



Institute
and Faculty
of Actuaries

3 years forward, 2 steps back

Douglas Anderson, Founder of Club Vita
Andy Muddle, Senior Life Consultant,
Hymans Robertson LLP



Clickbait

sky news

A lot of people in the City are getting very excited about death

“...”£2bn windfall to the life sector.”

THE WALL STREET JOURNAL

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MARKETS | HEARD ON THE STREET

Life Was Short for Longevity Gains

Life expectancy at 65 is falling and that means cash windfalls for insurers

The Actuary

The magazine of the Institute & Faculty of Actuaries

Falling life expectancy to slash pension scheme liabilities

MailOnline

British life expectancy falls by SIX MONTHS for men and women with experts blaming NHS cuts and a rise in dementia, diabetes and obesity

...”pension firms have already begun to cash in on falling life expectancies.”



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Behind the headlines

Release of reserves from longevity assumption changes

Insurer	31-Dec-2018 year end	31-Dec-2017 year end	Longevity trend model used
Legal & General	£433m	£332m	2018: CMI 2016 2017: CMI 2015
Aviva (prelim)	£780m	£779m	2018: CMI 2017 2017: CMI 2016
Phoenix	£168m	£148m	2018: CMI 2017 2017: CMI 2016
PIC	£144m	£113m	2018: CMI 2016 (updated rollforward) 2017: CMI 2016
Prudential (Including Europe)	£441m	£204m	2018: CMI 2016 2017: CMI 2015
Just Group	Broadly neutral	(reviewing assumptions post merger)	2018: Modified CMI 2017 2017: Modified CMI 2014/15/16 depending on product on source (CMI_2009 used for specific product)
Rothsay Life	£133m	£77m	2018: CMI 2017 advanced calibration 2017: CMI 2016 advanced calibration (Other model for insurance originated)



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In the not so bleak midwinter

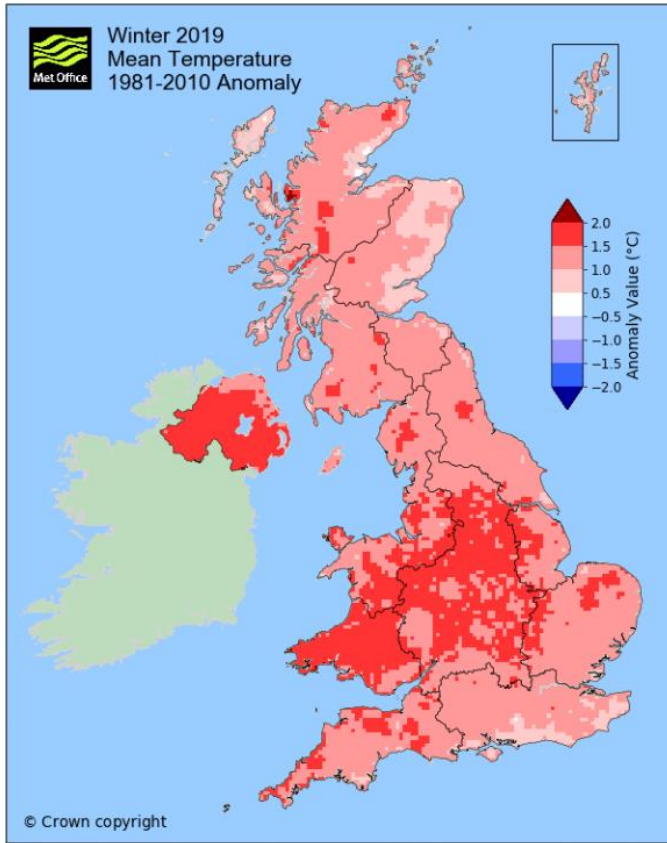
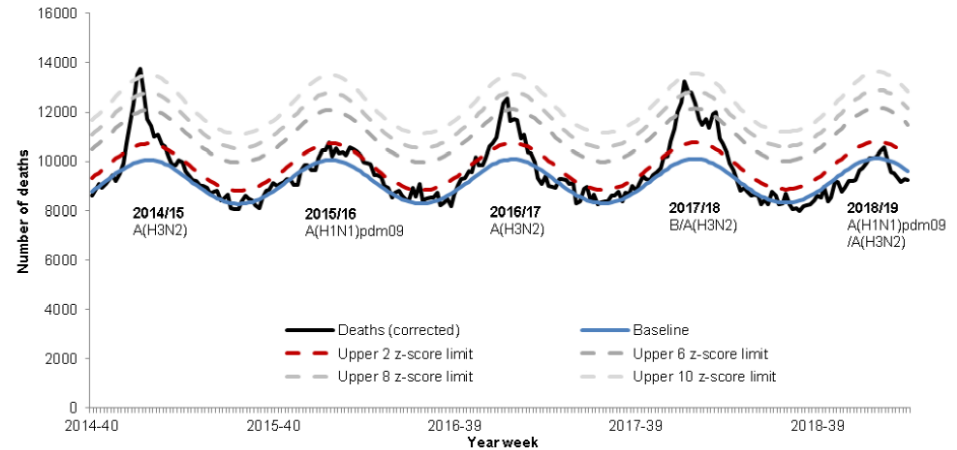
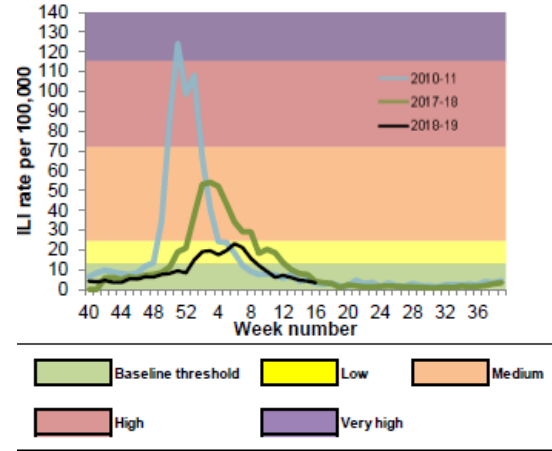


Figure 4: RCGP ILI consultation rates, England





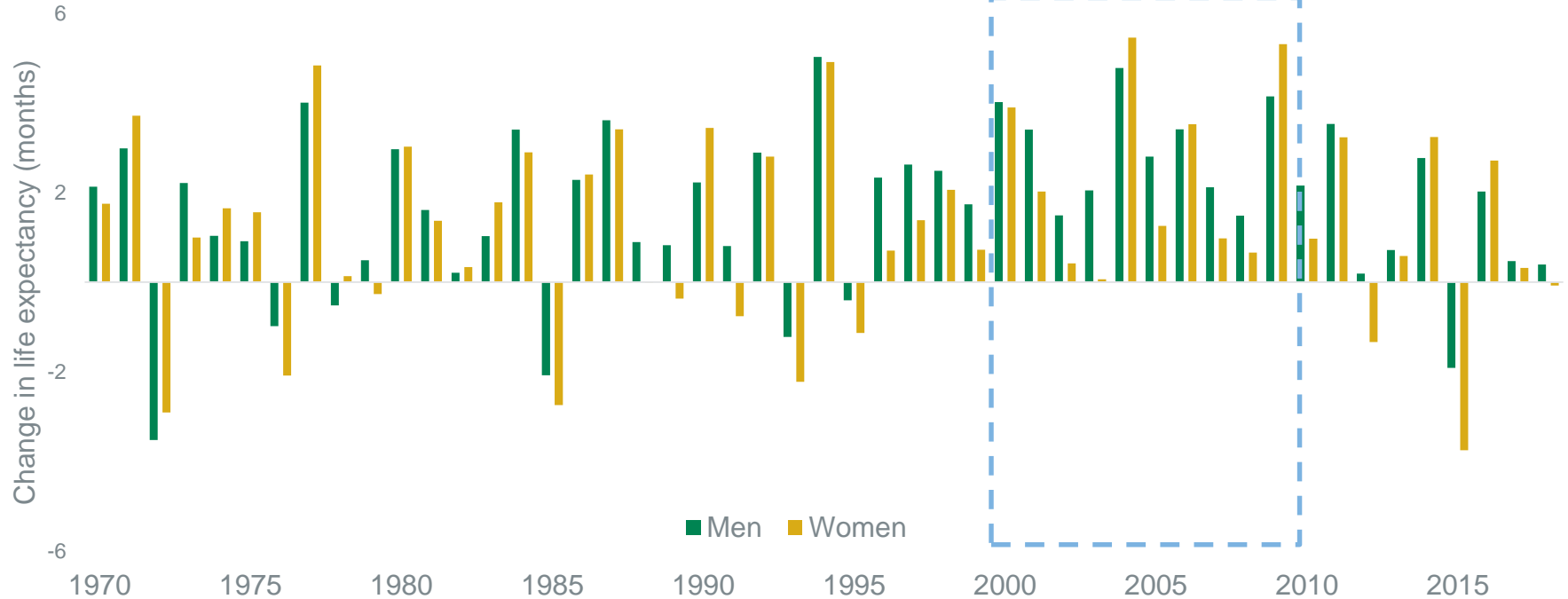
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Looking backwards



