

The coming of a New Era

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Introduction to Singapore:

General population

	2007	2008	2009	2010
Land Area (sq km)	705.1	710.2	710.3	712.4
Total Population (,000)	4,588.60	4,839.40	4,987.60	5,076.70
Singapore Residents (,000)	3,583.10	3,642.70	3,733.90	3,771.70
Total (Age)				
% below 15 years	19	18.4	17.9	17.3
% 15 - 64 years	72.5	72.9	73.3	73.7
% 65 years & above	8.5	8.7	8.8	9.0
Male (Age)				
% below 15 years	9.7	9.5	9.2	8.9
% 15 - 64 years	36.0	36.2	36.3	36.5
% 65 years & above	3.8	3.8	3.9	4.0
Female (Age)				
% below 15 years	9.2	9	8.7	8.5
% 15 - 64 years	36.5	36.7	36.9	37.2
% 65 years & above	4.8	4.8	4.9	5.0

Source: Ministry of Health Website

Introduction to Singapore: Healthcare cost per GDP



Country	Healthcare Cost as Percentage of GDP	Source
Singapore	Below 4% (in 2011)	Ministry of Health website
Australia	8.7% (in 2007)	OECD Health Data 2009
USA	16% (in 2007)	OECD Health Data 2009

Role of Government: Healthcare Financing Philosophy

Singapore offers universal healthcare coverage to its citizens, with a financing system anchored on the twin philosophies of

“individual responsibility and affordable healthcare for all”

Role of Government: 4-Tier Protection



Tier 1	<u>Government subsidies</u> of up to 80% of the total bill in acute public hospital wards, which all Singaporeans can access
Tier 2	<u>Medisave</u> , introduced in April 1984, a compulsory individual medical savings account scheme which allows practically all Singaporeans to pay for their share of medical treatment without financial difficulty
Tier 3	<u>MediShield</u> , introduced in July 1990, a low cost catastrophic medical insurance scheme. It complements medisave to provide effective coverage for serious illness or prolonged hospitalisation that requires heavy medical expenses; <u>ElderShield</u> , introduced in September 2002, a severe disability insurance; <u>Integrated Shield plans</u> , a supplement to basic Medishield coverage. Medisave can also be used to pay for premiums of these private Medisave-approved Integrated Shield plans, subject to a withdrawal limit of \$800 and for members above 80, \$1,150 per policy, per year; <u>ElderShield Supplements</u> , enhance the disability benefits coverage of ElderShield. All Singaporeans and Permanent Residents (PRs) who are CPF members are automatically covered under ElderShield when they turn 40 years old, unless they opt out of the scheme. Premiums for ElderShield are payable annually in cash or from their Medisave savings.
Tier 4	<u>Medifund</u> is a medical endowment fund set up by the Government to act as the ultimate safety net for needy Singaporean patients who cannot afford to pay their medical bills despite heavy subsidies, Medisave and MediShield.

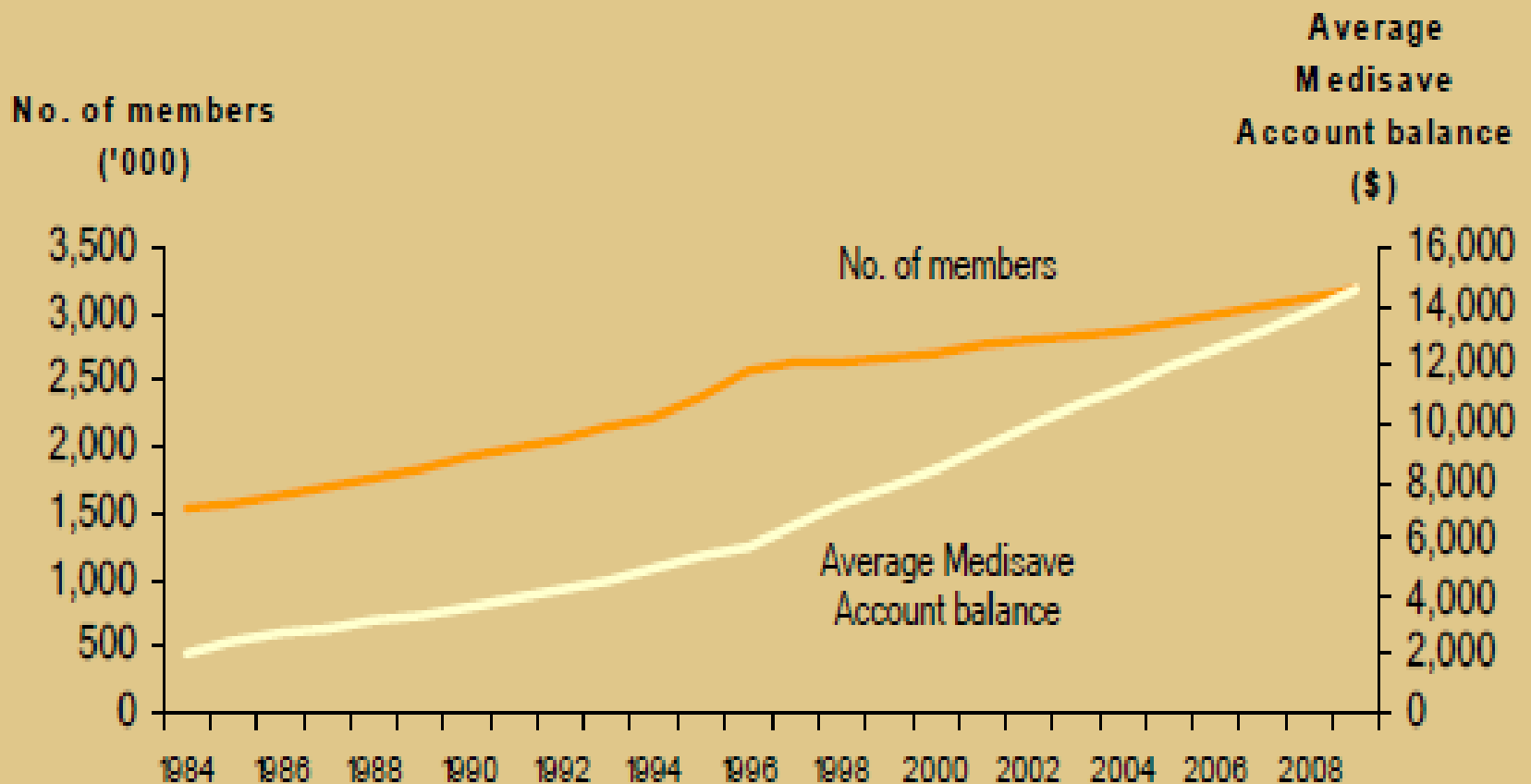
Market Condition: Direct Medical Expenses

	2007	2008	2009	2010
Medisave				
No. of Accounts (million)	2.8	2.9	2.9	3.0
Total Medisave Balance (\$billion)	39.3	42.4	45.8	50.2
Average Balance per Account (\$)	14,100	14,900	15,700	16,900
Amount Withdrawn for Direct Medical Expenses (\$million)	519	588	661	732
% used for direct medical expense	1.32%	1.39%	1.44%	1.46%

