

Healthy Life Expectancy 2017-2019



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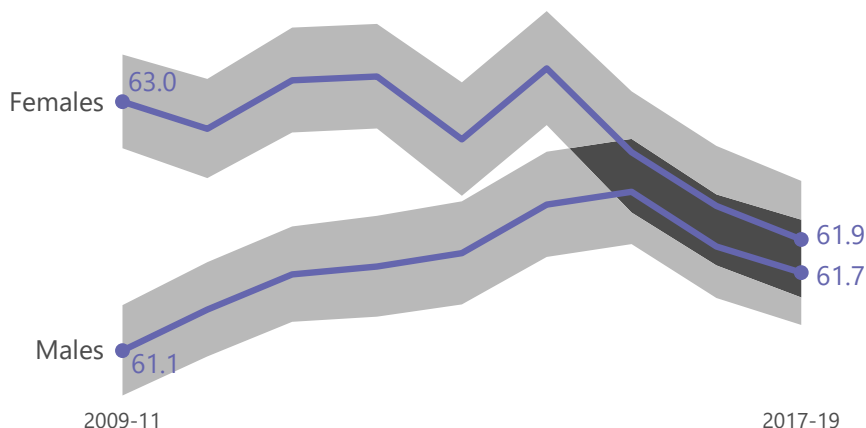
This statistical report details healthy life expectancy (HLE) estimates for areas within Scotland including council areas and NHS health boards. It also includes breakdowns by deprivation and outlines other inequalities observed in the data.

Healthy life expectancy has changed over time

Since 2009-2011 healthy life expectancy has increased for males and decreased for females. In the last few years healthy life expectancy has started to decrease and the gap between males and females has reduced.

* The shaded area shows the upper and lower 95% confidence intervals.

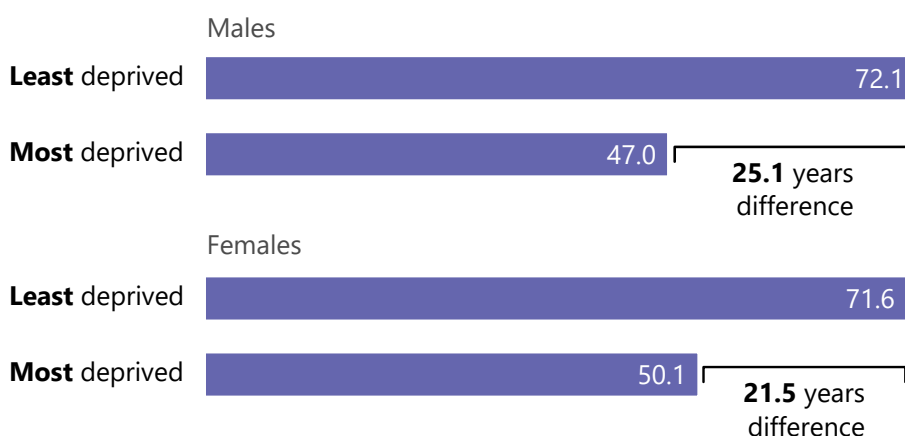
Healthy life expectancy at birth (years)



Deprivation has a large impact on healthy life expectancy

Healthy life expectancy for females is 21.5 years more in the least deprived areas compared to the most deprived areas in Scotland. For males that difference increases to 25.1 years.

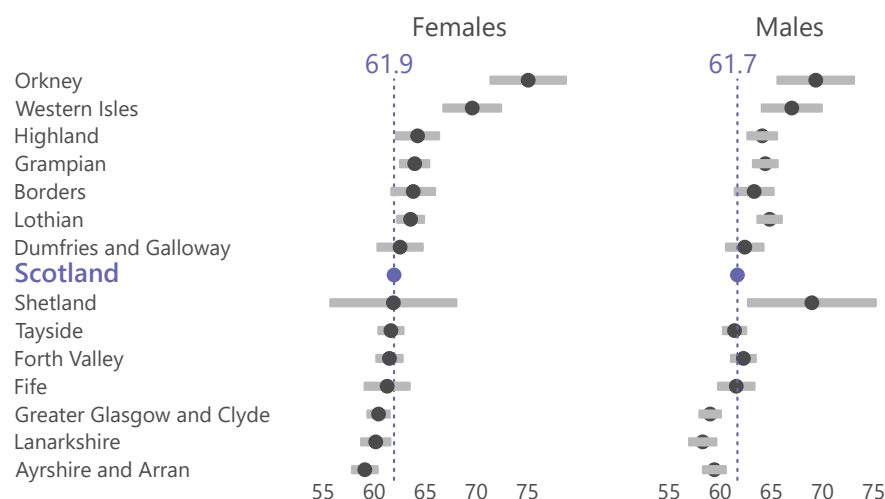
Healthy life expectancy at birth by deprivation (years)



Healthy life expectancy varies by health board

For females, Orkney had the highest healthy life expectancy at birth (75.1 years) whilst Ayrshire and Arran had the lowest (59.1 years) of all Scottish health boards. For male healthy life expectancy at birth, Orkney had the highest (69.3 years) and Lanarkshire the lowest (58.3 years) of the health boards.

Healthy life expectancy at birth by health board (years)



Healthy life expectancy at birth by council area (years)



Healthy life expectancy varies by council area

The council area with the highest female healthy life expectancy estimate at birth was Orkney Islands (75.1 years). The council area with the lowest female healthy life expectancy estimate at birth was North Ayrshire (56.3 years).

For males, the council area with the highest estimate was East Dunbartonshire (69.8 years) and the lowest was Glasgow City (54.6 years).

There was greater variation in the female healthy life expectancy estimates across council areas.

The difference between the council areas with the highest and lowest female healthy life expectancy estimates was 16 years. The difference between the council areas with the highest and lowest male healthy life expectancy estimates was 11 years.

Table of Contents

1. Main Points	4
2. Introduction	6
3. Healthy life expectancy in Scotland	8
4. How changes in HLE compare with changes to overall life expectancy	10
5. Healthy life expectancy in Council areas	13
6. Healthy life expectancy in NHS health boards	15
7. Healthy life expectancy in SIMD areas	17
8. Healthy life expectancy by Urban and Rural areas	19
9. Related Statistics	21
10. Notes on statistical publications	21

1. Main Points

In Scotland between 2017-2019:

- It is estimated that a baby boy expects to live 61.7 years in good health and a baby girl 61.9 years in good health.
- For males, healthy life expectancy at birth was highest in East Dunbartonshire (69.8 years) and lowest in Glasgow City (54.6 years).
- For females, healthy life expectancy at birth was highest in Orkney (75.1 years) and lowest in North Ayrshire (56.3 years).
- The gap in healthy life expectancy at birth between the most and least deprived areas was 25.1 years for males and 21.5 years for females.

