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Longevity in the age of austerity

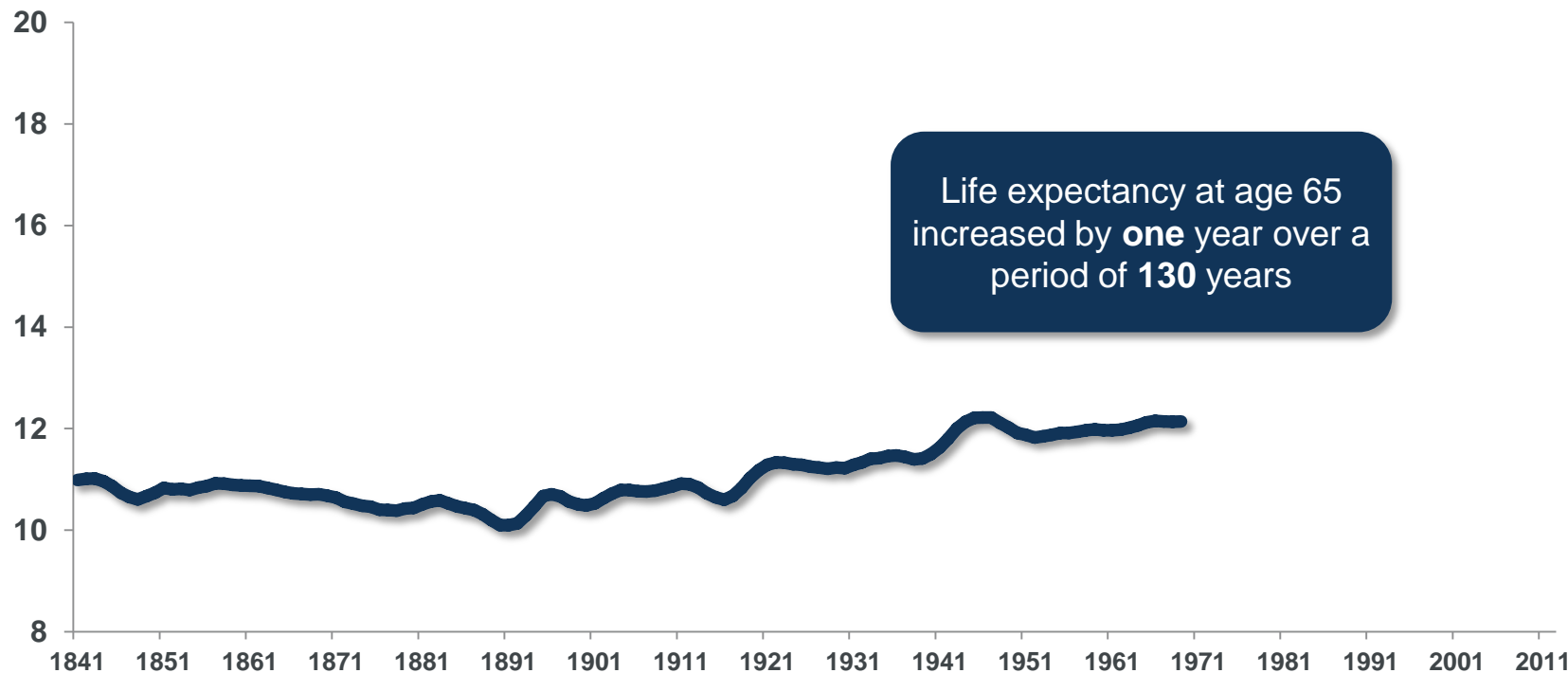
Richard Willets, Partnership

International Mortality & Longevity Symposium, September 2014



How life expectancy in retirement has increased

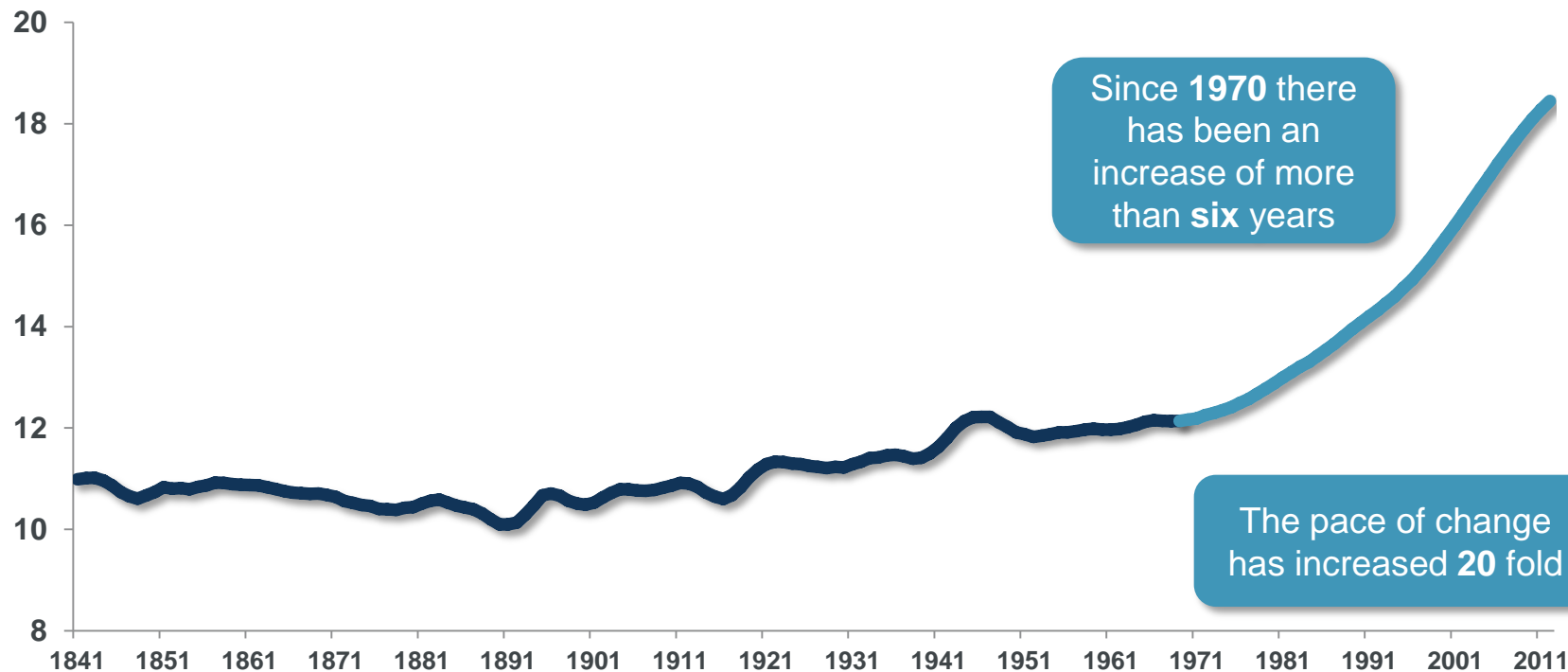
Life expectancy at age 65 for men in England & Wales, 1841 to 2012



Source: ONS/HMD

How life expectancy in retirement has increased

Life expectancy at age 65 for men in England & Wales, 1841 to 2012



Source: ONS/HMD

Some views expressed in 2013

Professor John
Ashton, President of
the Faculty of Public
Health

“It may be that we’re now moving into a new phase where the age of ever-increasing life expectancy is coming to an end”.

Professor Danny
Dorling, Oxford
University

“ ... I would say that these are the first casualties of austerity.”

Longevity in the age of austerity

- Have trends in longevity changed since the financial crisis?
- What role has economic austerity played?
- What does an analysis of global longevity trends show?

A survey of longevity specialists

Question 1.

In relation to the pace of improvement in mortality rates for the UK population (at ages 65+) which of the following is closest to your view:-

- a) Generally speaking, the underlying pace of improvement is **continuing to accelerate**
- b) Generally speaking, the underlying pace of improvement has **levelled off**
- c) Generally speaking, the underlying pace of improvement is now **decelerating**
- d) I **don't know** whether the underlying pace of improvement is accelerating, level or decelerating

A survey of longevity specialists

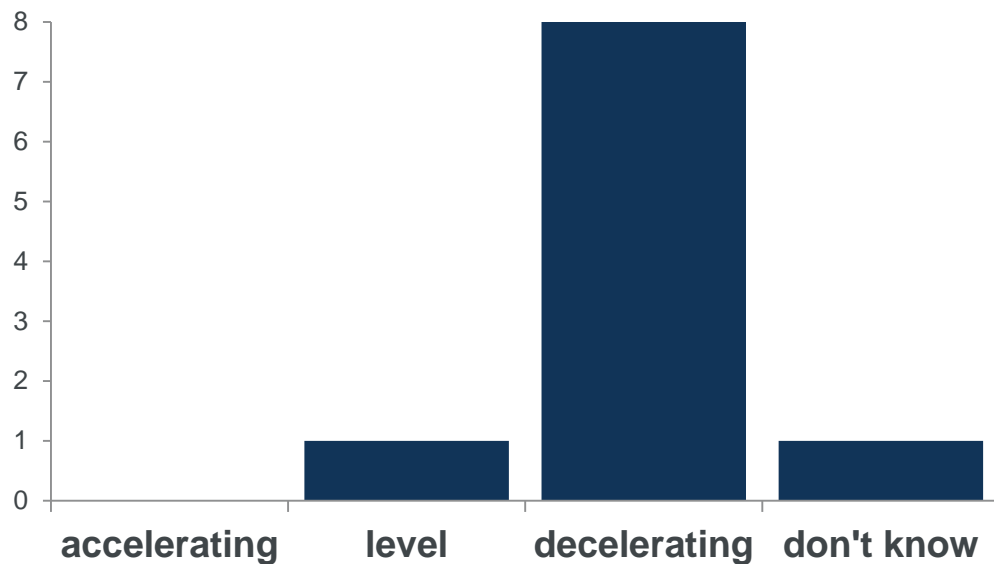
Question 2.

