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How the Elderly Singaporeans Pay for their Hospitalization?

Himani^a, Jeremy Lim^b, Tilak Abeysinghe^a

*^aNational University of Singapore, Department of Economics,
Singapore*

^bCentre for Health Services Research, SingHealth, Singapore

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Motivation

- Singapore spends < 4% of its GDP on health care but health outcome indicators compare well with other developed countries.
- Major challenge: world's third fastest ageing population[#].
 - Population aged ≥ 65 : Projected increase from 8.5% (2007)^{##} to 18.7% (2030)^{*}.
- Elderly utilize health care at a greater rate than general population.
 - Elderly $\sim 8.5\%$ of population accounted for $\sim 28\%$ of public hospital admissions in 2007^{**}.
- This demographic transition is going to have sizeable impact on health care system.

[#]The Straits Times, 26 June, 2008, ^{##}Department of Statistics, Singapore, 2008

^{*}Report on the Ageing Population, 2006, ^{**}Authors' computation using data from Yearbook of Statistics, Singapore, 2008

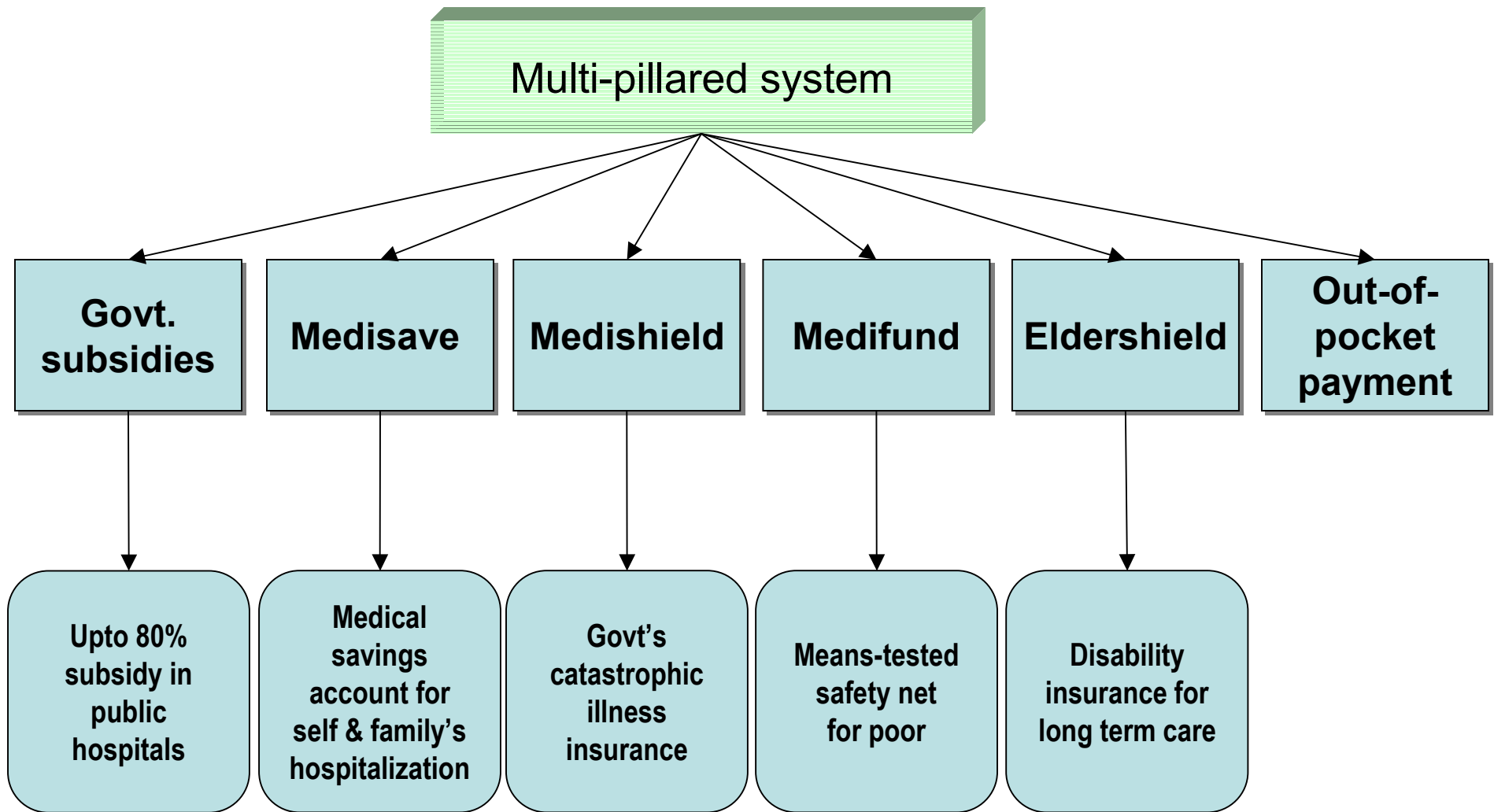
Objective

To investigate how the elderly Singaporeans pay for their hospitalization expenses.

Singapore's Health Care Financing Philosophy*

- Rests on individual responsibility, family & community support.
- Patients to co-pay part of their medical expenses.
- Government subsidies to keep basic healthcare affordable.

Singapore's Health Care Financing System



Government Subsidies & System of Ward Classes

- Implemented through system of ward class in public hospitals.
- Means testing introduced since Jan 2009 in class B2 and C wards.

