SINGAPORE ACTUARIAL SOCIETY

From Public Baselines to Employee Benefits

The Actuarial Realities of Singapore's Hybrid Health Model

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Convention A | 24 Mar 2026

Agenda

01 Singapore Macro Landscape

02 Architecture of Healthcare Financing

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05 Path to Sustainable Healthcare

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Singapore Macro Landscape

Singapore Comparison Against OECD High Income Countries (2022)

Resources

	Health Spending (USD Int. per Capita)	Out of Pocket Spending (%)	Doctors per 1000 population	Nurses per 1000 population	Hospital beds per 1000 population
High Income OECD countries	US$ 4,715	12.9%	2.6	9.0	3.9
Singapore	US$ 5,754 ▲	22.5% ▲ (1)	2.6 ≈	6.4 ▼	2.1 ▼ (2)

Outcomes

	Healthy Life Expectancy (Female) at birth	Healthy Life Expectancy (Male) at birth	Survival to age 65 (F) % of cohort	Survival to age 65 (M) % of cohort	Under age 5 mortality rate Per 1000 live births
High Income OECD countries	70.7 yrs	69.9	94.1	89.2	3.8
Singapore	75.0 yrs ▲ (3)	72.4 ▲	93.8 ▼	87.9 ▼	3.8 ≈

(1) High out of pocket spending is by design. But mitigated via the "S+3Ms" framework, which includes tax-advantaged medical savings account (Medisave)

(3) Good outcomes in higher than median health life expectancy

(2) Beds low because SG govt has always prioritized primary care, and is concerned about "supply induced demand".
e.g.: In Mar 2006 Minister for Health, Khaw Boon Wan quoted *"Roemer's Law" which states that "a built (hospital) bed is a filled bed".*
By forcing the hospital to understand its sources of overcrowding, we discovered outdated policies like treatment for chickenpox, and cumbersome discharge procedures which kept patients unnecessarily in hospital.

Notes:
High Income OECD (Organisation for Economic Co-operation and Development) countries are Australia, Brunei, Hong Kong (China), Japan, South Korea, Macau (China), New Zealand, Singapore
https://www.oecd.org/en/publications/health-at-a-glance-asia-pacific-2024_51fed7e9-en/full-report/country-and-territory-dashboards_202a2729.html
https://www.moh.gov.sg/newsroom/moh-budget-speech-(part-2)---are-healthcare-facilities-adequate/

Healthcare Provision in Singapore

	Primary Care	Specialist Care		Hospital	Intermediate and Long Term Care (Step Down Care)
Examples	GP clinics, Polyclinics, Telemedicine	Specialist Clinics	Outpatient Clinics in Hospitals Ambulatory Care Centres (Day Surgery Centres)	Hospitals, Medical Centres	Community Hospitals, Nursing Homes, Hospice
Doctors	**Total GPs 9.5k 59%** Public 6.4k 40% Private 3.1k 19%	**Total Specialists 6.7k 41%** (2) Public 4.8k 29% Private 1.9k 12%			Psychiatric 2.0k beds 1 hosp Community 2.6k beds 10 hosps (3) Nursing homes 20.4k beds 88 homes
Facilities	**GPs Clinics 4.5k** Public 26 Private 2.5k (1)	**Acute Hospitals 12.6k beds 20 hospitals** Public 10.6k beds 11 hospitals Private & NonProfit 2.0k beds (4) 9 hospitals			

(1) Primary care is mainly private.
"We (SG govt) will pay family doctors in private practice to take on additional responsibilities in improving preventive and chronic care."
2022 Healthier SG White Paper

(2) Concern about "supply induced demand" remains
e.g.: In Oct 1993 Affordable Health Care white paper
"At present 40% of Singapore doctors are specialists. This proportion compares favourably with other countries and should not be increased."

(3) Community hospital beds being built at faster rate than acute hospitals beds.
All new acute hospitals since 2015 are build with adjoining community hospital.
- Ng Teng Fong / Jurong Campus
- Sengkang General Campus
- Woodlands Health Campus

(4) Hospital care is mainly public.
No new private hospital since 2016 (likely forever).
Closest next possibility is "not for profit" model.

