

Stalling progress: mortality & life expectancy trends in the UK

December 2019

Reflections from the UK and Ireland: A Making Life Better Seminar

@davidfinchrf @healthfdn



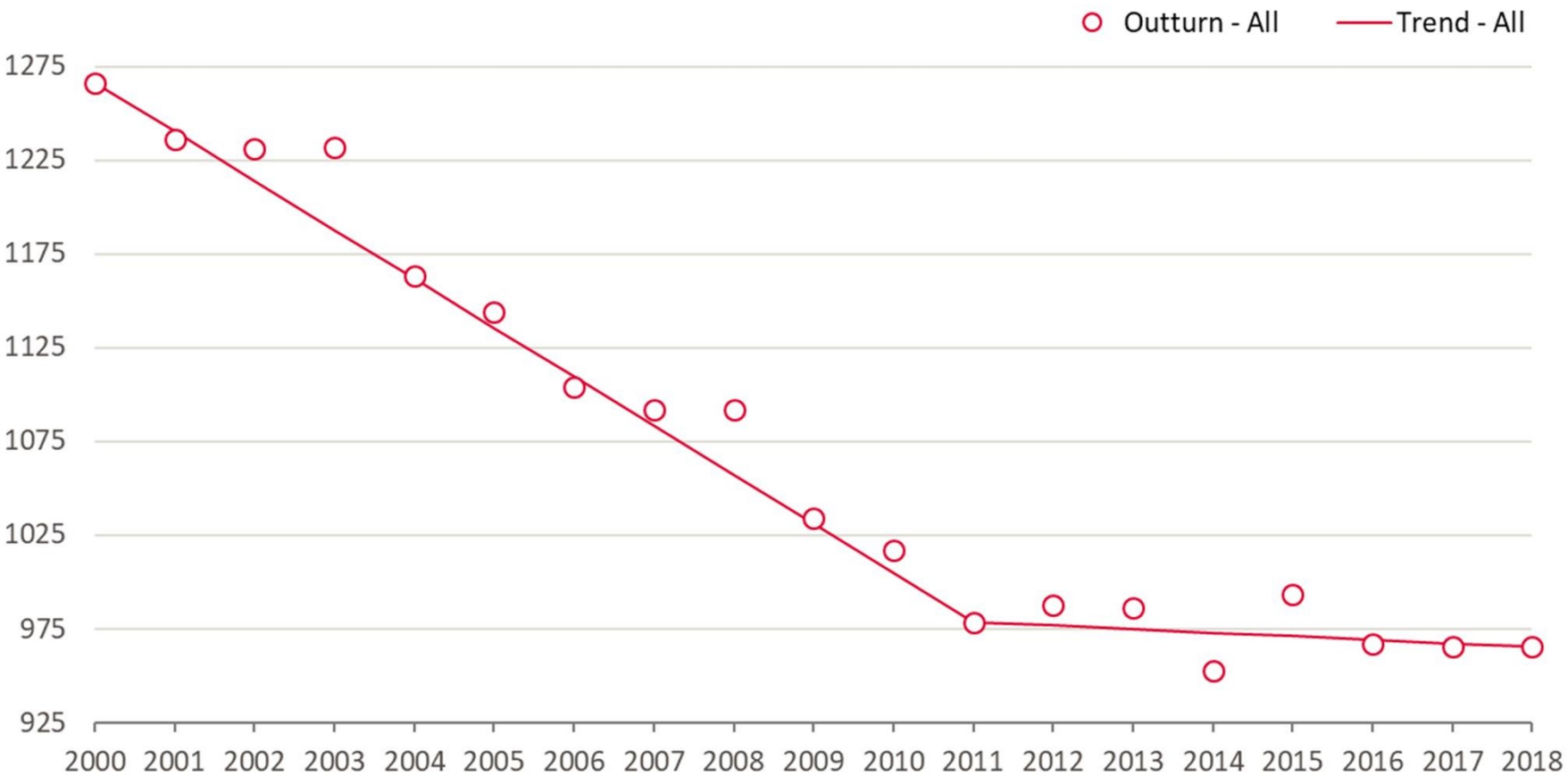
Contents

- What has been happening to life expectancy in UK and England?
- The experience & drivers for different population groups
- Causes for optimism?

What has been happening to
life expectancy in UK and
England?

Improvements in mortality slowed at the start of the decade

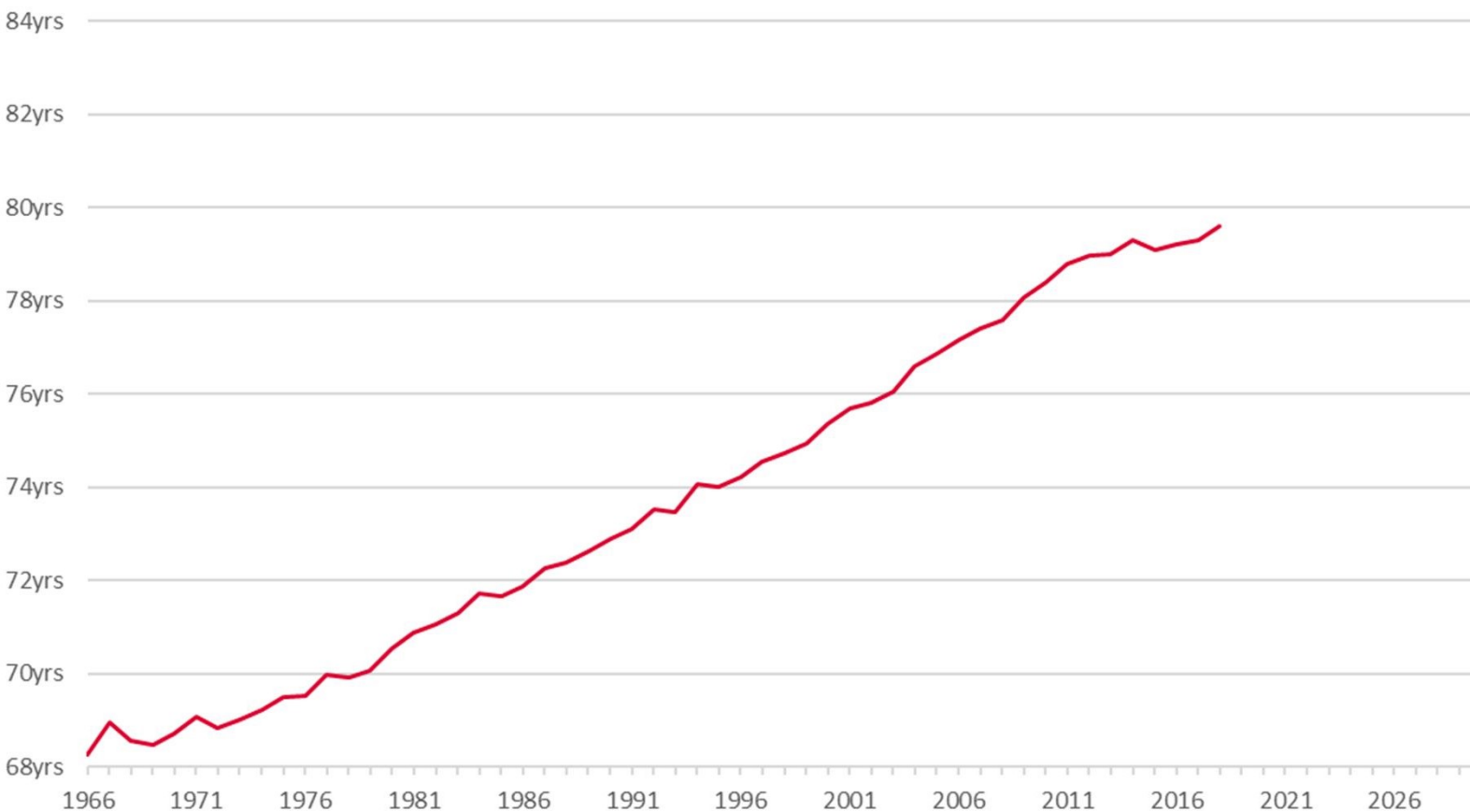
Age-standardised mortality rates (per 100,000 population): England & Wales, 2000–2018



Source: Health Foundation analysis using ONS, Deaths registered in England and Wales, 2018.

Leading to stalling life expectancy gains...

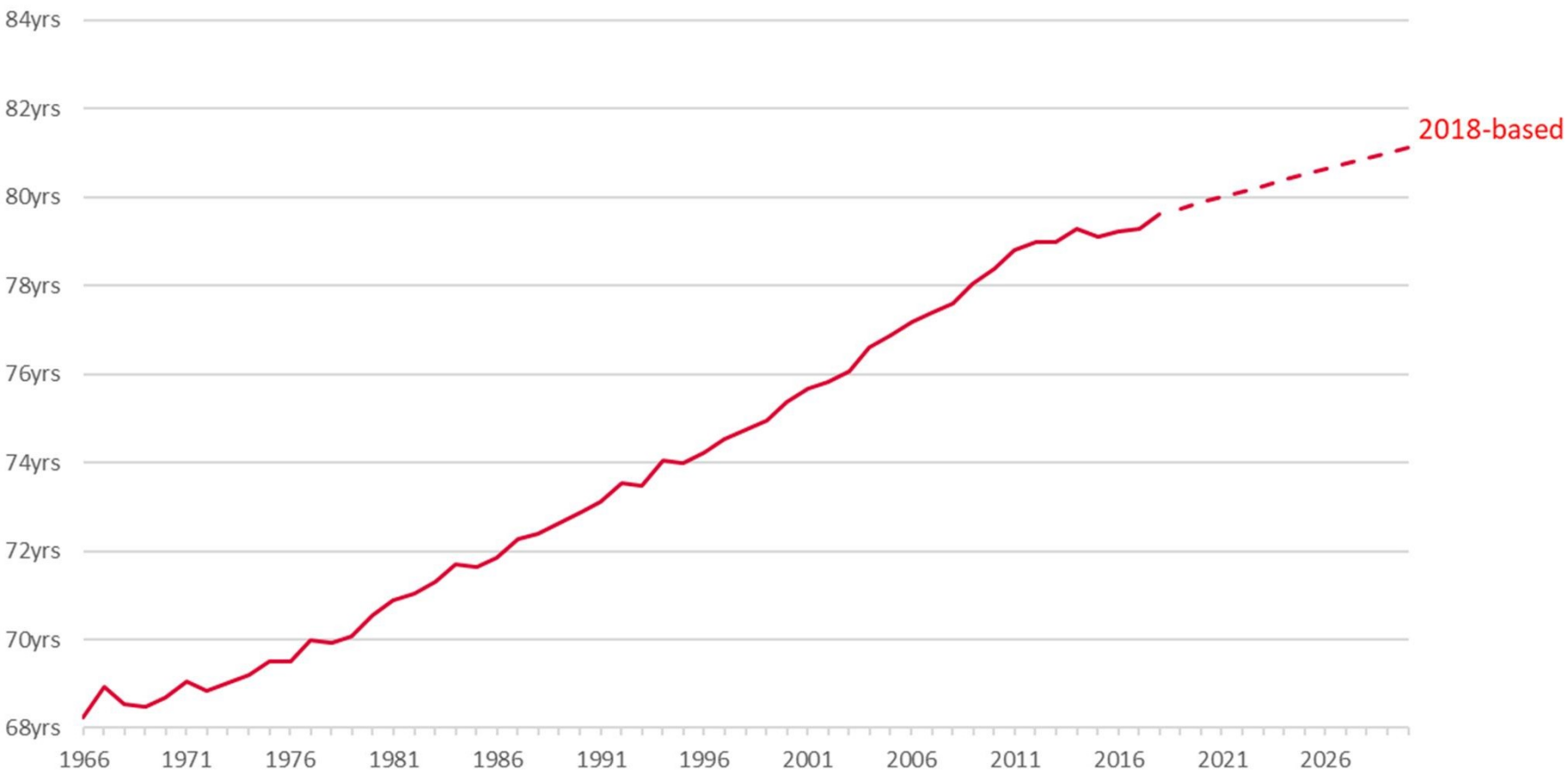
Successive projections of period life expectancy at birth, males: UK, 1966-2030



Source: ONS National Population Projections Accuracy Report underlying data, UK, 1966 to 2030; Expectation of life, principal projection, United Kingdom, 2012-based, 2014-based & 2016-based

Leading to stalling life expectancy gains...

