

Influence of ageing on dental costs

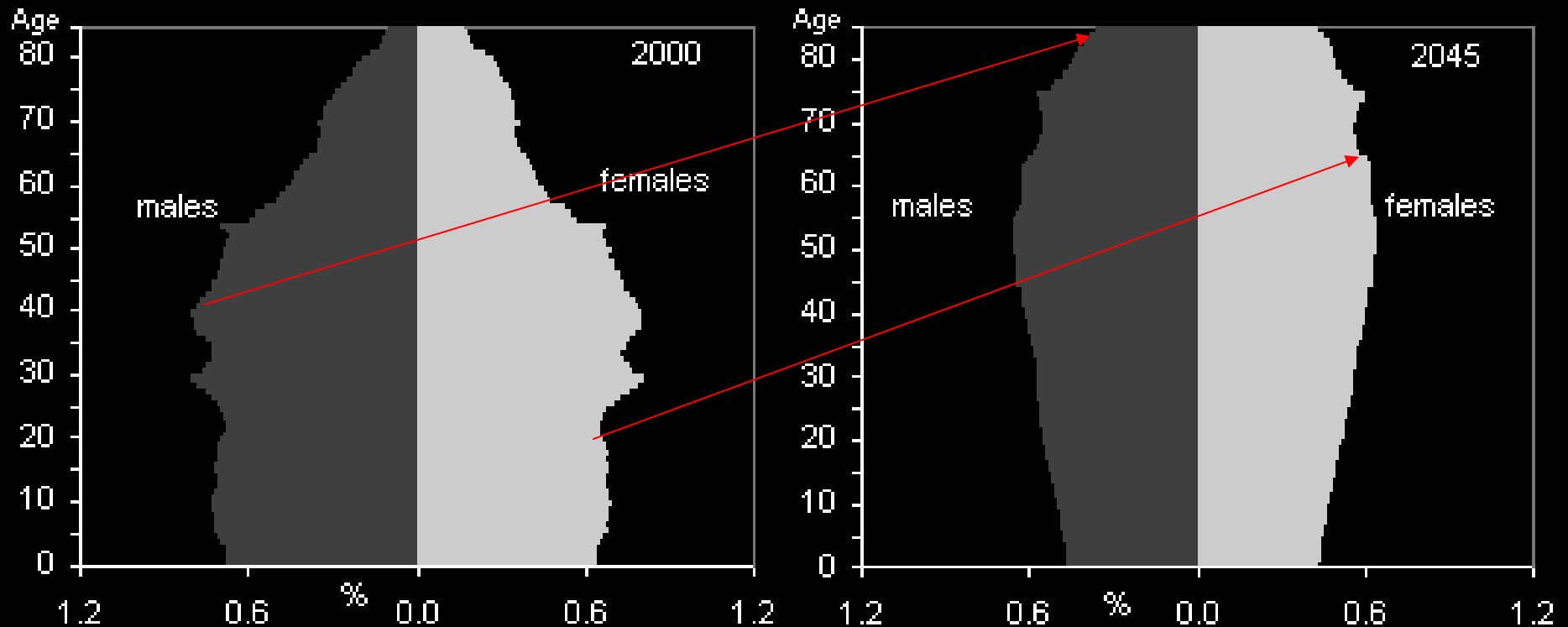
Jane Harford and Liana Luzzi
With help from David and Len

Population ageing

Either or both of two conditions define population ageing

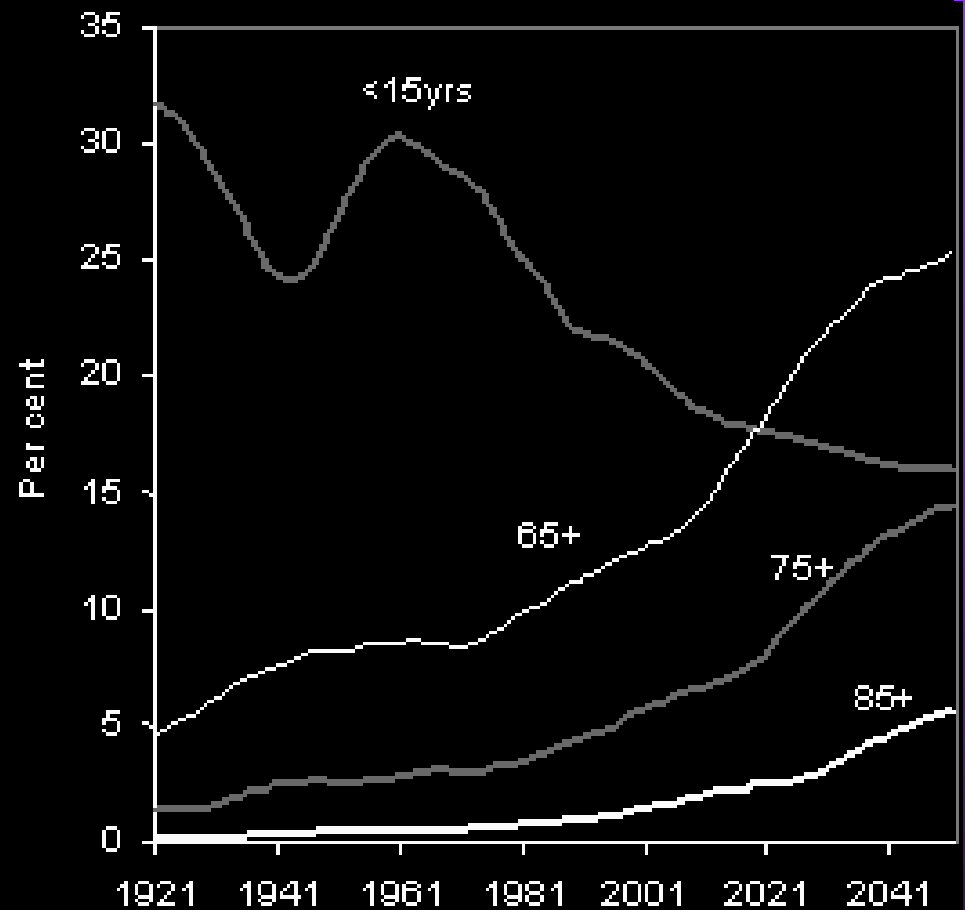
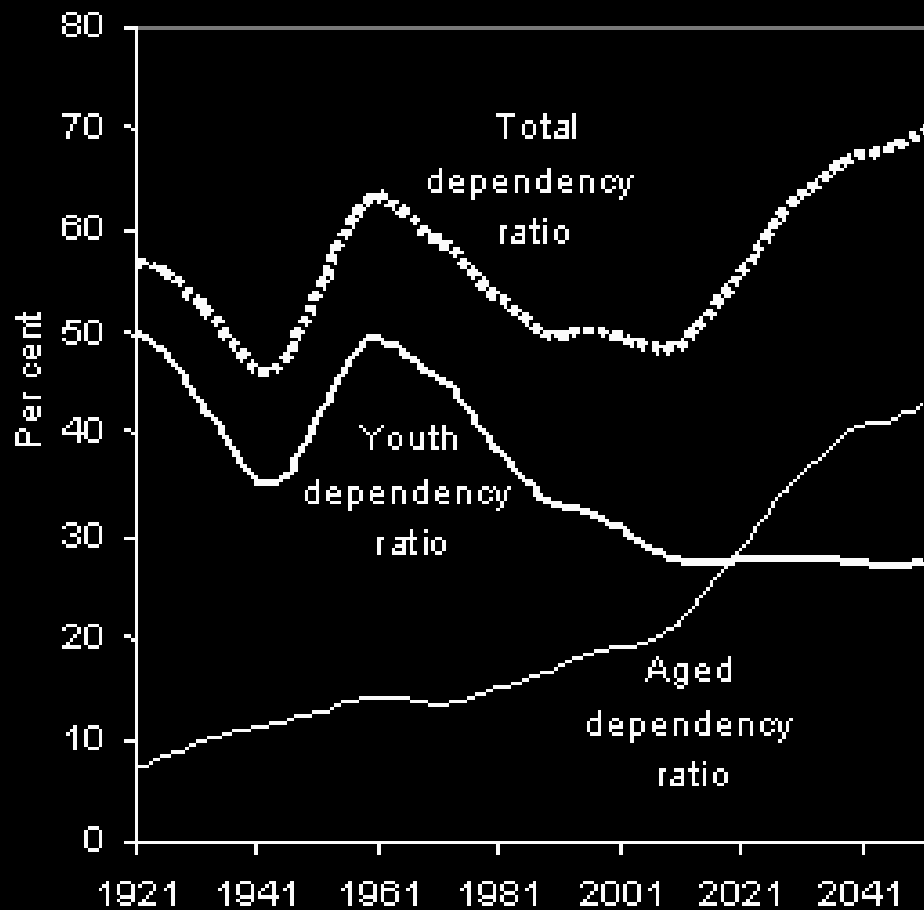
- (i) The average (mean or median) age is increasing
- (ii) There is an increase in the proportion of the population above a certain age threshold.

Demographic change – population ageing



Source: Productivity Commission (2005) Economic implications of an ageing Australia. Canberra. Productivity Commission

Demographic change - Dependency



Source: Productivity Commission (2005) Economic implications of an ageing Australia. Canberra. Productivity Commission

The reports on ageing

- First EPAC Report - 1988
- Second EPAC report - 1994
- National Commission of Audit - 1996
- Intergenerational report - 2002
- Productivity Commission report - 2005

The problem of population ageing is not new

They were also worried In the 1800's..

