ACA Bloomfield Lecture 2025

Healthcare Advancements, Inequality, and the Ageing Nation: Rethinking Retirement in the UK

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Agenda

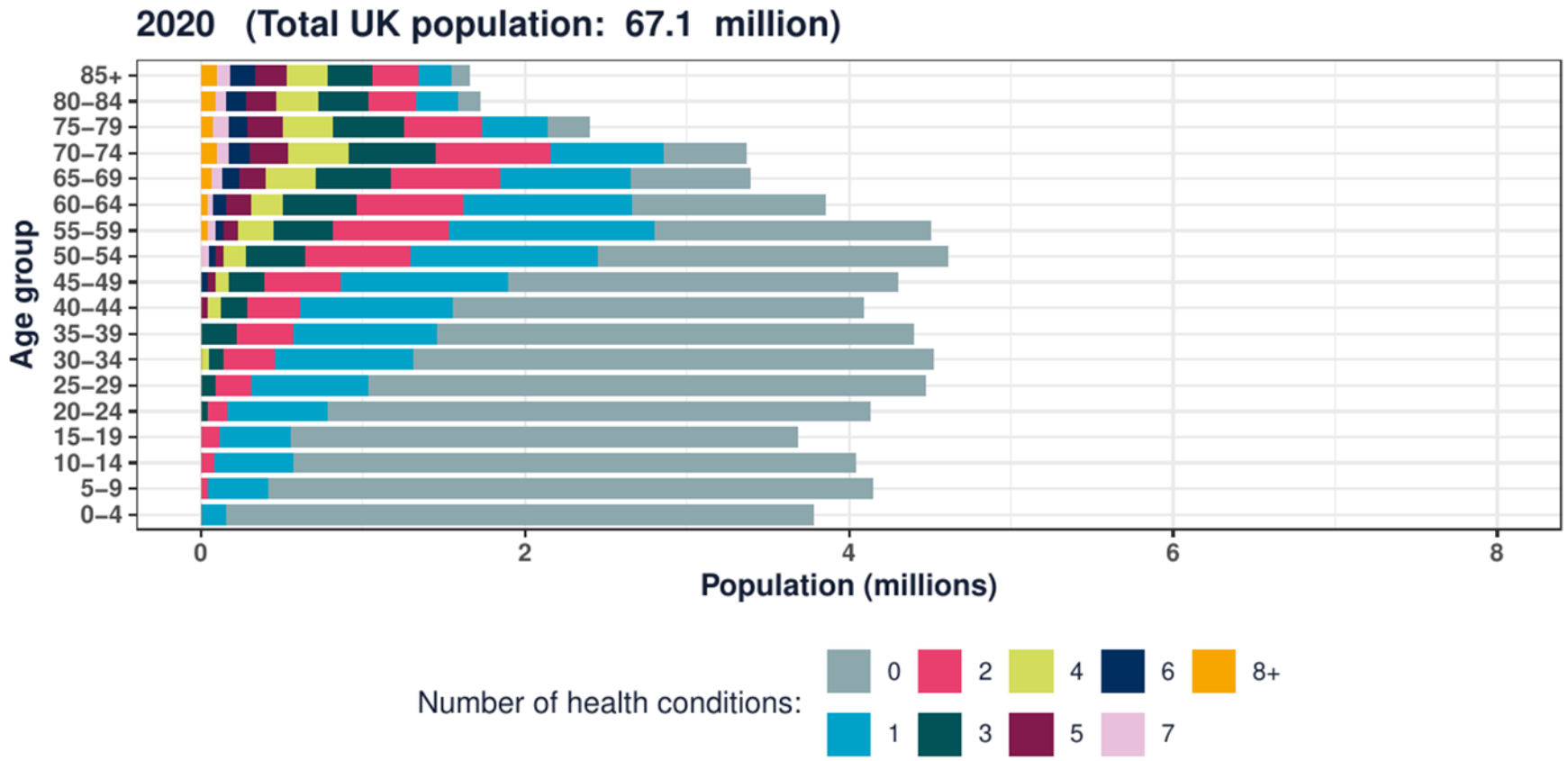
- The state of health in the UK
- What does the state of health mean for UK mortality
- Healthy life expectancy
- How do people view their own life expectancy
- The state pensions landscape
- Conclusions

The state of health in the UK

Current pressures on the health system

The UK population is ageing rapidly, and there is increasing prevalence of multimorbidity (2+ chronic conditions).

Population projections by age group and number of health conditions in UK, if health does not improve



Adapted from LCP Health Analytics Report

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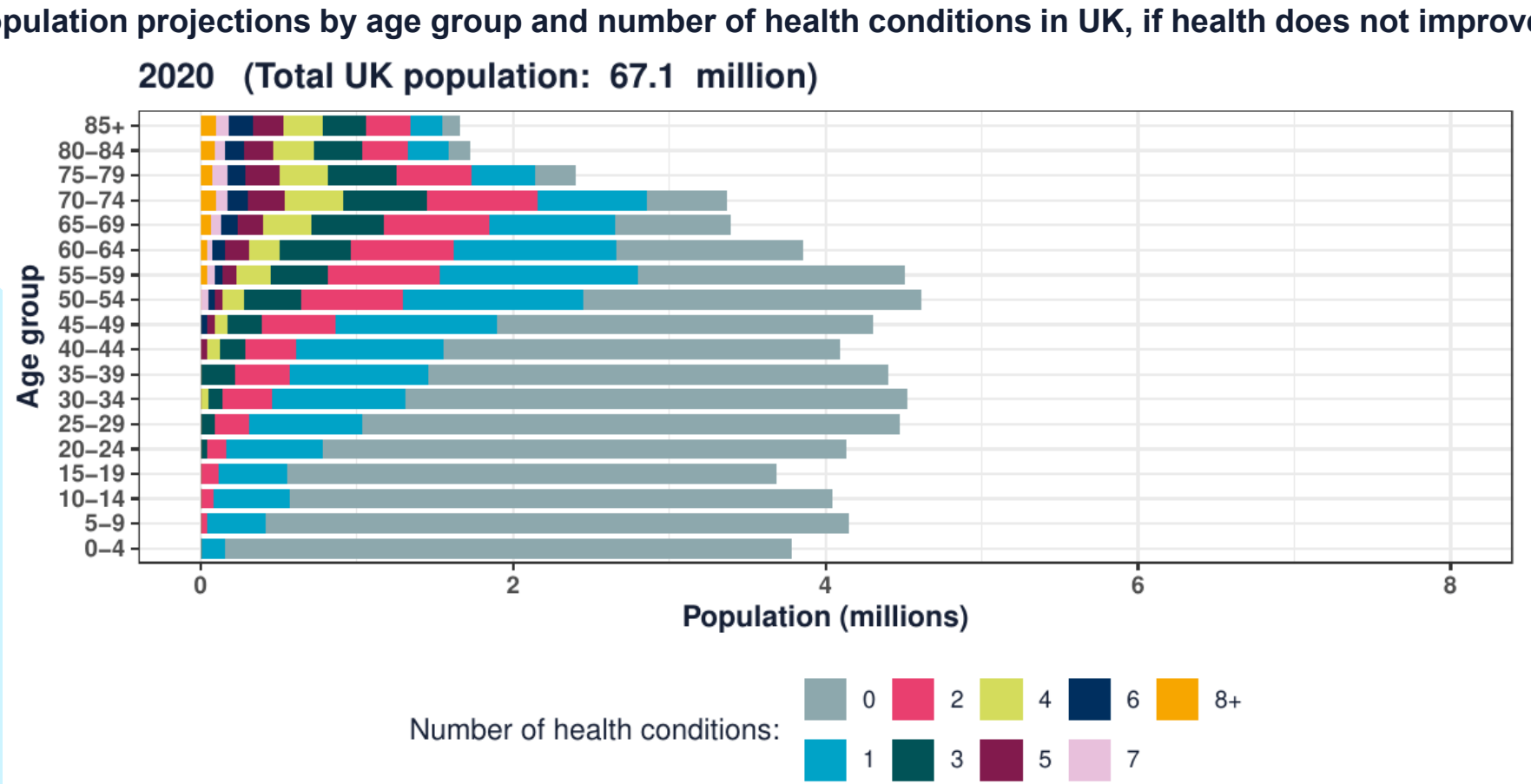

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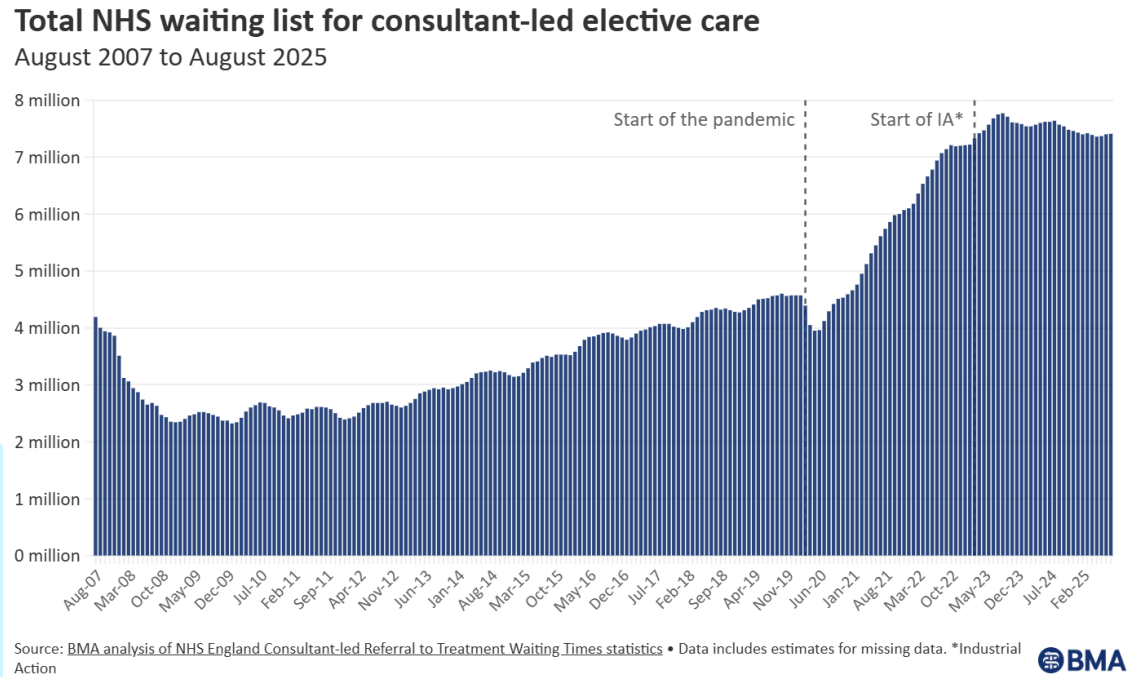
Current pressures on the health system

- There are numerous pressures on the NHS in addition to the growing health burden:
  - Huge variation in health burden and demand
  - Elective care waiting list continues to grow and acute care targets continue to be missed
  - Post-Covid pressures have generally increased rather than reduced
- The 10-year NHS plan acknowledges existing pressures and the need to tackle them



Advances in population health and medicine

Health policy

- Funding for weight management
- Potential smoking and vapes ban

Medical advances

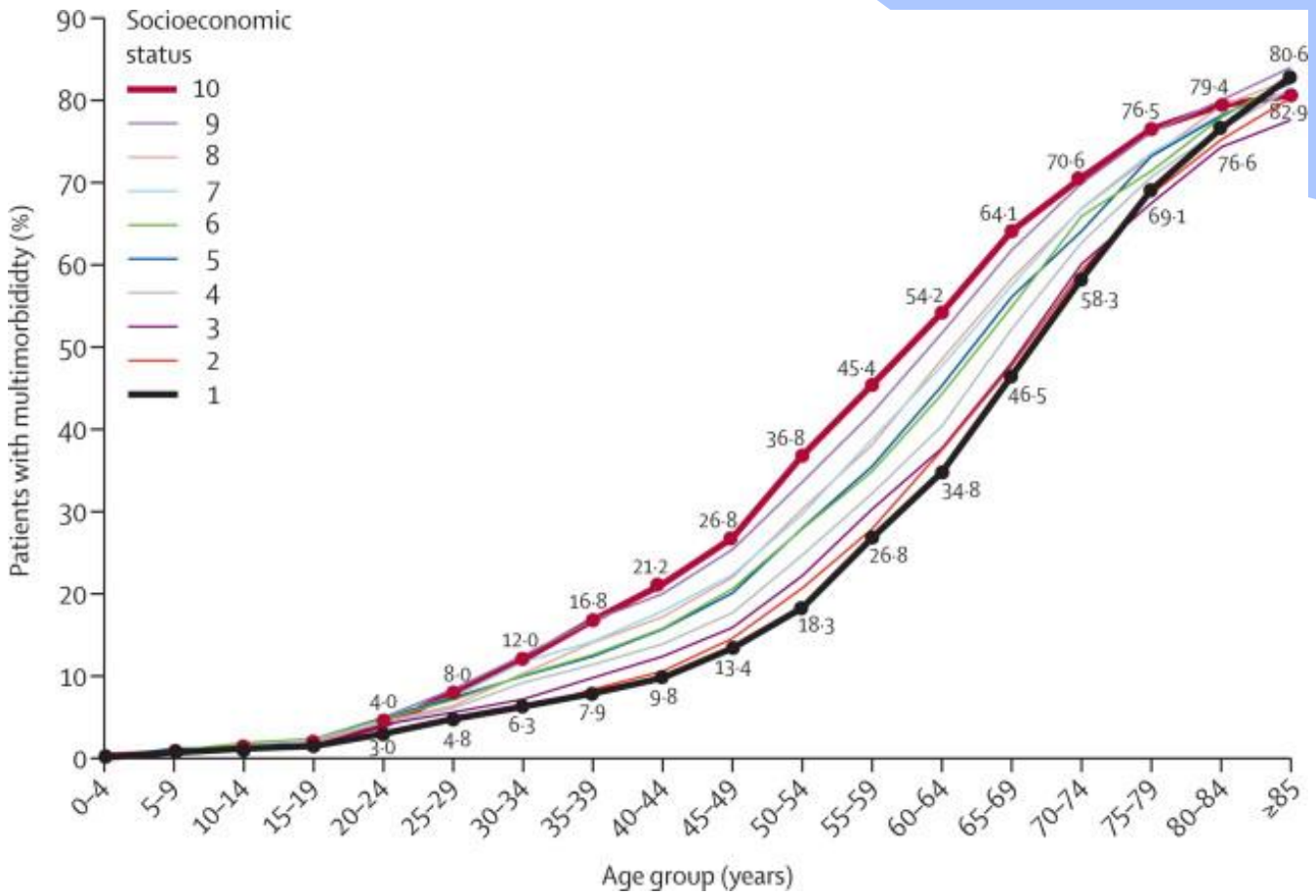
- Weight loss medicines which are more effective and can reduce risks of other diseases
- Alzheimer's disease treatments
- Cancer immunotherapy and early detection
- Drug discovery and personalised treatment
- Use of AI in diagnostics, screening and drug discovery

If these advances improve health, they would make later and more active retirements possible. However, if these advances extend life without substantial improvement in health, then they would result in longer periods of ill health and higher care costs.