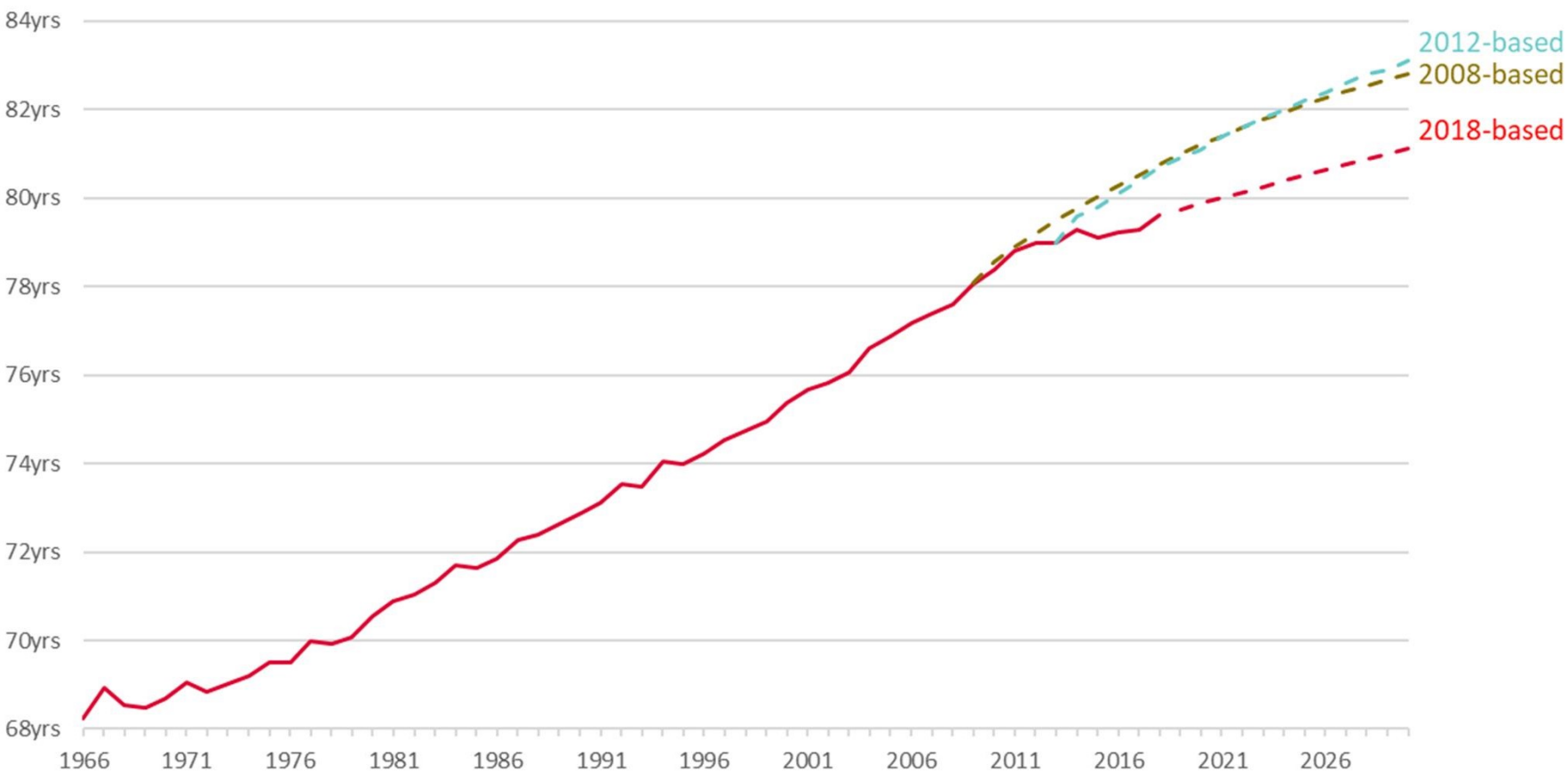
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And revisions in life expectancy projections...

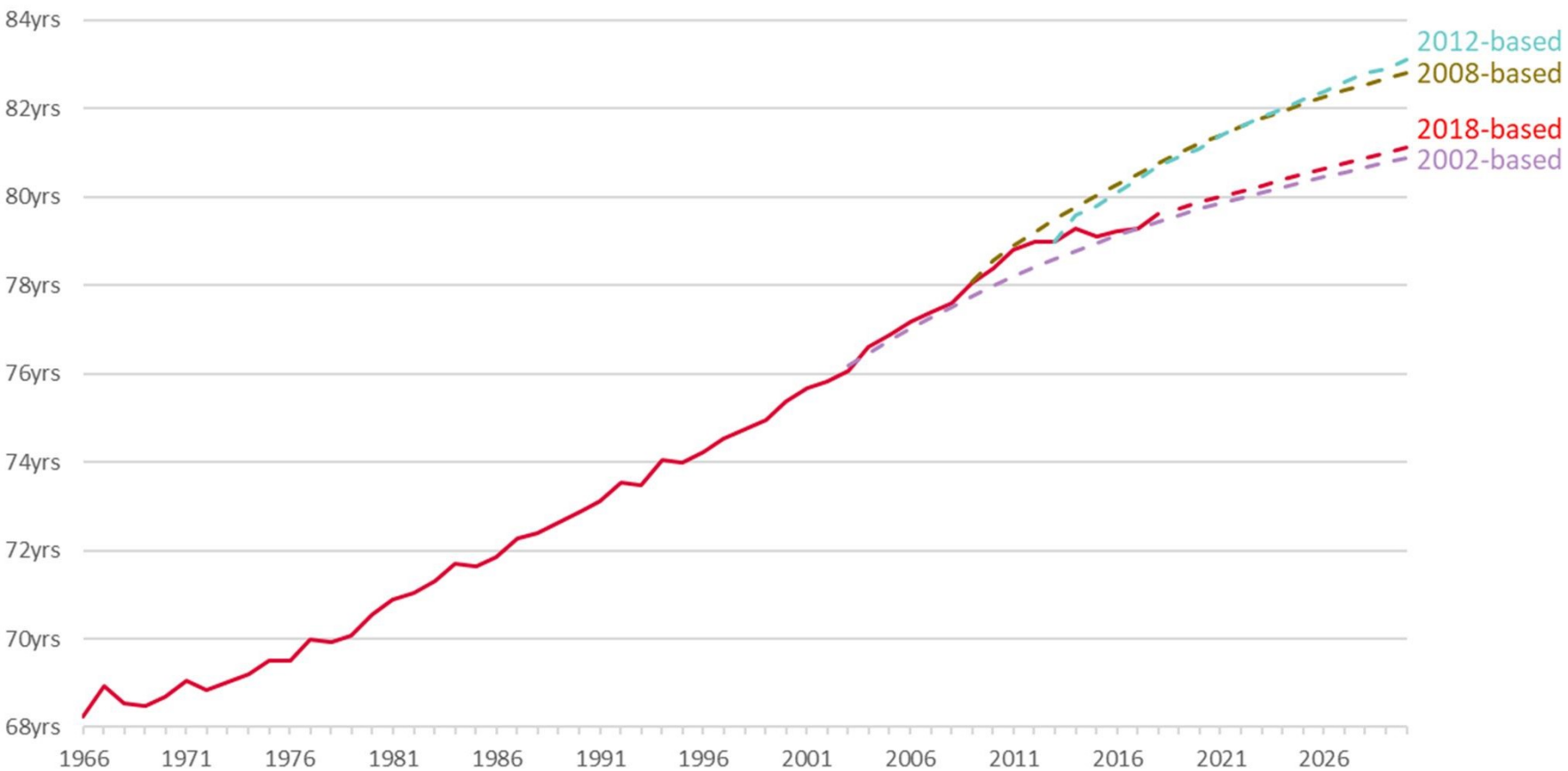
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Source: ONS National Population Projections Accuracy Report underlying data, UK, 1966 to 2030; Expectation of life, principal projection, United Kingdom, 2012-based, 2014-based & 2016-based

...projections have gone back to where they were 16 years ago

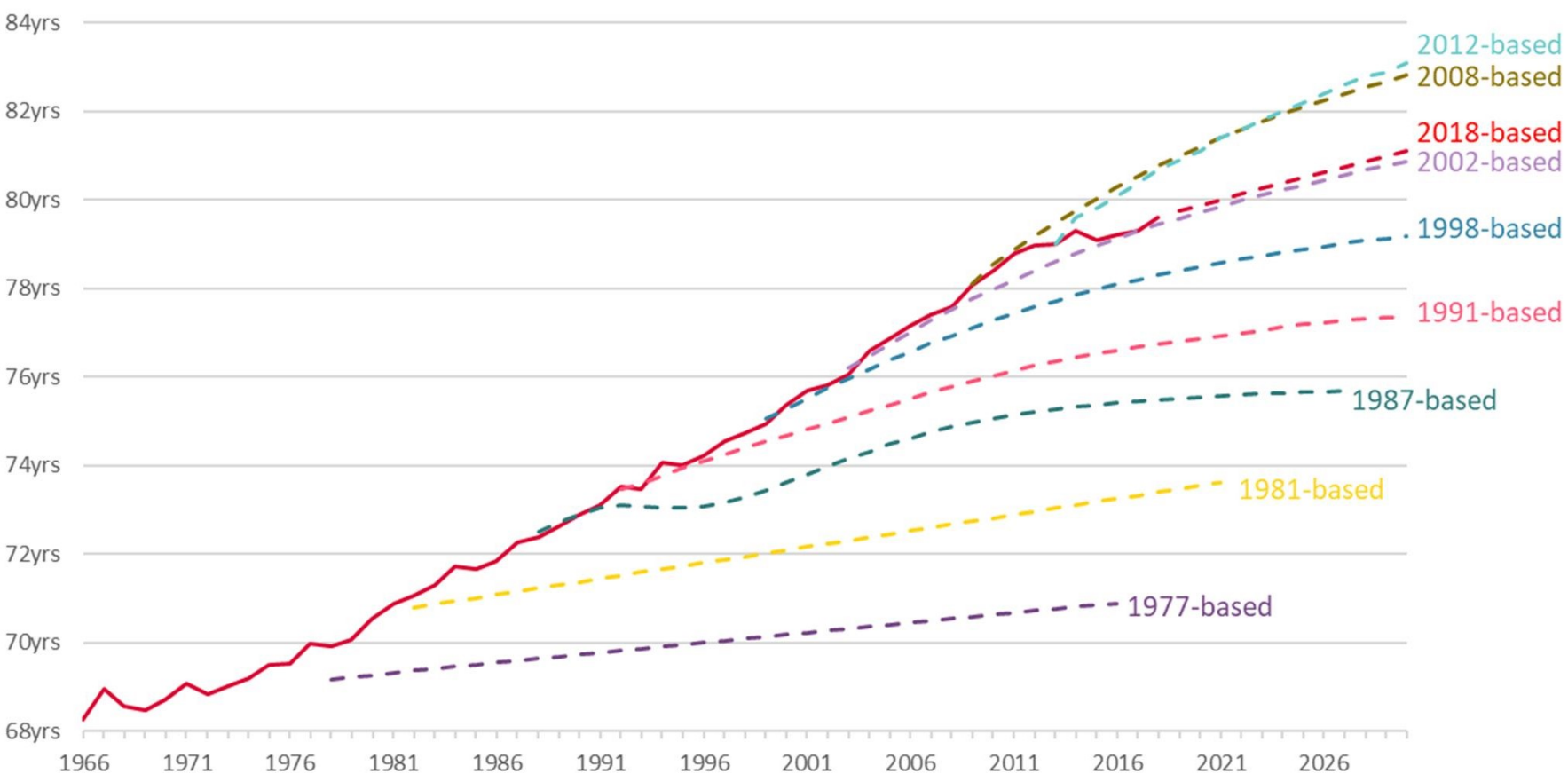
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Taking the long view, recent slowdown follows decades of gains