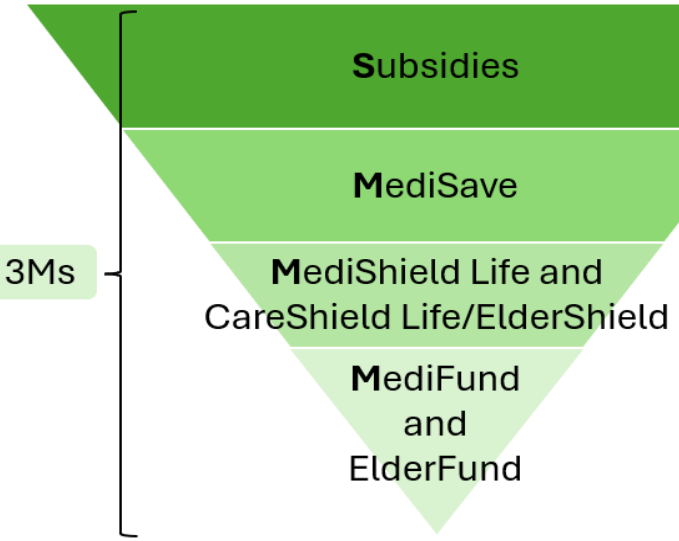
2024 statistics: https://www.moh.gov.sg/others/resources-and-statistics/health-manpower/
https://www.moh.gov.sg/others/resources-and-statistics/beds-in-inpatient-facilities-and-places-in-non-residential-long-term-care-facilities/
https://file.go.gov.sg/healthiersg-whitepaper-pdf.pdf
https://isomer-user-content.by.gov.sg/3/4f5148fc-2b01-49b2-b9e7-a3bd415f1822/affordable_health_care.pdf
https://www.moh.gov.sg/newsroom/not-for-profit-private-acute-hospital-model/

Architecture of Healthcare Financing

Funding of healthcare

Government (S+3Ms)

S + 3Ms



Affordable Health Care
Up to 80% at public healthcare institutions

S$12.5B [(a)] mainly paid to public hospitals as subvention / grant to offset operating costs. Patient bills will show a discount.

Personal Savings
To save for healthcare needs

S$1.4B [(b)] member withdrawals for co-pays or insurance premiums. $ into Medisave are tax-advantaged

Basic Health Insurance
To risk pool for unexpected healthcare expenses

S$2.5B [(c)] Premiums paid (from Medisave) for Medishield Life. There are subsidies as well

Safety Nets
To provide help to needy Singaporeans

S$0.2B [(d)] paid for medical bills of needy Singaporeans

Private Insurance

Integrated Shield Plans:
Private medical plans providing additional coverage on top of MediShield Life. For Singapore Residents.

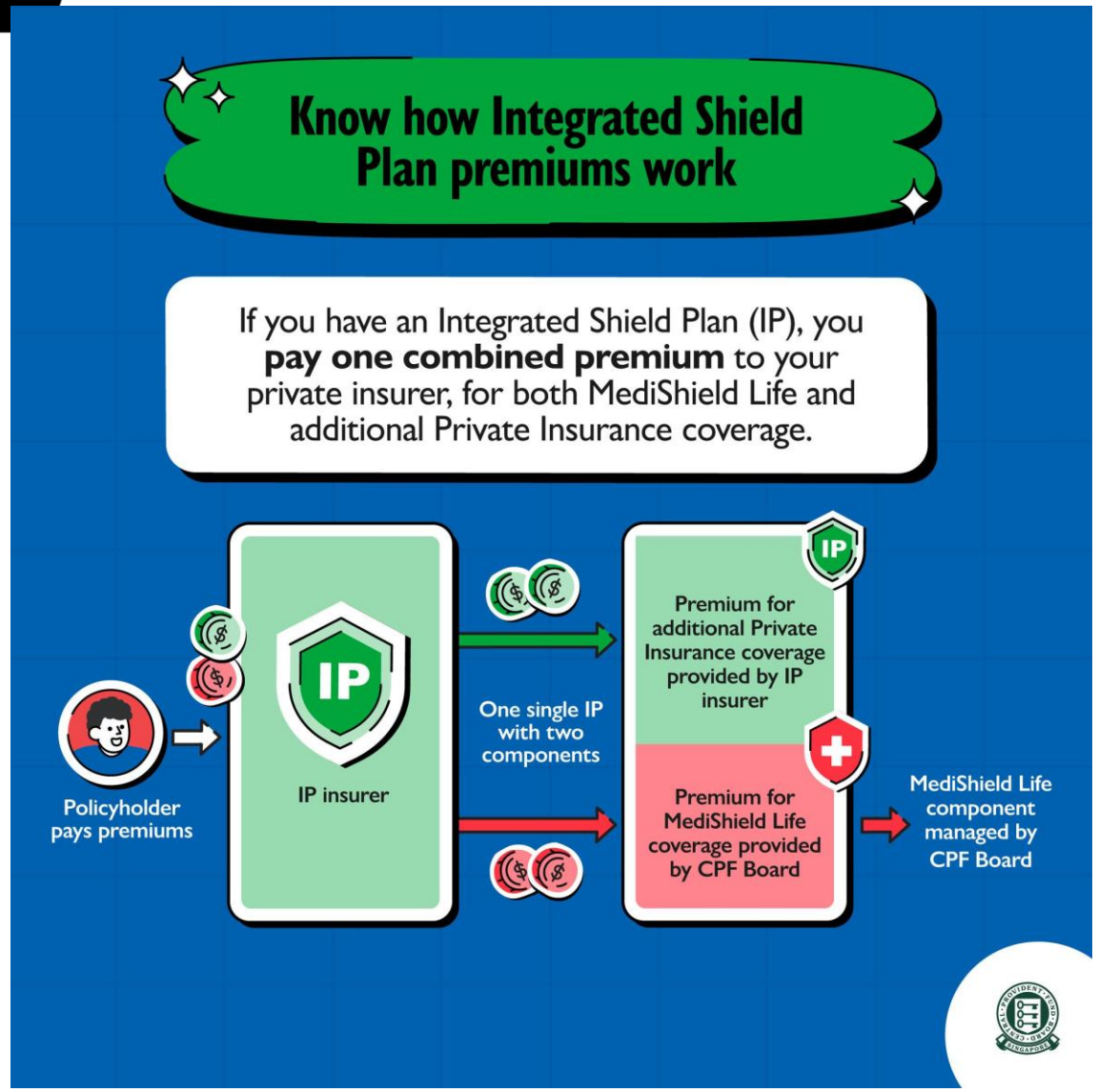
Employee Benefits: Group insurance for employees, often without medical underwriting.
Also includes Foreign Worker Medical Insurance, and International Private Medical Insurance (IPMI)

