

ARE THERE SOCIOECONOMIC INEQUALITIES WITHIN THE OVERALL STALLING OF MORTALITY IMPROVEMENTS IN SCOTLAND?

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A STORY IN TWENTY CHARTS.....



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Scots' life expectancy falls for first time in 35 years

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Deprivation, affluence and a 'shocking' health gap

By Reevel Alderson
BBC Scotland's social affairs correspondent

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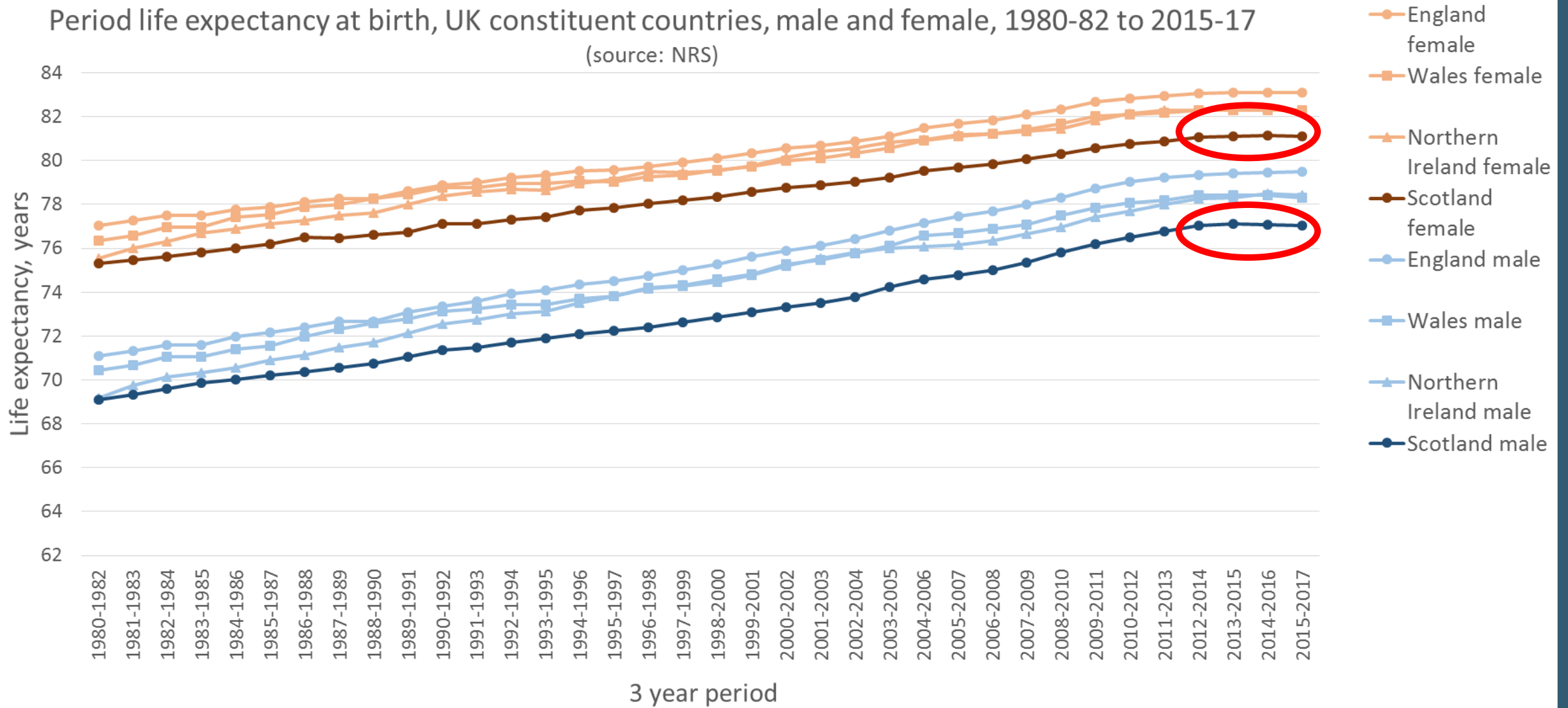
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SUMMARY MEASURES OF MORTALITY

- Life expectancy (period life expectancy at birth)
- Mortality rates (age-standardised)

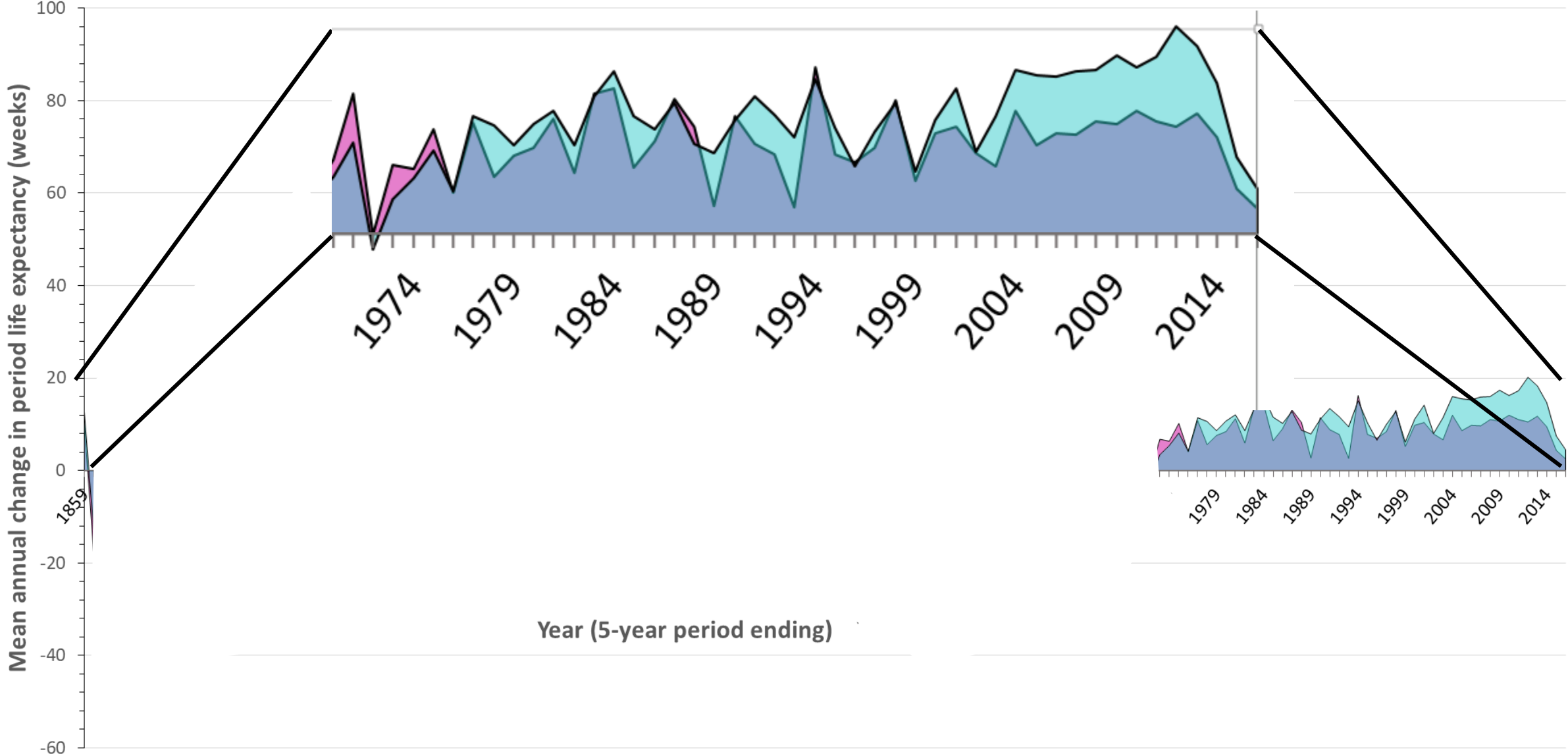
Period life expectancy at birth, UK constituent countries, male and female, 1980-82 to 2015-17

