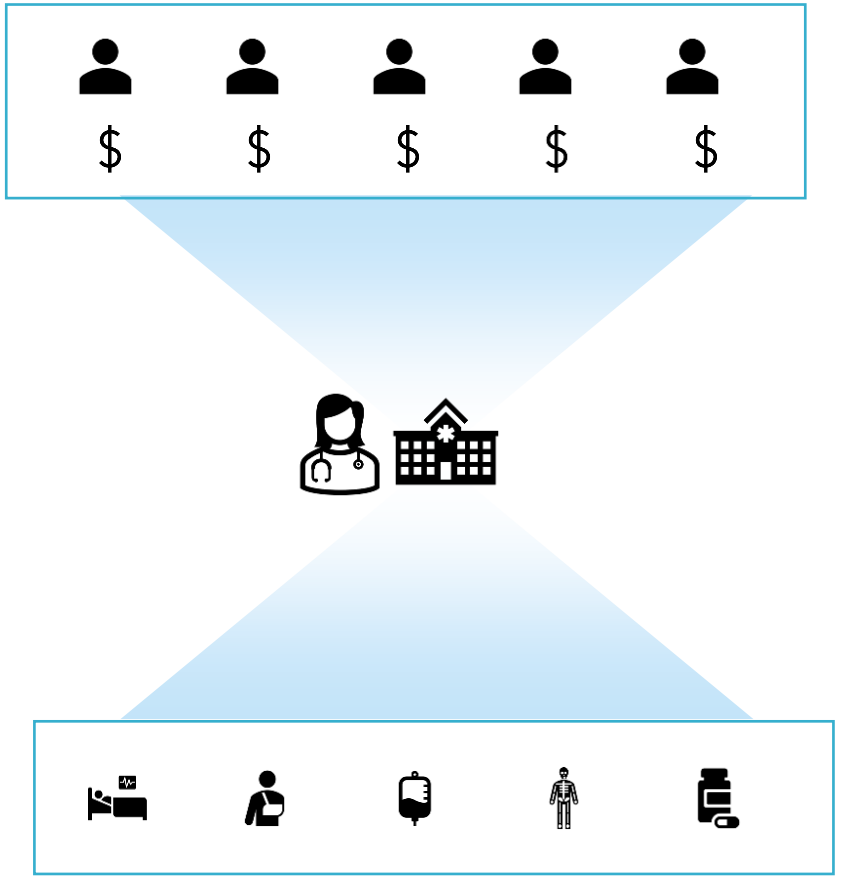
Fee for Service

Payment is made for each service provided



Capitation – in simple terms

Payment is made per beneficiary



Comparing capitation with other payment arrangements

Pay per Service

FUNDER

Retrospective Payment
Number of services unknown
Cost of services unknown

Uncertainty

PROVIDER

Little restrictions on services
Low risk on complications

Uncertainty

BENEFICIARY

No limit in services
Benefits may be restricted
Over-servicing

Pay per Day

FUNDER

Cost per day known
Length of Stay (LOS) unknown
Number of admissions unknown

Uncertainty

PROVIDER

Longer LOS for complications
Payment reductions

Uncertainty

BENEFICIARY

Receive care as required
Higher LOS

Pay per Event

FUNDER

Cost per event known
Number of events unknown
Types of event unknown

Uncertainty

PROVIDER

Risk based payments
i.e. Diagnosis Related Groups (DRGs)