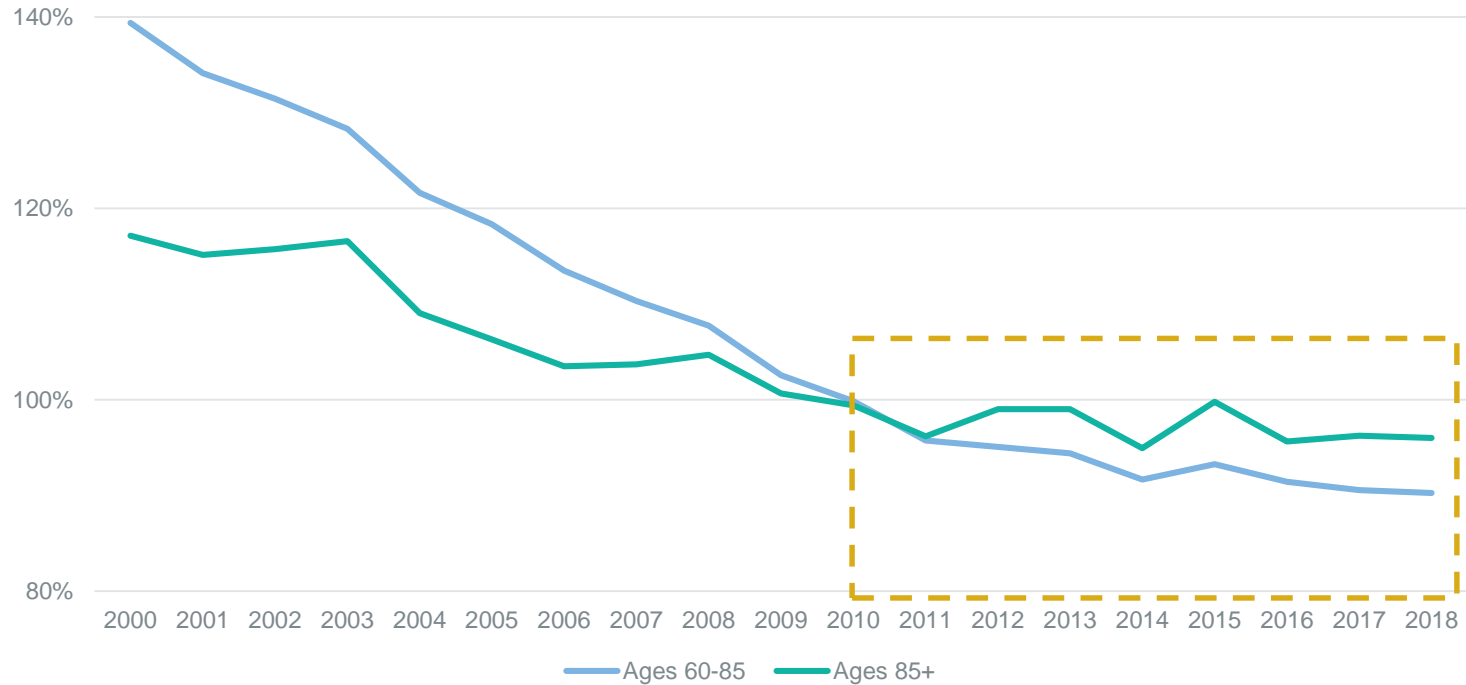
A bumper decade

Annual gains/losses in life expectancy from age 65 (E&W data)



A bumpy decade

Change in age standardised mortality rate as % of 2008-2012 average
(E&W data)



Recent slowdown: Some theories



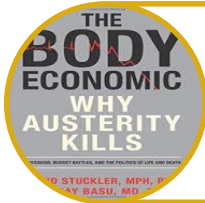
End of an era

Have we exhausted the era of cardio-vascular improvements with no replacement driver of improvements?



Frailty decline

A few harsh winters and flu seasons, each of which trigger frailty decline and premature mortality have merged together.



Cash-strapped Britain

Are austerity driven cuts **(supply)** impacting health outcomes, particularly of older people in an ageing population **(demand)**?



High-rise 00s

Were the 2000s simply abnormally good e.g. strong investment in health care, drives for social (health) equality?



Rise of Dementia

Larger rise in dementia than attributable to ageing population – are current generations more 'prone' for some reason?



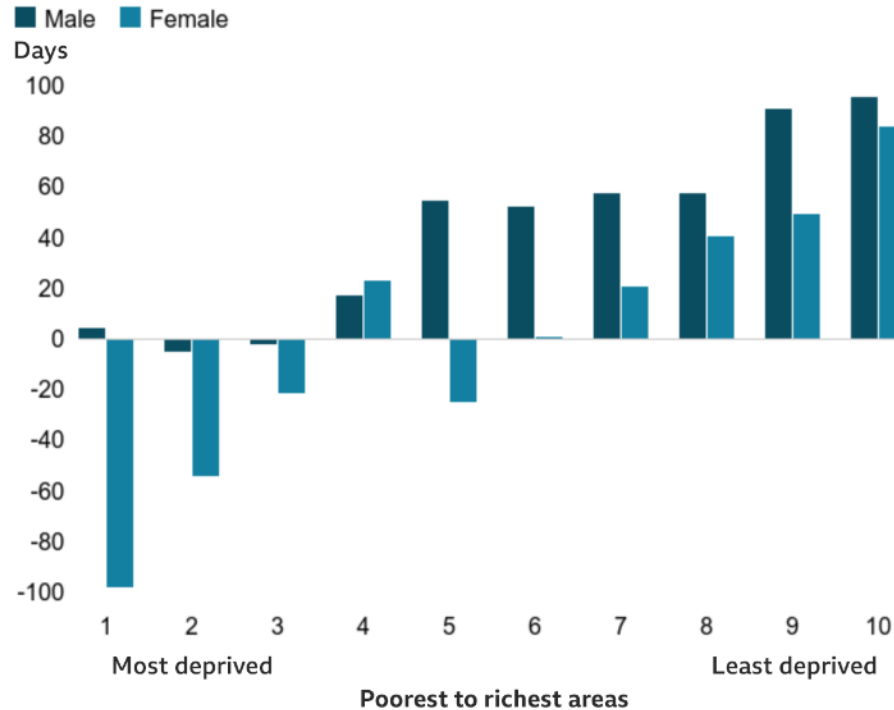
Data anomaly?..

Is there an anomaly within the population data? **Unlikely given the results replicated in Club Vita.**