Year % aged 65+

1861 1.4%

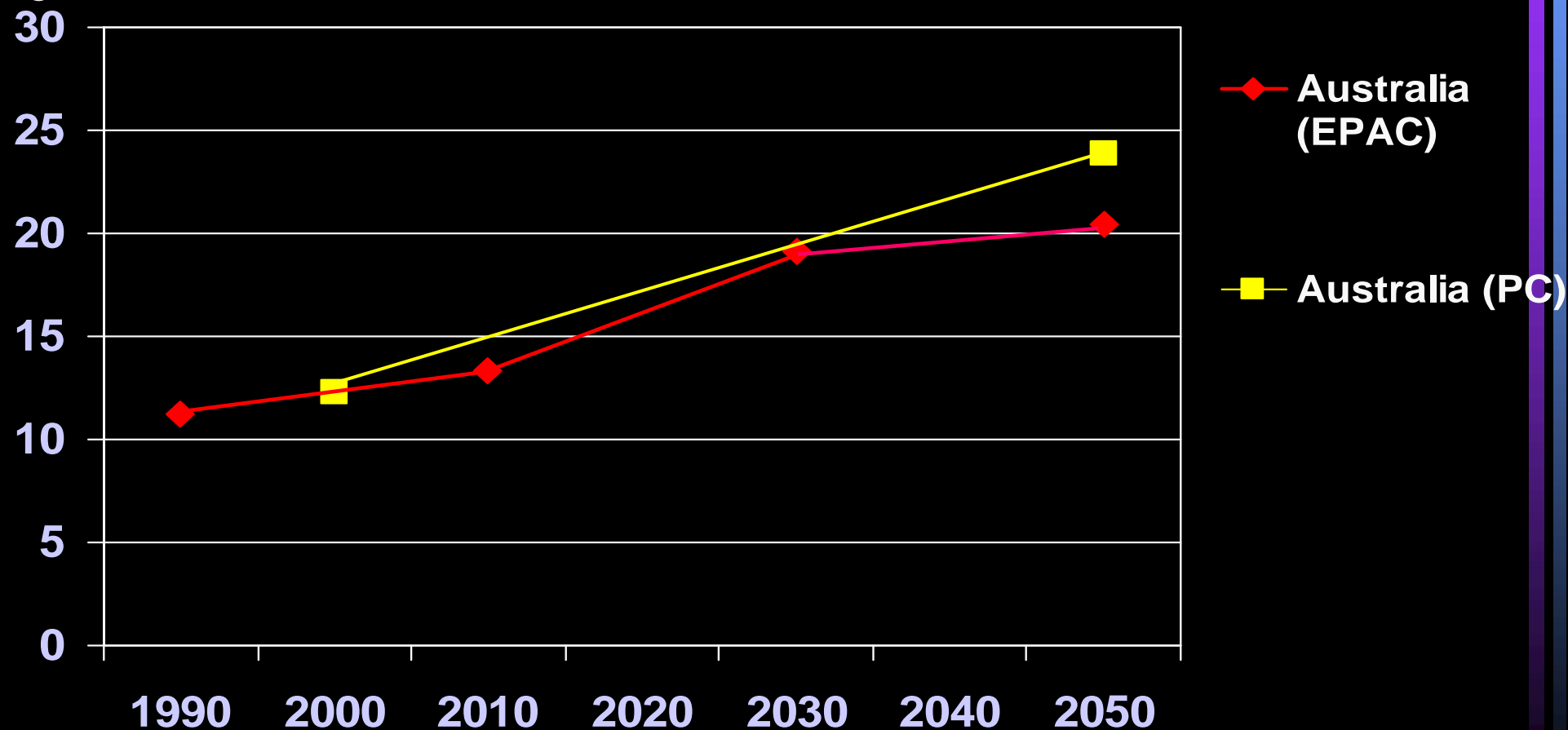
1891 2.5%

1901 3.4% (46,500 people)

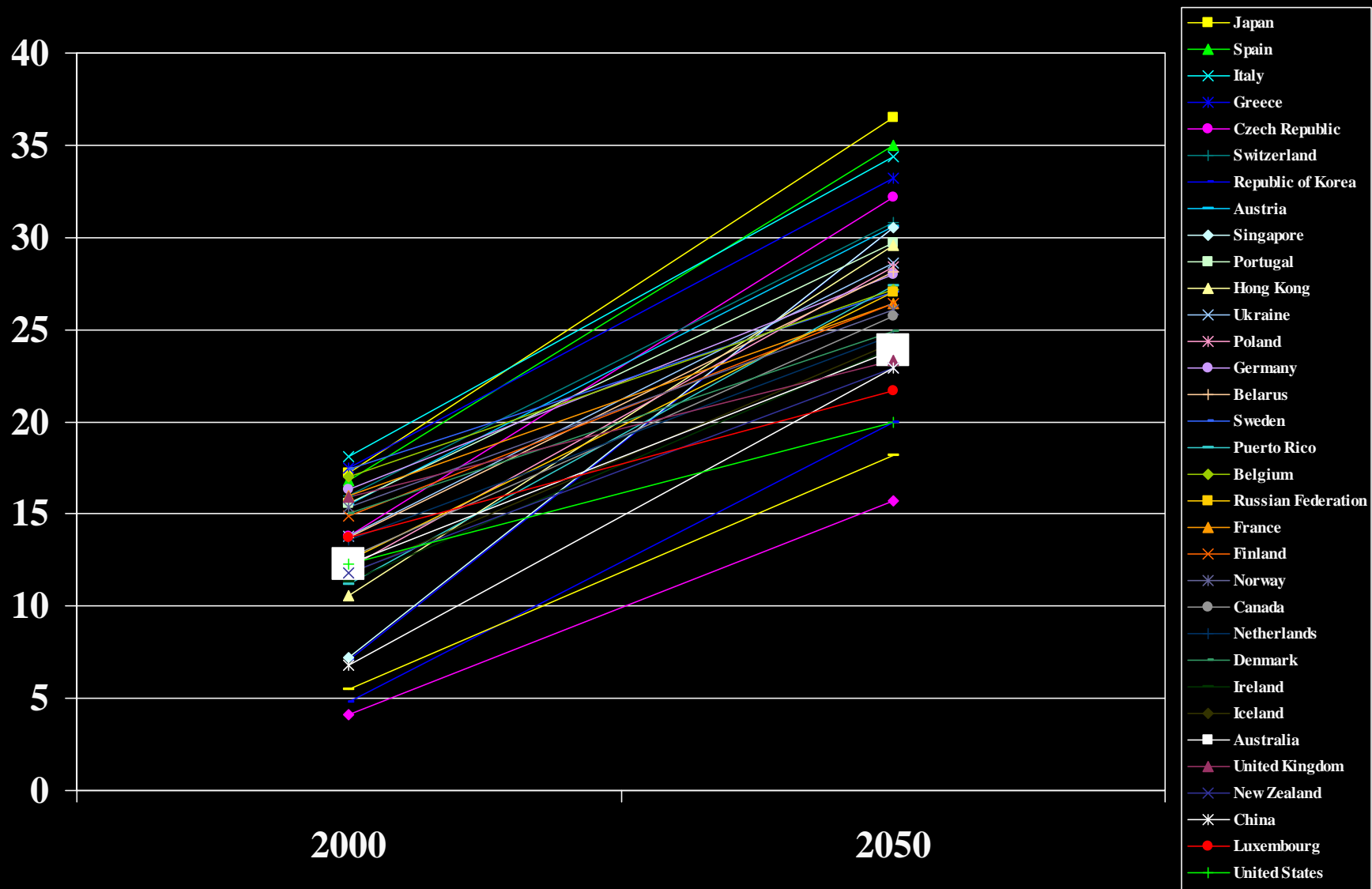
60% increase between 1891 and 1901

Per cent of population aged 65 and over

% aged 65+



Population ageing internationally PC



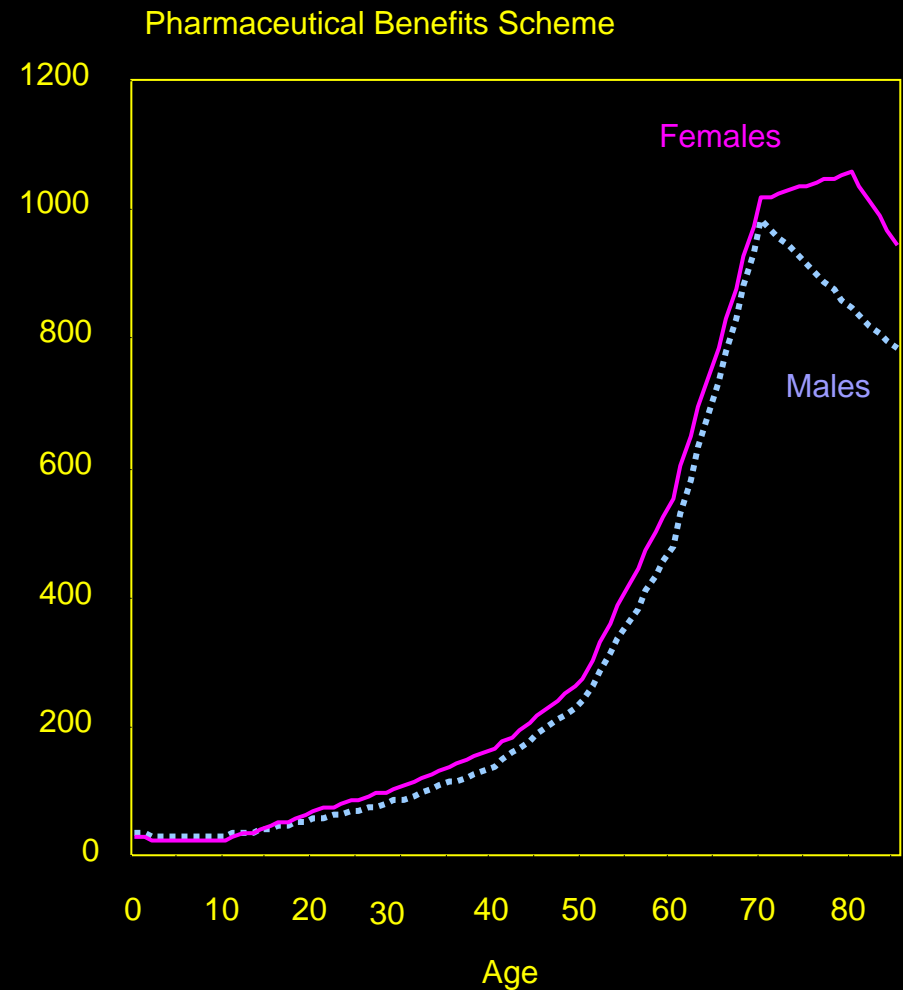
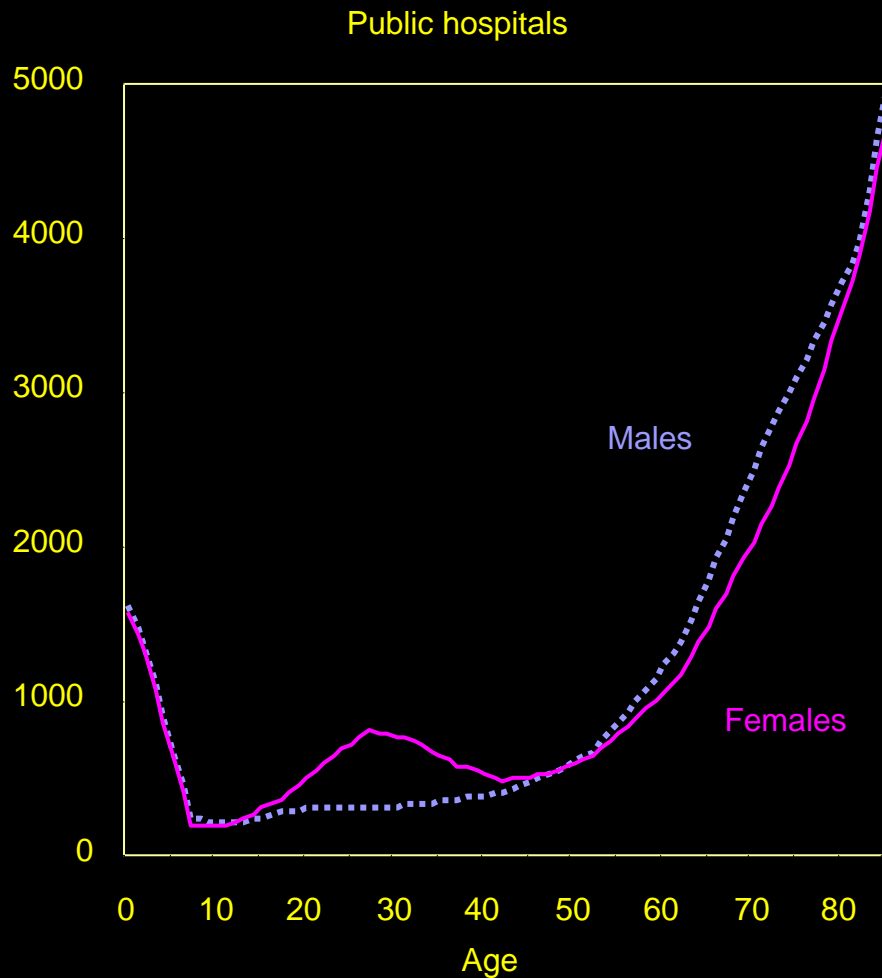
Ageing and health care costs

