

2013 Convention

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31 Oct - 1 Nov 2013

Sandton, Johannesburg

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Maintaining a balance:

The impacts of ageing on the age cross
subsidy in medical scheme contributions

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Agenda

1. Background
2. Age trends in the overall medical scheme risk pool
3. Data and methodology
4. The cost of ageing
5. Late joiner penalties
6. Longer term implications
7. Individual scheme challenges
8. Conclusions

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Background

The evolution of medical schemes

Pre 2000

Able to restrict older and sicker
Contribution loadings
Underwriting restrictions and exclusions
Benefit design

Post 2000:
Medical Schemes Act

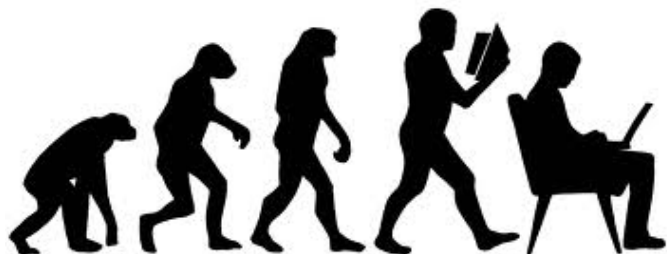
Community rating
Prescribed minimum benefits
Open enrolment

Expected trajectory included:

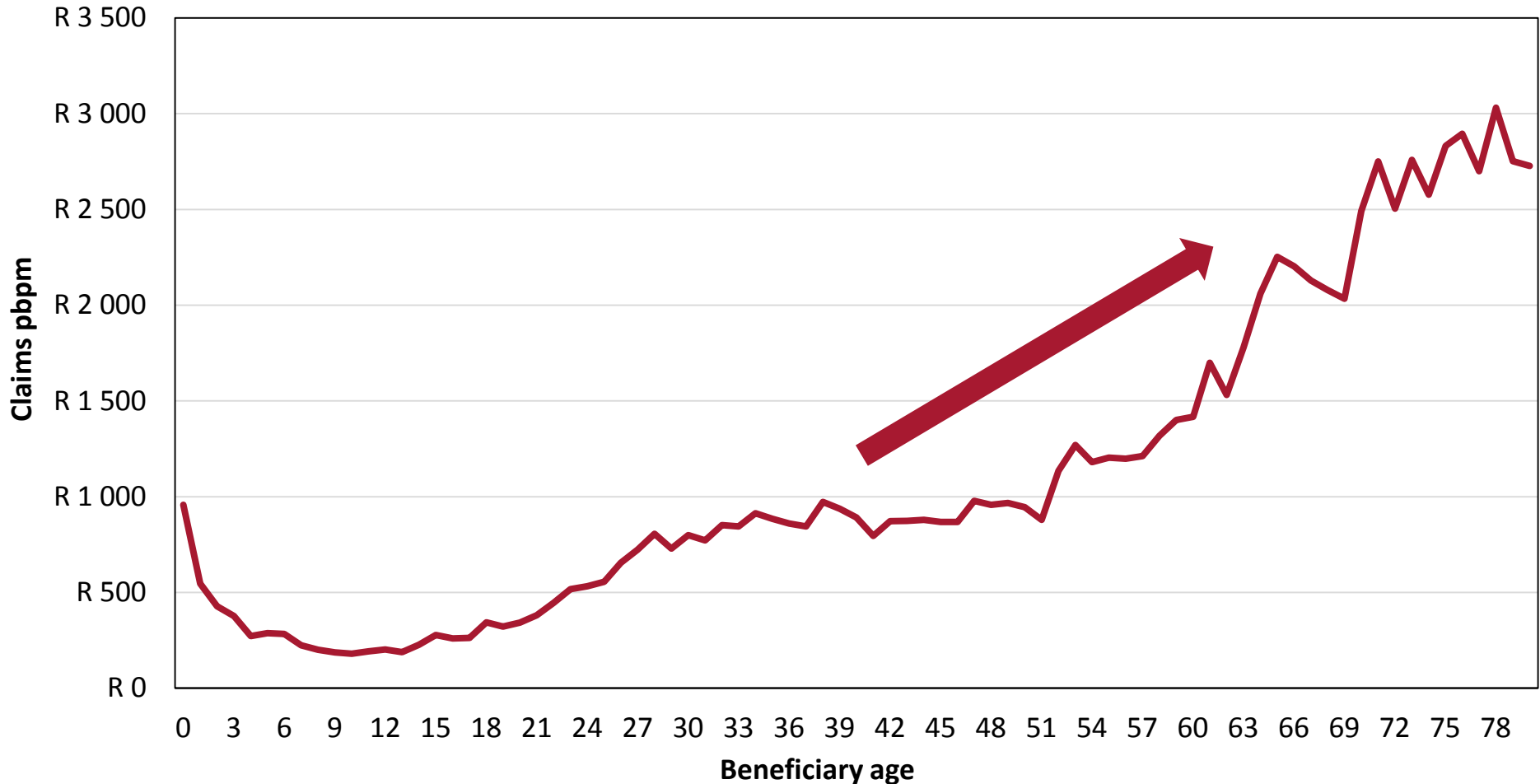
Mandatory cover
Risk Equalisation

Underlying age and health profile is key

Claims costs increase with age
Need to balance age profile to reduce risk
Open schemes are directly exposed to changes in risk profile due to open enrolment
Restricted schemes are exposed to changes in employer base