Ward	Subsidy	Beds/ room	Attached Toilet & Shower	Air- con	T.V. & Phone
A	0	1	Yes	Yes	Yes
B1	20%	4	Yes	Yes	Yes
B2+	50%	5	Yes	Yes	No
B2	50 – 65%	6	No	No	No
C	65 - 80%	>6 (open ward)	No	No	No

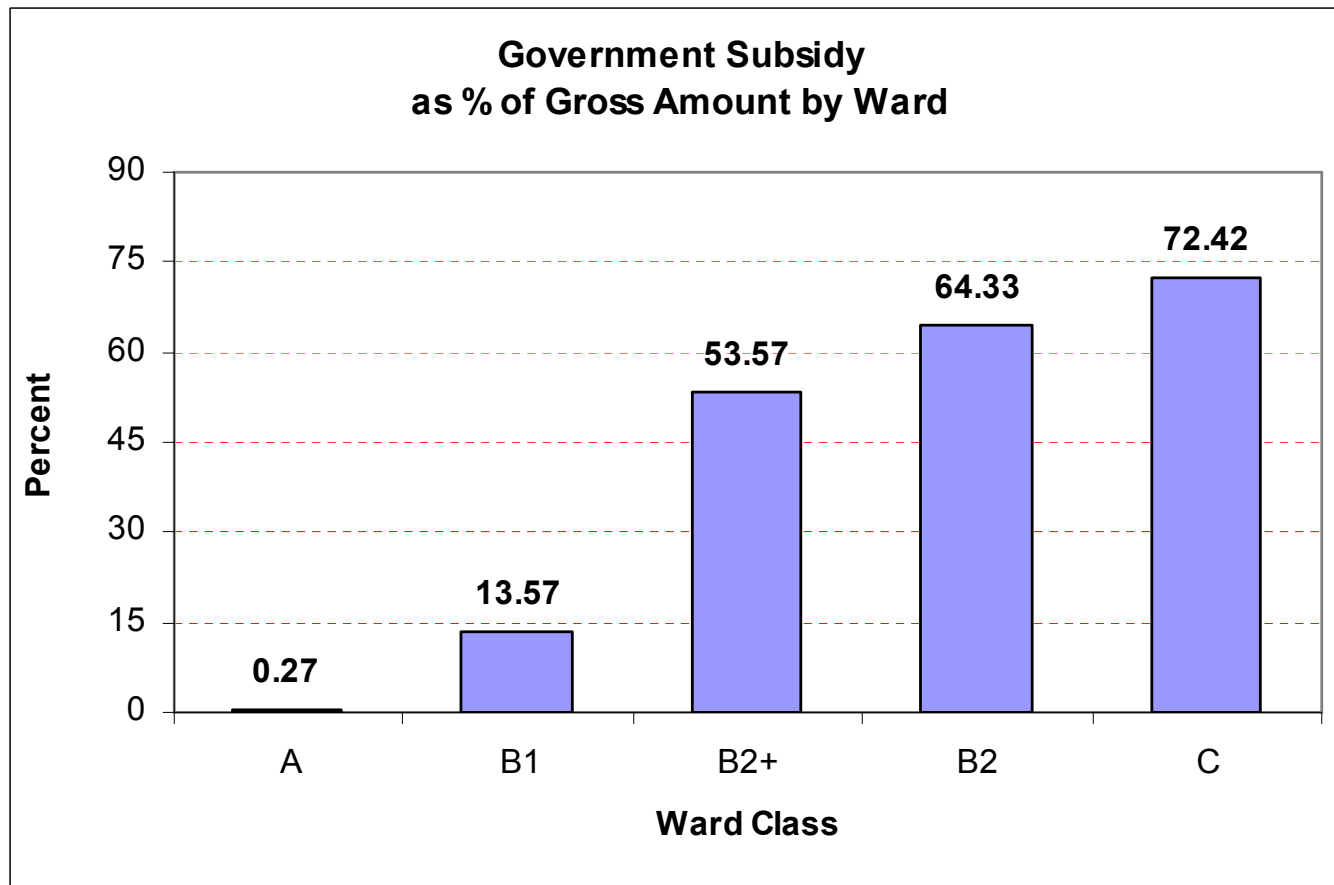
Data & Data Source

- Data is extracted from hospital bills of elderly (≥ 64 yrs) admitted in a tertiary public hospital from Jan 2007-Dec 2007.
- Information on patient's age, gender, LOS, ward class, primary & secondary diagnoses, outcome of hospitalization, itemized inpatient expenses, modes of financing.
- Sample size: 30,192 hospitalization episodes of 18,935 elderly patients.

Results & Analysis

Government Subsidies

- Mean gross amount ~ S\$6,067.