Trends by socio-economic group

The life expectancy gap between rich and poor grew between 2012-14 and 2015-17



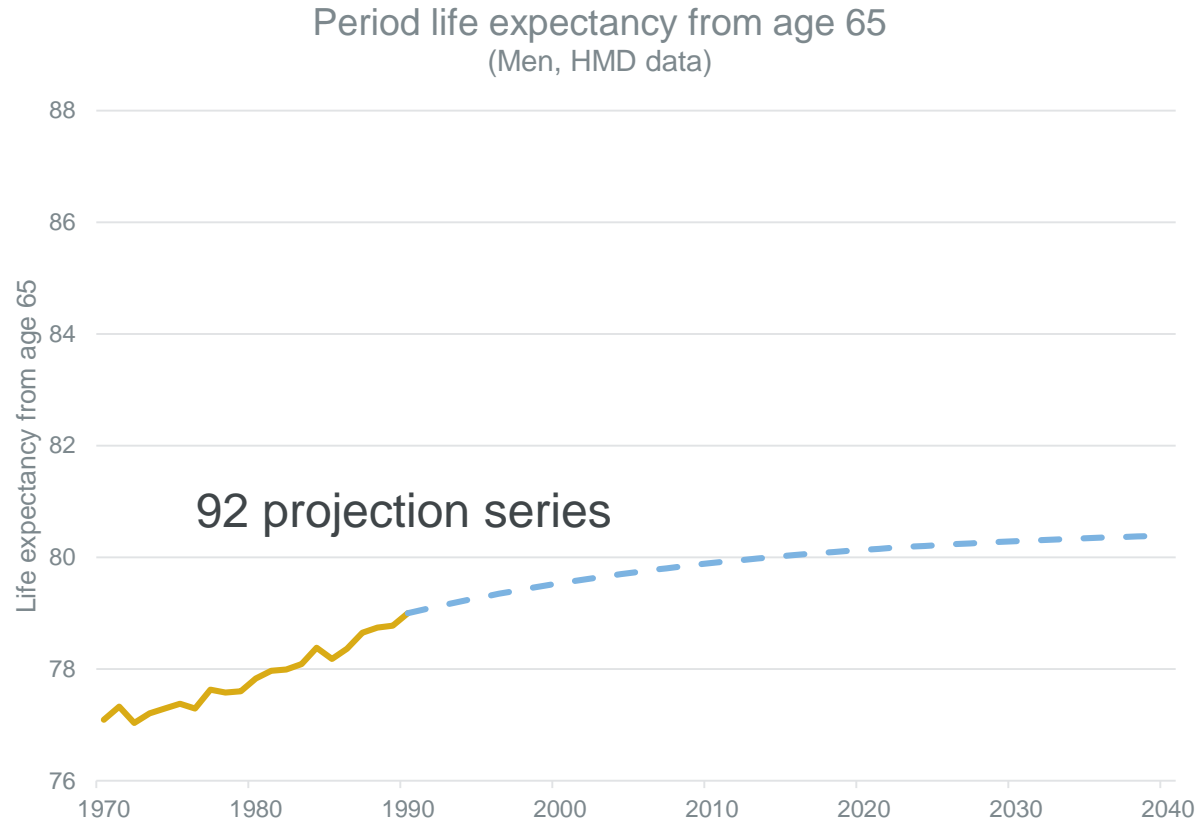
Trends by socio-economic group



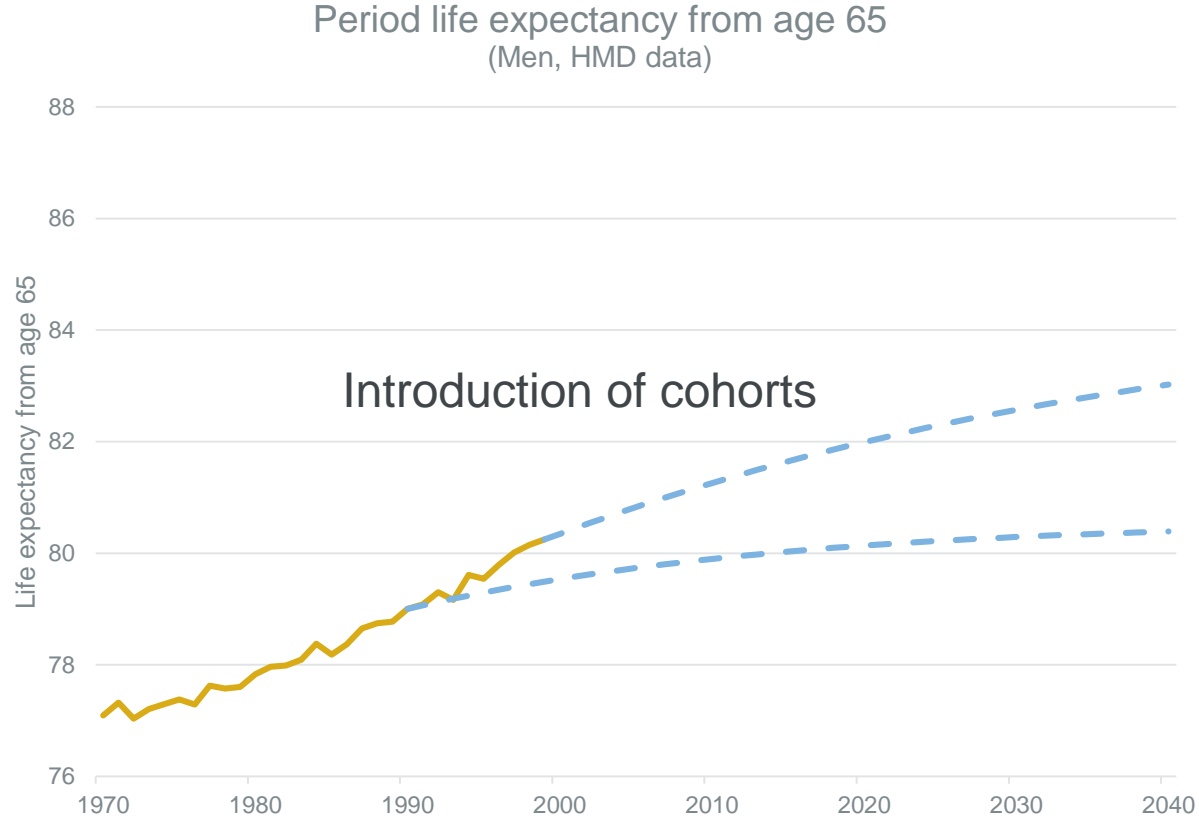
Group	Annualised mortality improvement (age-standardised, 3 year smoothing)		
	2001-2006	2006-2011	2011-2016
England & Wales	3.0% ($\pm 0.1\%$)	2.6% ($\pm 0.1\%$)	0.9% ($\pm 0.1\%$)
Comfortable	2.0% ($\pm 0.6\%$)	2.6% ($\pm 0.4\%$)	1.5% ($\pm 0.4\%$)
Making-do	2.9% ($\pm 0.4\%$)	2.9% ($\pm 0.3\%$)	1.1% ($\pm 0.3\%$)
Hard-pressed	2.6% ($\pm 0.4\%$)	3.1% ($\pm 0.3\%$)	0.7% ($\pm 0.3\%$)



Evolution of projections

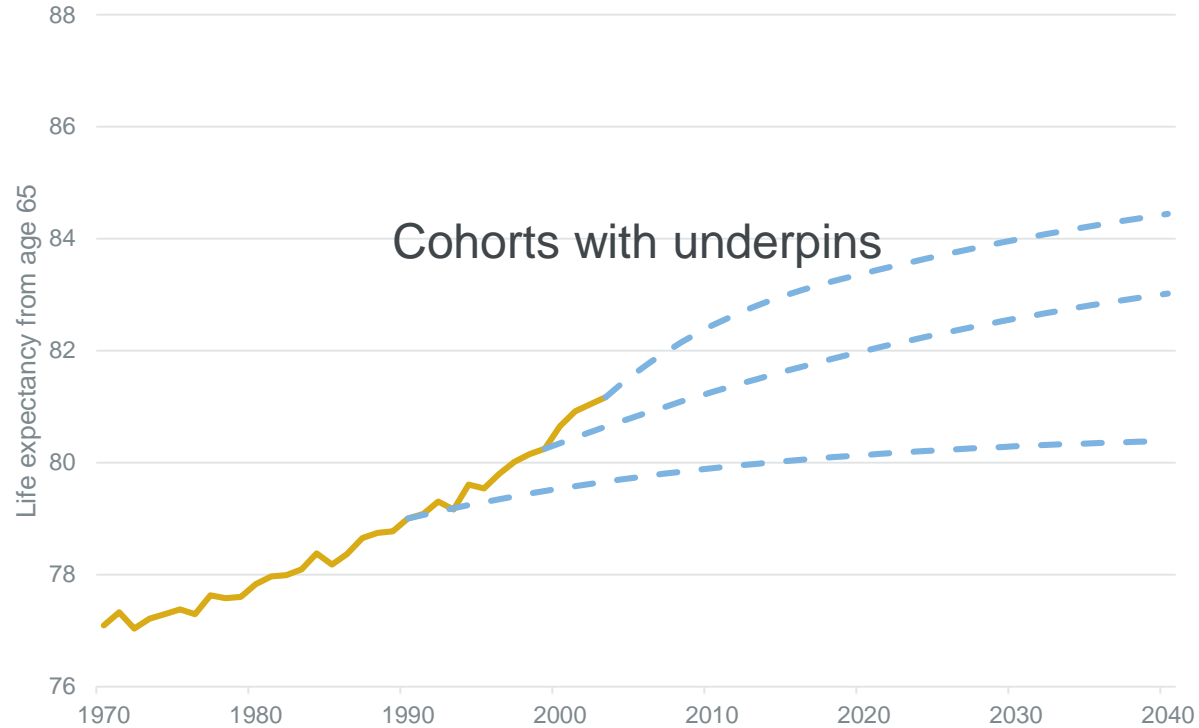


3 years forward ...

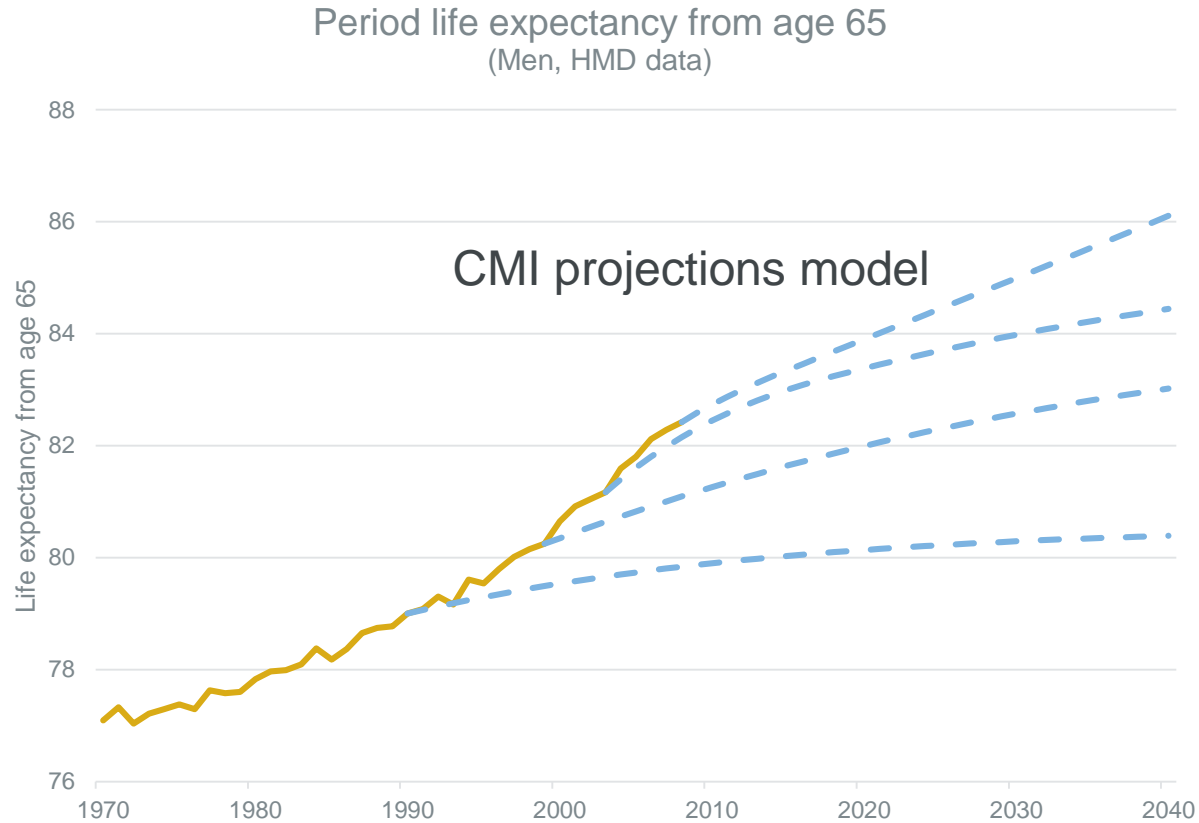


3 years forward ...