Out-of-pocket

Out-of-pocket expense for direct medical expense payable to medical operators for bills that are not covered
(no medical insurance or exclusions or partially covered (co-payment/co-insurance)

Notes:
https://www.healthhub.sg/support-and-tools/costs-and-financing/costs_and_financing_overall
(a) Pg 335, Government subsidies in the form of operating subvention to public hospitals and institutions for patient care, manpower development, etc
https://isomer-user-content.by.gov.sg/153/a61963cb-3a10-49e8-8359-e2897aae2cde/revenue-and-expenditure-estimates-for-fy2025-2026.pdf
(b) Pg 38, 2024 CPF Annual report https://www.cpf.gov.sg/content/dam/web/member/infohub/documents/CPF%20Annual%20Report%202024%20Part%202.pdf
(c) Pg 52, 2024 CPF Annual report
(d) https://www.moh.gov.sg/newsroom/-165-million-disbursed-to-needy-singaporeans--through-medifund-in-fy2024/

MediShield Life & Private Plans (IPs) for Residents



Rider
(est. 2m policyholders ~67% of IP Plans)

- Provides additional coverage on the co-insurance amounts. Cannot cover deductible
- Subject to at least 5% co-payment
- Premium payable by cash
- Can only be purchased on top of Integrated Shield Plan

Integrated Shield Plan
(est. 3m policyholders ~71% of residents)

- Provides enhanced coverage in higher wards (B1 or A) in Public or Private Hospitals
- Managed by Private Insurers
- Fully medically underwritten, usually pre-existing excluded
- Premiums can be paid by Medisave up to specified limit and then by cash
- Mandatory deductible up to $3,500, and co-pay of 10%

MediShield Life
(est. 4m policyholders ~100% of residents)

- Covers large bills in subsidised B2/C wards in public hospitals
- Managed by CPF Board
- All residents (and pre-existing) is covered by default.
- Premiums directly deducted from Medisave

