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Investigating medical scheme expenditure on private hospitals in South Africa

Commissioned by the Hospital Association of South Africa

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Outline

- Motivation
- Contextual trends and research questions
- Data and methodology
- Utilisation in aggregate
- Utilisation by age group
- Utilisation by disease diagnosis
- Conclusion

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Motivation – explanations for private healthcare expenditure increases needed

- South Africa has witnessed high and rising medical scheme* **expenditure**
- Speculated to be due to lack of competition and **pricing** power
- Research into **utilisation**** trends representative of the medical scheme population better informs debate
- Analysis of expenditure and drivers forms part of the South African Competition Commission's inquiry
- This study contributes by analysing private hospital expenditure (significant part of the costs funded by medical schemes) and relation to utilisation and other factors

* *type of private healthcare insurance organisation*

** *for purpose of study, a collective term to describe changes in volume and case-mix*

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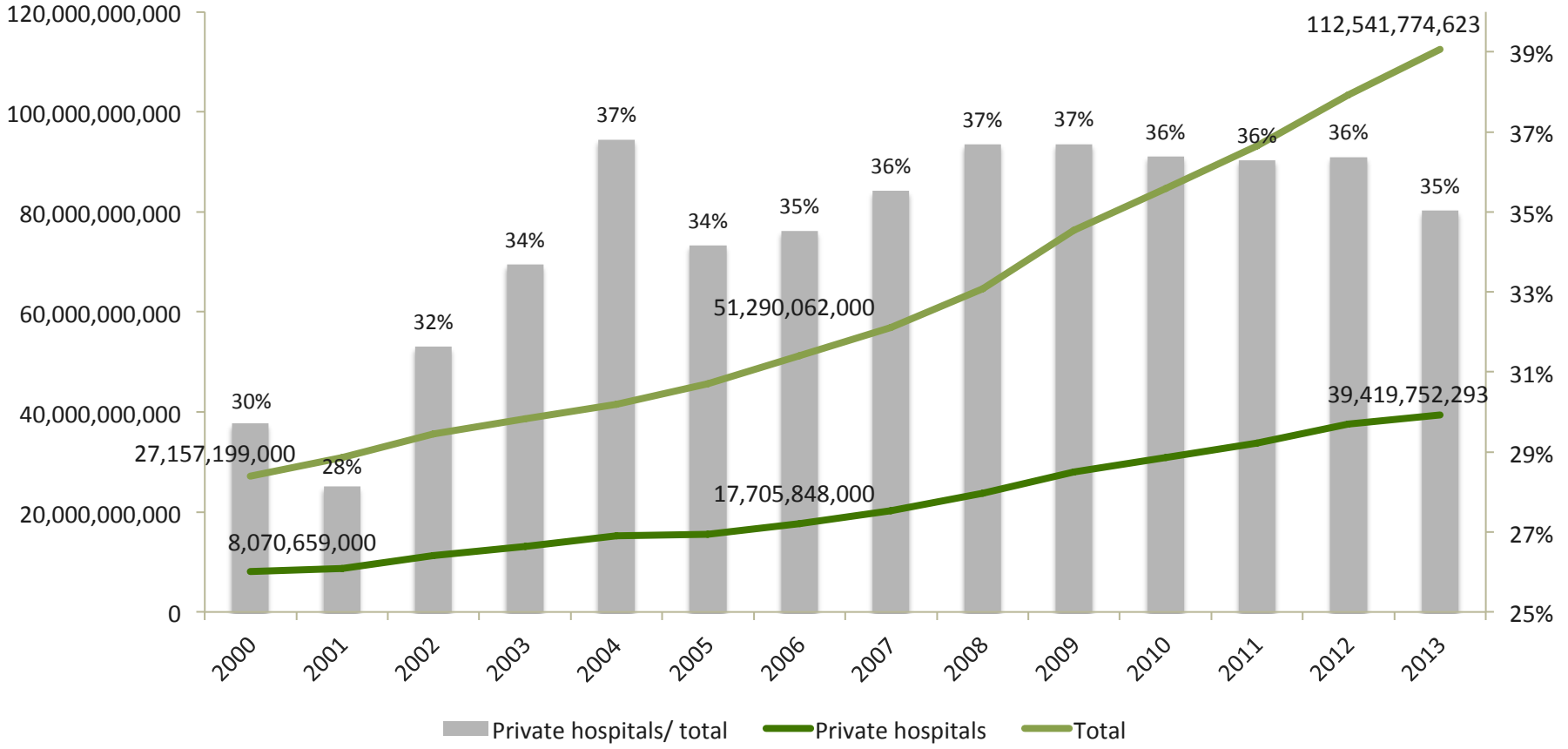
Context – high and rising medical scheme expenditure on private hospitals in South Africa

Nominal (Rands) total medical scheme expenditure and portion spent on private hospitals, 2000–2013