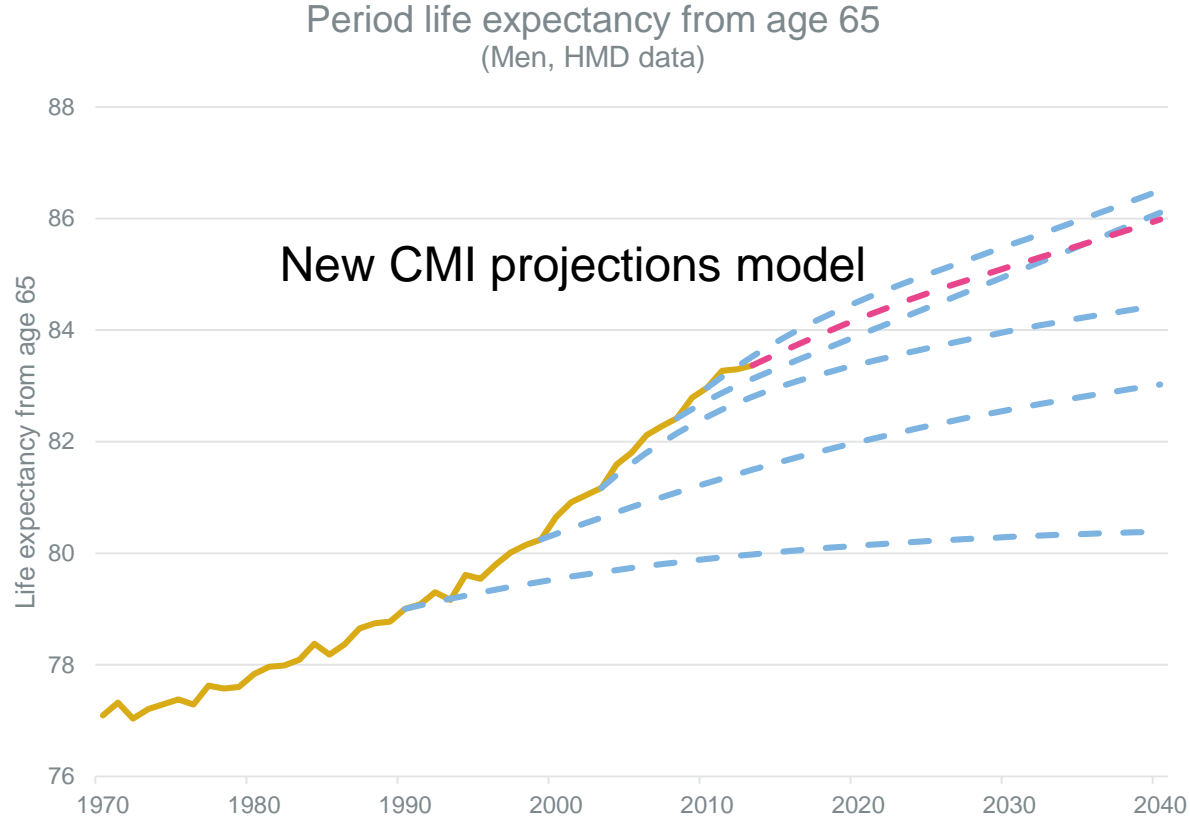
Period life expectancy from age 65
(Men, HMD data)



3 years forward (actually it was six!)

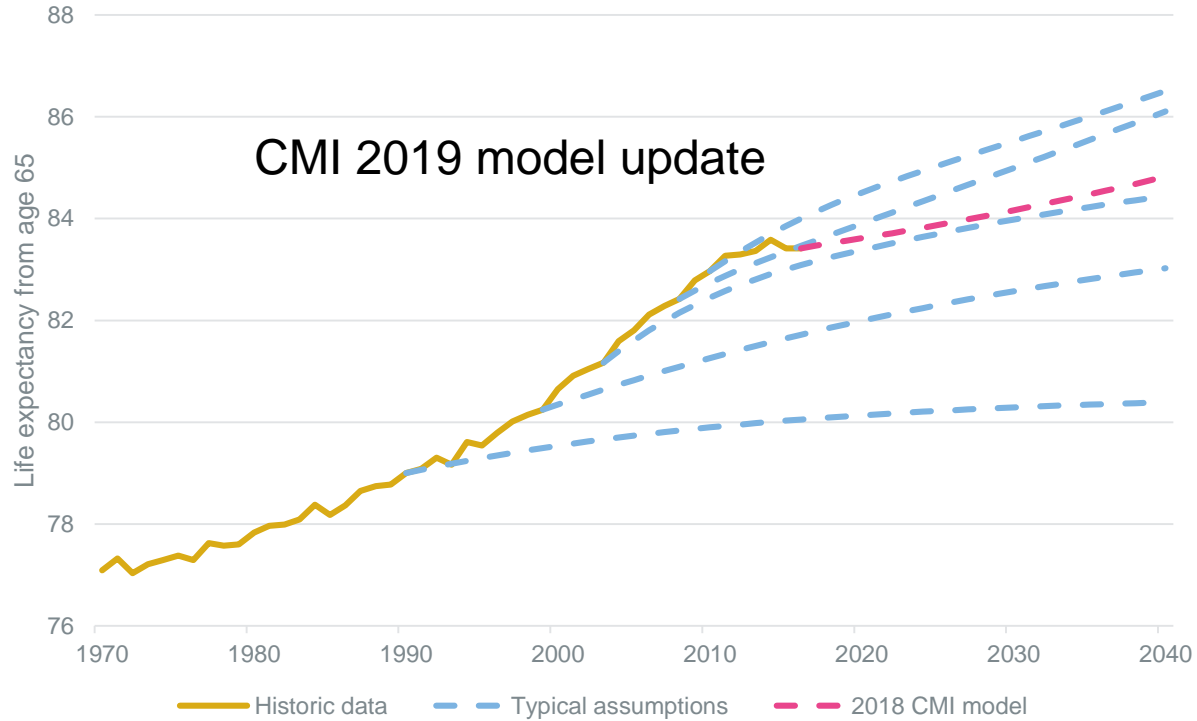


The tide turns



2 steps back

Period life expectancy from age 65
(Men, HMD data)





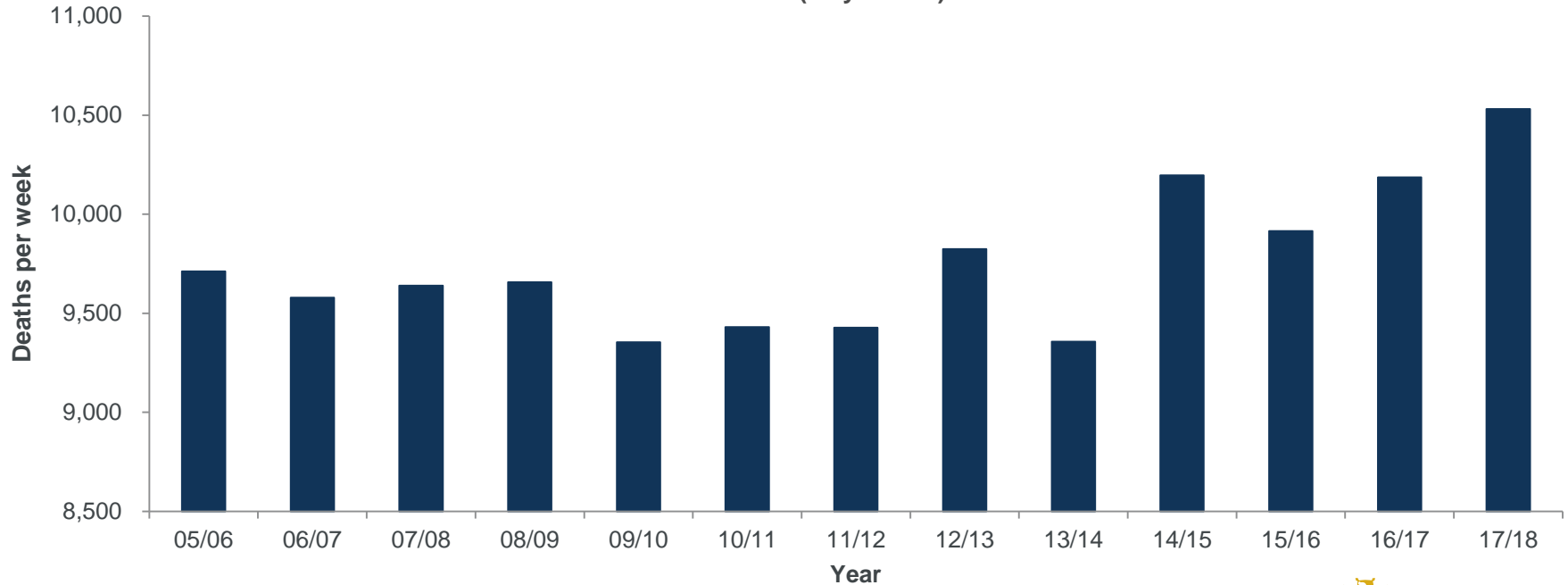
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Making sense of the recent data