Comprehensive

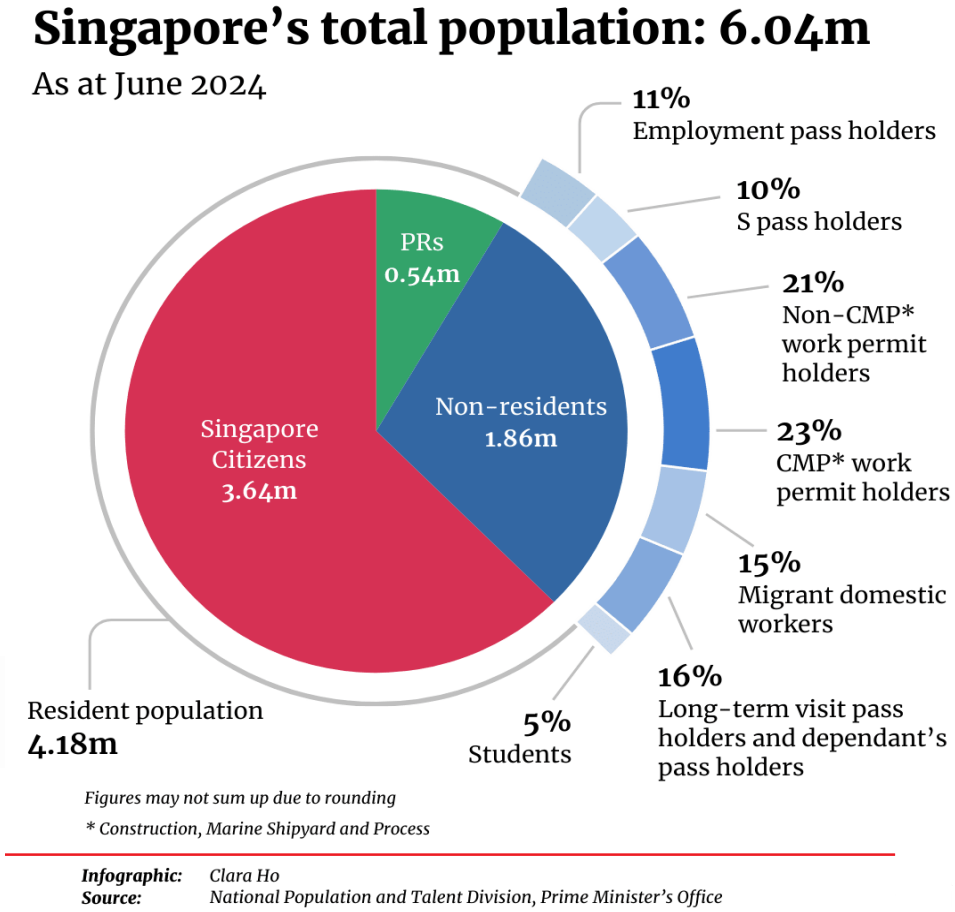
Basic

Source:
https://www.facebook.com/share/p/18CCnE5Ctn/

https://www.channelnewsasia.com/singapore/changes-integrated-shield-plan-riders-faq-5490106

Group Insurance & Overlapping Coverage

Population Structure & Risk Pools



Distinct Insurance Risk Pools

Residents 4.18M (69%) - MediShield Life

- Citizens and permanent residents
- Covered by national medical schemes (e.g., MediShield Life)
- 2.97m (49%) bought Integrated Shield as supplement
- Those who are employed (with larger companies) would have Employee Benefits Insurance (Group Insurance)

Non-Residents 1.86M (31%)

- Reliant on Employee Benefits (Group Medical Insurance)
- Some minority would purchase own private individual insurance or IPMI

Target Group	Plan	2024 Premiums	Market Share	Lives Covered
Residents	MediShield Life	$2.5B	30%	4.2m
Residents	Integrated Shield Plans	$3.2B	37%	3.0m
Residents and Non-Residents	Employer funded/ Group Medical	$2.6B	30%	3.5m
	Others	0.3B	4%	1.5m
Total Medical Expense Insurance		**$8.5B**		

Overlapping coverage

Source is MAS Form A5 Insurance returns and CPF Board 2024 Annual Report.
https://www.mas.gov.sg/statistics/insurance-statistics/insurance-company-returns
https://www.lia.org.sg/media/4459/20250213_lia-4q2024-results_slides.pdf

https://www.channelnewsasia.com/singapore/singapore-population-604-million-non-resident-increase-4627281

Group Insurance Insurance Market Structure

2024 Data[a]	S$	% vs Premiums
Gross Premiums	$2,562m	
Gross Claims	($2,108m)	82%
Management Expenses	($260m)	10%
Commission	($254m)	10%
Operating Results	($139m)	(5%)

No. of Policies in Force	118k
No. of Lives covered	3,474k
No. of claims registered	8,277k
Premiums per Life	$737
$ per claim	$255
Claims Per Life	2.4

27 insurers with
Group Medical portfolios
But 7 insurers
= 82% of gross premiums

61% of companies[b] bought Group Medical Insurance

- Remaining 39% include direct reimbursement of expenses, reimburse private medical insurance, or additional Medisave contributions
- Many product types, with varying limits, and multiple permutations

Group Outpatient

- Group GP Outpatient
- Group Specialist Outpatient
- Group Dental Insurance

Group Hospital & Surgical (GHS)