(source: NRS)

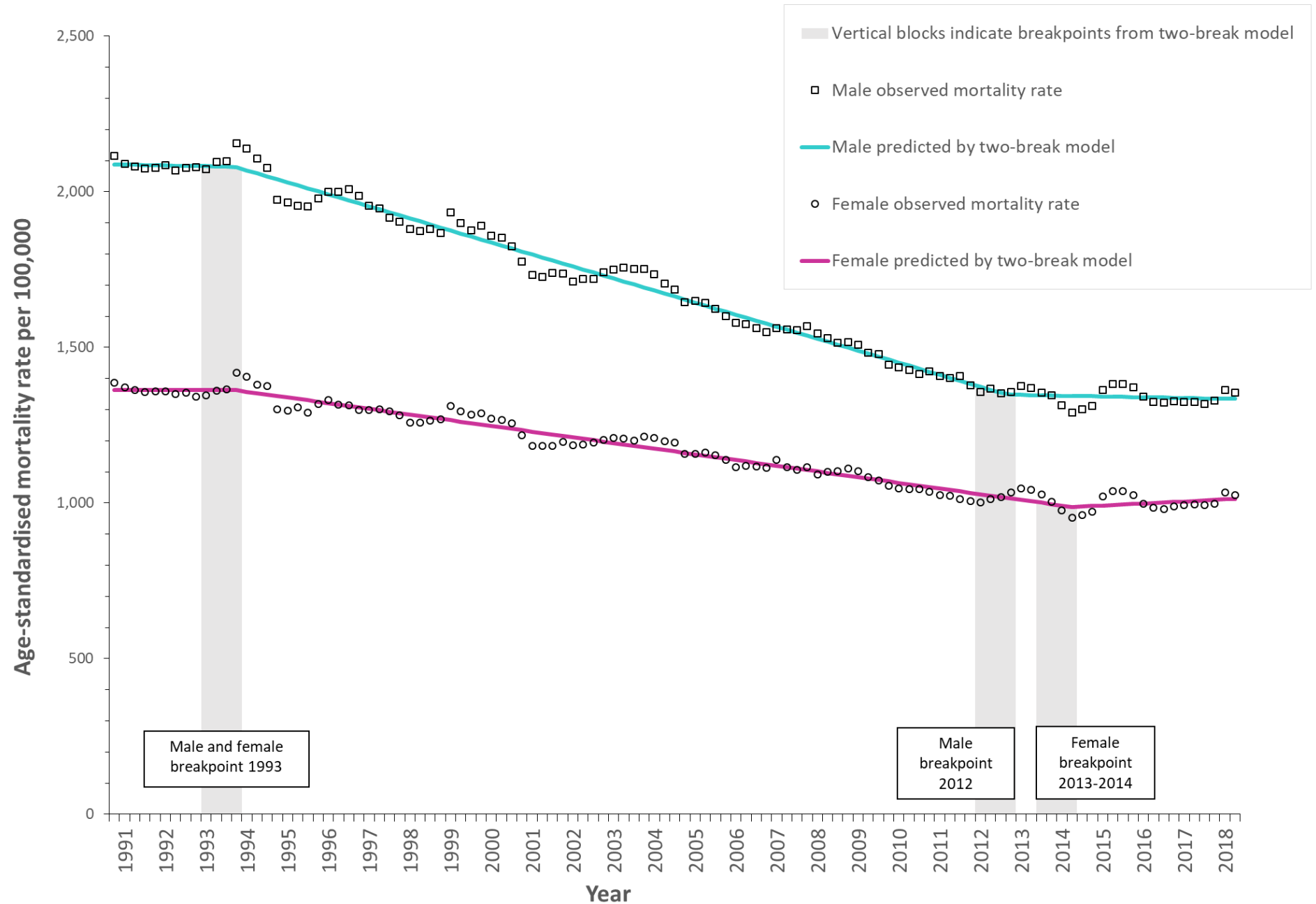


Mean annual average change in life expectancy (civilian population) for 5-year rolling periods, Scotland, males and females, 1859-2016.

Data source: Human Mortality Database.



Quarterly-rolling age-standardised mortality rates, males and females, Scotland, 1990-2018, with two-break segmented regression model fitted.



SOCIOECONOMIC INEQUALITIES IN MORTALITY

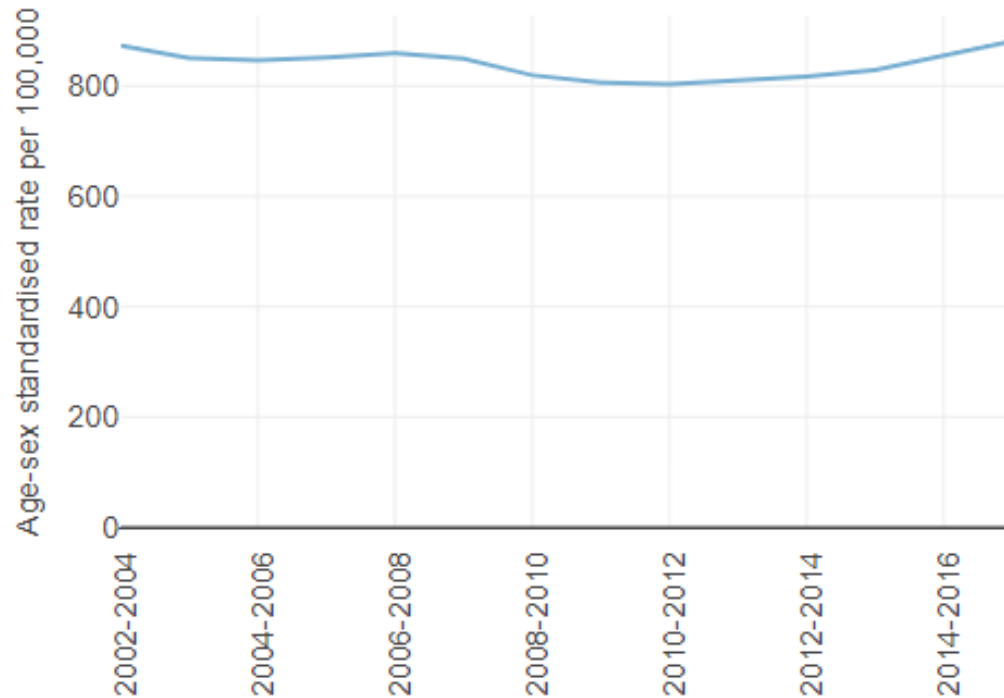
- Scottish index of multiple deprivation
- Mortality rates (age-standardised)
 - Absolute gap between most and least deprived areas
 - Relative difference in mortality rates

Deaths all ages: Scotland 2015-2017

- The most deprived areas have 38% more deaths than the overall average.
- Deaths all ages would be 27% lower if the levels of the least deprived area were experienced across the whole population.