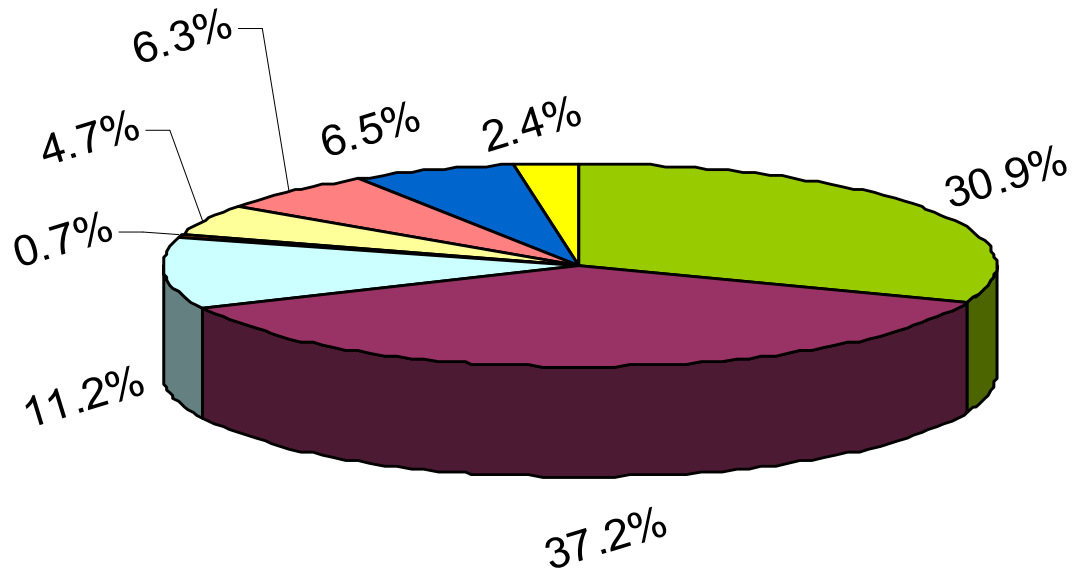
Hospital Bill Size of the Elderly

- Mean net expense of a hospitalization episode ~ S\$2,320.
- Class A ward bill ~ 5.5 times class C ward bill & ~ 4.5 times class B2 ward bill.

Ward Class	N	Mean (S\$)	Median (S\$)	90th Percentile (S\$)	95th Percentile (S\$)	99th Percentile (S\$)
A	1,395	8,108	4,180	18,326	23,266	48,793
B1	2,324	6,560	3,574	14,819	18,404	33,646
B2+	822	2,305	1,804	4,074	5,681	10,851
B2	15,260	1,727	986	3,989	5,257	10,083
C	10,391	1,466	842	3,257	4,431	9,004
Total	30,192	2,320	1,087	4,778	8,133	19,126

Modes of Financing

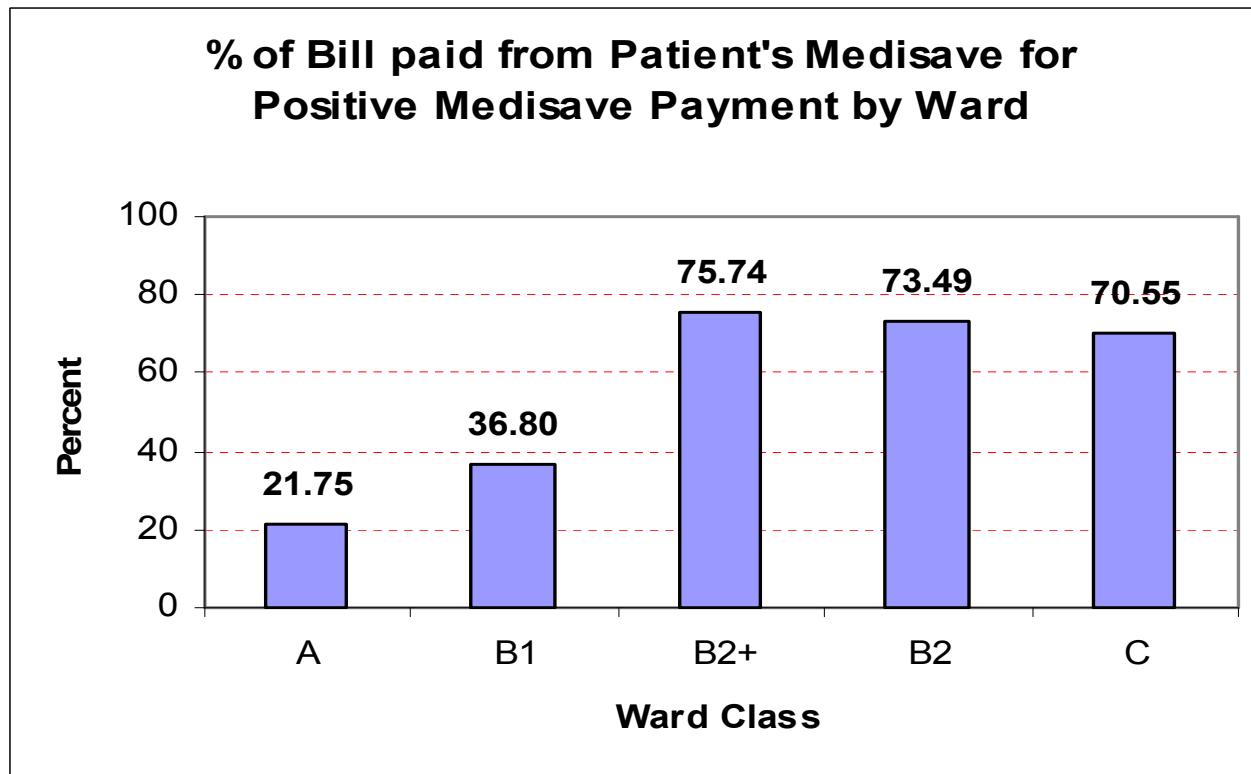
Shares of Different Modes of Financing



- | | |
|-------------------------|------------------------------|
| ■ Medisave of patient | ■ Medisave of family members |
| ■ Medishield | ■ Medifund |
| ■ Pvt. health insurance | ■ OOP |
| ■ MCPS | ■ Others |

Medical Savings Account (Medisave) of the Patient

- 55% of elderly use Medisave to pay for hospitalization.
 - Females:46%, Males: 66%
- For elderly who use Medisave, 68% of bill is paid from Medisave.