- Population ageing and increasing health care costs have run hand-in-hand.
- High health care costs at older ages are partly accounted for by the higher risk of dying.
- Growing body of evidence that past increases in health care costs cannot be accounted for by population ageing.

Use of health services

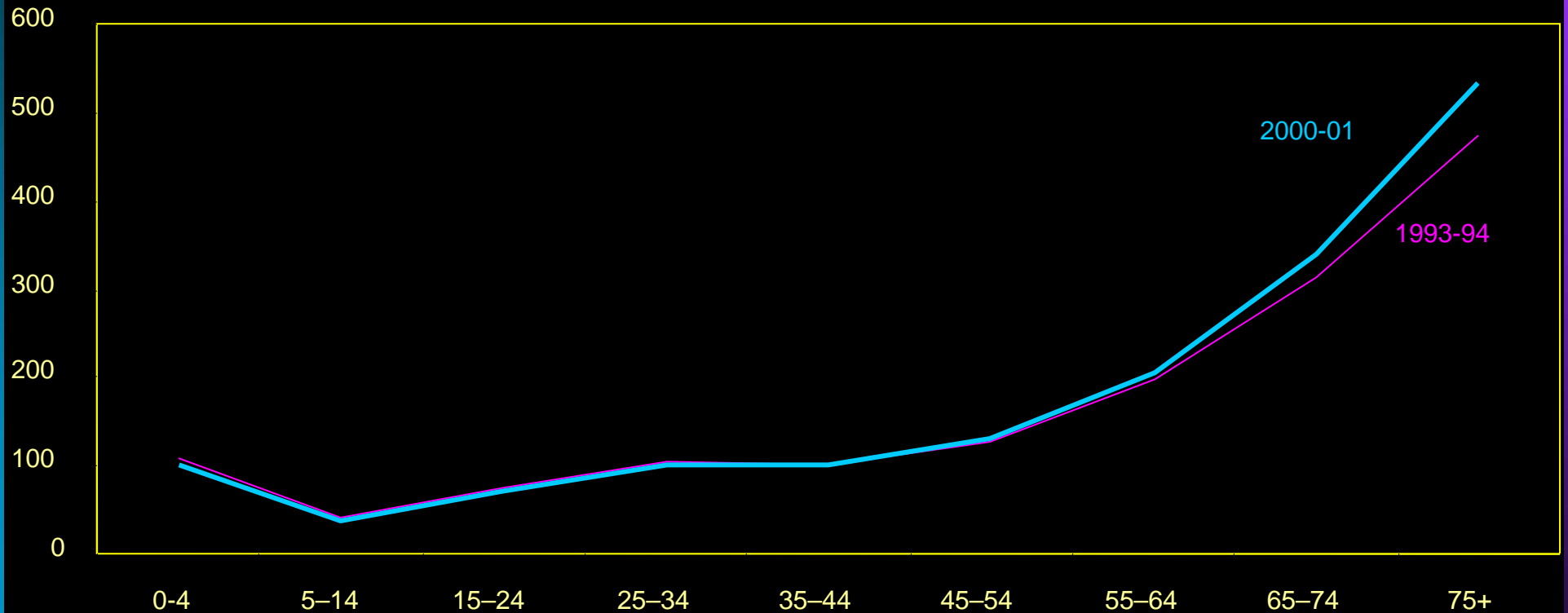
- The high cost of health service usage in the aged
- The 'health' of the aged
- The last 1 or 2 years of life argument

Age and health expenditure, Australia, 2003



Change in relative expenditure over time, Australia.

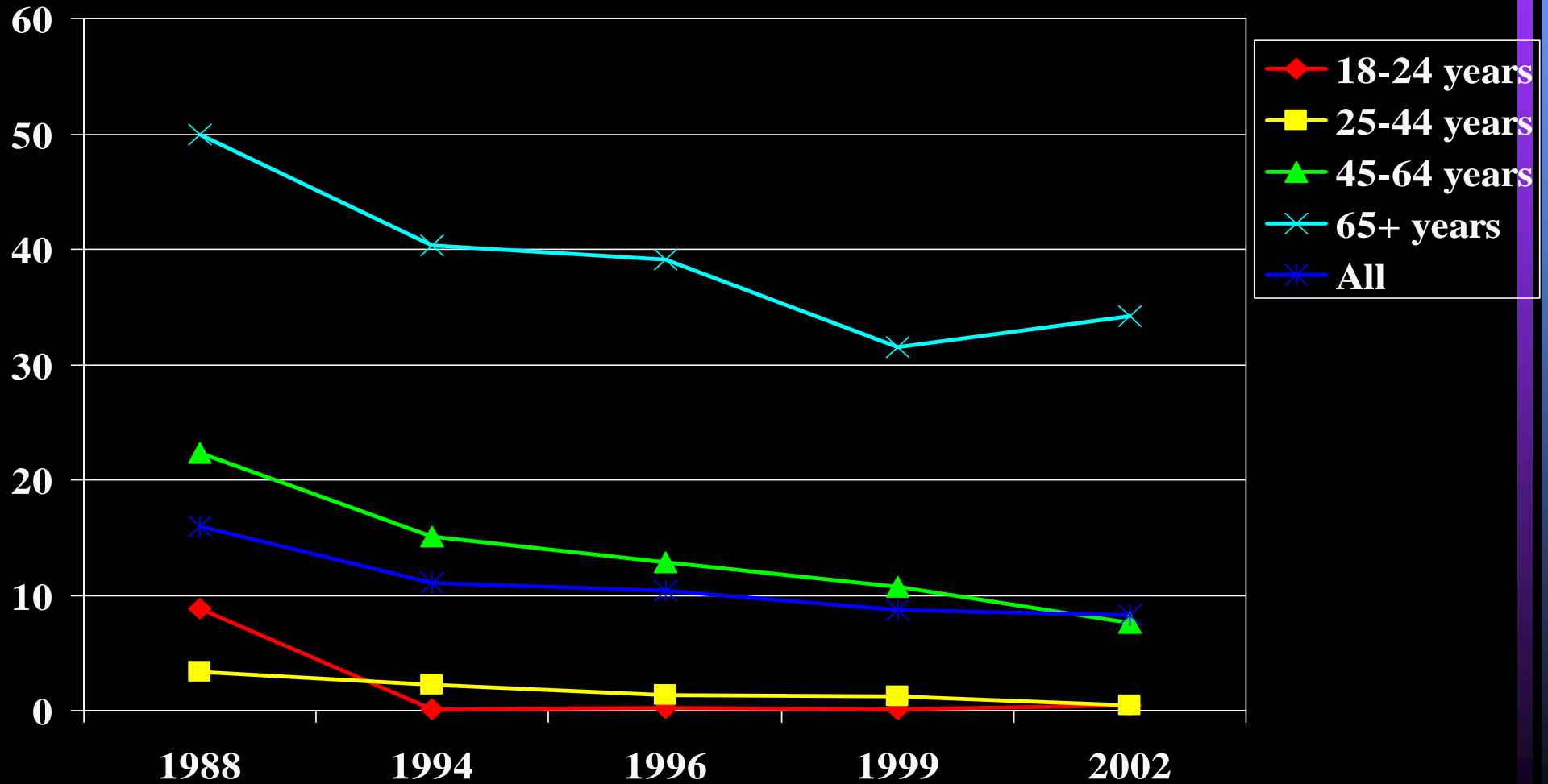
Index (35-44 age group =100)