Barriers to improvements in health

- Lack of investment in and access to novel anti-microbials
- Growing mental health and substance abuse crisis
- Widening health inequalities and unequal access to healthcare

Prevalence of multimorbidity by age and socioeconomic status



Source: Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study - The Lancet

Poll - Which health policies or medical advancements will have the biggest impact on (healthy) life expectancy, and thus pension scheme and insurer liabilities?

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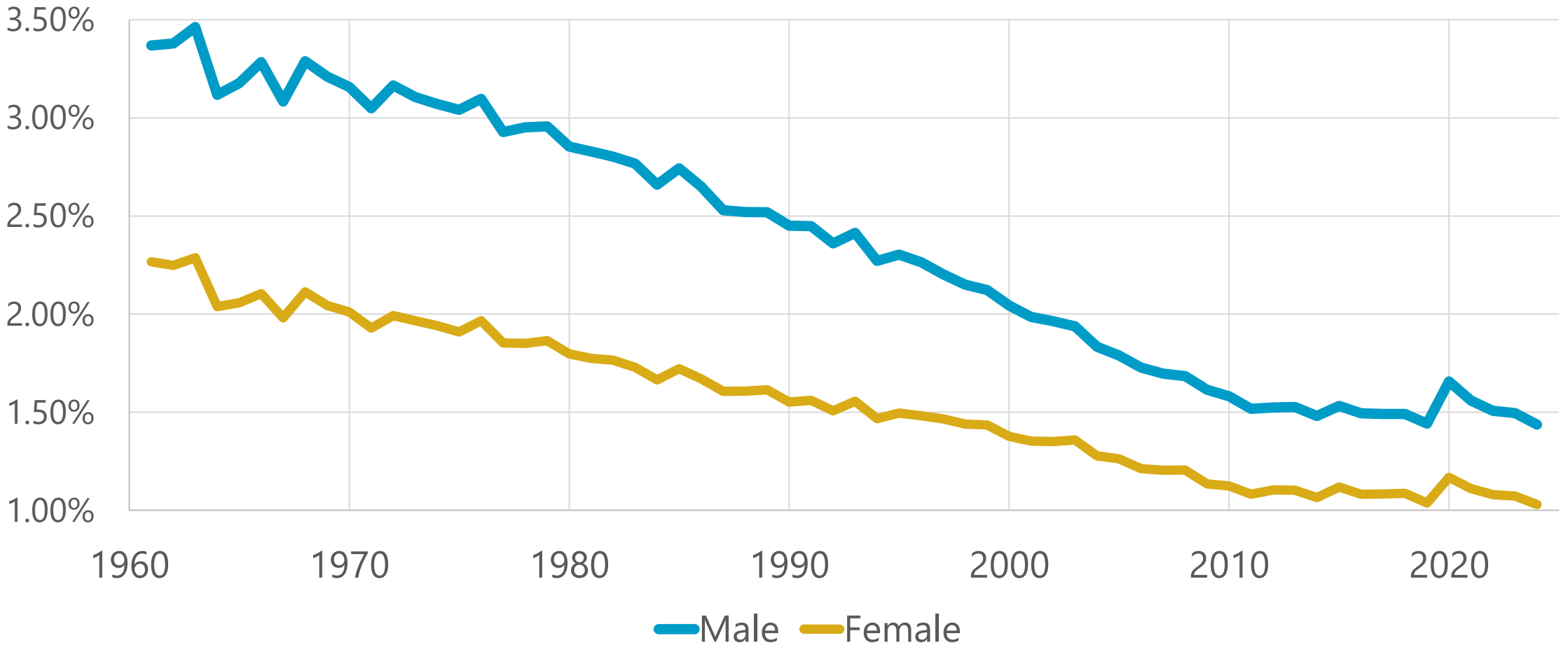
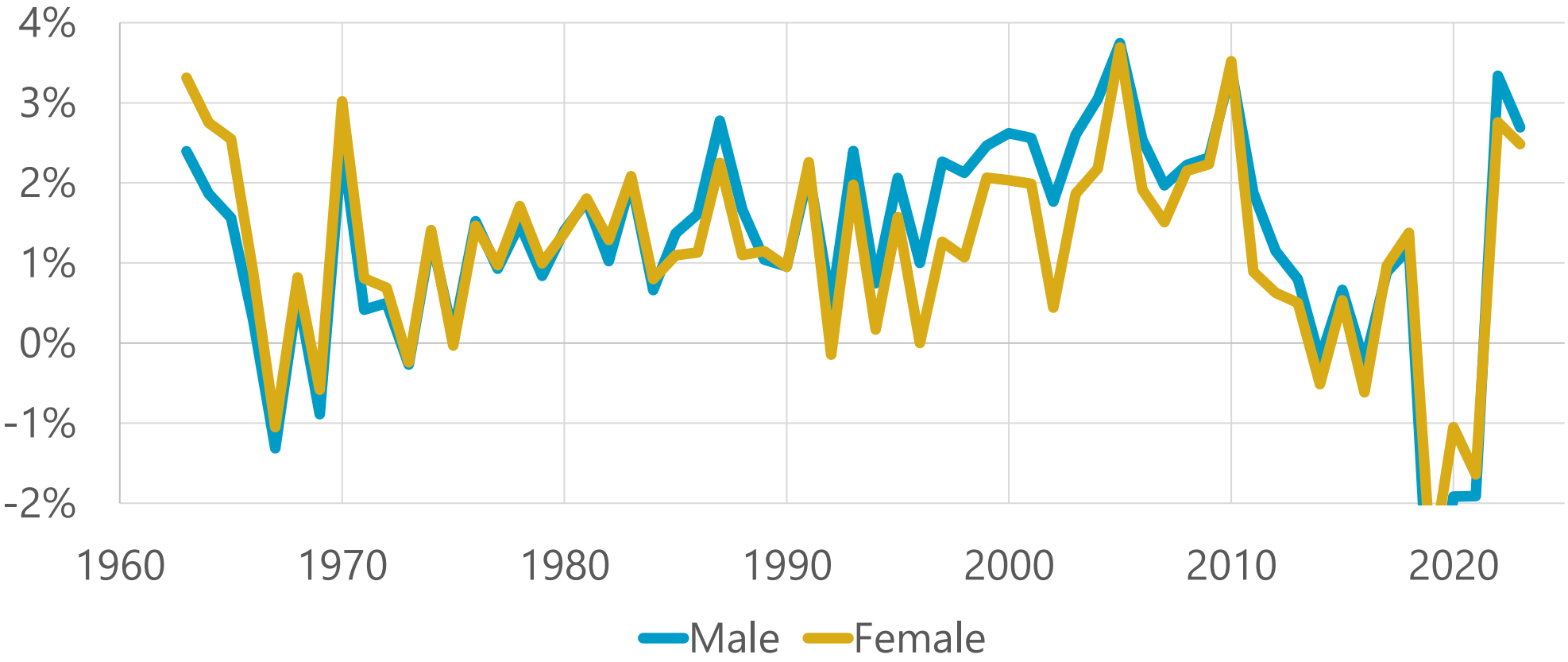
What does the state of health mean for UK mortality

Recent mortality rates – England & Wales



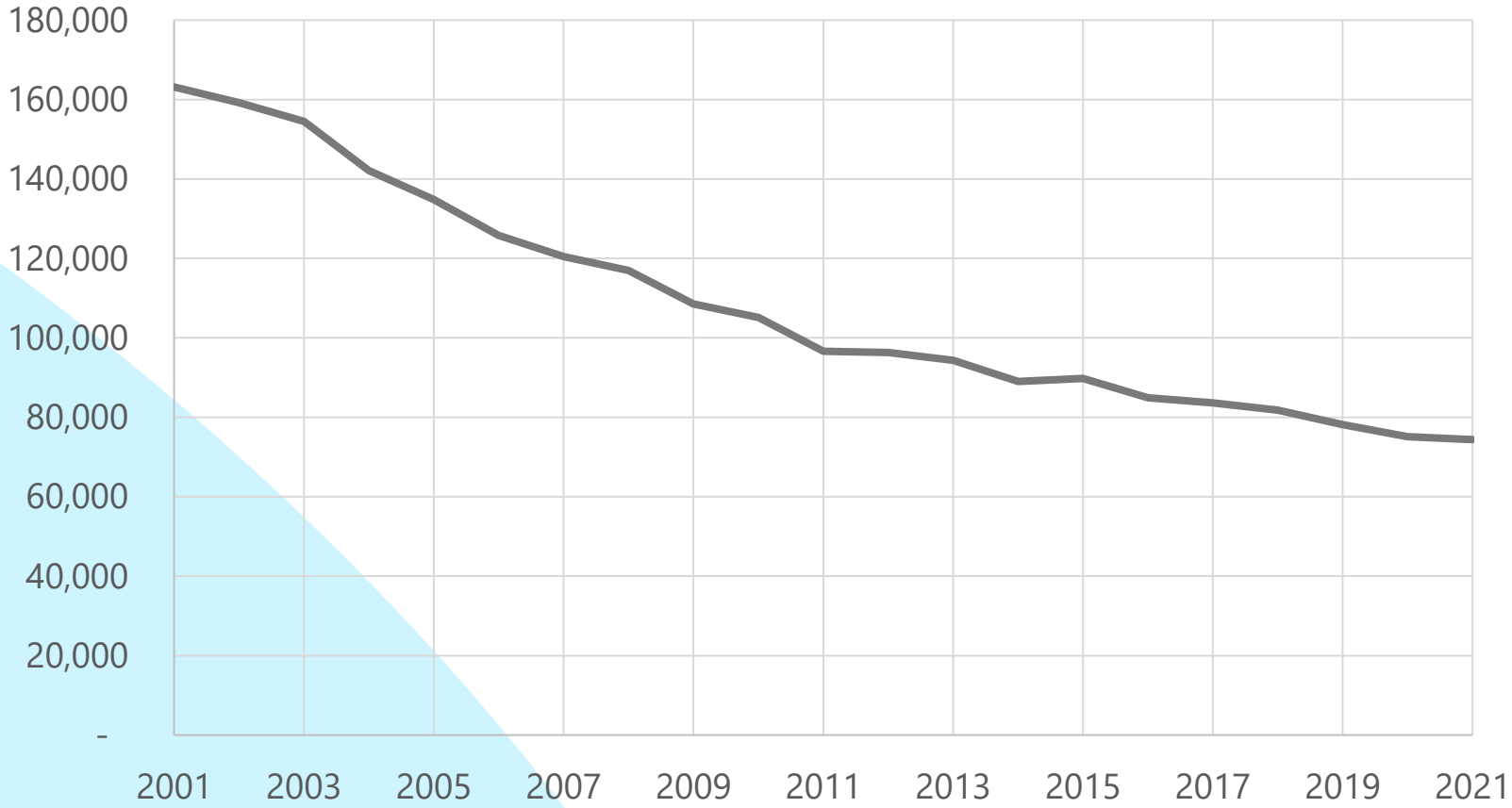
Source: BW calculations using ONS data

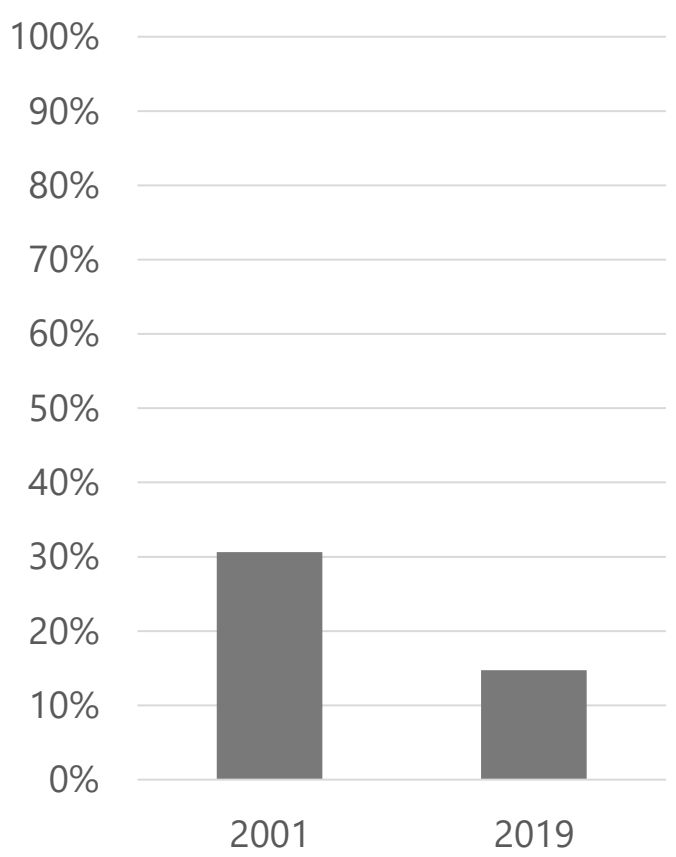
Recent mortality improvements – England & Wales



Source: BW calculations using ONS data

What are the major causes affecting recent deaths





Source: BW calculations using MRSC cause of death dataset

Cardiovascular Disease
Cancer
Alzheimer's and Dementia
Co – Morbidity
Covid-19
Other