Source: Ministry of Health Website

Market Condition: Medisave

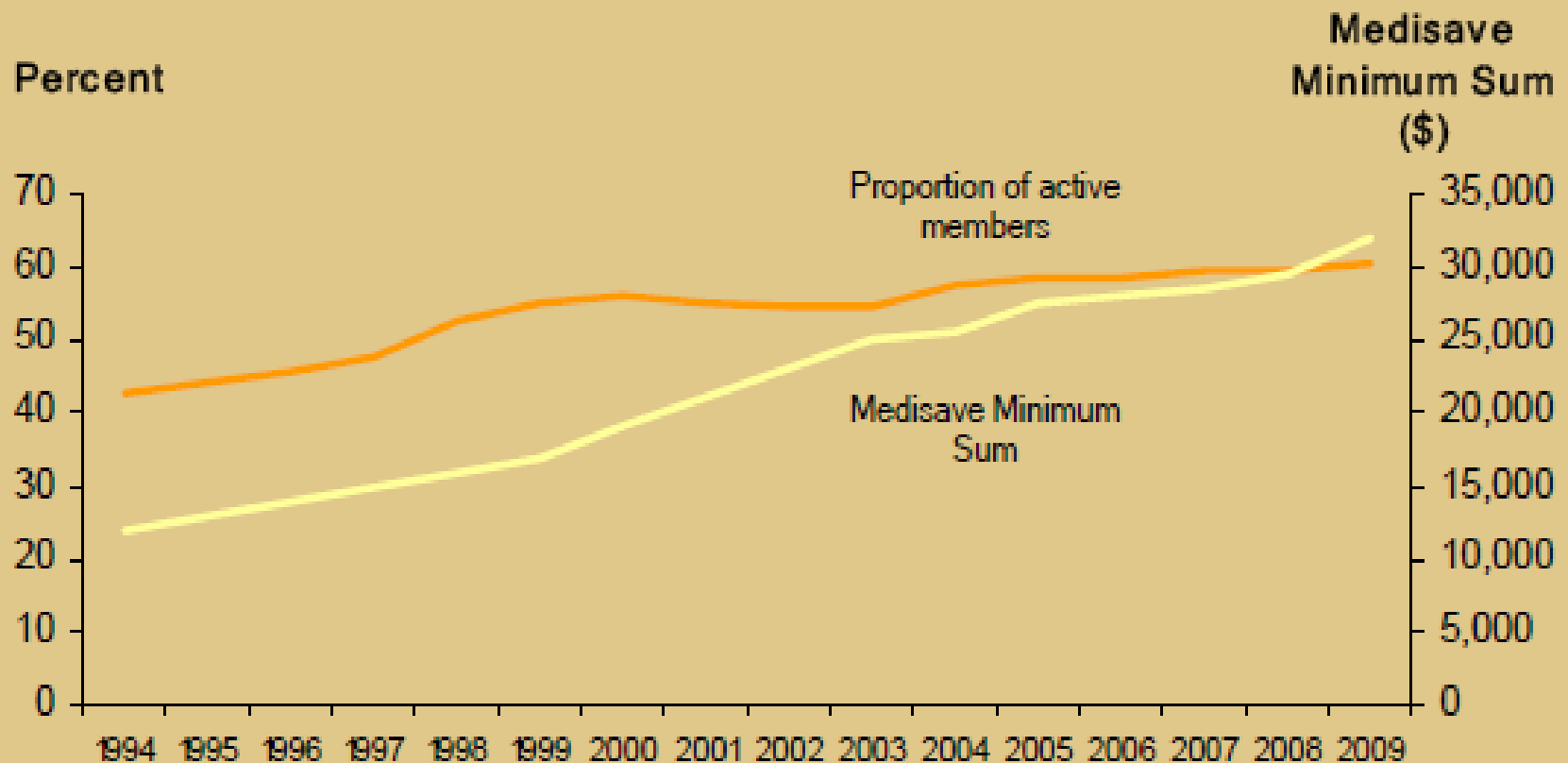
Growth of Medisave members to 3.2m and average account balance to \$14,550



Market Condition: Medisave Minimum Sum



% of Active Members (Singaporean and PR) who meet Medisave Minimum Sum @ 55



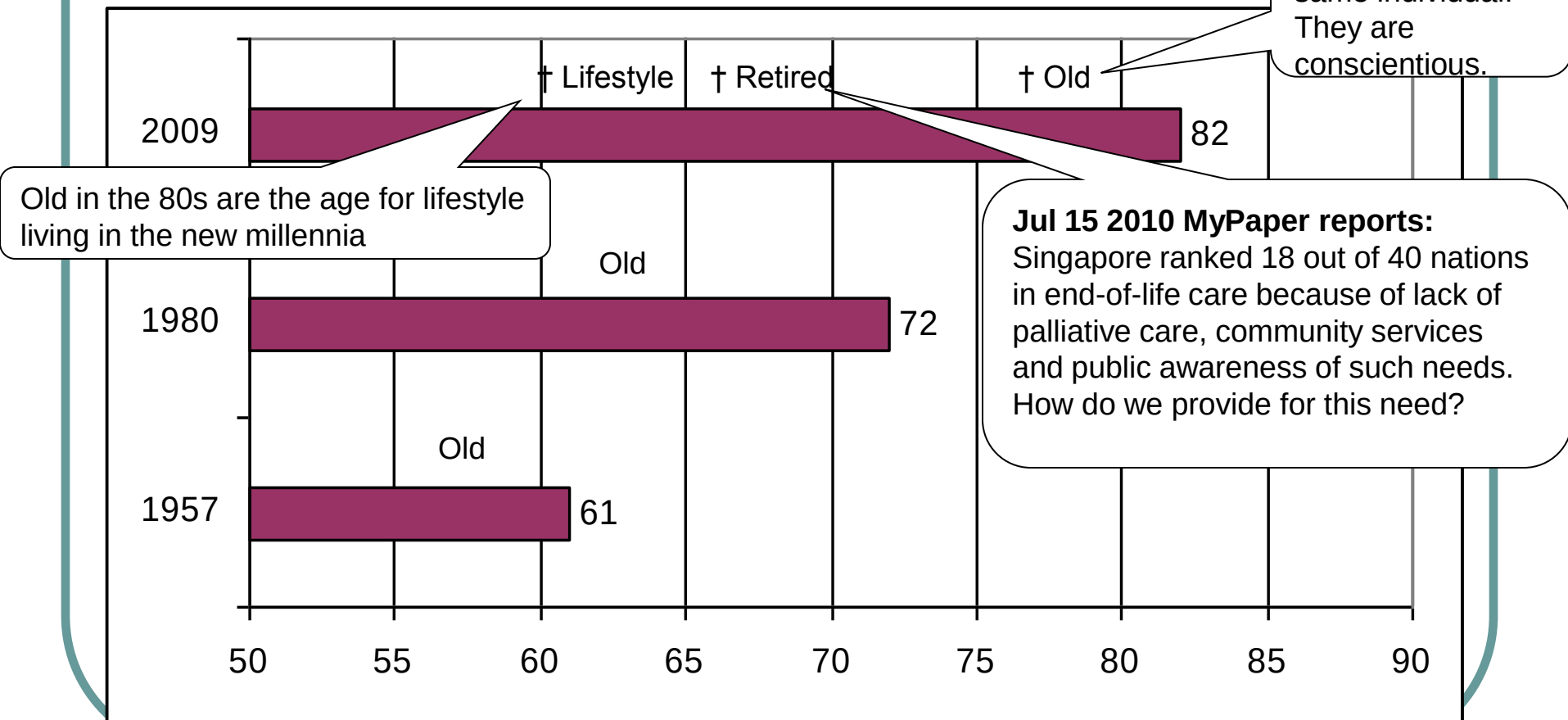
Health Condition:

Are we in health crisis?