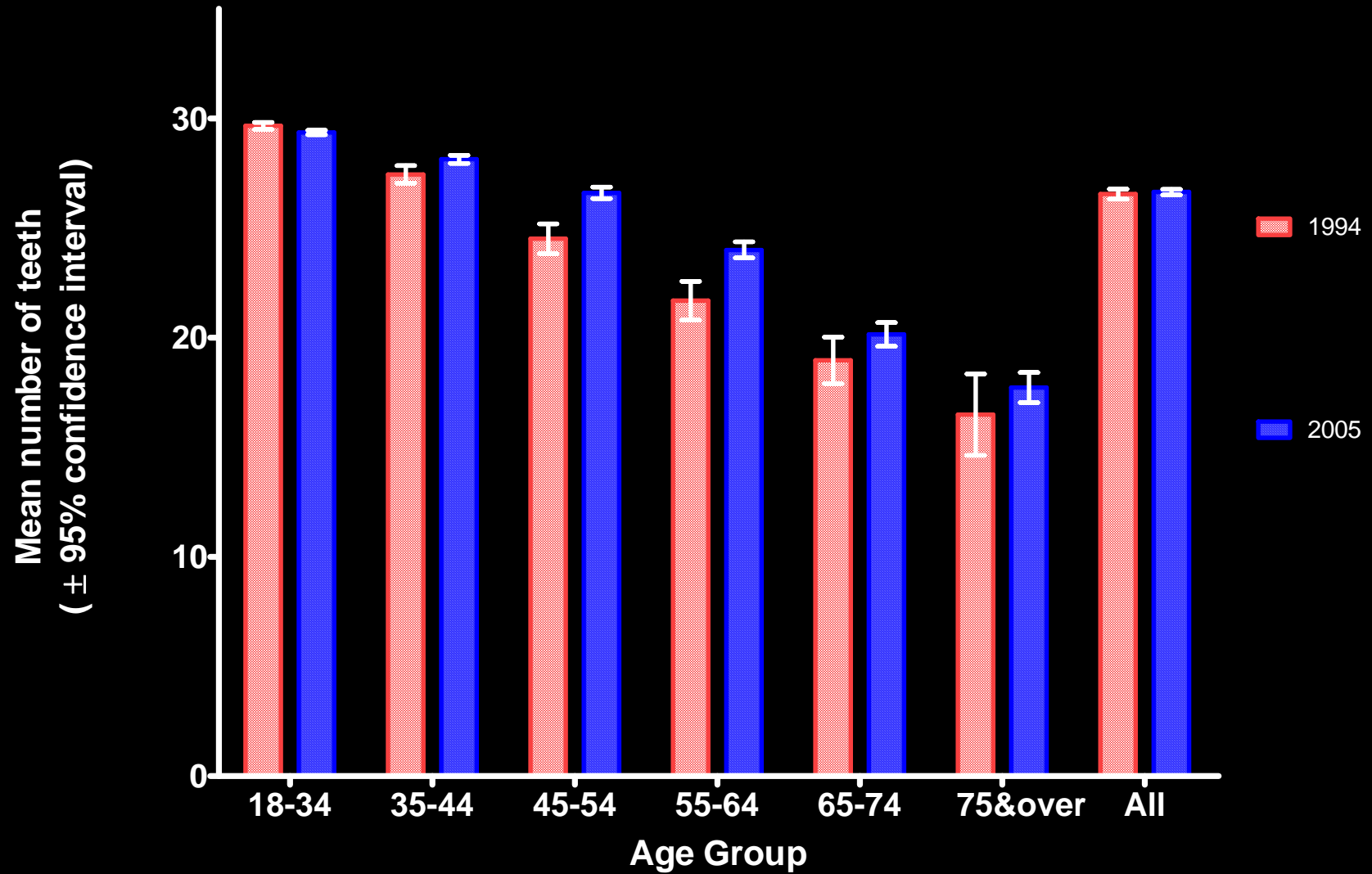
Possible drivers of dental costs

- Falling edentulism rates
- ?Higher numbers of teeth in dentate people
- ?Greater burden of active oral diseases in older people
- ?Cultural change
- ?Technological change