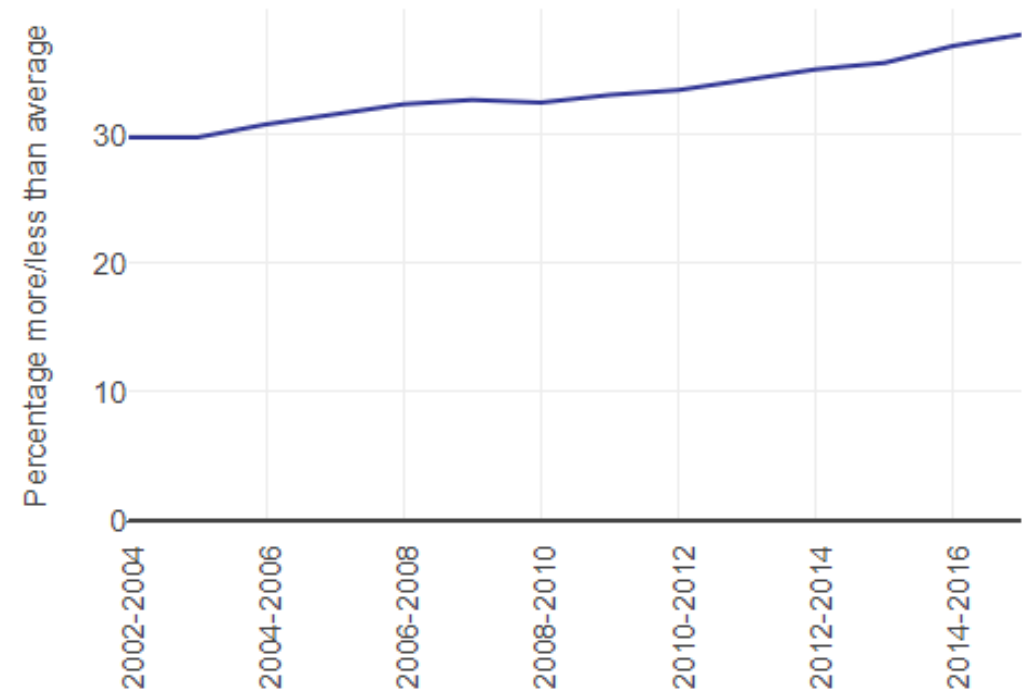
Inequality gap over time

Absolute differences between most and least deprived areas, expressed as age-sex standardised rate per 100,000.

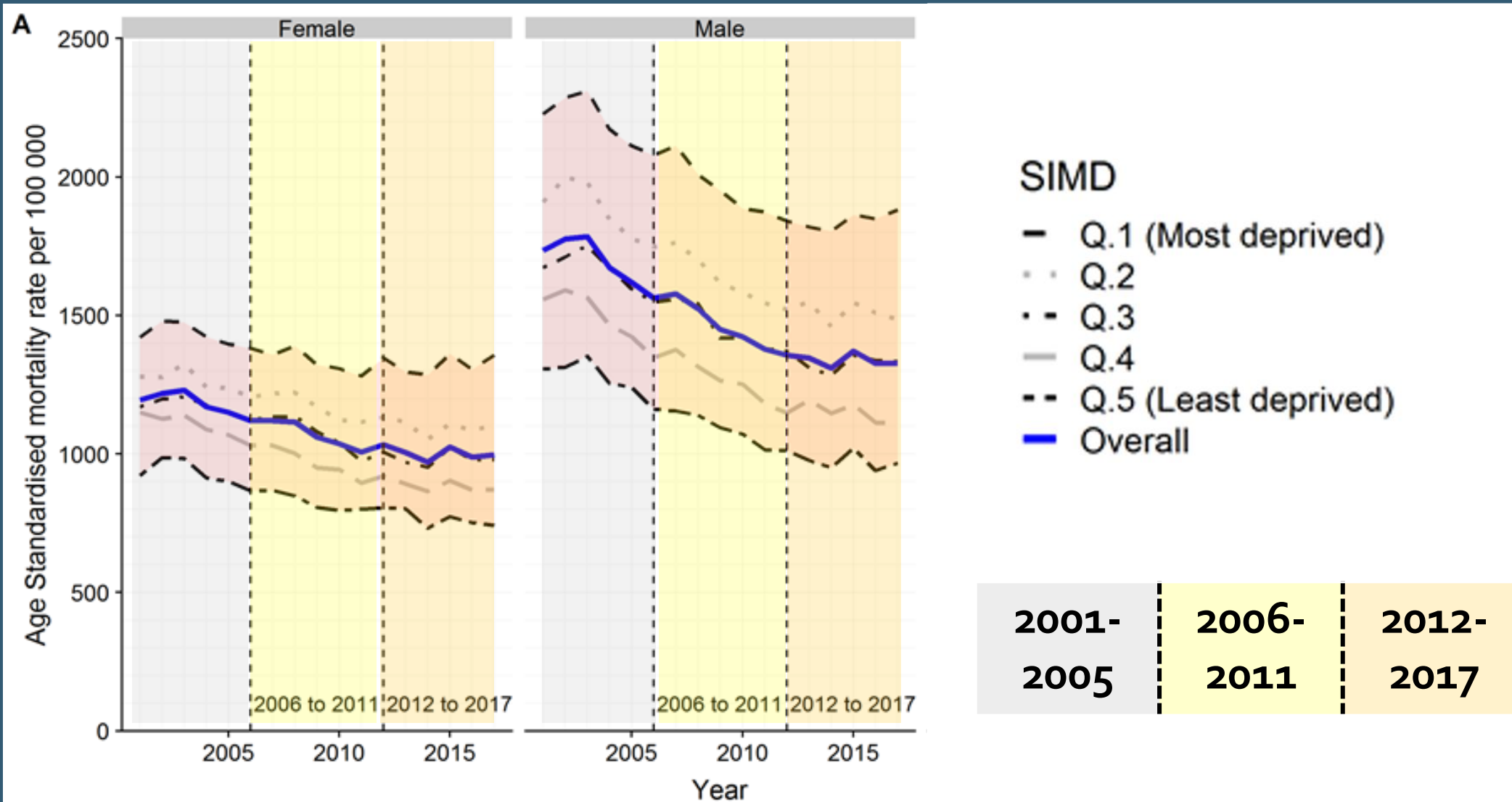


How the most deprived area compares with the average for Scotland

Relative differences between the least deprived area and the overall average for the area.