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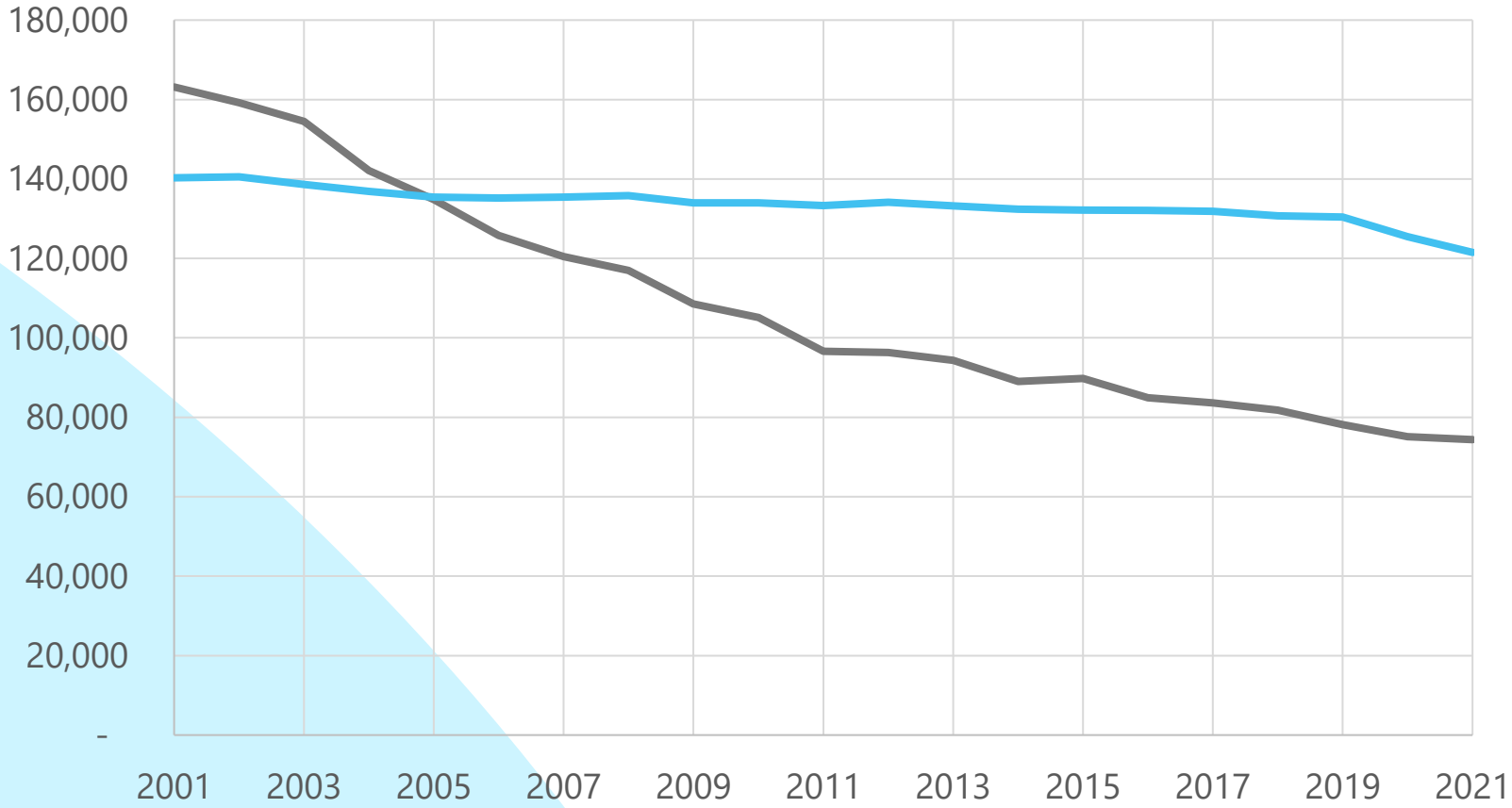

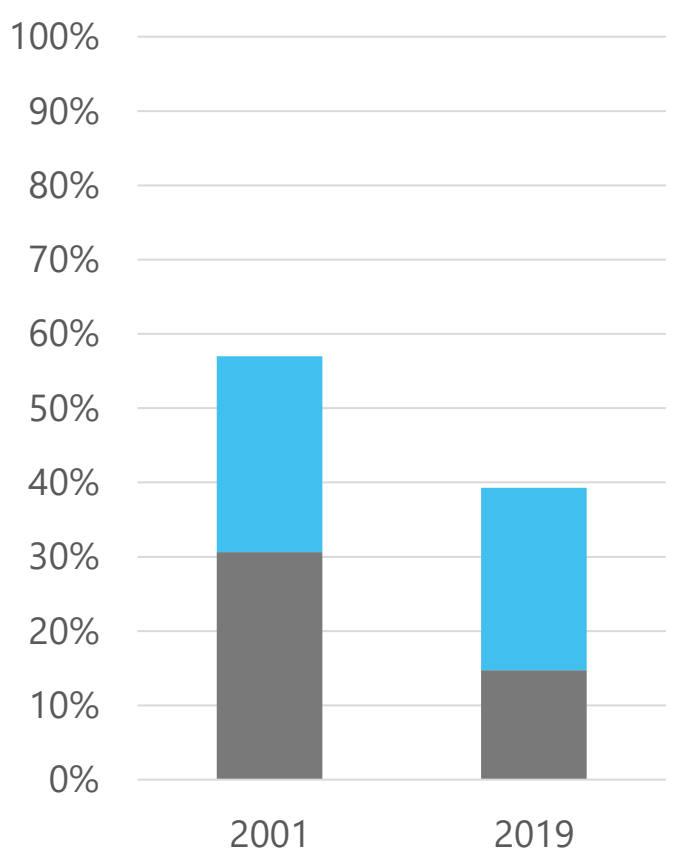

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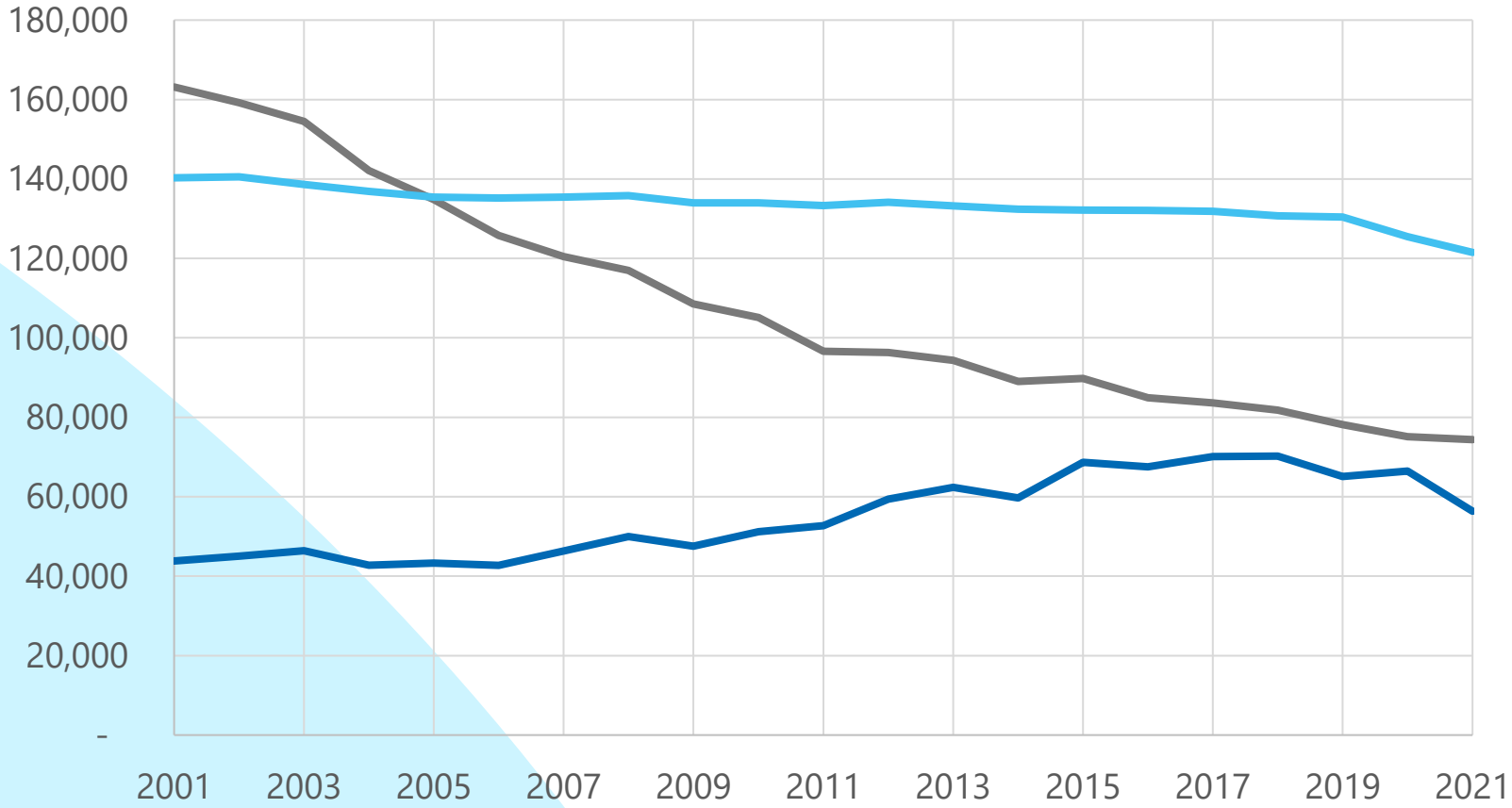

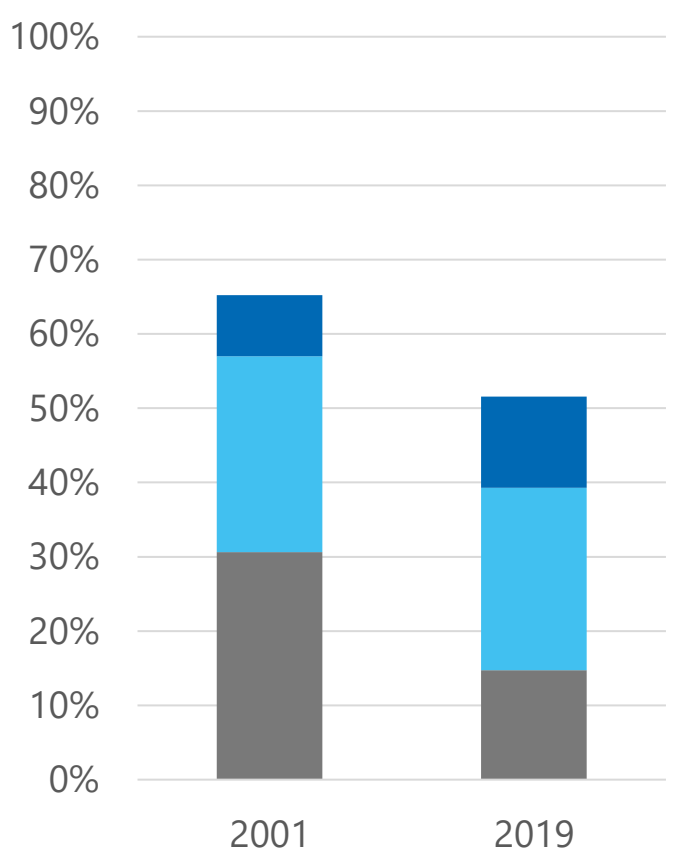

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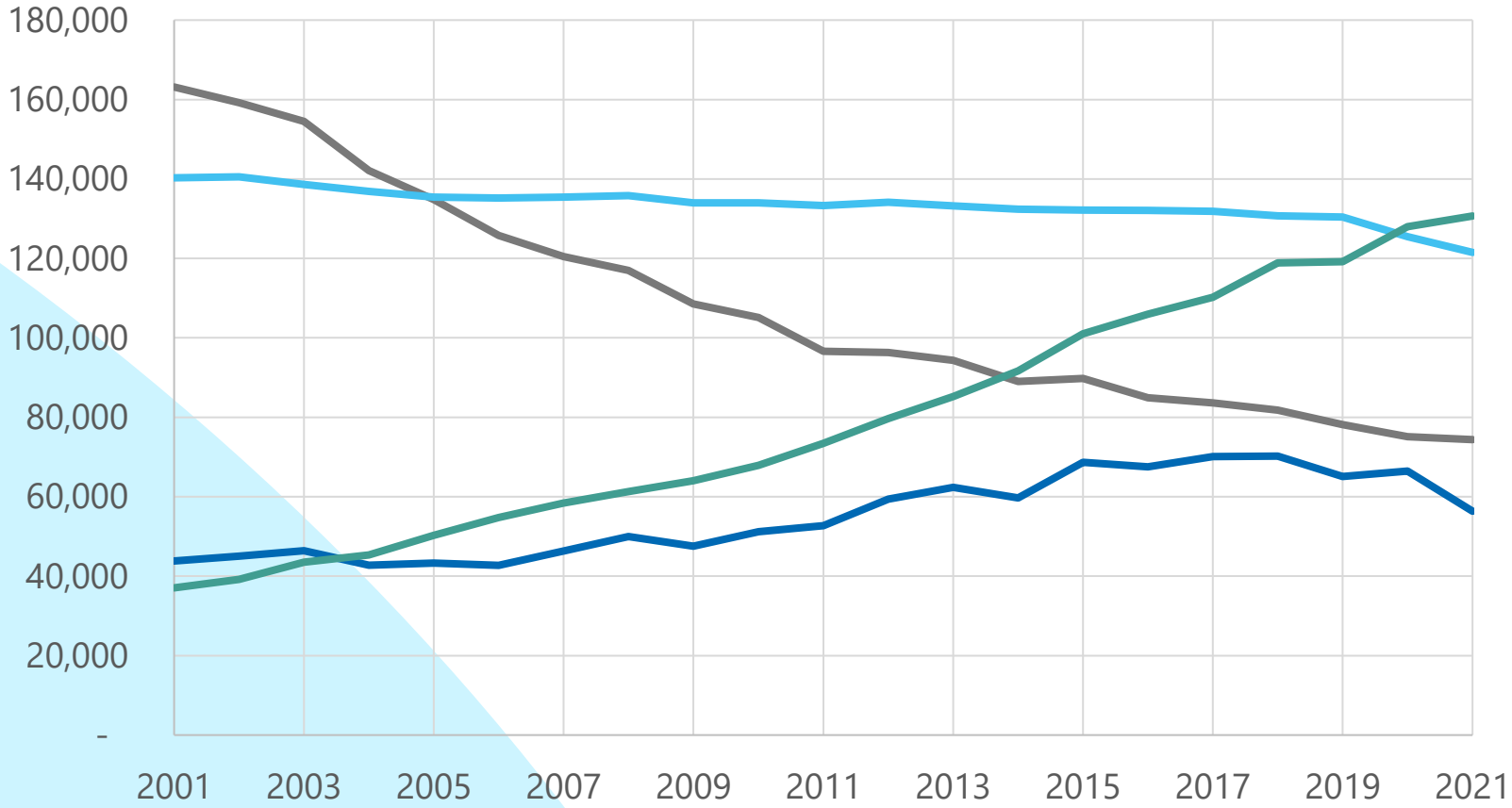