How this compares to previous years:

- For males, healthy life expectancy at birth has increased over the last decade.
- For females, healthy life expectancy at birth has decreased over the last decade.
- However, both males and females experienced a decrease in healthy life expectancy from the previous year (2016-2018).

2. Introduction

This report gives estimates of healthy life expectancy based on the years 2017-2019 for areas within Scotland. A more detailed breakdown of the estimates for all areas and age groups can be found in the accompanying tables.

What is healthy life expectancy?

Healthy life expectancy (HLE) is an estimate of the number of years lived in 'very good' or 'good' general health, based on how individuals perceive their state of health at the time of completing the annual population survey (APS).

How are the statistics calculated?

Statistics are drawn from the annual population survey (APS) where participants indicate their general health. The HLE estimates are derived from the good health prevalence rate (calculated from the APS survey data) and deaths and population data, through which the average number of remaining years in good health can be calculated for each age group and geography. See [methodology](#) for more detailed breakdown of the process.

Throughout this report, statistically significant results will be clearly indicated. Where insignificant estimates are reported, the reader should interpret such results with caution.

Why is it useful to analyse healthy life expectancy?

Healthy life expectancy provides insight into the proportion of life expectancy spent in good health. HLE estimates are important to analyse alongside the life expectancy estimates, to understand the state of health the population is in, as well as their years of life expectancy.

Most importantly, it is important to understand how the two estimates are changing over time and relative to each other as this can determine the future health state of the population. For this reason, HLE is of particular use in monitoring and investigating the health inequalities across Scotland and directing public health targets.

These figures are also used to help deliver local and national services in addition to use for teaching and research purposes.

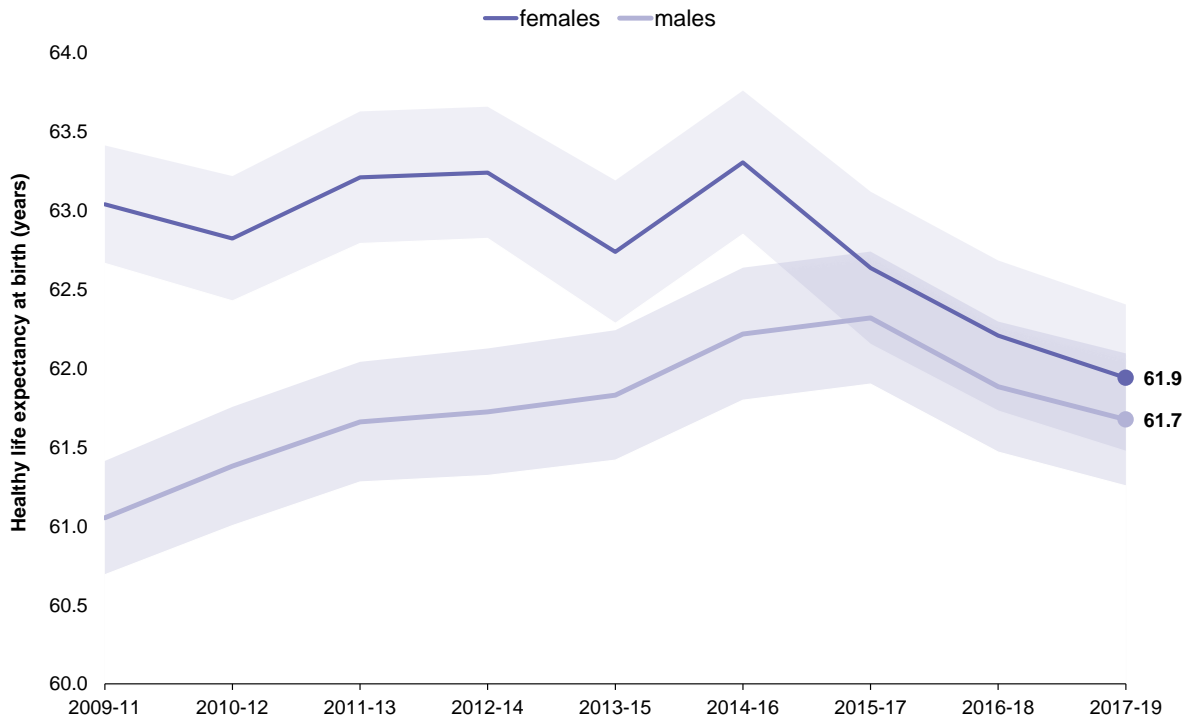
Why do we report confidence intervals?

95% confidence intervals are included to measure the uncertainty around the estimates. In this report, the confidence intervals are quoted in brackets, for example 65 (± 0.7) years. These represent the range of values the true value is 95%-likely to lie between. The wider the confidence interval, the less accurate the estimate is.

Estimates from larger populations (such as health boards) will have smaller confidence intervals and therefore provide more accurate estimates, than from smaller populations (such as intermediate zones) with larger confidence intervals.

3. Healthy life expectancy in Scotland

Figure 1a: Healthy life expectancy at birth in Scotland, 2009-2019



In 2017-2019:

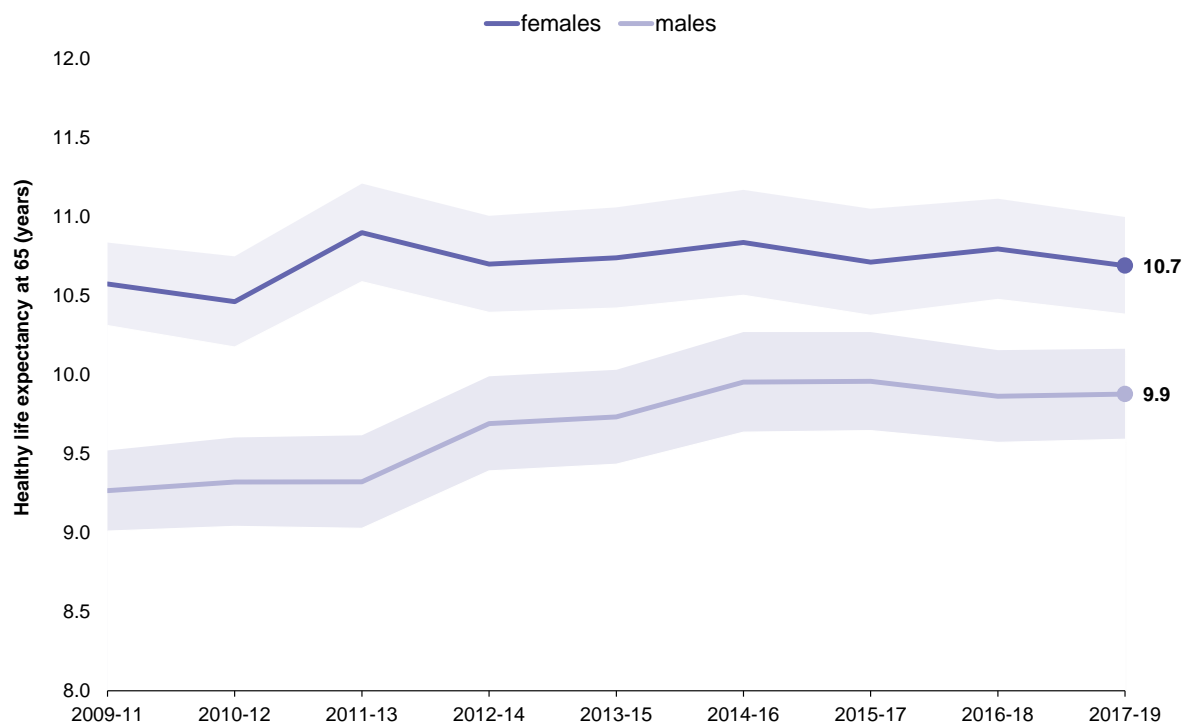
- The estimated healthy life expectancy of a female was 61.9 (± 0.5) years.
- The estimated healthy life expectancy of a male was 61.7 (± 0.4) years.