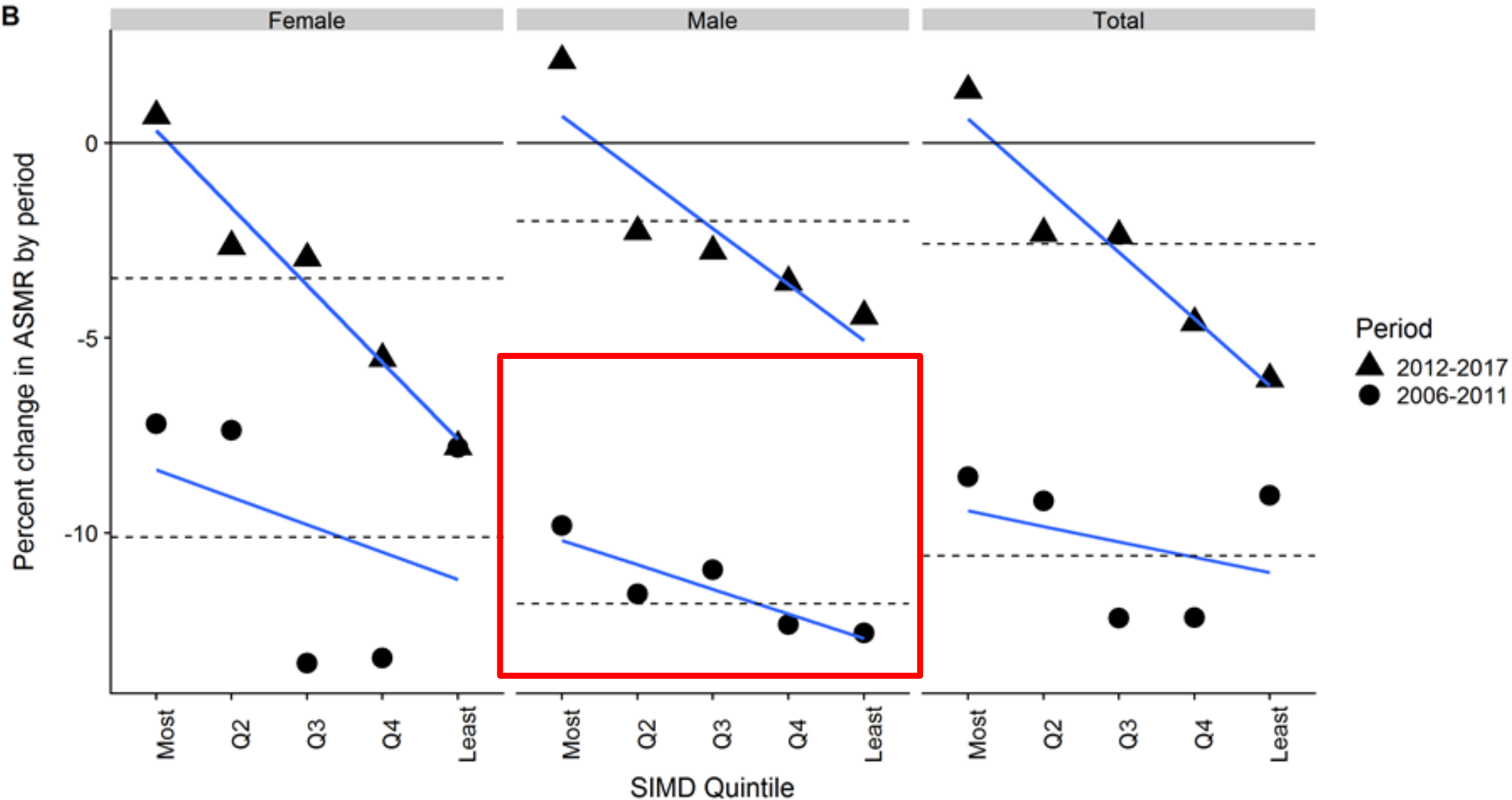


Age-standardised mortality rates, males, females and total population, Scotland, 2001 to 2017, by SIMD quintile



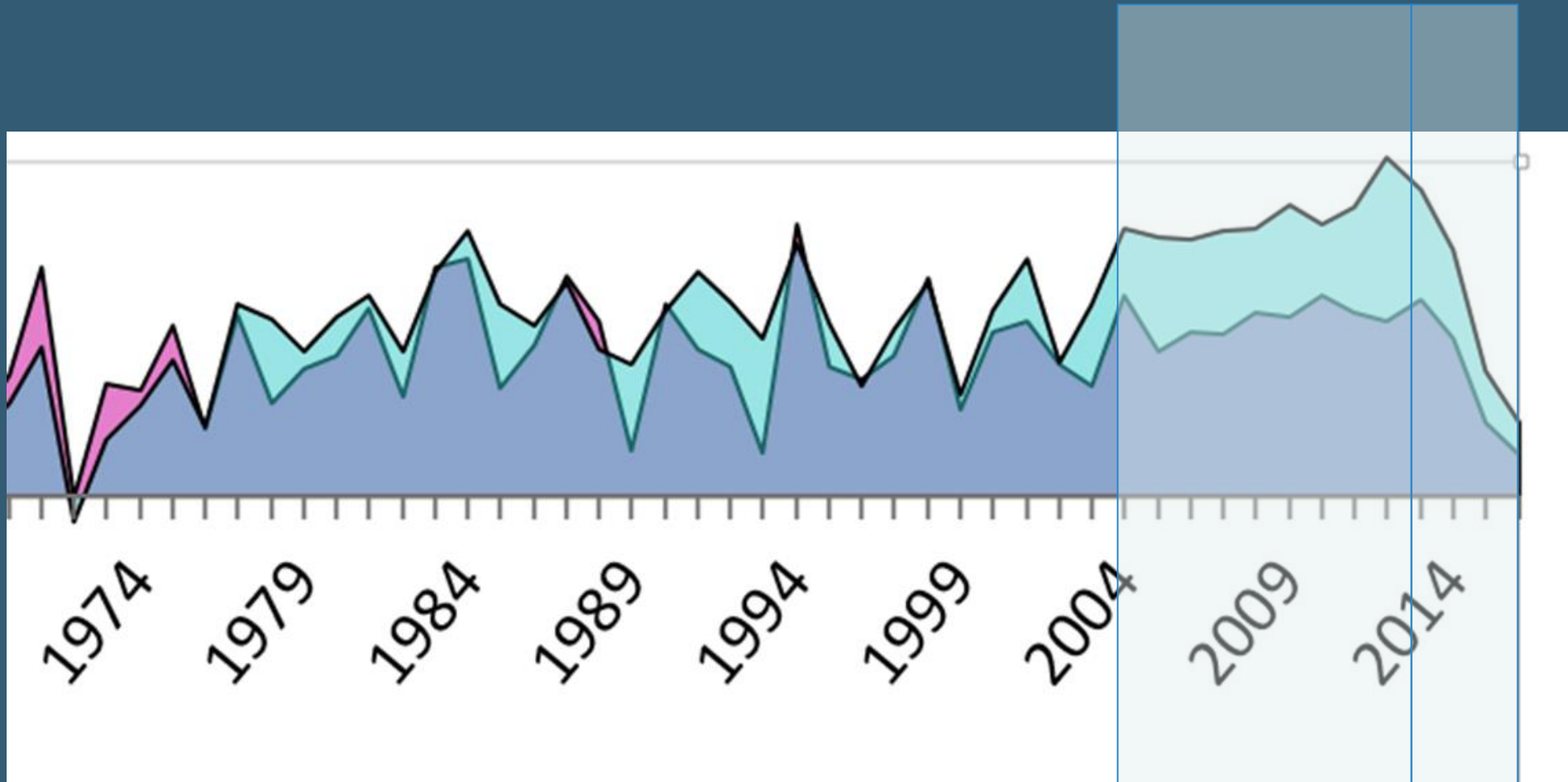
Percentage change in age-standardised mortality rates by SIMD quintile for two periods: 2006-2011 and 2012-2017 (males, females and total population, Scotland)

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DECOMPOSITION OF CHANGES IN LIFE EXPECTANCY

- What contribution do deaths in different groups make to overall changes in life expectancy over time?
 - Age groups
 - Certified cause of death
 - Area-level deprivation



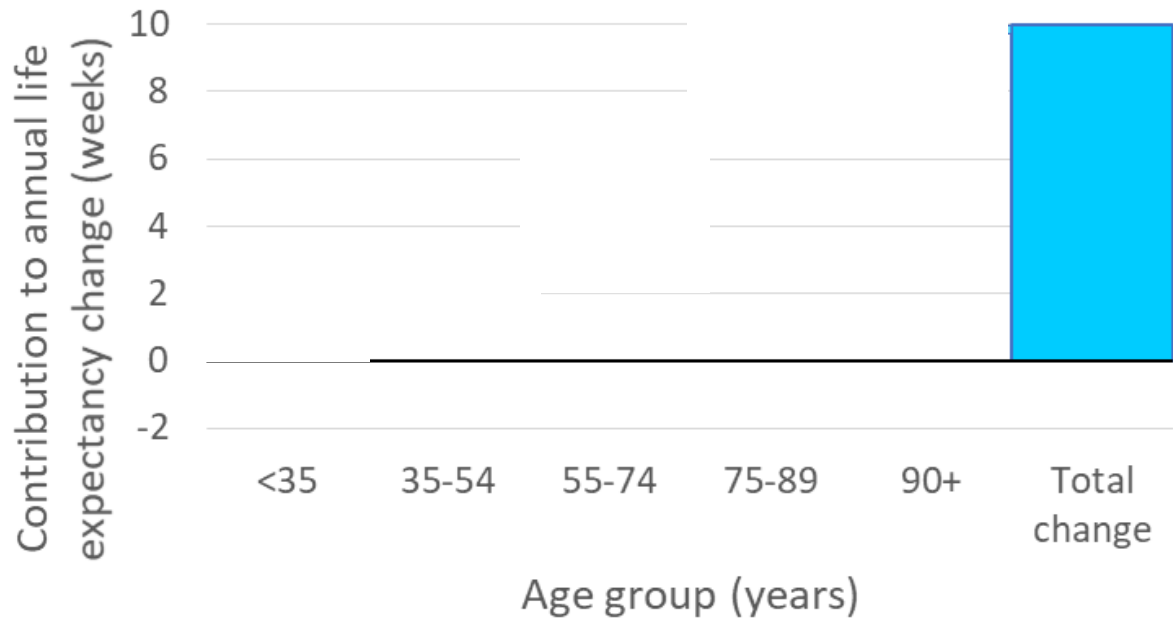
→ Mean annual change in life expectancy across period