Uncertainty

BENEFICIARY

Receive care as required
Unnecessary admissions

Pay per Beneficiary

FUNDER

Cost per beneficiary known
Less volatility

Uncertainty

PROVIDER

Number of events unknown
Manage efficiencies

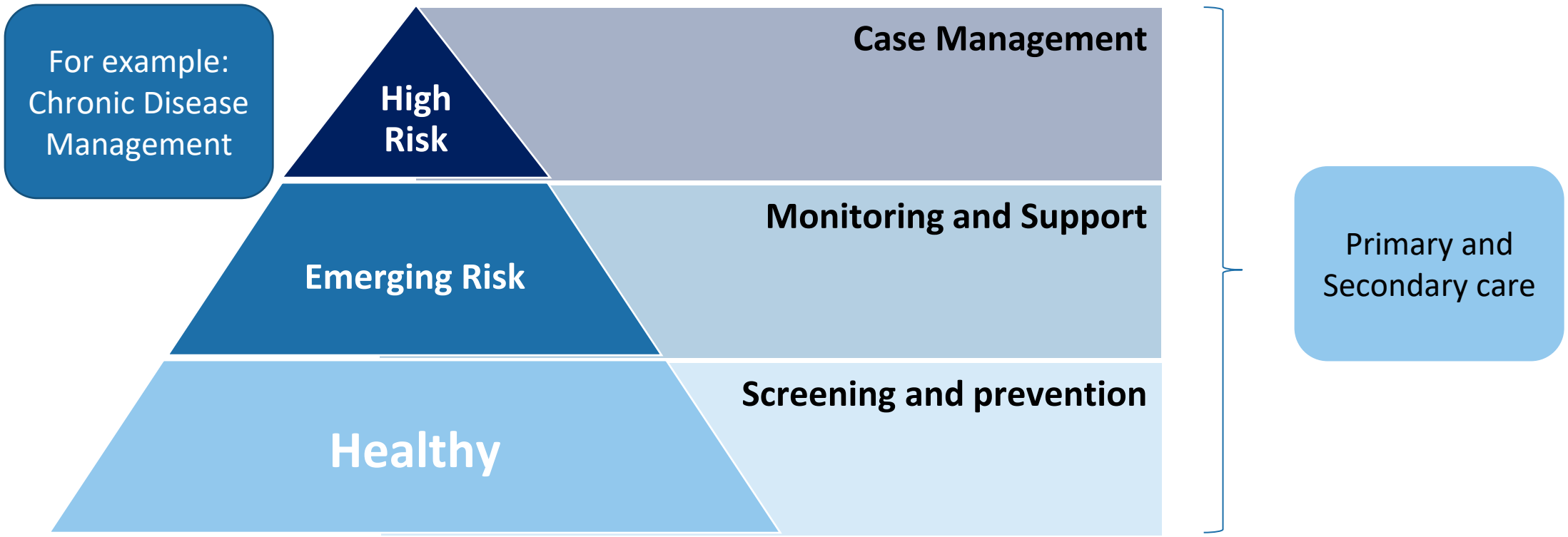
Uncertainty

BENEFICIARY

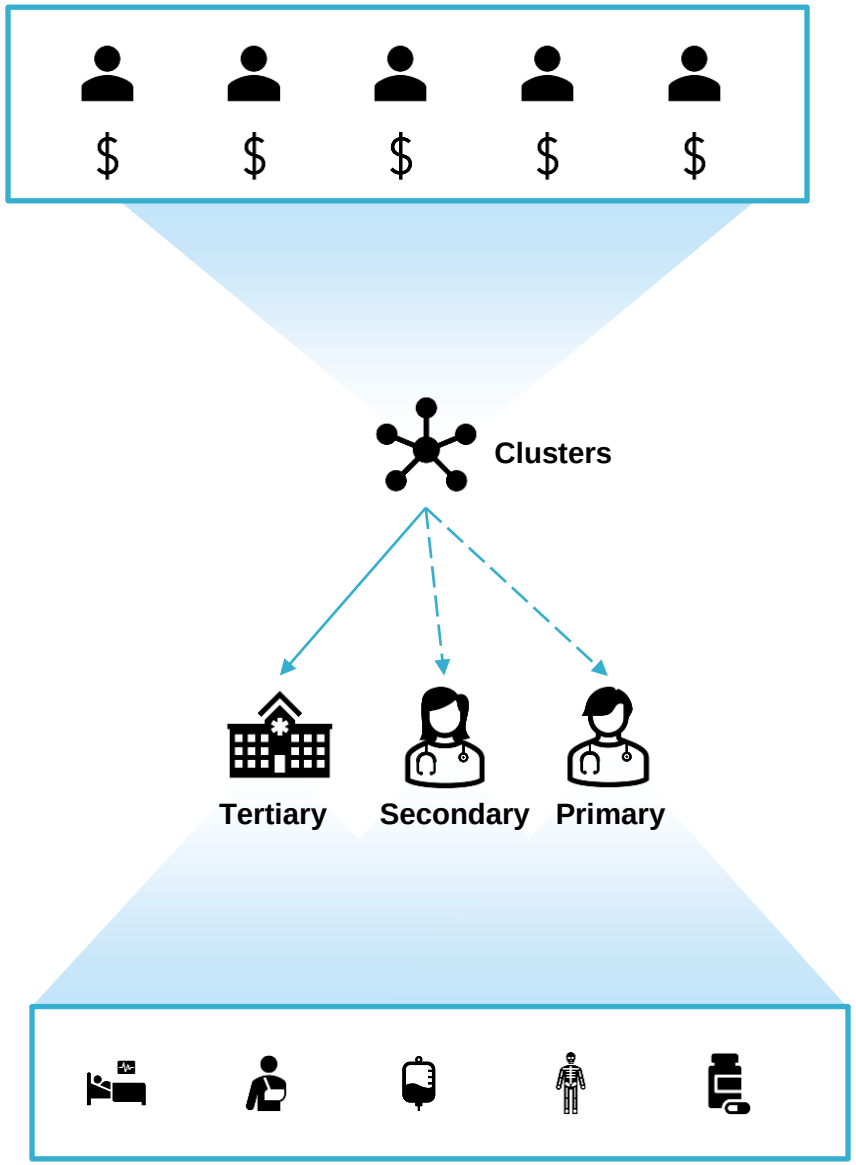
Preventative care
Increased rules/limitations
Under-servicing/cost shifting

