National Records of Scotland

Healthy Life Expectancy 2019-2021

Published on 14 December 2022

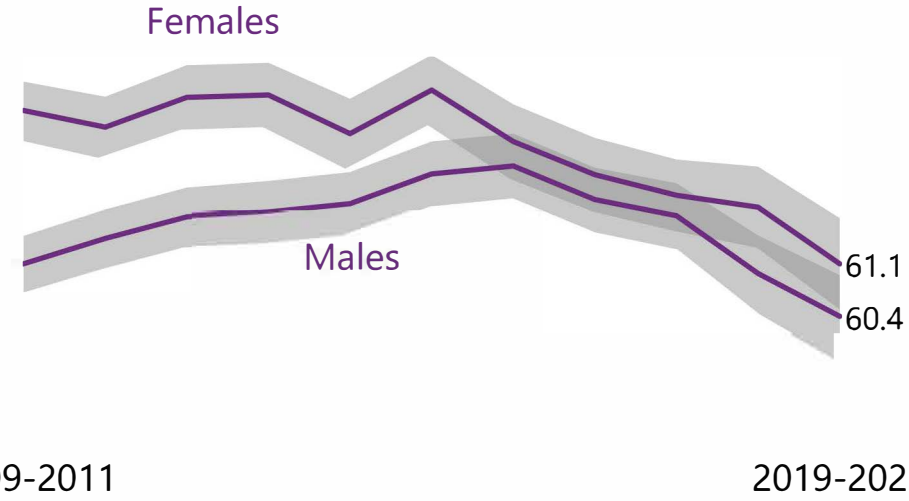
This statistical report details healthy life expectancy (HLE) estimates for areas within Scotland including council areas and NHS health boards. It also includes breakdowns by deprivation and rurality.

Healthy life expectancy has changed over time

In the last few years healthy life expectancy has decreased for both males and females. It is now lower in 2019-2021 than it was in 2009-2011 for both males and females.

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

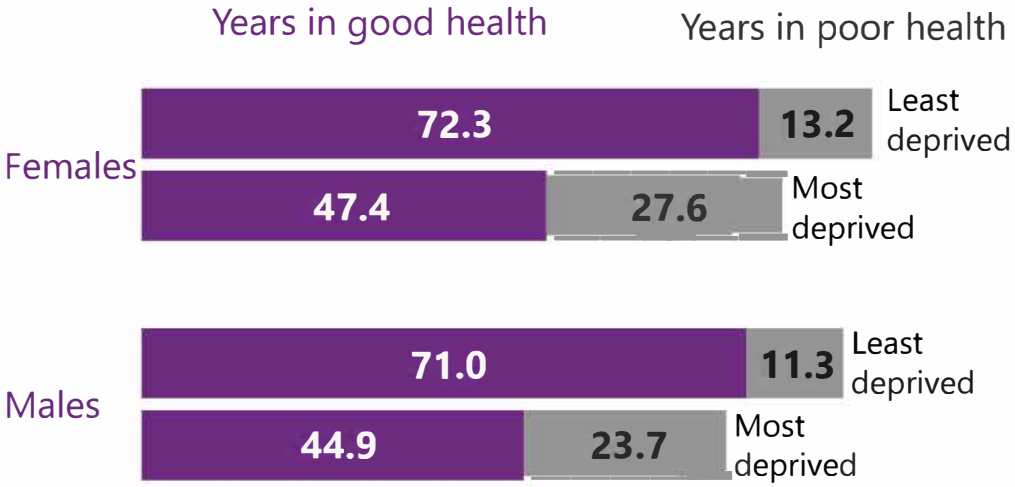
Healthy life expectancy at birth (years)



Deprivation has a large impact on healthy life expectancy

Healthy life expectancy for females is 24.9 years more in the least deprived decile compared to the most deprived decile of Scotland. For males that difference increases to 26.0 years.
In the most deprived areas, people spend more than a third of life in poor health