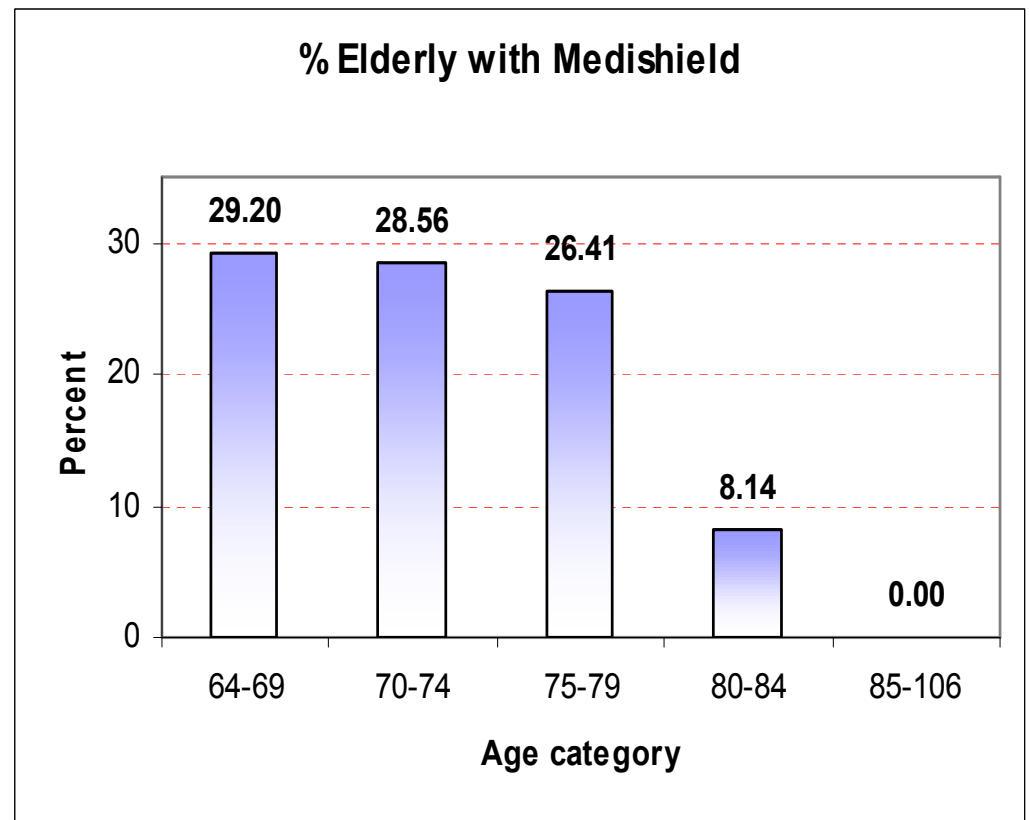
Medical Savings Account (Medisave) of the Patient (*cont'd*)

Why is role of Medisave limited?

- Medisave balances of majority of elderly fall short of minimum sum.
 - In 2005, average Medisave balance ~ S\$5,300 while minimum sum ~ S\$27,500*.
- Reason
 - Not enough working years after scheme was implemented in 1984 to accumulate required balances.
 - Greater draw-down & no replenishment.

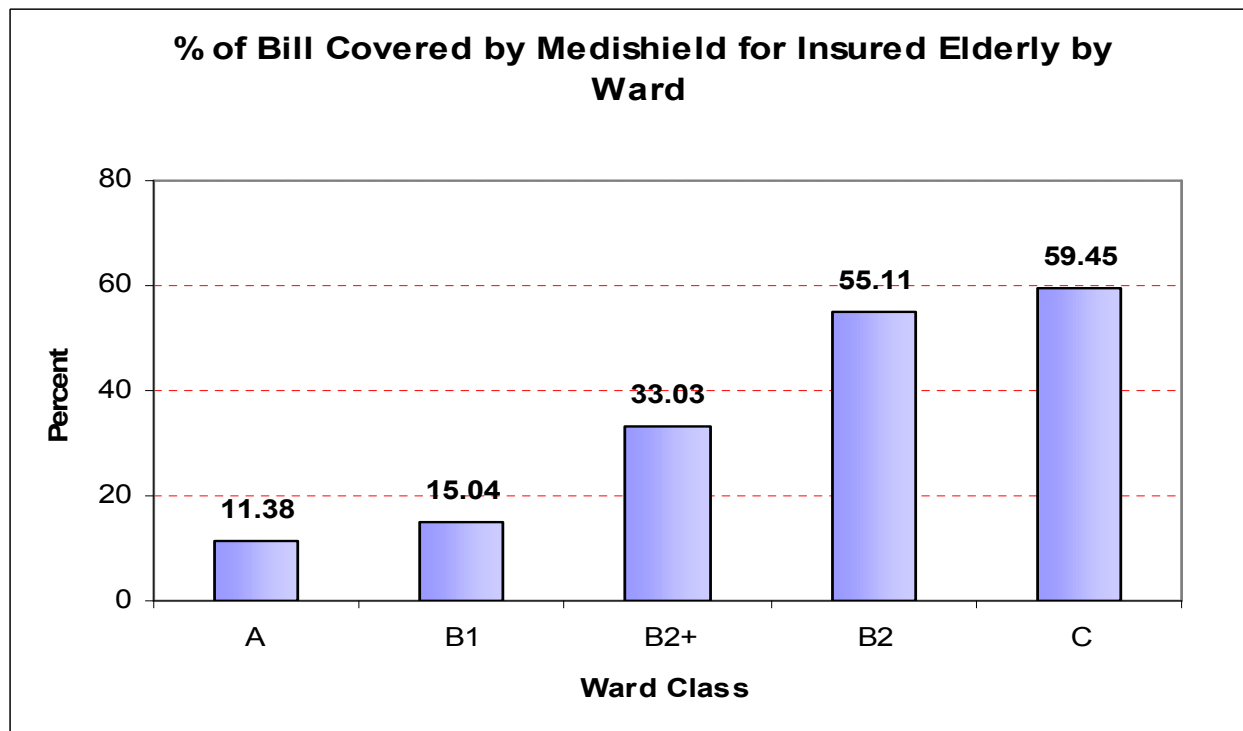
Health Insurance: Government (Medishield)