Healthy life expectancy has increased for males and decreased for females over the last decade. Despite this, since the time series began, the HLE estimates of females has remained greater than that of males. However, since 2015-2017 the estimates for males and females have remained relatively similar (as shown by the overlapping confidence intervals).

Female HLE at birth has shown no consistent trend across the time series, with each period experiencing a change in direction of the estimates. That is until 2014-2016 when the estimates begin to decrease consistently up to 2017-2019.

Male HLE at birth experienced a consistent increase between 2009-2017, after which the estimates have decreased although remain greater than the original 2009-2011 figure.

Figure 1b: Healthy life expectancy at 65 in Scotland, 2009-2019



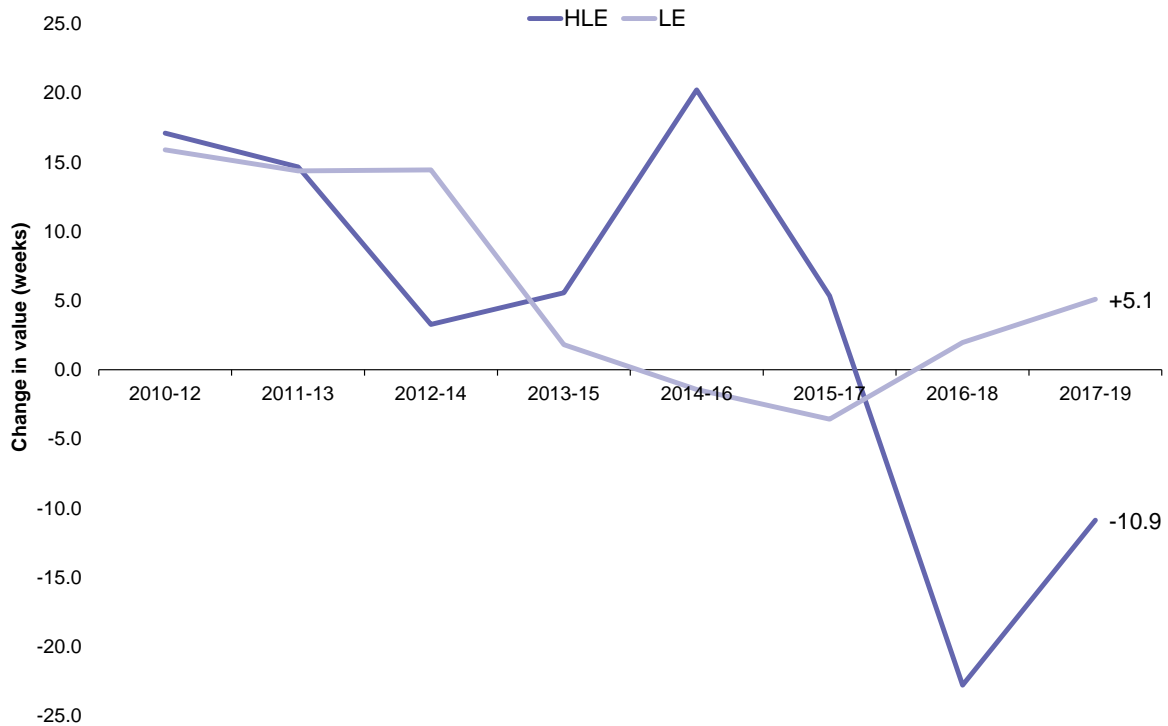
In 2017-2019:

- The estimated healthy life expectancy of a female at 65 was 10.7 (± 0.3) years.
- The estimated healthy life expectancy of a male at 65 was 9.9 (± 0.3) years.

Over the last decade, male HLE at 65 has experienced an increase whilst female HLE at 65 has remained relatively unchanged since 2009-2011. Due to an ageing population, this means females are estimated to spend a greater proportion of their life in bad health than previously experienced, as the healthy life expectancy at 65 is not increasing with the increasing life expectancy.

4. How changes in HLE compare with changes to overall life expectancy

Figure 2a: Yearly change in healthy life expectancy and life expectancy at birth, 2010-2019, males



In 2017-2019:

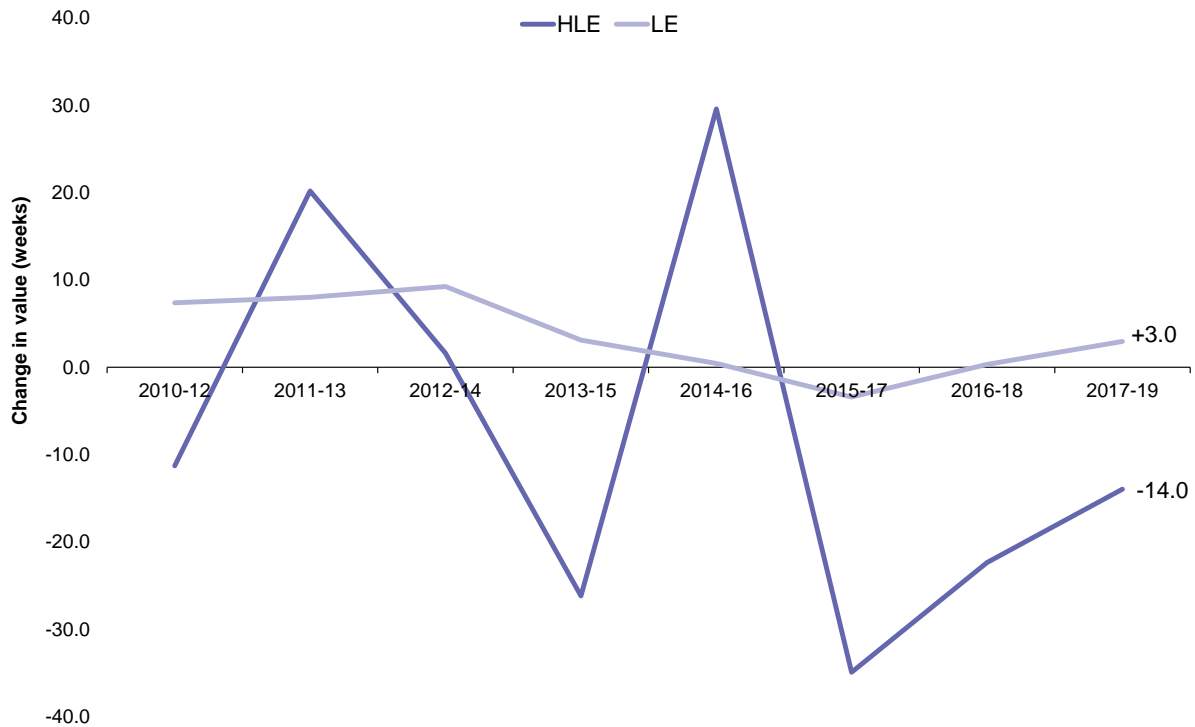
- Male healthy life expectancy decreased by 10.9 weeks from the previous year (61.7 compared to 61.9 years in 2016-2018).
- Male life expectancy increased by 5.1 weeks from the previous year (77.1 compared to 77.2 years in 2016-2018).