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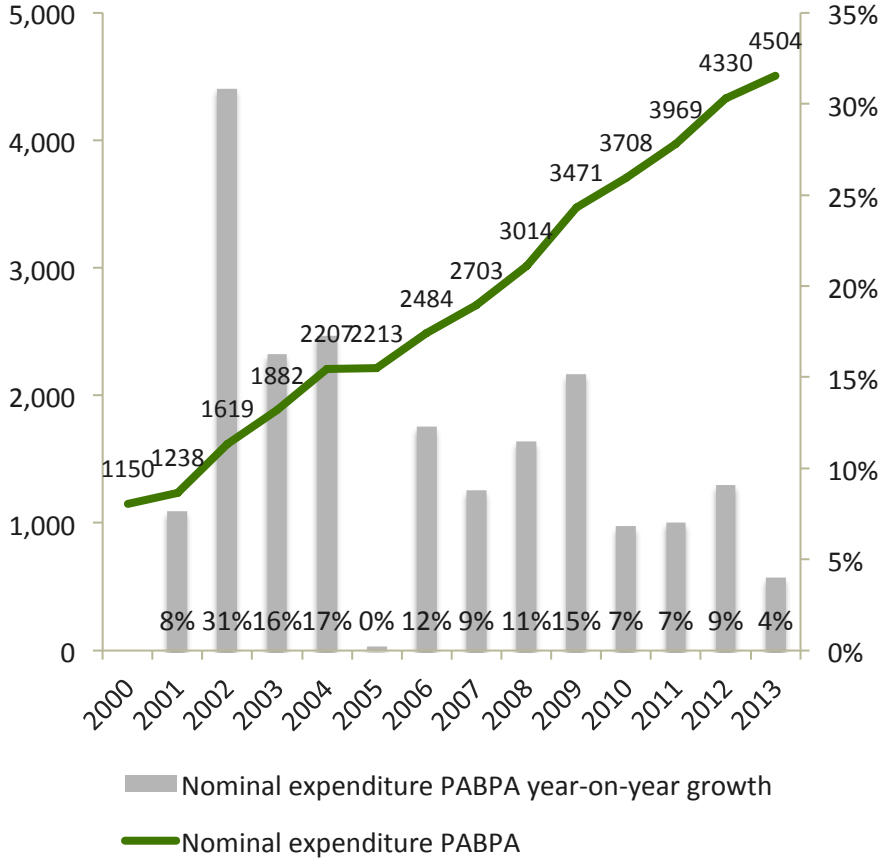
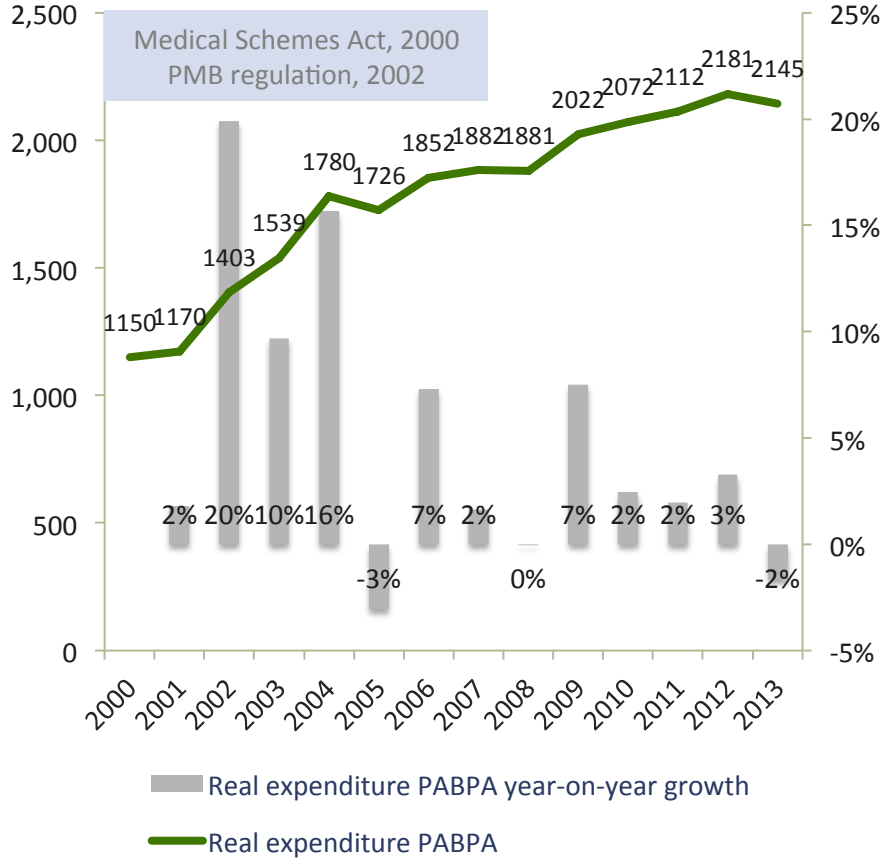
Context – expenditure increases exceed beneficiary growth and headline inflation

Nominal (Rands) PABPA medical scheme expenditure on private hospitals, 2000–2013



Real (Rands) PABPA medical scheme expenditure on private hospitals, 2000–2013



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Research questions – what are the other drivers of South Africa's private healthcare expenditure?

- Has private hospital utilisation –
  - In aggregate;
  - Per age band; and
  - Per disease diagnosis

  increased, and how does this relate to expenditure?
- How do institutional* and technological factors influence utilisation and expenditure?

* *E.g. Medical Schemes Act – community rating & open enrollment & no mandatory membership = potential anti-selection*

Data and methodology

- Dataset built for study (public data limitations)
- Confidential admissions data from Netcare, Mediclinic and Life Healthcare (70% of private hospital beds in South Africa)
- Covers 2006–2014 (nine years)
- Covers all admissions, aggregated by year, age and ICD10 codes
- Each aggregate entry includes admission number (excludes outpatients), length of stay (calendar days) and expenditure (revenue in Rands)
- Targeted descriptive and exploratory analyses; residual approach to hospital expenditure
- Adjustments for share of private hospital beds accounted for by three groups and self-paying patients