- Group Hospital & Surgical
- Group Major Medical

Foreign Worker Insurance

- Enhanced Medical Insurance [c]
- Primary Care Plan[f] <- **not insurance**

Overlap between Integrated Shield and Group

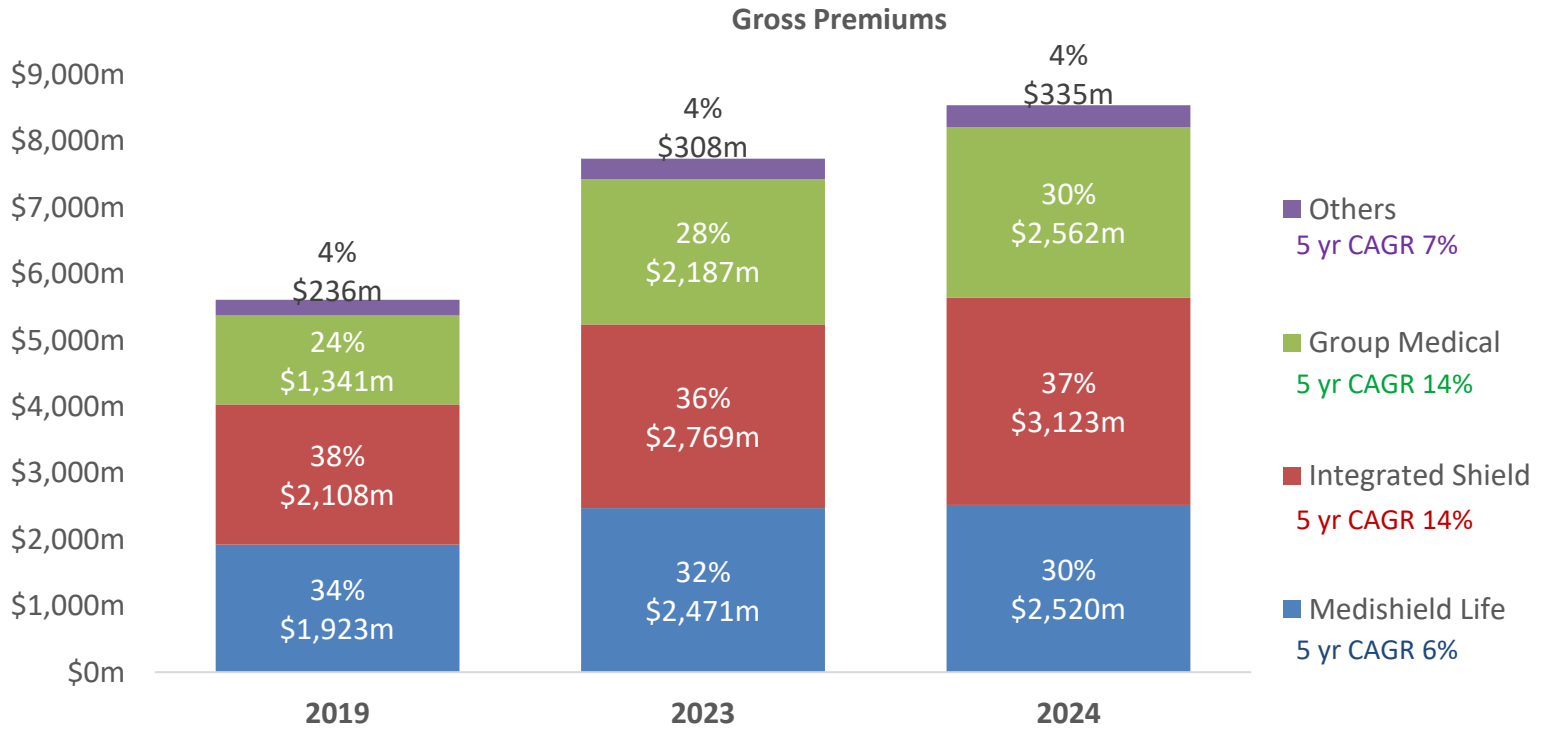
Only 6% of companies[b] implemented portable benefits

- Companies reimburse for the Integrated Shield plans of employees. Other permutations like Transferable Medical Insurance Scheme (TMIS), Portable Medical Benefits Scheme (PMBS) are less important.
- Barriers include costs,
differences in underwriting group vs individuals, differentiations between resident and foreign employees, etc.
- It is noted that 59% of companies has not thought about it or are not aware about portable benefits in general.

Source
(a) MAS Form A5 Insurance returns https://www.mas.gov.sg/statistics/insurance-statistics/insurance-company-returns
(b) 2022 https://stats.mom.gov.sg/Pages/MedicalBenefitsTimeSeries.aspx
(c) https://www.mom.gov.sg/passes-and-permits/work-permit-for-foreign-worker/sector-specific-rules/medical-insurance
(d) https://www.mom.gov.sg/newsroom/press-releases/2025/1214-enhanced-pcp

Actuarial Results & Cost Drivers

Financials of the Medical Insurance market



	Gross Loss Ratio		
	2019	**2023**	**2024**
Others	56%	52%	54%
Group	78%	79%	82%
Int. Shield	75%	77%	77%
MSL	*114%*	*95%*	*130%*
Total (excl MSL)	**75%**	**77%**	**78%**

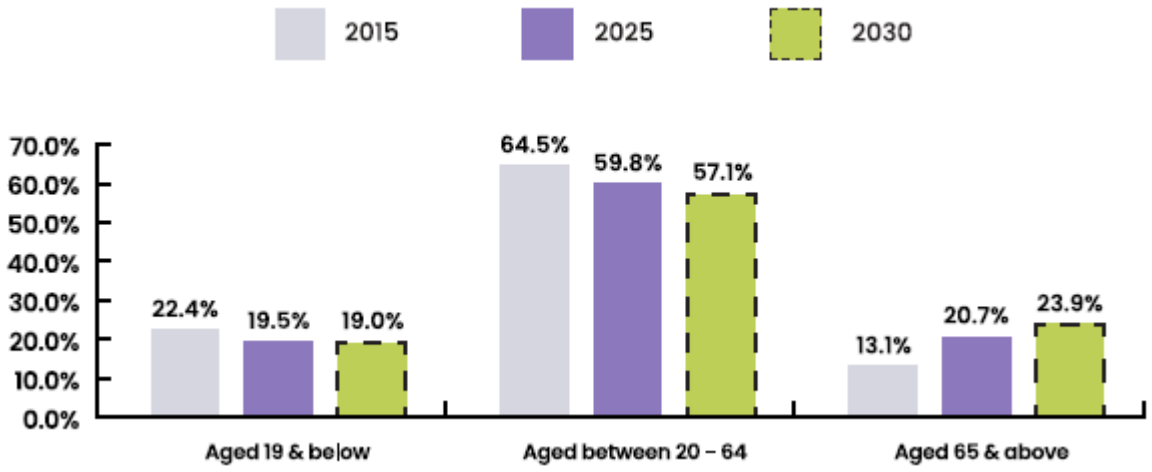
Operating Results [a]	**2019**	% margin	**2023**	% margin	**2024**	% margin
Medishield Life (MSL) [b]	*($273m)*	*(14%)*	*$133m*	*5%*	*($745m)*	*(30%)*
Integrated Shield	$18m	1%	$16m	1%	($16m)	*(1%)*
Group	$6m	0%	$54m	2%	($139m)	*(5%)*
Others	$10m	4%	$17m	6%	$36m	11%
Grand Total (excl MSL)	**$34m**	**1%**	**$87m**	**2%**	**($119m)**	***(2%)***