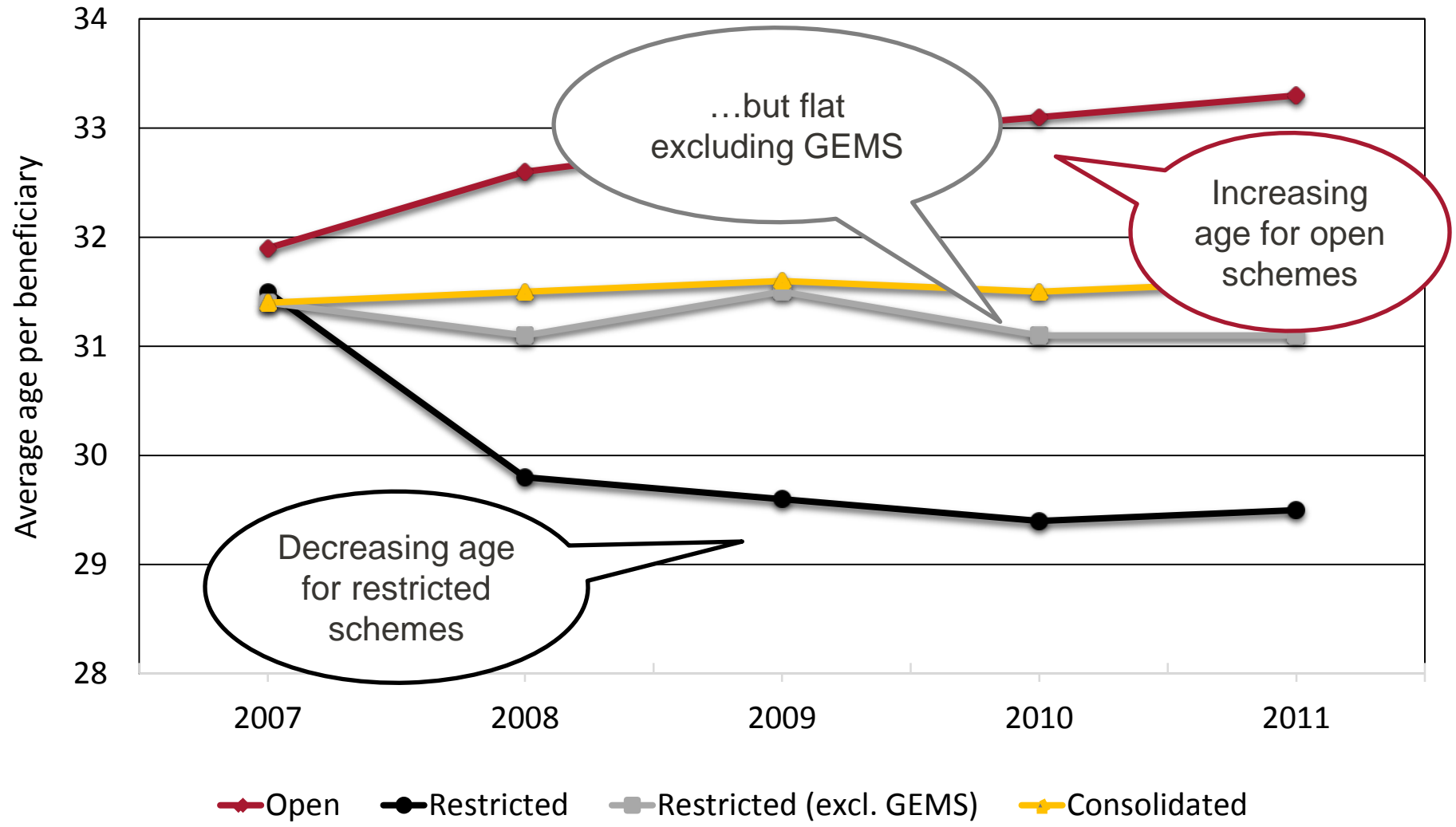


Claims costs increase by age

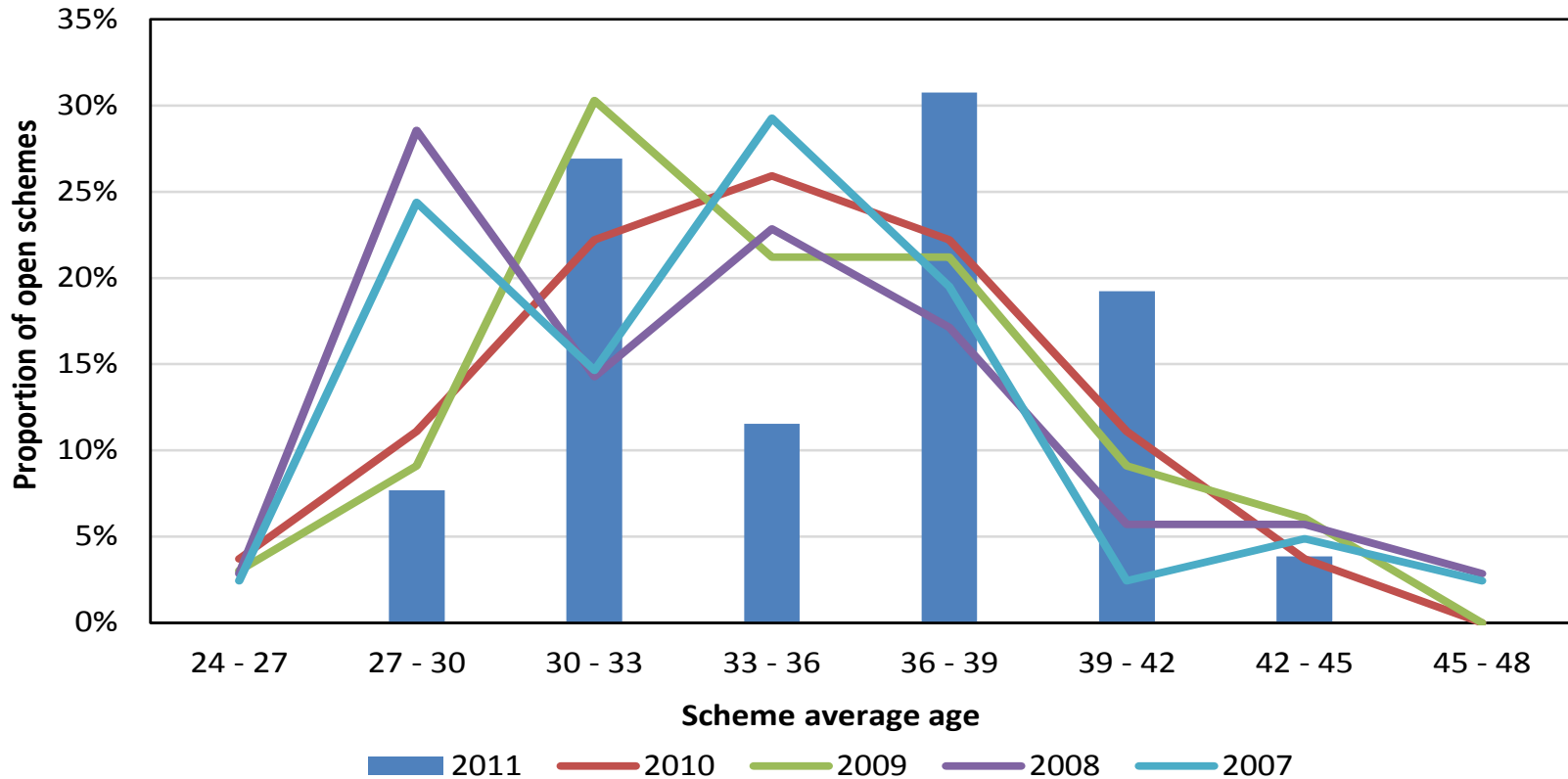


- As expected, the claims costs were found to be increasing with age

Ageing in the medical scheme risk pool



Spread in age profile in the open scheme industry



- Spread of average age causes competitive difficulties
- Spread of scheme ages has decreased
- Ageing has caused a higher proportion of schemes with average age between 36 and 42 years

Aims of research

Investigate the extent of
age cross subsidies
within existing
contribution structures

Quantify the impact of
ageing on claims cost



Quantify the impact of
additional demographic
factors on claims costs

Enhance the
understanding of the
impact of ageing to assist
medical schemes in their
management

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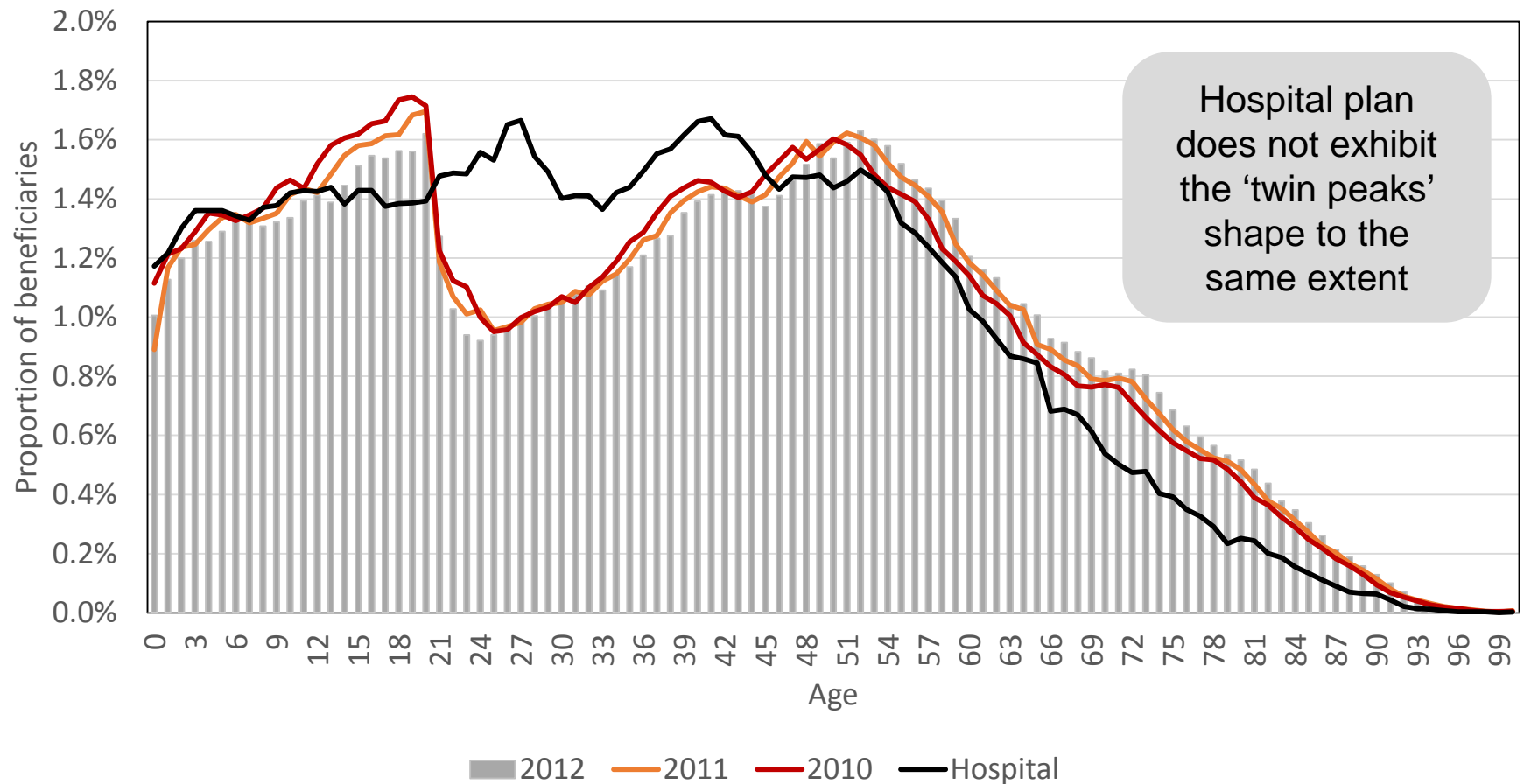
Data and methodology

Data

- 4 open schemes and 4 restricted schemes (36 plans)
- Data from 2010 to 2012
- Linear regression was used to obtain a linear formula for claims per beneficiary per month based on demographic factors

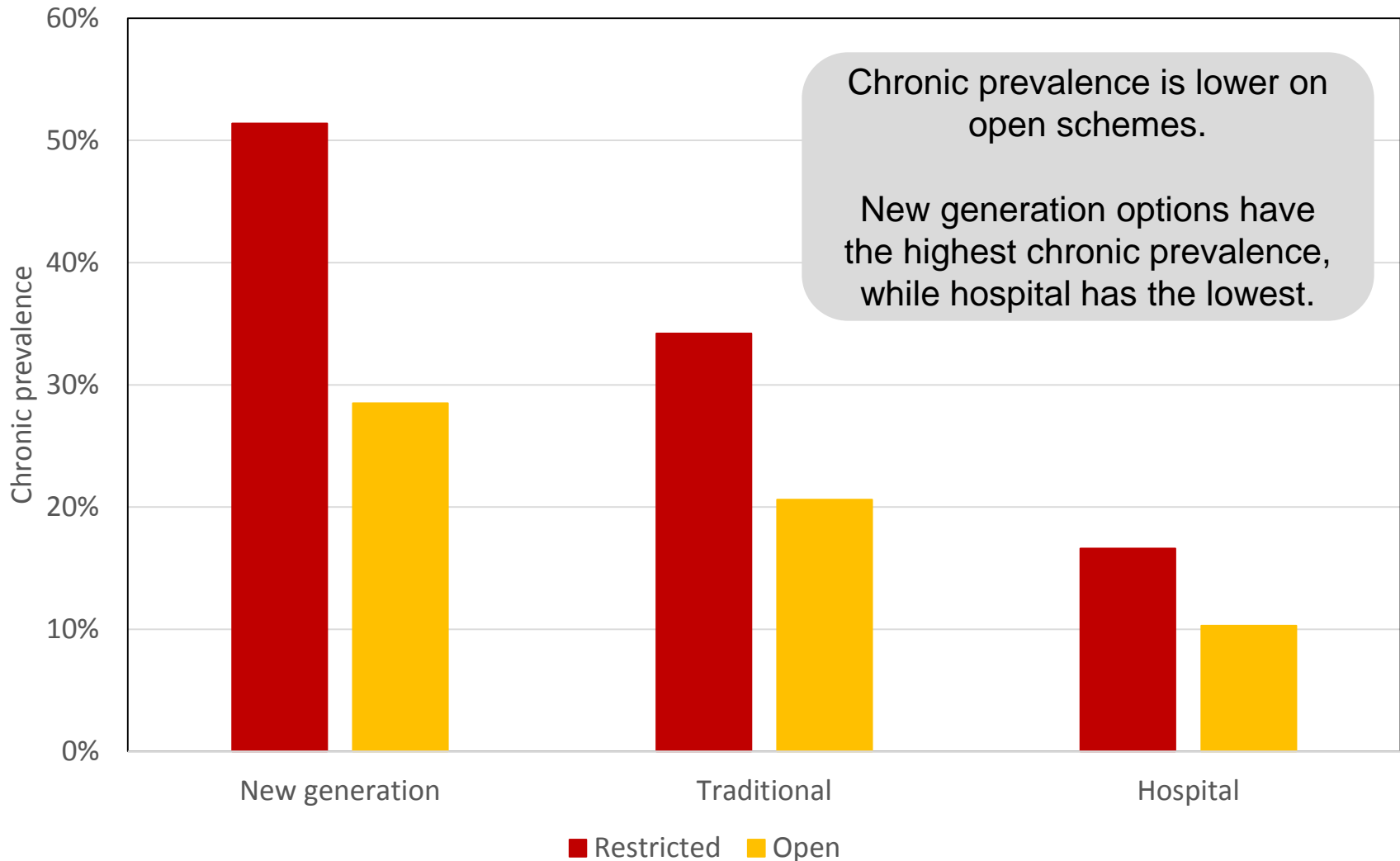
	New generation	Traditional	Hospital	Total
Open	6	12	5	23
Restricted	3	8	2	13
Total	9	20	7	36