In relation to the pace of improvement in mortality rates for the UK population (at ages 65+) and the potential impact of the global recession and 'economic austerity' (e.g. the constraint on public spending following the financial crisis) which is closest to your view:-

- a) The recession and economic austerity has had, or will have, a **material positive** impact on life expectancy in retirement
- b) ... a **positive (but negligible)** impact on life expectancy in retirement
- c) ... **no impact** on life expectancy in retirement
- d) ... a **negative (but negligible)** impact on life expectancy in retirement
- e) ... a **material negative** impact on life expectancy in retirement
- f) I **don't know** what impact the recession and economic austerity has had, or will have, on life expectancy in retirement

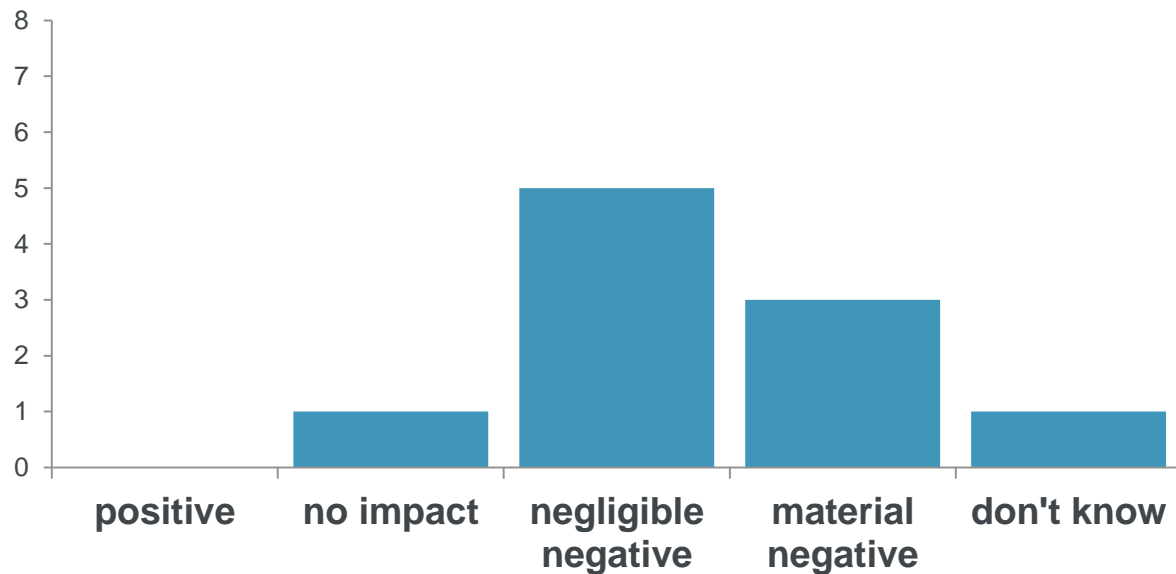
A survey of longevity specialists

Answers to question 1.



A survey of longevity specialists

Answers to question 2.





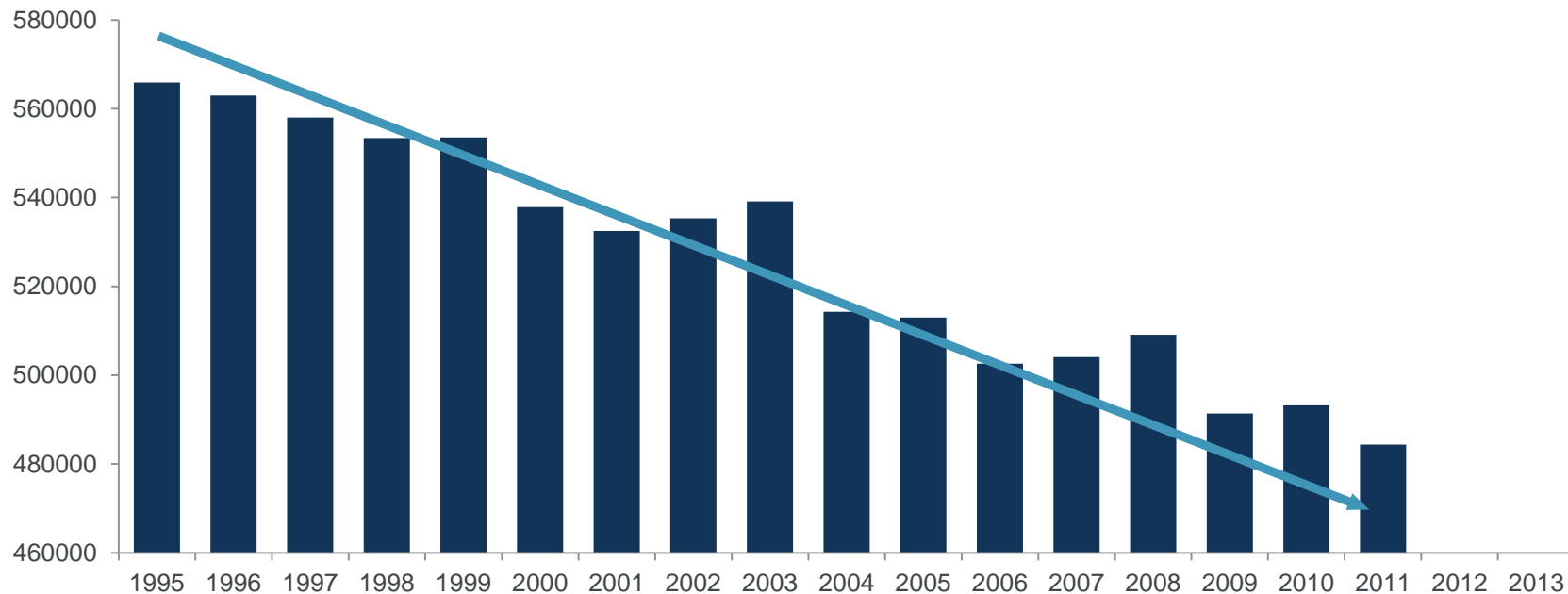
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Trends in longevity

18 September 2014

Is the pace of improvement slowing?

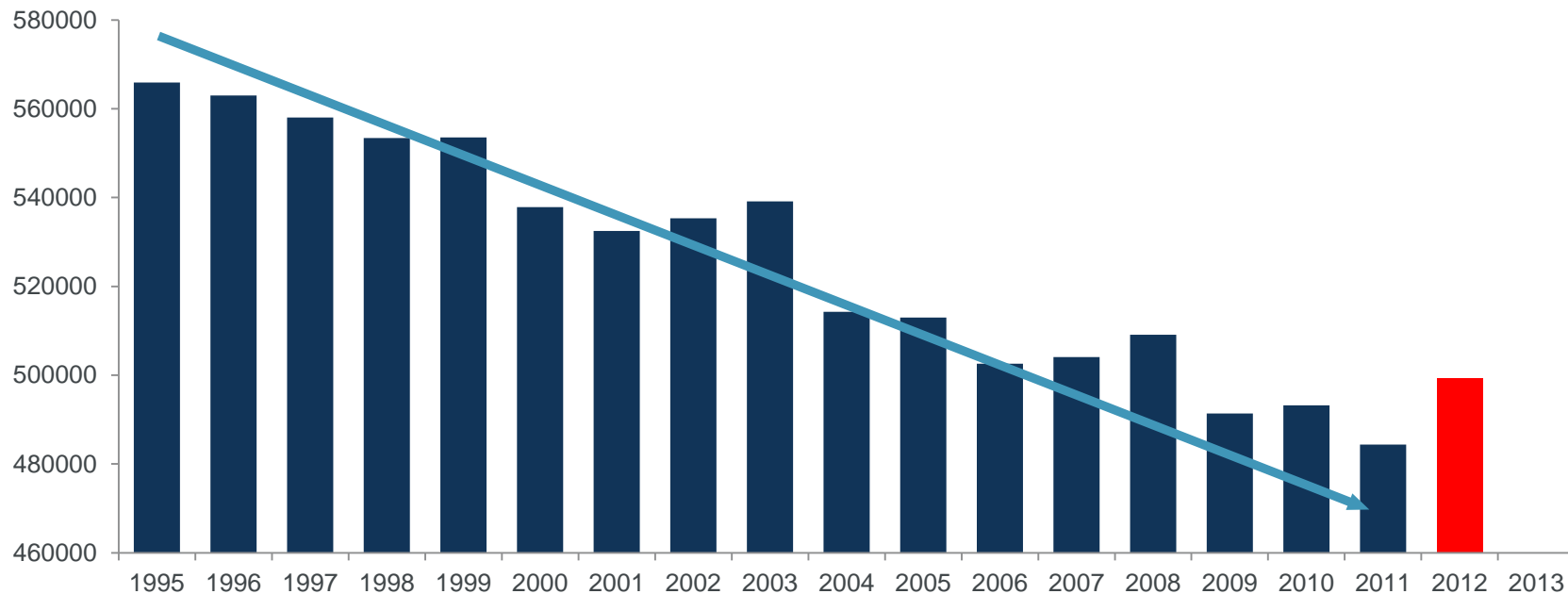
Number of deaths registered in England & Wales, 1995 to 2013



Source: ONS

Is the pace of improvement slowing?