- 22% of elderly have Medishield coverage.
 - Females: 18%, Males: 26%
- Older elderly (≥ 80 years) have almost no coverage.
 - Maximum entry age is 75 years*.
 - Relatively higher premiums for older elderly.
 - S\$524 (76-78)
 - S\$615 (79-80)
 - S\$1,087 (81-83)
 - S\$1,123 (84-85)*
 - Higher deductible for older elderly
 - For class C ward, S\$1,000 (≤ 80) & S\$2,000 (81-85)*



Health Insurance: Government (Medishield) (*cont'd*)

- Medishield finances 52% of bill of a hospitalization episode for insured elderly.
- Proportion of bill covered in class C/B2 wards ~ 4 times higher than in class A/B1 wards.

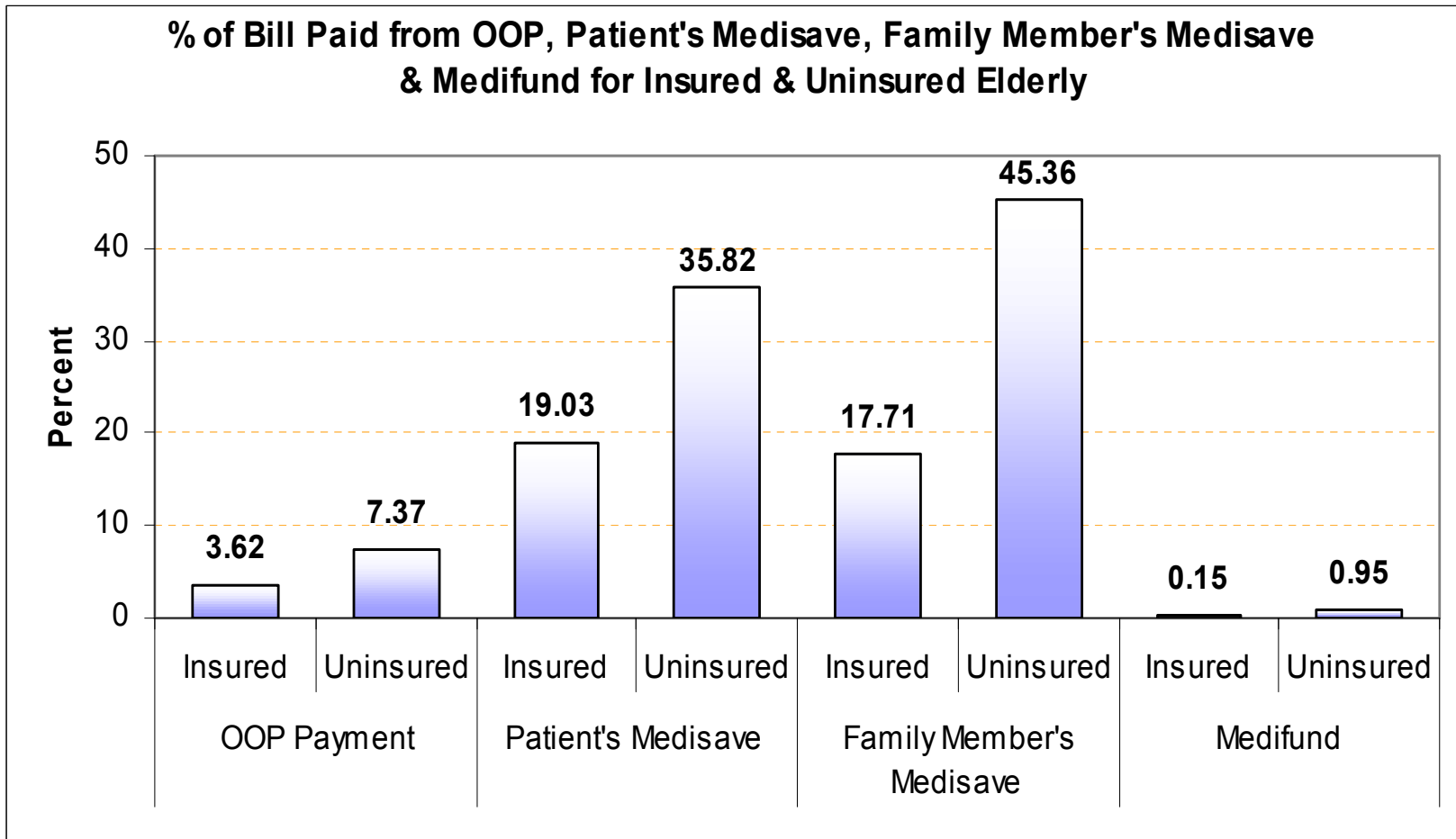


Health Insurance: Private (*cont'd*)

- Pvt. health insurance is even less popular ~ 8% of the elderly are covered.
 - Females: 8%, Males: 8.7%
- 62% of cost of a hospitalization episode for insured elderly is financed by pvt. insurance.