For two consecutive years the male healthy life expectancy estimates have decreased whilst life expectancy estimates have increased. As these two estimates are following opposing trends, this suggests that a greater proportion of male life expectancy will be spent in poor health.

It is also important to note that the two estimates (HLE and LE) do not appear to follow the same trend in their changes across the whole time series. For this reason, when the healthy life expectancy estimates do not follow the same positive change as life expectancy, it suggests the aging population spends more time in poor health.

The magnitude of the changes in healthy life expectancy have also been greater than the changes in life expectancy since 2013-2015. This was positive during 2013-2017 when healthy life expectancy was increasing more than life expectancy, suggesting an increasing proportion of life spent in good health. However when the magnitude is negatively greater this highlights a clear negative change in the health state of the male population.

Figure 2b: Yearly change in healthy life expectancy and life expectancy at birth, 2010-2019, females



In 2017-2019:

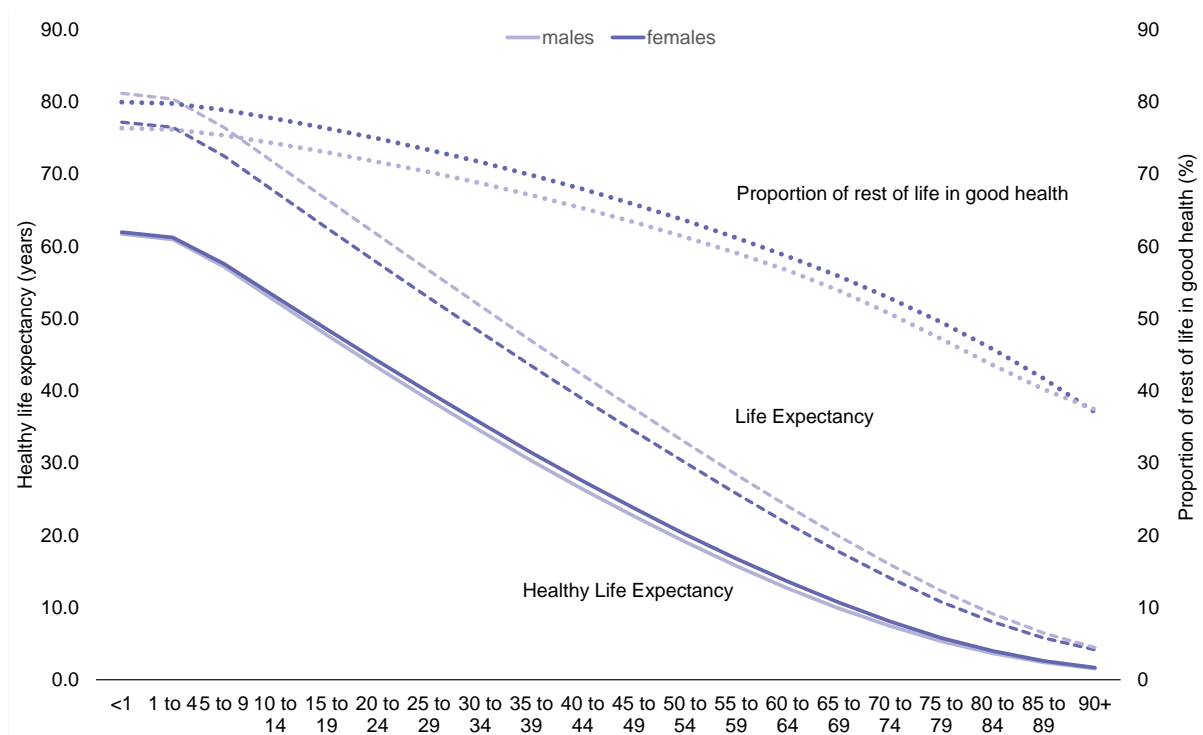
- Female healthy life expectancy has decreased by 14 weeks from the previous year (61.9 compared to 62.2 years in 2016-2018).
- Female life expectancy has increased by 3 weeks from the previous year (rounded estimate in years remains the same).

The female healthy life expectancy estimates have experienced negative changes more frequently than for males with 5 out of the 8 periods in the time series showing a reduction from the previous period. In addition to this, the life expectancy estimates are consistently positive (excluding a small reduction in 2015-2017). This suggests that the proportion of life spent in bad health is consistently increasing for females.

The range of the changes in female life expectancy estimates is smaller than for males (ranging from -3.4 to +9.2 weeks). Whilst the magnitude of the changes in healthy life expectancy are large relative to the LE changes (-34.9 to +29.6 weeks).

This highlights that despite female life expectancy experiencing minimal changes across the time series, the change in female healthy life expectancy varies more than for males. This suggests the proportion of life spent in good health for females is subject to change more frequently than for males.

Figure 3: Healthy life expectancy at all ages in Scotland, 2017-2019



It is also important to analyse how the healthy life expectancy estimates change across age categories, as a person moves through life from birth to old age. In particular, it is important to capture how these changes relate to the changes in life expectancy.