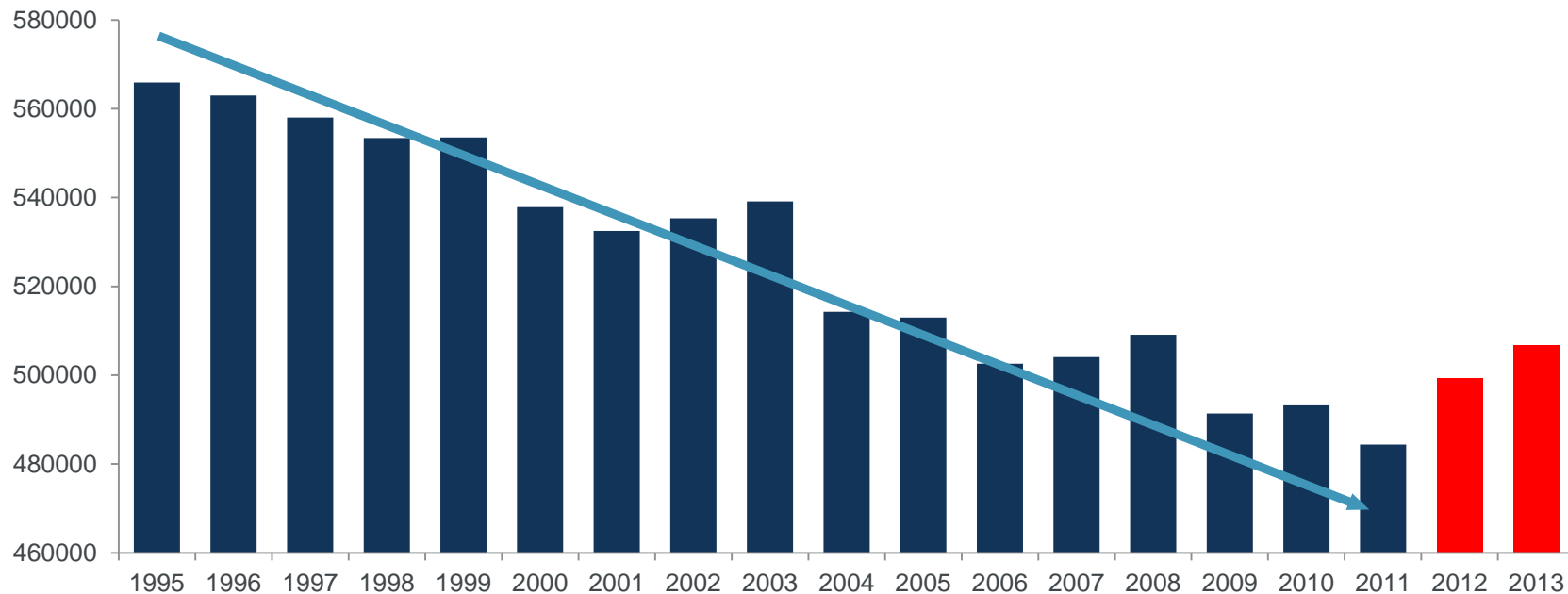
Number of deaths registered in England & Wales, 1995 to 2013



Source: ONS

Is the pace of improvement slowing?

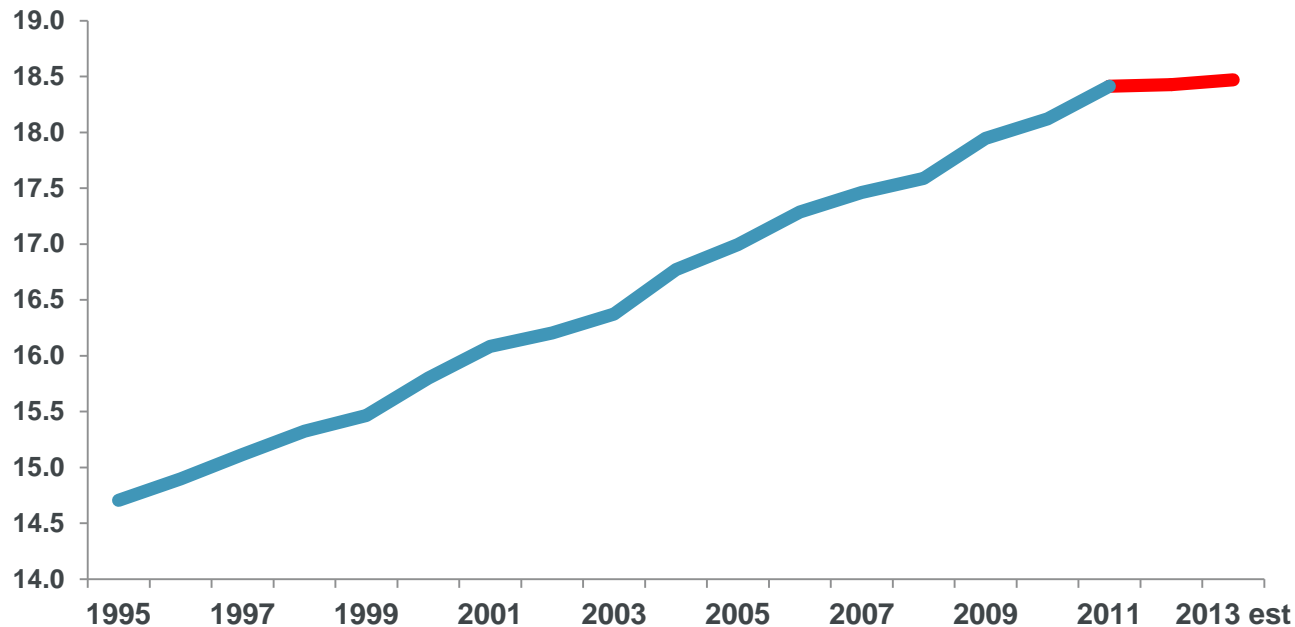
Number of deaths registered in England & Wales, 1995 to 2013



Source: ONS

Is the pace of improvement slowing?

Period life expectancy at age 65, males in England & Wales, 1995-2013



• Source: ONS (with own estimate for 2013)

The 2012/13 controversy

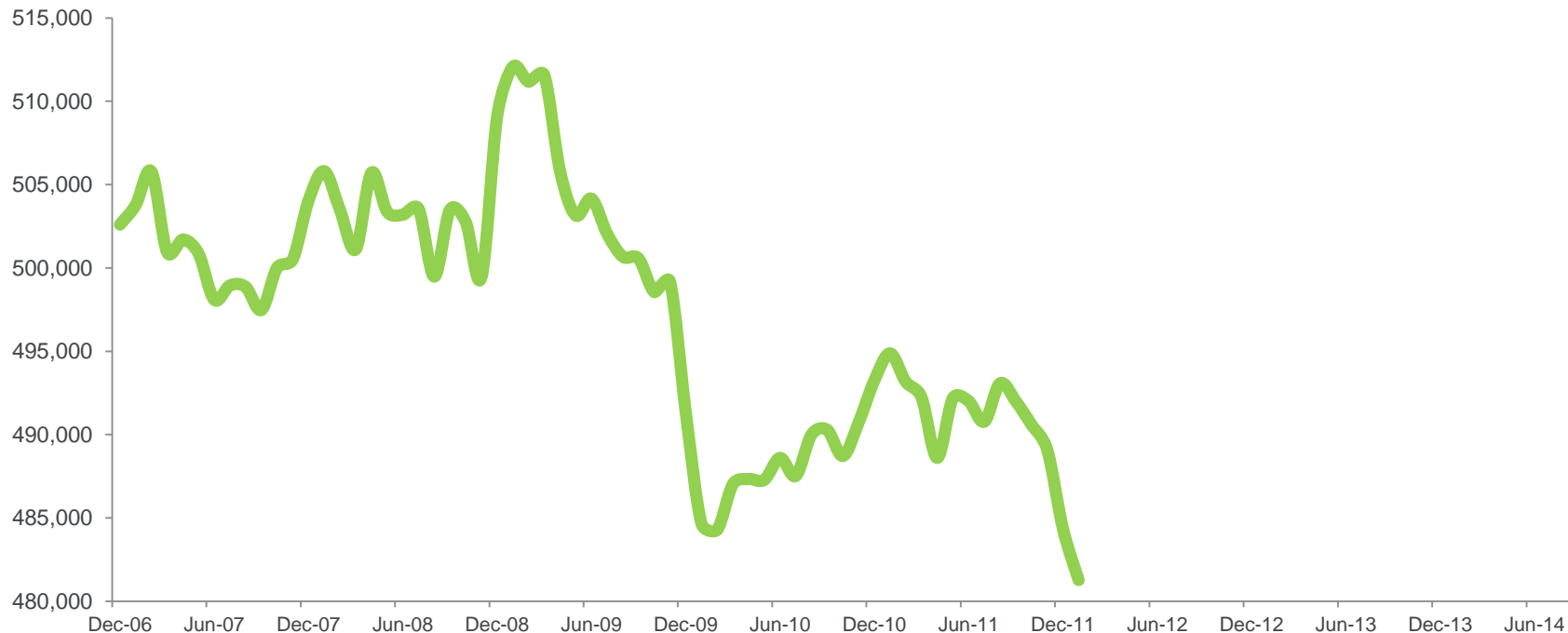
16 July 2013 - a research analyst at Public Health England circulates a report showing that death numbers have been unusually high in 2012 and much higher in 2013. He uses language such as “**unwelcome**” and “**worrying**” to describe the trend. The report was circulated internally within Public Health England, but also to some external contacts including journalists.

25 July 2013 - stories appear in HSJ and the Times describing the worrying increase in death rates. The Shadow Health Secretary, Andy Burnham, calls for an “**urgent investigation**” into the causes. The story is reported in a number of different publications.