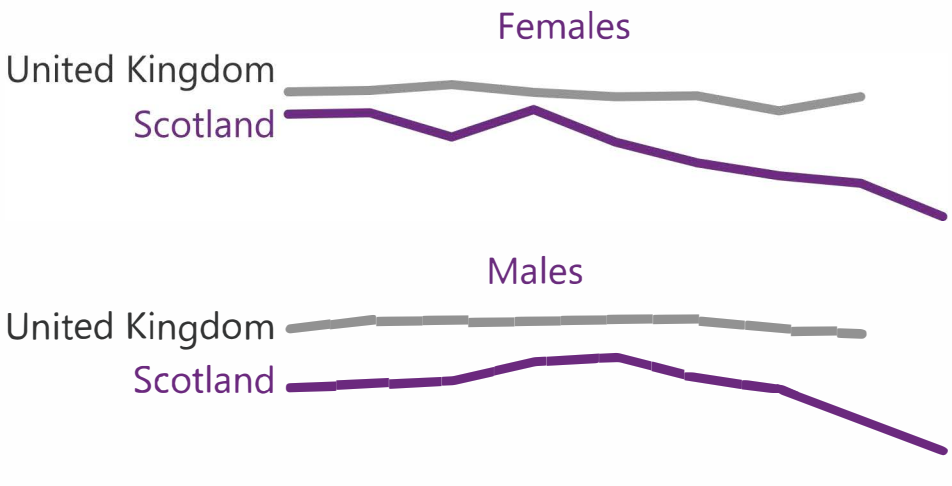
Healthy life expectancy by deprivation decile



Healthy life expectancy varies across the UK

Scotland has had lower healthy life expectancy than the UK since the start of the timeseries.
The figure for the UK is not yet published for 2019-2021

Healthy life expectancy in the UK and Scotland



Main Points

- In 2019-2021 healthy life expectancy at birth for females was 61.1 years and for males was 60.4 years.
- Healthy life expectancy at birth fell for both males and females over the latest year.
- Healthy life expectancy has been decreasing since 2015-2017 for males and since 2014-2016 for females.
- Orkney Islands had the highest healthy life expectancy for both males and females.
- North Lanarkshire had the lowest healthy life expectancy for males and North Ayrshire had the lowest healthy life expectancy for females.
- Healthy life expectancy for males in the most deprived areas of Scotland was 26 years lower than in the least deprived areas. For females the difference was almost 25 years.
- In the most deprived areas, males and females spend more than a third of their life in poor health compared to around 15% in the least deprived areas.