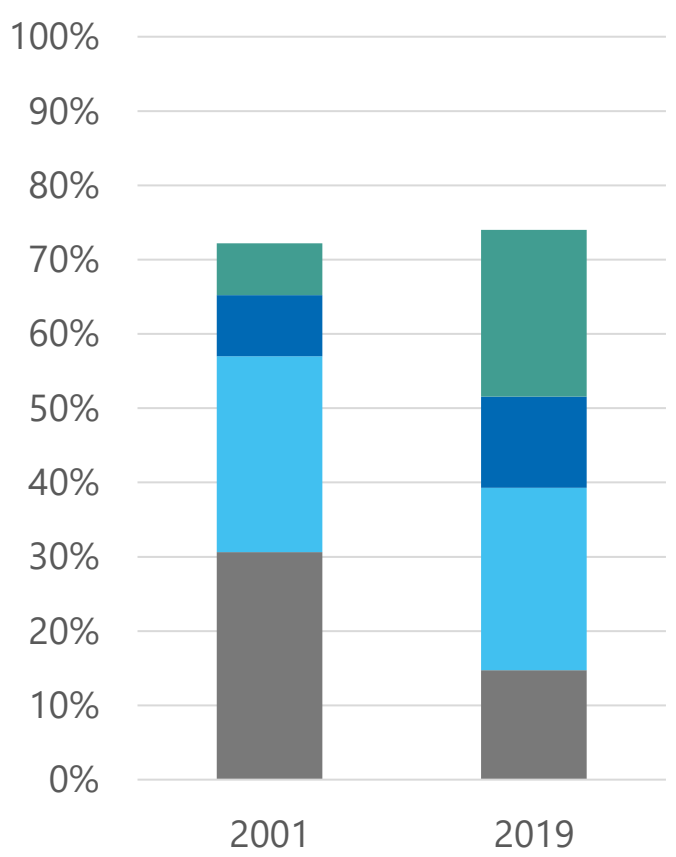

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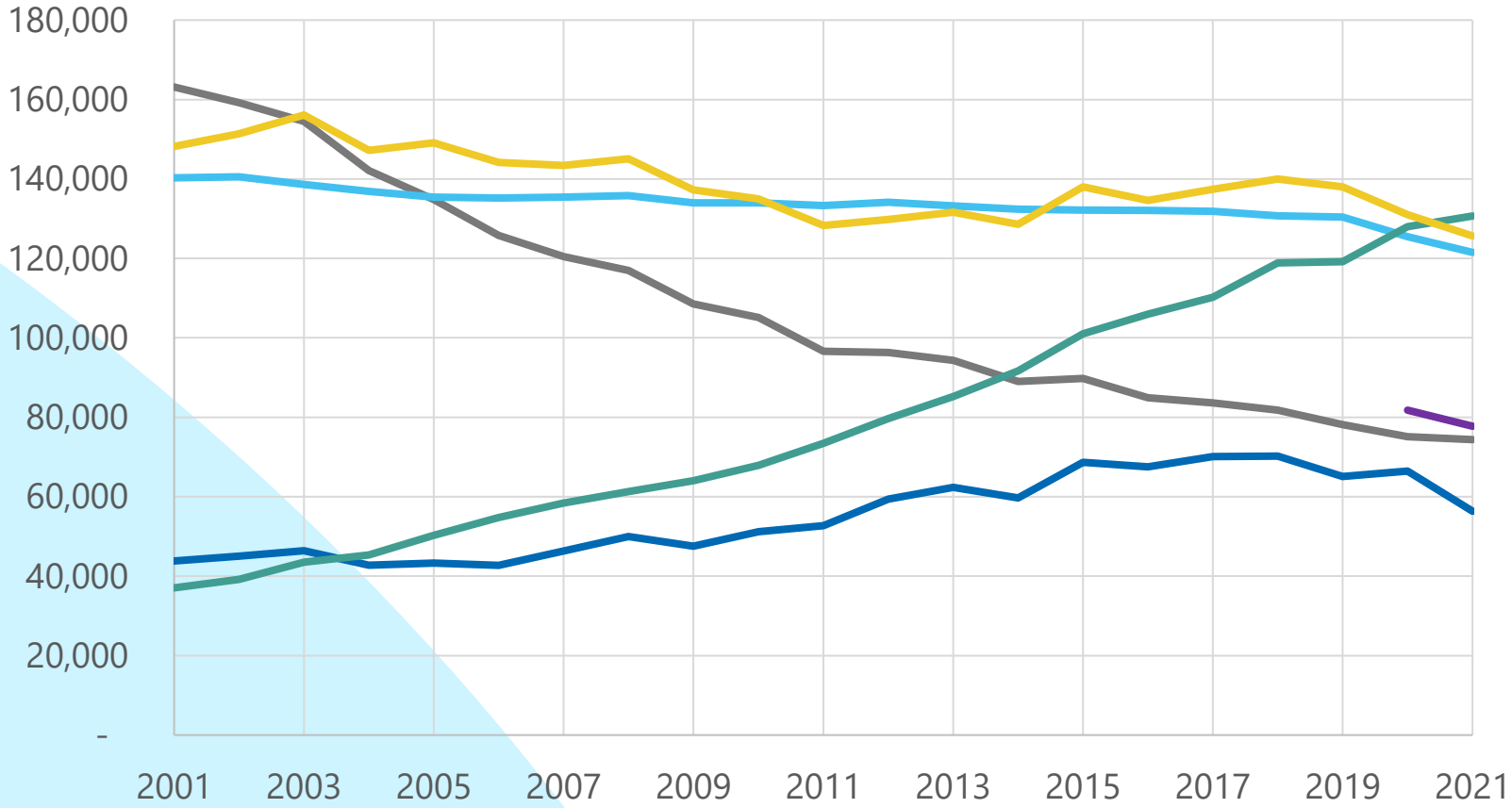

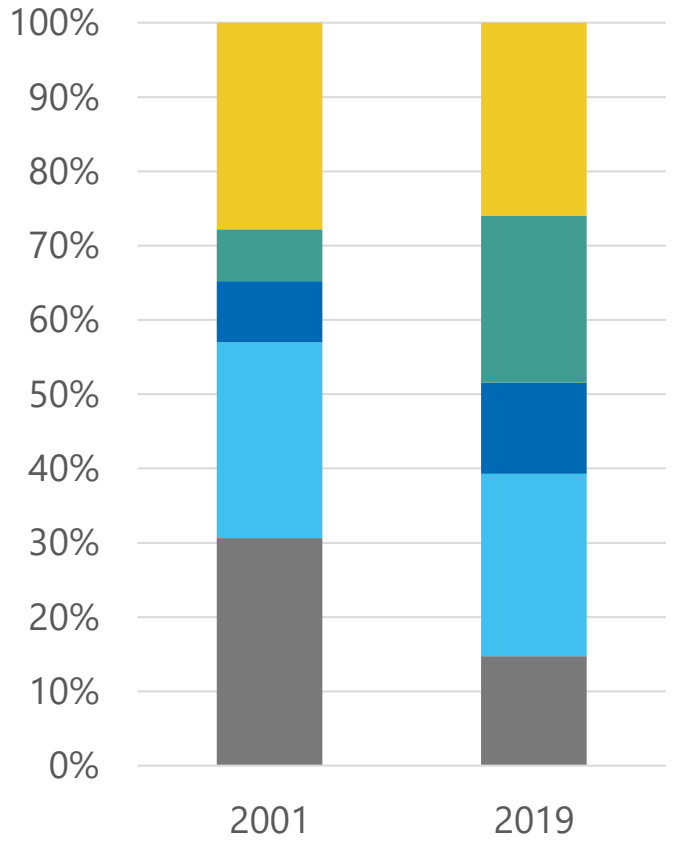

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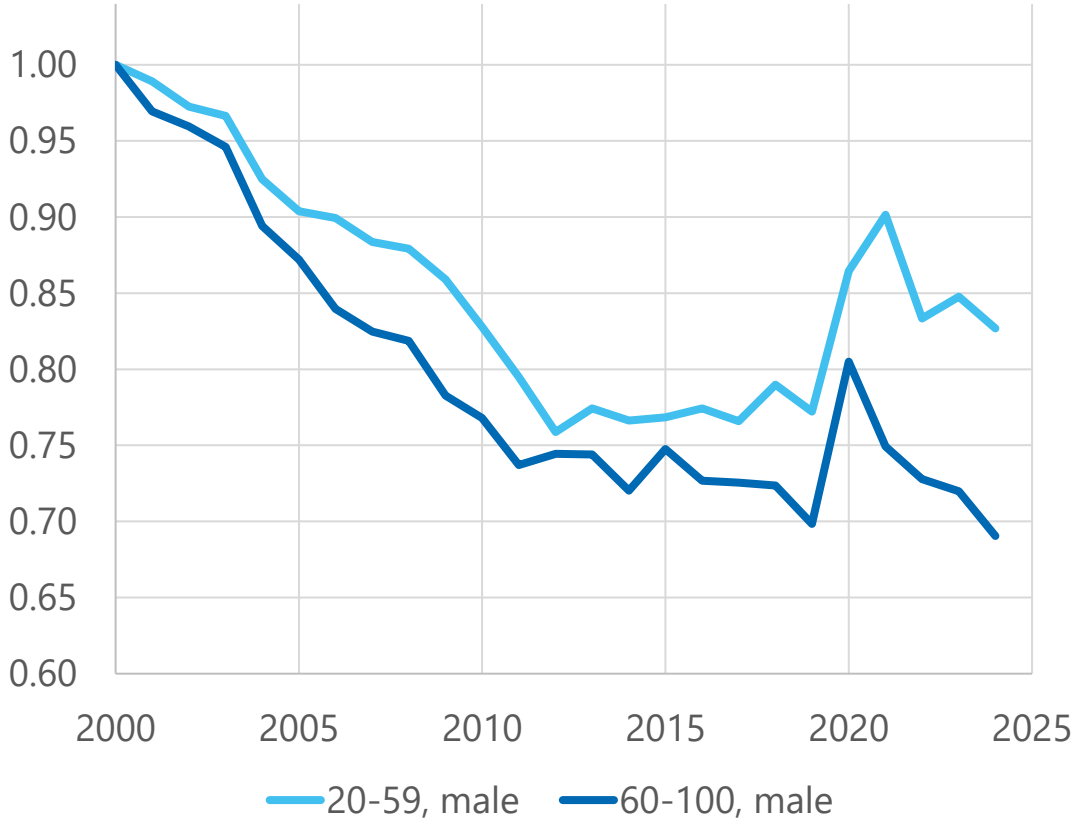
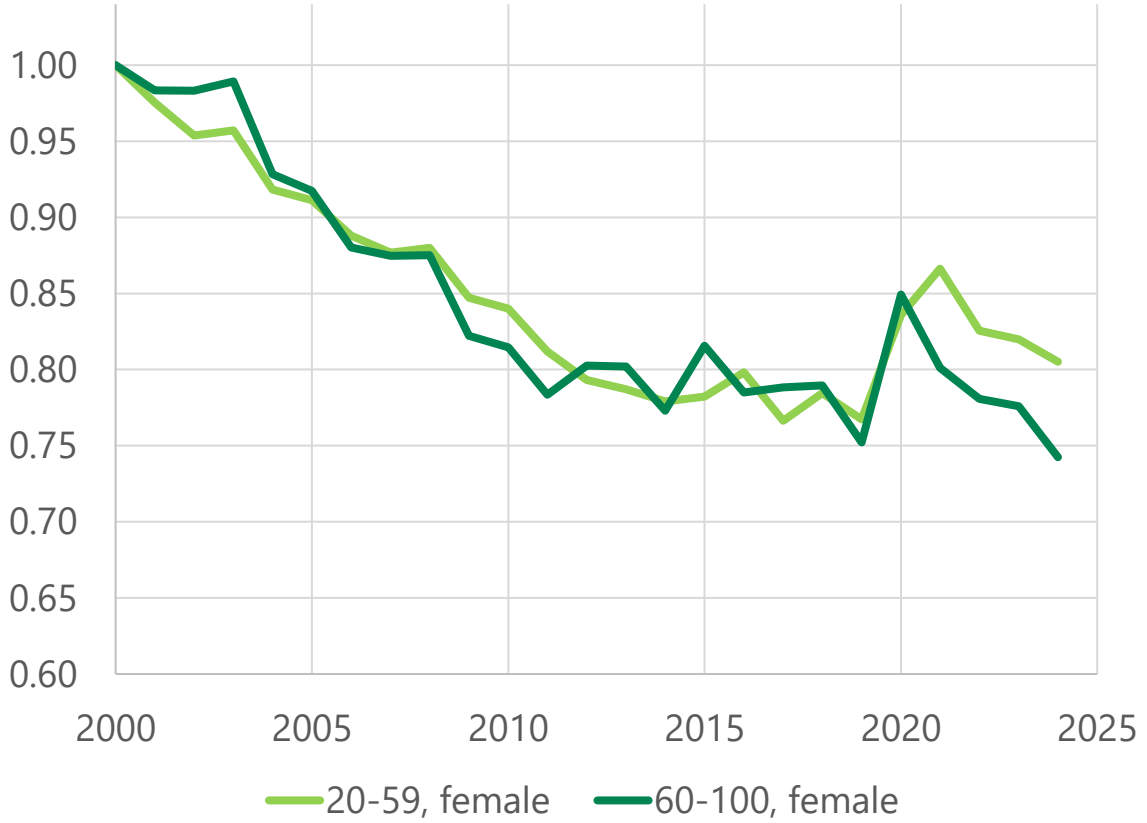
Other

Changes in mortality rates by age band (relative to mortality rates in 2000) – England & Wales