15 August 2013 - Public Health England publish a report which concludes that the high death rates are **not unusual** and caused by influenza and low temperatures. They also publish a letter saying that the methodologies used to produce their previous report were flawed. This was met with some scepticism.

What does the most recent data show?

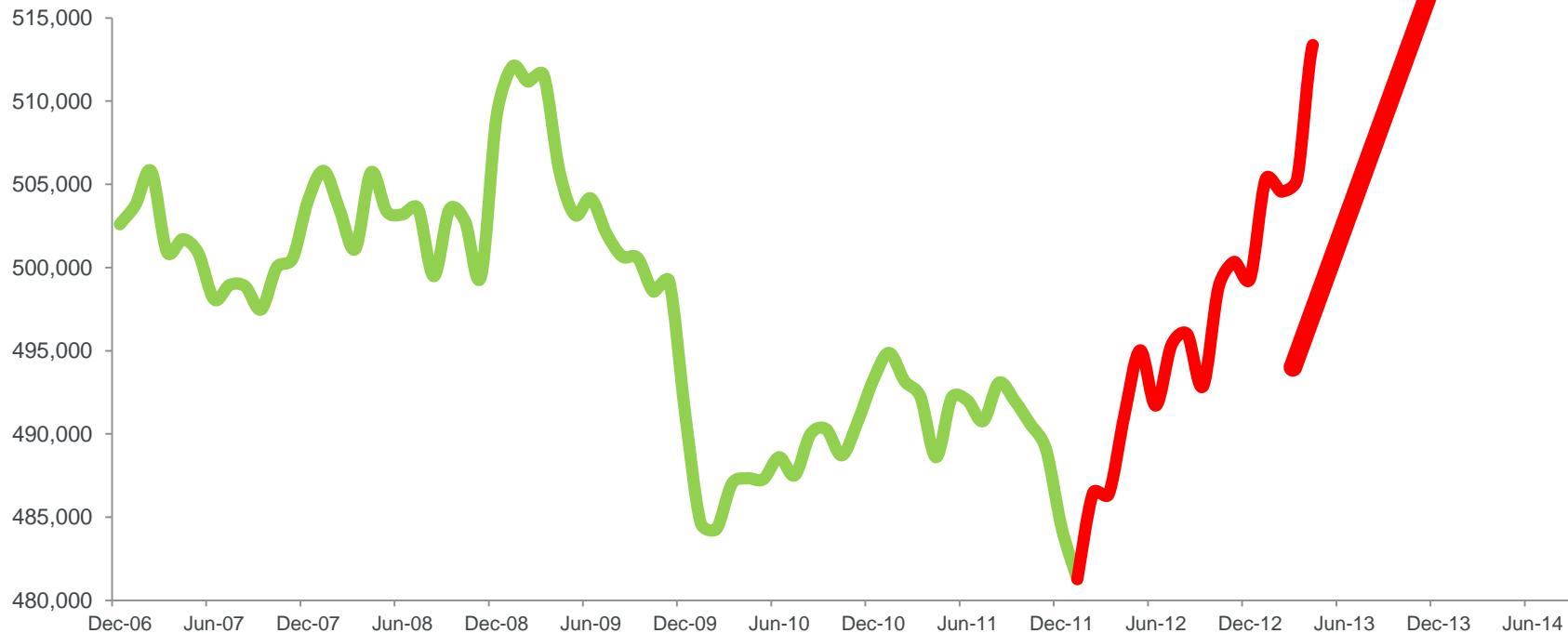
Death registrations in England & Wales, 12 month rolling total



Source: ONS

What does the most recent data show?

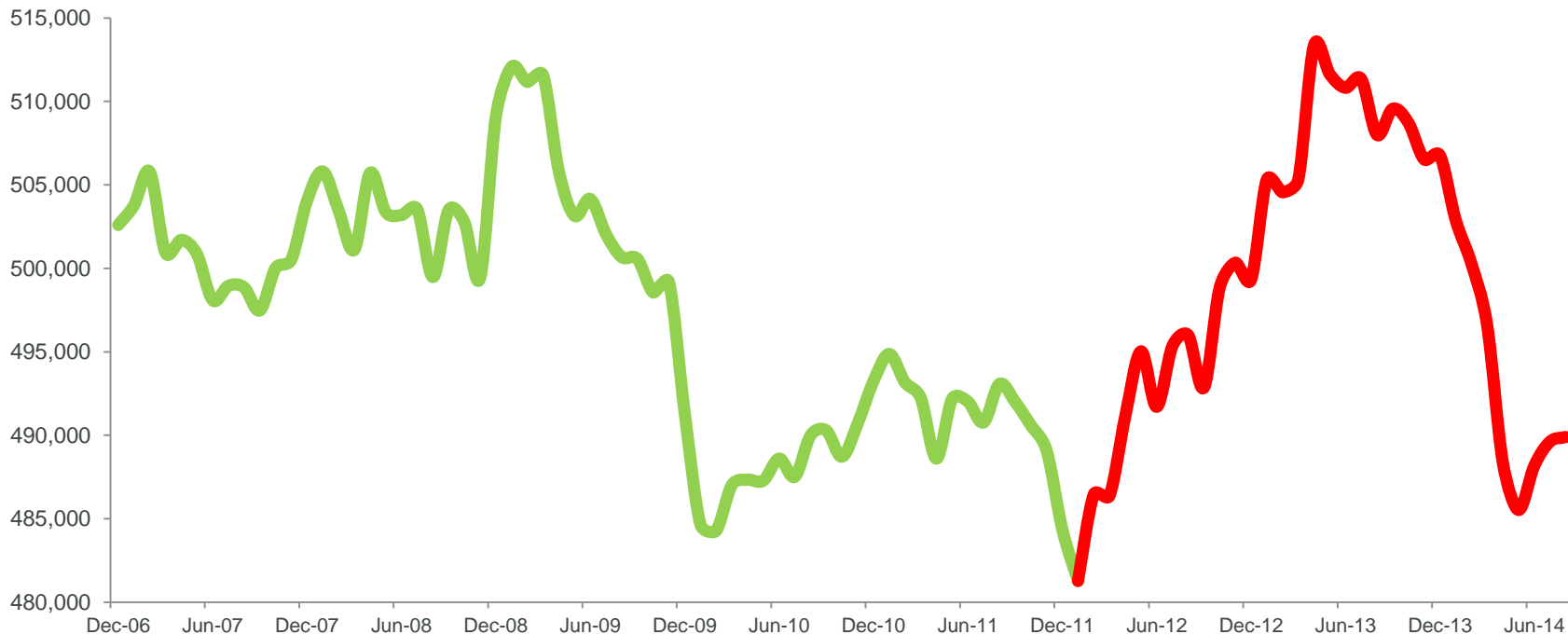
Death registrations in England & Wales, 12 month rolling total



Source: ONS

What does the most recent data show?

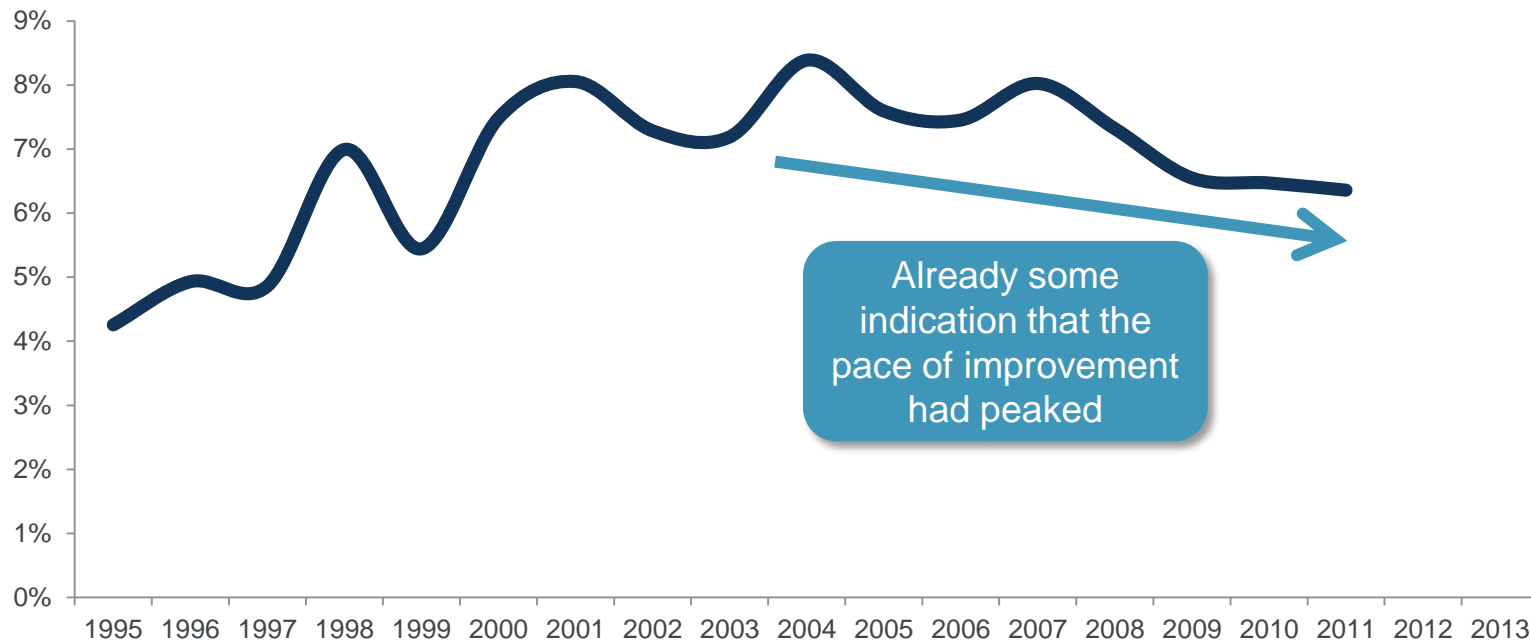
Death registrations in England & Wales, 12 month rolling total



Source: ONS

What does the most recent data show?