- Life expectancy is increasing
- Adequately covered against uncertainty and adequately capitalize
- Timely medical care provided

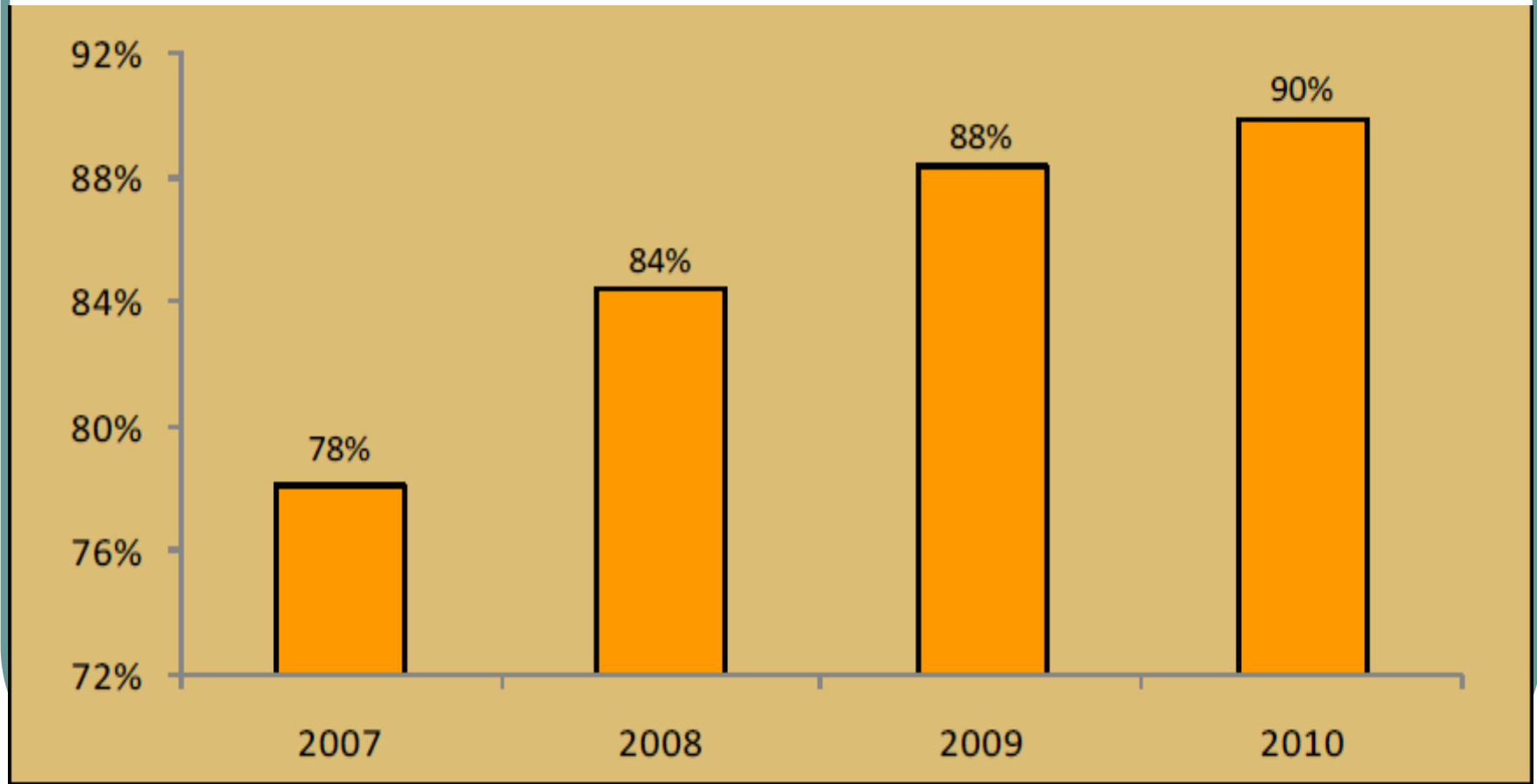
Health condition: Increasing life expectancy [1]

Life Expectancy increase by 20 years from 1957 to 2009



Health Condition: MediShield [2]

% of Persons with MediShield coverage as at end of year to base as at midyear



Health Condition: Integrated Shield Plan [3]

	2007	2008	2009	2010
MediShield & Integrated Shield Plans				
No. of MediShield Policyholders('000)	2,870	3,076	3,299	3,390
No. of MediShield Policyholders with Private Integrated Shield plans('000)	1,660	1,790	1,930	2,068
% increase in MediShield		7.18%	7.25%	2.76%
% increase in ISP		7.83%	7.82%	7.15%
Proportion of MediShield with ISP	57.84%	58.19%	58.50%	61.00%

Source: Ministry of Health Website

Health Condition:

Yale School of Health Report [4]

Yale School of Public Health shows ...

... found wide age disparities for a range of acute and chronic health conditions, **including diabetes, pneumonia and high blood pressure between blacks and whites**

... Black were hospitalized an average of nine years earlier than whites for all health conditions combined. After factoring in insurance and other variables

... The biggest differences were found in **uncontrolled diabetes (a 12-year age disparity) and bacterial pneumonia (7.5 years)**

Summary:

... **Indication that they have received inadequate care for the underlying conditions in the years leading up to their hospitalization.**

Timely medical care can
save medical cost

<http://publichealth.yale.edu/news/news/2009/Disparities.aspx>

Health Condition:

Can the lowest income group afford healthcare? [5]

	1997/98	2002/03	2007/08
Proportion of monthly Household Expenditure spent on Healthcare¹(%)			
(by income quintiles²)			
All Households	3.5	4.7	5.3
Lowest 20%	5	5.7	6
2nd quintile	3	4.8	5.5
3rd quintile	3.4	4.8	5.5
4th quintile	3.2	4.8	5.3
Highest quintile	3.3	4.1	4.8

Medical care is highly affordable even for the bottom 20 percentile of Singapore society. There should not therefore be a trend to delay medical care

Source: Ministry of Health Website

Health Condition:

Can the working population afford healthcare? [6]

LEVEL OF SAVINGS IN MEDISAVE (AS AT END-2009)

50 th Percentile	75 th Percentile	85 th Percentile	95 th Percentile	Average
\$11,235	\$30,900	\$36,340	\$37,900	\$15,700