Source
(a) MAS Form A5 Insurance returns https://www.mas.gov.sg/statistics/insurance-statistics/insurance-company-returns
(b) https://www.moh.gov.sg/newsroom/yearly-loss-ratio-of-medishield-life-(basic)-in-last-five-years/
https://www.moh.gov.sg/managing-expenses/schemes-and-subsidies/medishield-life/medishield-life-fund/
https://www.cpf.gov.sg/content/dam/web/member/infohub/documents/CPF%20Annual%20Report%202024%20Part%202.pdf

Aging Population & Longevity Risk

Singapore projected to reach "super-aged" in 2026

21% and more age 65 and above



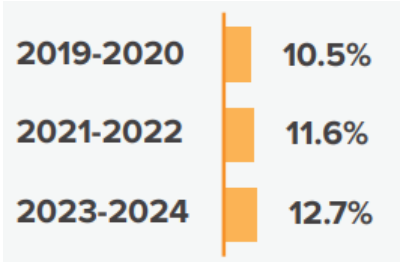
Proportion of citizens aged 65 and above
increased from 13.1% in 2015 to 20.7% in 2025.
By 2030, around 1 in 4 citizens (23.9%) will be aged 65 and above

Source
https://www.population.gov.sg/our-population/population-trends/longevity/
https://www.moh.gov.sg/ageing-well/ageing-in-the-community/

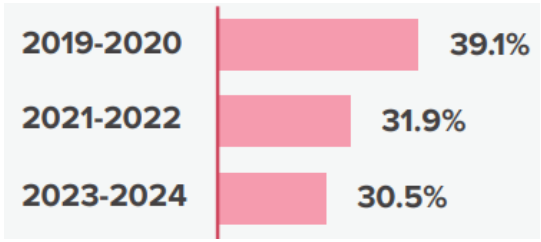
Non-Communicable Diseases (NCD) remain a concern

Preventive, Education strategies are yielding results

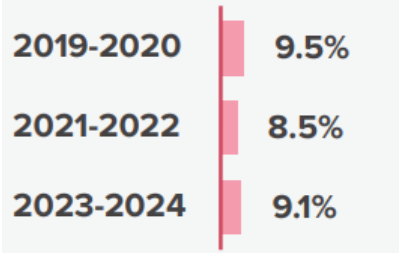
Prevalence of Obesity



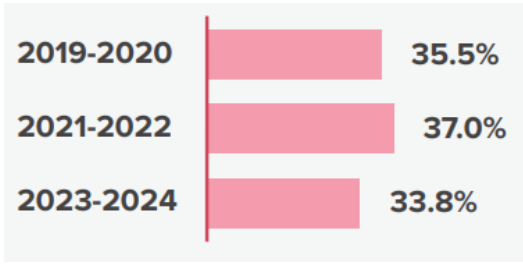
Prevalence of Hyperlipidaemia



Prevalence of Diabetes



Prevalence of Hypertension



Source
https://www.moh.gov.sg/others/resources-and-statistics/national-population-health-survey--nphs--2024-report/

Impact on Healthcare Expenditure

We are focused on trends (CAGR) instead of absolute $ level, as there are many caveats to the numbers

	Premiums Per Live[a]			CAGR
	2019	2023	2024	
Medishield Life	$428	$596	$603	5%
Int. Shield	$586	$705	$781	6%
Group	$428	$665	$737	11%

	Claims Per Live[a]			CAGR
	2019	2023	2024	
Medishield Life	$256	$334	$374	8% 1
Int. Shield	$442	$541	$604	6% 2
Group	$336	$528	$607	13% 3

	2019	2023	2024	CAGR
Inflation[b]	89	97	100	2%
Monthly Wages[c]	$5.5k	$6.6k	$6.9k	6%
GDP[d]	$479B	$537B	$565B	3%

1 MSL scheme facing high 8% increases annually. Not sustainable when compared to 2% inflation; 3% GDP growth; 6% wage growth. Some of the increase is due to benefit enhancements. Refer to past commentary for detailed background. https://actuaries.org.sg/sites/default/files/2021-01/SASResponseMSHLReview2020FINAL.pdf

2 There are many resources explaining the cost management measures of Integrated Shield players, including some back-and-forths played out in media.
"Over-consumption & over-servicing facilitated by overly generous coverage."[e]
"insurer profits account for only 2%" [f]
"Self-Inflicted Product Design" [g]

3 Anecdotally, reduction in coverage of Integrated Shield riders, moves personal claims to Group Medical insurance for the sizable % (1m+?) that is insured personally and via their company.