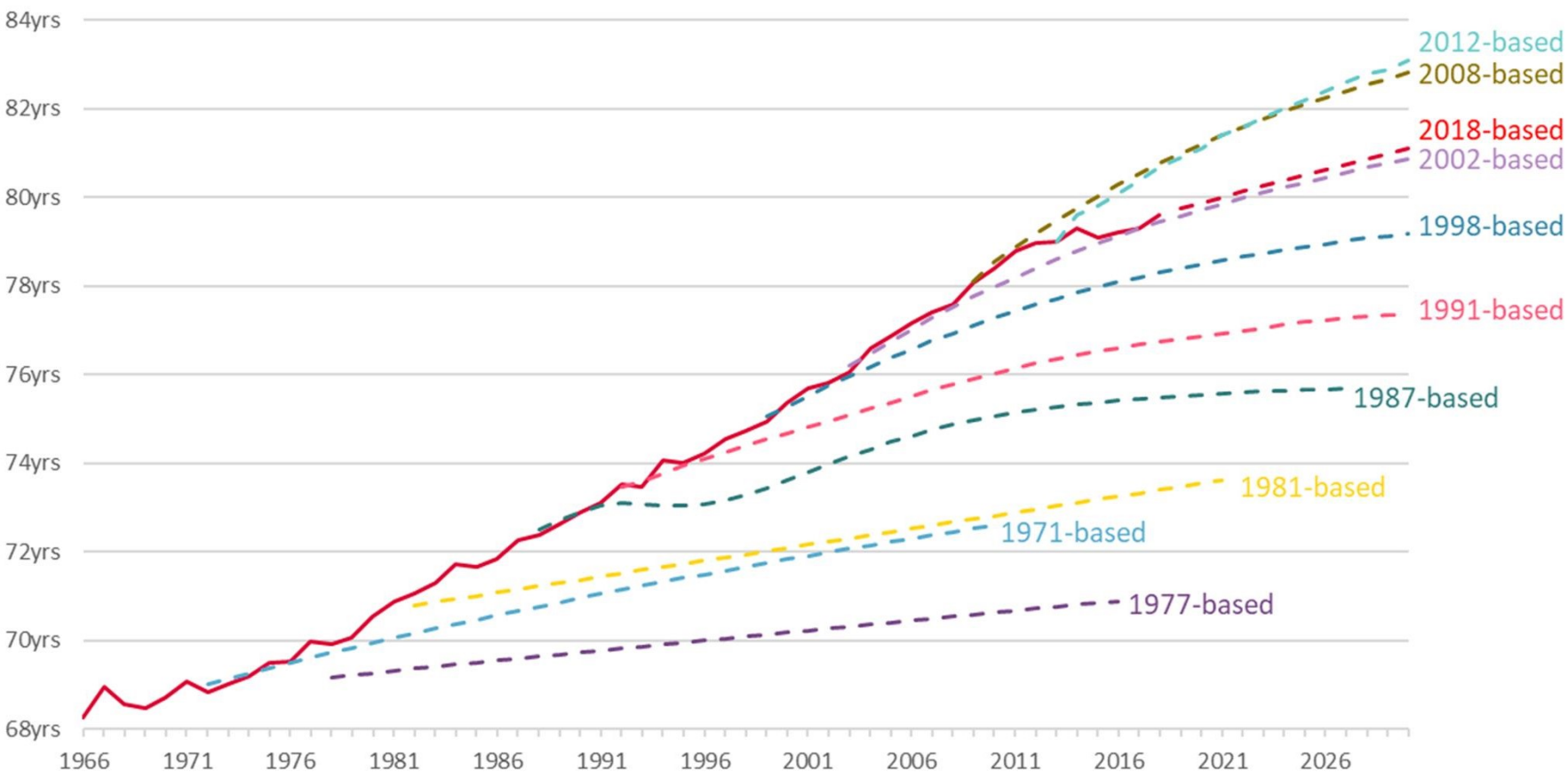
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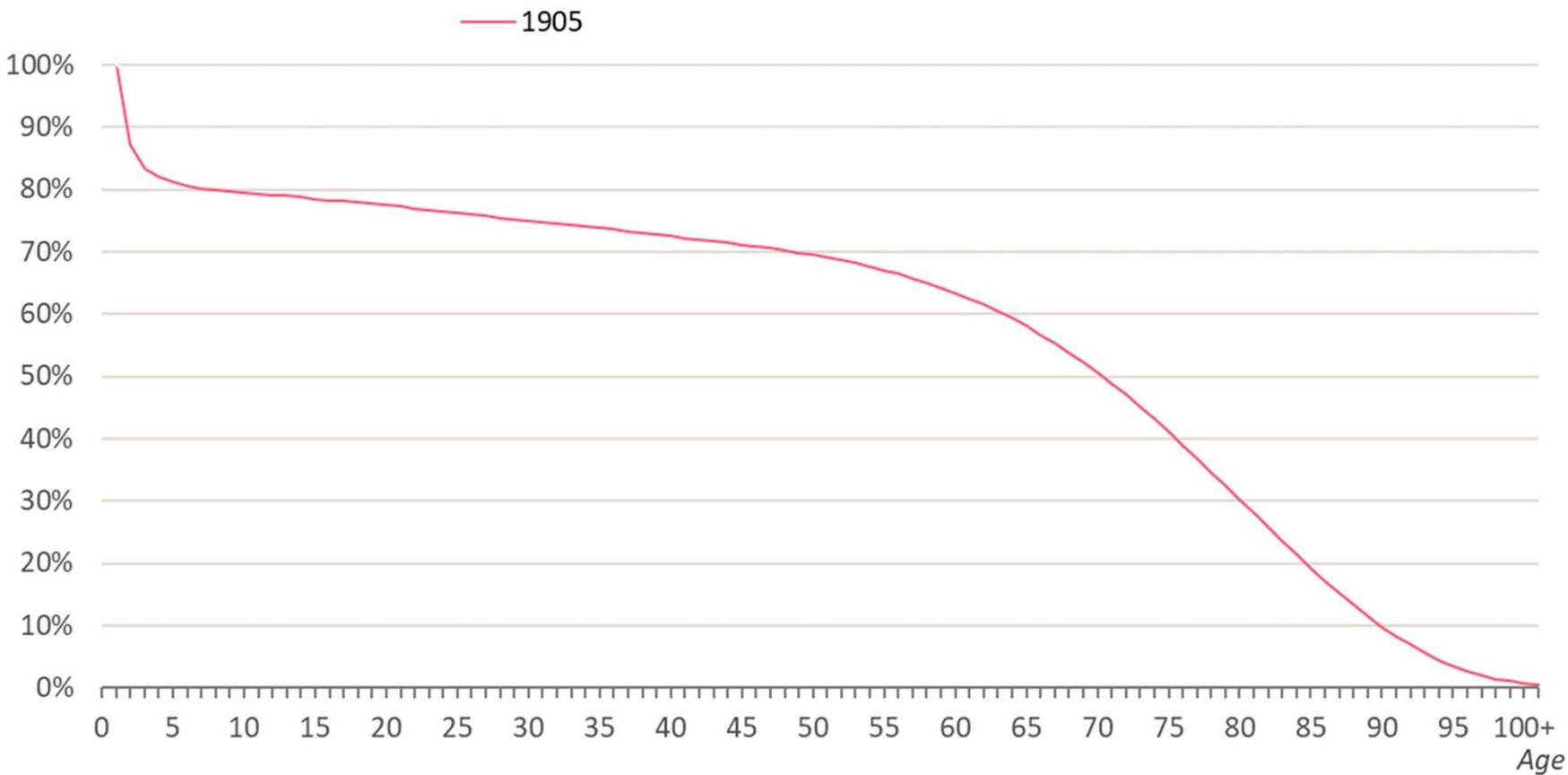
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Even longer view, a century of cohort-on-cohort improvements

Proportion of cohort surviving to age: England and Wales, selected birth cohorts 1905–2005

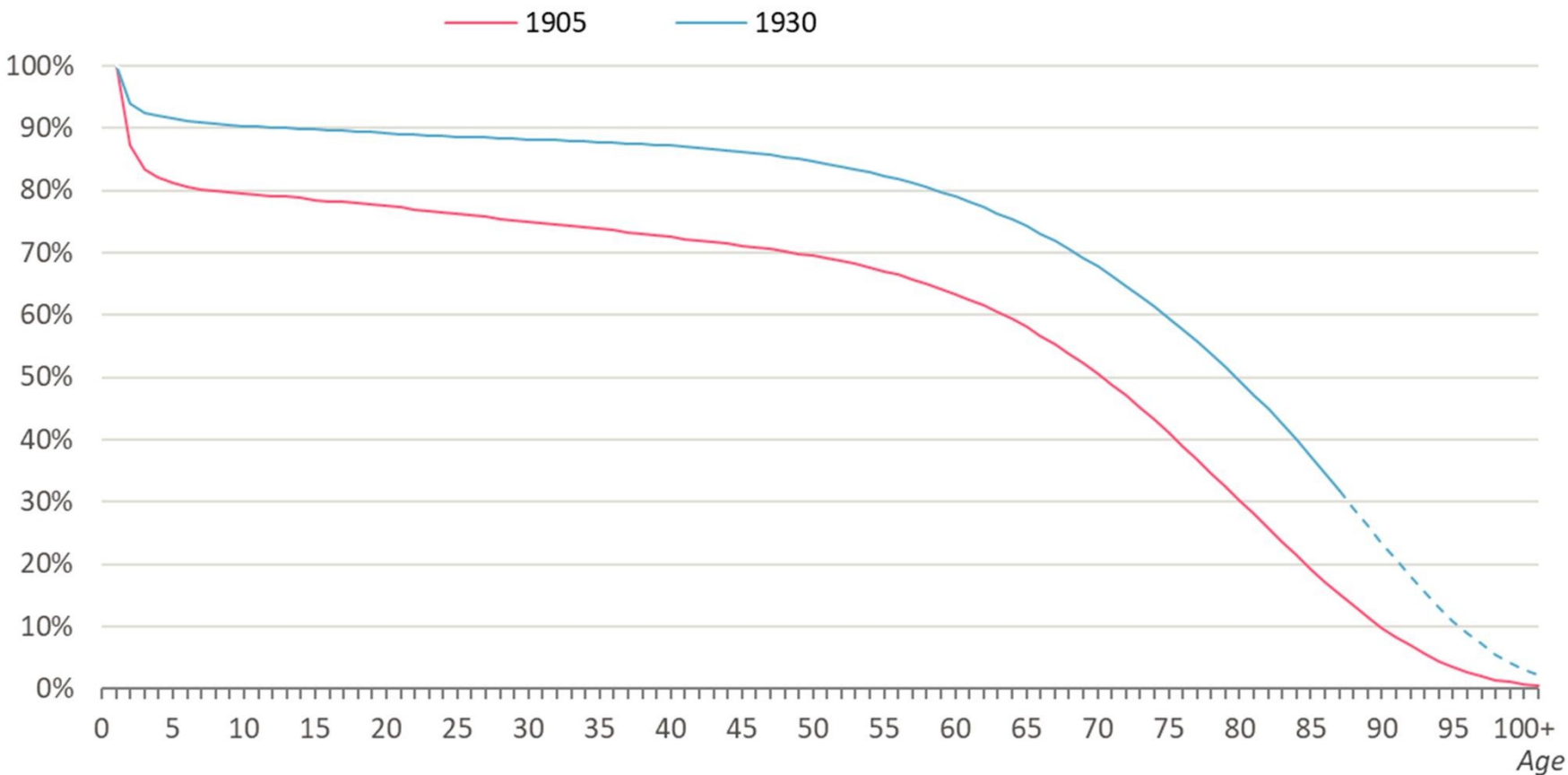


Source: ONS, 2016-based England and Wales lifetable.

Note: ----- denotes projection.

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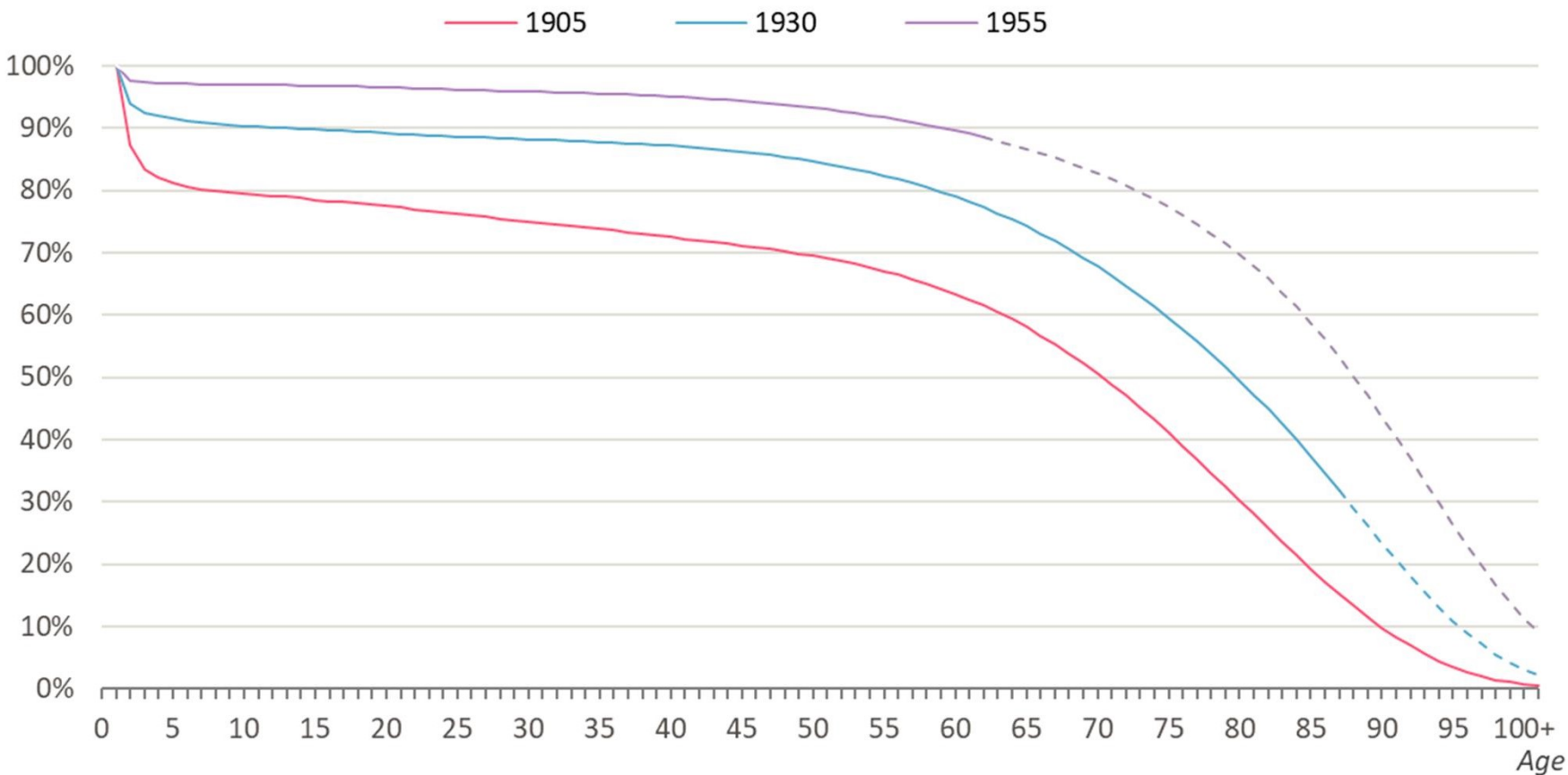


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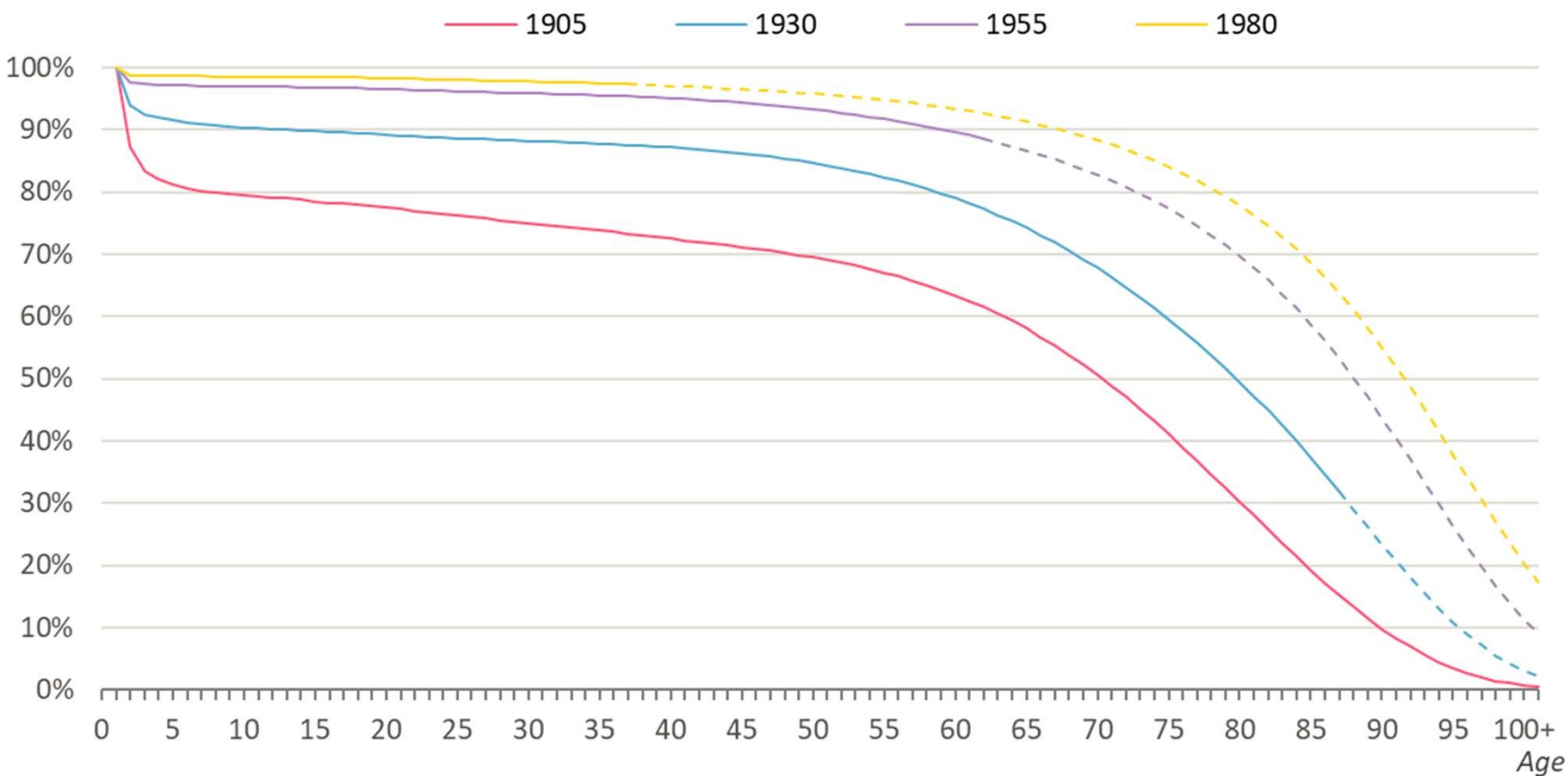