Twin peaks

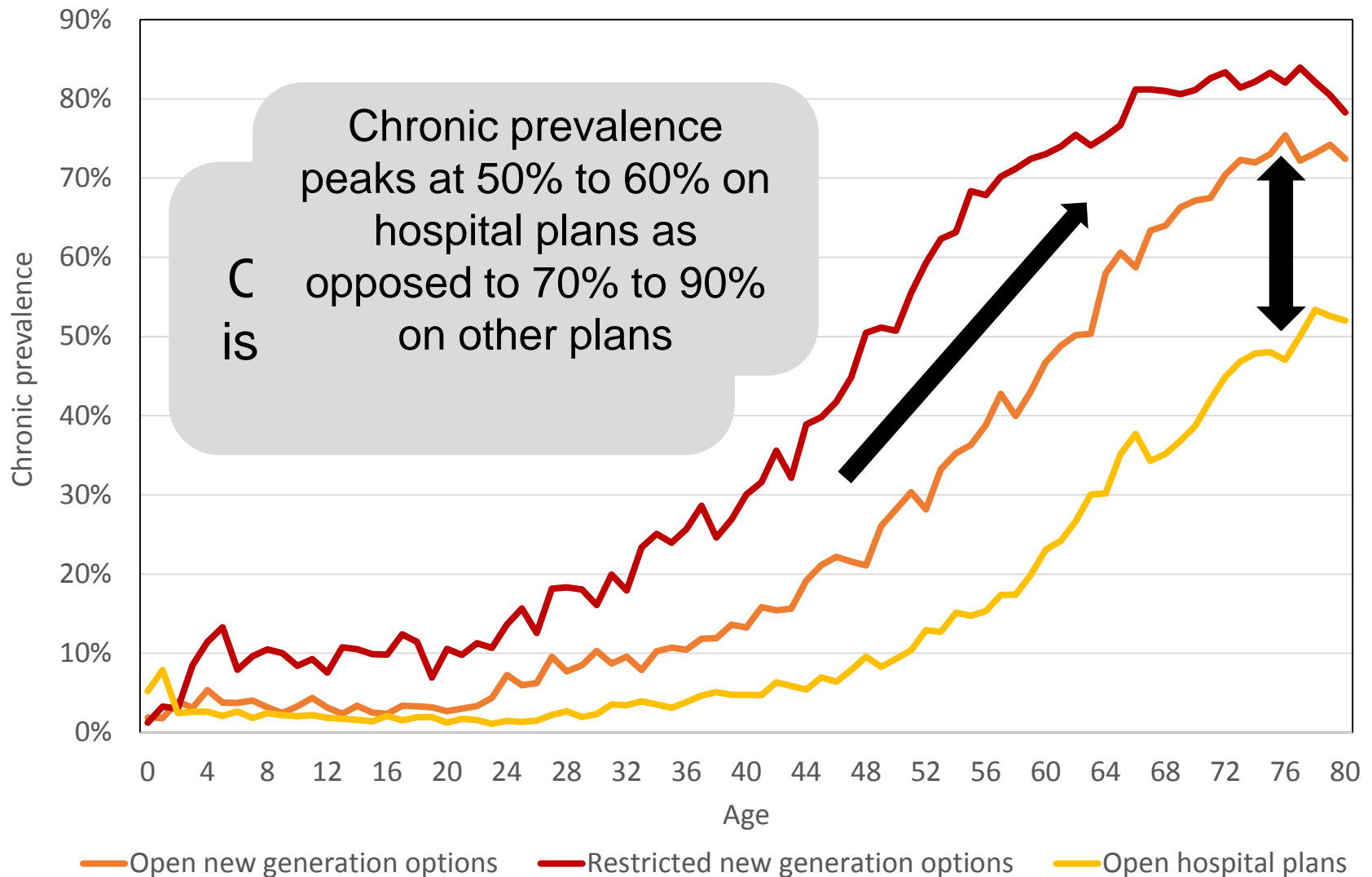


- The shape of the curves relatively unchanged since 2010
- Traditional and new generation plans aged by 1 year and 1.5 years respectively over the period, hospital plan average age has decreased by 0.5 year

Chronic prevalence by plan type



Chronic prevalence by age



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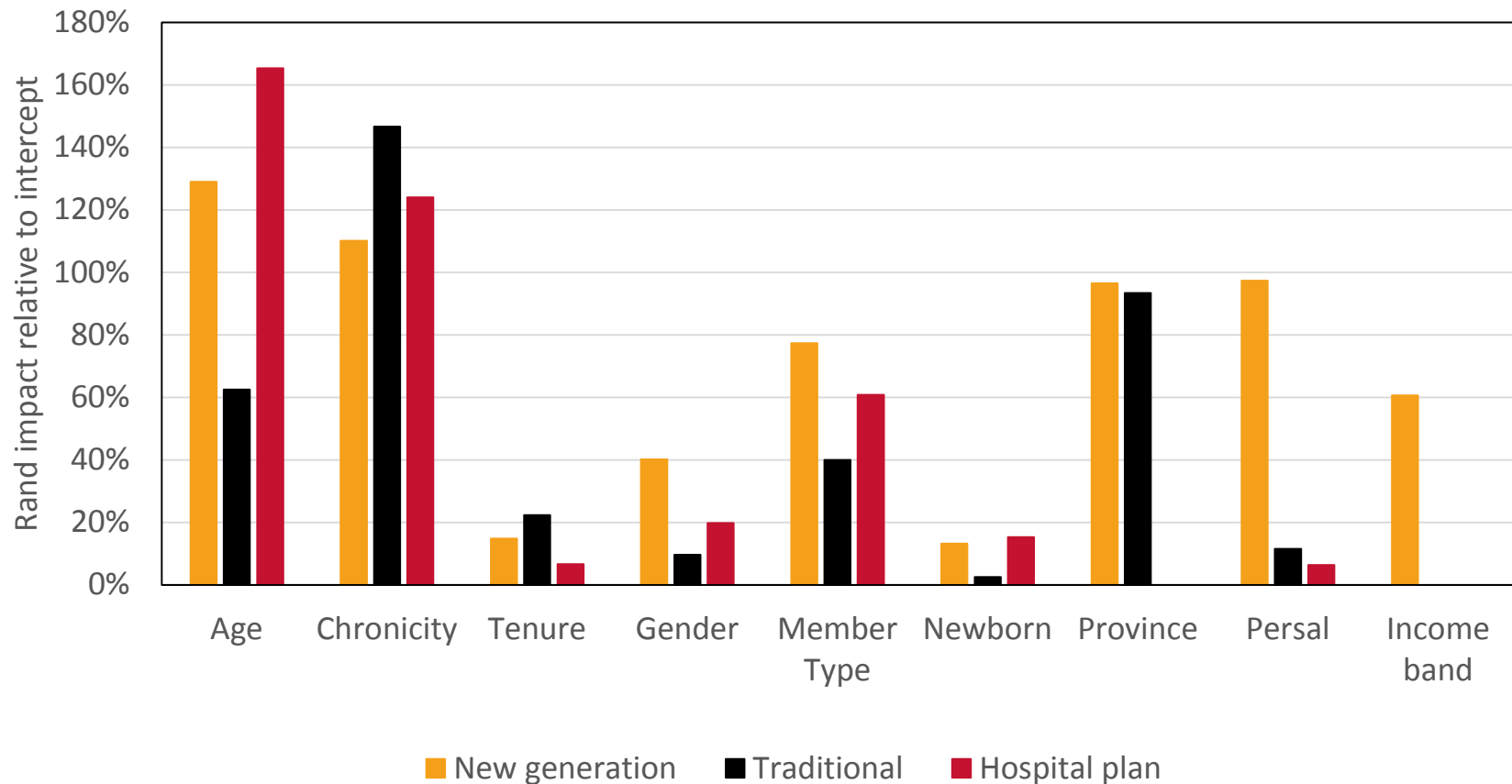
Linear modelling results