Annual deaths – mid year to mid year

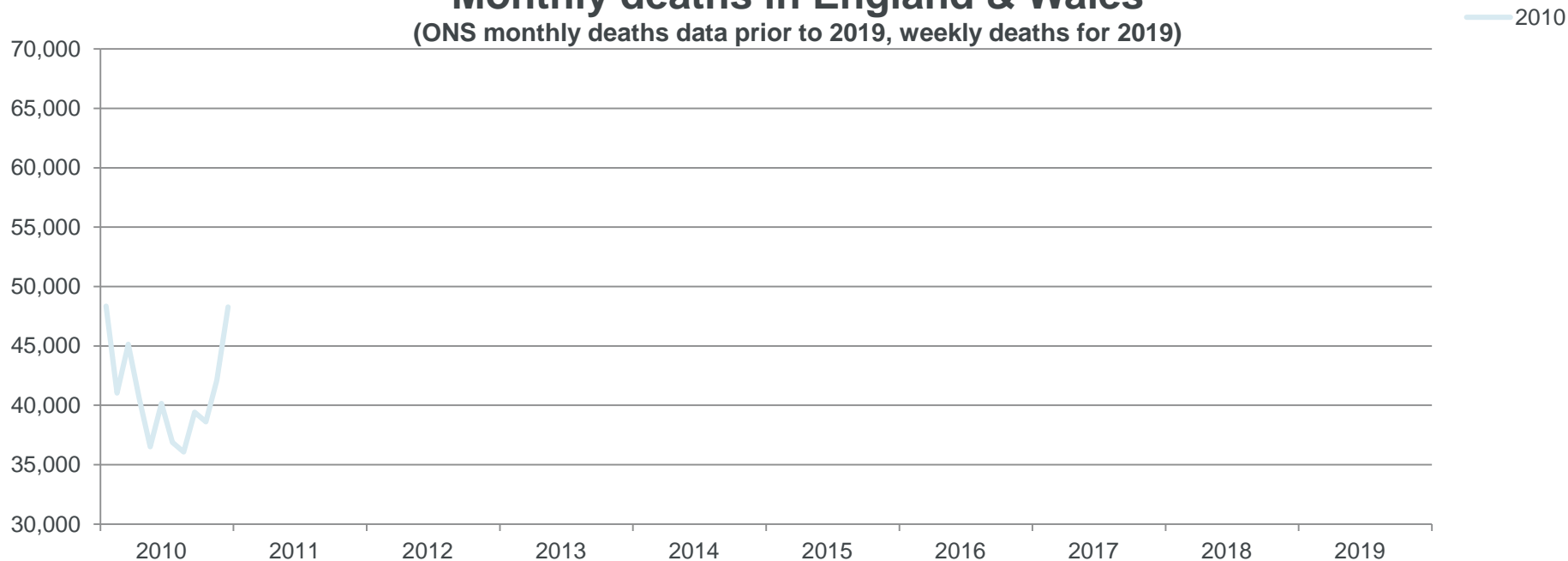
Average deaths per week in England & Wales
(July - June)



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Seasonal pattern

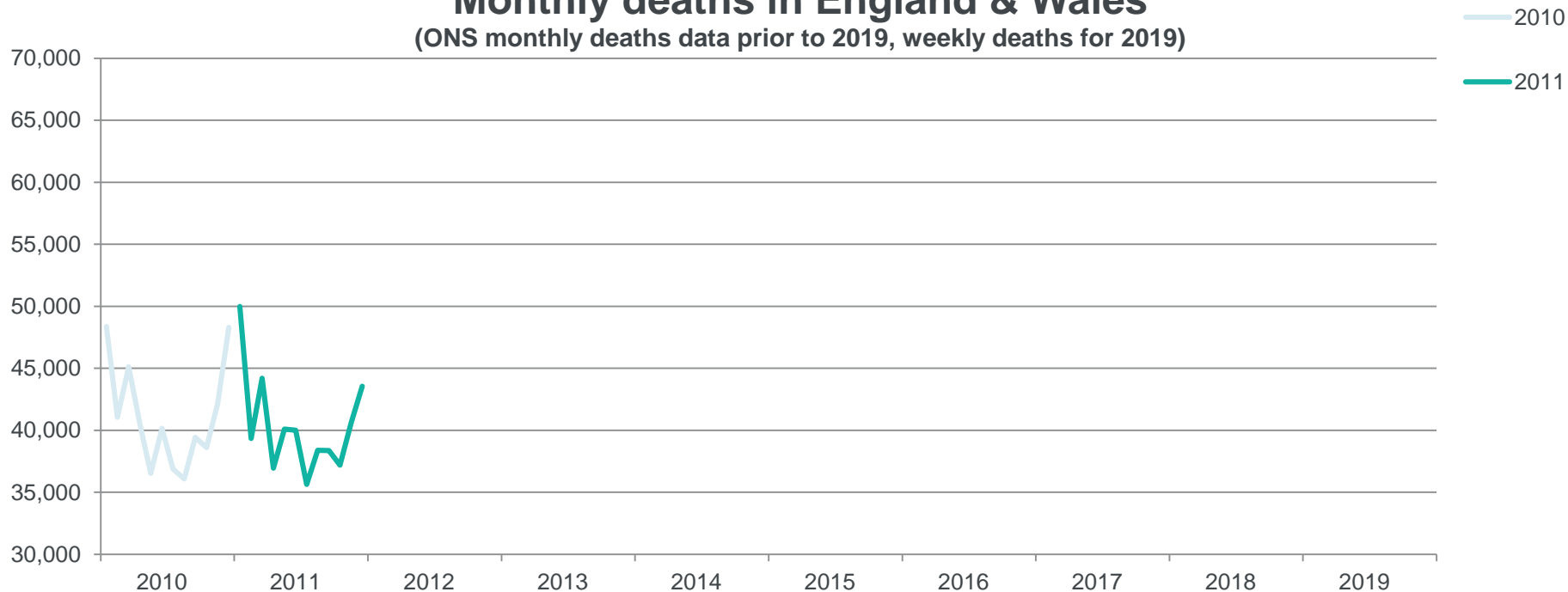
Monthly deaths in England & Wales (ONS monthly deaths data prior to 2019, weekly deaths for 2019)



Seasonal pattern

Monthly deaths in England & Wales

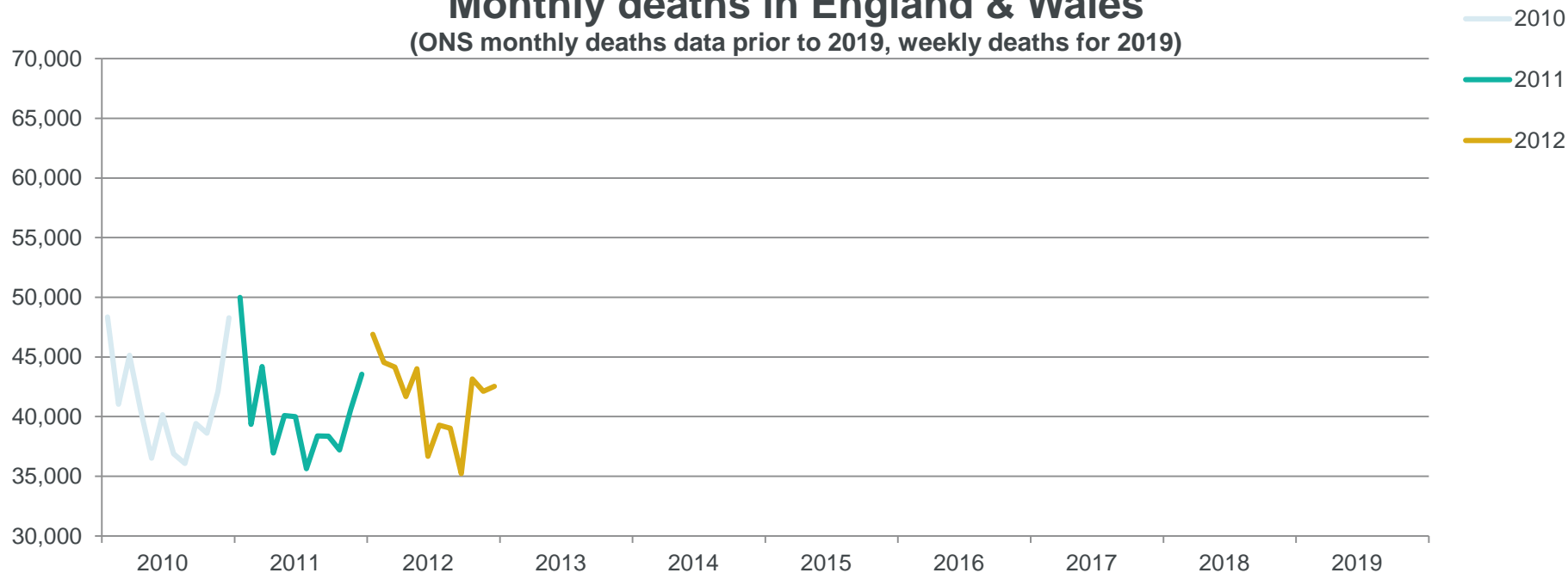
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Seasonal pattern

Monthly deaths in England & Wales

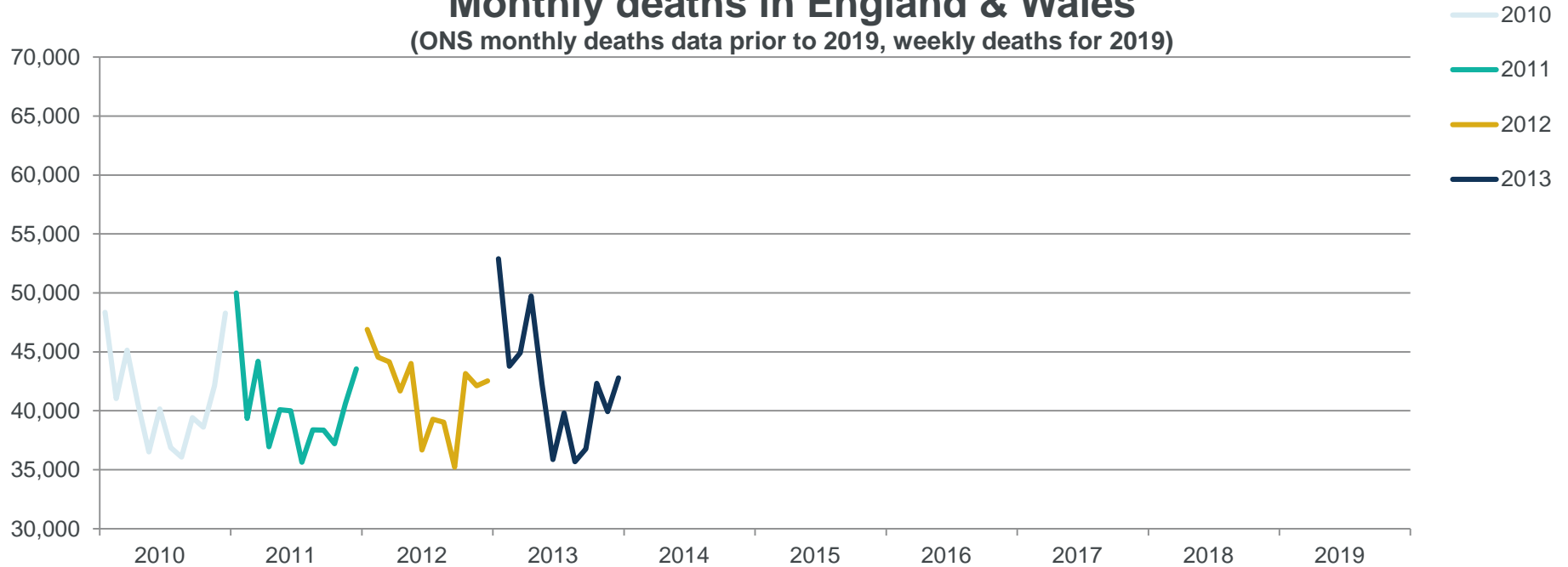
(ONS monthly deaths data prior to 2019, weekly deaths for 2019)