Male



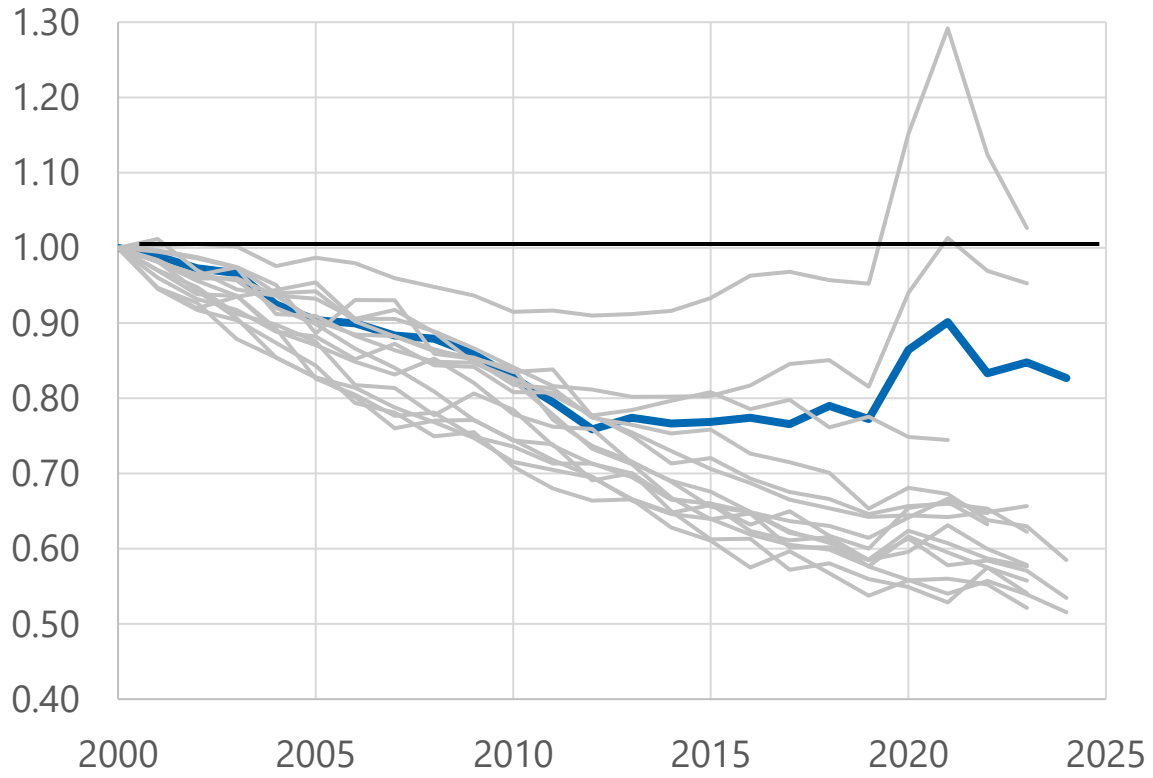
Female



Source: BW calculations using ONS data

Young age mortality – international comparison

Male



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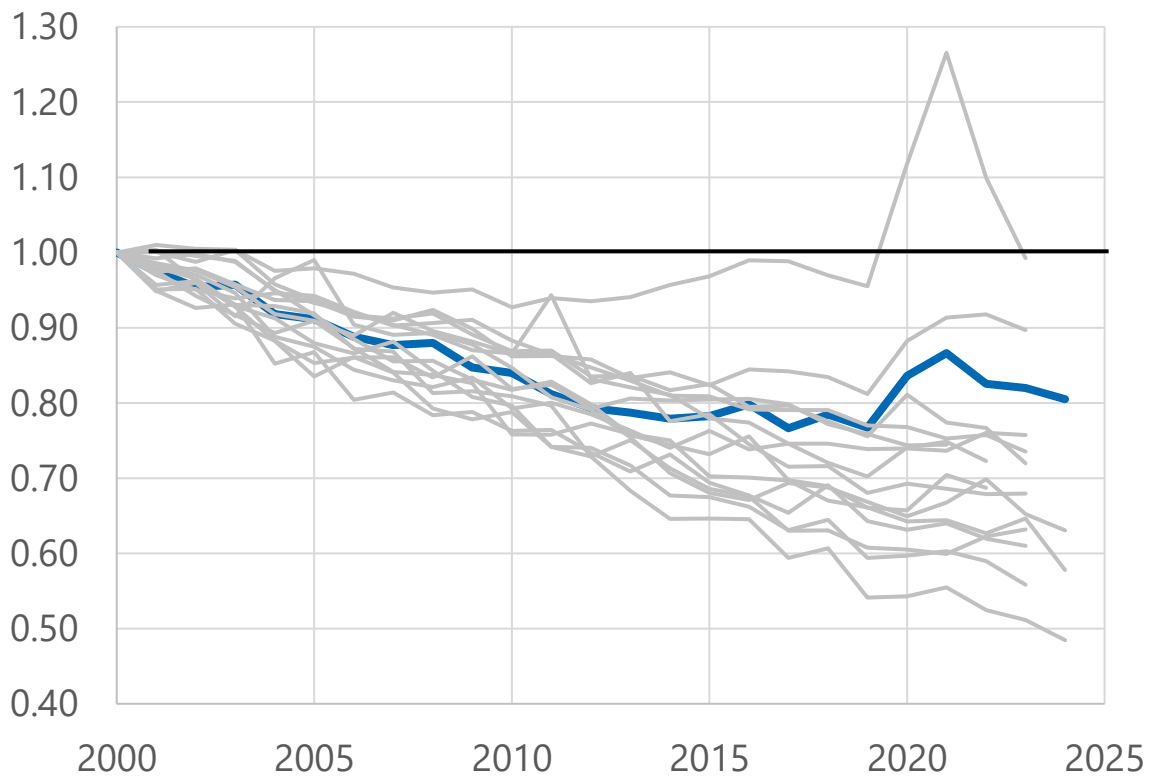
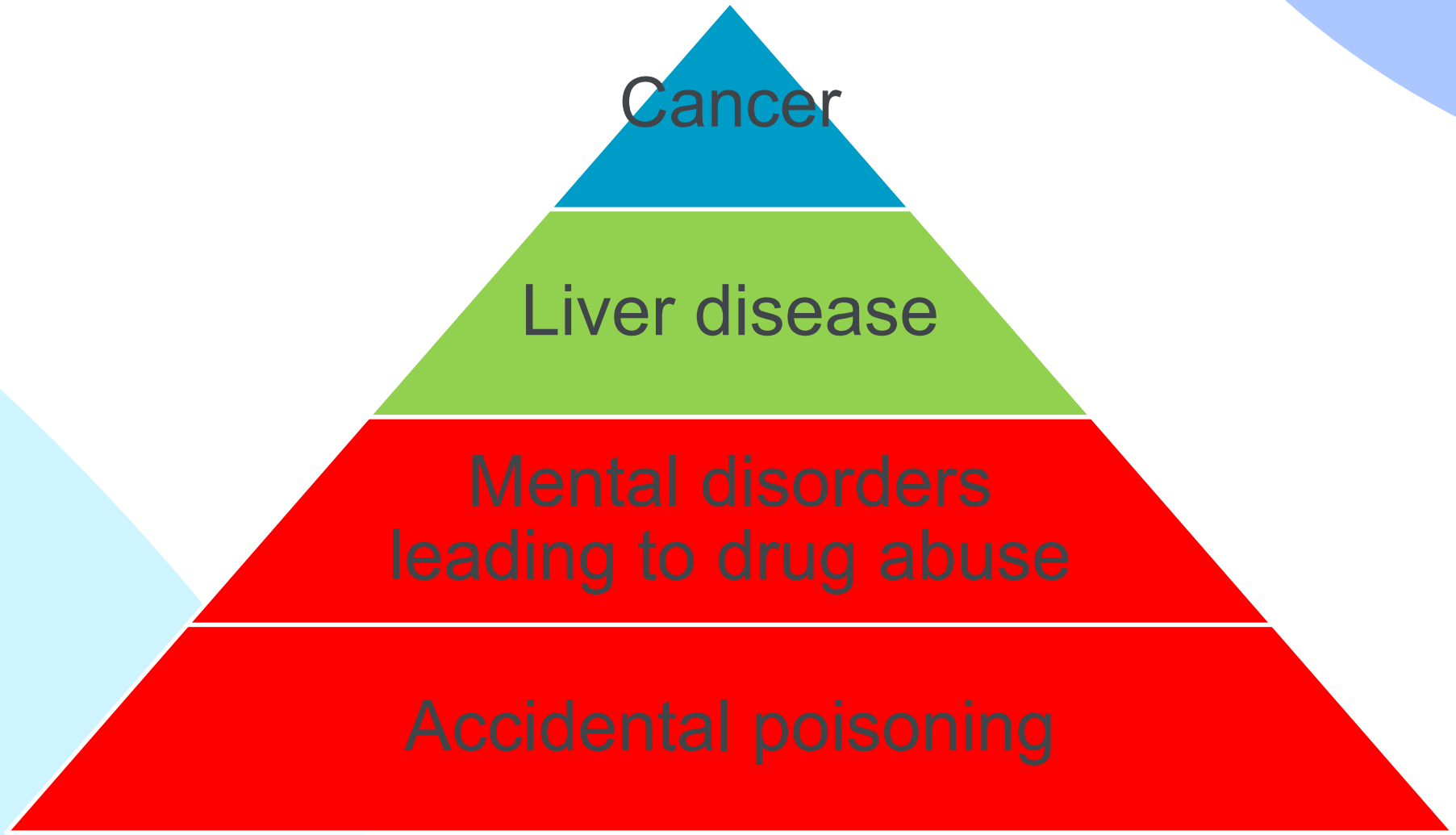


Source: BW calculations using ONS and Human Mortality Database data

Young age mortality – UK drivers



Using this data for pension scheme modelling

Challenges

- Understanding the “norm” for mortality improvements
- Cause of death data reporting issues
- Young age mortality
- Translating this all into the CMI model

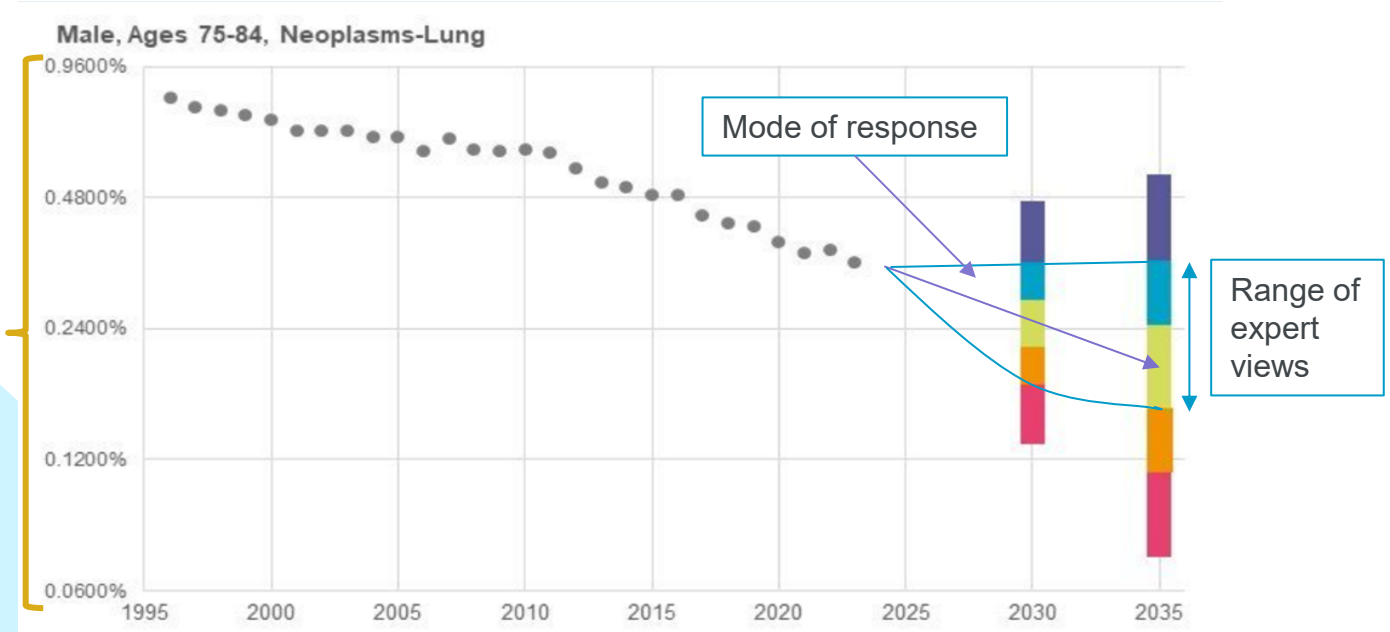
Innovation

- More cause of death analysis
- New tools like AI
- Solutions to manage risk – run-on, CDC

Forecasting mortality with expert input

- Projecting mortality by cause of death is now more commonplace in actuarial longevity teams.
- In contexts where data are limited or uncertain, statistical mortality models alone may be unreliable.
- There is a formal process of extracting expert knowledge about uncertain quantities for these causes and formulating these into probability distributions.

LCP Delphi exercise – Example



Appropriate scale of age-standardised mortality rates

	2030	2035
Purple (more deaths)	0%	0%
Blue	30%	20%
Green	70%	80%
Orange	0%	0%
Pink (fewer deaths)	0%	0%

Consolidated distribution of responses

Key drivers stated by experts in questionnaires.

Headwinds

- Worsening drivers of mortality

Tailwinds

- Positive drivers for longevity

Poll – Which cause of death will experience the
(1) largest increase in mortality?
(2) largest reduction in mortality?

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Healthy life expectancy

What is healthy life expectancy (HLE)?