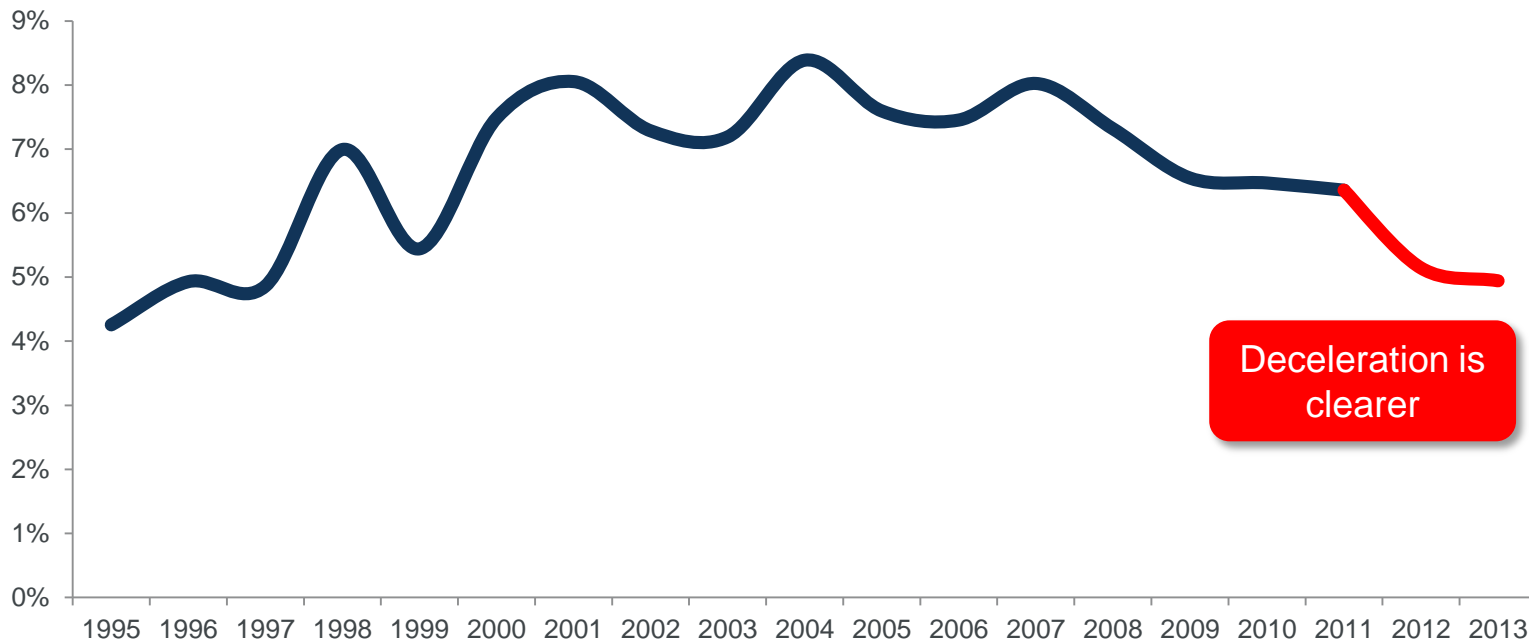
Increase in life expectancy for males in England & Wales aged 65 over previous 5 years, 1995-2011



Source: ONS

What does the most recent data show?

Increase in life expectancy for males in England & Wales aged 65 over previous 5 years, 1995-2013



Source: ONS (with own estimate for 2013)



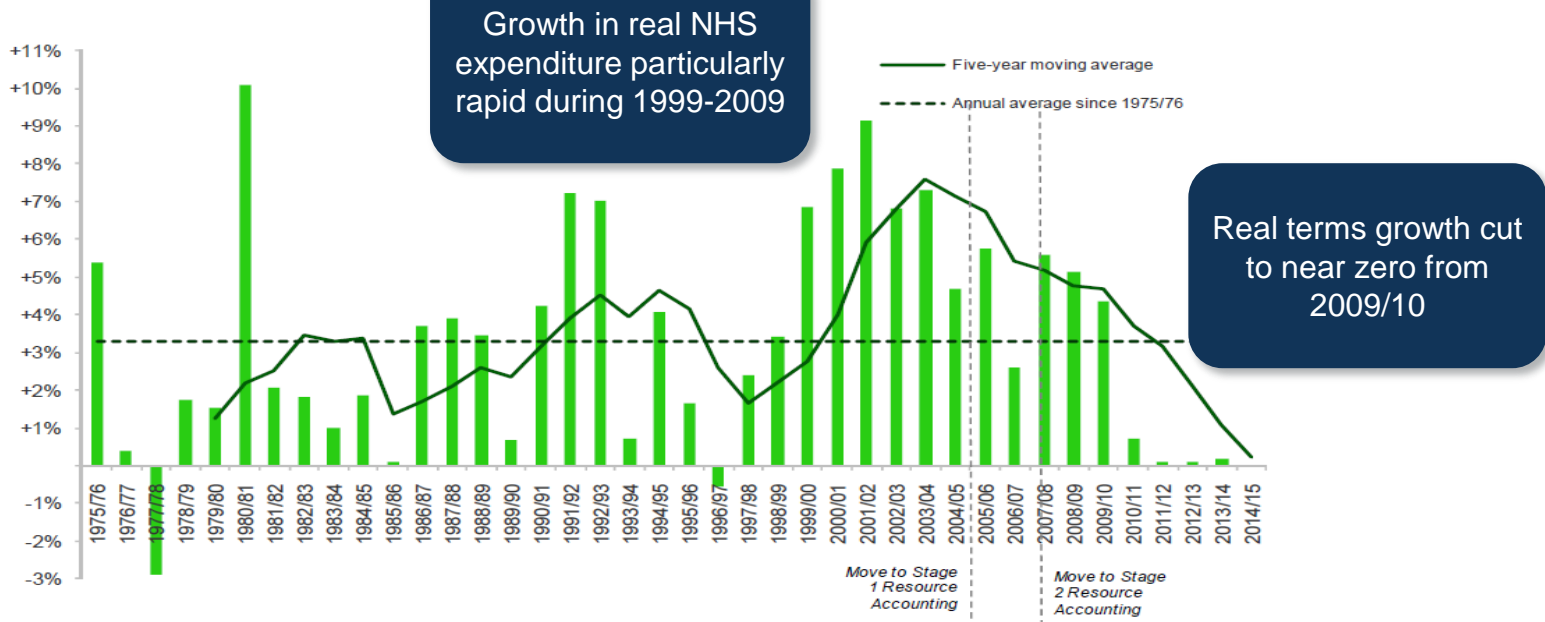
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Economic austerity

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NHS expenditure

Annual percentage change in real terms NHS expenditure and planned expenditure in England 1975/75 to 2014/15



Source: NHS Funding & Expenditure, House of Commons Library (2012)

NHS statistical indicators

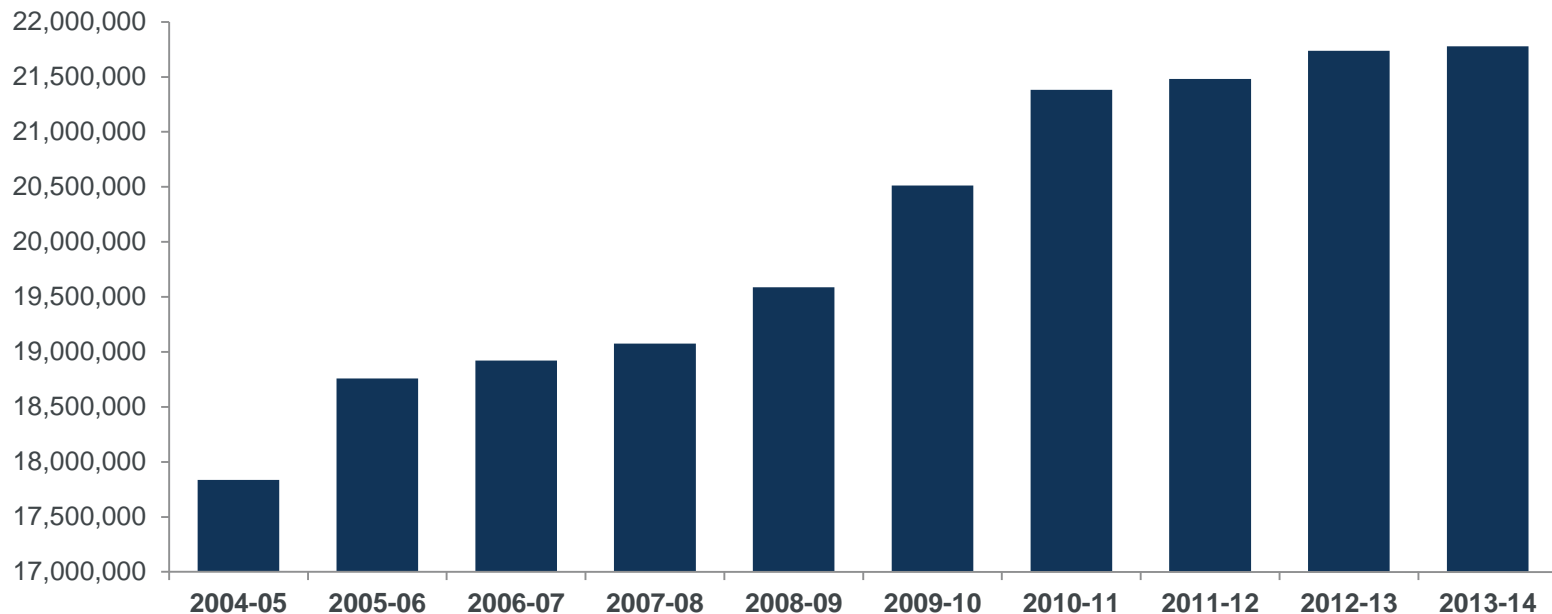
Summary of statistical indicators

Indicator	Summary of recent trend
Waiting times for cancer patients	Trend broadly stable
Volume of A&E admissions	Significant increases
A&E waiting times	Increase in > 4 hour waits
Cancelled elective operations	Trend broadly stable
Ambulance quality indicators	Generally positive
Bed availability and occupancy	Reducing availability
Referral to treatment waiting times	Trend broadly stable
Critical care beds	Number increasing, occupancy rate stable
Delayed transfers of care	Trend broadly stable
Hospital activity	Steady increase in inpatient and outpatient activity
Patient experience	Mixed (e.g. outpatient positive trend, A&E negative trend)