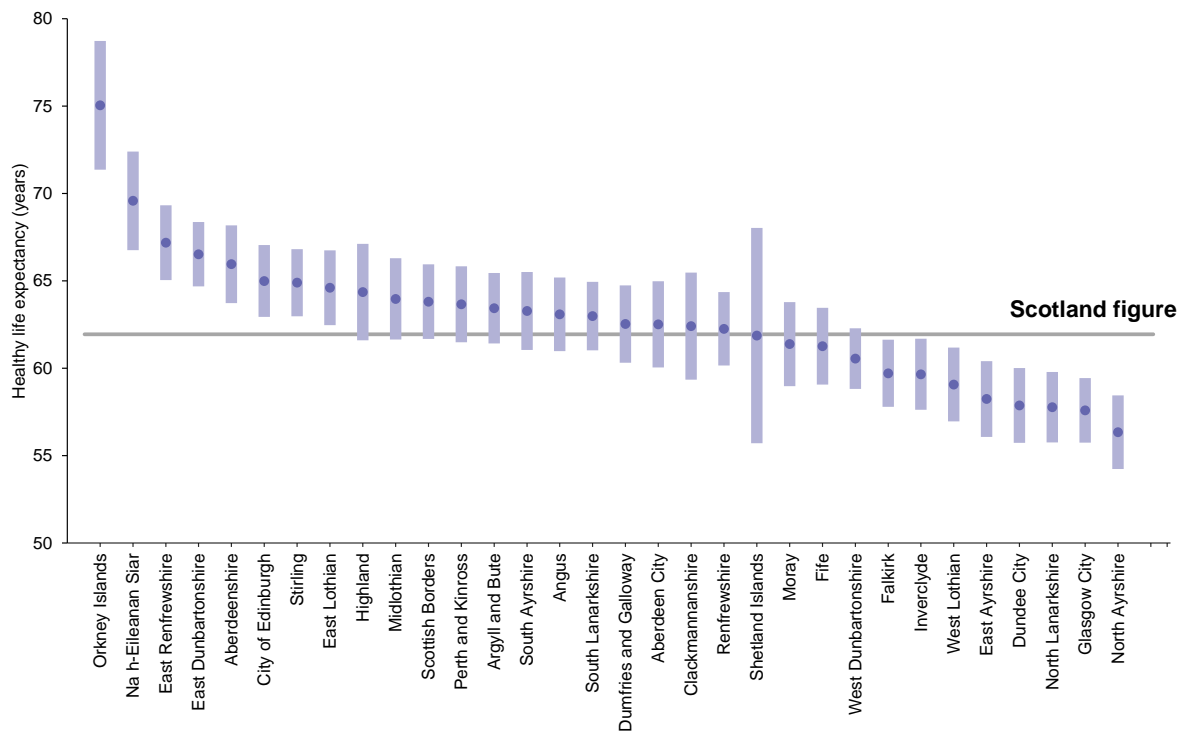
The trend in decreasing healthy life expectancy through the age categories remains similar for both males and females. This trend follows that of life expectancy, although the difference between males and females, with female life expectancy consistently higher, remains across ages.

The rate of change in healthy life expectancy across the ages is lower than the rate of change in life expectancy. This demonstrates that the healthy life expectancy reduces more slowly as you move up the age groups.

Due to females having a greater life expectancy, but a similar healthy life expectancy as males, the proportion of life in good health for females is lower. In other words, females spend a greater proportion of life in poor health.

5. Healthy life expectancy in council areas

Figure 4a: Healthy life expectancy at birth in council areas with 95% confidence intervals, 2017-2019, females

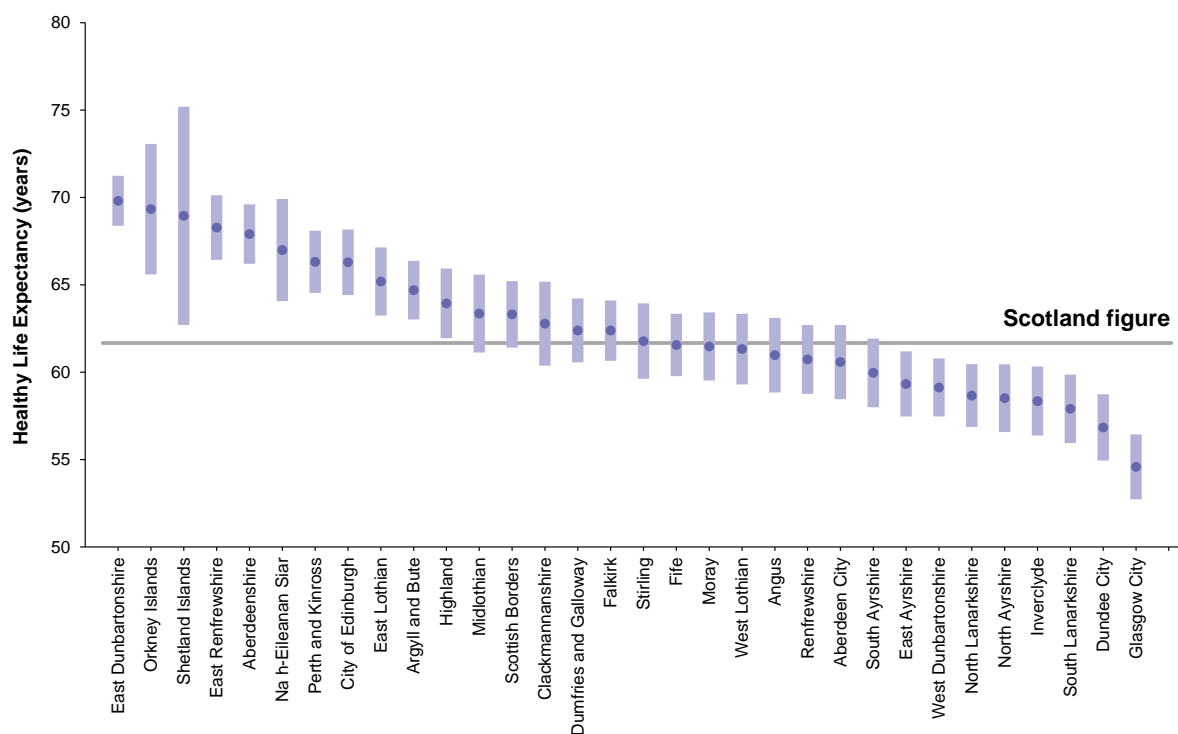


For females in 2017-19:

- The councils with the highest healthy life expectancy at birth were Orkney (75.1 (± 3.7) years), Na h-Eileanan Siar (69.6 (± 2.8) years) and East Renfrewshire (67.2 (± 2.1) years).
- The councils with the lowest healthy life expectancy at birth were North Ayrshire (56.3 (± 2.1) years), Glasgow City (57.6 (± 1.8) years) and North Lanarkshire (57.8 (± 2.0) years).

Please note that the bars represent the confidence intervals around the estimate, showing that although Orkney and Na h-Eileanan Siar have the highest recorded HLE estimates, they also have the largest confidence intervals (excluding Shetland) making their estimates less reliable.