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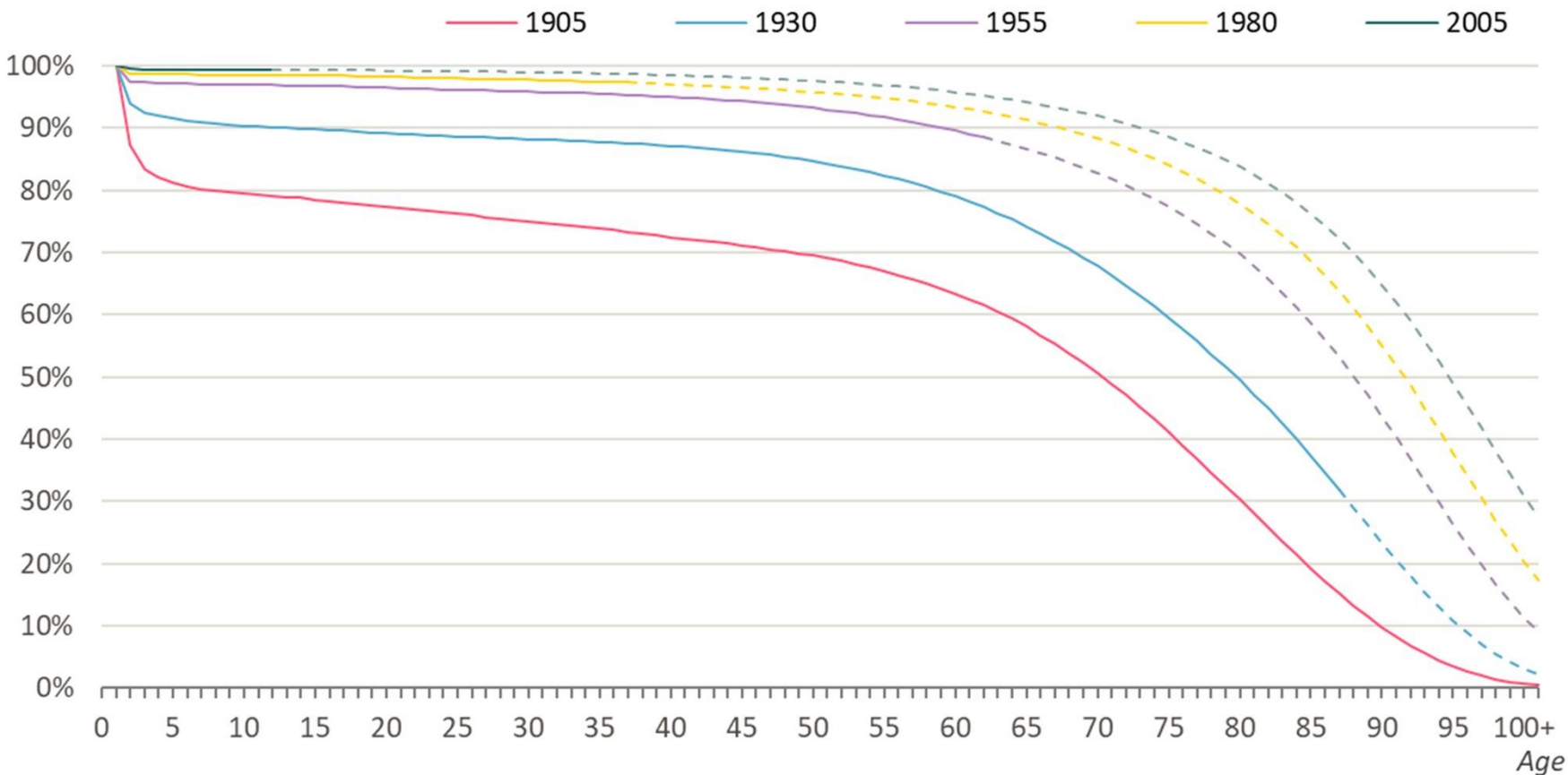


Source: ONS, 2016-based England and Wales life table.

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Even longer view, a century of cohort-on-cohort improvements

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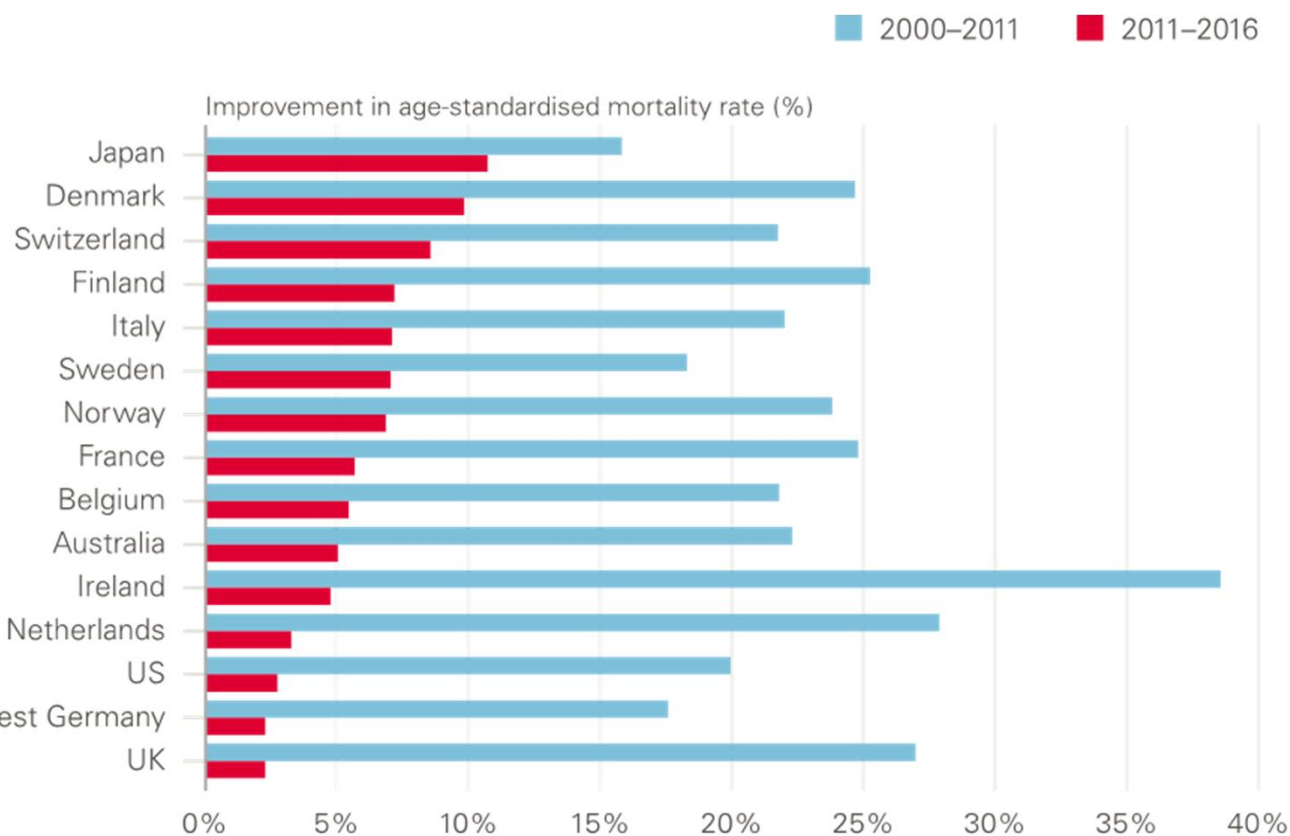


Source: ONS, 2016-based England and Wales lifetable.

Note: ----- denotes projection.

The slowdown in mortality improvements is not unique to the UK

Improvement in age-standardised mortality rates: selected countries, 2000–2011 and 2011–2016



Source: Human Mortality Database; calculations by Murphy, Luy and Torrisi

Notes: Data for Australia, Ireland, Italy and Norway are to 2014, for Switzerland and Finland to 2015

UK sits towards the bottom of the female life expectancy league tables

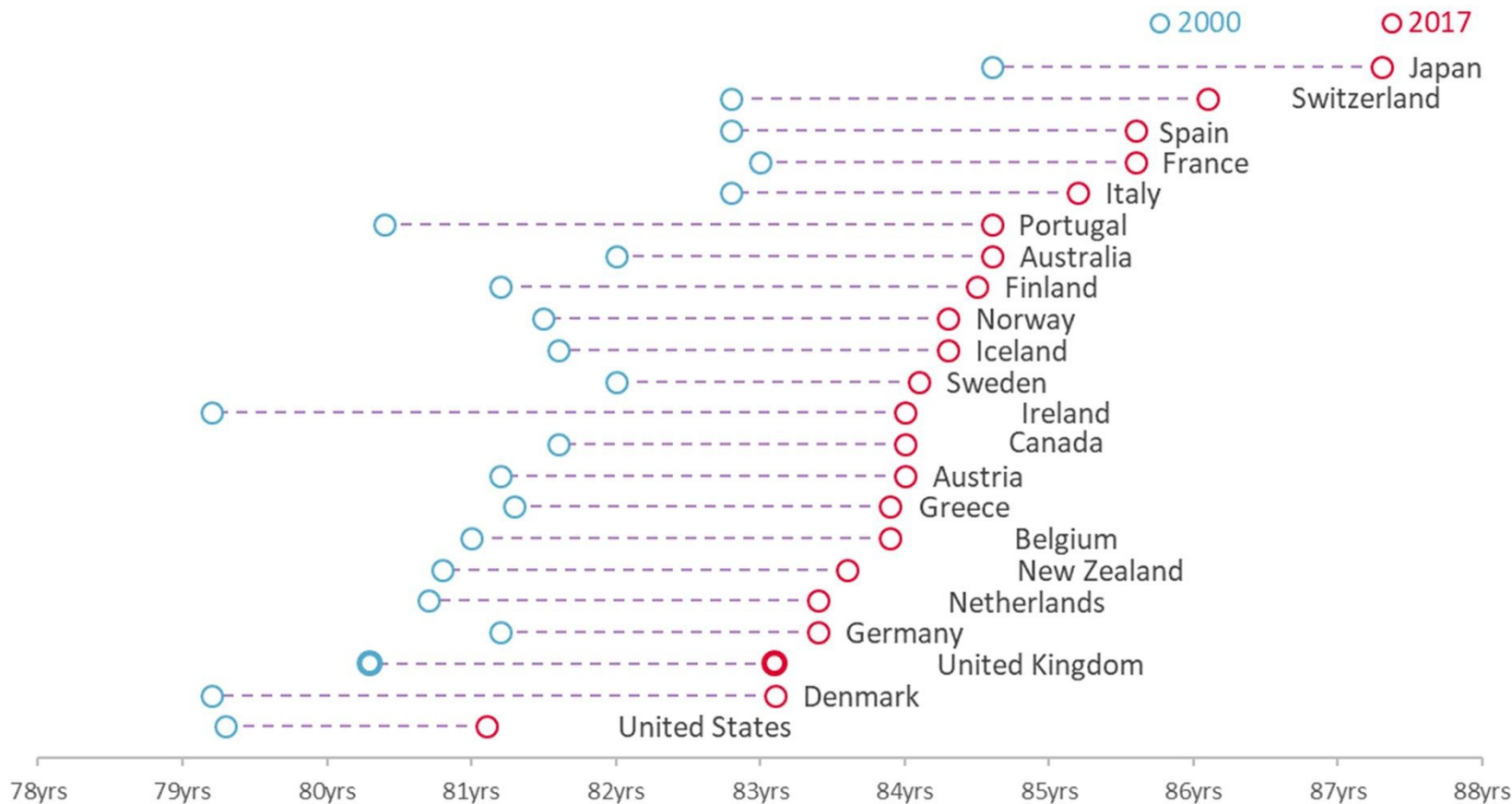
Changing period life expectancy at birth, females: selected countries, 2000–2017