• Data source: NHS England (2014)

Increasing pressure on A&E

Total A&E attendances per annum (including minor injury units)

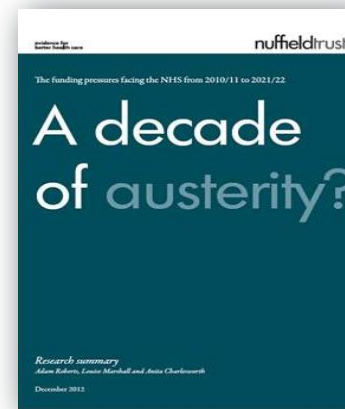


• Source: NHS England (2014)

A decade of austerity?

‘The funding pressures facing the NHS from 2010/11 to 2021/22’

A Nuffield Trust Report (December 2012)



*“Cost pressures on the NHS are projected to grow at around **four per cent a year** up to 2021/22.*

These arise from growing demand for health care – to meet the needs of a population which is ageing, growing in size, and experiencing more chronic disease.”

“If NHS funding increased in line with the historic average (four per cent a year) after 2014/15, this would be sufficient to meet the projected demands on the service.

“However, the outlook for public finances makes this highly unlikely...”

- Source: Nuffield Trust (2012)

Focus on social care for older people

'Reductions in adult social services for older people in England'

Report by The Health Foundation &
Nuffield Trust (March 2014)



“It is highly likely that reduced spending on social care for older adults is having a negative effect on the health and well-being of users and carers ... it is currently difficult to quantify the impact.”

- Local authority net spending on social care for the elderly fell by **15%** between 2009/10 and 2012/13
- Spending on home and day care reduced by **23%** over the same period
- Spending on community-based meals reduced by **46%**
- The number of older adults receiving publicly funded community-based services fell by **26%**
- The cuts are against a backdrop of growing demand for social care
- A **third** of women aged over 65 report having unmet needs for some Activities of Daily Living

Source: The Health Foundation & Nuffield Trust (2014)

How austerity has affected mortality rates

‘Why are old people in Britain dying before their time?’

Professor Danny Dorling (Feb 2014)

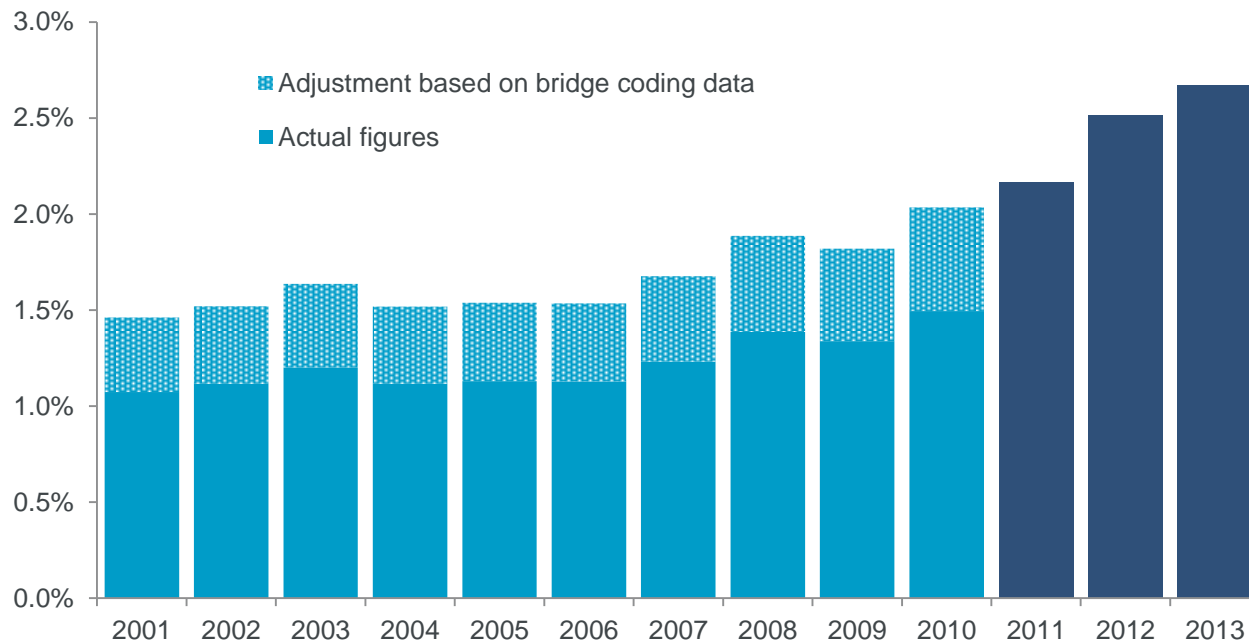
Key arguments

- Cuts in social care for the elderly
- ‘Fuel poverty’ combined with fewer home visits
- Financial difficulties in the private care sector (resulting in involuntary relocation or the threat of relocation)
- Negative impact of NHS re-organisation
- Jump in number of deaths caused by dementia (e.g. Stuckler & McKee, 2013)



Trend in dementia deaths

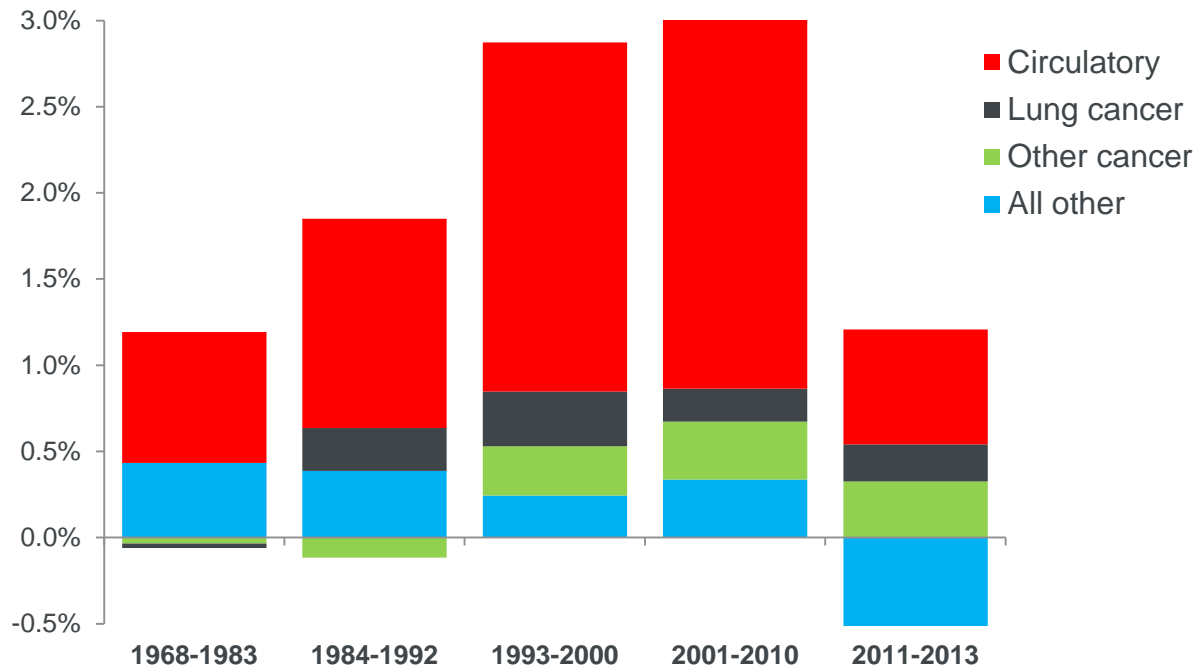
Mortality rate for Dementia & Alzheimers (F01, F03 & G30), females aged 85+, England & Wales, 2001-2013