Adapted from the Clinical Frailty Scale

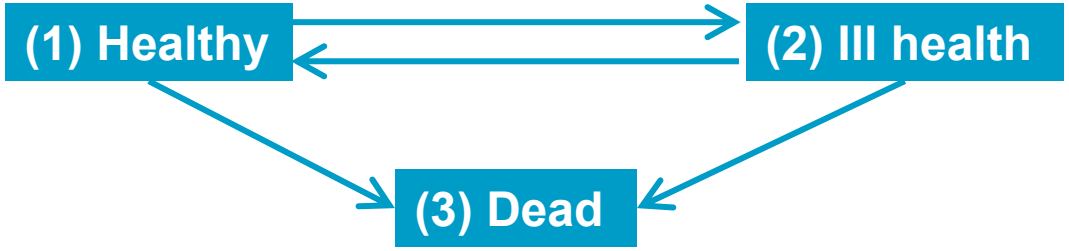
- HLE is the average number of years a person can expect to live in good health, at a specific age.
- It is measured by combining data on mortality and morbidity.
- Multiple definitions of ‘ill health’ can be used, including self-reported health, disability or chronic diseases.

Why HLE Matters

- HLE captures not just “how long we live”, but also “how well we live.”
- It is crucial for planning retirement, pensions, and social care in ageing societies.
- In UK, the State Pension Age Reviews have used HLE to inform whether the pension age is fair or should change. The government has also previously committed to targets to reduce the gap in HLE and increase HLE by 5 years.

Conceptualising and modelling HLE

- Normally conceptualised with a model that has three health states, where people can move between these states - a multi-state survival model.



- An alternative conceptualisation is biological age.

Recent patterns in HLE

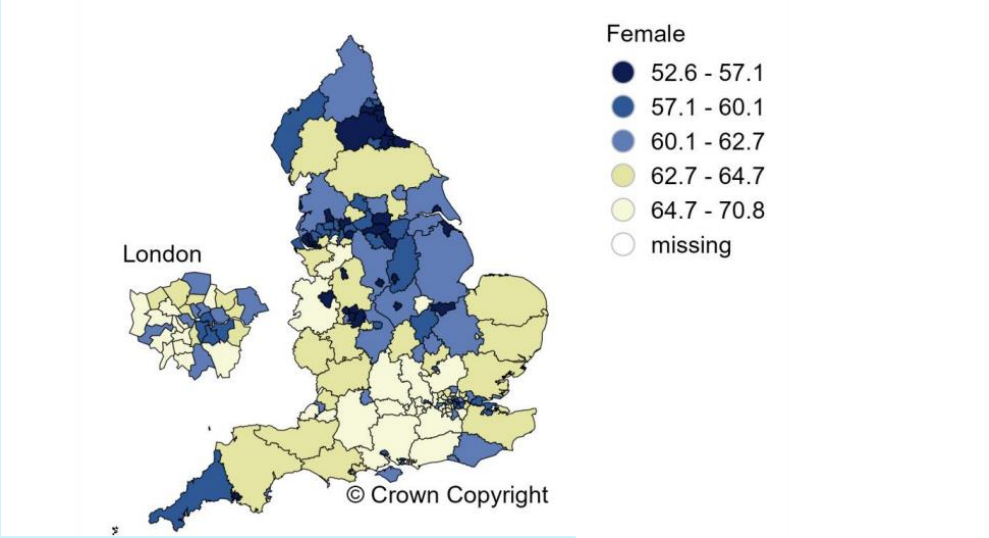
- HLE at birth in 2021-2023 was **61.5 and 61.9 years** for men and women in England respectively (ONS).

- HLE in England remained relatively stable in the 2010s, but has fallen by **~1.8 years** compared to pre-Covid-19 levels. In contrast, LE has generally been increasing and has fallen by **less than half a year** compared to pre-Covid-19 levels.

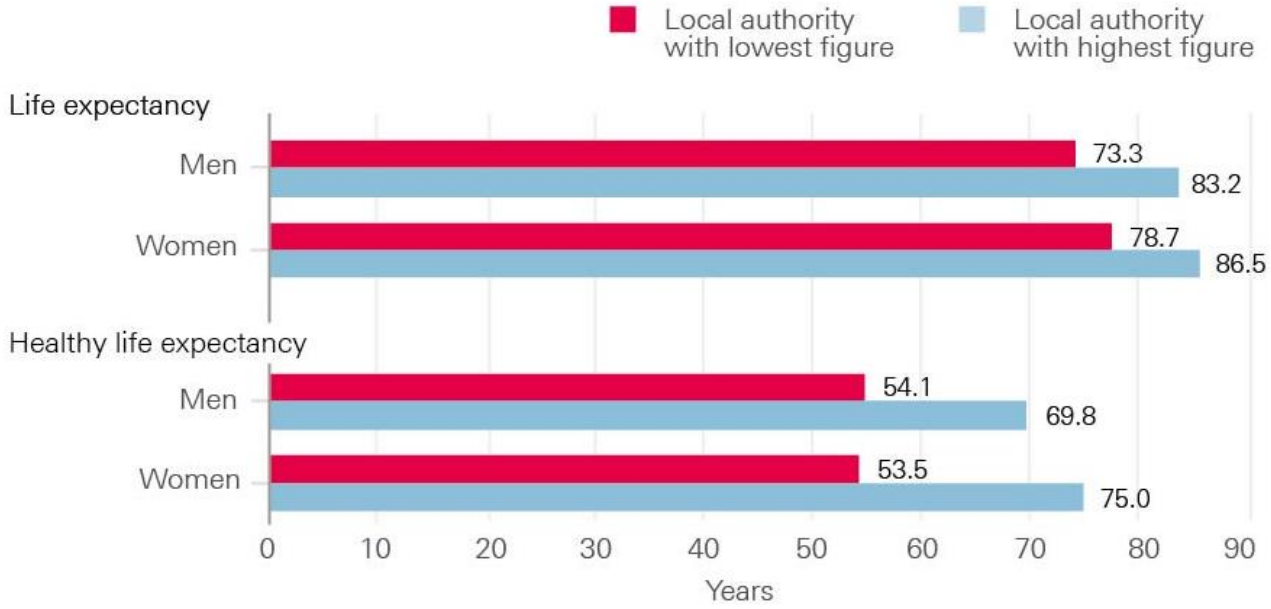
Geographic and socioeconomic patterns in HLE

- The gap between the local authorities with the highest and lowest HLE in 2018-2020 is 22 years (Health Foundation), larger than the gap for LE.

Figure 1.6 Geographic variation in healthy life expectancy



Source: Health trends and variation in England, 2025: A Chief Medical Officer report

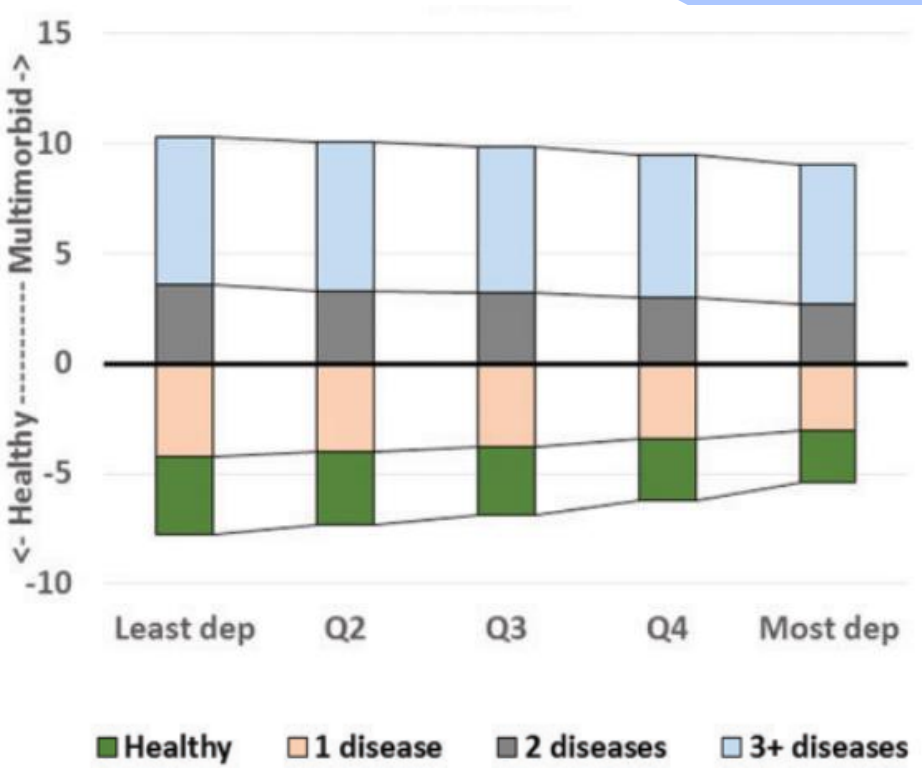


Source: The healthy life expectancy gap - The Health Foundation

HLE close to retirement still varies by deprivation

- HLE can also be measured in terms of whether people live with multimorbidity or not – more objective than self-reported health.
- For men, there was a larger 2.3-year gap in HLE at age 65 between the least vs most deprived (Q1 vs Q5), compared to a 1.3-year gap in ill health LE. These gaps were smaller for women.
- These gaps are wider when comparing never with current smokers.

LE at age 65 for men — years spent with (positive) or without (negative) multimorbidity, by IMD quintile

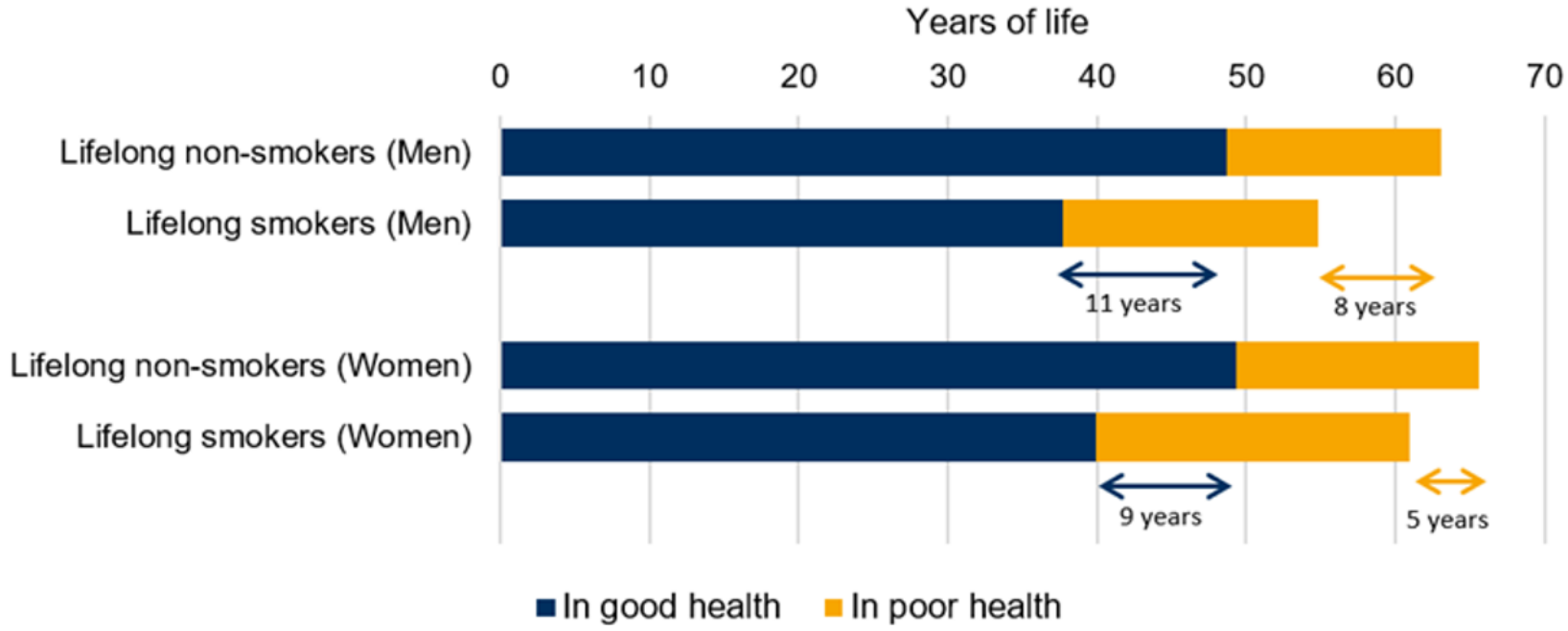


Source: Socio-economic inequalities in life expectancy of older adults with and without multimorbidity: a record linkage study of 1.1 million people in England | International Journal of Epidemiology | Oxford Academic

HLE may also vary substantially by generation if there is widespread improvement in health

18-year-olds who never smoke could spend around a decade more of their lives in good health than those who start smoking at 18 and remain lifelong smokers.

Estimated HLE and LE for 18-year-old lifelong non-smokers vs smokers



Source: 'Smoke-free generation' bill could lead to a cohort of young people living up to a decade more in good health – LCP

How do people view their own life expectancy

Member choice, or member risk?

Choice

- Freedom to make financial decisions
- No obligation to purchase annuity
- Drawdown income that's right for the member

Risk

- Many lack financial literacy
- Limited longevity protection if all DC
- Volatile retirements

Poll – What age do you expect to live until?