Source: OECD, Health indicators dataset

...and has fallen further down the table in recent years

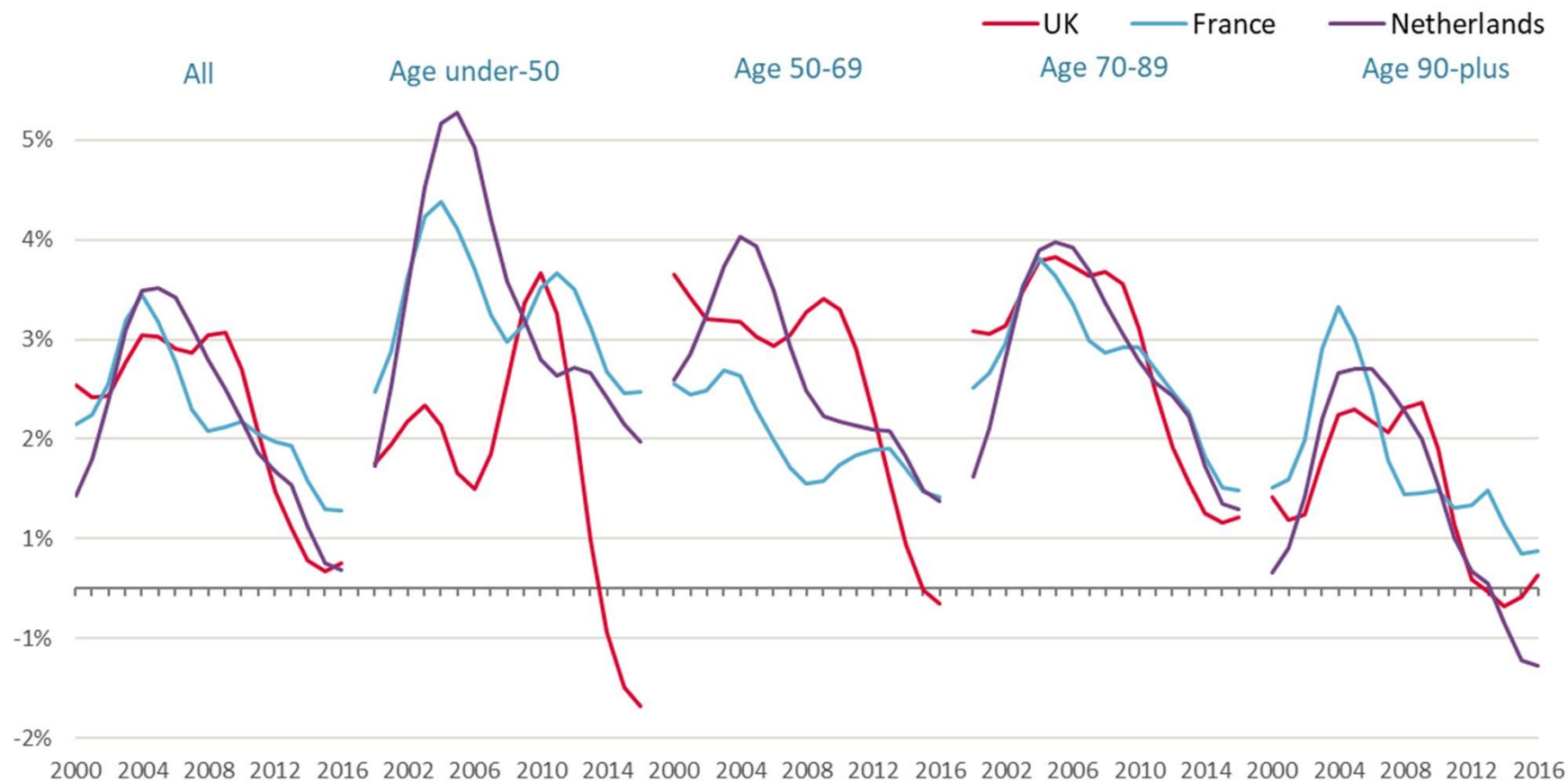
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Source: OECD, Health indicators dataset

UK experience is similar to France & Netherlands

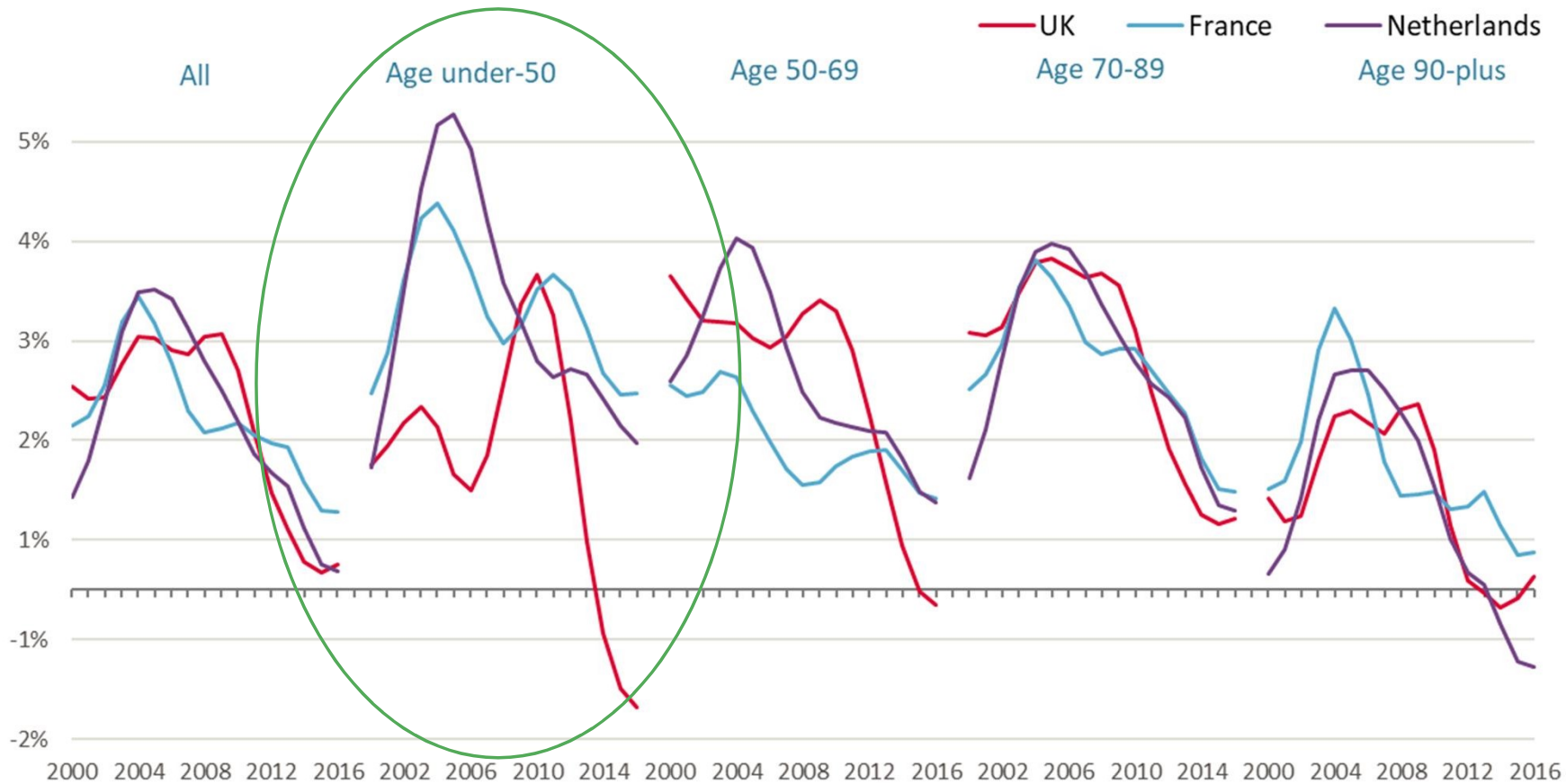
Annual change in age-group-specific age-standardised mortality rates (%): selected countries, 2000–2016



Source: Human Mortality Database; calculations by Murphy, Luy and Torrisi.

UK experience is similar to France & Netherlands but underperforming for younger groups

Annual change in age-group-specific age-standardised mortality rates (%): selected countries, 2000–2016

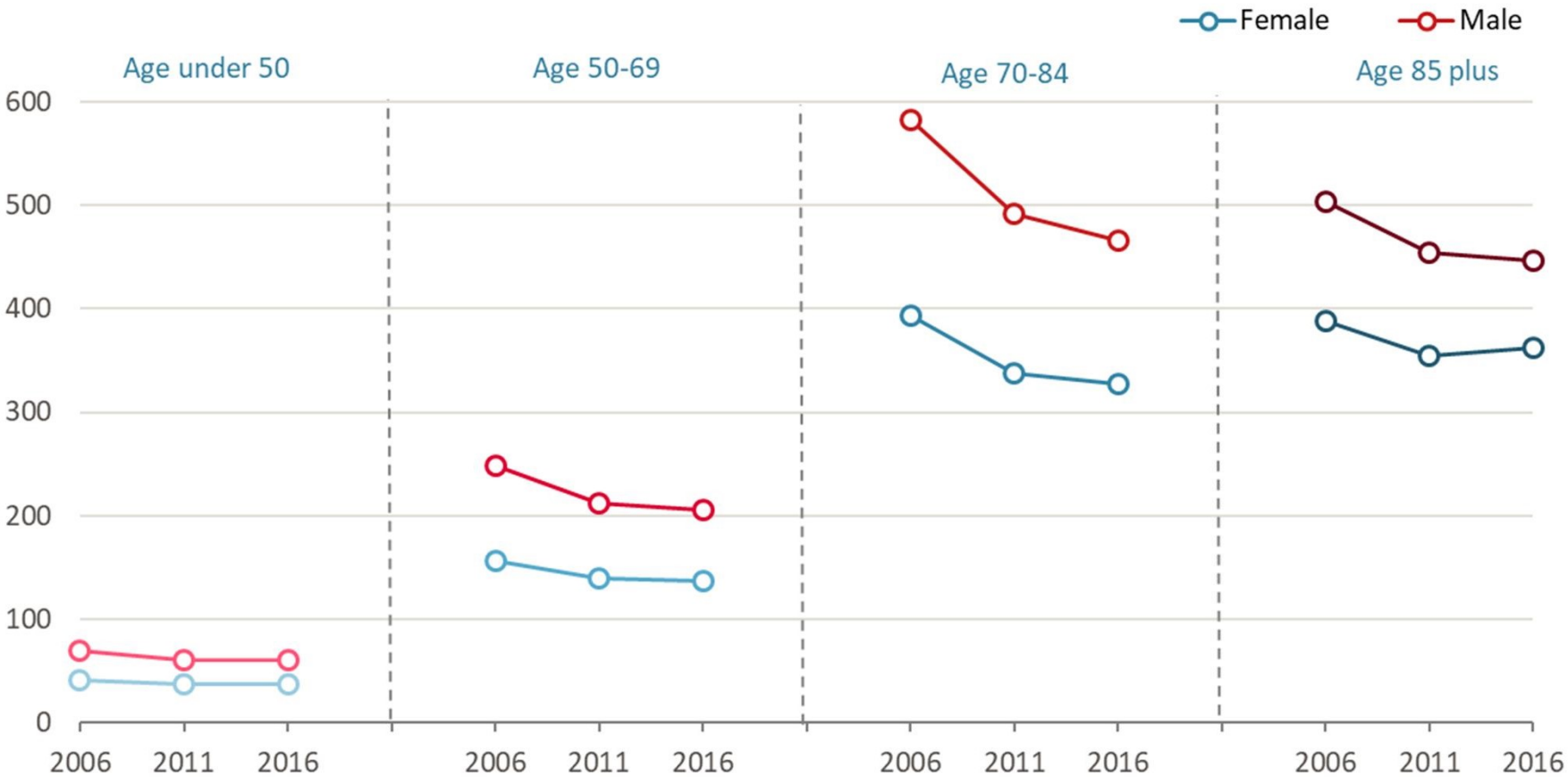


Source: Human Mortality Database; calculations by Murphy, Luy and Torrissi

The experience of different groups

Mortality rates for UK under-50s have not improved since 2011

Age-standardised mortality rates by age group (per 100,000 population): UK, 2000–2016

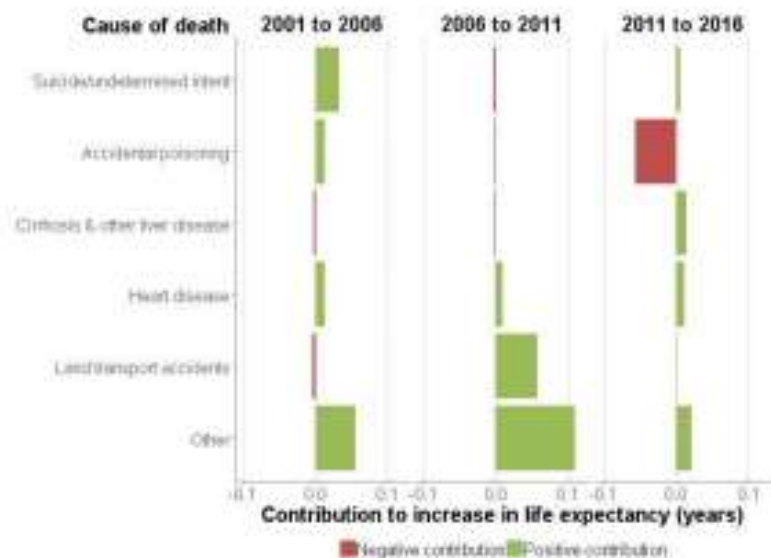


Source: Human Mortality Database; calculations by Murphy, Luy and Torrisi

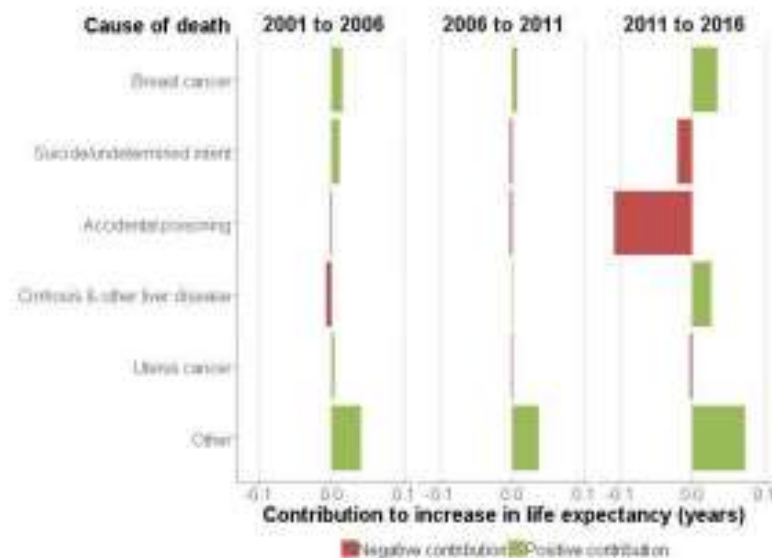
In England the lack of improvement at younger ages has been driven by a rise in deaths from accidental poisonings