Source: Own calculations using ONS data

Cause of the deceleration

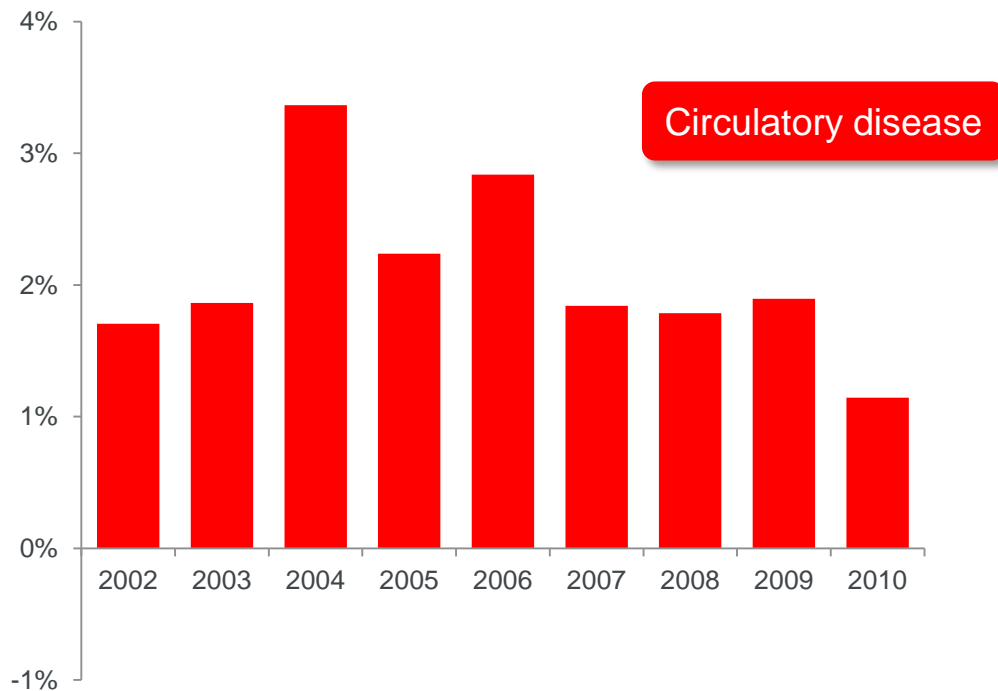
Average annual mortality improvement , split by cause, males aged 60-89, England & Wales, 1968-2013



Source: Own calculations using ONS data

Cause of the deceleration

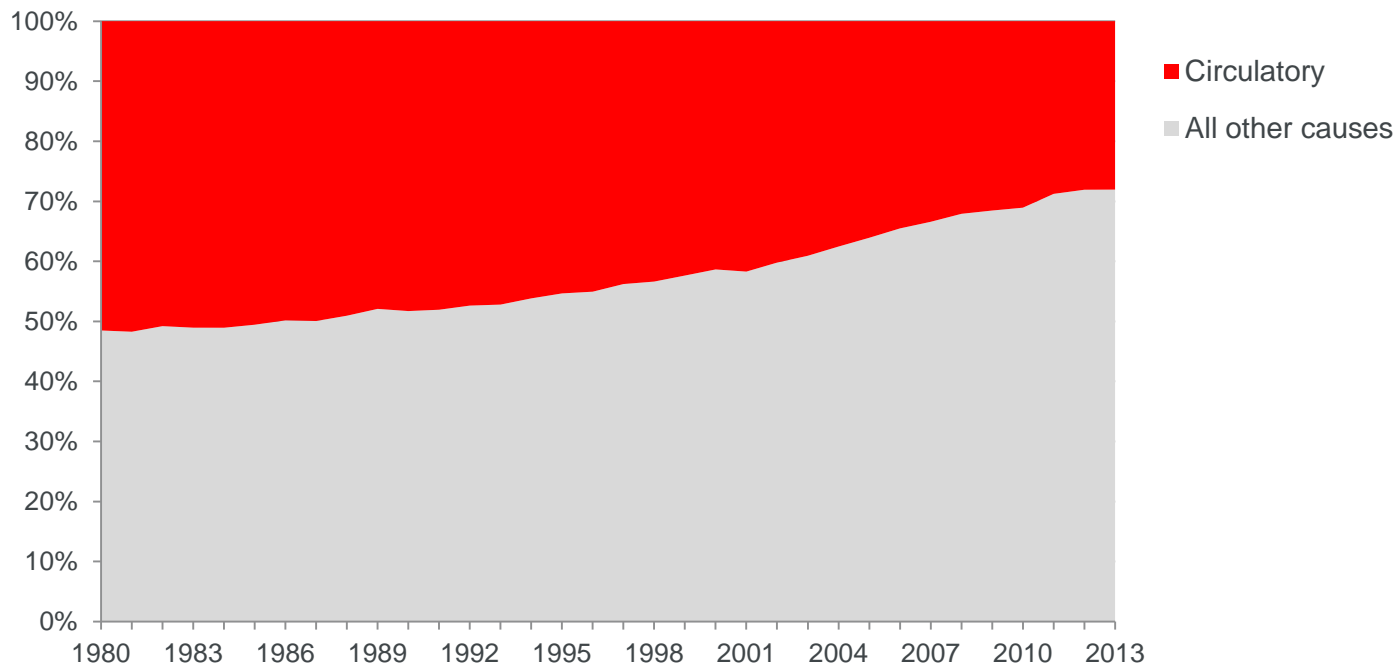
Average annual mortality improvement , split by cause, males aged 60-89, England & Wales, 2002-2010



Source: Own calculations using ONS data

Cause of the deceleration

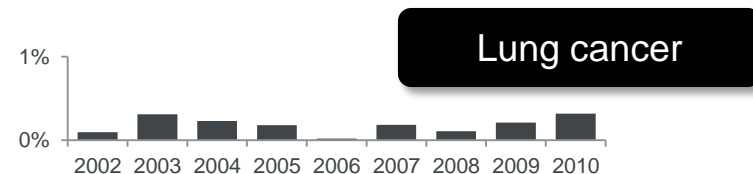
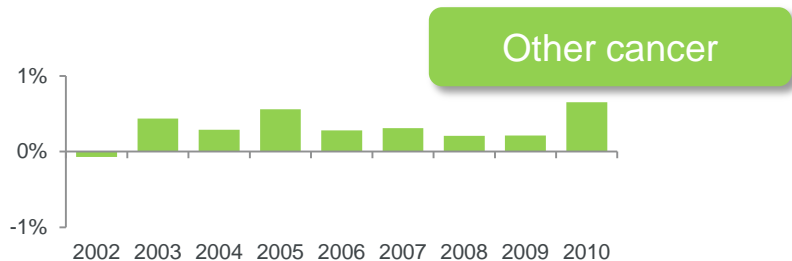
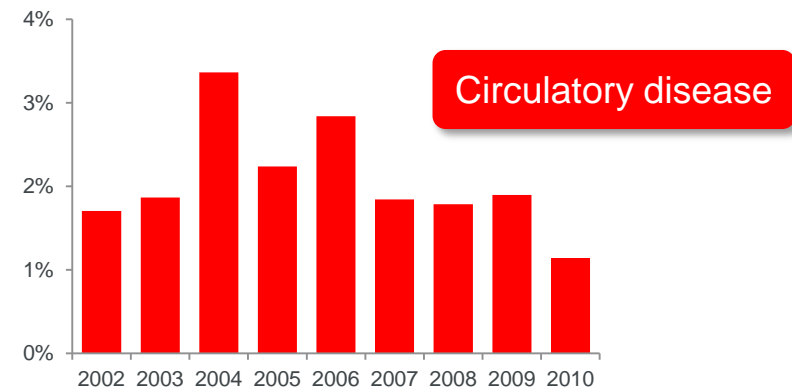
Split of deaths for males aged 65-74 into circulatory and other causes, England & Wales, 1980-2013



Source: Own calculations using ONS data

Cause of the deceleration

Average annual mortality improvement , split by cause, males aged 60-89, England & Wales, 2002-2010





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An international perspective



18 September 2014

A (brief) review of academic literature

How longevity affects economic growth...

*“Health, in the form of life expectancy, has appeared in many cross-country growth regressions, and investigators generally find that it has a **significant positive effect** on the rate of economic growth”*

Acemoglu & Johnson (2006)

*“... there is **no evidence** that the large exogenous increase in life expectancy led to a significant increase in per capita economic growth.”*

Bloom et al (2004)

*“There is no doubt that human longevity has increased substantially over the last decades. However, there is an **ongoing debate** how this affects short- and long-run economic growth.”*

Scheider & Winkler (2009)

How economic growth affects longevity...

*“... population health tends to evolve **better during recessions** than in expansions.”*

*“Although social science is not physics, regularities in the past allow us at least some confidence in forecasting the future. Historical experience tells us that **no particular increase of mortality** is to be expected as a consequence of a recession beyond an increase in suicides.”*

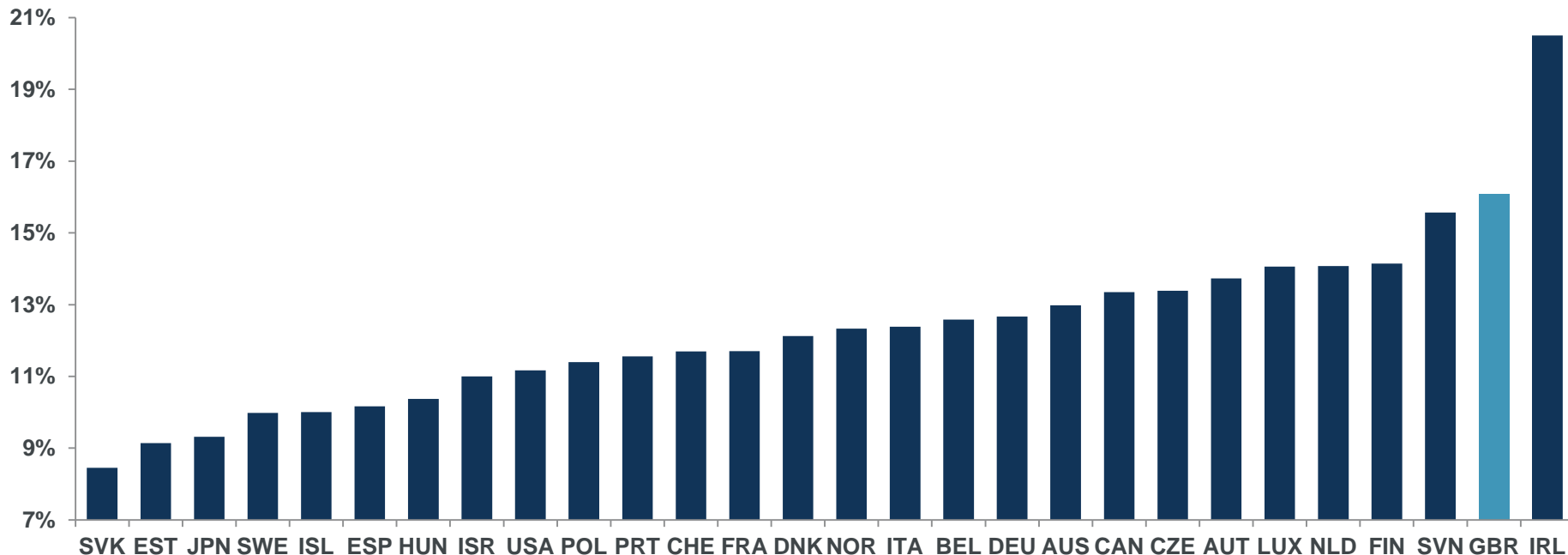
Granados & Diez Roux (2009)

*“The intuition that mortality increases when the economy declines ... **appears wrong.**”*

Catalano et al (2011)

How does the UK compare to similar countries?