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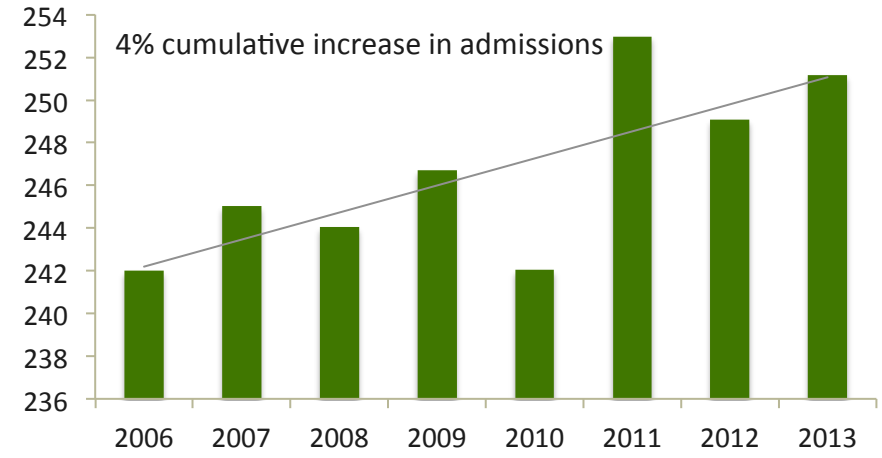
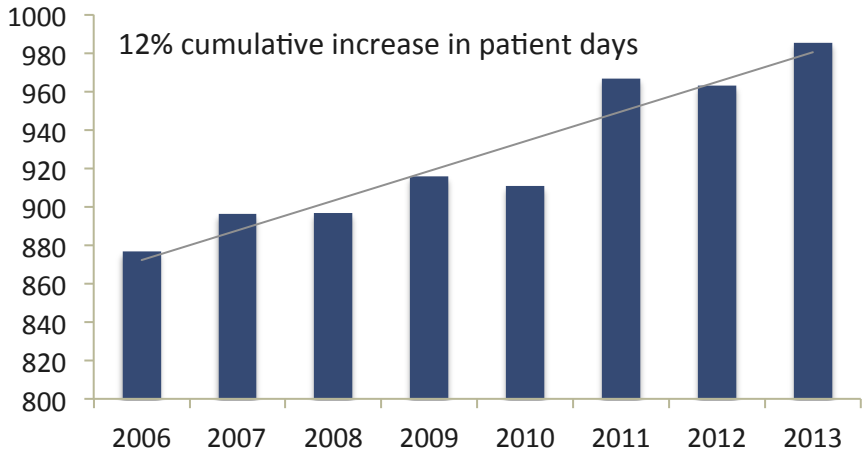
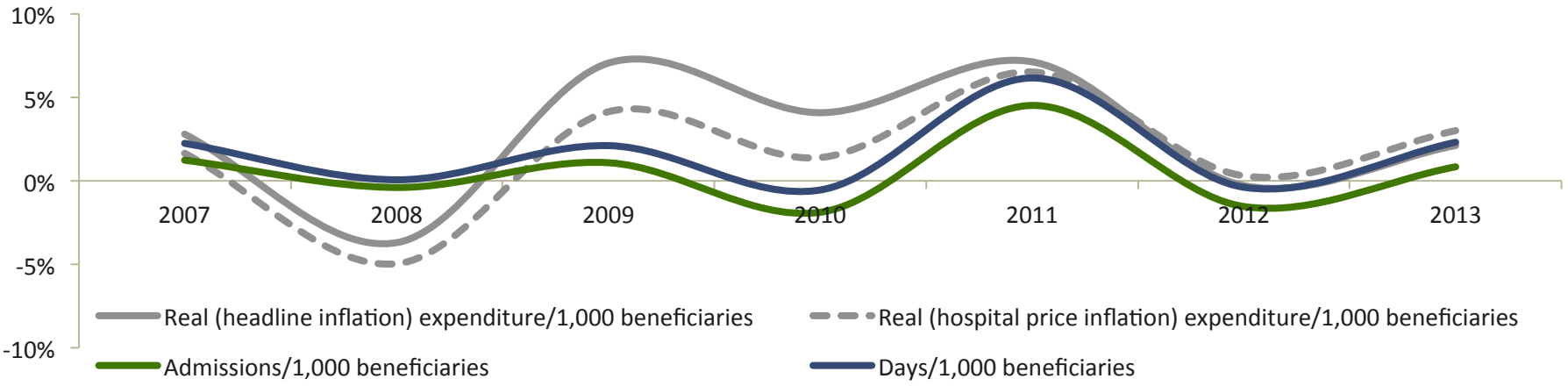
Utilisation in aggregate is increasing and relates to expenditure

Admissions, patient days and expenditure per 1,000 beneficiaries, 2006–2013







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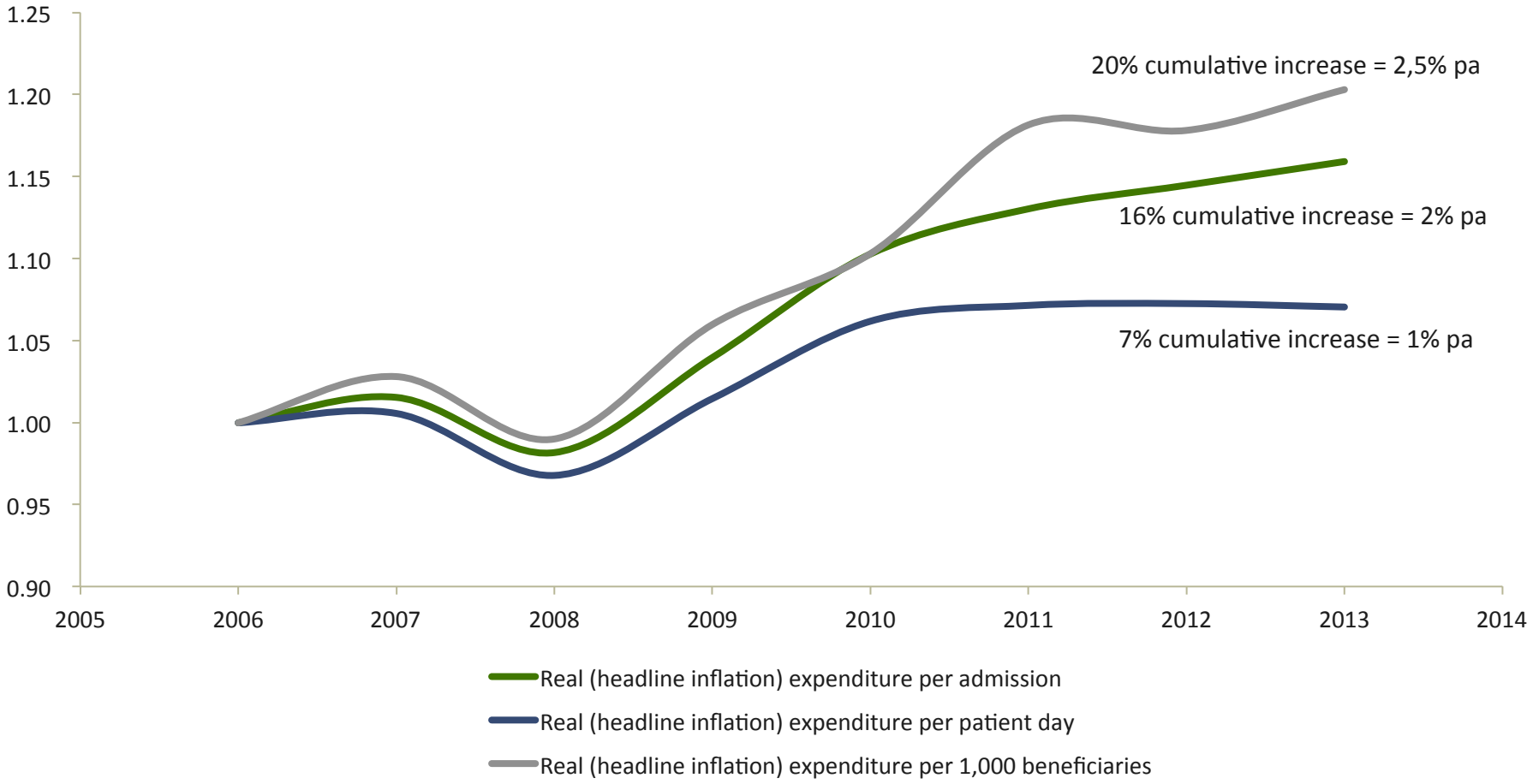
Expenditure increases are more benign if calculated as per admission/day rather than per beneficiary