Figure 3G: contribution of 5 leading causes of death to changes in life expectancy, aged 20-44, England, 2001 up to 2006, 2006 up to 2011 and 2011 up to 2016

Male



Female

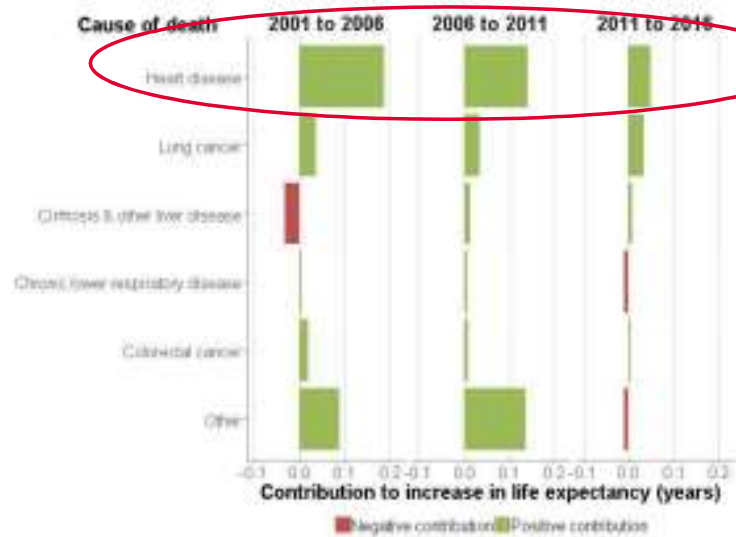


Source: PHE, Recent trends in mortality in England

For 45-64 year olds, gains from heart disease have reduced

Figure 3H: contribution of 5 leading causes of death to changes in life expectancy, aged 45-64, England, 2001 up to 2006, 2006 up to 2011 and 2011 up to 2016

Male



Female

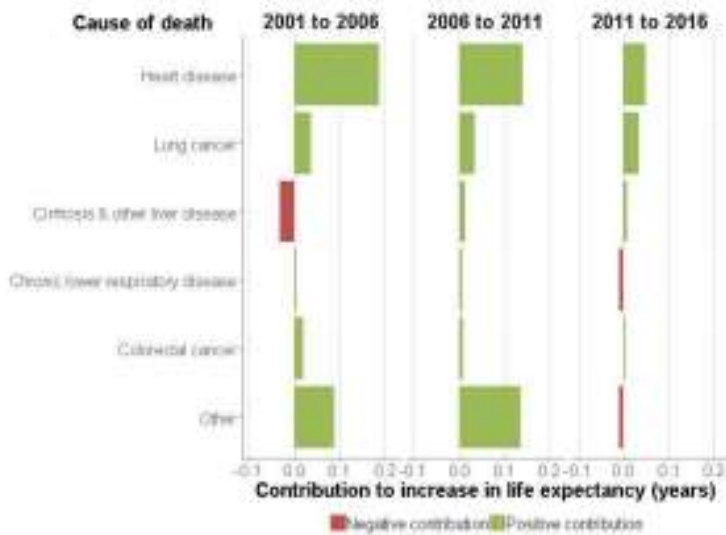


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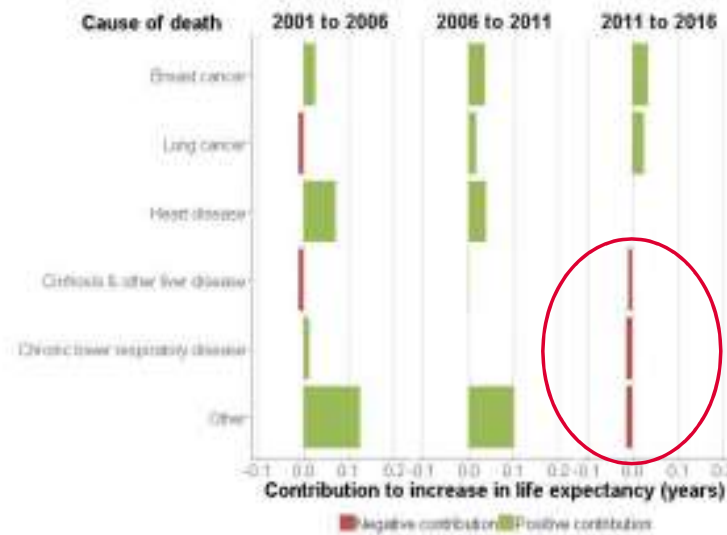
For 45-64 year olds, avoidable mortality has dragged on progress

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Female

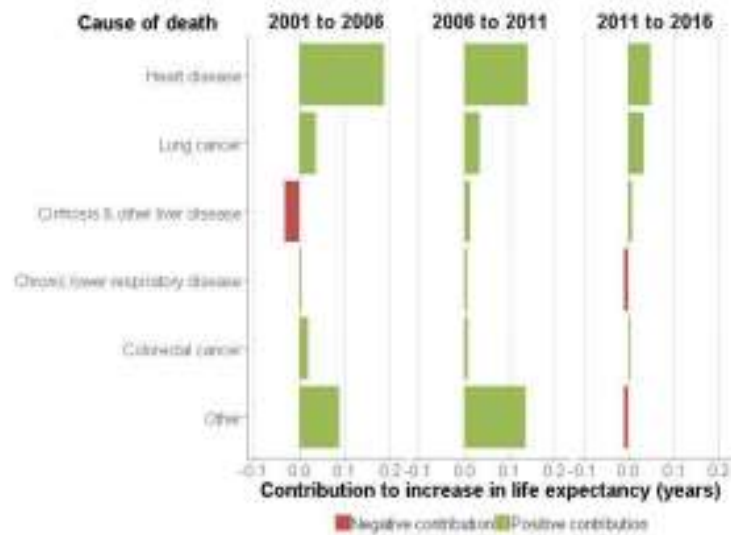


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Figure 3H: contribution of 5 leading causes of death to changes in life expectancy, aged 45-64, England, 2001 up to 2006, 2006 up to 2011 and 2011 up to 2016

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Female



Source: PHE, Recent trends in mortality in England

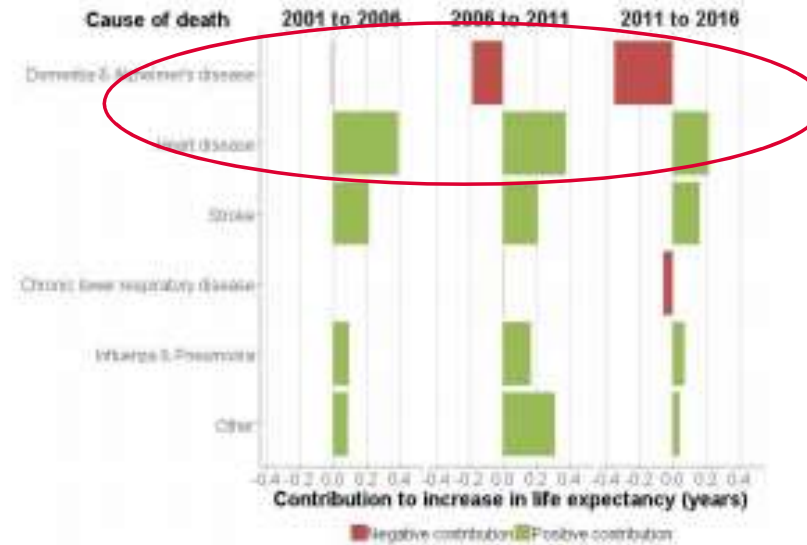
For the 65+ group a rise in deaths from Alzheimer's is the greatest drag

Figure 3I: contribution of 5 leading causes of death to changes in life expectancy, aged 65+, England, 2001 up to 2006, 2006 up to 2011 and 2011 up to 2016

Male



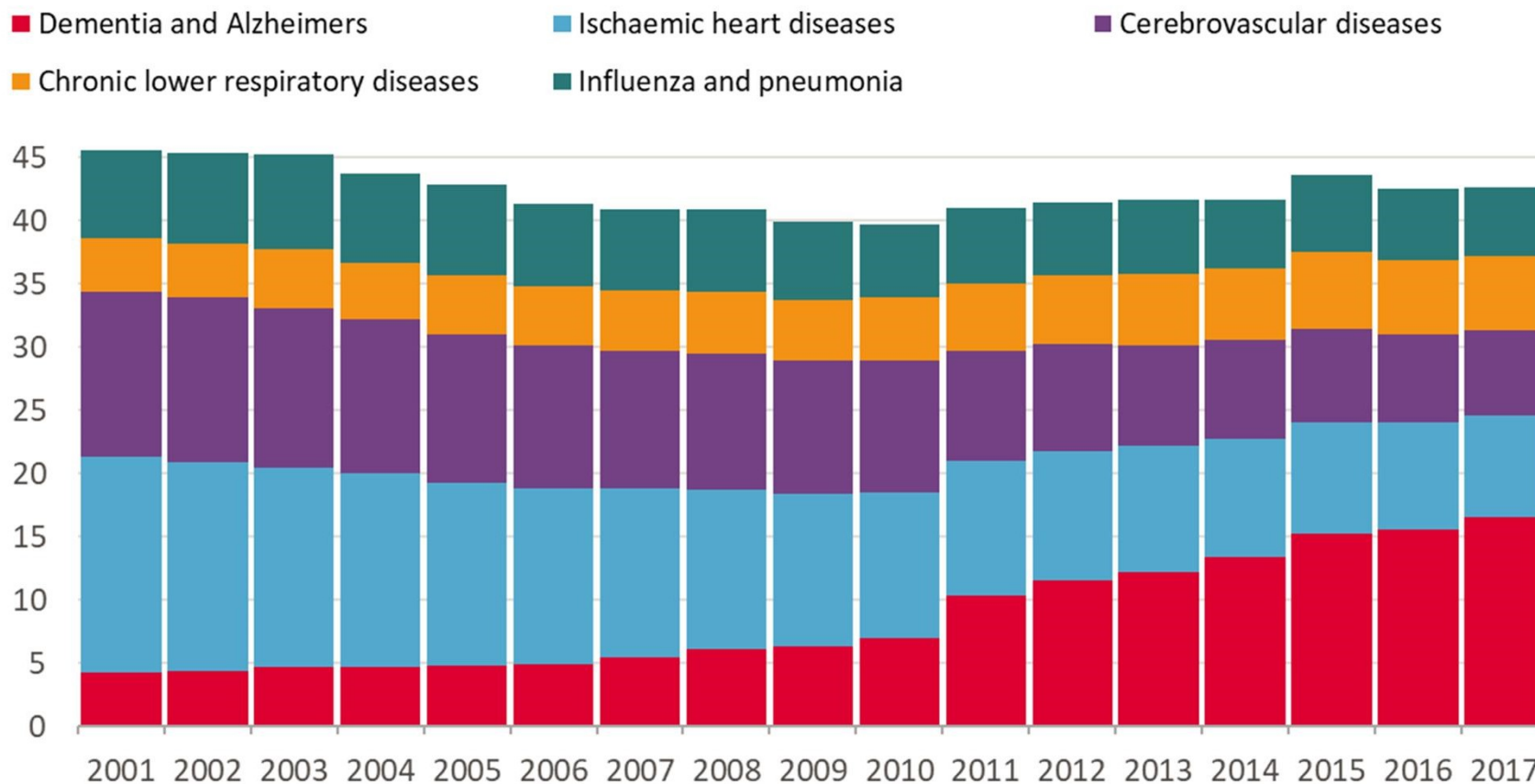
Female



Source: PHE, Recent trends in mortality in England

However, the rise in Alzheimer's reflects rise in diagnoses and changed practice in how deaths are coded

Change in the top five leading causes of death, females, all ages: England and Wales, 2011–2017