Period 1
2002-2004
to
2012-14

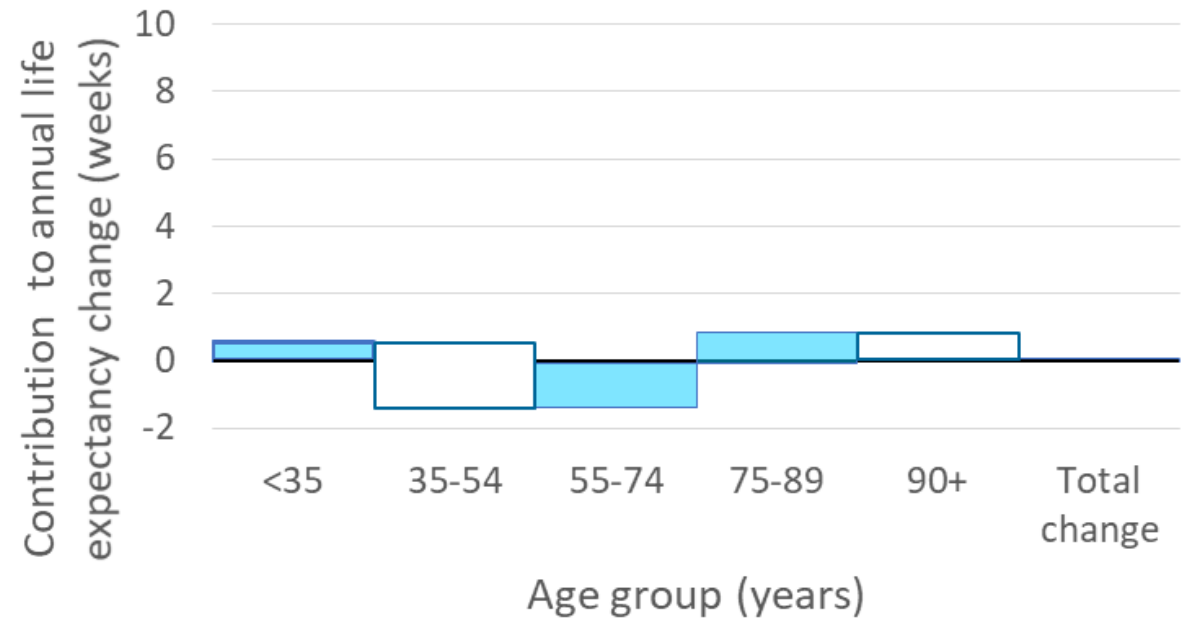
Period
2
2012-
2014
to
2015 -
17

Contribution to change in life expectancy for two periods, by age group, females, Scotland

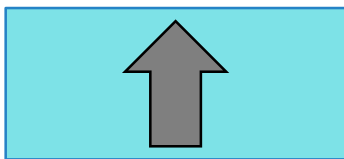
2002-2004 to 2012-14



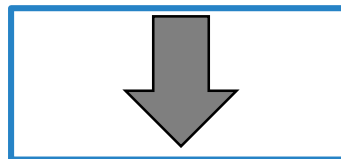
2012-14 to 2015-17



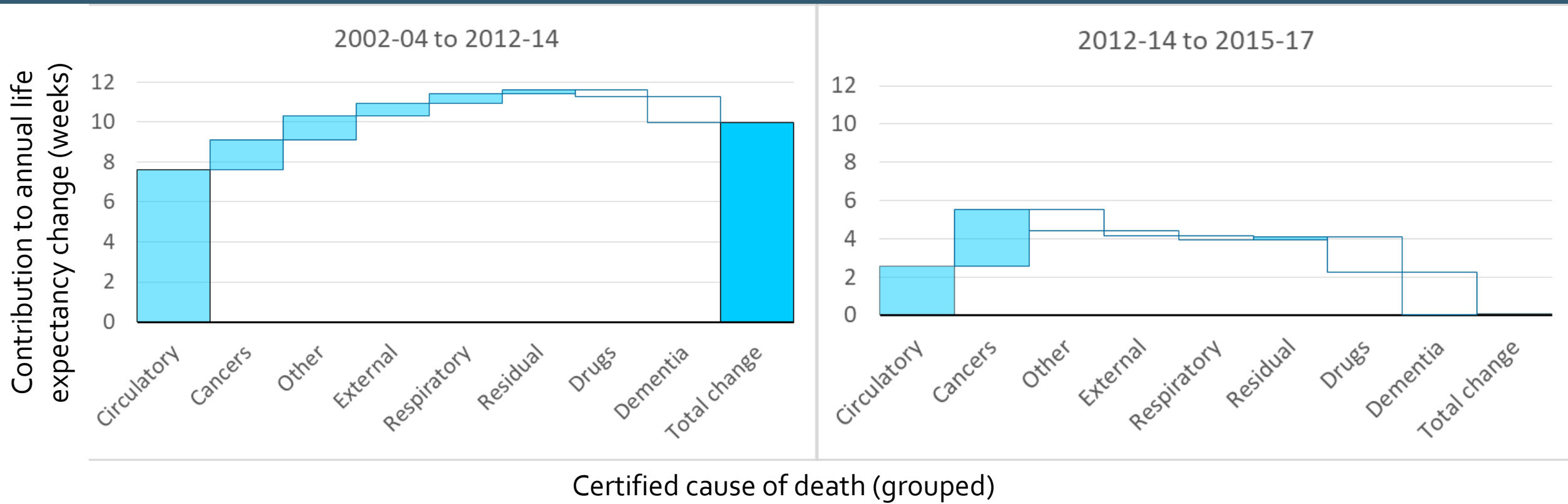
Positive



Negative



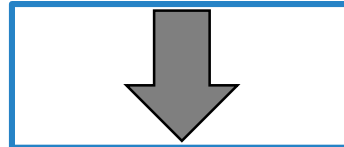
Contribution to change in life expectancy for two periods, by certified cause of death, females, Scotland