BILL SIZE FOR PATIENTS IN PUBLIC HOSPITALS (2008)

Billsize	50 th Percentile	75 th Percentile	85 th Percentile	95 th Percentile	Average
Class A	\$2,515	\$4,961	\$6,985	\$15,618	\$4,465
Class B1	\$2,072	\$4,297	\$6,203	\$13,570	\$3,767
Class B2	\$879	\$1,630	\$2,408	\$4,815	\$1,537
Class C	\$716	\$1,401	\$2,146	\$4,472	\$1,410

Source: Ministry of Health Website

Health Condition:

Can the working population afford healthcare? [7]

Lung Cancer with Complications (Ward A) – excludes surgical treatments

Hosp	Vol	Ave LOS (days)	50% Bill Size	90% Bill Size
SGH	70	8.3	5,339	15,026

Stroke with Complications (Ward A) – some may include rehabilitation treatments

Hosp	Vol	Ave LOS (days)	50% Bill Size	90% Bill Size
CGH	33	6.1	8,109	13,127
NUH	34	10.2	6,790	25,540
SGH	60	8.0	8,642	19,993
TTSH	78	10.7	7,197	25,201

Prostate Operation age less than 80 (Private 1 Bed) – no other conditions

Hosp	Vol	Avg LOS (days)	50% Bill Size	90% Bill Size
MEH	37	3.0	13,834	18,025

Health Condition:

Can the working population afford healthcare? [8]

Heart surgery with Coronary artery bypass graft (Ward A) - uncomplicated

Hosp	Vol	Ave LOS (days)	50% Bill Size	90% Bill Size
NHC	64	8.0	28,124	33,010

Heart surgery with Coronary artery bypass (Private 1 bed) - uncomplicated

Hosp	Vol	Ave LOS (days)	50% Bill Size	90% Bill Size
MEH	44	8.3	43,688	71,238

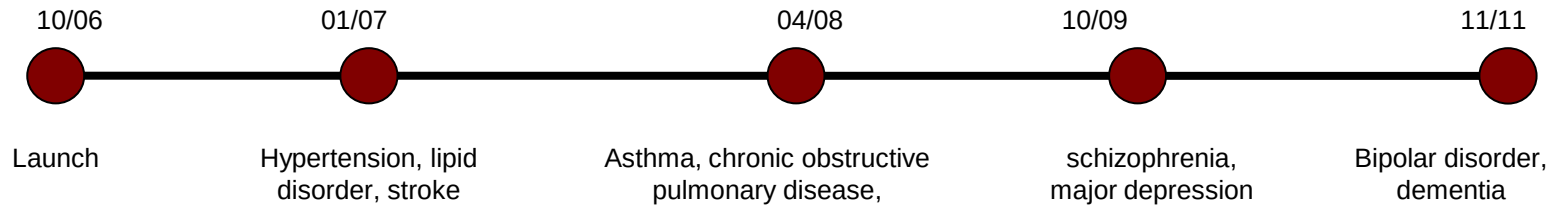
Health Condition:

Control Healthcare Cost [9]

Philosophies of individual responsibility & affordable healthcare for all

1. Publish hospital bill sizes with a view to push hospital to do more for less
2. Properly manage chronic diseases (such as diabetes mellitus, hypertension, lipid disorders and stroke) that affect over 1 million Singaporeans. Else may result in serious complications. Therefore promote
 1. Early detection by encouraging health screening such as mammogram & colonoscopies. Allow medisave withdrawals.
 2. Better education for patients through patient education folders and toolkits, patient booklets and FAQ
 3. Extensive use of Chronic Disease Management Programmes (CDMP). Through regular monitoring, appropriate medical treatment & lifestyle changes. Allow Medisave to pay part of outpatient cost.

Health Condition: Chronology of CDMP [10]



Health Condition: Causes of Death [1]

PRINCIPAL CAUSES OF DEATH

	2007	2008	2009	2010
Total No. of Deaths	17,140	17,222	17,101	17,610
% of Total Deaths				
Cancer	27.7	29.3	29.3	28.5
Ischaemic Heart Disease	19.8	20.1	19.2	18.7
Pneumonia	13.9	13.9	15.3	15.7
Cerebrovascular Disease (including stroke)	8.7	8.3	8	8.4
Accidents, Poisoning & Violence	6	5.8	5.7	5.5
Other Heart Diseases	4.3	4	4.4	4.8
Urinary Tract Infections	2.2	2.1	2.5	2.5
Chronic Obstructive Lung Disease	2.6	2.5	2.4	2.5
Nephritis, Nephrotic Syndrome & Nephrosis	2	2.1	2.3	2.2
Diabetes Mellitus	3.6	2.7	1.7	1

Source: Ministry of Health Website

Health Condition: Disease Burden [2]

DISEASE BURDEN

	1992	1998	2004	2010
Prevalence among adults aged 18 to 69 years ¹ (%)				
Hypertension ²	22.2	27.3	24.9	23.5
Diabetes	8.6	9	8.2	11.3
High Total Cholesterol	19.4	25.4	18.7	17.4
Obesity	5.1	6	6.9	10.8
Daily Smoking	18.3	15.2	12.6	14.3

Source: Ministry of Health Website

Health Condition: Hospital Admission [3]

	2007	2008	2009	2010
Total No. of Discharges ('000)	436.5	442.4	445.6	459.0
% of Total Discharges				
1.Accidents, Poisoning & Violence	9.2	9.4	9.5	9.5
2.Cancer	5.7	5.6	5.4	5.6
3.Ischaemic Heart Disease	3.7	3.6	3.4	3.7
4.Obstetric Complications affecting Fetus or Newborn	2.4	2.4	2.5	2.3
5.Pneumonia	2.5	2.6	2.3	2.5
6.Other Heart Diseases	2.3	2.3	2.3	2.4
7.Cerebrovascular Disease (including stroke)	2.2	2.2	2.2	2.1
8.Infections of Skin and Subcutaneous Tissue	1.9	2.0	2.1	2.1
9.Chronic Obstructive Lung Disease	2.4	2.3	2.0	2.2
10.Urinary Tract Infection	2.0	1.8	1.8	1.9

Source: Ministry of Health Website

Health Condition: Top 5 Cancer [1]



Top 5 leading Cancers¹(Incidence, 2005-2009)

Male	ASR ³	Female	ASR ³
1) Colo-rectum	40.1	1) Breast	60
2) Lung	38.5	2) Colo-rectum	28.6
3) Prostate	26.7	3) Lung	15.4
4) Liver	17.2	4) Corpus Uteri	12.1
5) Stomach	13.4	5) Ovary	12.0

Notes:

¹Singapore Residents

²Among adults aged 30 to 69 years

³ASR : Age-standardised rate per 100,000 per year. ASR derived by the direct method using the UICC 'World Population'

⁴Source : Singapore Burden of Diseases Study 2007



Competition:

Singapore Female loves CI Products [2]

Female to Male Ratio - Insured Lives vs Population in Singapore

Age Group	Insured Lives	Population
0-19	92%	94%
20-29	119%	104%
30-39	125%	104%
40-49	123%	98%
50-59	151%	100%
60+	185%	117%
Overall	120%	101%