Cumulative increase in expenditure per 1,000 beneficiaries, per admission and per day, 2000–2013



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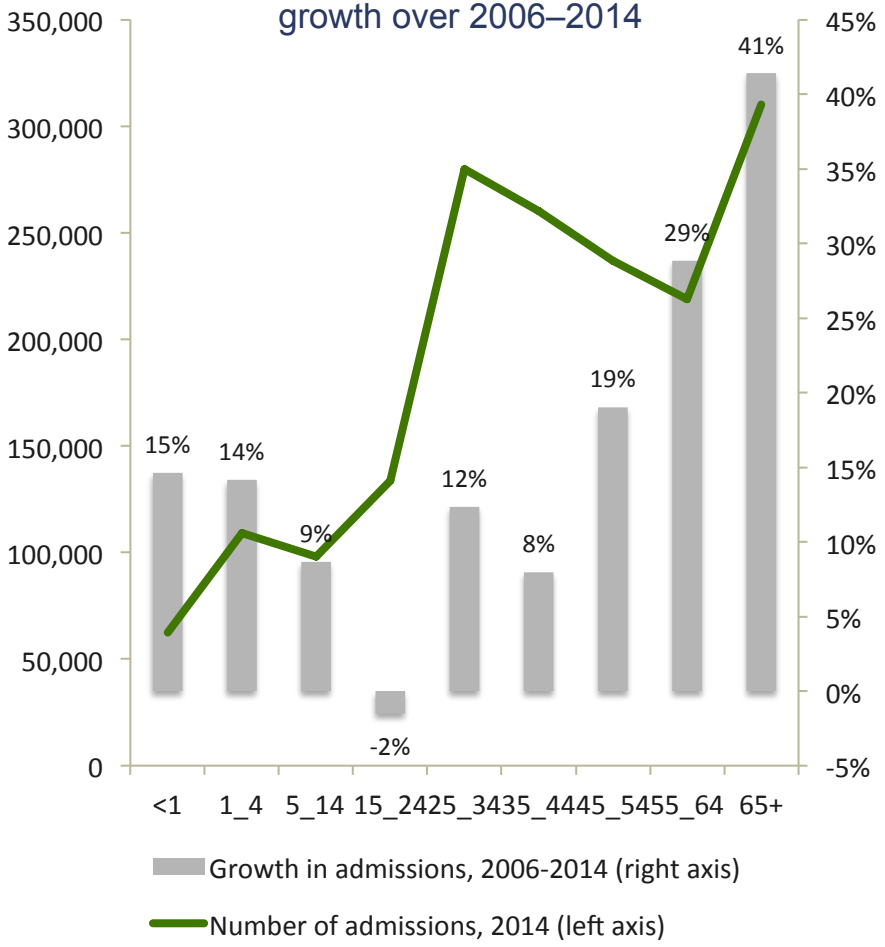
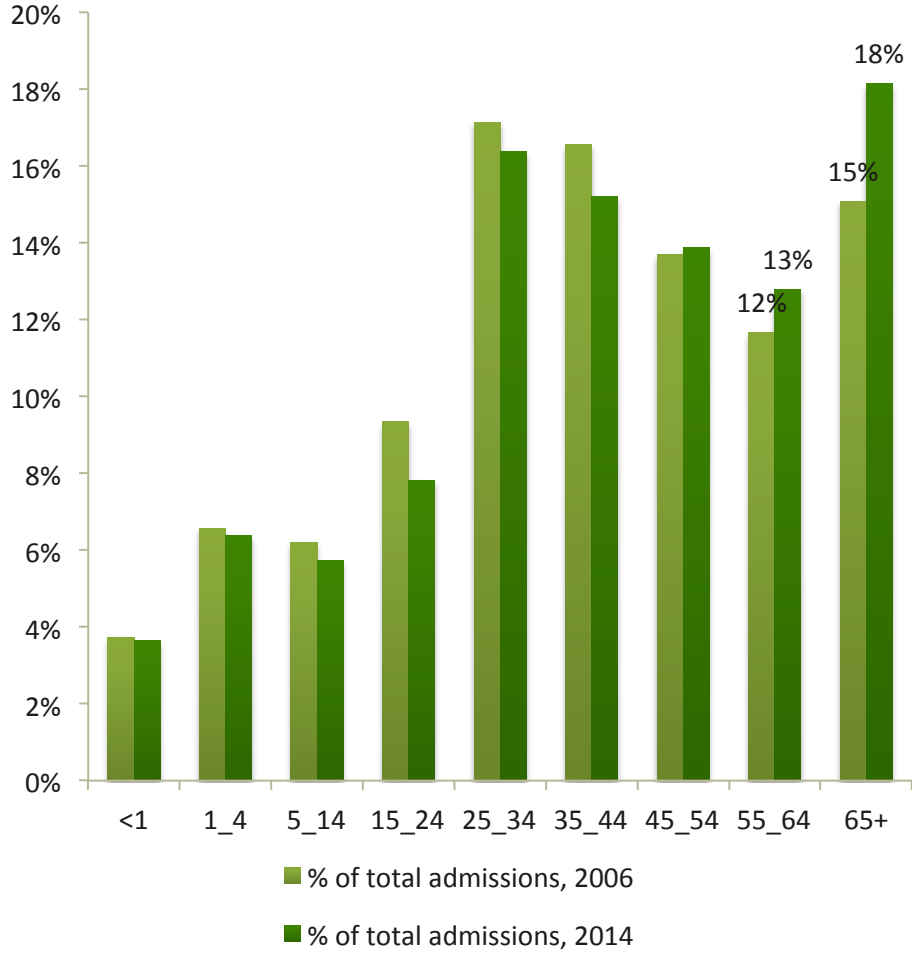
Aging has a strong and increasing effect on admissions