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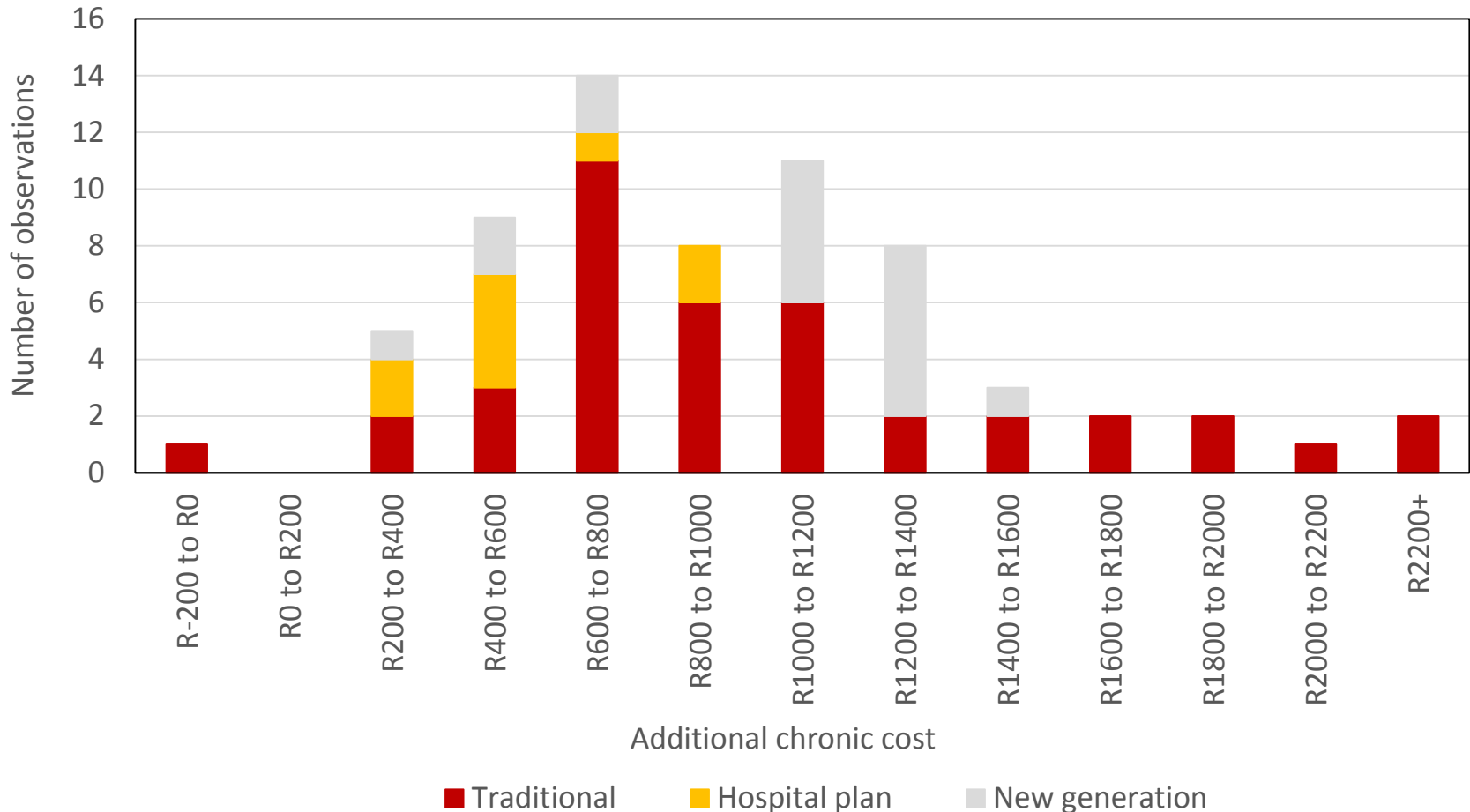
Demographic factors driving claims

Age & chronicity are leading contributors



- Age and chronic status have the most significant Rand impact on claims
- Where applicable, province, income band & member type also caused significant Rand impacts on claims

Chronicity increases claims by R978



- Average additional claim pbpm due to chronicity was R978.
- Impact lower for Hospital plans, may be due to unavailability of certain chronic benefits

Demographic claims drivers

Interesting observations

Tenure on scheme (significant driver in 37% of cases)

- Beneficiaries on a scheme for less than 1 year and between 1 and 3 years claimed R375 and R176 more per month
- This provide potential evidence of anti-selection

Gender (significant driver in 49% of cases)

- No significant trend was observed

Beneficiary type (significant driver in 74% of cases)

- Open schemes: principals claimed more than adult dependants 94% of the time
- Restricted schemes: adult dependants claimed more than principals 100% of the time
- Evidence of anti-selection

Province of residence (significant driver in 100% of cases)

- Those residing in Limpopo claimed less
- May be related to lack of access to healthcare facilities or lack of practitioners

State employment (significant driver in 46% of cases)

- State employees claimed on average R150 to R300 less
- This could be due to lack of access to healthcare providers or lack of awareness of benefits

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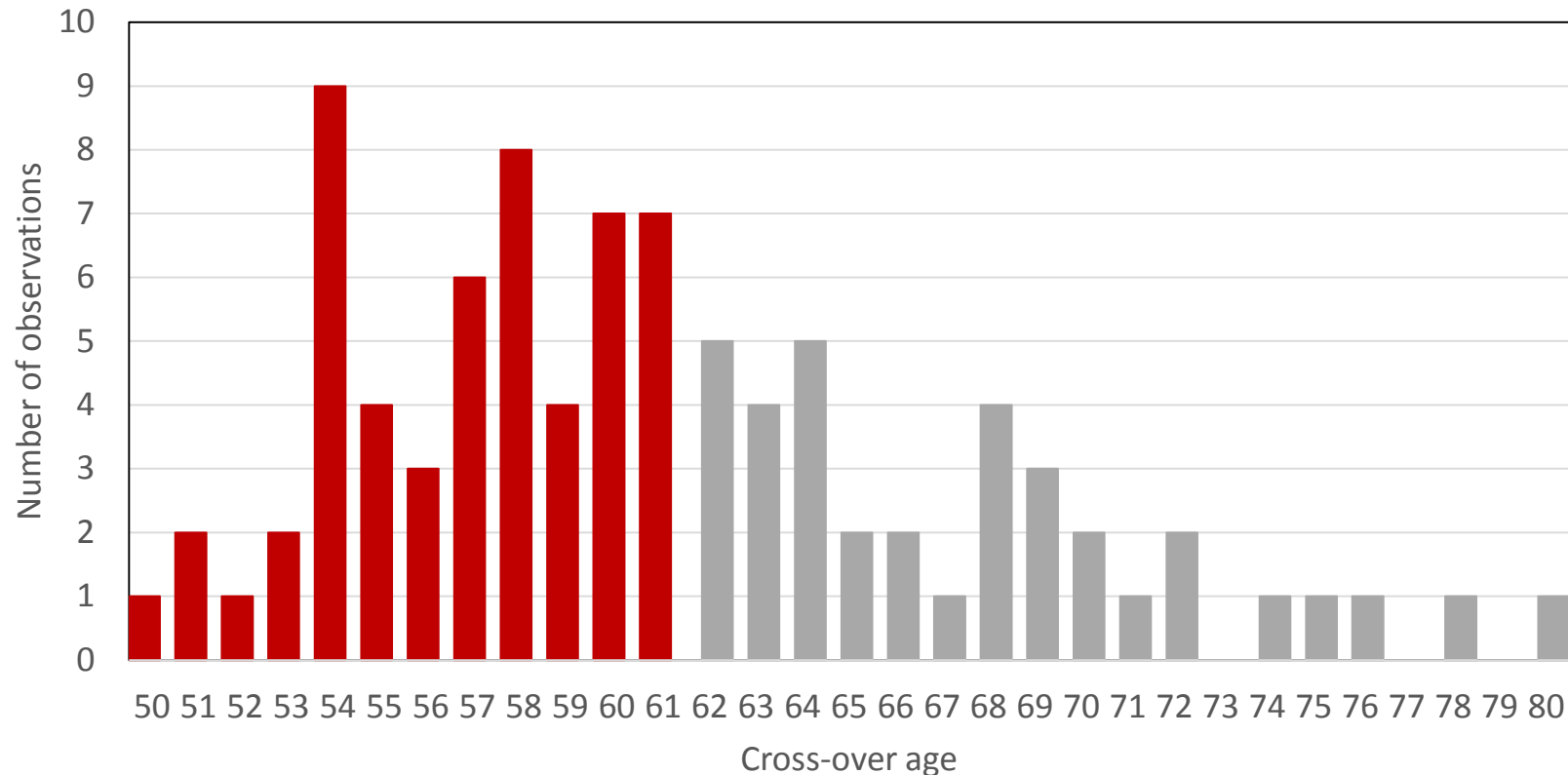
The cost of ageing

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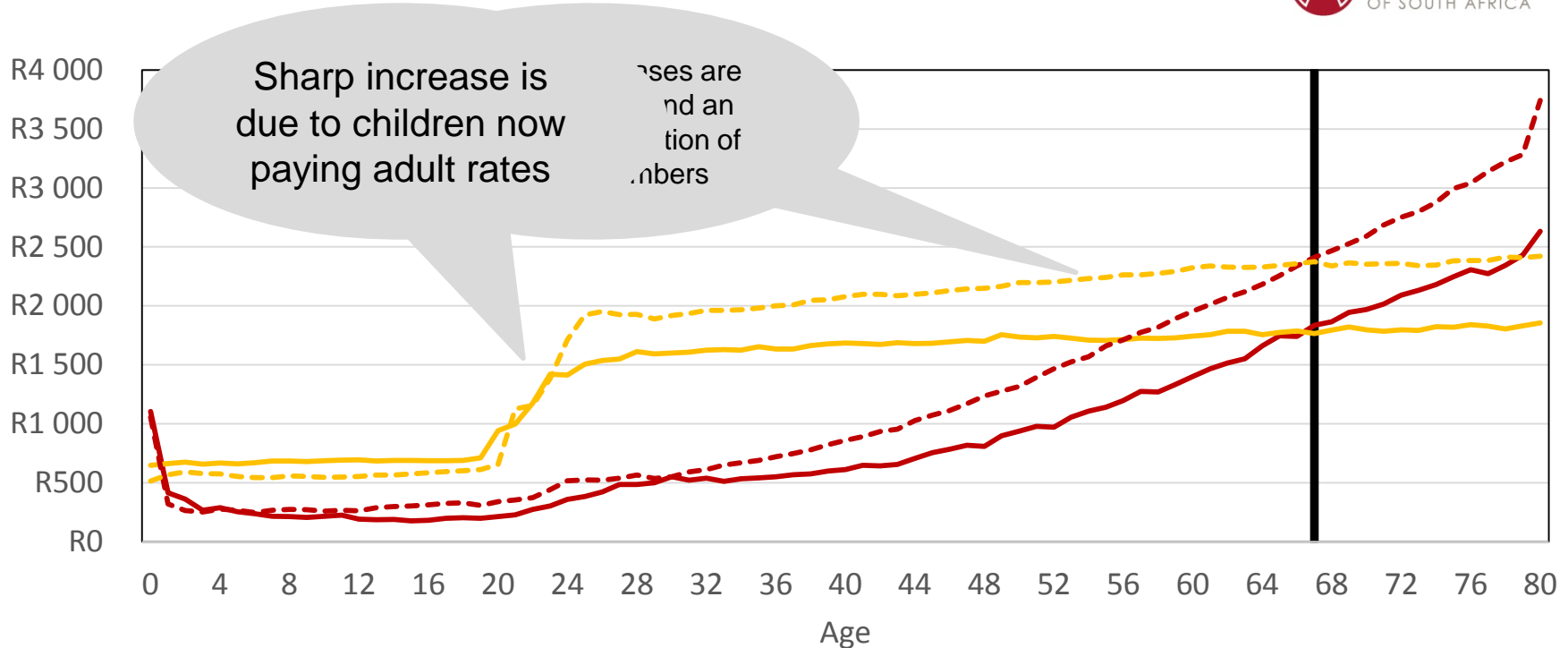
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Cross over ages