Figure 4b: Healthy life expectancy at birth in council areas with 95% confidence intervals, 2017-2019, males



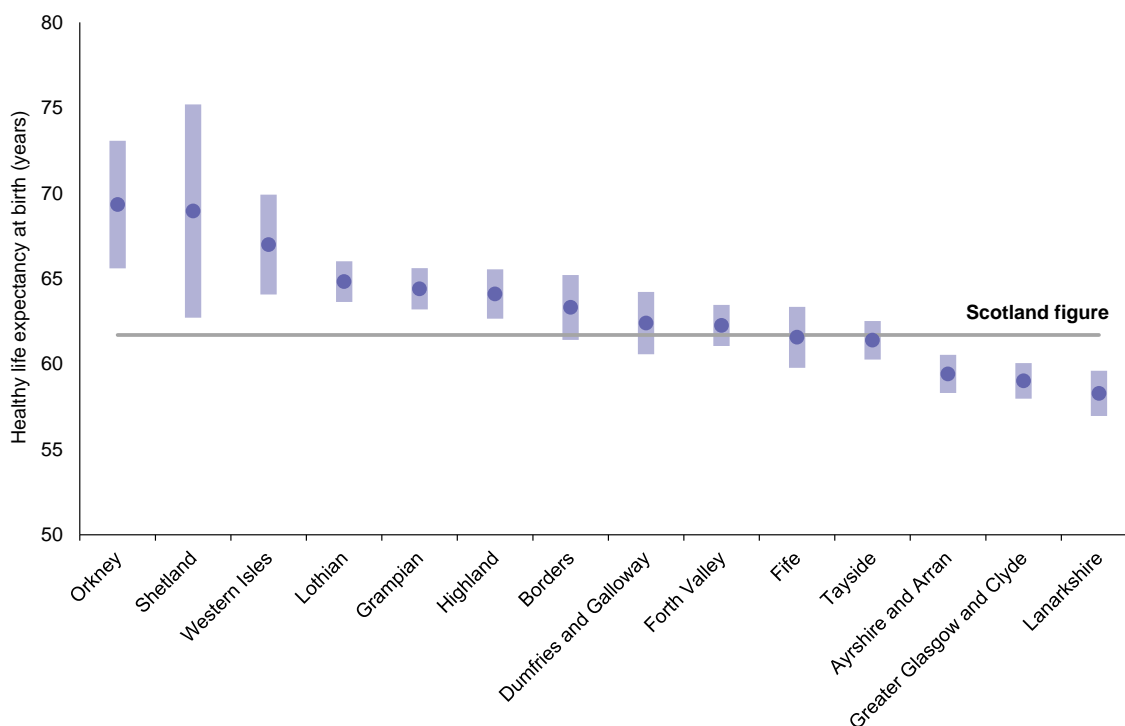
For males 2017-19:

- The councils with the highest healthy life expectancy at birth were East Dunbartonshire (69.8 (±1.4) years), Orkney (69.3 (±3.7) years) and Shetland Islands (69.0 (±6.2) years).
- The councils with the lowest healthy life expectancy at birth were Glasgow City (54.6 (±1.9) years), Dundee City (56.8 (±1.9) years) and South Lanarkshire (57.9 (±2.0) years).

The Shetland estimate must be taken with caution as it has a large confidence interval relative to the rest of the councils, making it less reliable.

6. Healthy life expectancy in NHS health boards

Figure 5a: Healthy life expectancy at birth by health board, 2017-2019, males

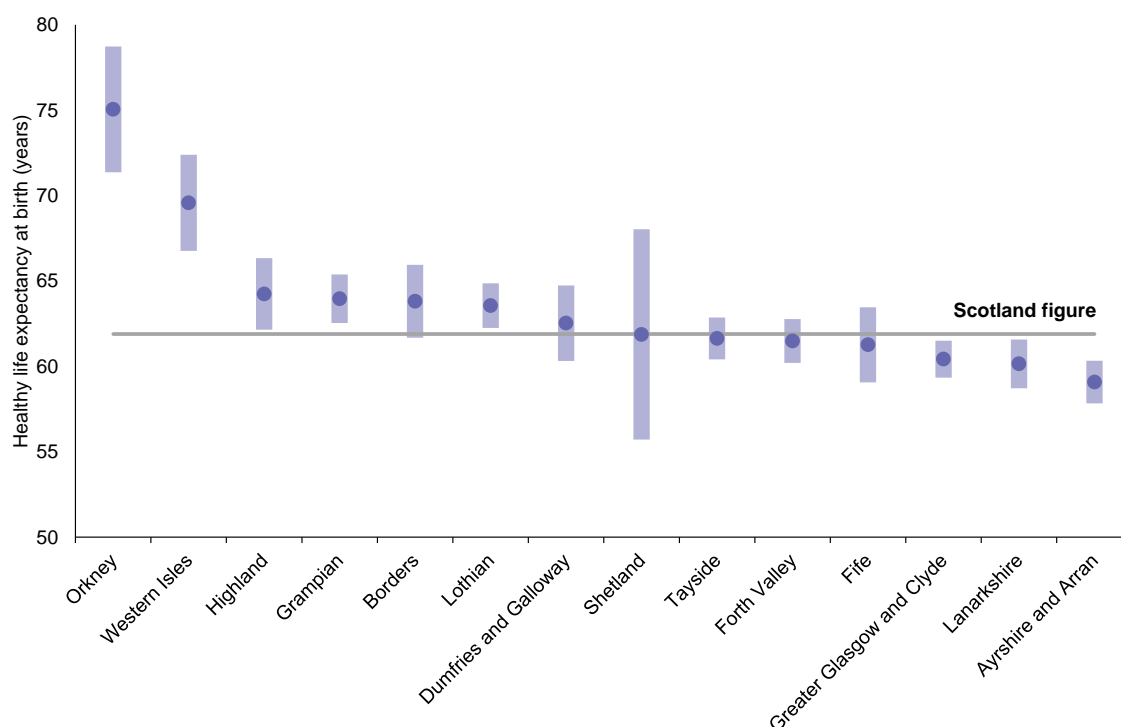


For males in 2017-2019:

- Orkney, Shetland and Western Isles had the highest healthy life expectancy estimates of all the health boards (69.3 (±3.7), 69.0 (±6.2) and 67.0 (±2.9) years respectively).
- Lanarkshire, Greater Glasgow and Clyde and Ayrshire and Arran had the lowest healthy life expectancy estimates (58.3 (±1.3), 59.0 (±1.0) and 59.4 (±1.1) years respectively), all below the overall estimate for Scotland.

Please note that the bars represent the confidence intervals around the estimate, showing that although Orkney, Shetland and Western Isles have the highest recorded HLE estimates they also have the largest confidence intervals of all health boards making their estimates less reliable.

Figure 5b: Healthy life expectancy at birth by health board, 2017-19, females



For females in 2017-2019:

- Orkney, Western Isles and Highland had the highest healthy life expectancy estimates of all the health boards (75.1(±3.7), 69.6 (±2.8) and 64.2 (±2.1) years respectively).
- Ayrshire and Arran, Lanarkshire and Greater Glasgow and Clyde had the lowest healthy life expectancy estimates (59.1 (±1.2), 60.2 (±1.4) and 60.4 (±1.1) years respectively), all below the overall estimate for Scotland.