2014 admissions per age group and growth over 2006–2014



% of total admissions per age group, 2006 and 2014



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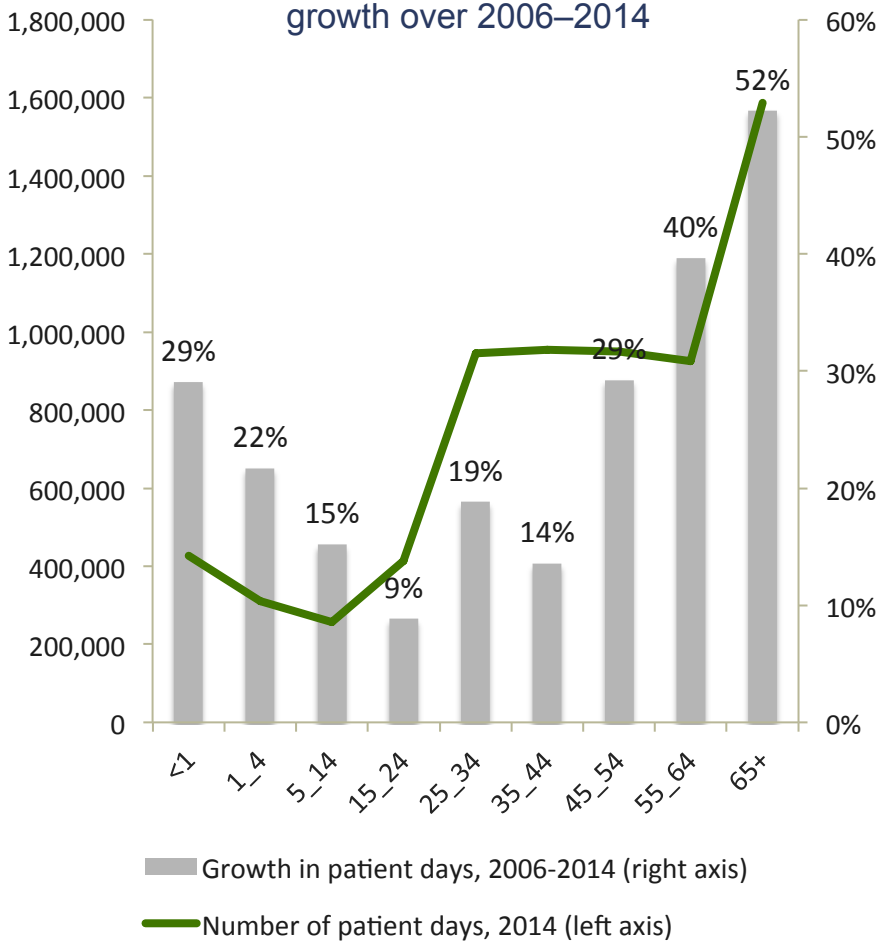
Aging has a strong and increasing effect on patient days

2014 patient days per age group and growth over 2006–2014



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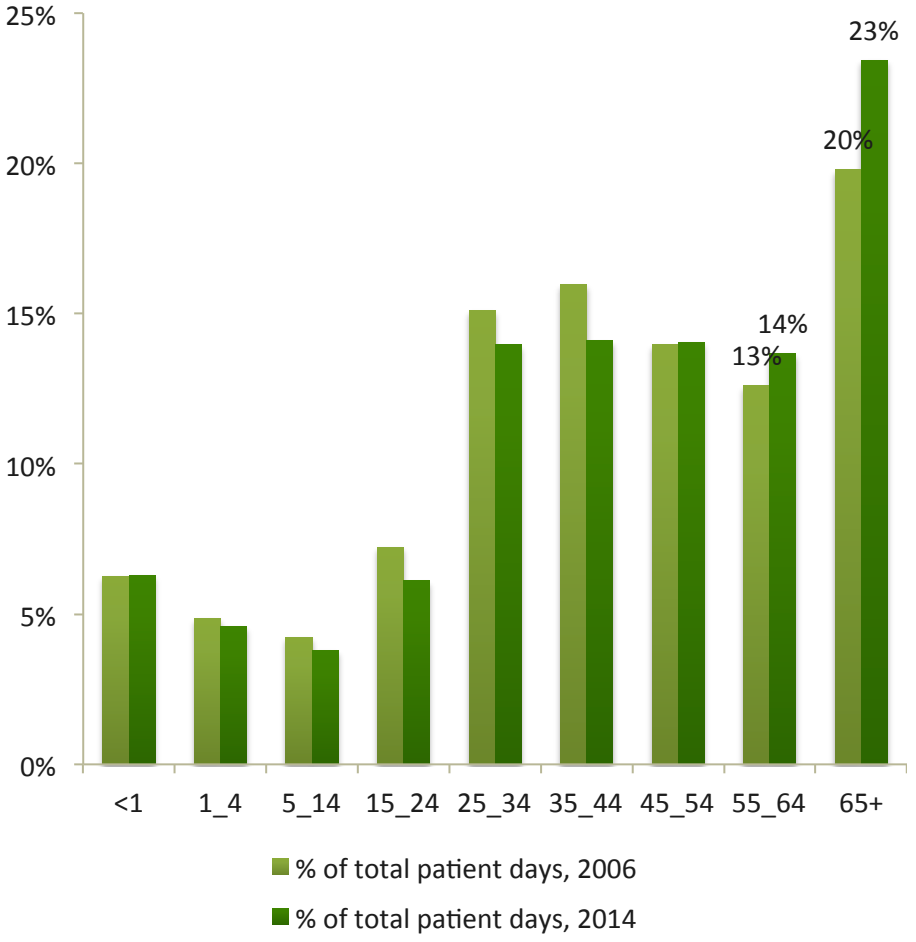