Positive



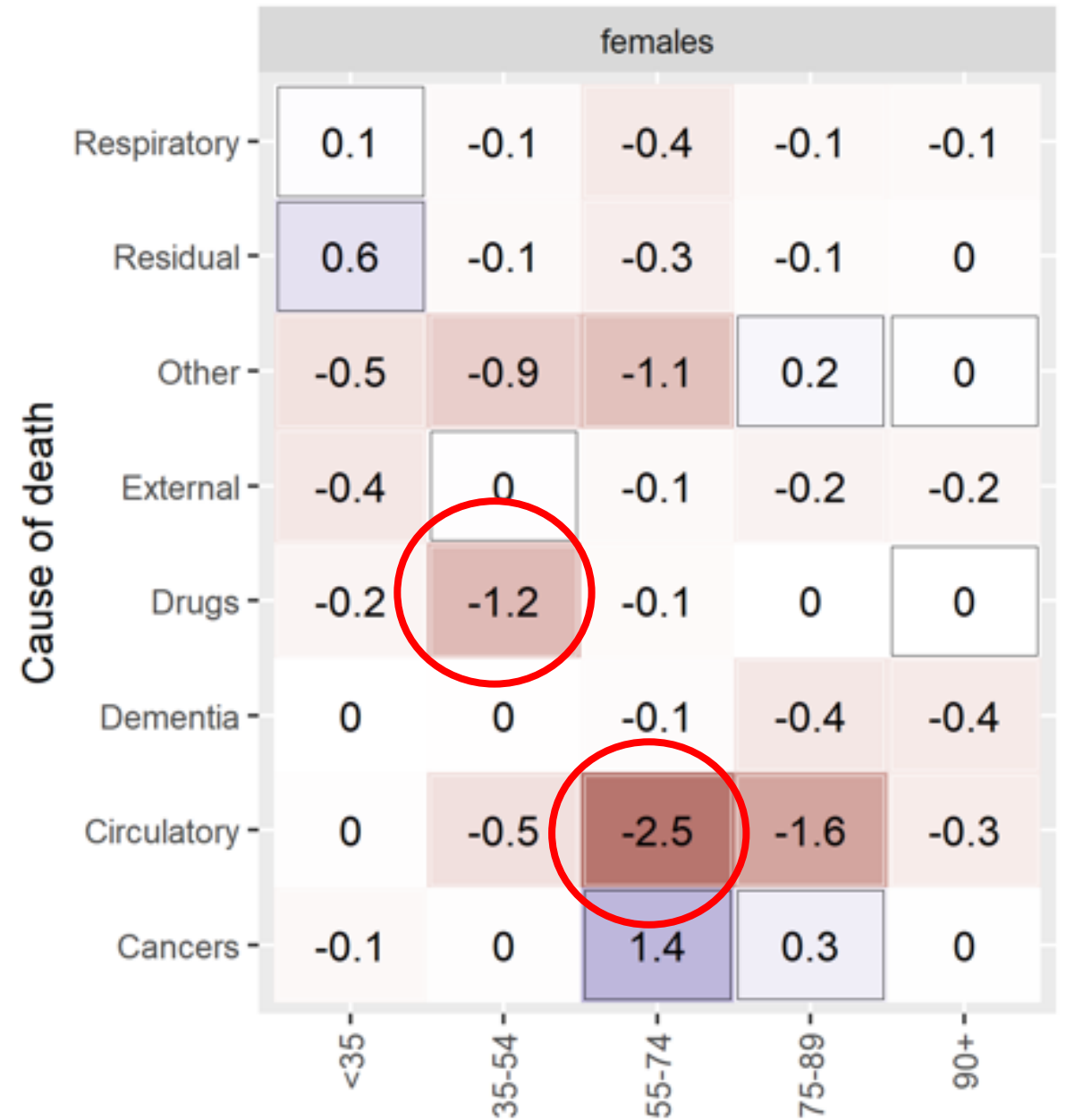
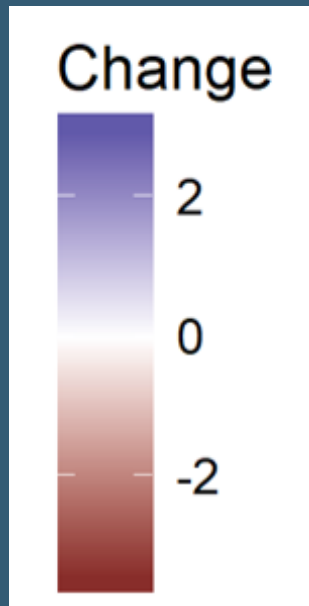
Negative



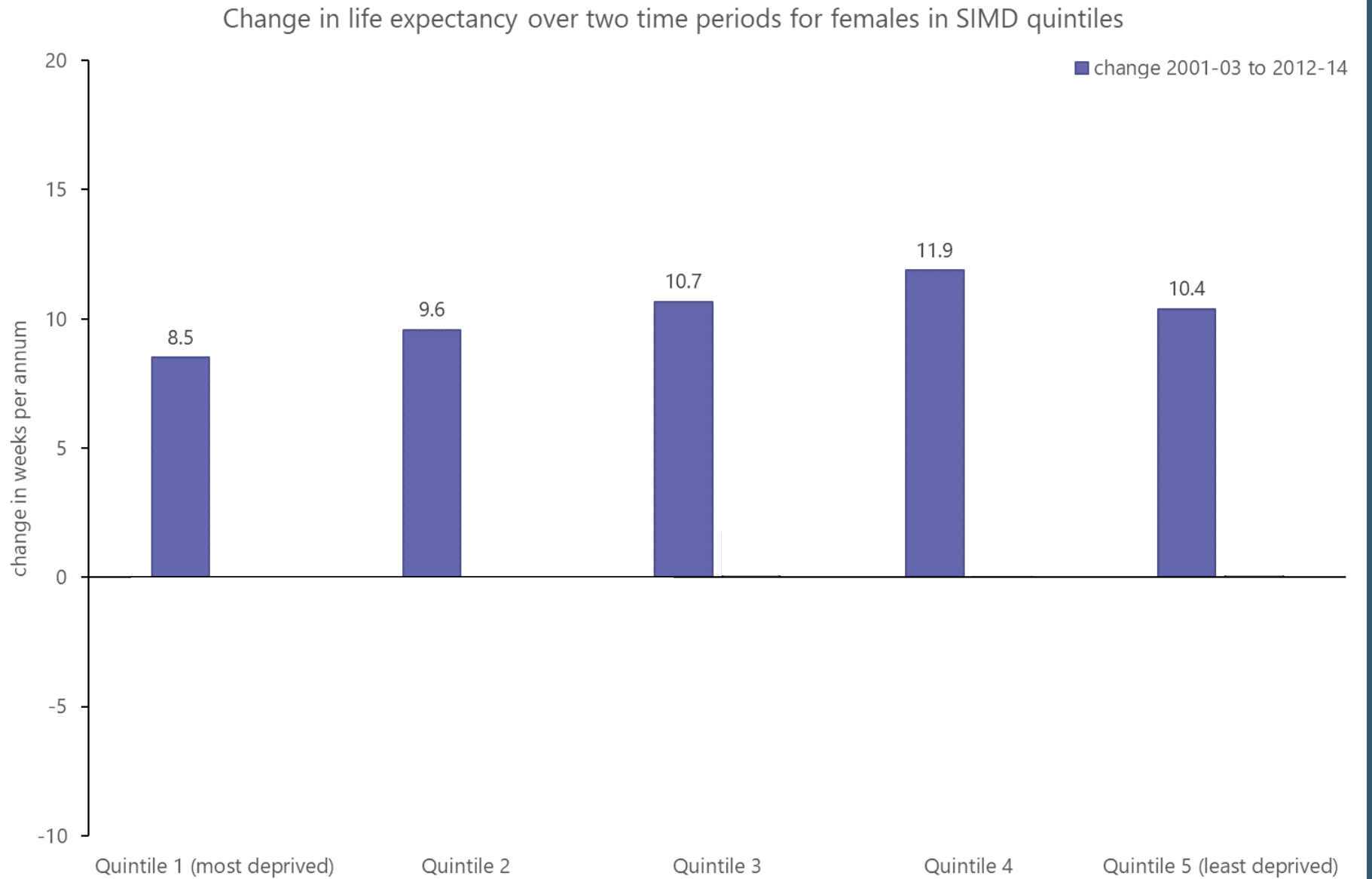
Heat-map of contribution to change in life expectancy (mean weeks/year) for two periods, by certified cause of death and age-group, females, Scotland