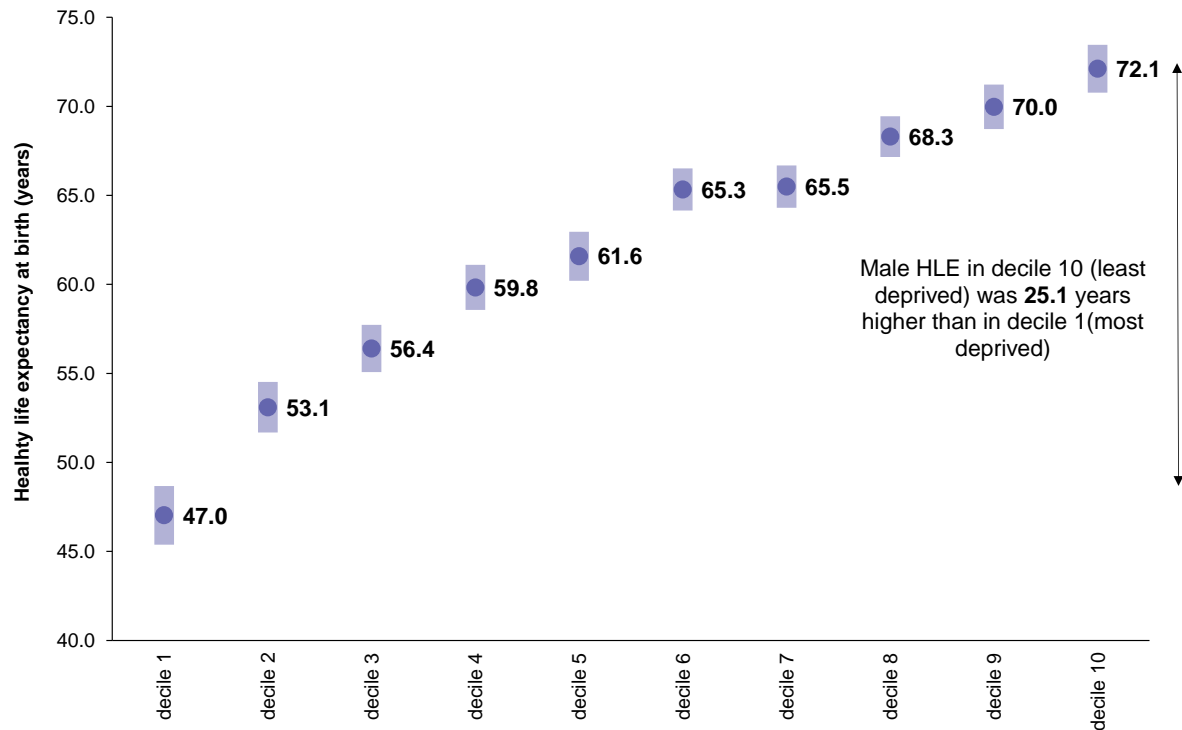
As with the male estimates, Orkney and Western Isles have the largest confidence intervals (excluding Shetland) making their estimates less reliable than the others with smaller confidence intervals.

Overall:

- Orkney had the highest healthy life expectancy at birth for both males and females.
- The remaining health boards had similar estimates for healthy life expectancy, with the difference between males and females remaining relatively small.
- Greater Glasgow and Clyde, Lanarkshire and Ayrshire and Arran had the lowest healthy life expectancy estimates of the health boards for all persons.

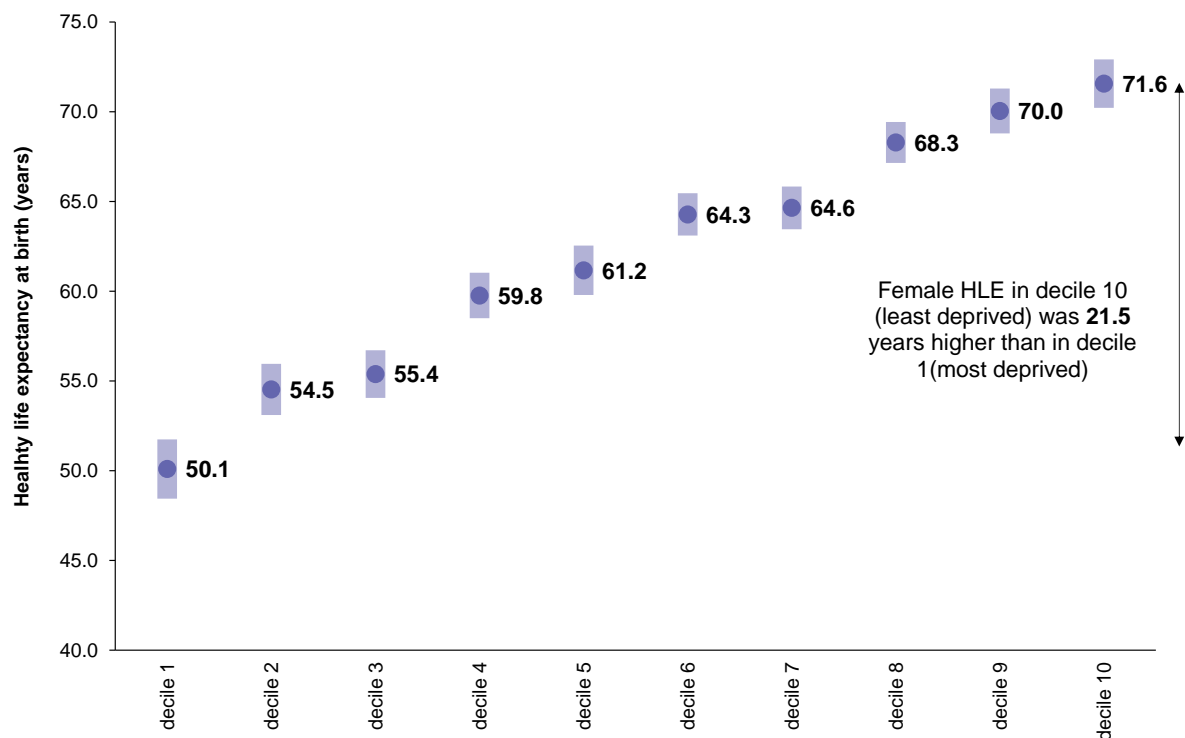
7. Healthy life expectancy in SIMD areas

Figure 6a: Healthy life expectancy at birth by SIMD decile, 2017-19, males.



- Males born in the most deprived area were estimated to have a healthy life expectancy of 47.0 (± 1.6) years whilst males in the least deprived area were estimated to have a healthy life expectancy of 72.1 (± 1.3) years. That is a difference of 25.1 years.