Additionally, WTW survey[h] indicates cost increases are due to:
- rise in new medical technologies and pharmaceuticals
- surge in healthcare utilization post COVID-19 pandemic

Source
(a) MAS Form A5 Insurance returns https://www.mas.gov.sg/statistics/insurance-statistics/insurance-company-returns
(b) MAS Core Inflation Measure https://tablebuilder.singstat.gov.sg/table/TS/M213901
(c) Average Monthly Nominal Earnings Per Employee https://tablebuilder.singstat.gov.sg/table/TS/M182941
(d) GDP In Chained (2015) Dollars https://tablebuilder.singstat.gov.sg/table/TS/M015721

Source
(e) https://www.moh.gov.sg/newsroom/integrated-shield-plan-rider-framework/
(f) https://www.actuaries.org.sg/sites/default/files/2024-11/SAS%20Discussion%20Paper%20Medical%20Insurance%20Premiums%20Nov24%20Final.pdf
(g) https://www.sma.org.sg/positionstatement/sma-position-statements-issued/22
(h) https://www.wtwco.com/en-sg/insights/2024/10/2025-global-medical-trends-survey

Path to Sustainable Healthcare

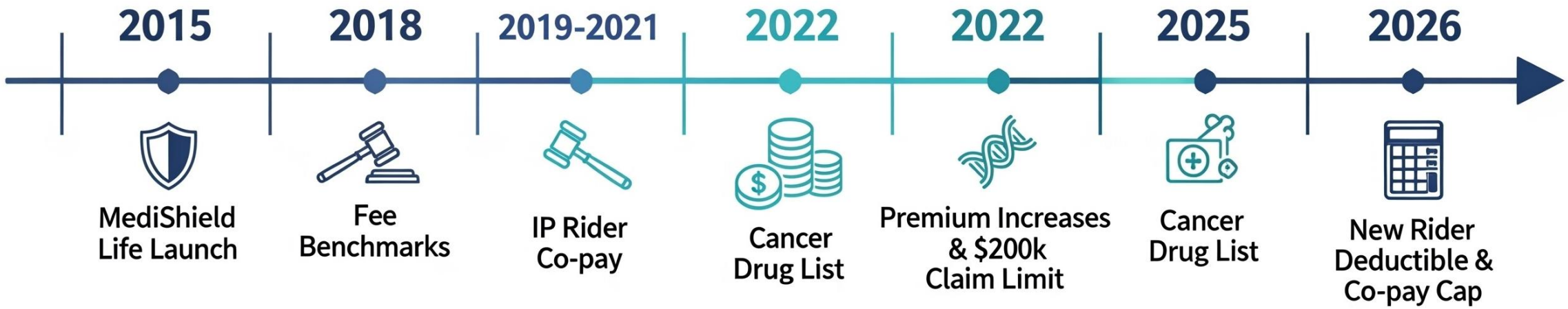
History of changes of Medishield Life & Integrated Shield

Both healthcare provision, and healthcare funding are inter-connected.
Changes are needed on both sides for sustainability.

2018: Integrated Shield (IP Plan)
MOH sets fee benchmarks for various medical services at private providers, providing a reference to moderate costs.

2022: Medishield Life
Outpatient cancer treatment coverage transitioned to $ coverage limit by drug, and by diagnosis.
No longer blind $ per mth cover

2025: Integrated Shield
Cancer Drug List implemented.
e.g. 5x multiple of MSL limits.



2015: Medishield Life (MSL)
All residents covered.
No exclusions for pre-existings.
Increased ward limits.
No lifetime claim limit.

Integrated Shield
2019: Standardised new IP riders to require patients to pay part of their bills (5% co-pay up to an annual cap).