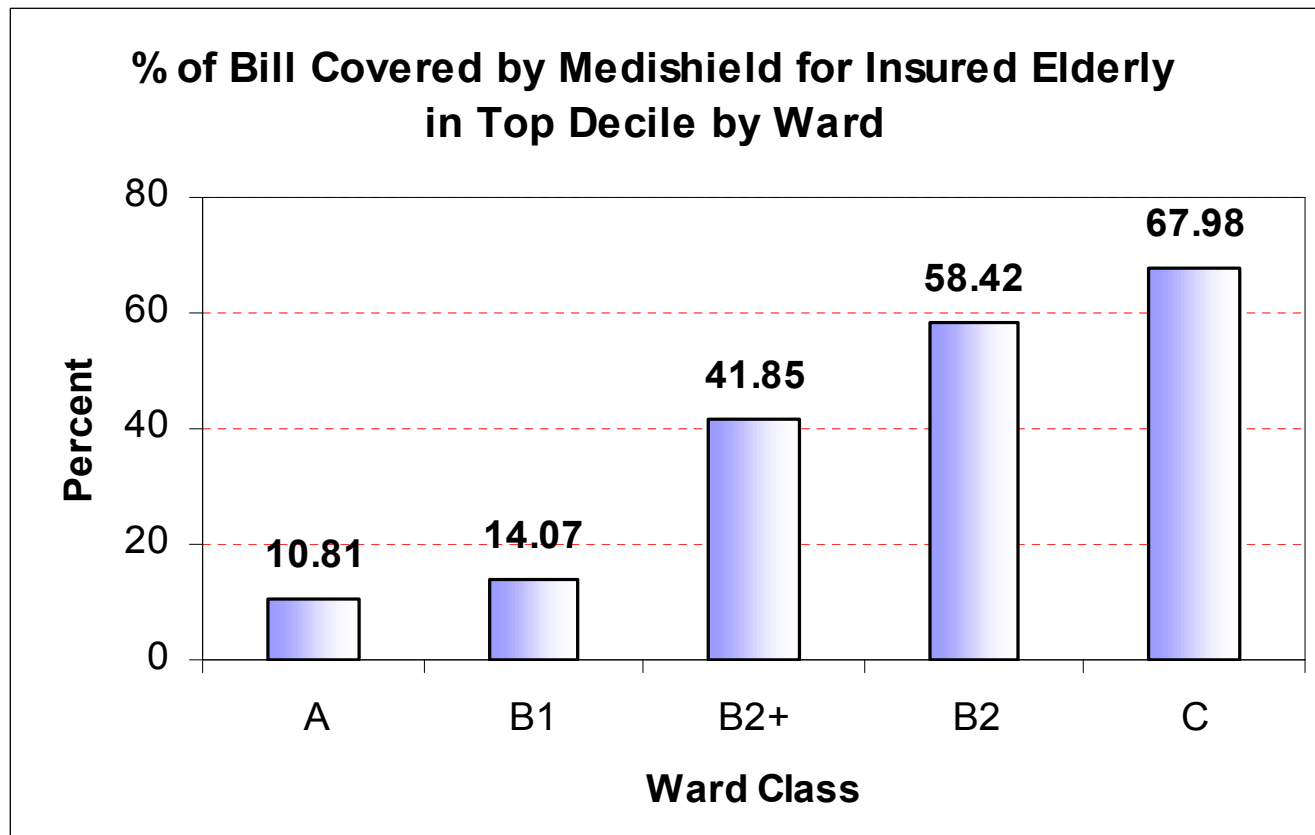
Insured vs Uninsured (*cont'd*)

- 54% of bill for insured elderly is covered.



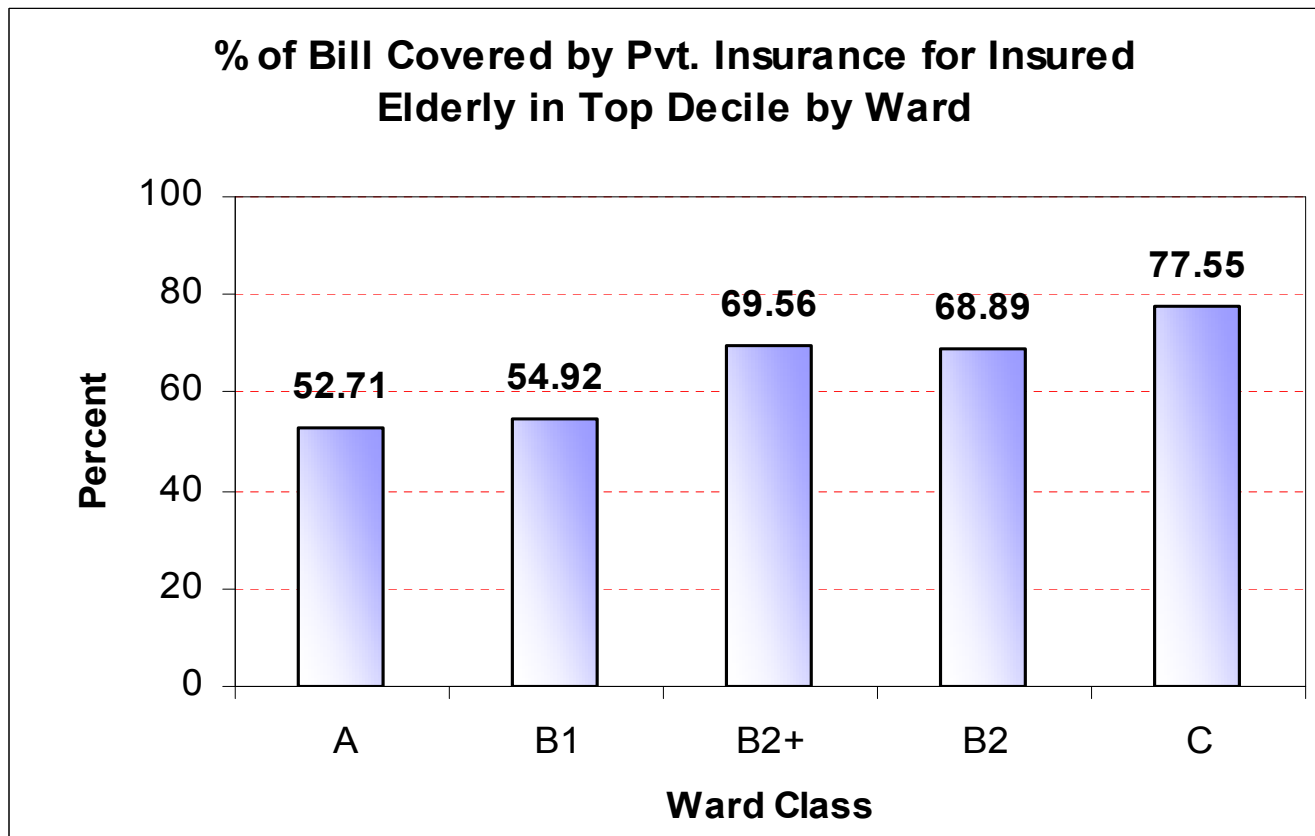
Health Insurance: Catastrophic Expenditure (*cont'd*)