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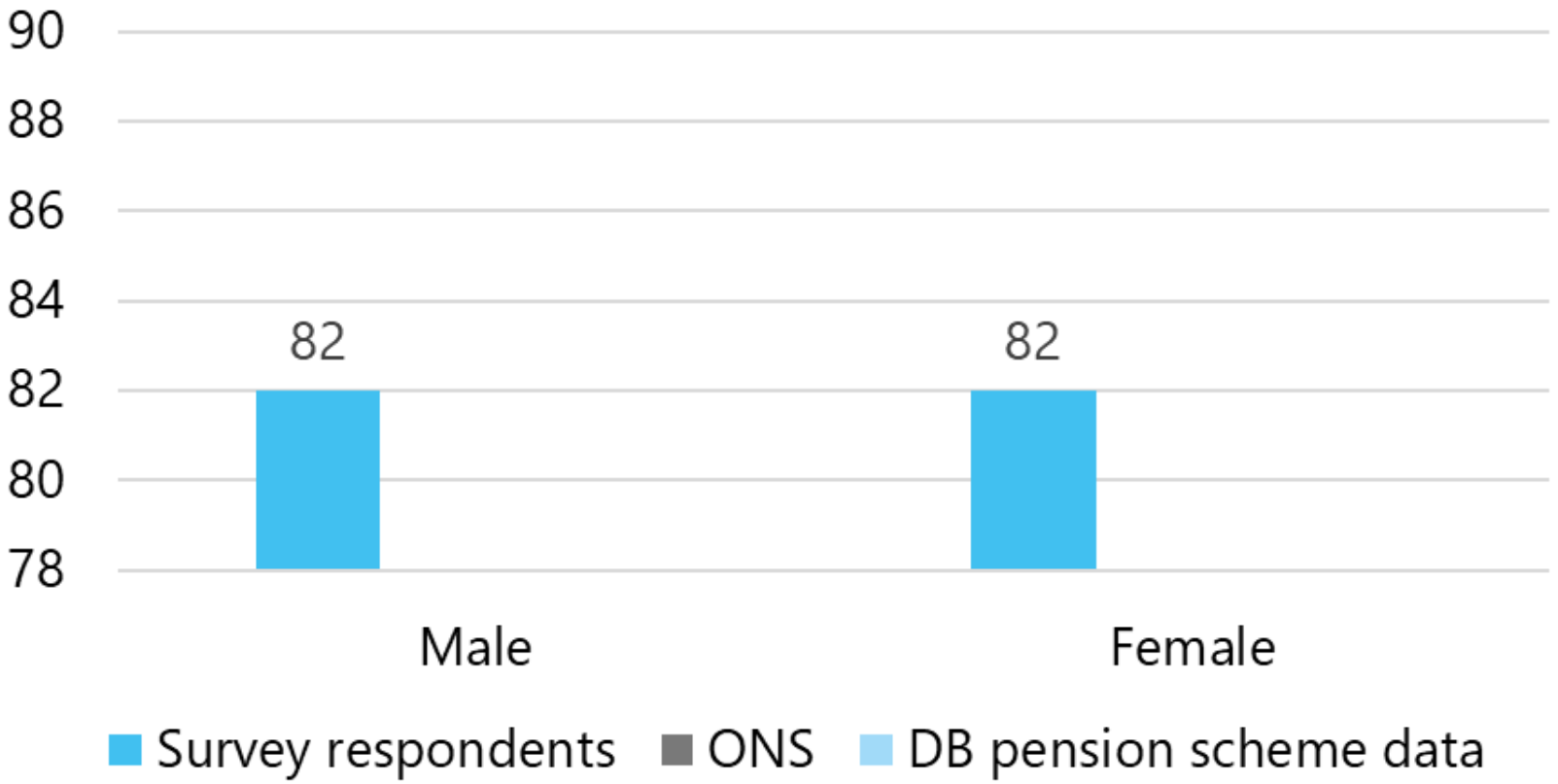
How long do people think they'll live?



Source: BW calculations and data

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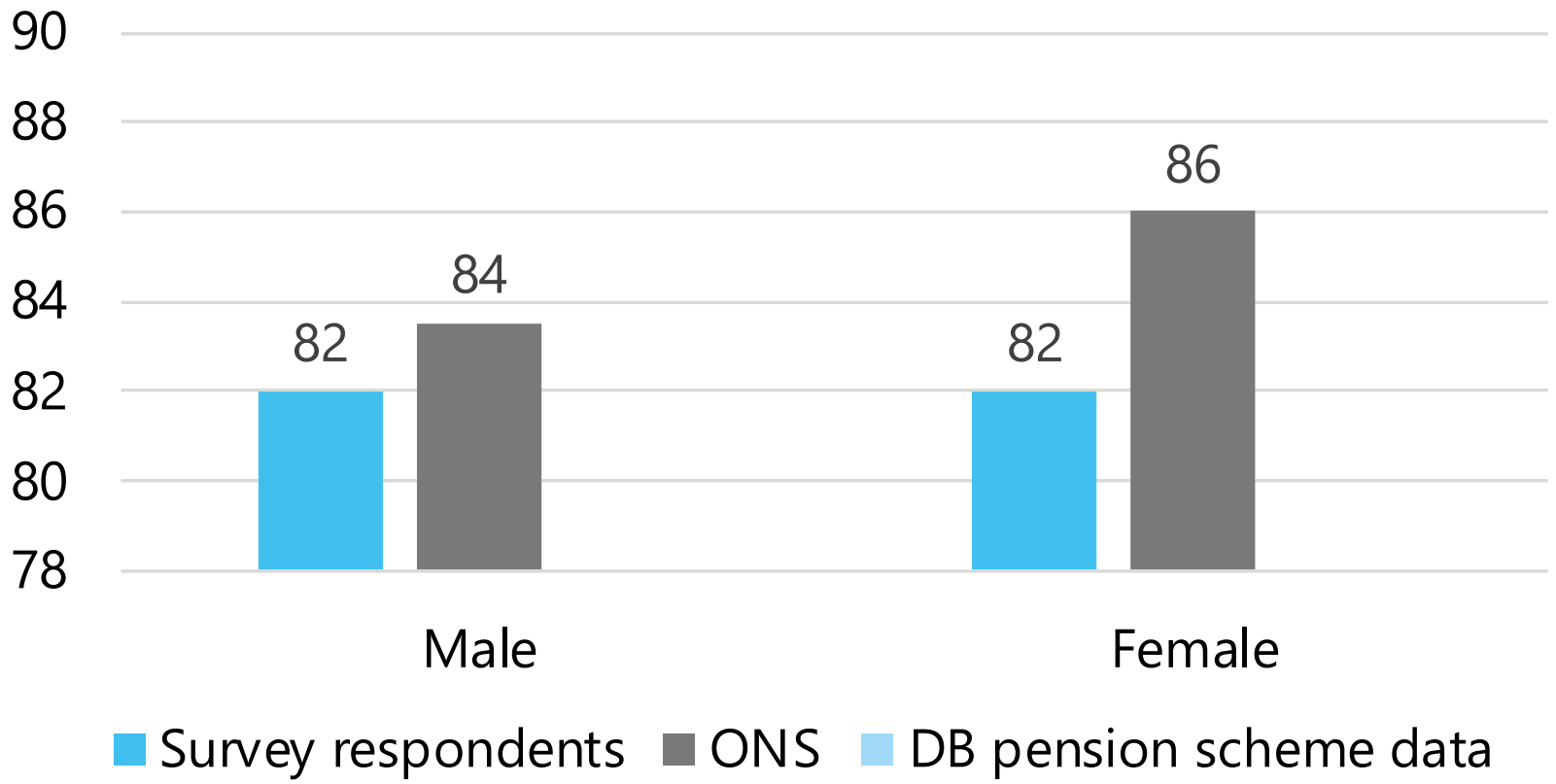

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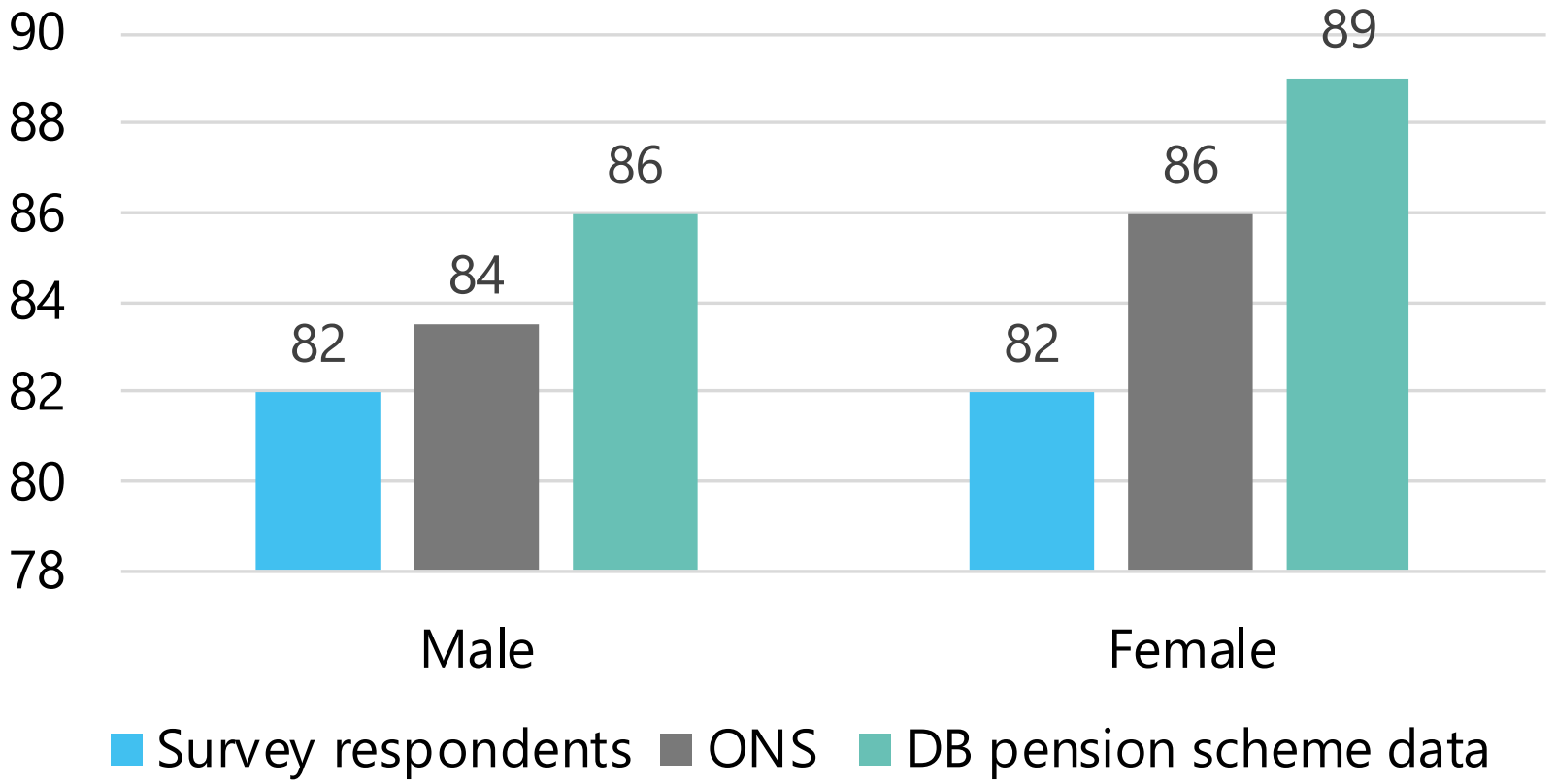
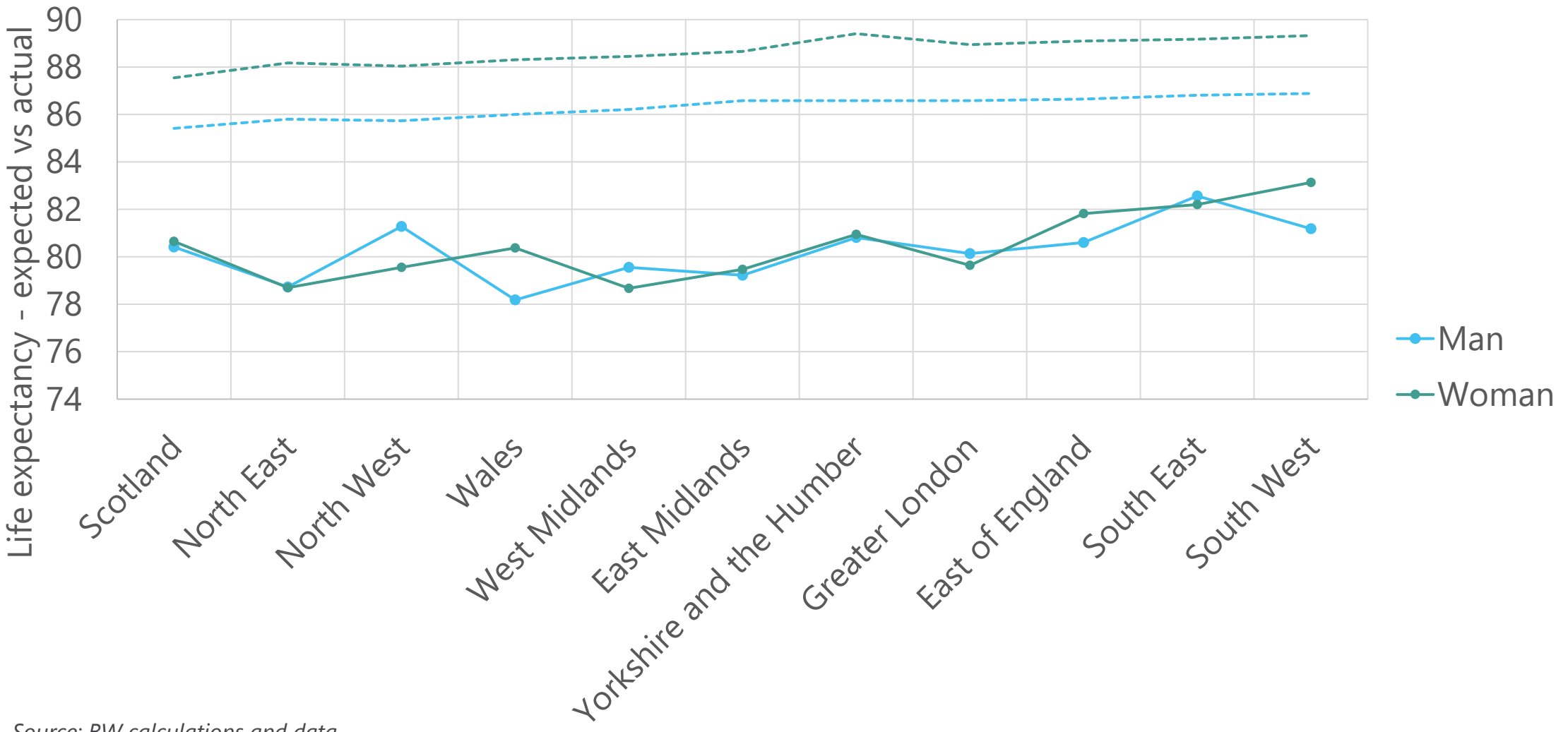