Preventative care and cost management

Segmenting the population to manage health and prevent high cost events



Proposed capitation in Singapore



WHAT?

Healthcare clusters get a pre-determined fee for every resident living in the region that they are looking after (each region about 1.5m residents)

WHY?

More emphasis on preventative health – to reduce costs by managing health and keeping individuals out of hospital

HOW?

There will be a set of health outcomes matching this change in basis. Some salient indicators are quality of care, uptake of healthy lifestyles and habits, prevalence of chronic illnesses, cost effectiveness of treatments etc.

Panel Discussion

Panel Discussion

What learnings do we have from international experience?

- What have worked well in other markets?
- What are the pitfalls to avoid?

Possible Pros?	Potential Cons?
Preventative Care	Increased rules/limitations
Ease of administration	Loss of billing data
Cost management	Under-servicing

How has the public been impacted?

Discussion

How are capitation rates typically calculated?

How is risk taken into account and adjusted for: prospectively and retrospectively?

FIGURE 2: RISK EQUALISATION FUND TRANSFERS FOR PRIVATE HEALTH INSURERS

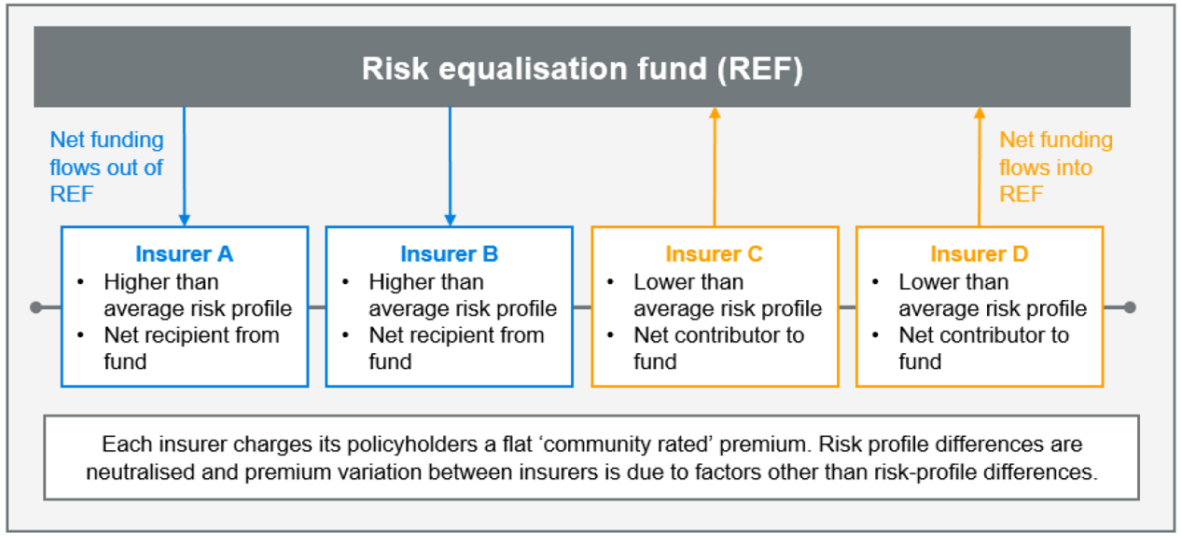
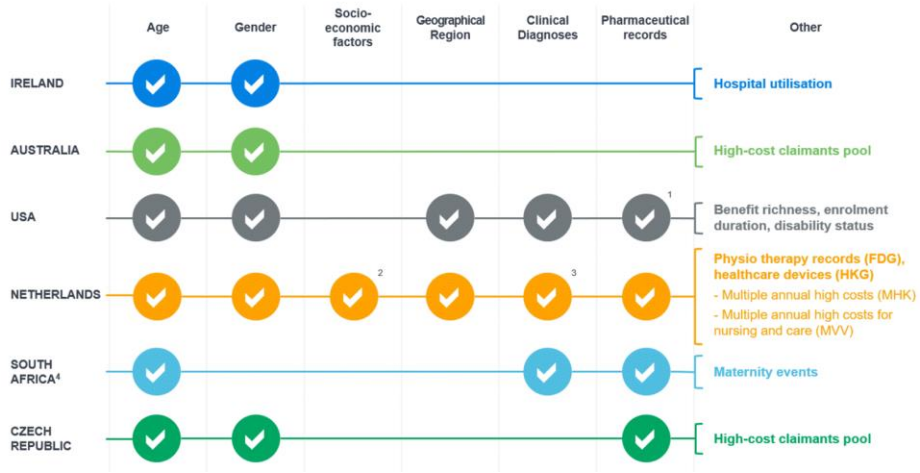
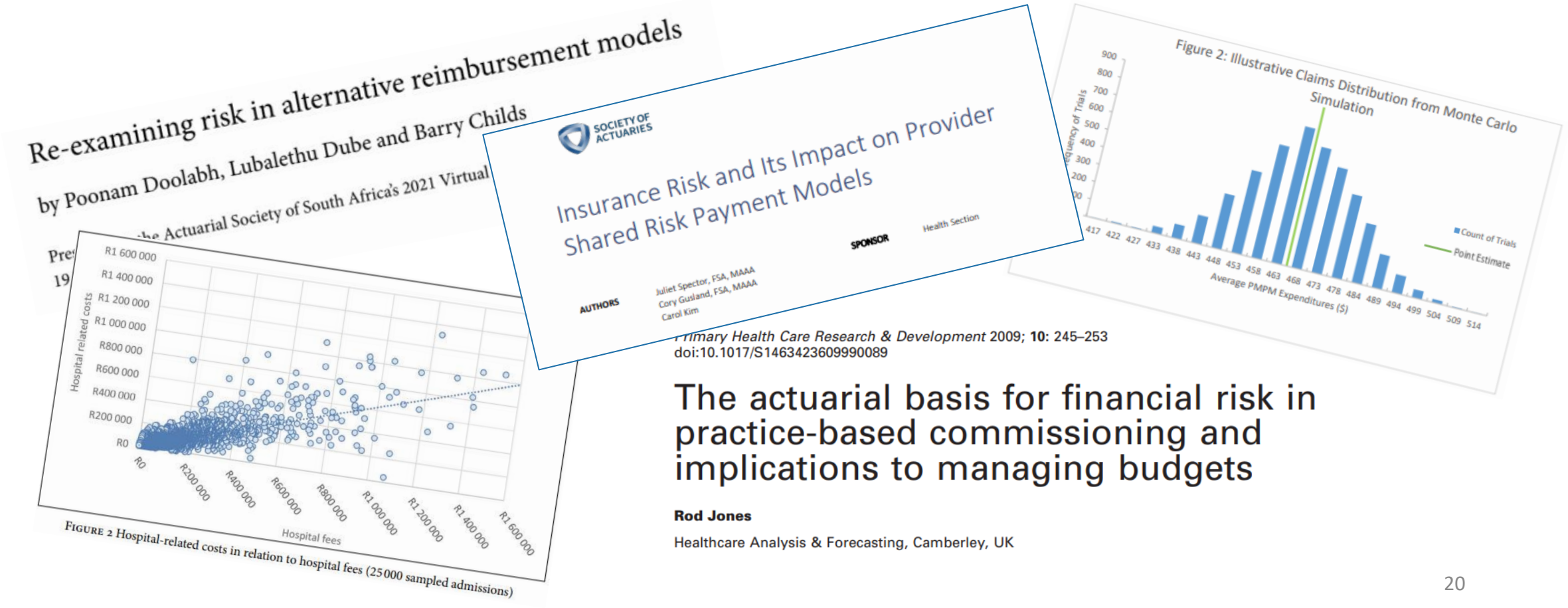


FIGURE 4: PARAMETERS USED IN RISK EQUALISATION SCHEMES AROUND THE WORLD



Discussion

What role do actuaries play in capitation models?



Zoom Poll - Question to the audience:

What topic would you be interested to learn more about?

a) International experience in implementing capitation models

b) Risk adjustment methodologies in calculating capitation rates

c) Health risk management strategies to manage cost

d) Work done by actuaries where alternative reimbursement models have been implemented

Thank you!

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