Percentage increase in life expectancy for males aged 65, 1997-99 to 2007-09, 28 member states of the OECD



• Source: own calculations using HMD

The periods of most rapid improvement

Ten-year periods showing the most rapid increases in life expectancy at age 65, OECD countries since 1900

Country	Gender	% increase	10-year period ending	Notes
Ireland	males	20.8%	2005-2007	Coincides with the ‘Celtic Tiger’ boom - GDP growth was 10% p.a. from 1995 to 2000, then approx. 7.5% up to 2007
Finland	females	17.5%	1977-1979	Finland experienced rapid economic growth between 1967 and mid-1970s. In 1967-99 life expectancy for Finnish females was lowest in OECD
Czech Republic	males	16.4%	1999-2001	‘Velvet Revolution’ took place in 1989 and Czechoslovakia dissolved into its constituent states in 1993
Japan	males	16.4%	1978-1980	Japan experienced ‘Economic Miracle’ in post-war years with GDP growth running at 10% p.a. in the 1960s and 5% p.a. in 1970s. Stroke mortality dropped precipitously from 1965 onwards.
New Zealand	males	16.2%	2005-2007	Economic boom from 1993, with growth peaking at 7% p.a. in 1994 and averaging 3.5% p.a. for the period up to 2007
UK	males	16.1%	2007-2009	

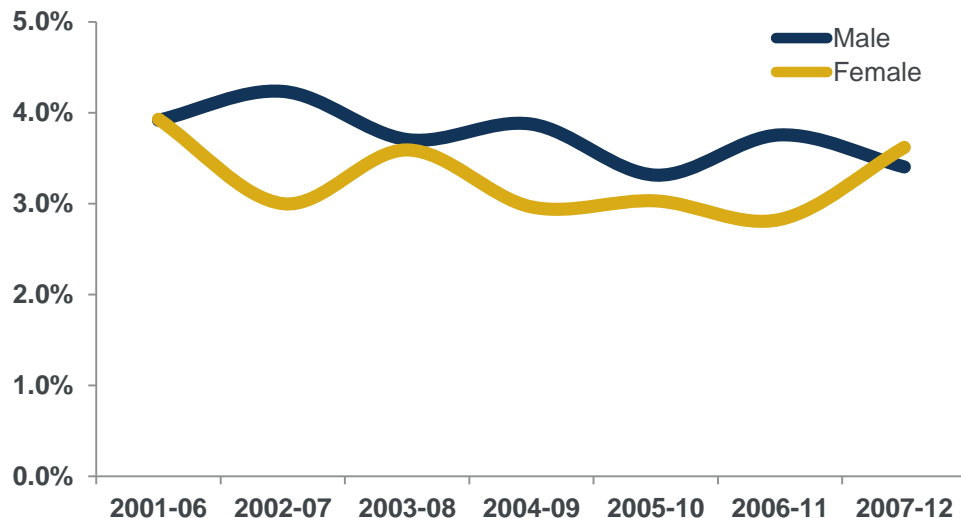
Ireland – contrasting effects for different age groups

Higher mortality rates were observed for younger adult males (30s and 40s) in the period after 2007. Increased **suicide rates** were a major factor.

“... the age group 35-44 which experienced the greatest increase in the suicide rate over the period 2007-2008 to 2009-2011 is also likely to be the age group most impacted by the serious downturn experienced by the Irish economy over the same period in terms of negative equity on property, rising unemployment and higher costs of living (increases in taxes, levies, health care costs etc.).”

Hall (2013)

Average annual rate of mortality improvement, ages 65-84, Ireland, successive five-year periods



• Source: own calculations using CSO data

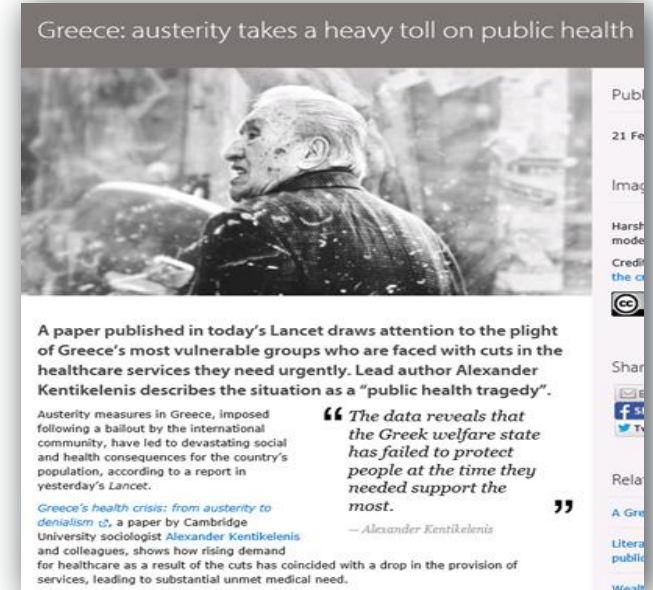
Greece's health crisis – from austerity to denialism

“Rising demand for healthcare as a result of the cuts has coincided with a drop in the provision of services, leading to substantial unmet medical need.”

Kentikelenis *et al* (2014)

- Rapidly increasing rates of **mental illness**, **suicide** and **infectious disease** incidence
- **47%** rise in people who felt they did not receive medically necessary healthcare

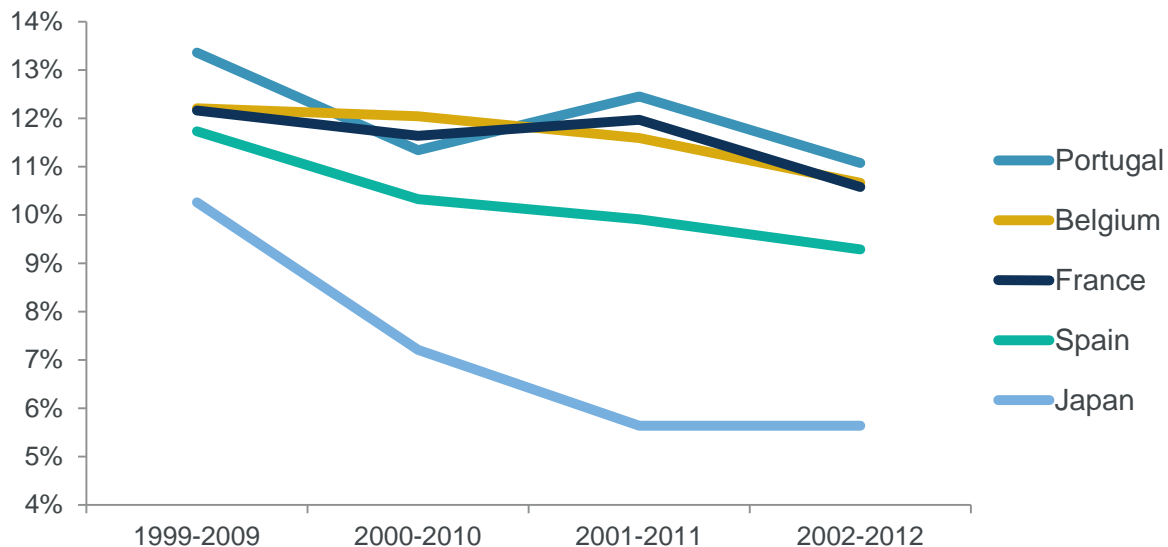
The authors point to the experiences of other countries – notably, Iceland and Finland – in surviving financial crises. They argue that, by **ring-fencing health and social budgets**, and concentrating austerity measures elsewhere, governments can offset the harmful effect of crises on the health of their populations.



Source: www.cam.ac.uk

What does the most recent data show?

Increase in male life expectancy at age 65, over successive ten-year periods, selected countries



Source: own calculations using HMD



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Conclusions



Conclusions

- The pace of improvement (in life expectancy) has decelerated at older ages
- This has been primarily due to the reducing influence of circulatory disease improvement
- It is unclear to what extent changes in funding for social care for older adults contributed to high mortality rates in 2012/13
- Emerging trends should be monitored closely
- Future funding of health and social care presents a significant challenge given underlying trends in population and healthcare provision
- What will be the impact of economic austerity...?



Questions



Comments

Expressions of individual views by members of the Institute and Faculty of Actuaries and its staff are encouraged.

The views expressed in this presentation are those of the presenter.