Female buys critical illnesses products and this desire grows with age

Source:

Gen Re Dread Disease Survey 2000 - 2004 by Dr Wolfgang Droste

http://www.actuaries.org.sg/files/library/forum_presentation/Wolfgang%20-%20DD%20survey%202000-2004_SAS%20Seminar_20080626.pdf?download

Competition:

Integrated Shield Plan industry players

- AIA
- Aviva
- Great Eastern
- NTUC
- Prudential

Competition:

Integrated Shield Plan service indicators [1]

	Cumulative Claims Return Rate			Median claims return rate (days)
	<= 1 week	<= 2 weeks	<= 4 weeks	
AIA	85%	89%	92%	1
AVIVA	80%	83%	88%	1
Great Eastern	93%	96%	98%	0
NTUC Income	92%	94%	96%	0
Prudential	94%	97%	99%	0

Competition:

Integrated Shield Plan service indicators [2]

	Provides Letter of Guarantee	Absorbs costs of obtaining medical records
AIA	No	Yes
AVIVA	Provided to selected Restructured Hospitals and Institutions*	Yes
Great Eastern	No	Yes
NTUC Income	Provided to selected Restructured Hospitals and Institutions*	Yes
Prudential	Provided to selected Restructured Hospitals and Institutions*	Yes



Competition:

Integrated Shield Plan other categories

For **inpatient & day surgery** and **outpatient treatment**, all companies offer “As charged” - NTUC Income Enhanced IncomeShield Plan Preferred, AIA HealthShield Gold Max, Great Eastern SupremeHealth Plan P Plus, Prudential PruShield Plan A Premier and Aviva MyShield Plan 1.

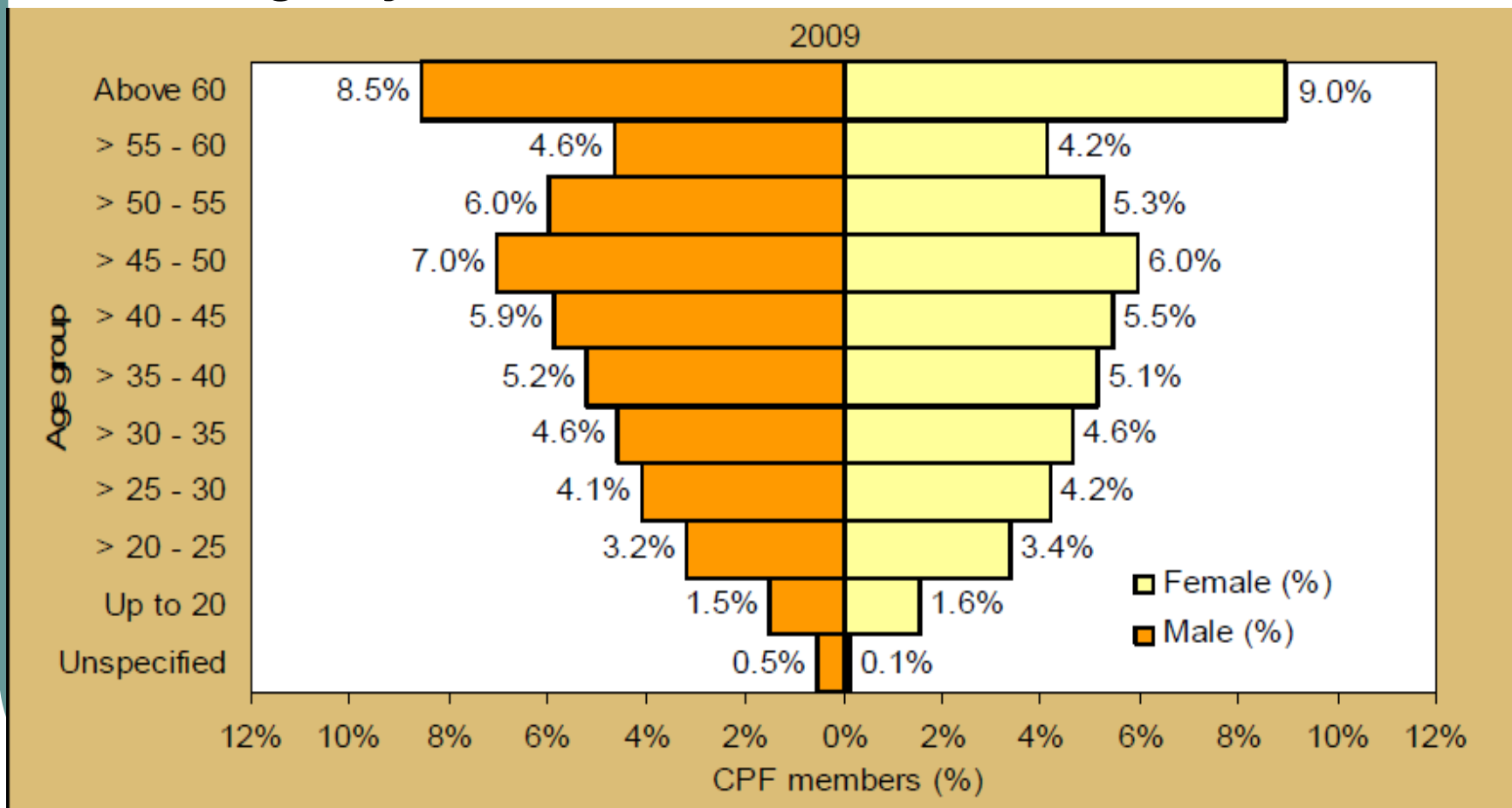
For Additional Benefits Limits category, AIA and AVIVA offers critical illnesses, Pregnancy Complications and Congenital defects because of the following Report from Gen Re and the direct medical expense report from CPF.

Aviva went one step further to boost persistency by offering free cover to the children of insured if both couple buy their ISP.

Cheaper plans gave consideration to total premium but not more expensive plans for private medical care.

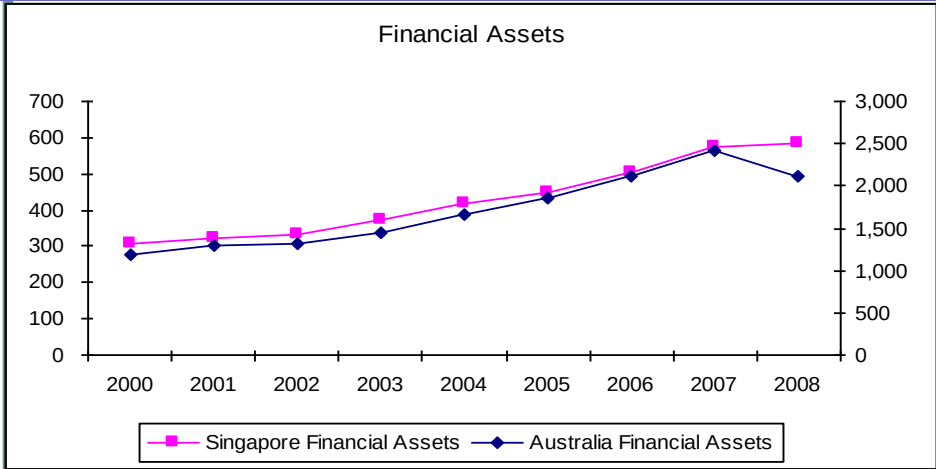
Are we entering an ERA like bancassurance 20 years ago: Age Profile of CPF members