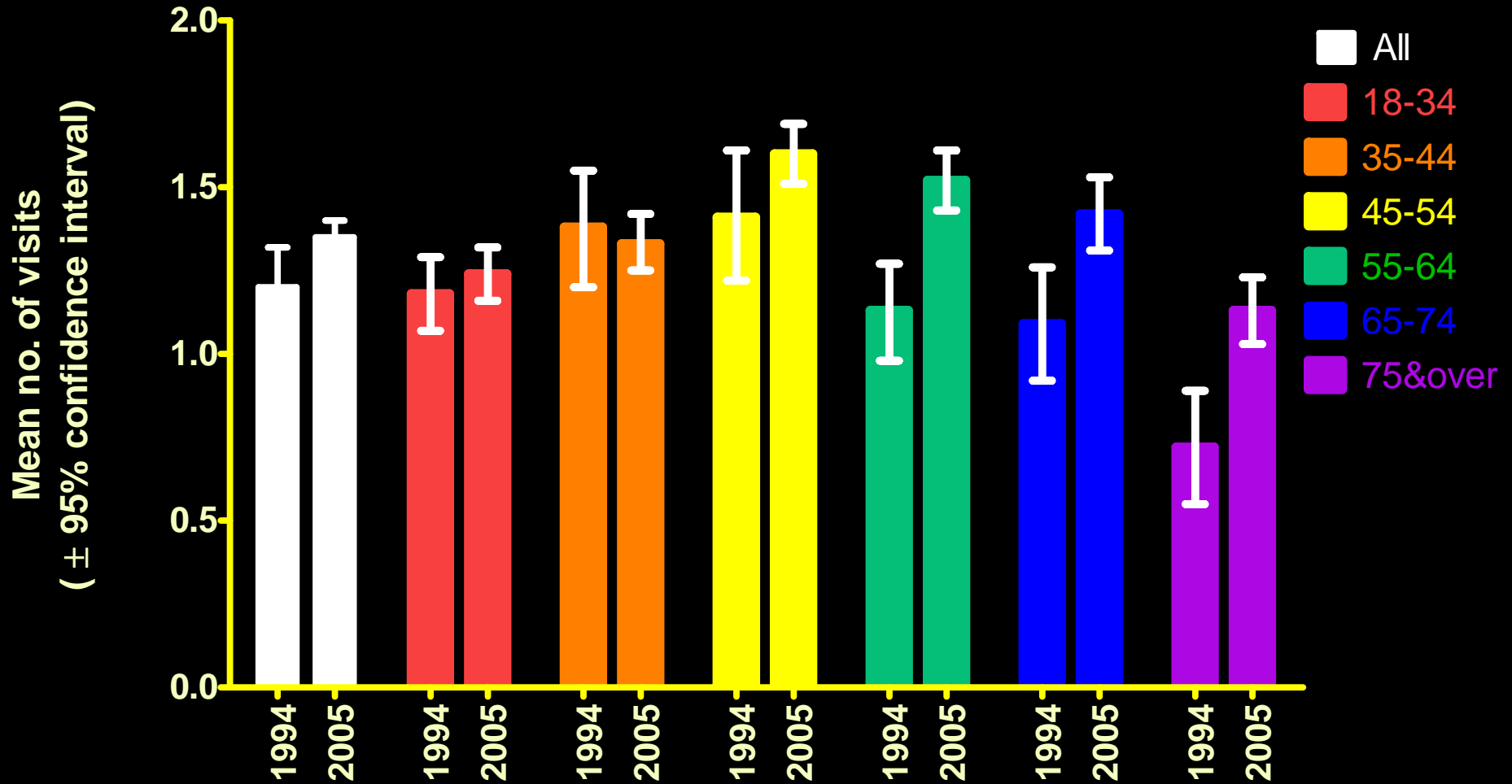
Edentulism rates



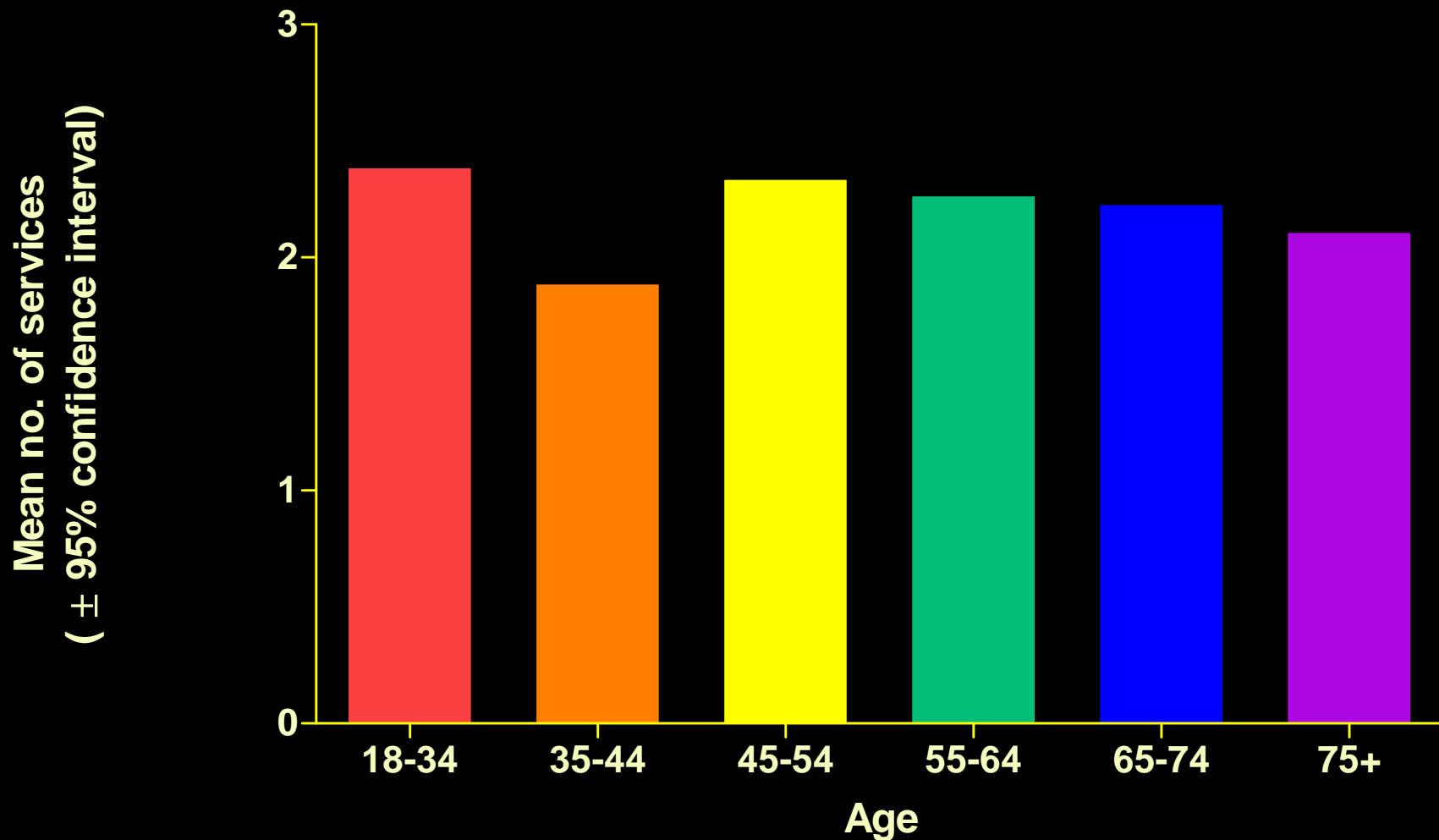
Mean number of teeth in dentate persons



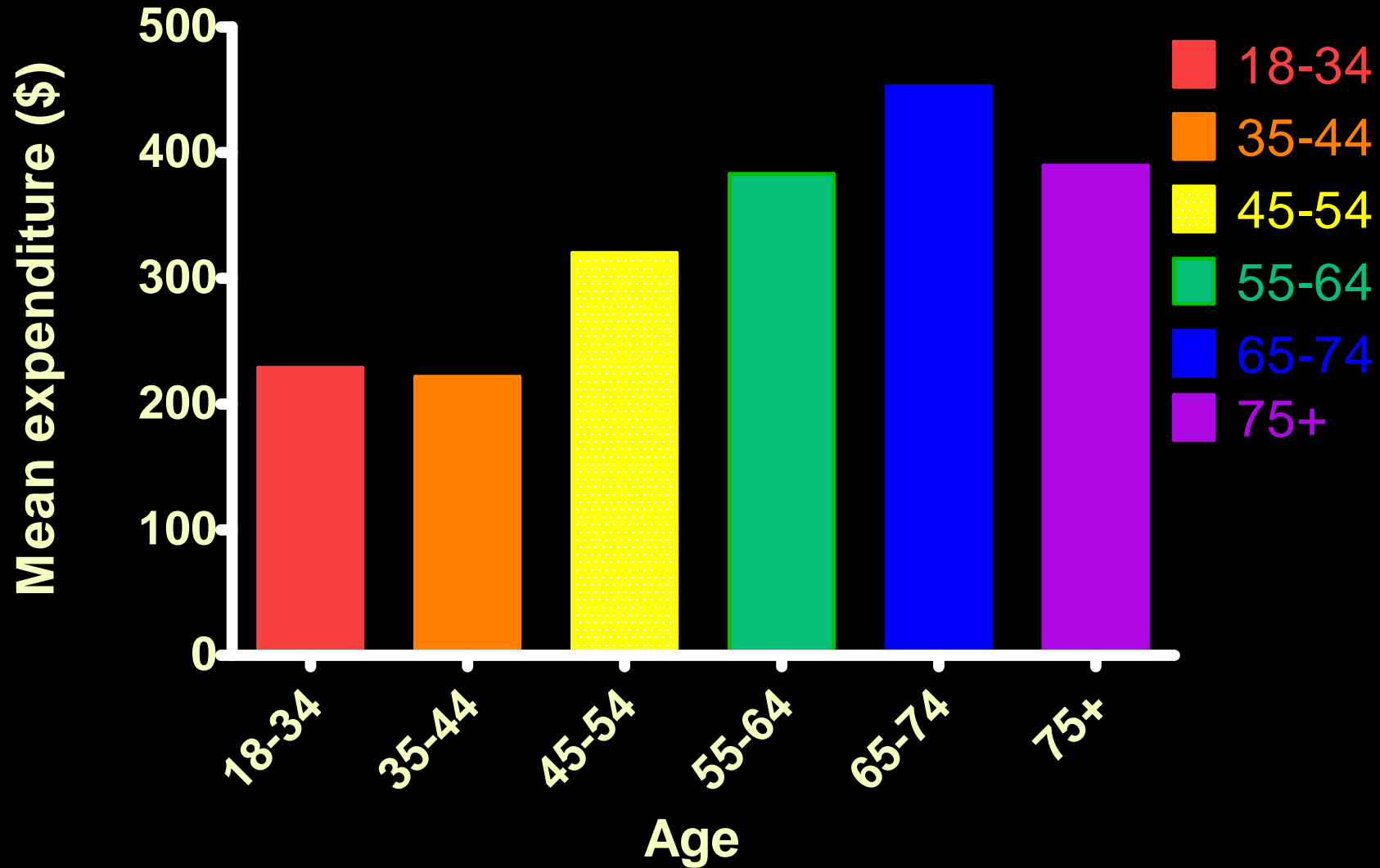
Number of visits by age group 1994 & 2005



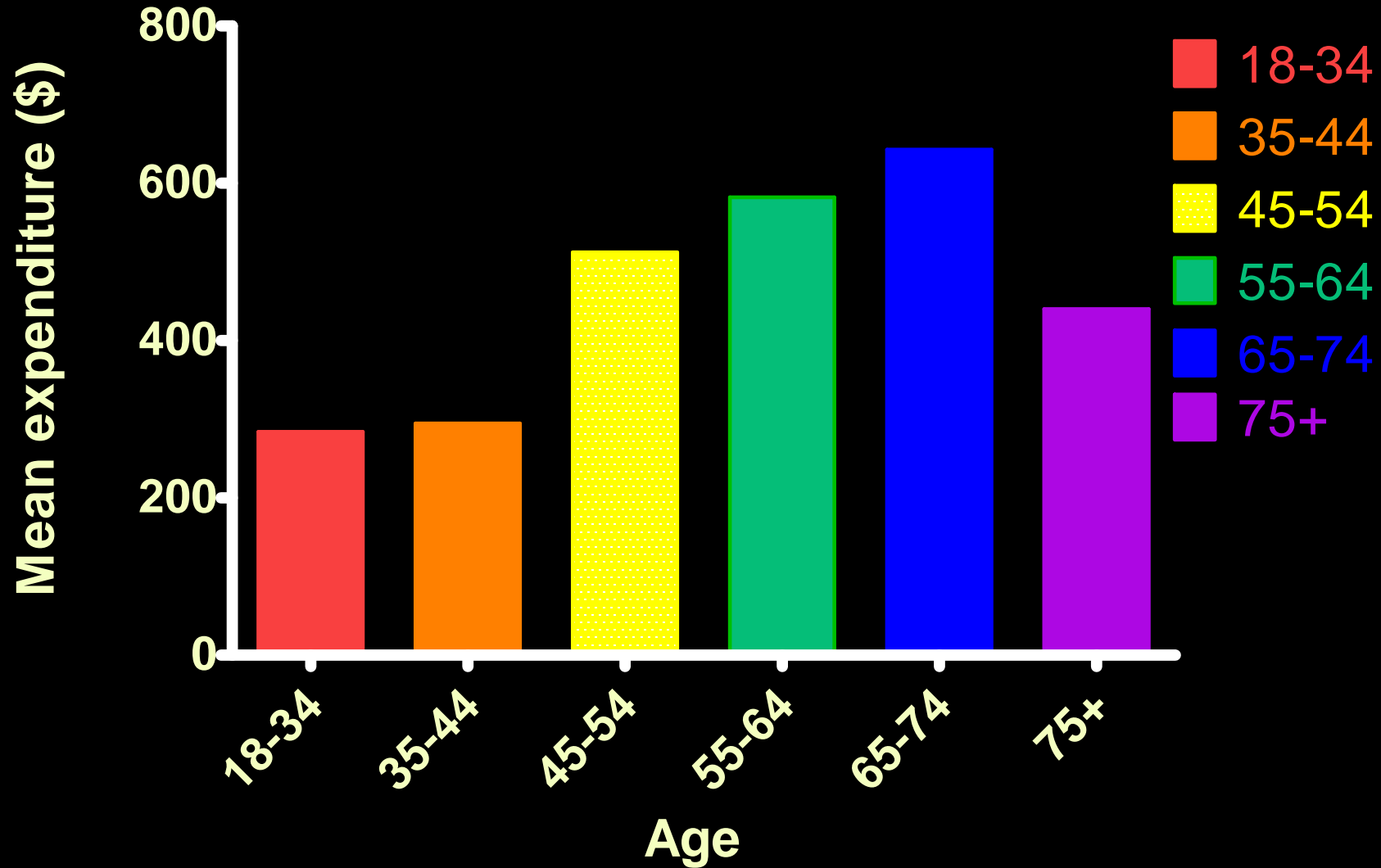
Number of services by age group 2003



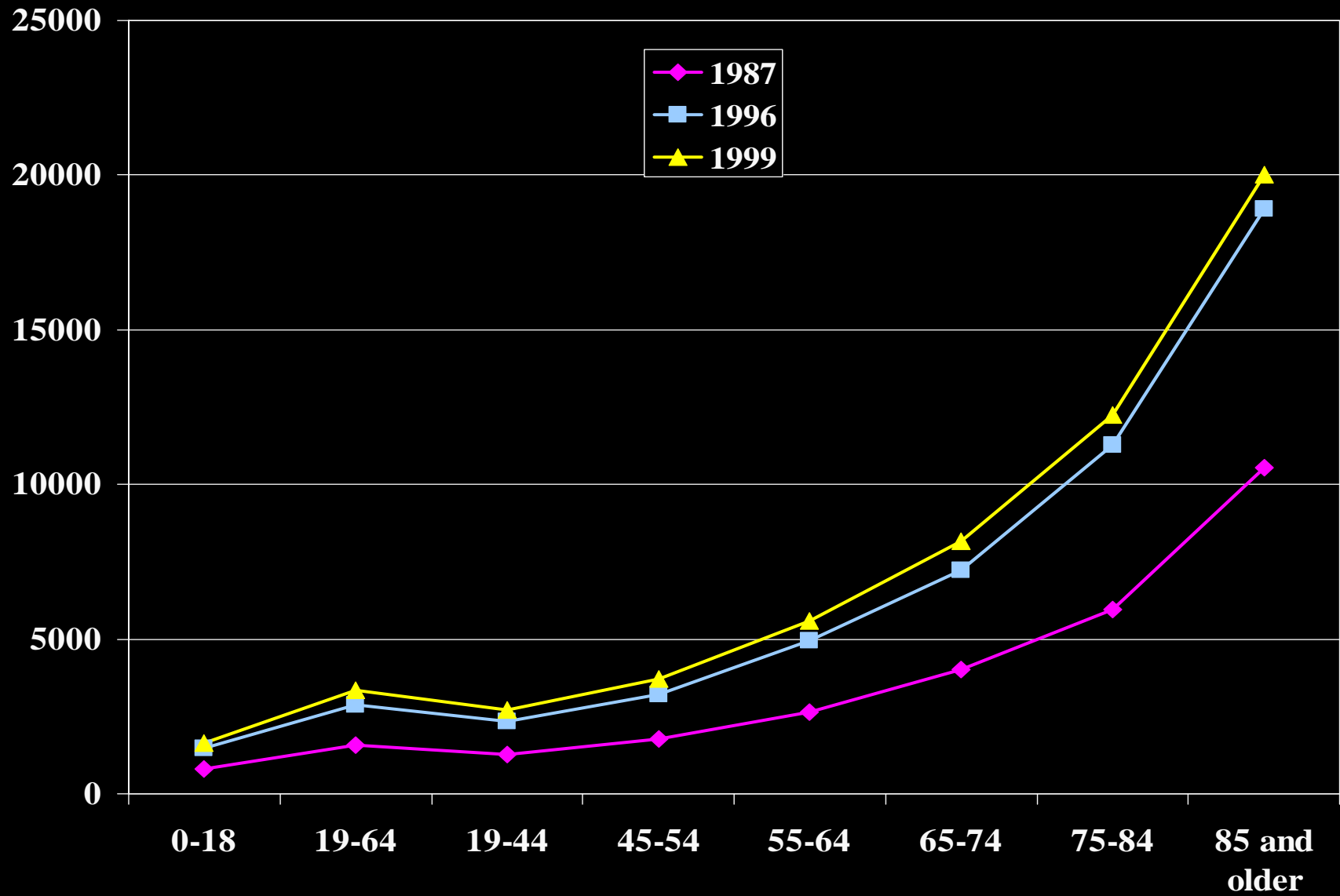
Mean dental expenditure per visit by age, Australia, 2003