- In top decile of expenditure distribution, Medishield covers 40% of bill for insured elderly.



Health Insurance: Catastrophic Expenditure (*cont'd*)

- Pvt. health insurance pays 61% of cost of hospitalization for top decile.

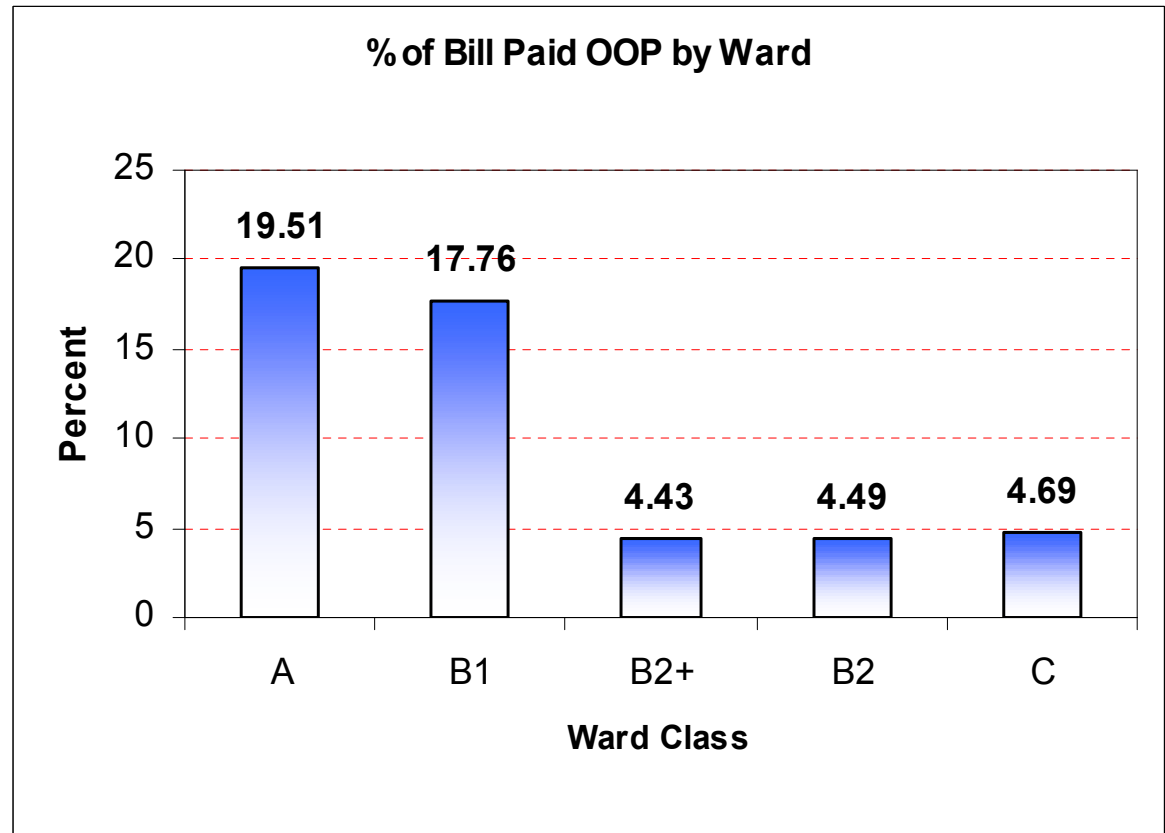


Medifund

- Only class B2 & C wards admissions are eligible for Medifund.
- 0.9% of elderly got Medifund assistance.
- 75% of expenses of a hospitalization episode are paid by Medifund for those who obtain aid.
 - Class B2: 51%, Class C: 78%

Out-of-Pocket (OOP) Payment

- In entire sample, OOP payment ~ 6% of bill.
- In class B2/C wards, OOP payment ~ 4.5%
- OOP payment for top decile ~ 14% & 21% for top one percentile.