Seasonal pattern

Monthly deaths in England & Wales

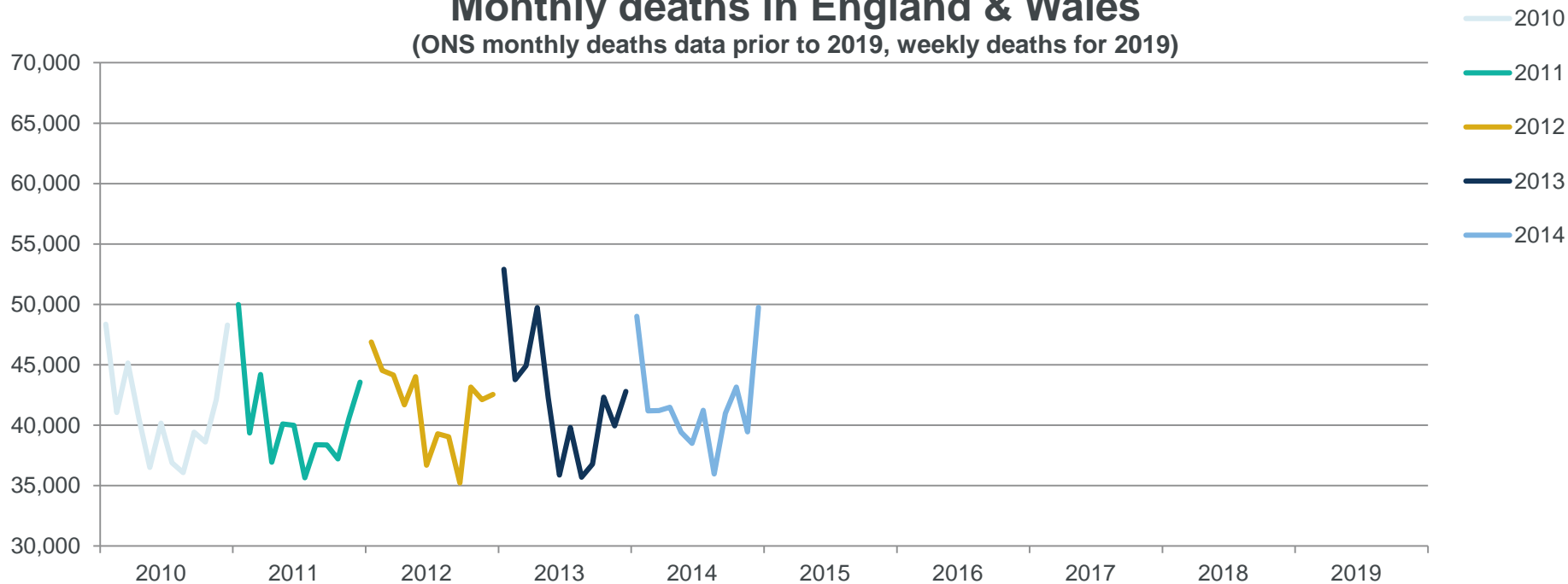
(ONS monthly deaths data prior to 2019, weekly deaths for 2019)



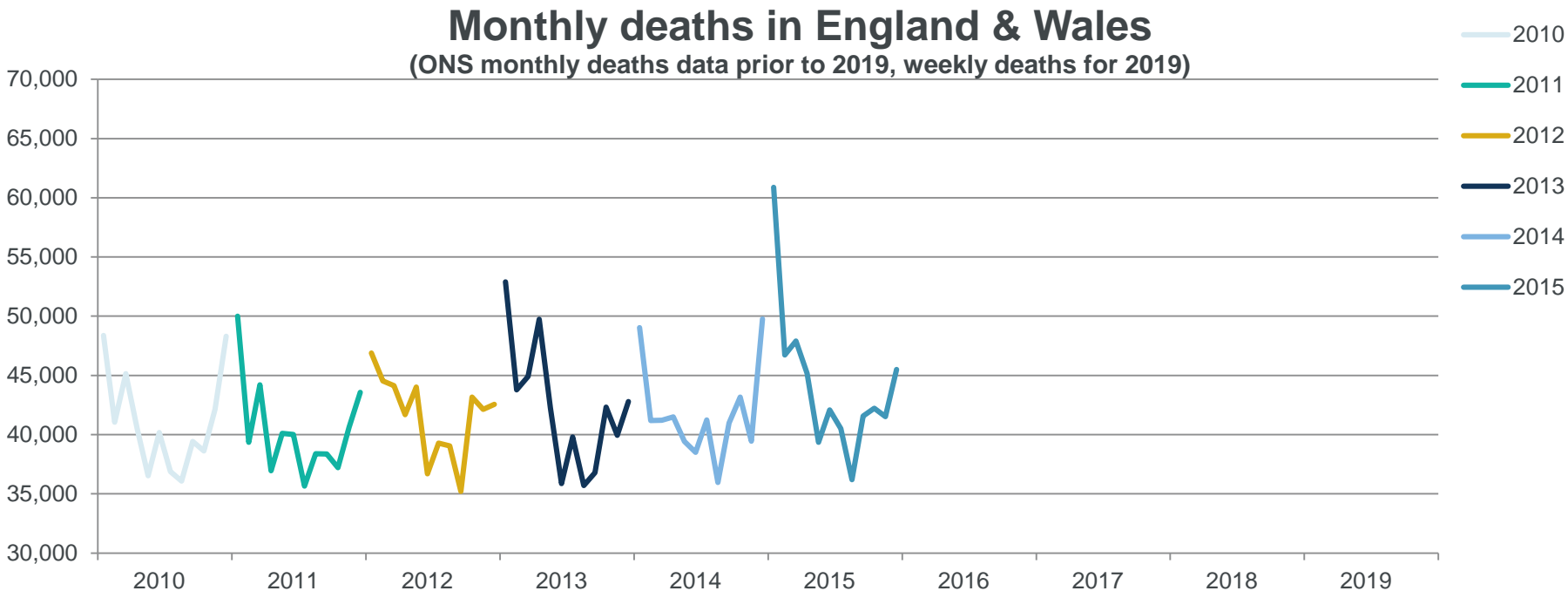
Seasonal pattern

Monthly deaths in England & Wales

(ONS monthly deaths data prior to 2019, weekly deaths for 2019)