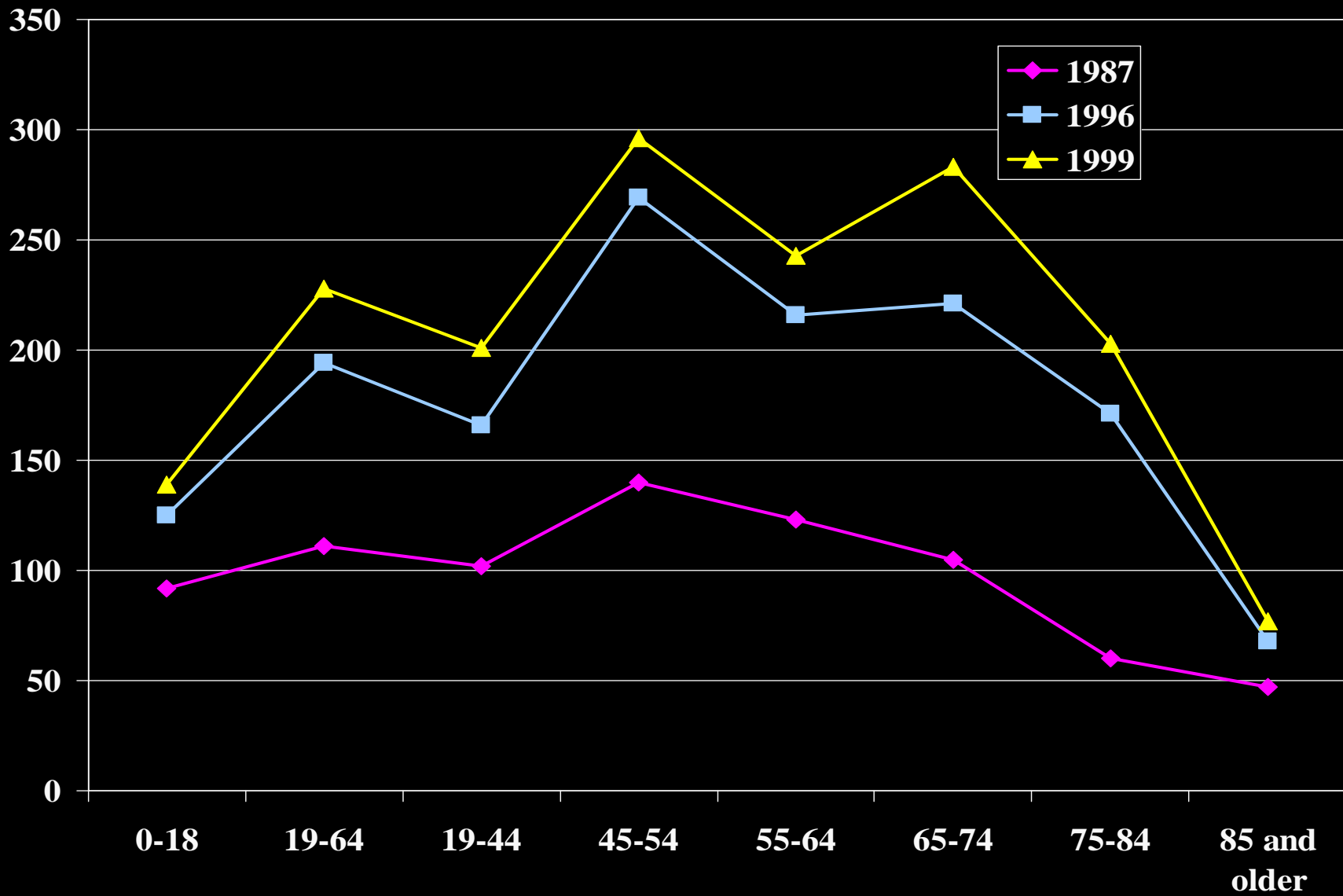
Mean dental expenditure per year by age, Australia, 2003



Age distribution of general health costs. USA

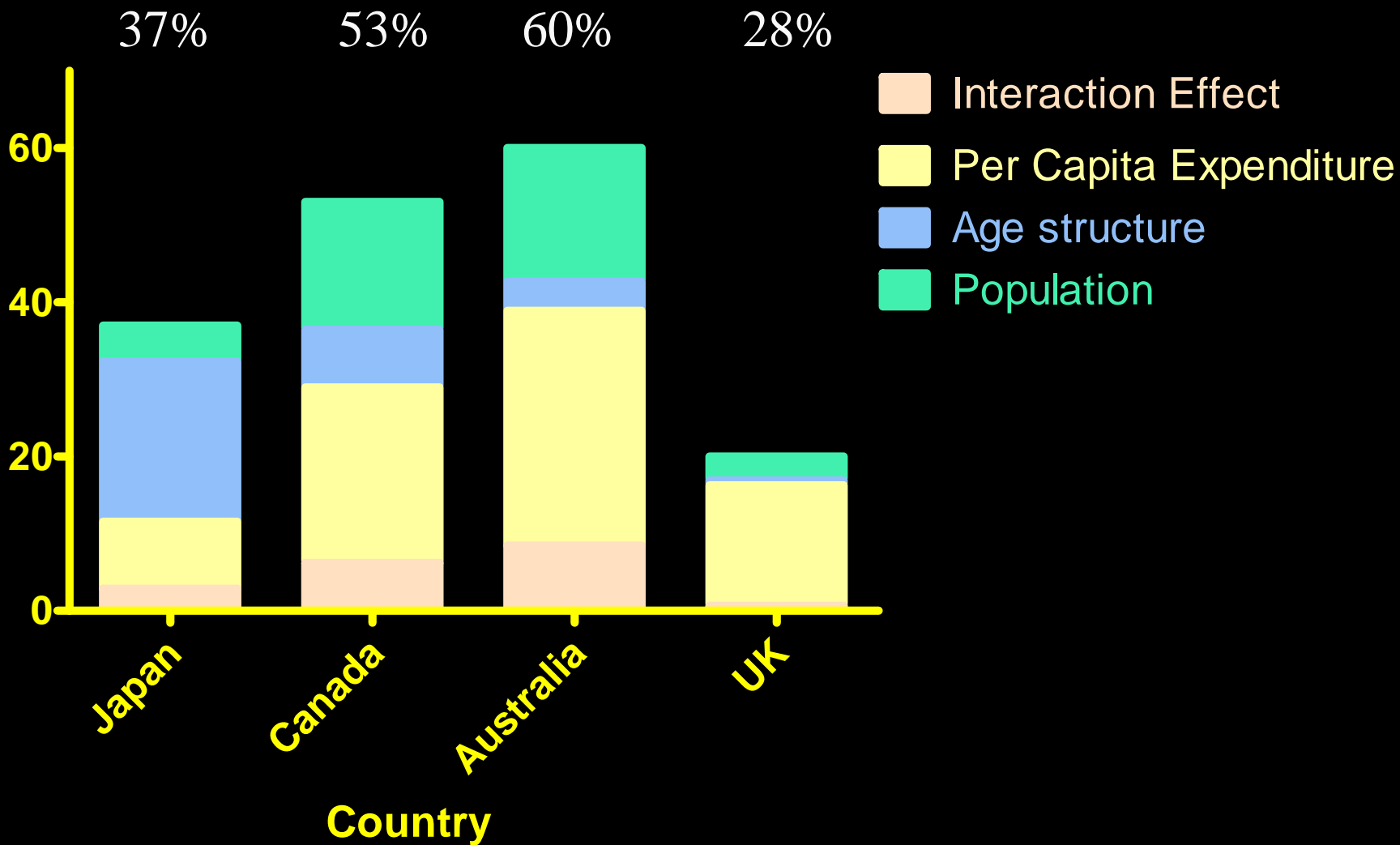


Age distribution of dental health costs. USA



Relative contribution of ageing

% contribution to overall expenditure change



Compression of morbidity

- Epidemiological transition
 - From deaths at early ages from acute causes
 - To deaths at later ages from chronic causes
- Compression of morbidity
 - From many years in later life in poor health
 - Few years in very late life in poor health
- Resulting in more years in good health rather than poor health

Policy responses

- Reducing the negative impact on growth of GDP
- Reducing overall costs of health care
- Reducing the public costs of health care and pension payments

Increasing self funding for retirement

- Increasing self funding for retirement
 - Potentially inflationary
 - Current account implications
- Reducing the costs of health care
 - User focussed
 - Ignores providers

Another view of ageing

- Demographic determinism / dependency
- Affordability
- People are buses, not trams (Hicks)
- The social response to ageing vs ageing itself.