- A cross over age was determined as the youngest age above 25 at which claims were found to exceed contributions
- Average cross-over age was 61



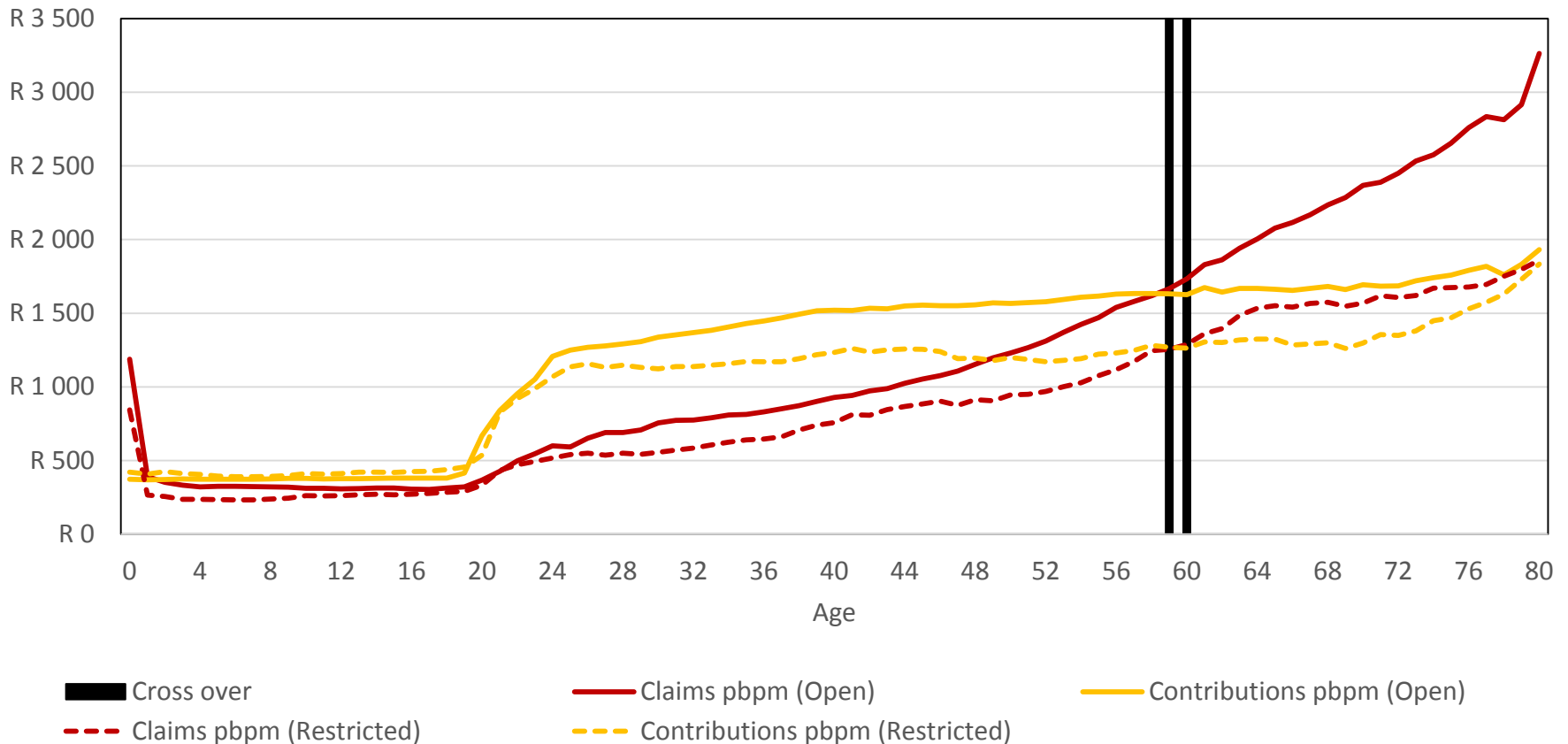
New Generation cross over ages



- Cross over
- Claims pbpm (Open)
- Contributions pbpm (Open)
- - - Claims pbpm (Restricted)
- - - Contributions pbpm (Restricted)

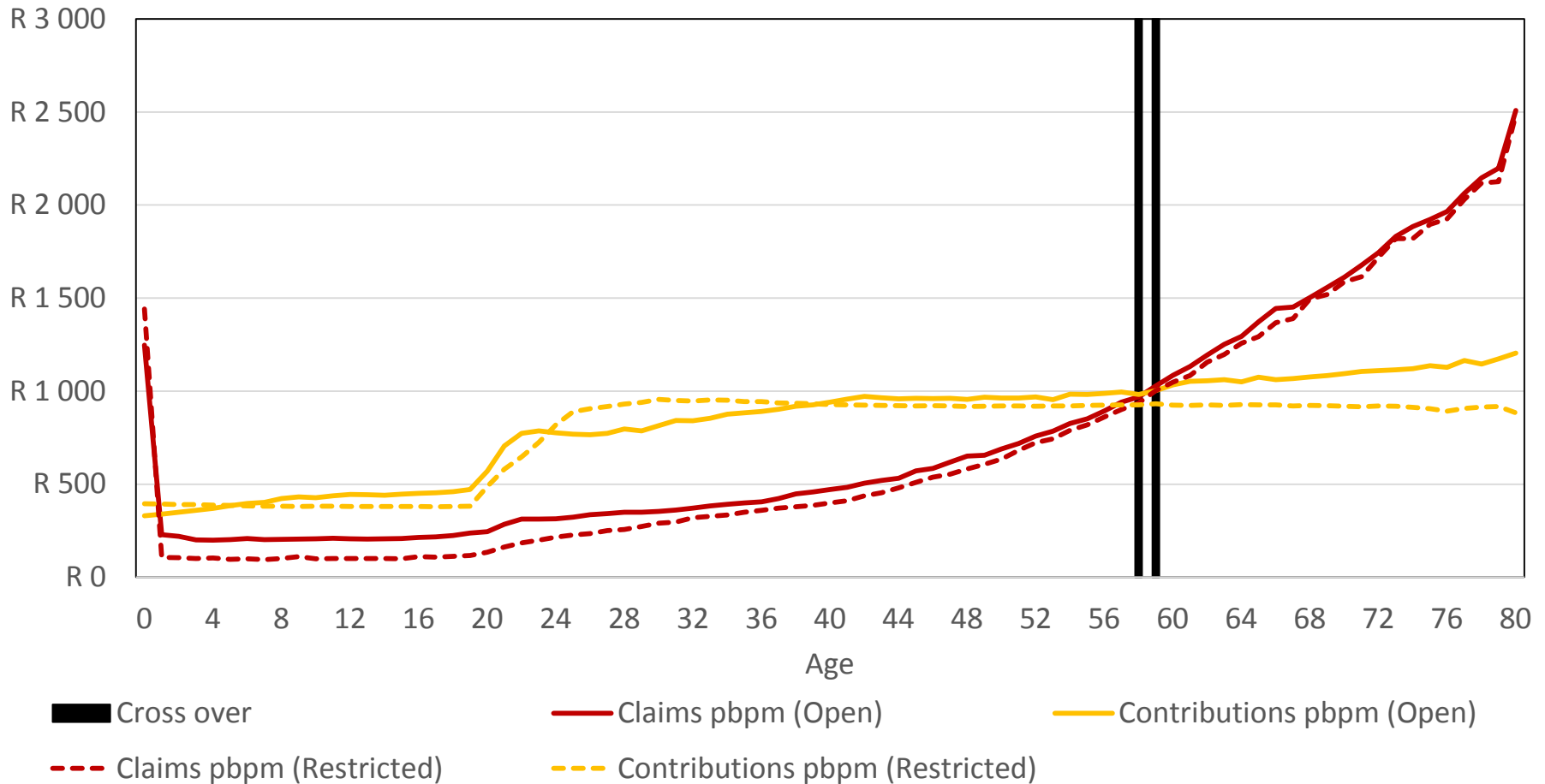
- The average cross-over age was 67 for both open and restricted schemes
- Child contributions were significantly more relative to claims costs for open schemes.
- Above 25, both claims and contributions were higher for restricted schemes