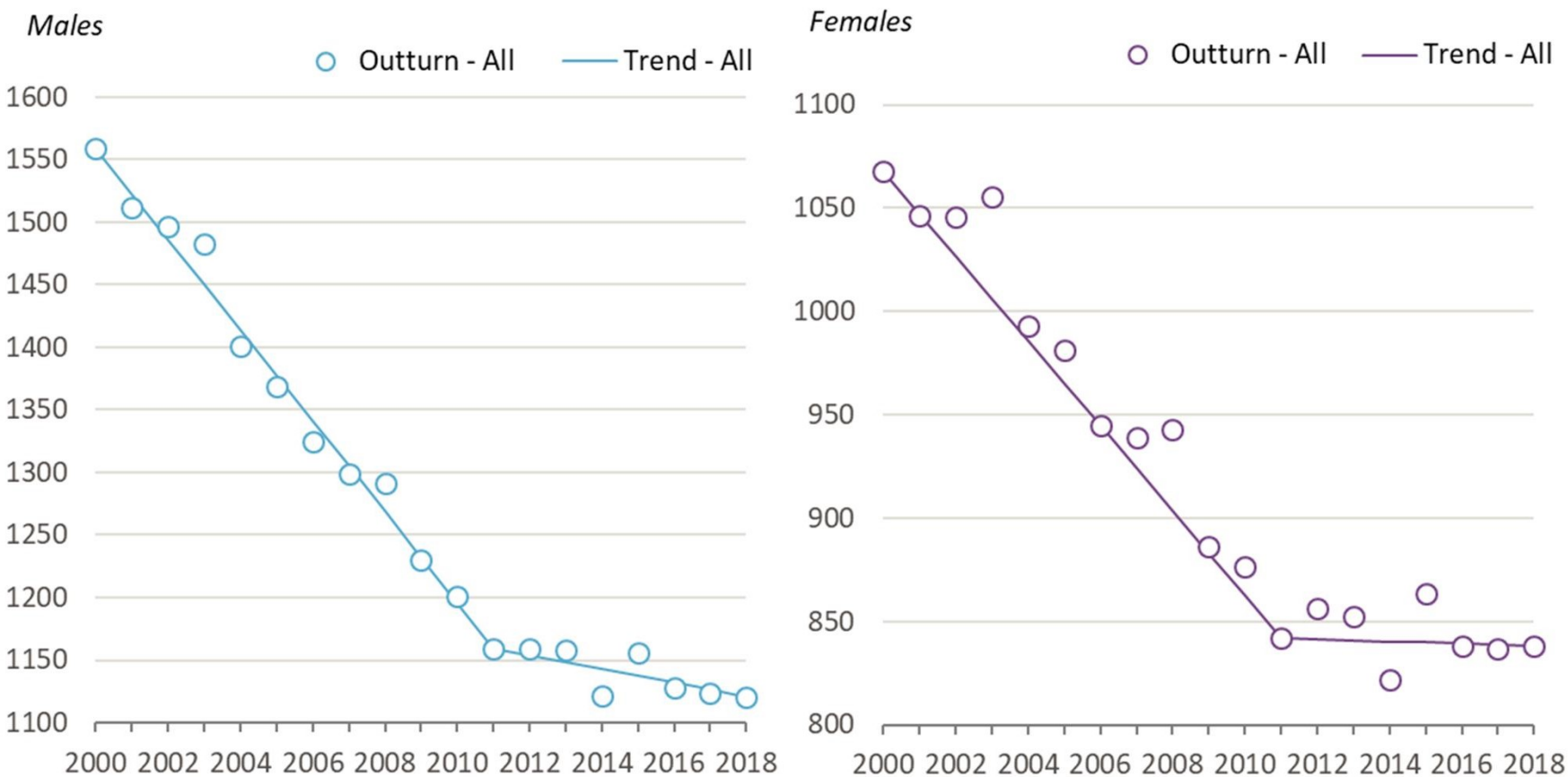


Source: ONS, Deaths registered in England and Wales (series DR), 2017.

Note: Changes to how diseases were coded occurred between 2011 and 2014.

The slowdown was sharper for women in England and Wales

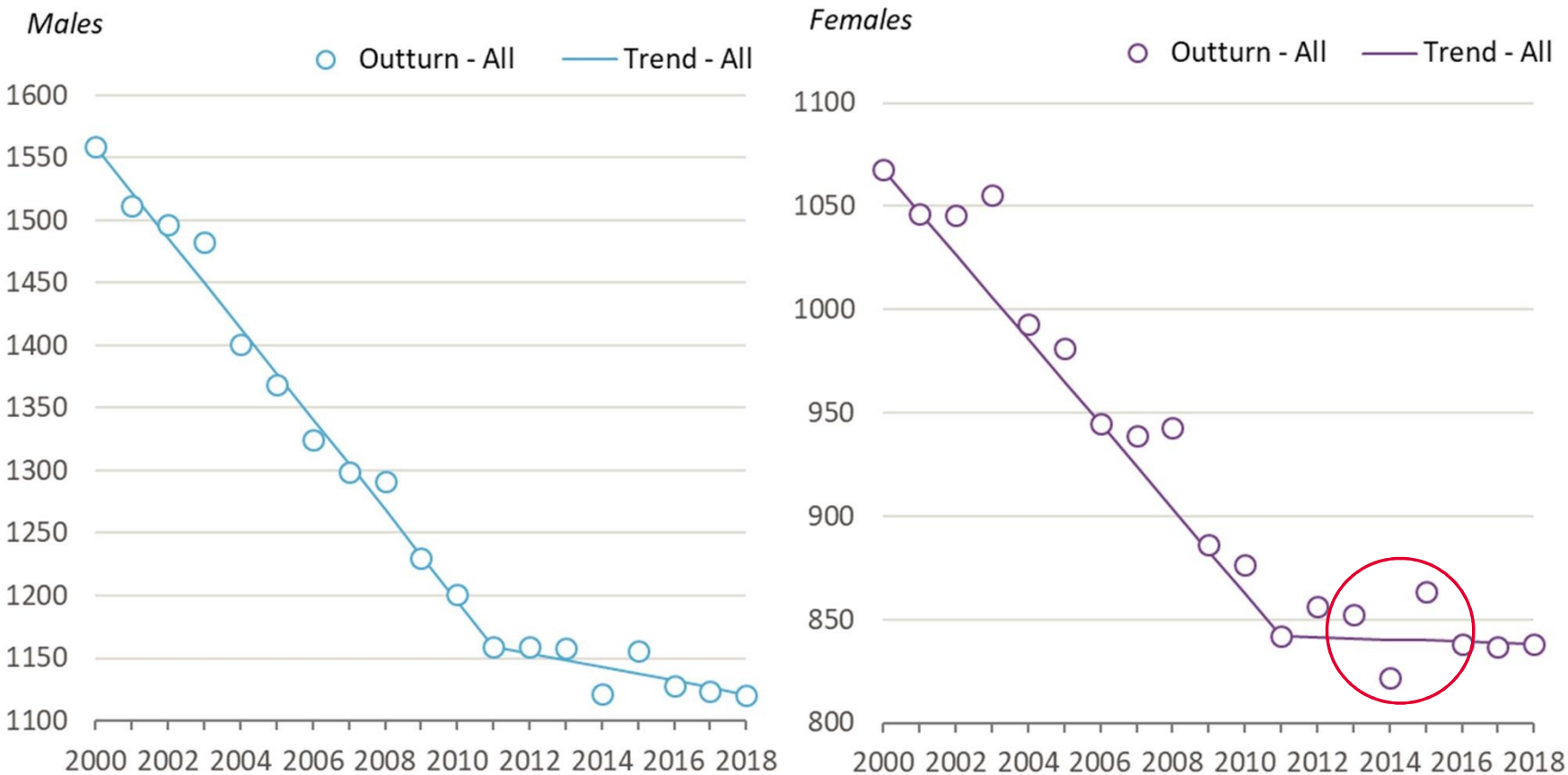
Age-standardised mortality rates (per 100,000 population) by sex: England and Wales, 2000–2018



Source: Health Foundation analysis using ONS, Deaths registered in England and Wales, 2018.

The greater year-to-year variation drew attention to flu as a possible cause

Age-standardised mortality rates (per 100,000 population) by sex: England and Wales, 2000–2018



Source: Health Foundation analysis using ONS, Deaths registered in England and Wales, 2018.

The North East and West Midlands are regions with biggest slowdown

Table 3C: average annual absolute change in life expectancy at birth (years), English regions, 2001 up to 2006, 2006 up to 2011 and 2011 up to 2016*

Males			
Region	2001 to 2006	2006 to 2011	2011 to 2016
North East	0.34	0.34	0.01
North West	0.30	0.33	0.09
Yorkshire and The Humber	0.29	0.31	0.08
East Midlands	0.28	0.32	0.06
West Midlands	0.27	0.40	0.00
East of England	0.30	0.30	0.05
London	0.40	0.40	0.17
South East	0.34	0.28	0.07
South West	0.31	0.26	0.04
Females			
Region	2001 to 2006	2006 to 2011	2011 to 2016
North East	0.19	0.28	-0.02
North West	0.23	0.26	-0.01
Yorkshire and The Humber	0.20	0.21	0.06
East Midlands	0.22	0.29	0.00
West Midlands	0.20	0.30	-0.01
East of England	0.25	0.24	0.01
London	0.32	0.30	0.12
South East	0.21	0.25	0.04
South West	0.25	0.20	-0.02

Source: PHE, Recent trends in mortality in England

The North East and West Midlands are regions with biggest slowdown

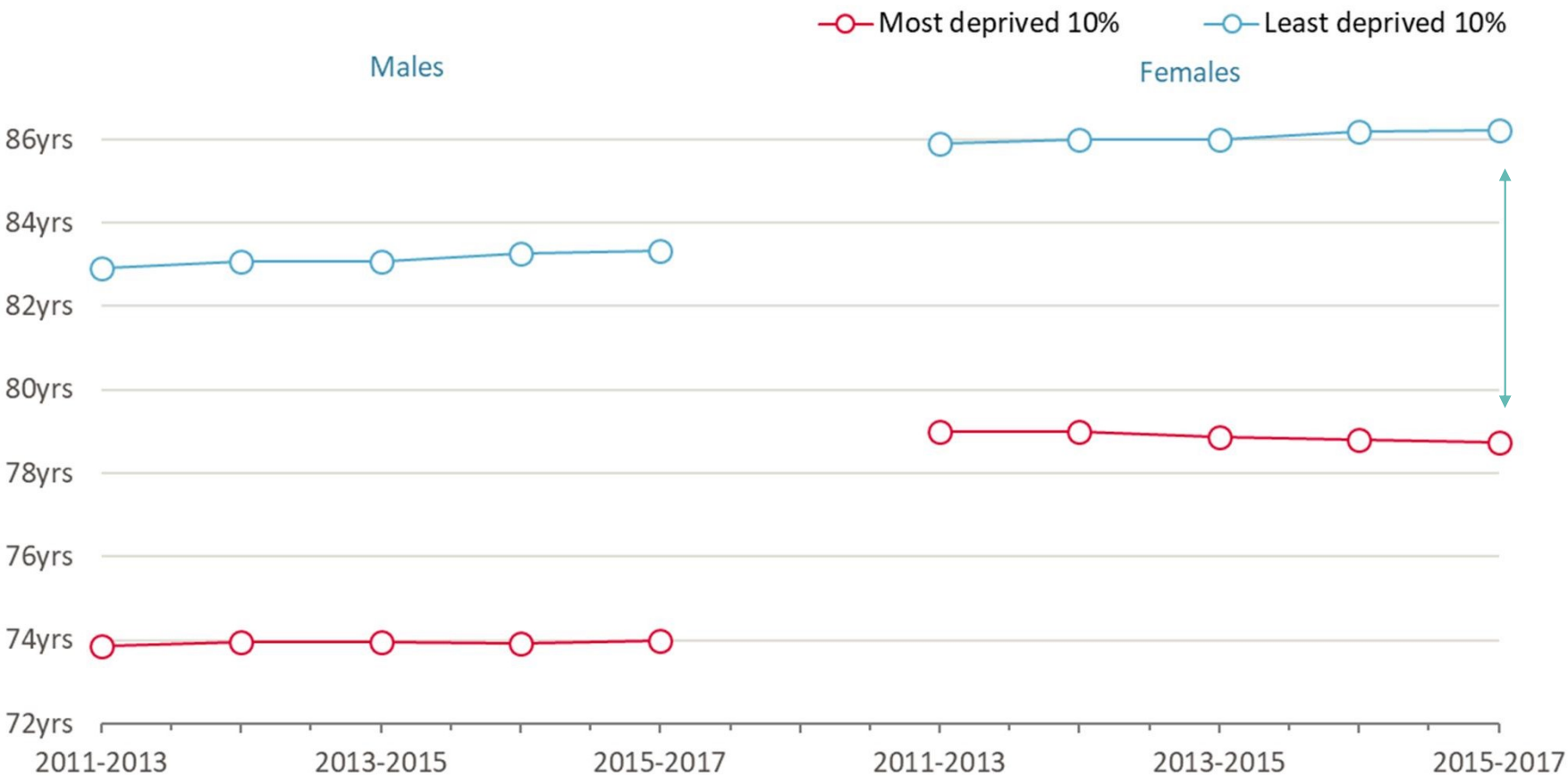
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Source: PHE, Recent trends in mortality in England

Life expectancy gap between most and least deprived has widened

Period life expectancy at birth by deprivation: England, 2011-2013 to 2015-2017

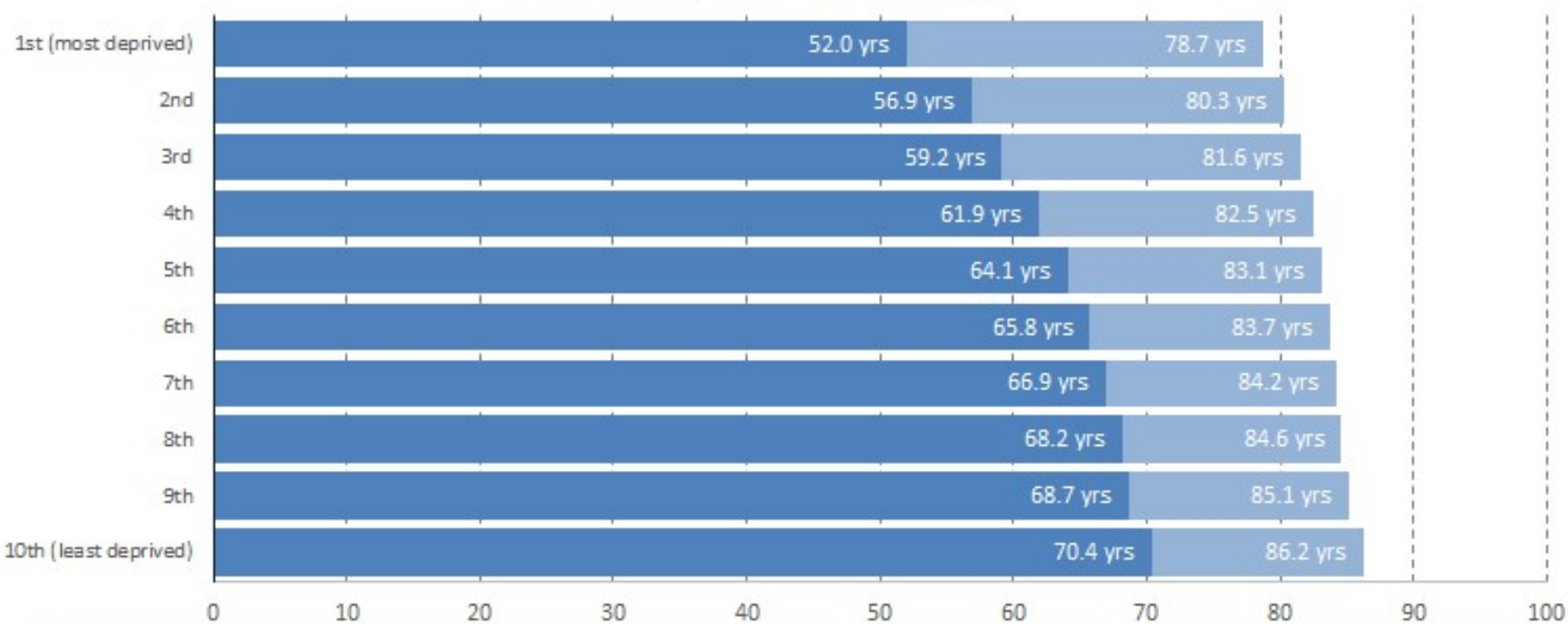


Source: ONS Health state life expectancies by deprivation decile, England, 2011/2013–2015/2017.