Another view of ageing

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Dependency

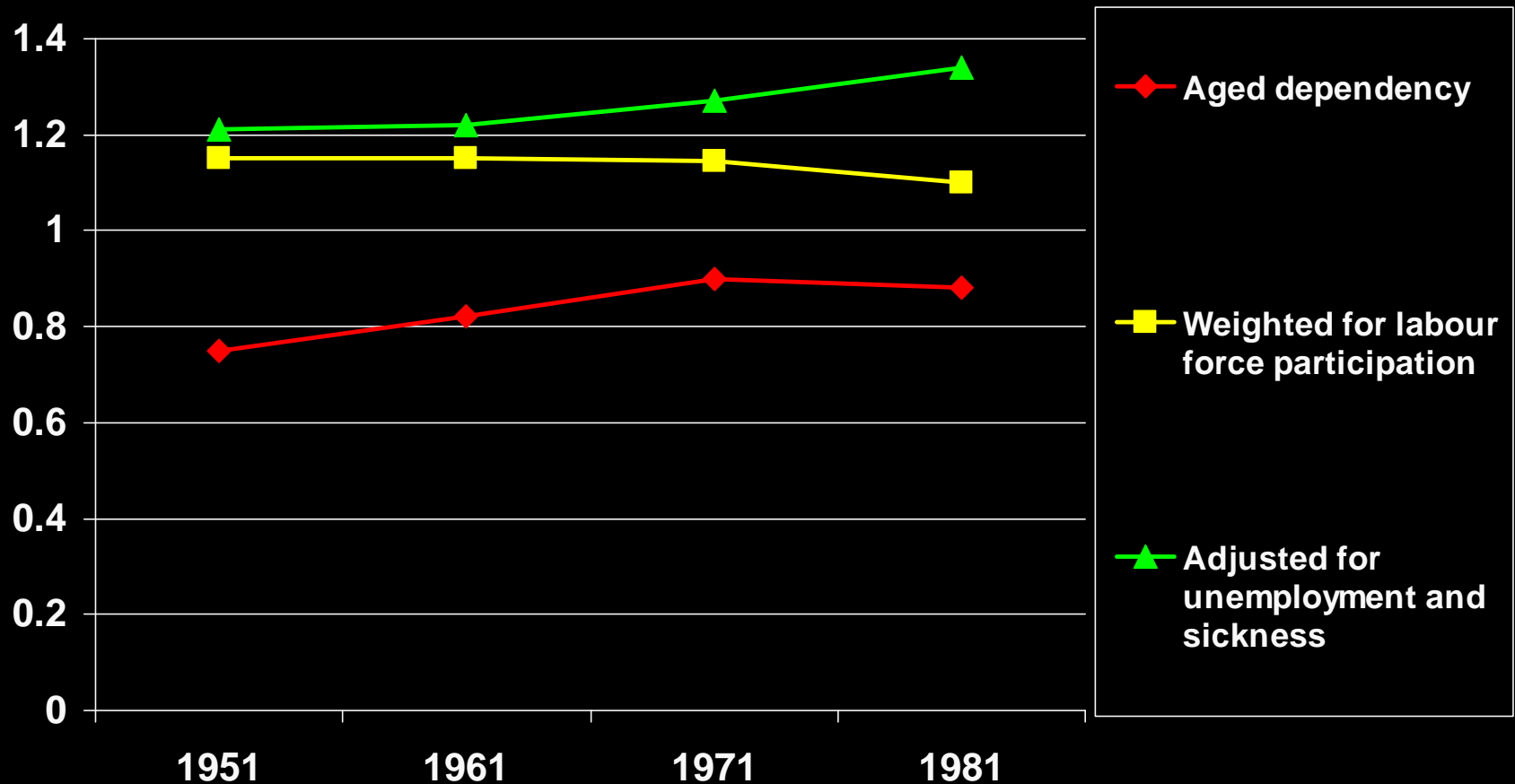
- Age-based dependency ratios

$$\text{Ratio} = \frac{0-15/20 + 60/65+}{15/20 - 60/65}$$

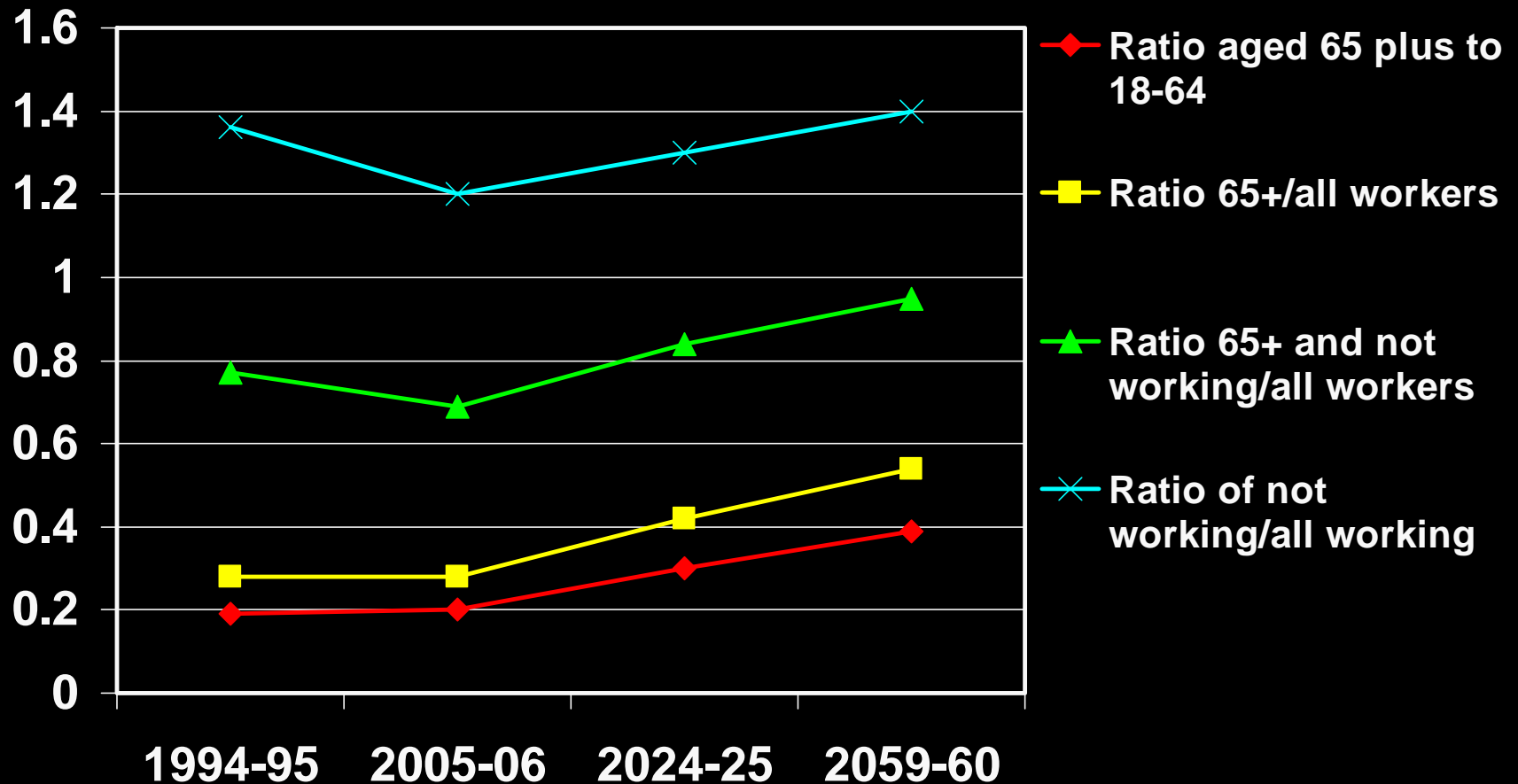
- Old-age dependency ratios

$$\text{Ratio} = \frac{60/65+}{15/20 - 60/65}$$

Dependency ratios - UK



Dependency ratios - Australia



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GDP and expenditure projections - PC

	2003	2044-45
GDP	39611	72708
Health expenditure	2257	9117
Welfare expenditure	2653	5598
Balance of GDP	34699	57991

Source: ABS Cat 5206 2/3/05; Productivity Commission 2005, various tables

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Patterns of retirement in late 20th C Australia

- Cohort factors
 - WWII veterans
 - superannuation
 - home ownership
- Time factors
 - invalid pensions
 - early retirement/leisure
 - recession - unemployment
 - recession - discouraged workers