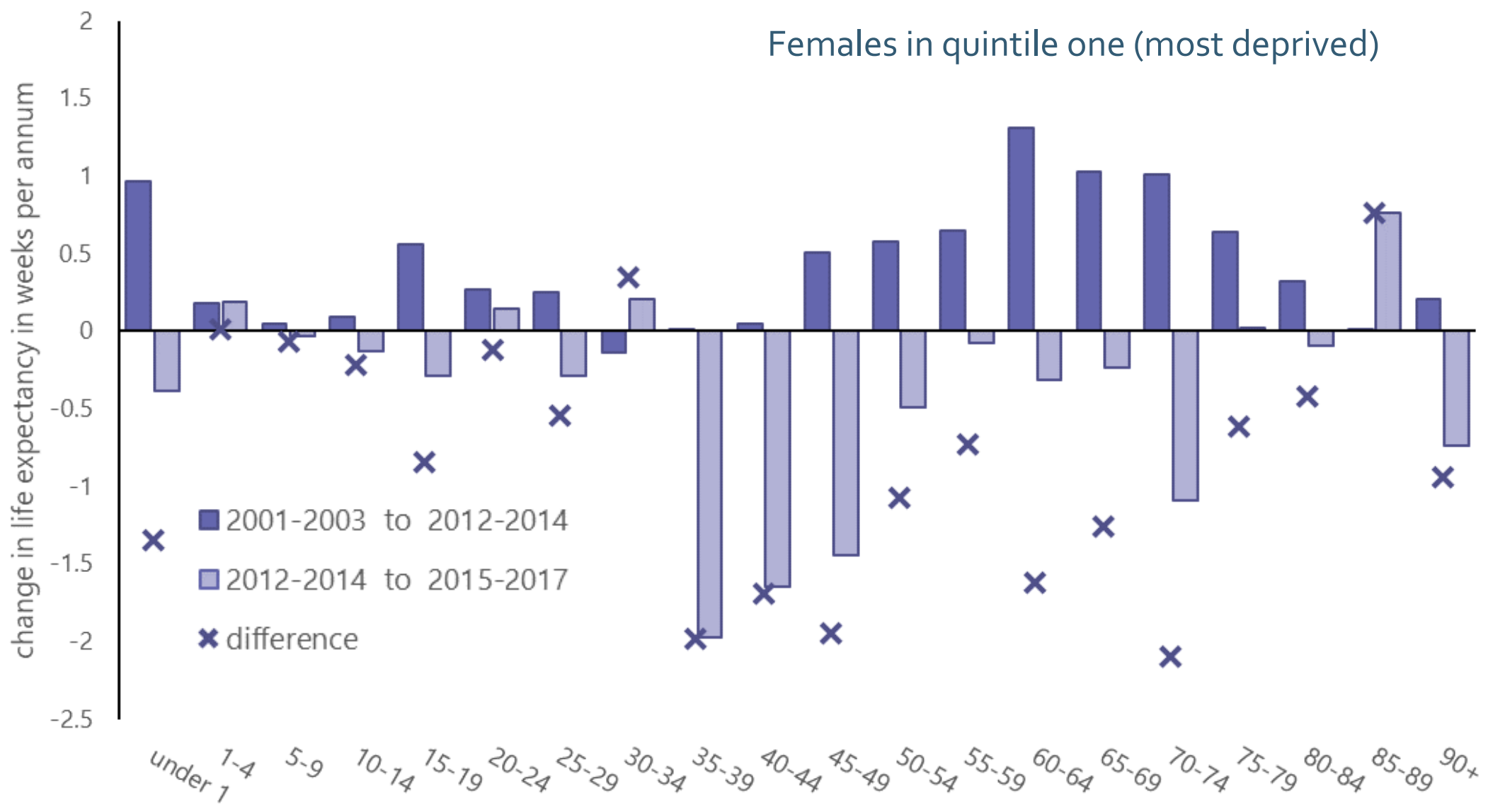
Heat-map of the **change in contribution** (mean weeks/year) between period 1 and period 2, to the change in life expectancy in each period, by certified cause of death and age-group, females, Scotland



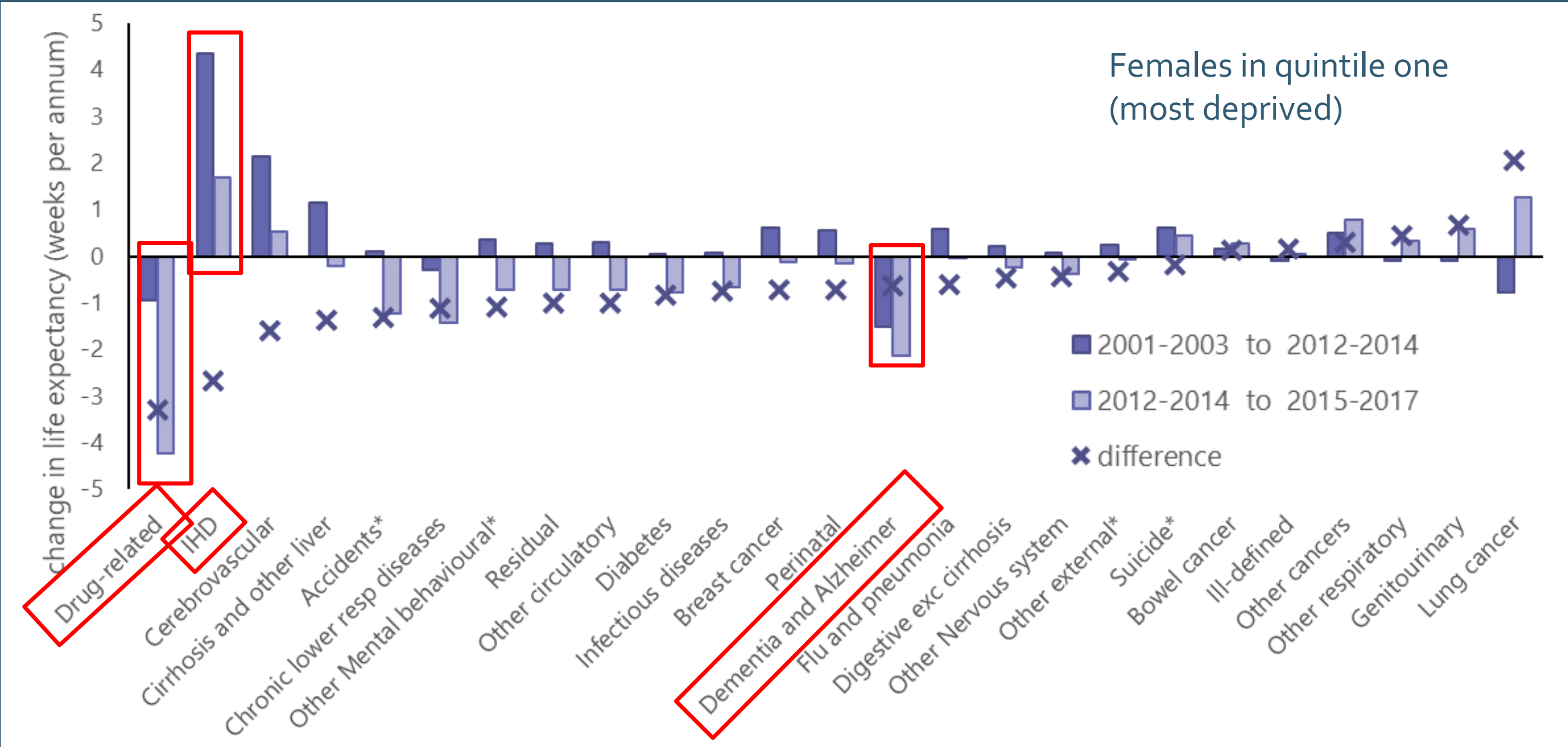
Change in life expectancy for two periods (2001-03 to 2012-14 and 2012-14 to 2015-17), by deprivation quintile, females, Scotland



Contribution to change in life expectancy for two periods, by age-group, females, Scotland, least and most deprived SIMD quintiles