OOP Payment (*cont'd*)

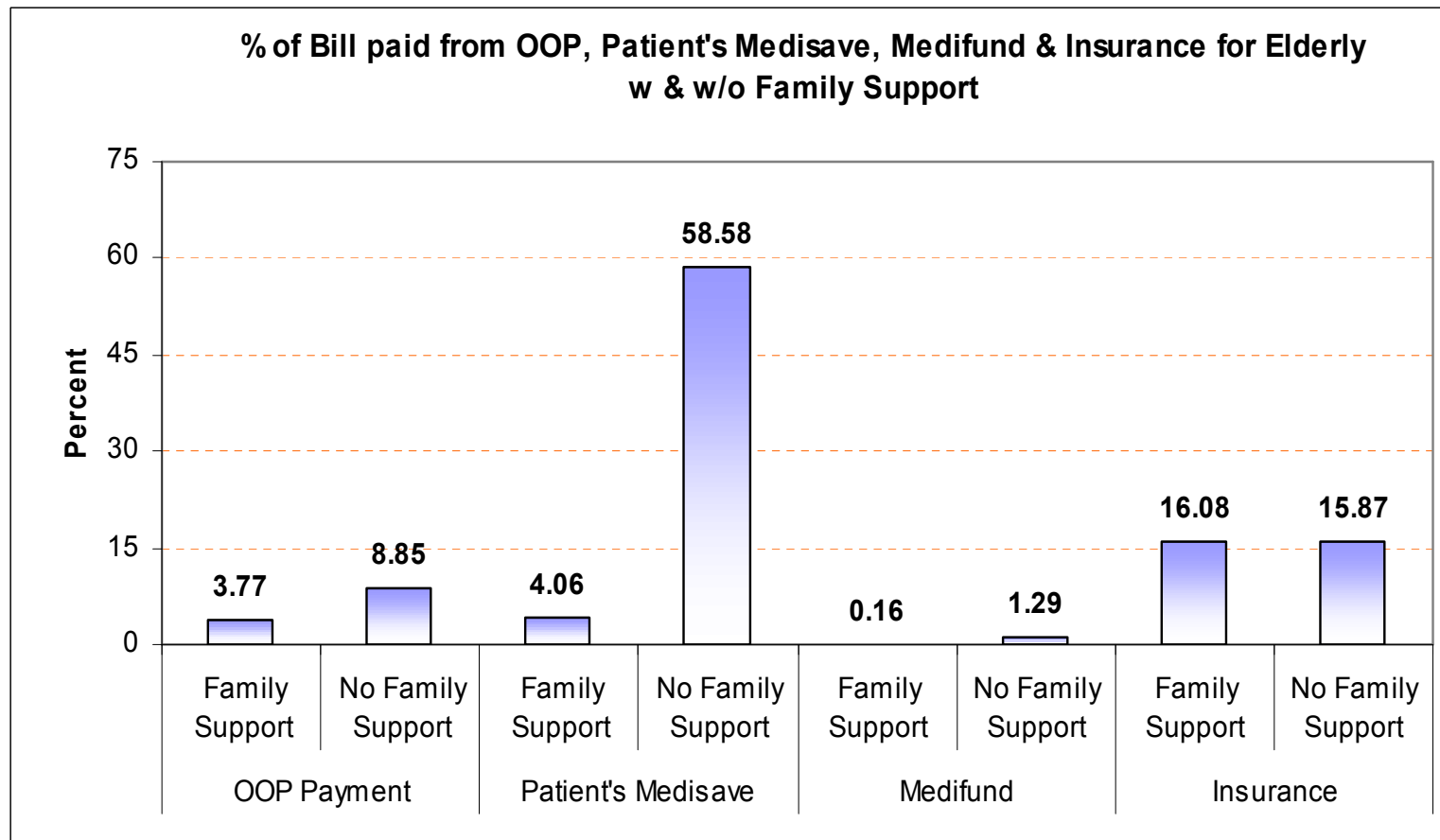
- 23% of elderly paid a certain fraction of bill OOP.
- For episodes with OOP payment, 37% of cost is offset by OOP payment.
- Annual OOP payment ~ 12% of average annual income of HHs with main income earner ≥ 65 yrs*.

Medical Savings Account (Medisave) of a Family Member

- 51% of elderly have their hospital bills paid from their family members' Medisave.
- More females (64%) than males (38%) tap on family members' medical savings.
- Older elderly (56%) more dependent on family than younger elderly (49%).

Dependent vs Independent Elderly (*cont'd*)

73% of cost of an inpatient episode is paid from a family member's Medisave for the dependent elderly.



Key Messages

- Govt subsidies remain vital to affordability.
- Medisave enacted 'too late' to be very useful to present cohort of elderly, also greater draw-down & no replenishment for elderly.
- Ability to tap on family members' medical savings very important in paying for healthcare.
- Medishield has limited value to elderly because latest entry age of 75 years, relatively high premiums & high deductible.
- OOP payment is small because of all other schemes above.

Concluding Remarks

- Healthcare for elderly still affordable.
 - Govt. subsidies.
 - Family members' pooling of monies through Medisave.
- Increasing challenges ahead as elderly increase in proportion with larger political voice.
 - Govt. would be strained to finance ever-increasing health subsidies from a shrinking tax base.
 - Greater demand on children's Medisave when they themselves grow old & face rising personal medical expenses, e.g. Medisave account holder 60 yrs old with an elderly dependent 85 yrs old.
- Focus on achieving deeper penetration of insurance.

Thanks!