Deprivation gap in healthy life expectancy remains wide at over 18 years for females

Female life expectancy and healthy life expectancy at birth, England: 2015-17

■ Healthy life expectancy ■ Life expectancy



Source: ONS, Health State Life Expectancies by decile of deprivation, England and Wales: 2015-17

Source: ONS Health state life expectancies by deprivation decile, England, 2015/2017.

Summing up – why has life expectancy stalled?

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Some diversions:

- Flu

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- Ageing society

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No single answer:

- Already accrued big cohort-on-cohort gains
- Further improvements from Cardiovascular Diseases slowed

Summing up – why has life expectancy stalled?

Some diversions:

- Flu
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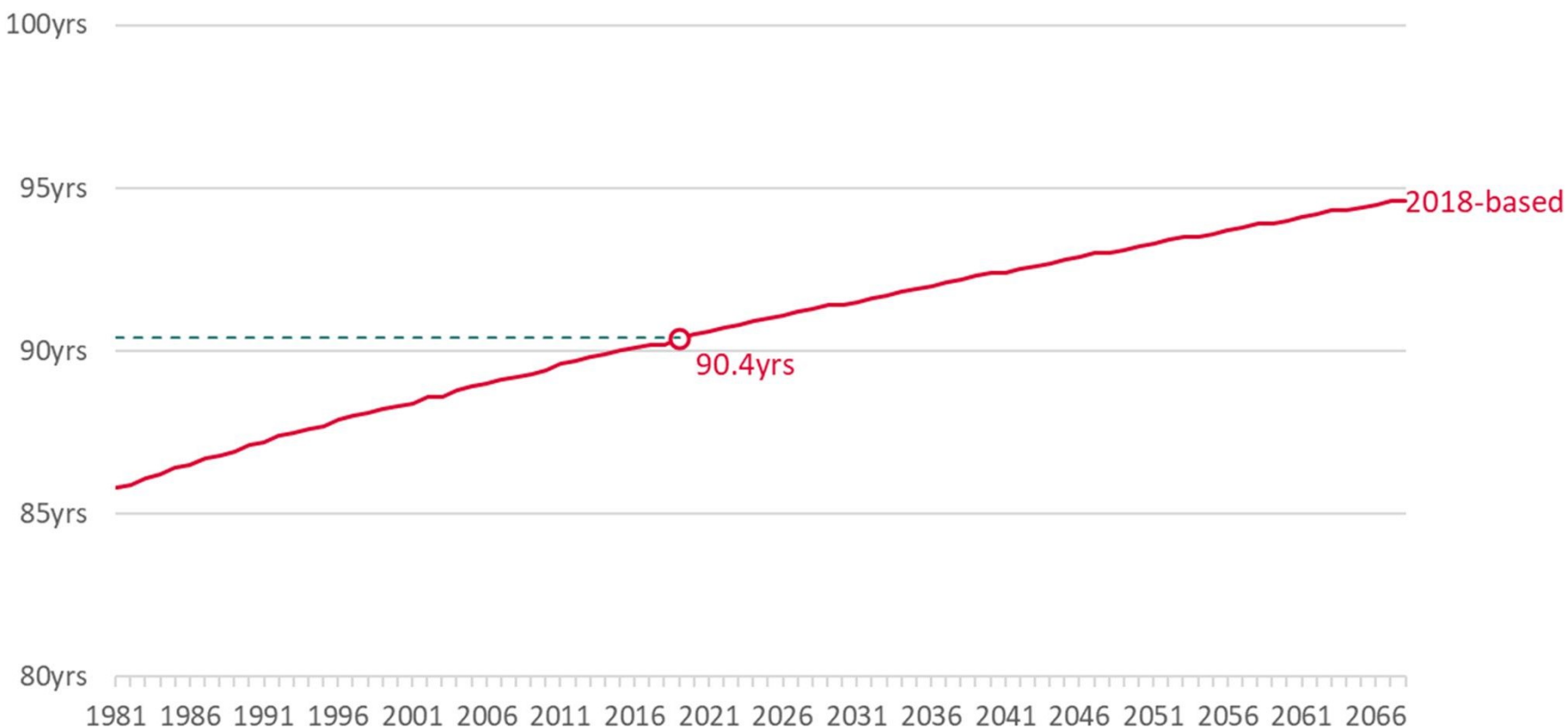
No single answer:

- Already accrued big cohort-on-cohort gains
- Further improvements from Cardiovascular Diseases slowed
- Austerity?

Causes for optimism?

We can still expect to live for longer than past cohorts

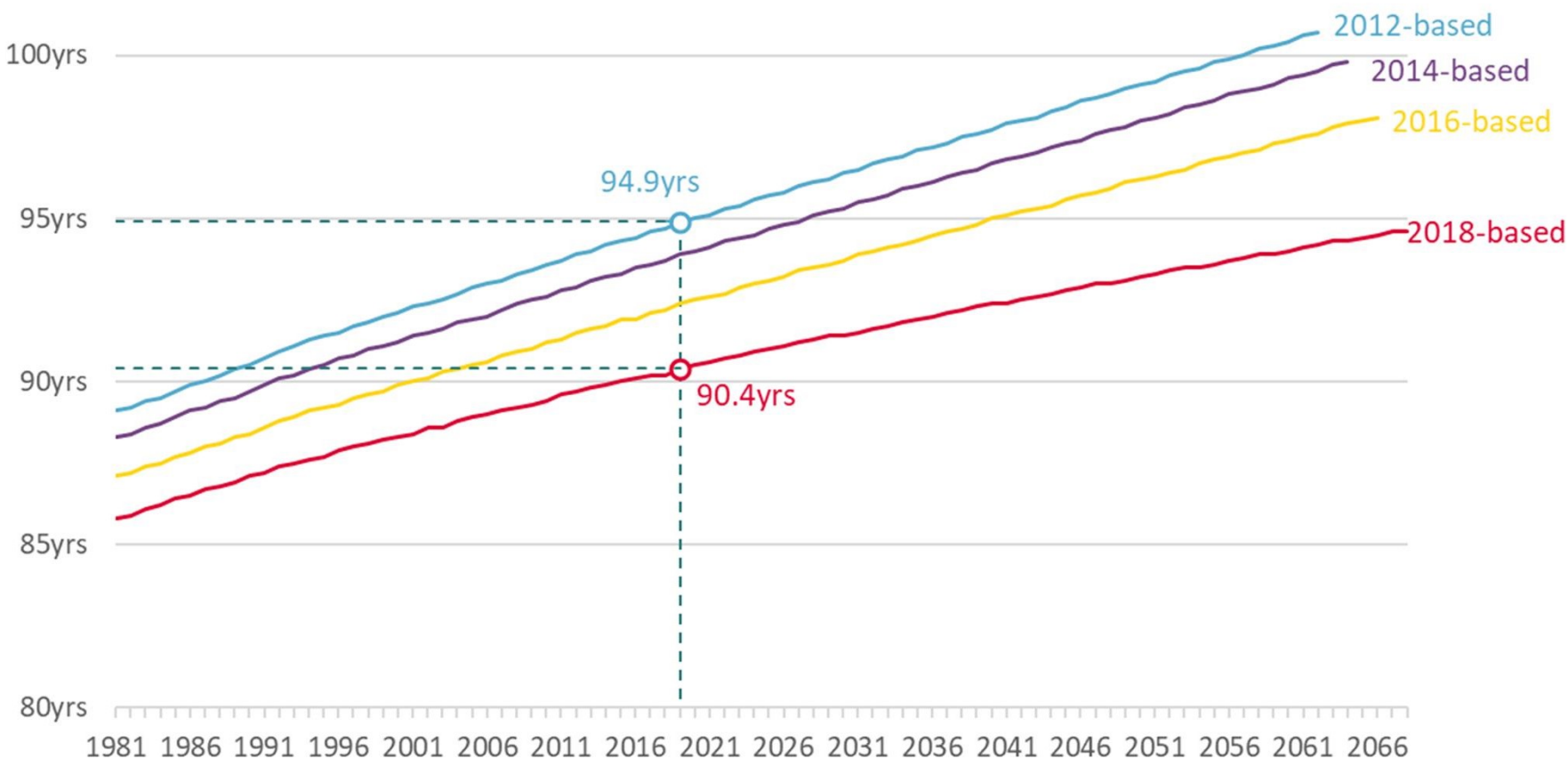
Cohort life expectancy at birth, females: selected projections, 2013-2019



Source: ONS, Past and projected expectations of life: principal projection, UK, 2012-based to 2018-based

We can expect to live for longer than past cohorts (but not for as long as we previously thought)

Cohort life expectancy at birth, females: selected projections, 2013-2019



Source: ONS, Past and projected expectations of life: principal projection, UK, 2012-based to 2018-based

Latest mortality data in England reached lowest rate on record (just)

Mortality rates by sex: England, Q2 2001-2019
Age-standardised mortality rates per 100,000 population



Source: ONS, Quarterly mortality report, England: April to June 2019

There is ample room for improvement

Changing period life expectancy at birth, females: selected countries, 2000–2017

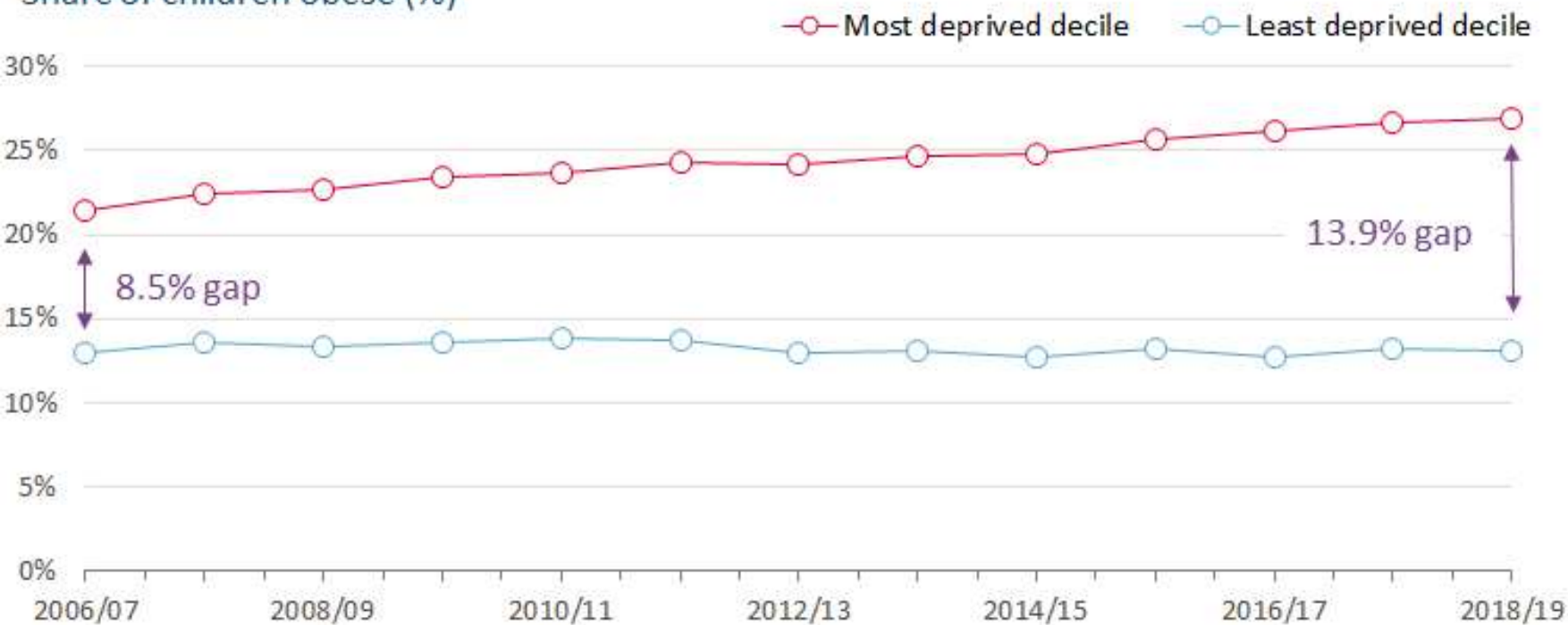


Source: OECD, Health indicators dataset.

Must pay attention to health of younger population

The obesity deprivation gap, children Year 6: England, 2006/07-2018/19

Share of children obese (%)



Source: NHS Digital, National Child Measurement Programme England 2018/19

Notes: Obesity includes severe obesity and deprivation is calculated on an IMD 2015 ranking Lower Super Output Areas based on school postcode

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