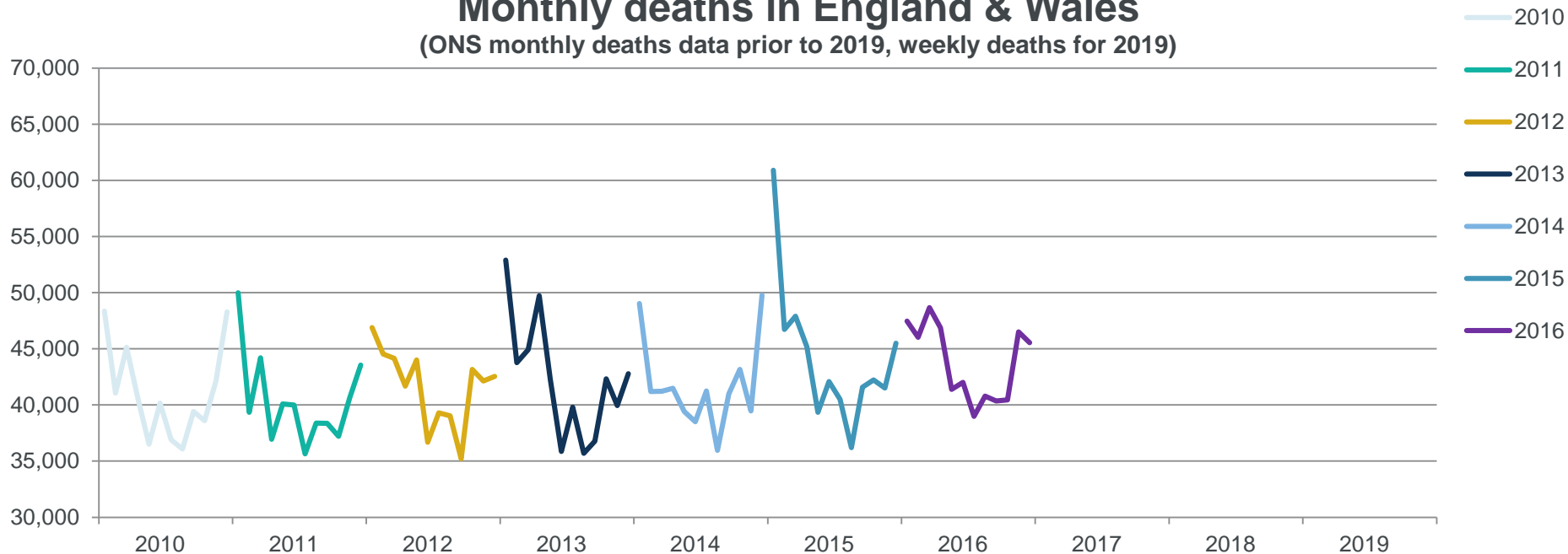
Seasonal pattern



Seasonal pattern

Monthly deaths in England & Wales

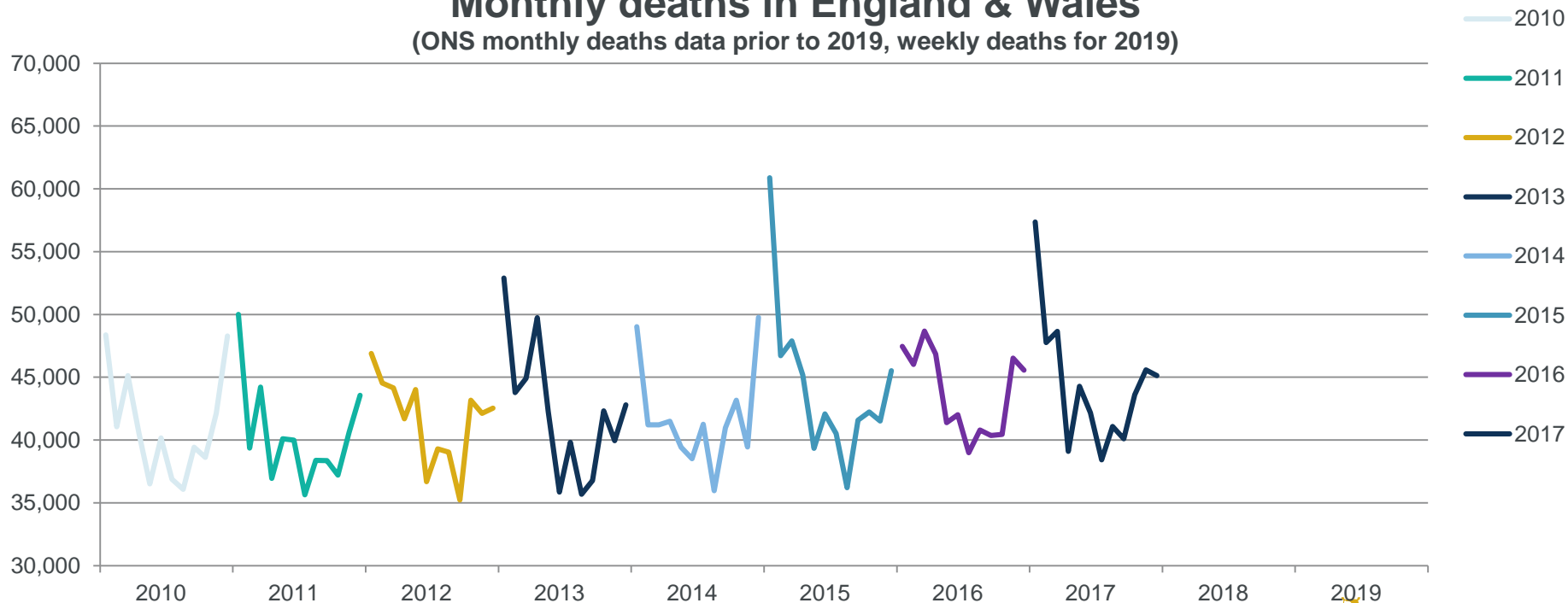
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Seasonal pattern

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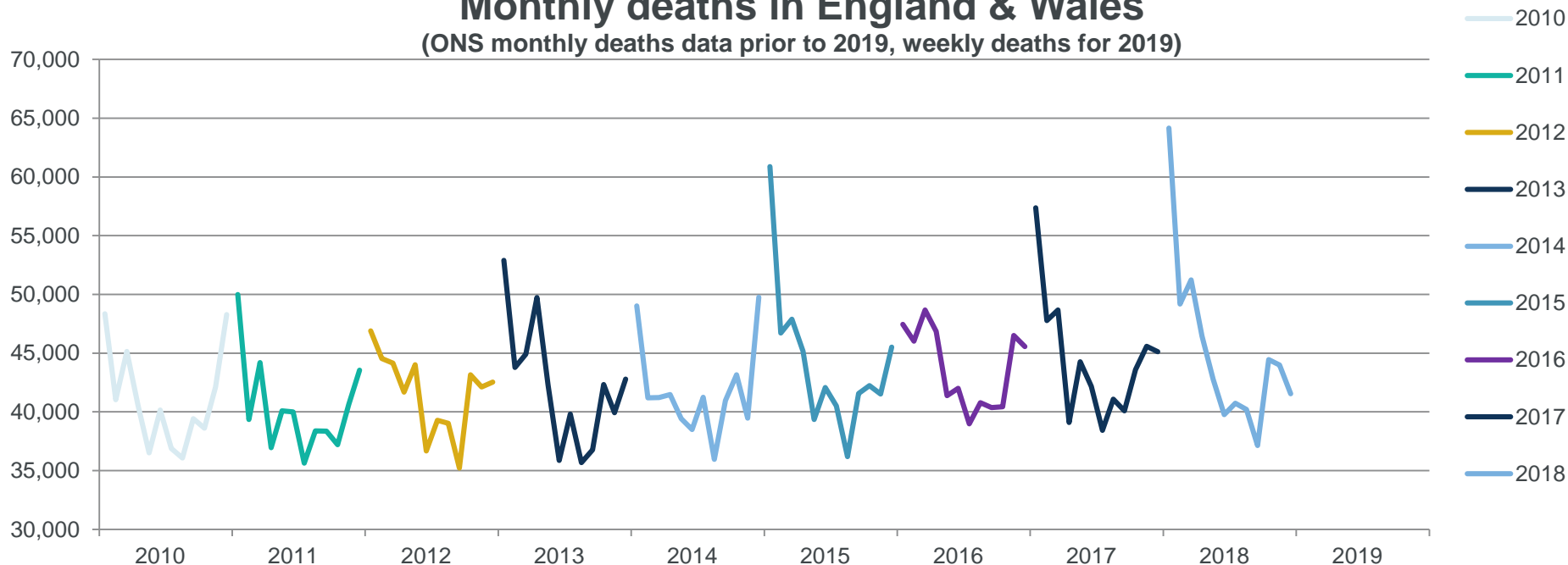
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Seasonal pattern

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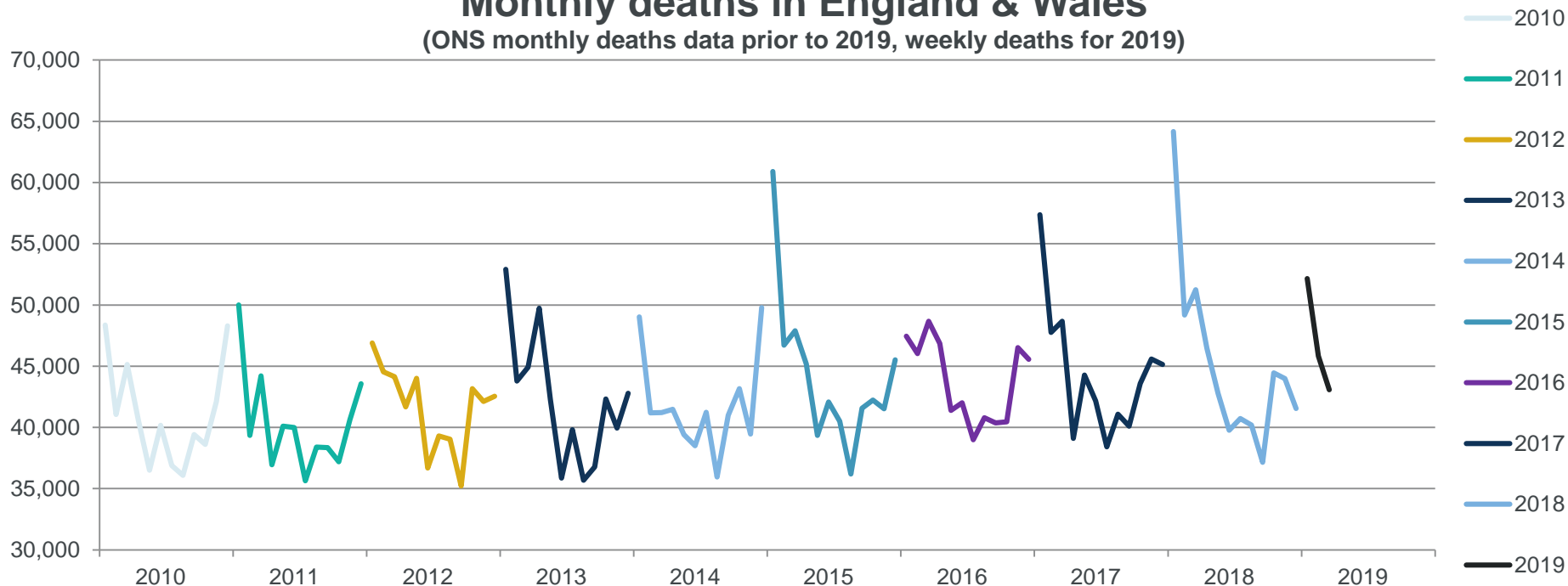
(ONS monthly deaths data prior to 2019, weekly deaths for 2019)