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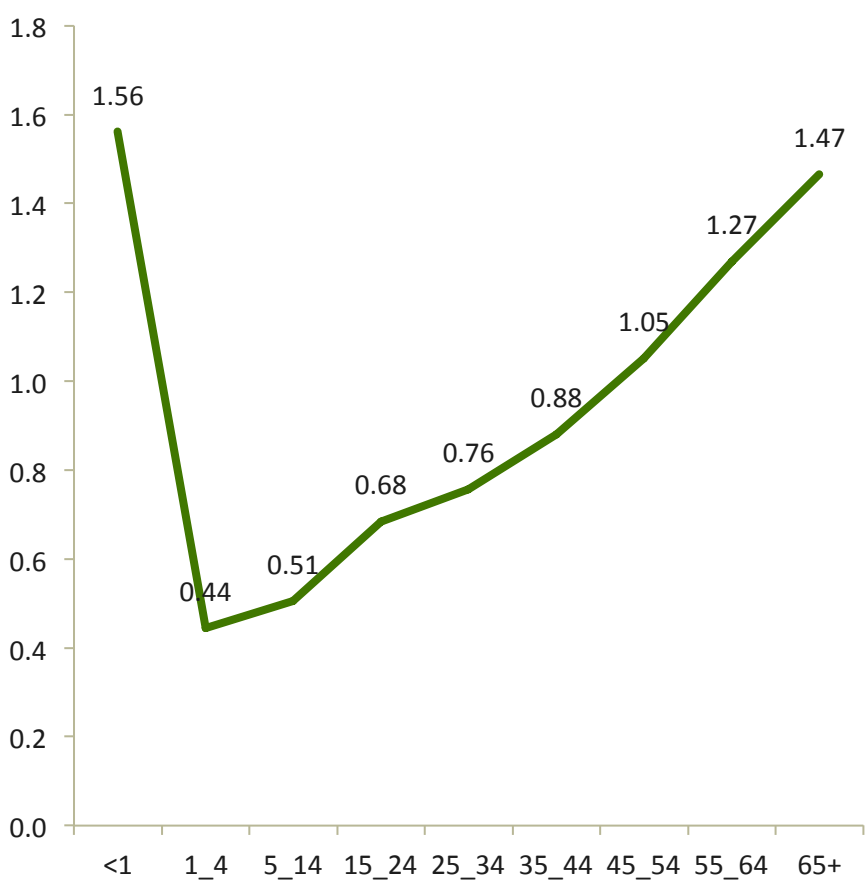
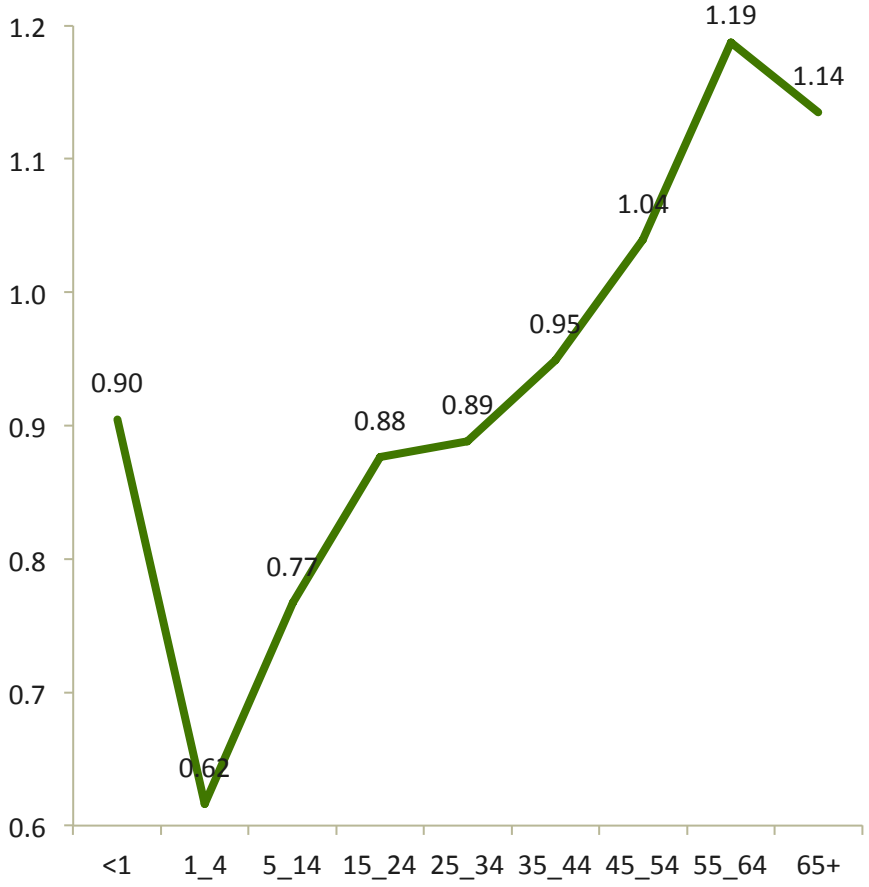
Aging has a strong effect on costs

Average real expenditure per admission and patient day, indexed to the average, 2014