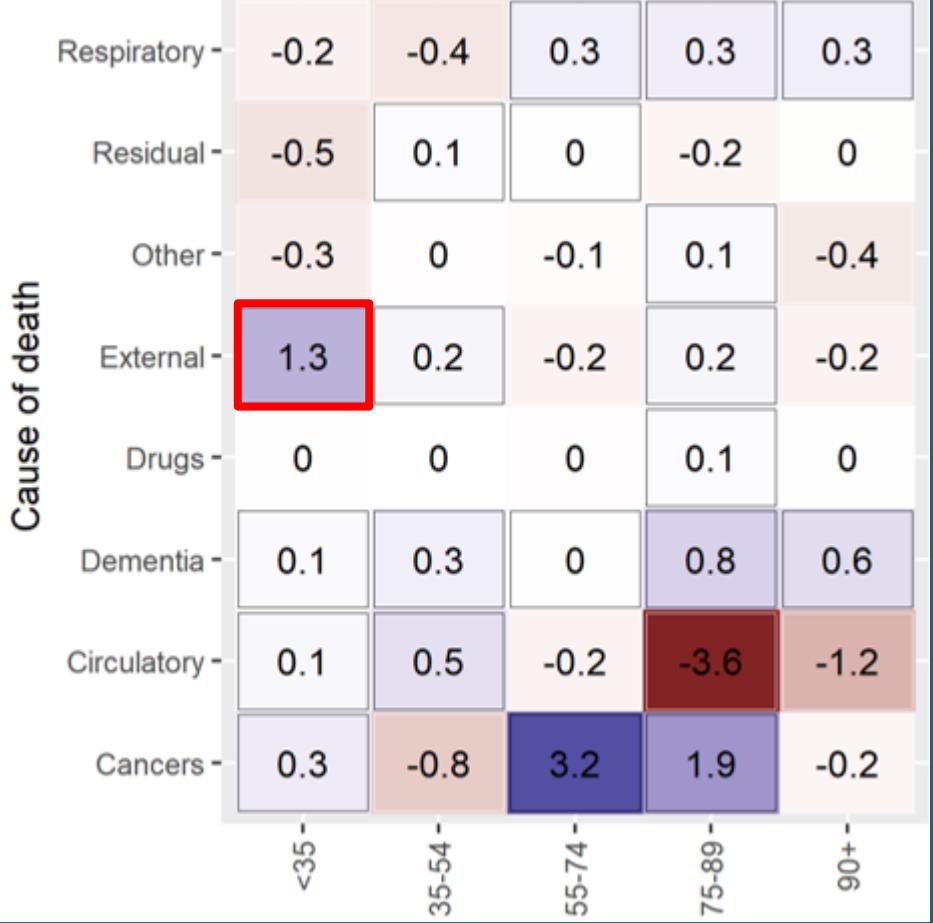


Contribution to change in life expectancy for two periods, by certified cause of death, females, Scotland, least and most deprived SIMD quintiles

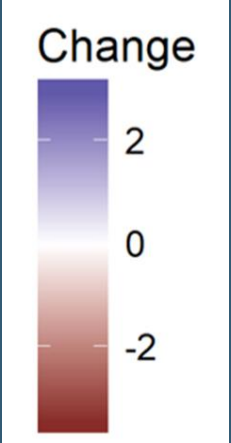
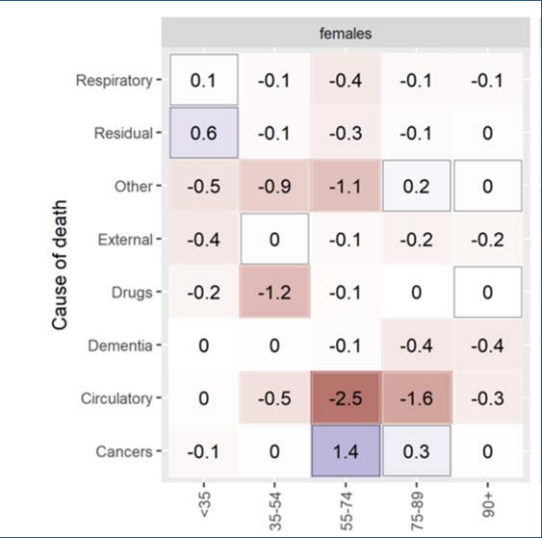


Heat-maps of the **change in contribution** (mean weeks/year) between period 1 and period 2, to the change in life expectancy in each period, by certified cause of death and age-group, females, Scotland

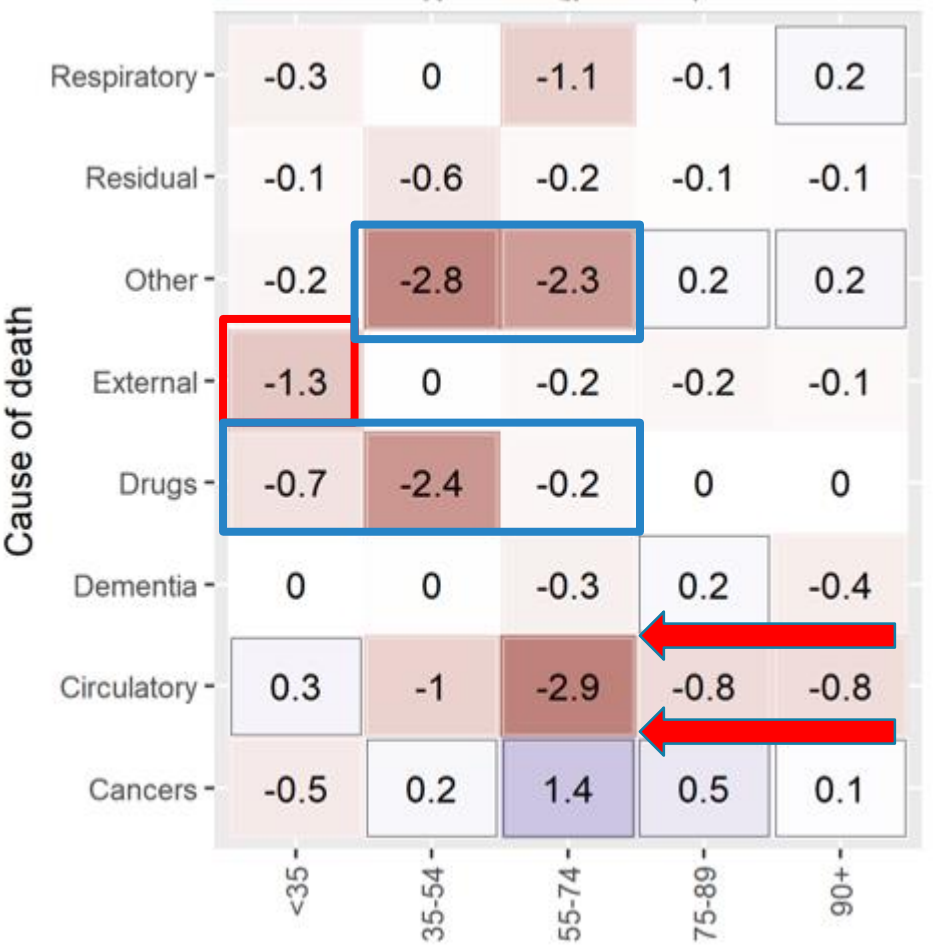
Least deprived quintile



All females



Most deprived quintile



Age-group (years)

SUMMARY

- There are clear socioeconomic inequalities within the recent stalling of mortality improvements in Scotland
- The current trends are widening socioeconomic inequalities in mortality
- There are differences in the mortality rates by cause and age-group that are contributing to the stalling and falling in our least and most deprived areas, respectively

IMPLICATIONS

- This is not inevitable
- Need to understand the shared causes of the causes
- Need to act on plausible contributors: impacts of austerity policies on conditions of living, and on health and social care services
- Encourage proportionate responses to proportional contributors, accept complexity
- Seek to refine and strengthen our understanding and shared narrative regarding overall life expectancy stalling and mortality inequalities

WITH THANKS TO:

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- Grant Wyper, NHS Health Scotland
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FOR MORE:

- <https://www.scotpho.org.uk/population-dynamics/recent-mortality-trends/>



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