Age Pyramid of CPF Members as of 2009





Are we entering an ERA like bancassurance 20 years ago: Potential



Singaporeans have higher proportion of their financial assets invested in currency & deposits and a lower proportion invested in IL with life insurers

Jul 14 2010 MyPaper:
reported 47% of Singapore affluent favor capital protection, the highest in the region

	(millions) Singapore	(per capita) Singapore	(%) Singapore	(%) Australia
Financial Assets	582.3	120.3	100%	100%
Currency & Deposits	212.4	43.9	36%	27%
Shares & Securities	135.8	28.1	23%	16%
Life Insurance	82.8	17.1	14%	57%
Central Provident Fund	151.3	31.3	26%	

Why do they favor currency & deposits when deposits have earned low interest for the past 10 years?

Source: Department of Statistics Singapore & Australian Bureau of Statistics

Characteristics of this market:

Trend

Close to 1 in 3 Singaporeans are over 65 ... by 2050

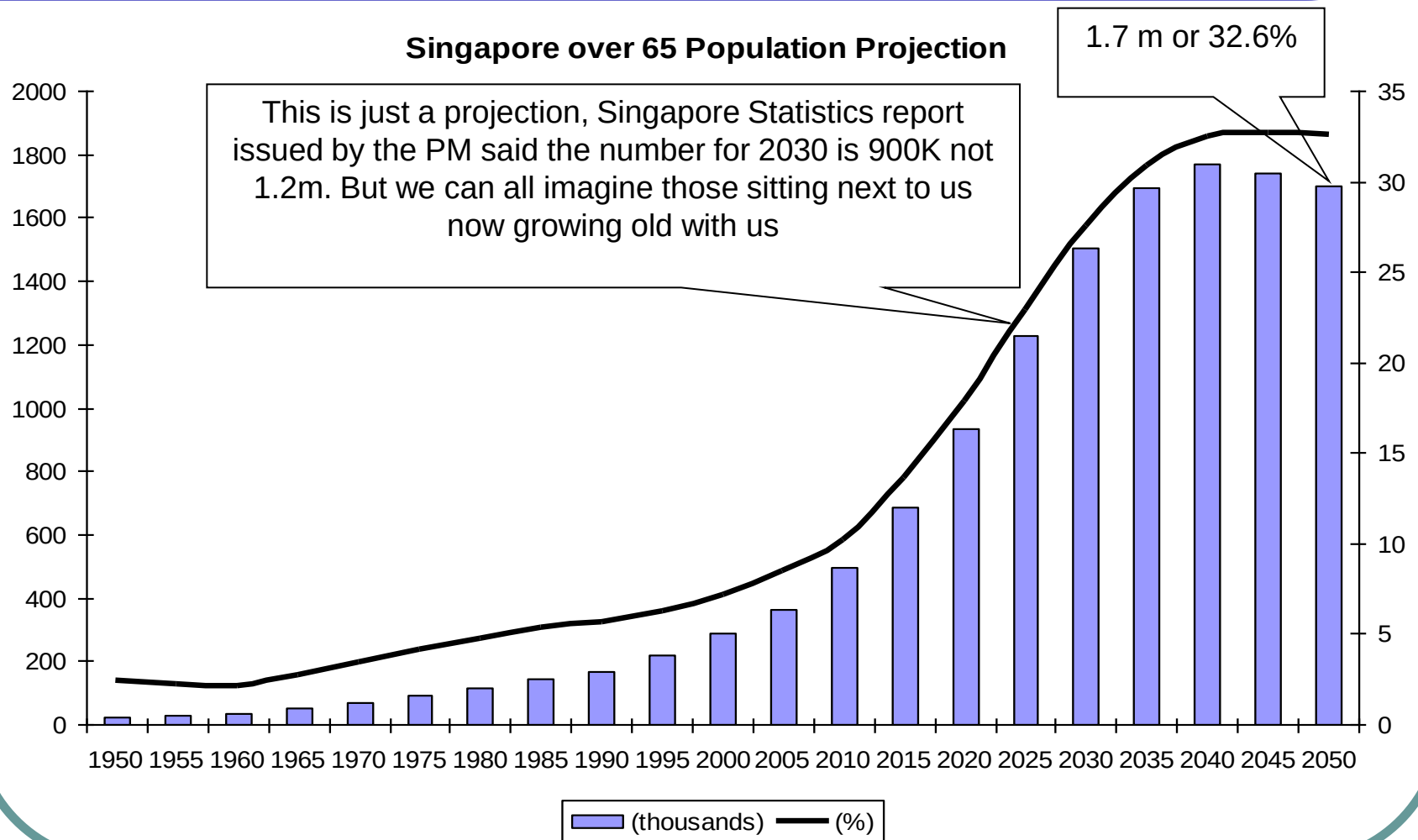
And they are generally healthier ...

They are richer and are generally better educated ...

But at the cost of their marriages and family ...

(This is just a projection – it can still be changed)

Characteristics of this market: Older



Source: UN World Population Prospects: The 2008 Revision, Population Database; Medium Variant