Traditional cross over ages



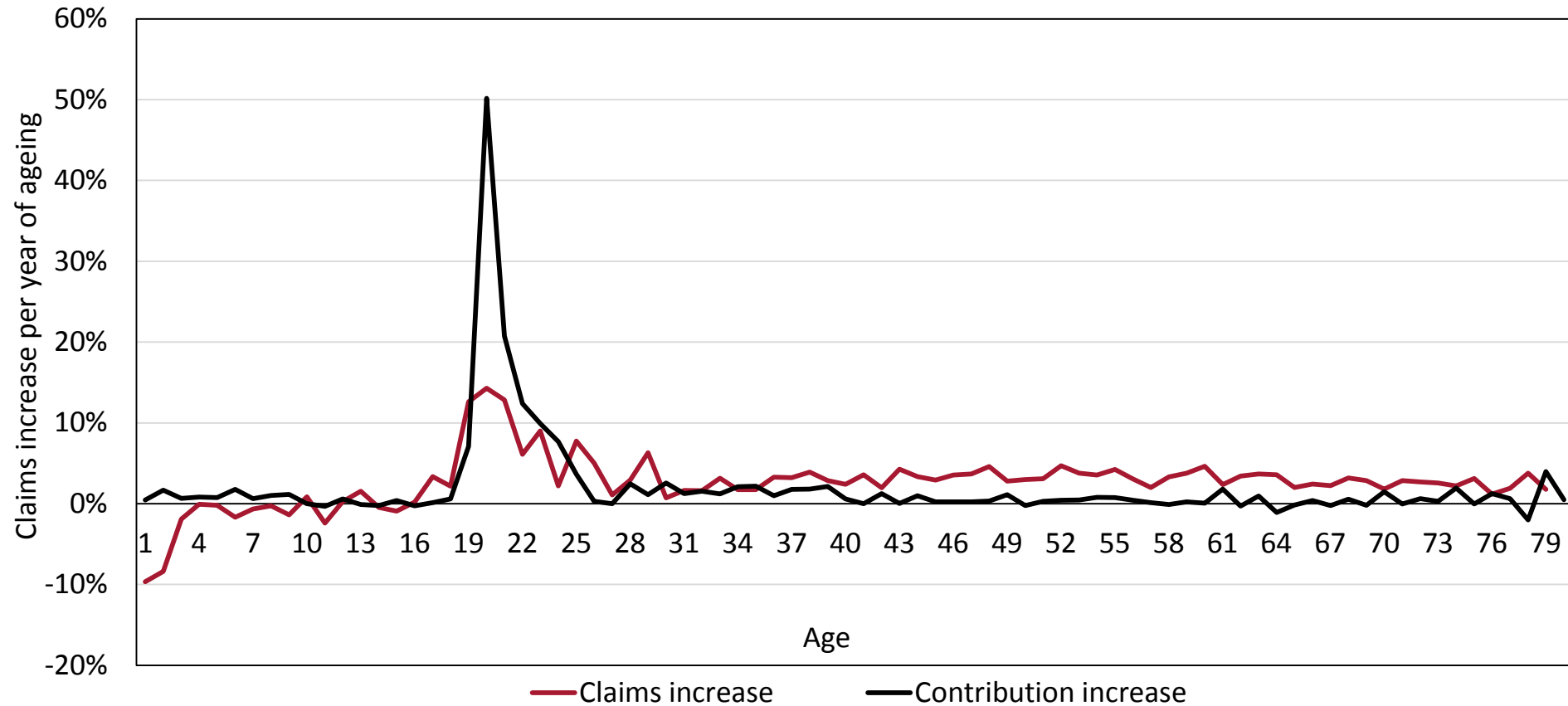
- Cross-over age was 59 for open schemes and 60 for restricted schemes
- Above 25, both claims and contributions were lower for restricted schemes on average

Hospital cross over ages



- Cross-over age was 59 for open schemes and 58 for restricted schemes

Increases due to ageing



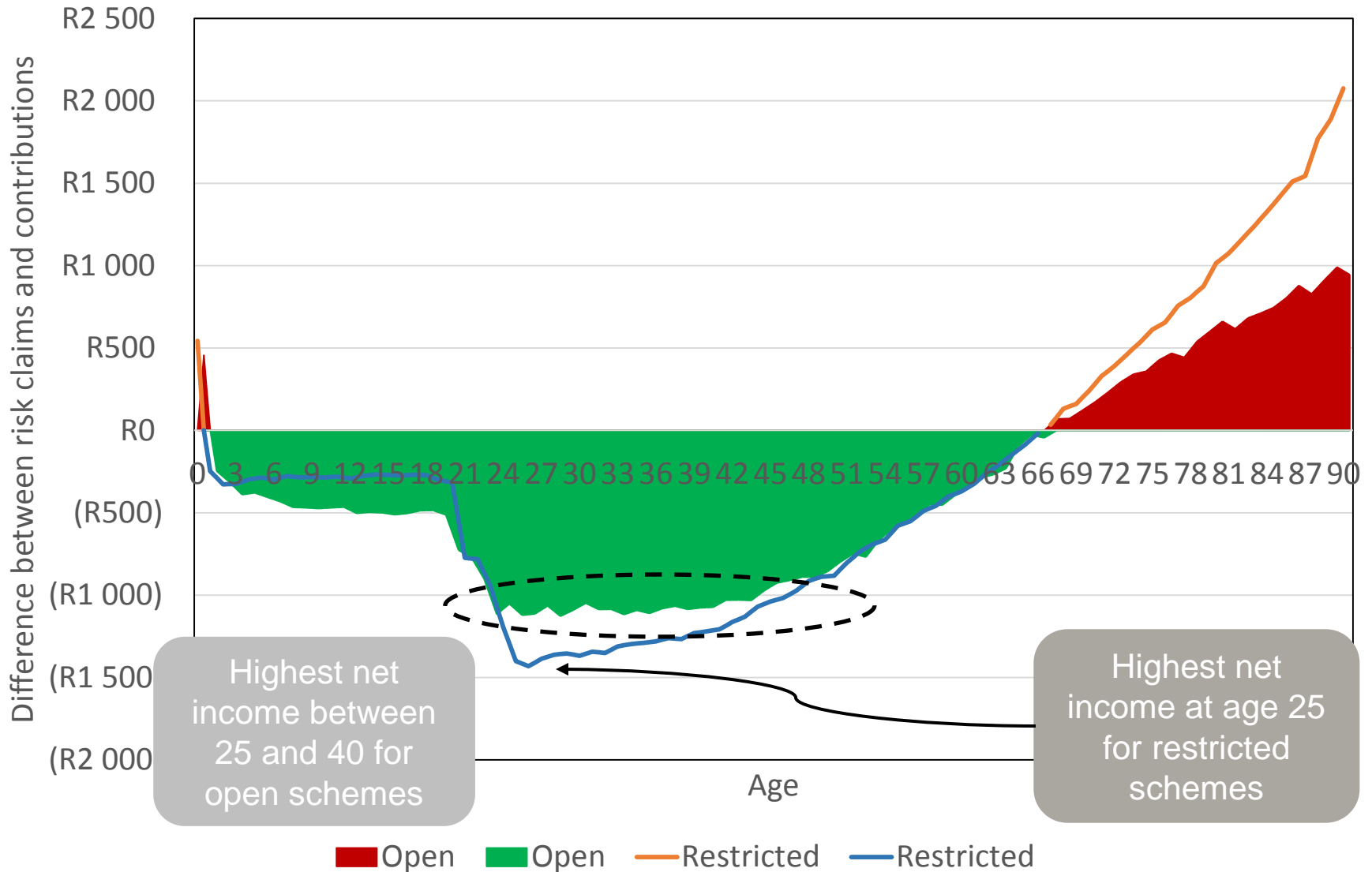
- Highest increase in claims and contribution is between the ages of 20 and 25 as children first become principal members and adult dependants.
- Claims cost increases exceeded contribution increases for the most part between the ages of 35 and 75.

The cost of an ageing population

Plan type	Increases per year of ageing (0-18)		Increases per year of ageing (19-24)		Increases per year of ageing (25+)	
	Claims	Net of contributions	Claims	Net of contributions	Claims	Net of contributions
New generation	(4.3%)	(5.2%)	10.2%	(8.9%)	3.4%	1.8%
Traditional	(2.9%)	(3.5%)	12.1%	(11.1%)	2.5%	1.1%
Hospital	(3.6%)	(4.6%)	6.6%	(4.7%)	3.9%	1.7%
Overall	(3.3%)	(4.0%)	10.2%	(9.1%)	2.9%	1.1%

- Claims per year of ageing decrease for those aged 0 to 18 , due to higher claims for new-borns.
- Both claims and contributions increases are highest for ages 19 to 24. Net cost lowest for this group due to higher increase of contributions than claims
- Overall average claims cost increase per year of ageing is 1.9%
- Hospital plan claims increases for adults are sharper as hospital claims are more age driven

Net difference between risk claims & contributions: New generation



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Late joiner penalties

Late joiner penalties applicable in SA

- Late joiner penalties support the community rated structure and allow for cross-subsidisation
- Penalties are applied as a % of risk contributions depending on age of entry into the medical scheme risk pool:

Age of entry (years above 35)	Late joiner penalty (% of risk contribution)
0-4	5%
5-14	25%
15-25	50%
25+	75%

Our approach to late joiner penalties

Calculated net income or cost per age based on average modelled claims cost per age

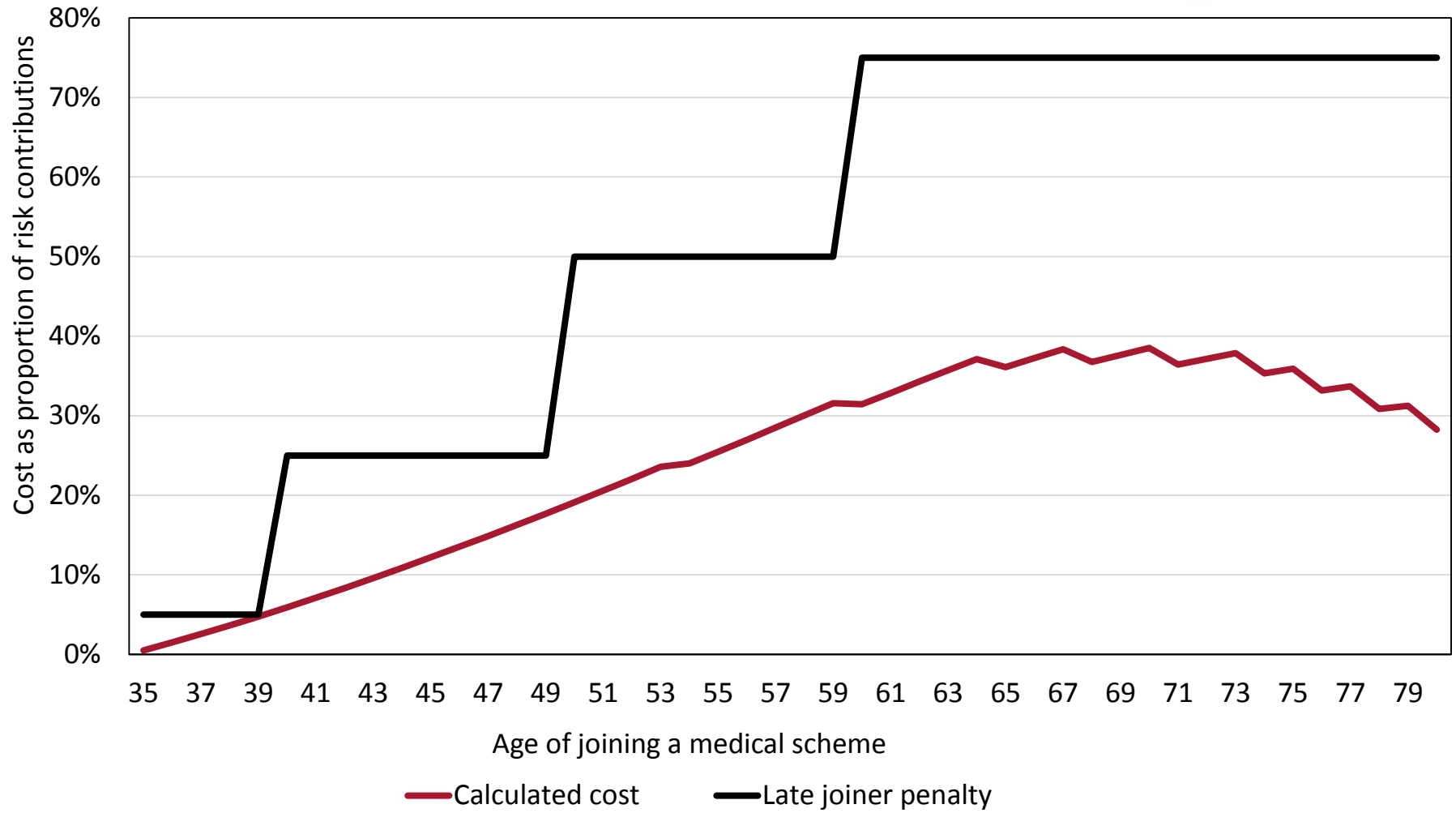
Cost of beneficiaries joining after age 35 was calculated as the sum of net income/cost for all ages between 35 and the age of joining a scheme