Another view of ageing

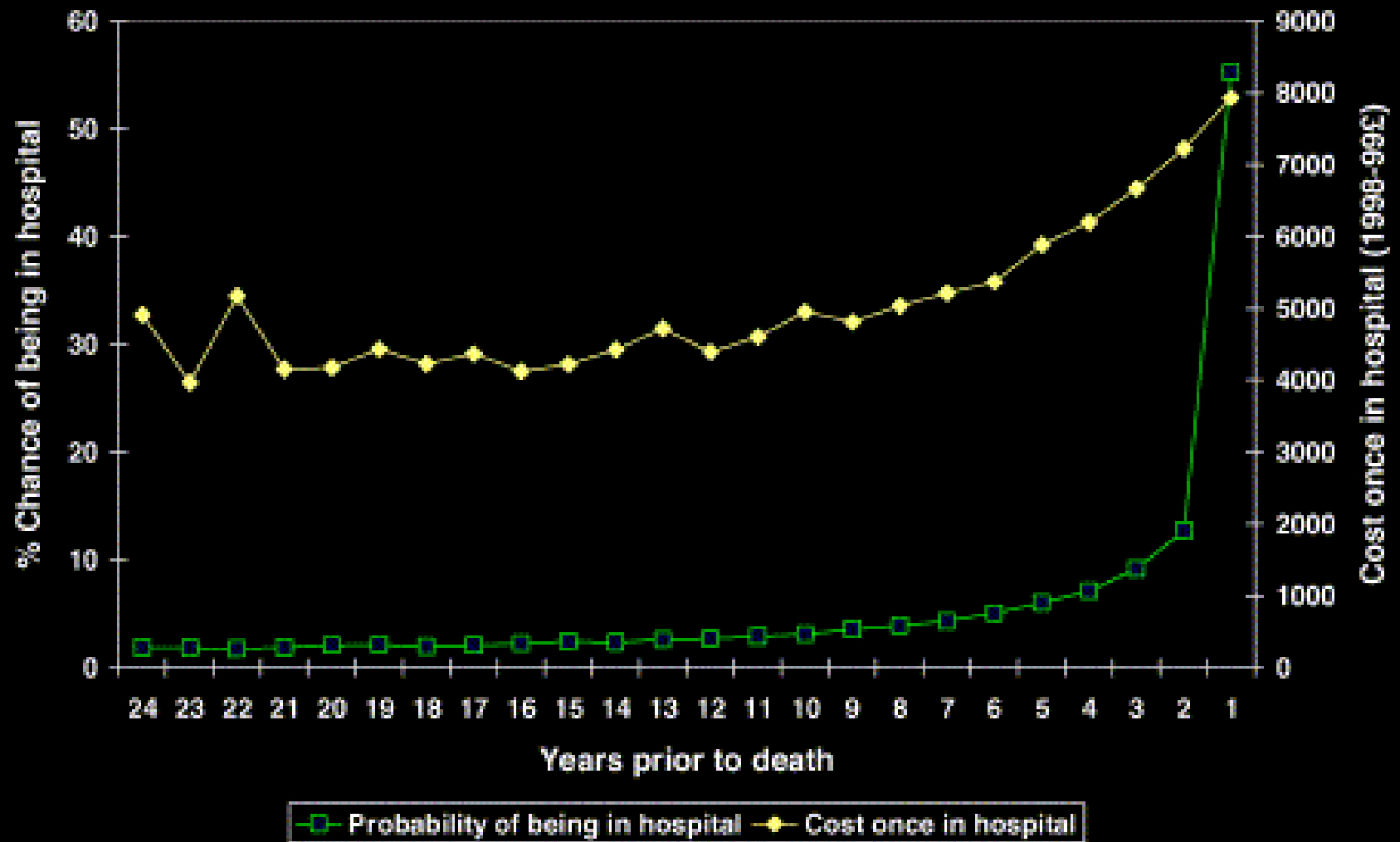
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- People are buses, not trams (Hicks)
- **The social response to ageing vs ageing itself.**

Future challenges

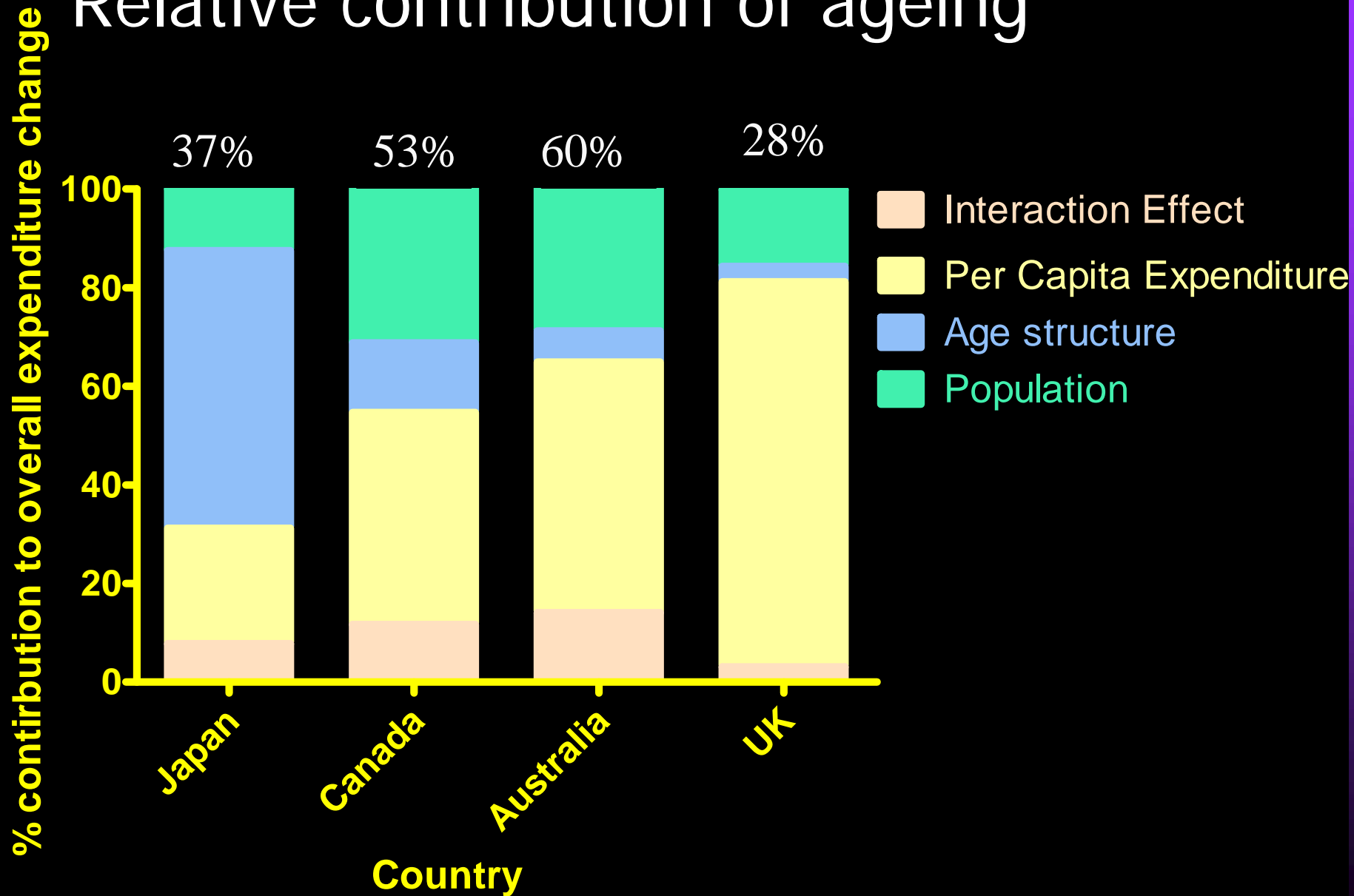
- Comparatively little work on effects of population ageing on dentistry
- Research agenda to inform planning
- Understanding the drivers of per capita change in utilisation and costs

Thank you for your attention.

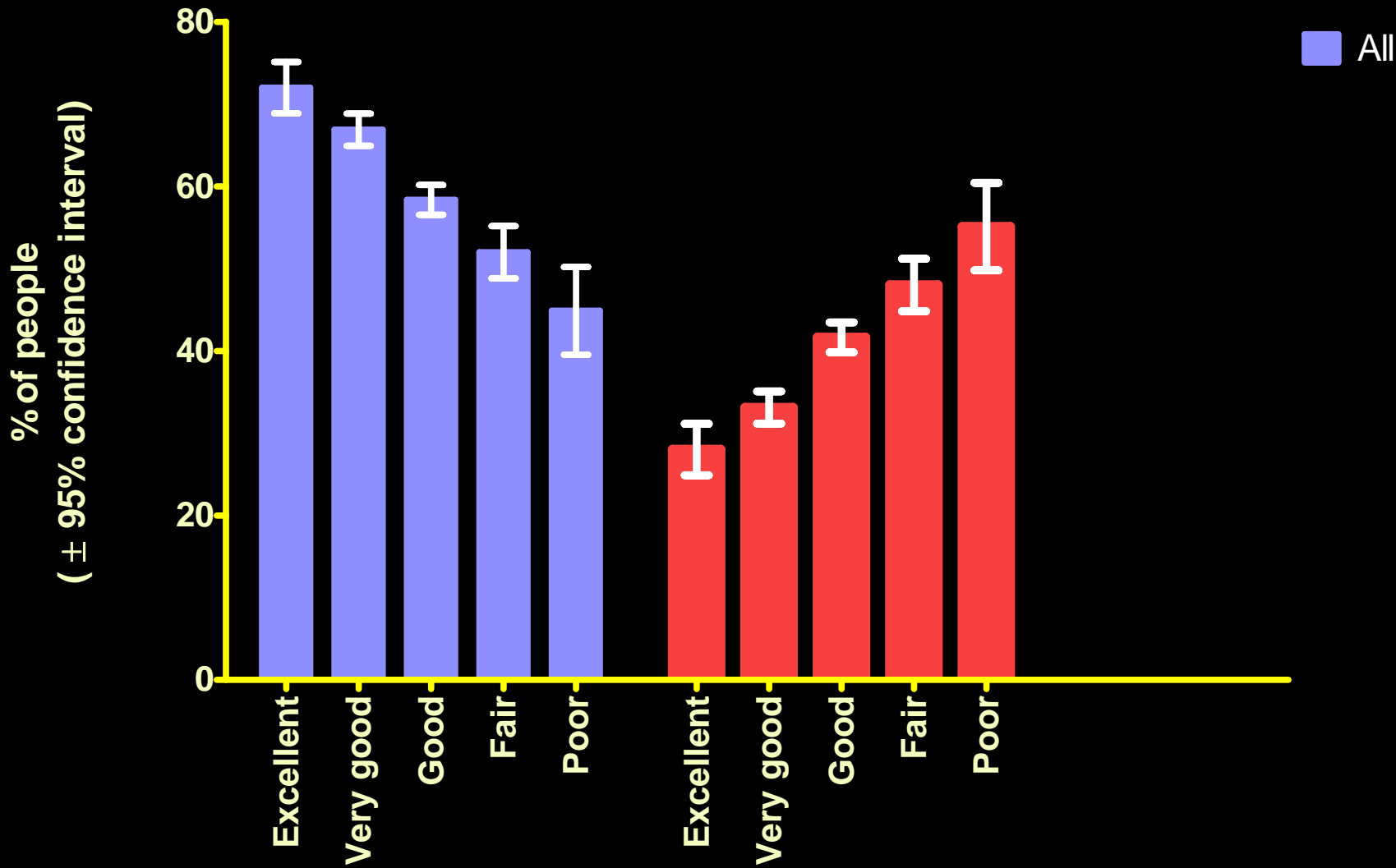
Death, hospitalisation and cost



Relative contribution of ageing



- Check National Centres for Health Statistics Website to find out whether the expenditure data they report are activity or MEPS data
- OHIP – lower in older people than younger people ie roughly mirrors inverted US for other OH measures ??
OHIP as a predictor for care-seeking behaviour?
- Break out costs by edent and dentate and public/private expenditure?



% of people
(\pm 95% confidence interval)