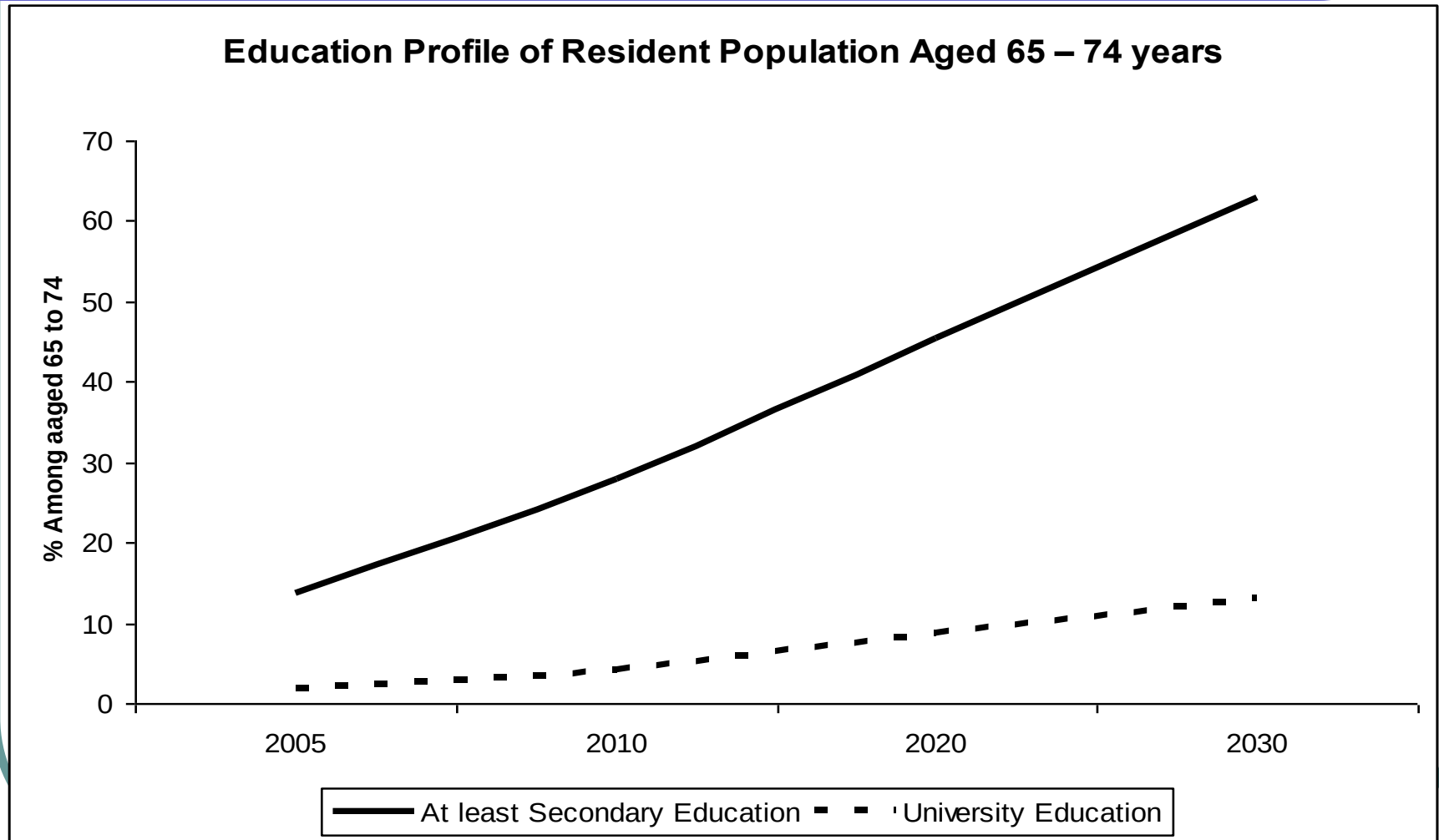
Characteristics of this market:

Healthier

Year	Cause of death		Hospital Morbidity Rate			Death	Average Length of Stay in Hospitals
	Heart	Cancer	Heart	Cancer	Cataract	Rate	
	Per thousand Residents 65 and over						
1980	14.2	10.9	22.3	23.9	13.0	55.1	15.5
1990	13.2	10.4	33.7	28.7	22.8	47.4	12.1
1995	12.2	11.0	40.0	32.0	37.2	48.1	11.5
2000	11.6	10.6	44.9	29.5	44.2	42.3	10.3
2001	11.4	10.2	43.2	28.8	45.0	40.0	10.3
2002	10.3	10.0	43.1	28.3	47.6	39.9	10.0
2003	11.3	9.6	38.0	25.5	42.4	41.6	11.0
2004	9.6	9.3	40.7	27.7	52.6	38.4	9.8
2005	8.7	8.8	38.3	27.0	48.0	37.4	9.4
2006	8.9	9.2	39.5	28.9	49.5	36.0	9.0
2007	9.3	9.3	37.8	28.6	51.4	36.7	8.9
2008	8.8	9.4	37.2	27.6	48.0	35.4	9.2
2009	8.2	9.0	34.1	26.3	48.4	33.9	9.1
2010	8.1	8.7	35.6	26.8	52.3	34.1	9.0

Source: Department of Statistics

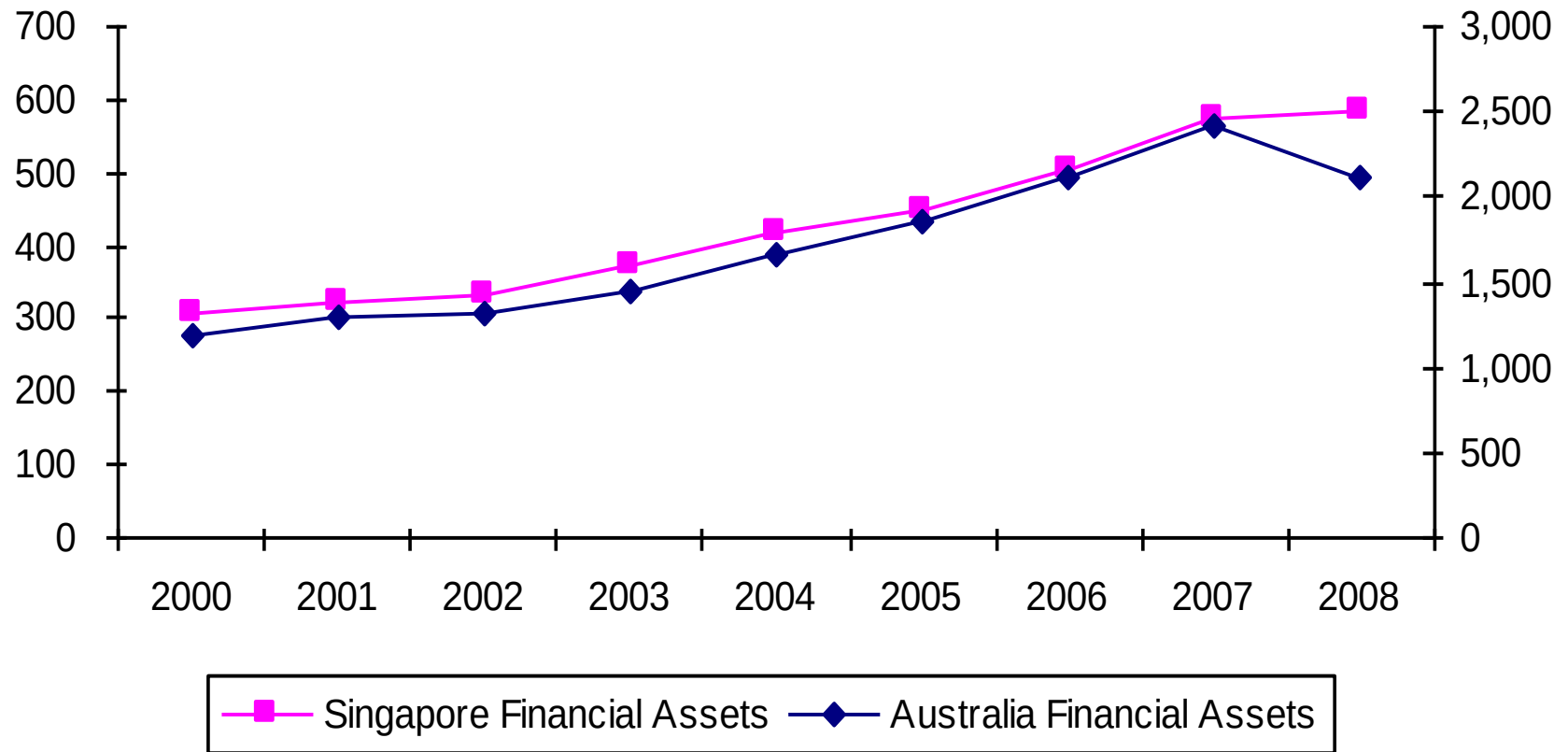
Characteristics of this market: Better Educated