The cost was compared to total expected future risk contributions per age.

This was compared to the late joiner penalty to determine whether they were sufficient

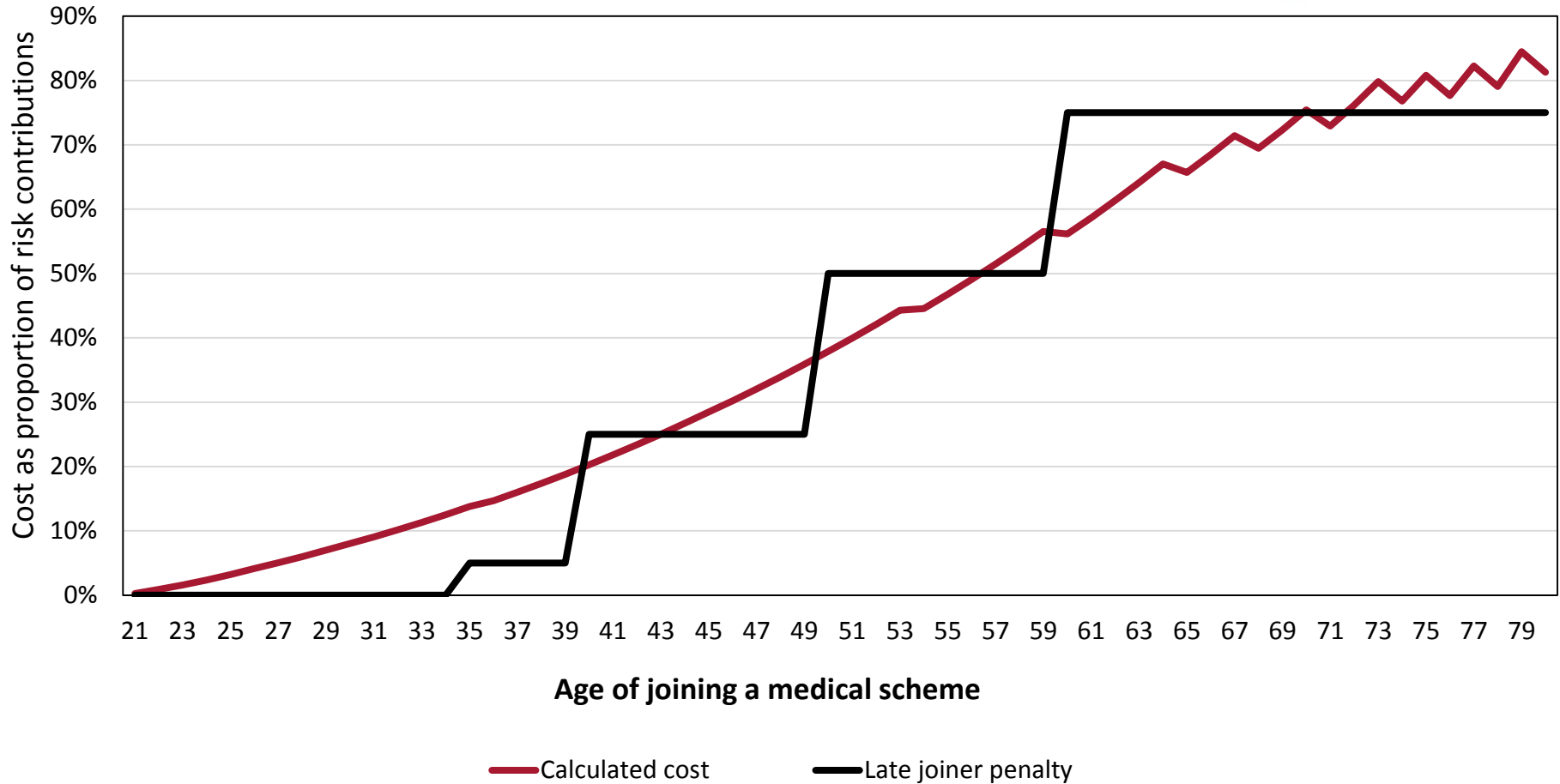
The “cost” did not allow for a late joiner penalty to cover higher claims for an older joiner – this is covered by cross subsidy through the community rated structure of scheme environment

Late joiner penalties appear sufficient...



- The cost of lost cross subsidies reduces after the age of 67 as older beneficiaries start to become a net cost to schemes

More in line if cross-subsidy is considered from age 21



- Schemes are exposed to the loss in cross-subsidies for members joining between the ages of 21 and 40
- After 40, late joiner penalties are in line with the expected loss in cross-subsidisation for late joiners

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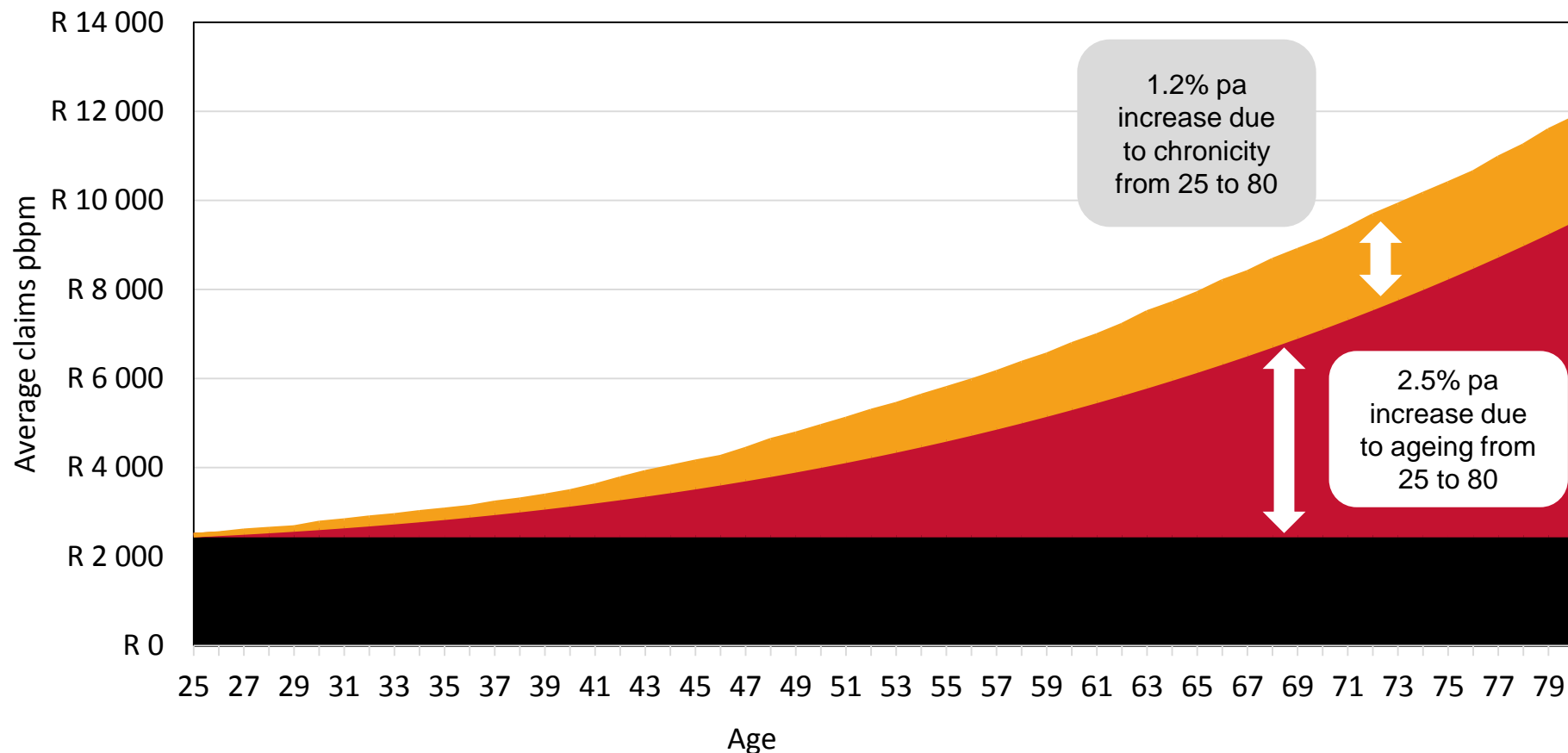
Longer term implications

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Impact of ageing and chronicity on claims

- 25 year old claims were projected to age 80
- Linear models were used to project increased costs due to ageing and chronic prevalence



■ Base level ■ Cost due to ageing ■ Cost due to chronicity

In the long run

- Assessed the level of young beneficiaries that need to join the medical scheme risk pool in order to continue to cross subsidise the older and sicker costlier beneficiaries.
- Used 2012 membership as starting membership
- Beneficiaries were assumed to join the population annually below the age of 35 in proportion to the level of 2012 beneficiaries within each age
- Beneficiaries were assumed to leave the population due to mortality
- **New entrant scenarios considered:**