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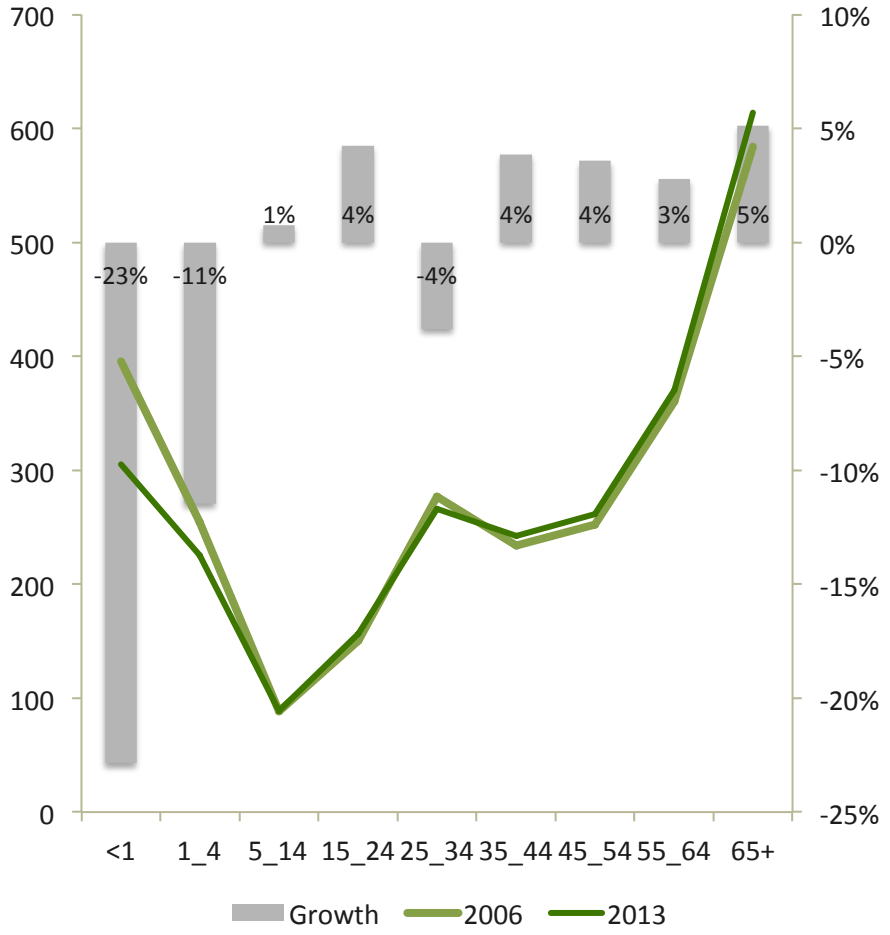
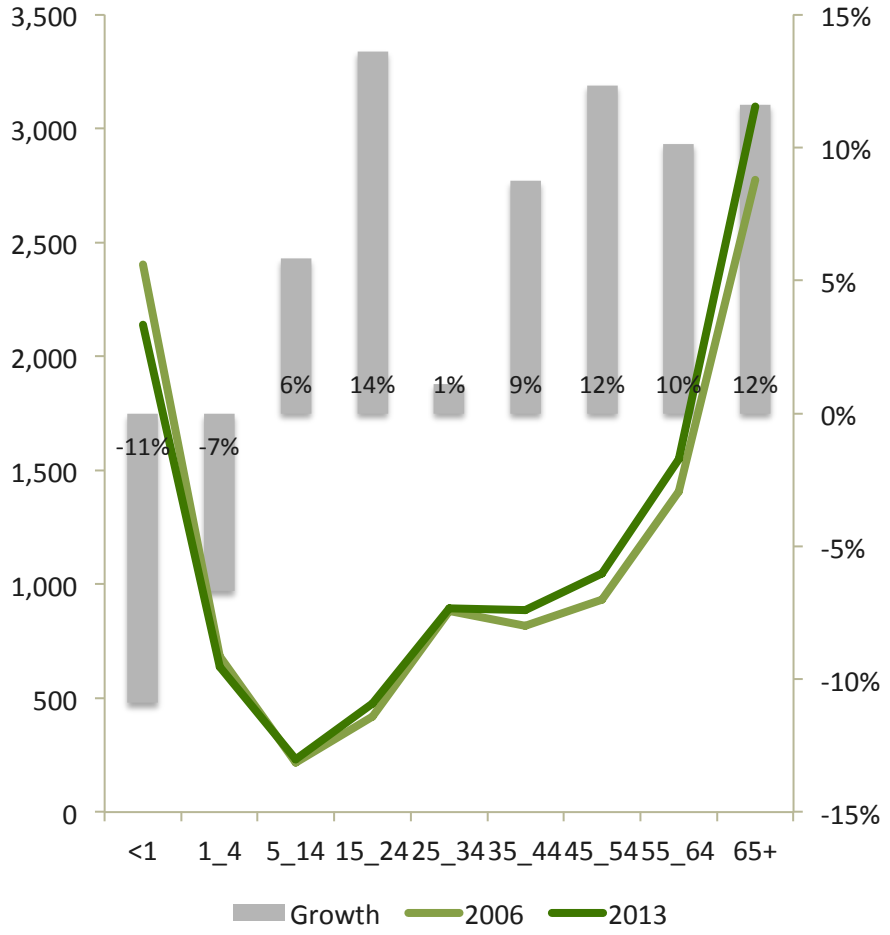
Utilisation by older age bands is high and increasing more rapidly than beneficiaries

Admissions and patient days per age group, per 1,000 beneficiaries, 2006 and 2013





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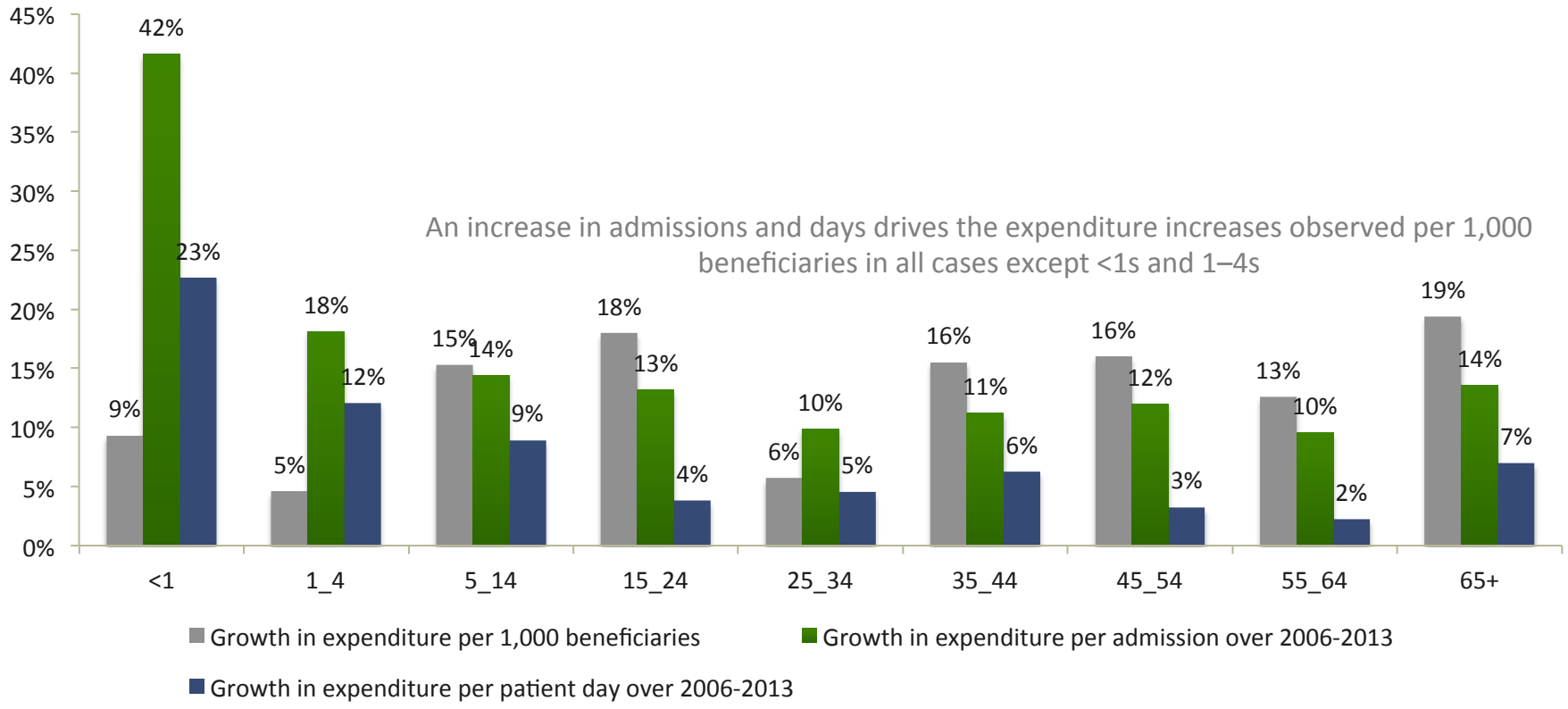