Source: National Survey of Senior Citizens (NSSC) 2005 and DOS

Characteristics of this market: Richer

Financial Assets



Source: Department of Statistics Singapore & Australian Bureau of Statistics

Characteristics of this market: More likely single

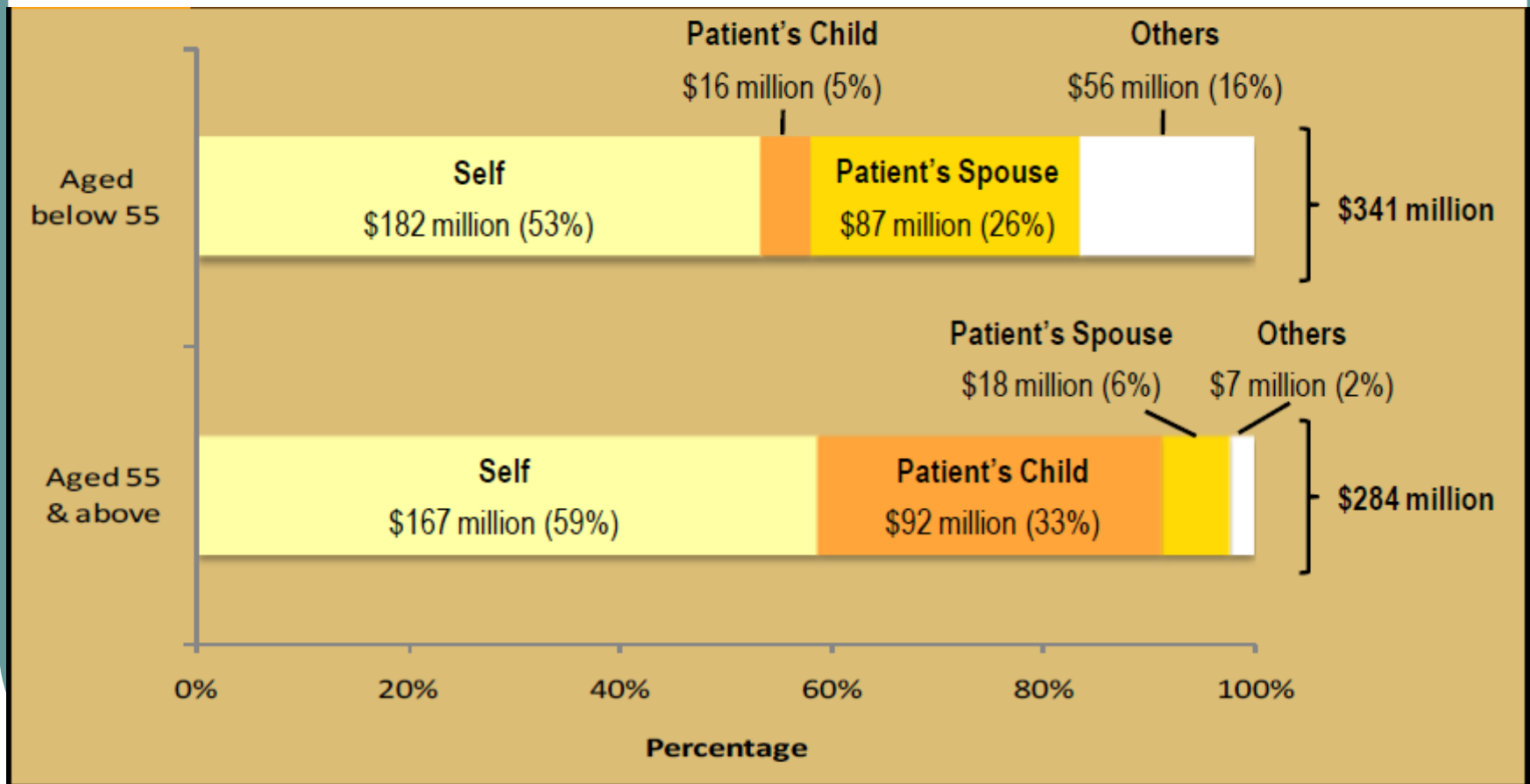
Table 1 Resident Population Aged 15 Years and Over by Marital Status

Marital Status	Per Cent					
	Total		Males		Females	
	2000	2010	2000	2010	2000	2010
Total	100.0	100.0	100.0	100.0	100.0	100.0
Single	30.5	32.2	33.6	34.7	27.4	29.8
Married	61.9	59.4	62.7	61.2	61.1	57.7
Widowed	5.2	5.1	1.8	1.6	8.4	8.4
Divorced/Separated	2.5	3.3	1.9	2.4	3.1	4.2

Characteristics of this market: Female controls the purse string



26% was withdrawn from patient's spouse which may be expenses related to maternity as most of these patients are female



How should life insurers respond: Risk

Reassess their annuities – longevity risk

Reassess their life insurance – mortality and morbidity risk

Reassess their underwriting and claims guidelines for the rapid changes in the medical world

Reassess their marketing strategy on business acquisition and retention an increasingly ageing population

How should insurers respond: Annuities or longevity risk

For four additional years of life span over current projections, someone who's 50 years old now would need close to \$160,000 beyond his or her current retirement savings to maintain a modest lifestyle – according to statistics from the US

Source: The Cost of Living Longer – Much Longer by Charles Passy

How should insurers respond: Mortality & Morbidity Risk

Would you insure a 78-year-old woman

...

... with history of breast cancer

... family history of heart disease

*... history of mental illness (bipolar meds
for years)*

For twenty million dollars

How should insurers respond: Underwriting & claims guidelines

It was approved by The Hartford underwriting team in 2010 in 30 minutes.

Details

... The breast cancer happened in her late 50s

... She has outlived her late father's heart disease
"danger marker" now that she is in her 70s

... Hartford believes she will live an additional 14.5 years -- to the ripe old age of 92 -- which is about four years longer than what the U.S. Census Bureau's life-expectancy table predicts for a woman her age

At a premium of \$1 million per annum, The Hartford believe they can turn a profit, after investments.

Source: The Cost of Living Longer – Much Longer by Charles Passy

How should insurers response:

Marketing strategy on business acquisition & retention

Are you ready for this phenomena?

- Do you have TPD cover ready for those who are still gainfully employed beyond the current retirement age?
- Do you have fund options for clients that are more risk averse and want much lower management charges?
- Have you streamlined your claims and operations processes to cater for this group?
- Would your underwriter accept this case in the case study?
- Is your underwriting manual and processes ready for such case?

What do our elders really want?

- Stay with their children
- Environment for active ageing – exercise equipments, walking paths, mahjong room, prayer room, a lake(?)
- Cultural activities – calligraphy, cooking classes
- Other activities – seminars on diets, aged care and finance
- Support services in immediate vicinity– nursing care, dementia care, ambulance and emergency facilities
- Hospitals nearby