A

0.97% joining pa

B

0.48% joining pa

C

1.93% joining pa

D

No new entrants

E

Young members opt out at adulthood (75%)

F

Young members opt out (20% pa below 35)

Claims increase (5-10 year term)

NEW ENTRANT ASSUMPTION:

A: 0.97%

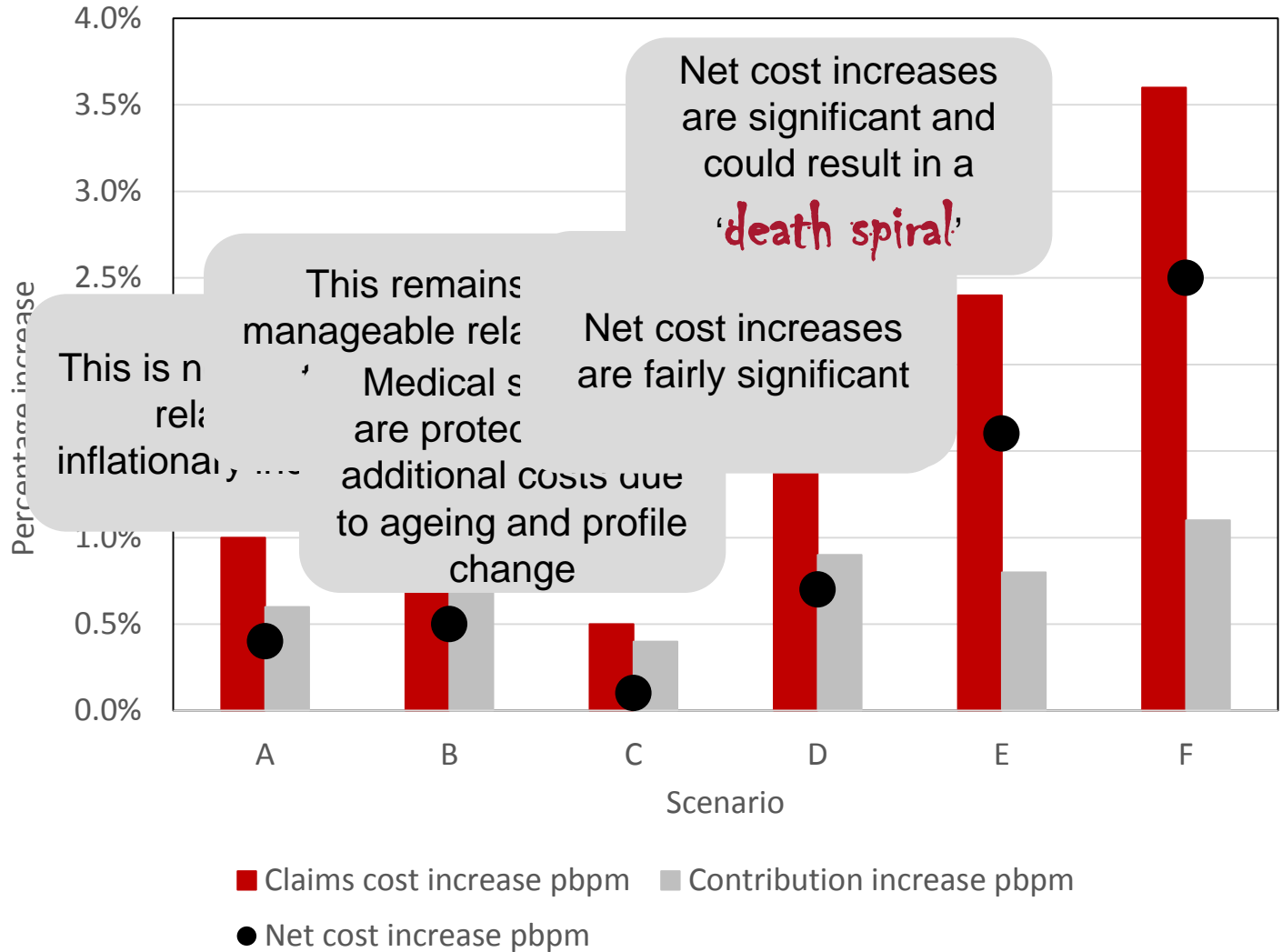
B: 0.48%

C: 1.93%

D: No new entrants

E: Young members opt out at adulthood

F: Young members opt out



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Individual scheme challenges

Management of ageing risk

Options for medical schemes

- Community rating without REF (Circular 47 of 2011) means schemes compete based on their age profile

Attracting young members

Benefit design

Contribution structure and level

Reserves

Provider reimbursement arrangements

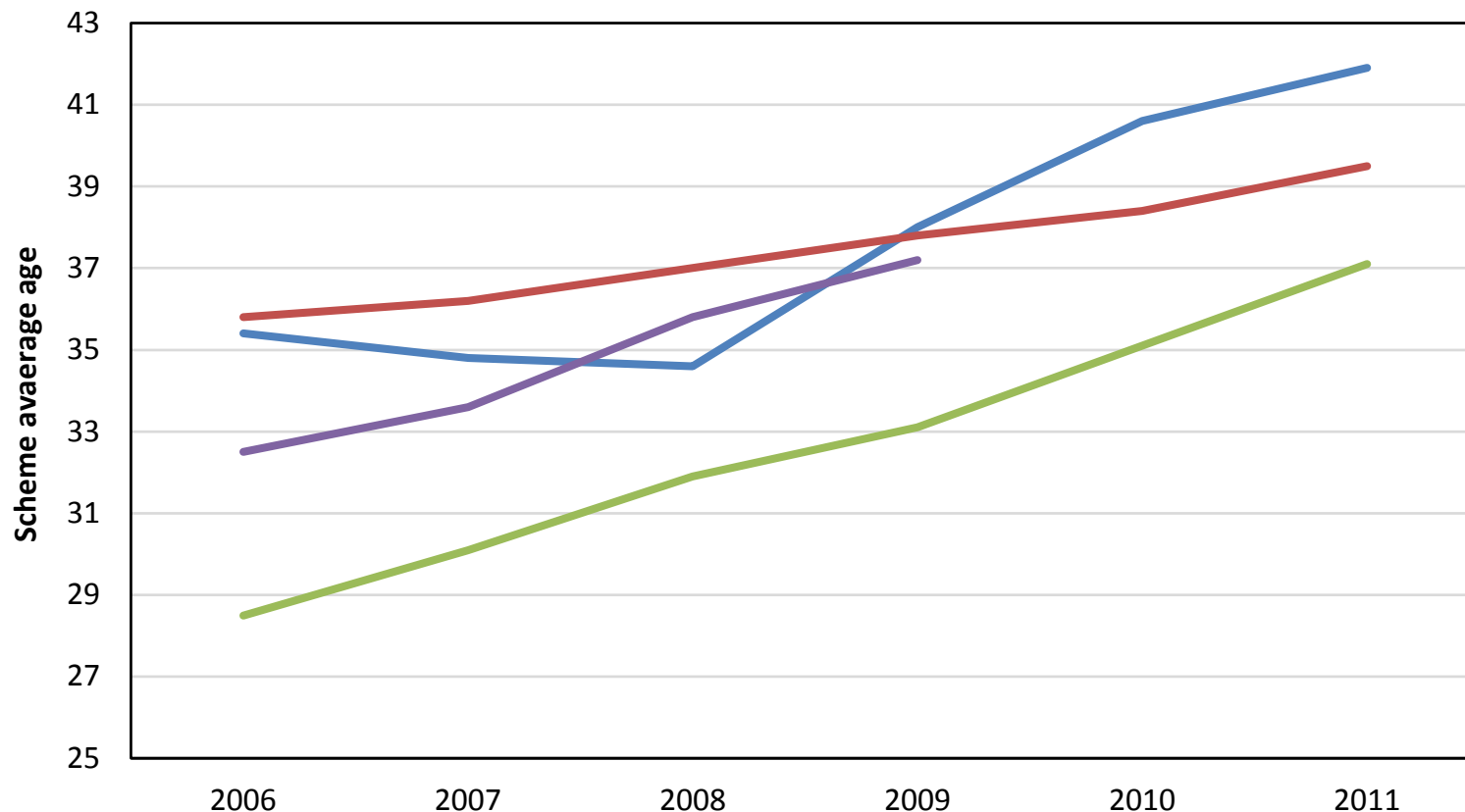
Preventative care

Managed care

- Individual schemes may not be able to utilise mechanisms to the same degree

Amalgamations due to age death spirals?

- Ageing on four schemes recently amalgamated was considered



- 3 of the schemes aged consistently by more than a year each year
- Ageing could lead to further ageing (death spiral) due to competitive difficulties

Ability to maintain performance within an old scheme

- The performance of 3 open schemes aged above 40 in 2011 were considered from 2008 to 2011

Scheme	Contribution increase pa	Operating result pbpa	Change in membership size pa	Average age increase pa (years)
Scheme 1 (Large)	13%	-R436	-11%	1.1
Scheme 2 (Medium)	22%	-R127	-23%	2.4
Scheme 3 (Medium)	15%	R145	-14%	1.5

- High contribution increases required to support operating losses
- Contribution increases causing selective withdrawal

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Conclusions

Further risks and considerations

Medium to longer term industry implications

- The impact of ageing was found to be dependent on membership movements and their age profile
- The industry needs to ensure attractive cover for younger individuals
- Individual schemes are exposed to their membership risk pool

Employer subsidisation reducing

- Benefit option buy-ups at retirement may reduce
- Cost-to-company approach may reduce take up of cover by younger members and cross-subsidisation for medical schemes

Regulatory framework (community rating and no REF)

- Individual schemes compete on the basis of their risk profile (examples show how these schemes are struggling)
- Consolidation is expected to continue as older schemes amalgamate or liquidate

National Health Insurance (NHI)

- When introduced younger members may exit medical scheme risk pool leaving schemes exposed
- It is important that the implementation of NHI is carried out bearing in mind that impact on medical schemes in line with the role envisaged for this sector

Further research

1. Literature review
2. Refinements to methodology (eg further data and expenses)
3. Impact of benefit option buy ups and buy downs
4. Impact of PMBs
5. Reverting to the Risk Equalisation Fund structure with mandatory cover