Source: BW calculations and data

How long do people think they'll live - income

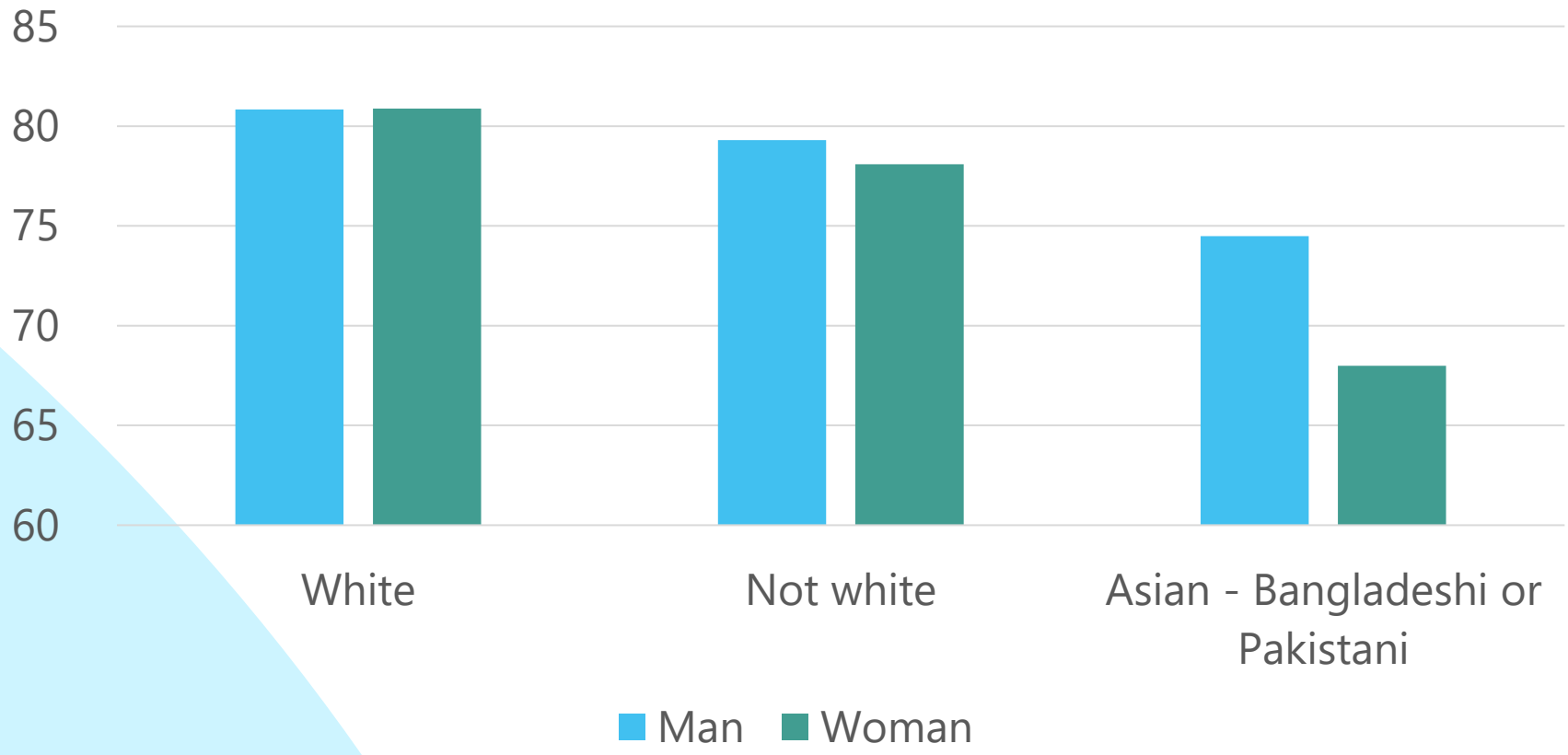
Source: BW calculations and data

How long do people think they'll live - region



Source: BW calculations and data

How long do people think they'll live - ethnicity



Source: BW calculations and data

What does this mean for retirement decisions?

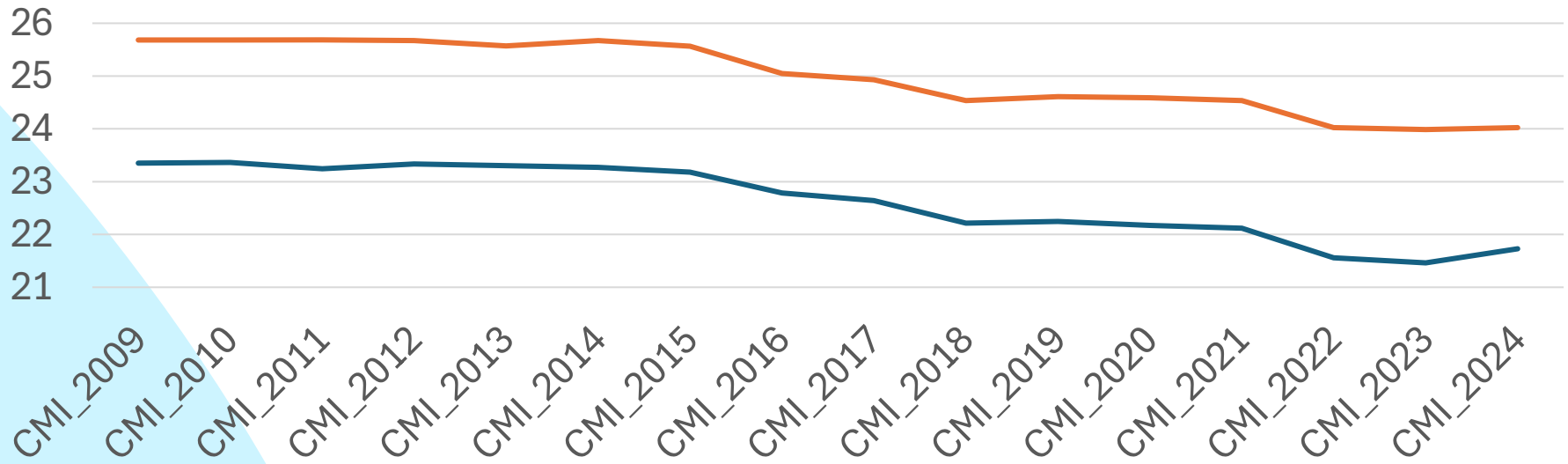
Challenges

- Misunderstanding of life expectancy
- Poor retirement outcomes
- But actuaries have been wrong in the past!

Innovation

- Holistic understanding of retirement wealth
- Education
- New products

Progression of cohort life expectancy, age 65 (Source: CMI)



The state pensions landscape in the UK

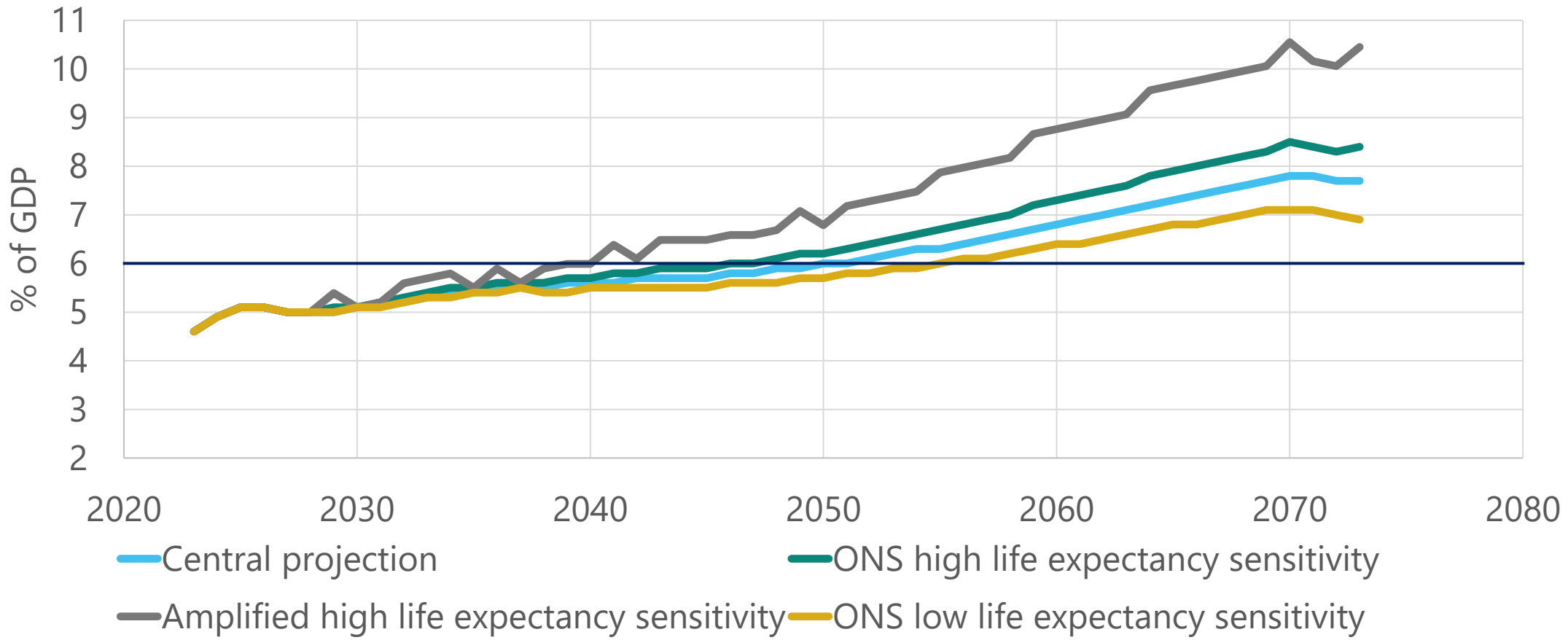
UK State Pension

Key longevity protection provided to individuals in the UK

- Unfunded
  - Affected by spending
  - Misunderstood by public
- Simplified features
  - State Pension Age
  - Triple lock

Pensions Commission to review, but only current lever is State Pension Age

The future of the UK State Pension



UK State Pension – public perception

I am 61 years old and I am finding it a struggle working till 67 when I get my state pension. My job needs good mental capacity, I can't imagine how people doing physical jobs will be able to continue working till 70 let alone 80.

Reply Click to rate 85 0

So,if people have paid NI,but the money isn't there...isn't that an offence of some sort.

Reply Click to rate 701 5

Maybe if we stopped listening to "experts" this country might be in a far better place

REPLY 3 REPLIES LIKE 10 1

Future of the UK State Pension

Challenges

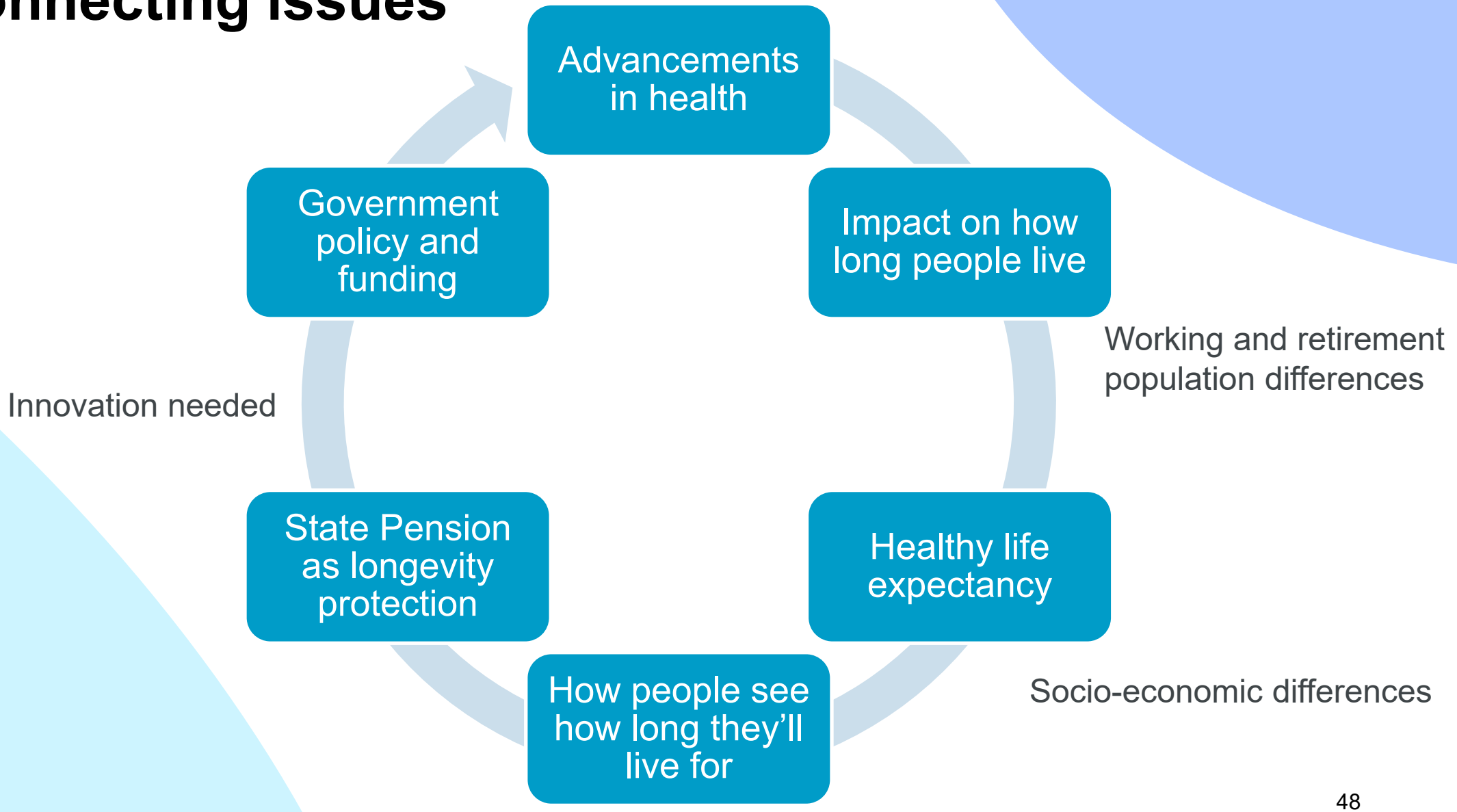
- Limited current levers for adjusting cost via State Pension Age (other levers politically unpalatable)
- Public perception and politics
- Level is relatively low so can’t be solely relied on when other funds run out

Innovation

- Means testing
- Shift towards longevity protection rather than base income
- Triple lock

Conclusions

Interconnecting issues



Parting questions

- How to square up:

Medical advances and health improvement

vs

State Pension Age and public perceptions?

- Is it the role of actuaries to help politicians explain retirement matters and complex statistics to the public?

- Due to the interconnectivity of issues, is there a need for:

More sophistication at individual level in DC world

vs

A holistic view from Government's perspective

Questions & Comments

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