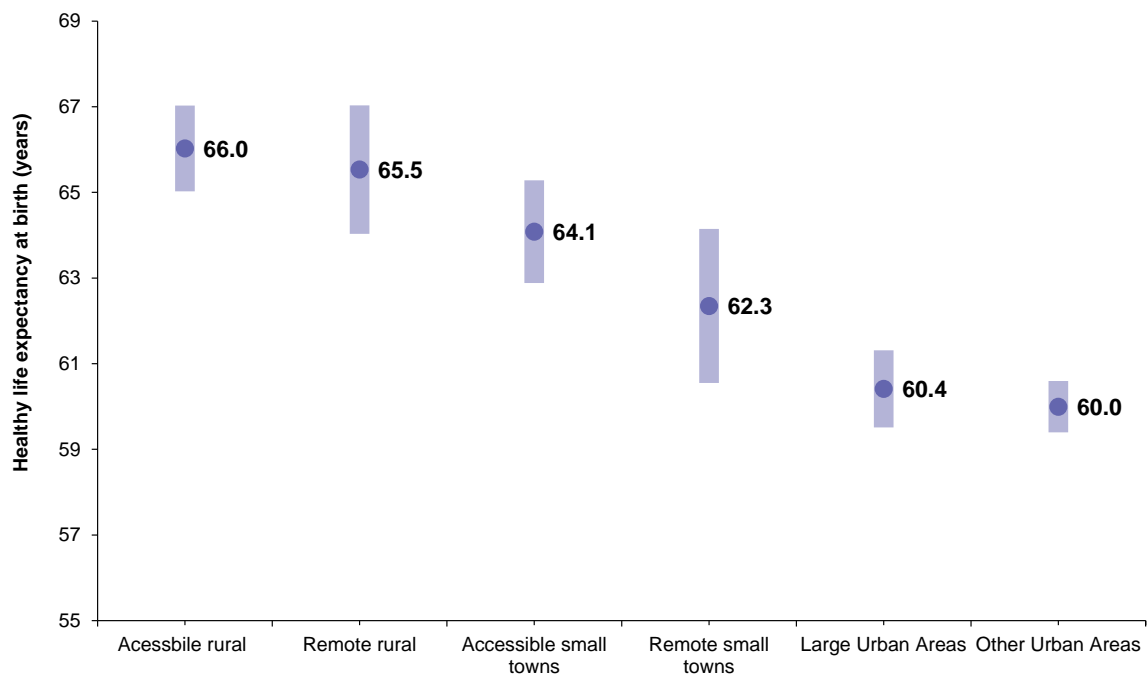
Figure 6b: Healthy life expectancy at birth by SIMD decile, 2017-19, females.



- Females born in the most deprived area were estimated to have a healthy life expectancy of 50.1 (± 1.6) years whilst males in the least deprived area were estimated to have a healthy life expectancy of 71.6 (± 1.5) years. That is a difference of 21.5 years.

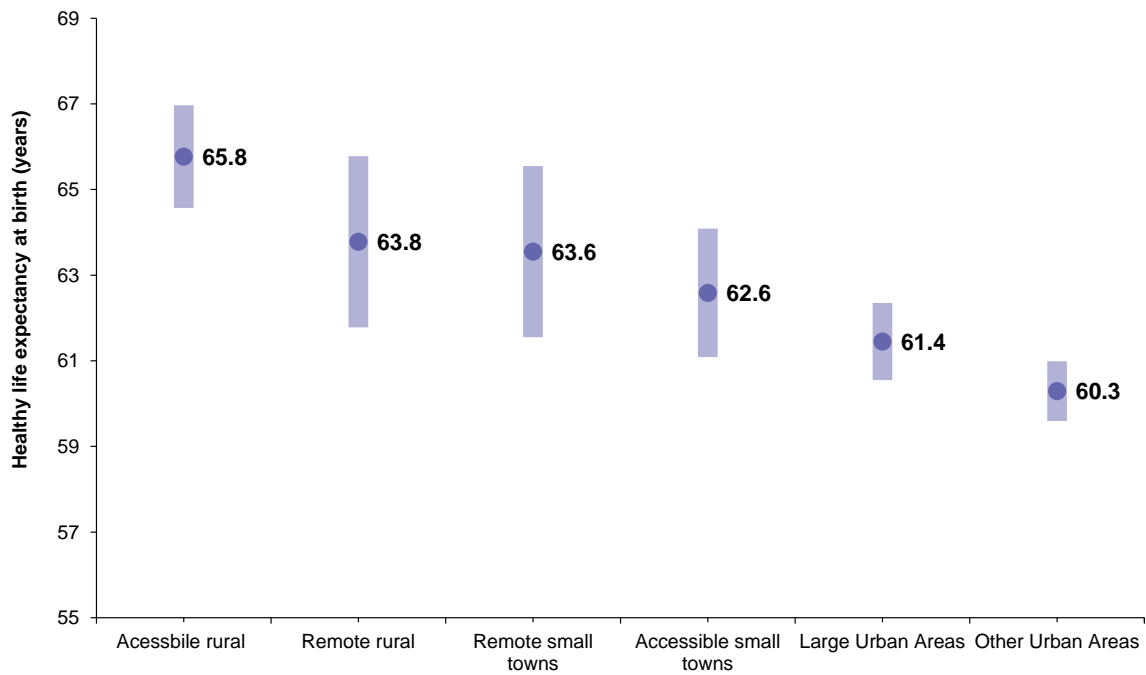
8. Healthy life expectancy in Urban and Rural areas

Figure 7a: Healthy life expectancy at birth by urban rural classification, 2017-19, males.



- The difference between the healthy life expectancy estimates in the most urban and most rural areas for males is 6.0 years.

Figure 7b: Healthy life expectancy at birth by urban rural classification, 2017-19, females.



- The difference between the healthy life expectancy estimates in the most urban and most rural areas for males is 5.5 years.

Overall

- The difference in healthy life expectancy at birth by rurality of area is relatively small for both males and females.
- However, the rural categories show the highest healthy life expectancy estimates whilst the urban areas have the lowest in both males and females.

9. Related Statistics

Previously, the healthy life expectancy statistics were included more briefly in the [life expectancy](#) publication.

[Accidental Deaths](#) are also published by NRS for more information on the statistics around accidents prone to each age-category.

The ONS also produce [Health State life expectancies](#) which contain healthy life expectancy (and life expectancy) statistics for areas within the UK.

10. Notes on statistical publications

National Statistics

The United Kingdom Statistics Authority (UKSA) has designated these statistics as National Statistics, in line with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics (available on the [UKSA](#) website).

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

All official statistics should comply with all aspects of the Code of Practice for Official Statistics. They are awarded National Statistics status following an assessment by the Authority's regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

It is National Records of Scotland's responsibility to maintain compliance with the standards expected of National Statistics. If we become concerned about whether these statistics are still meeting the appropriate standards, we will discuss any concerns with the Authority promptly. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.

Information on background and source data

Further details on data source(s), timeframe of data and timeliness, continuity of data, accuracy, etc. can be found in the metadata that is published alongside this publication on the NRS website.

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