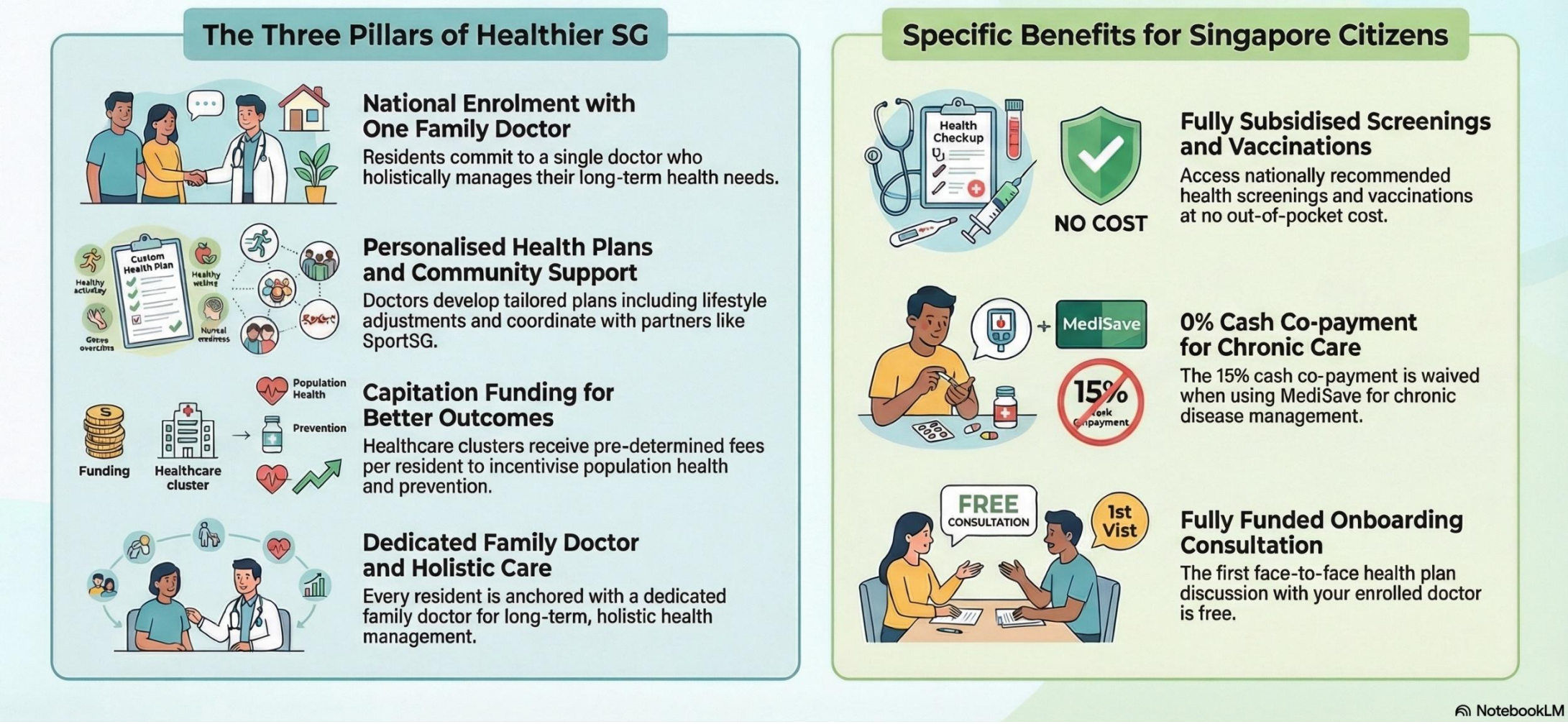
2021: Past first dollar coverage riders are transitioned to the new design.

2022: Medishield Life
Premiums increased, capped at 35% total over next three years. Some % increase offset via premium subsidys.

2026: Integrated Shield Riders
New rules prevent IP riders from paying the minimum deductible ($1,500 - $3,500), strengthening financial responsibility.
Minimum annual co-pay cap for IP riders standardised and increased to $6,000.

Healthier SG: Proactive Preventive Care

Healthier SG (2022 onwards) is a major transformation of the healthcare system. Shifting from reactive, high acuity inpatient treatment to proactive, primary care prevention. Every resident to have a dedicated family doctor, and personalised health plans. Helps residents lead longer, healthier lives through community support and enhanced subsidies



https://www.healthiersg.gov.sg/resources/white-paper/
https://www.actuaries.org.sg/sites/default/files/2022-05/20220512_SAS_AfternoonForum_HealthierSG_Capitation.pdf

Role of Insurers?

Contain Costs
- AI servicing models like underwriting, call center and claims to reduce cost
- Direct digital sales to reduce distribution costs
- Promote right siting of care: Look into reducing over-prescription / over-utilisation
- Preventive care models

Product Design
- Align product designs to right siting of care
- Adjust products for customers to have part to play

Premium changes
- Consider long term exposure
- Make premiums affordable for older ages (pre-funding?)

Educate consumers about affordability, right siting of care, importance of wellness

Conclusion

The New Actuarial Reality: From Passive Coverage to Active Management

	Previous	Future
Philosophy	**"As-Charged" & First-Dollar:** Minimum patient friction led to over-consumption.	**Financial Responsibility:** Mandatory co-payments and non-reimbursable deductibles.
Cost Control	**Blind Coverage and using Upper Sub-Limits:** Paying for all drugs and any provider without price benchmarks.	**Clinical Discipline:** Adherence to the Cancer Drug List (CDL) and Fee Benchmarks.
Individual vs Group	**Siloed:** Group medical insurance and Integrated Shield as distinct	**Interconnectivity:** Changes in IP riders will inevitably push more claims toward Group Medical plans.
Sustainability	**Price-Taking:** Insurers absorbing high medical inflation	**Right-Siting:** Using clinical fundamentals and product design to drive patients toward cost-effective care (community hospitals, primary care, etc)

Underwriting must move beyond simple loss-ratio tracking toward incentivizing "Right-Siting" and preventive care to survive a "Super-Aged" society.

Thank You