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Many chronic and pmb related admissions are increasing at rates higher than beneficiary growth (25%)

Select disease admissions at Mediclinic, Life and Netcare

	2014 % of admissions	2014 % of expenditure	2014 admissions indexed to 2006
Cardiovascular: Ischaemic Heart Disease	2,81	6,51	1,16
Nervous System Disorders: Epilepsy	0,93	0,59	1,64
Cardiovascular: Hypertensive Heart Disease	0,85	0,64	1,33
Respiratory Diseases: Asthma	0,66	0,36	0,83
Diabetes: Type1	0,61	0,55	1,16
Cardiovascular: Cerebro Vascular Accident / Stroke	0,61	0,86	1,33
Diabetes: Type2	0,41	0,30	1,97
Respiratory Diseases: COPD	0,37	0,50	1,78
Cardiovascular: Cardiomyopathy	0,08	0,19	2,07
HIV/AIDS: Acquired Immunity Deficiency Disease	0,05	0,14	48,11
Sense organs: Glaucoma	0,04	0,03	1,07

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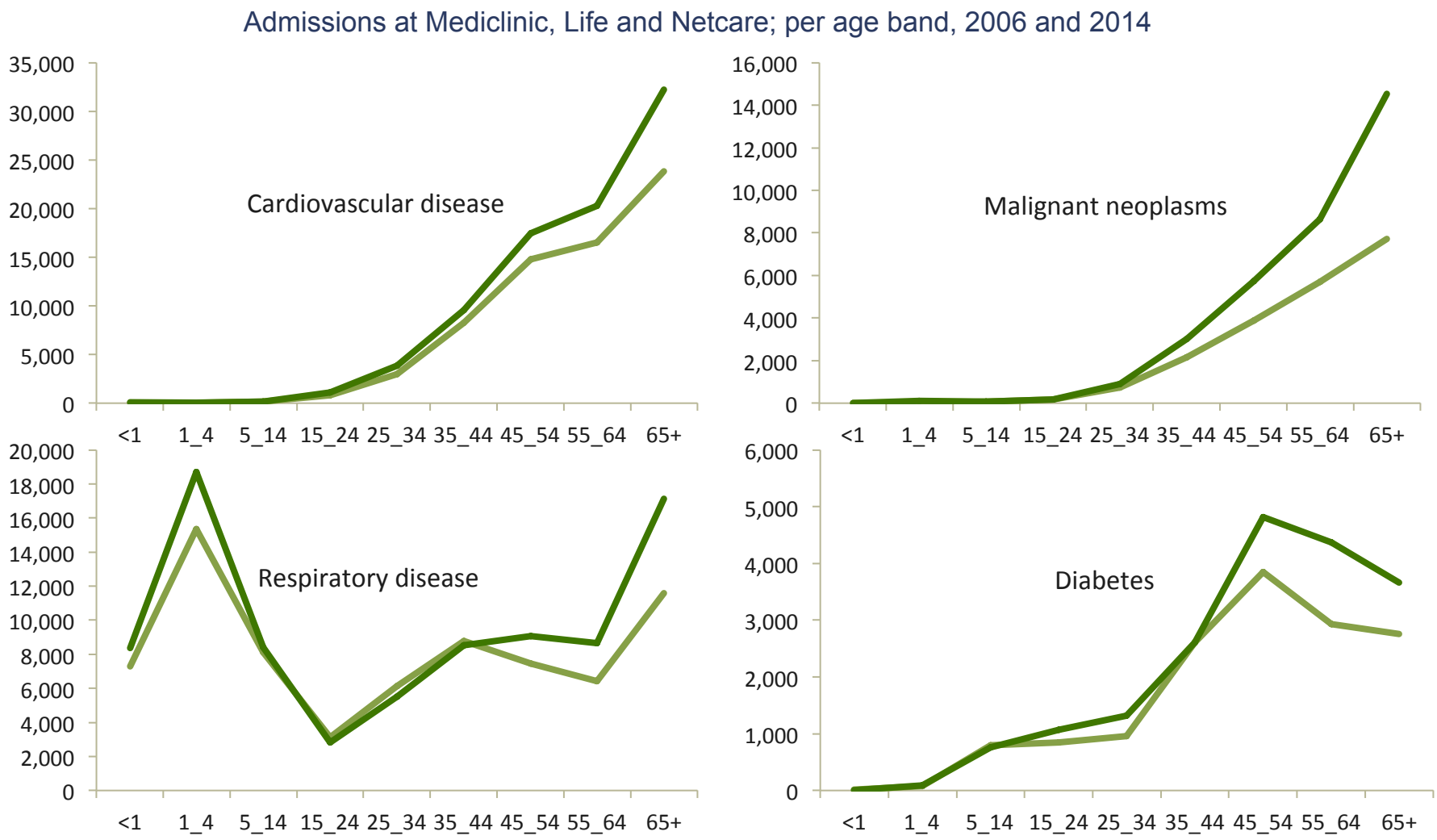
Disease-aging-utilisation-expenditure link



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Summary

- South African medical schemes' real PABPA expenditure (on private hospitals) increases were strongly driven by earlier years, **current increases are low but mostly positive** (require investigation)
- ***Utilisation at private hospitals, correctly measured, has increased.*** After accounting for adjustments in utilisation, the residual expenditure increase is in line with a benign hospital price inflation (<1% pa)
- ***Utilisation increases are driven by older individuals***. Volume drives expenditure for all age categories, with exception for very young individuals, where other factors play a role
- ***Utilisation increases are driven by burden of diseases***. After accounting for utilisation, the expenditure increases are reasonable, but treatment and technology needs to be accounted for
- These results are relevant in informing future health policy, and it is hoped that public data will over time develop to facilitate further similar studies