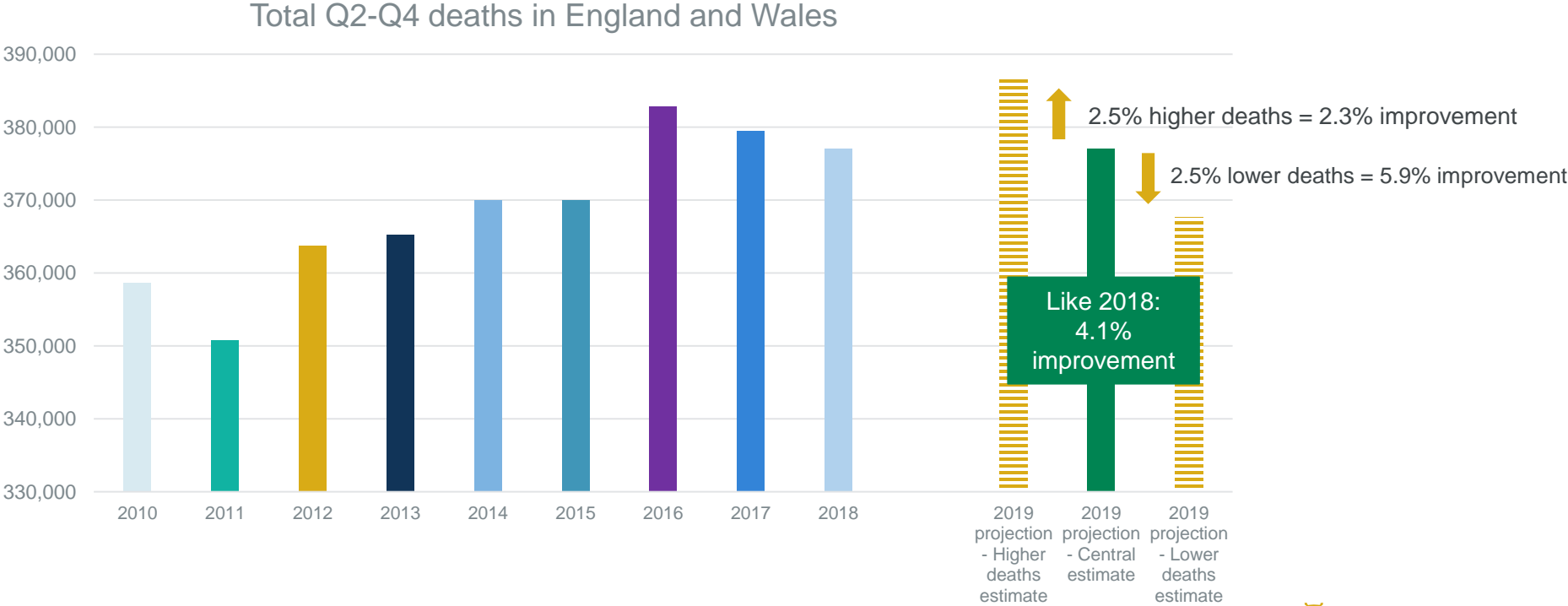
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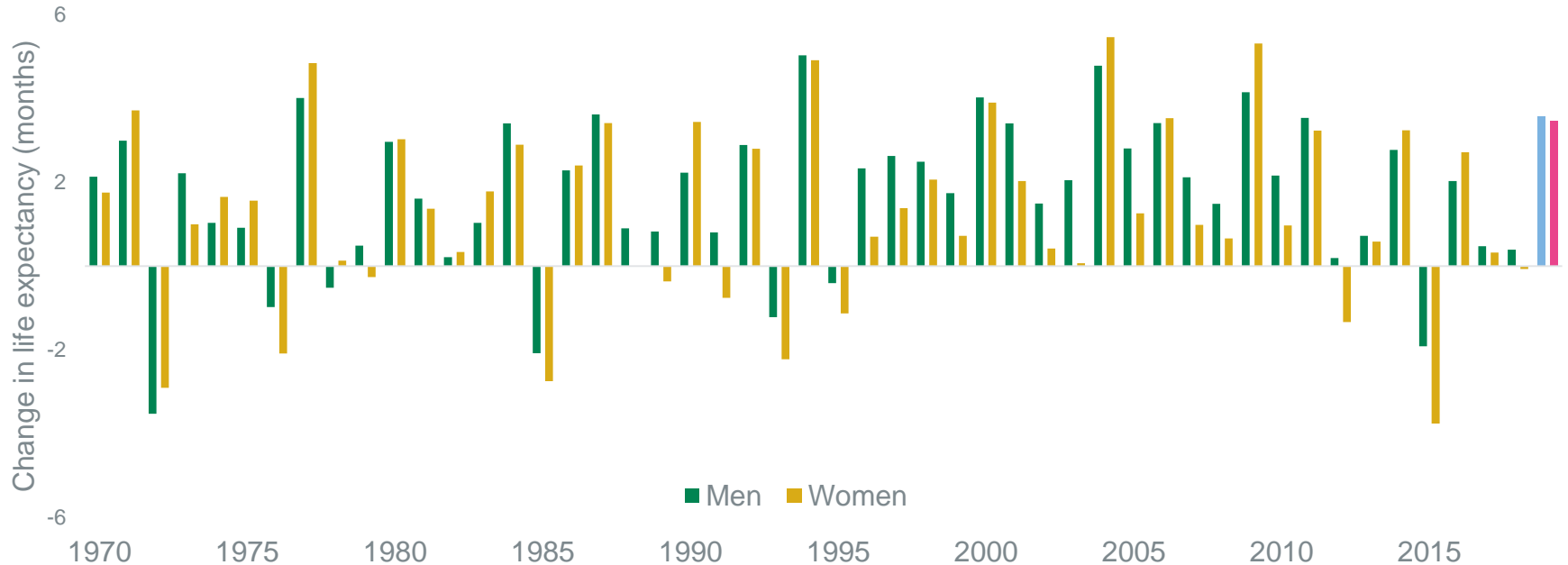


What might happen for the remainder of 2019?



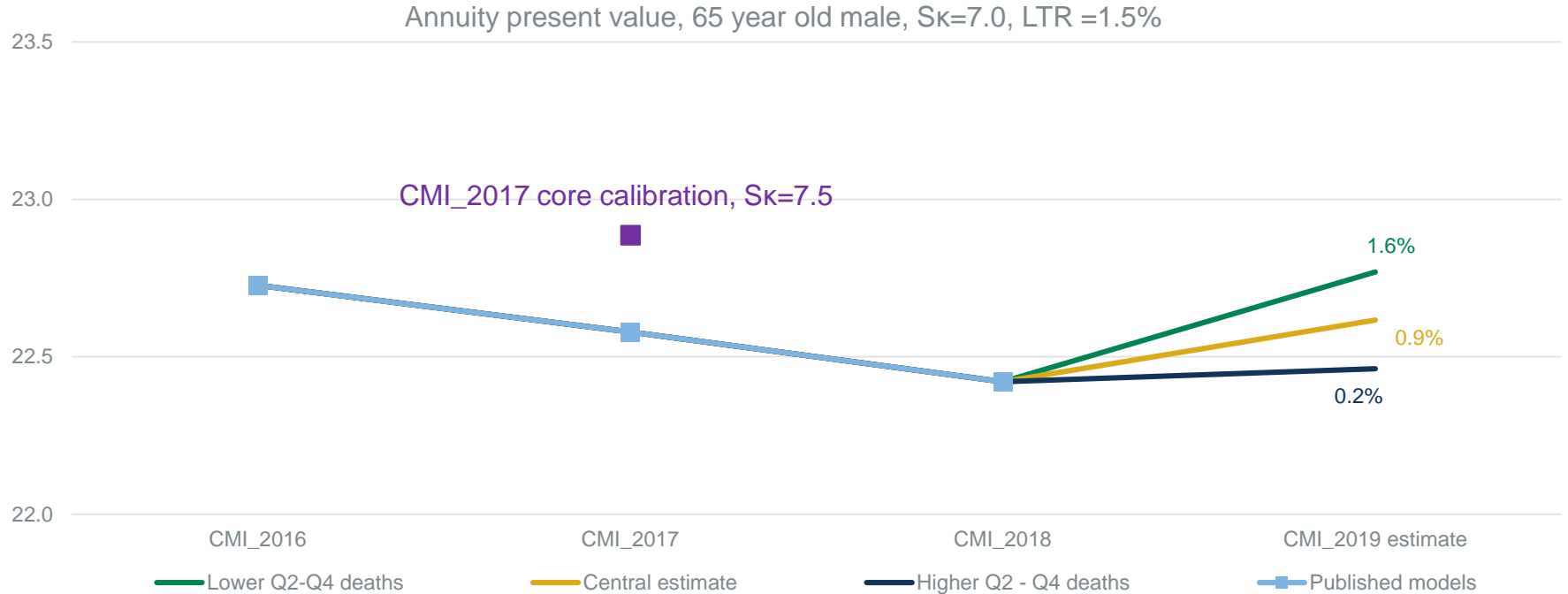
2019: a return to growth?

Annual gains/losses in life expectancy from age 65 (E&W data)



... remember that these are whole population

So, what might CMI_2019 look like?



... reversing releases of 2018!



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Two steps back for our profession?



Wise words

“The herd instinct among forecasters makes sheep look like independent thinkers.”

Edgar R. Fiedler



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Anonymous

“The goal of forecasting is not to predict the future but to tell you what you need to know to take meaningful action in the present”

Paul Saffo



So how can we mitigate the reputational risk?

- Place less weight on recent past
- Quicker data on socio-economic groups
- Place more emphasis on higher socio-economic groups, not national population
- Greater emphasis on changes in morbidity – the leading indicator of longevity
- Greater use of mortality-longevity hedging to neutralize volatility

What do you think?



Questions

Comments

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