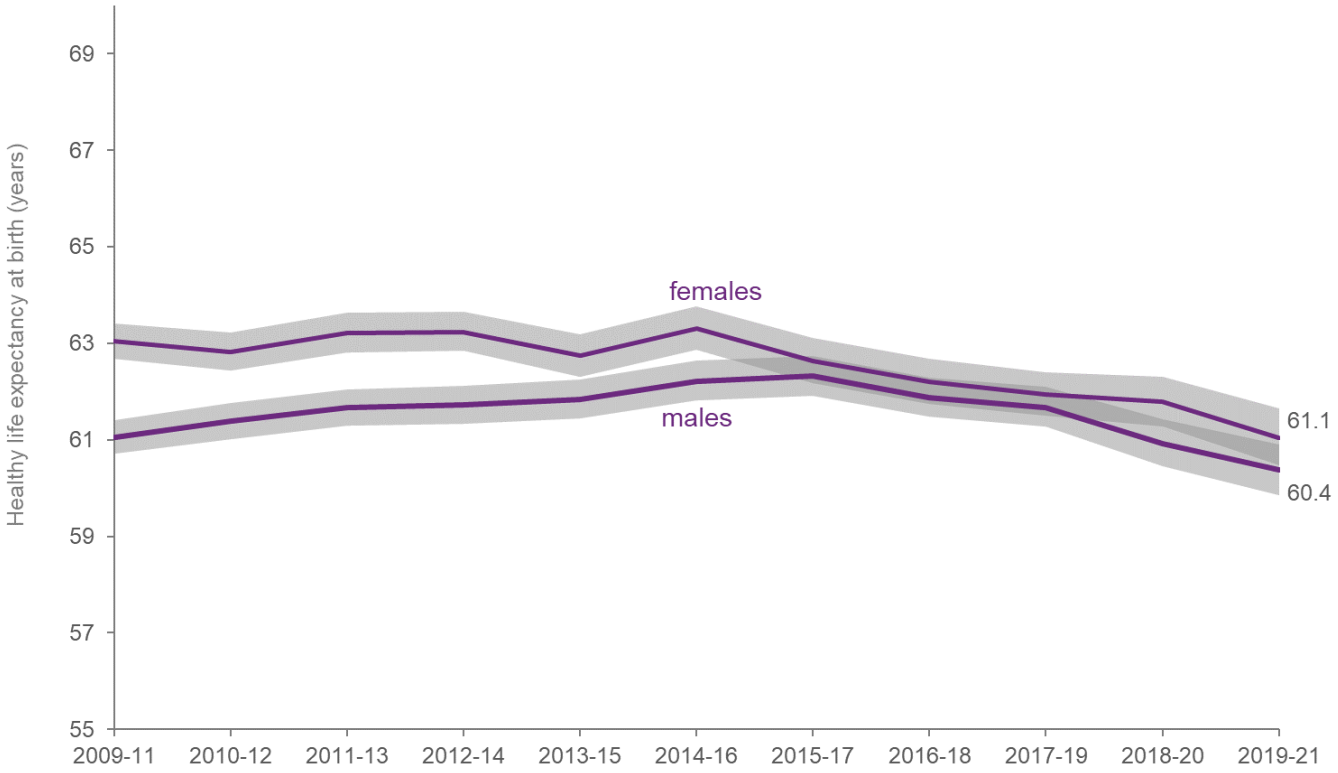
Healthy life expectancy in Scotland

In 2019-2021, healthy life expectancy at birth was 60.4 (± 0.5*) years for males and 61.1(±0.6) years for females.

Healthy life expectancy (HLE) at birth increased for males between 2009-2011 and 2015-2017. Since then it has been decreasing. Female HLE at birth did not change much between 2009-2011 and 2014-2016. Since then, the estimates have decreased each year. For both males and females HLE is now lower than in 2009-2011.

Since the time series began, HLE has been higher for females than for males. However the gap between males and females has become smaller over time.

Figure 1: Healthy life expectancy at birth in Scotland, 2009-2011 to 2019-2021

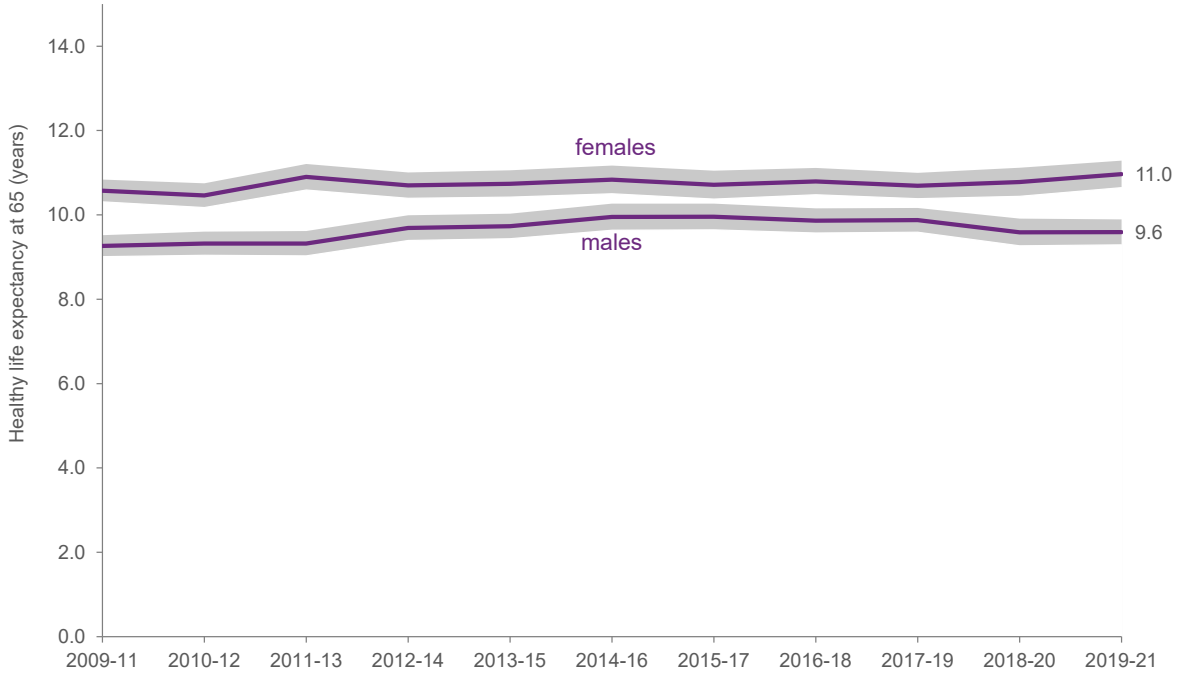


*in this report, 95% confidence intervals are reported after the HLE estimate in brackets. So **60.4 (± 0.5)** means that we are confident that the true value lies within 0.5 above or below 60.4.

What is Healthy Life expectancy (HLE)?

HLE is the average number of years of life that people spend in good health. Good health is based on how people rate their own health in the annual population survey.

Figure 2: Healthy life expectancy at age 65 in Scotland, 2009-2011 to 2019-2021



In 2019-2021, healthy life expectancy at age 65 was 9.6 (± 0.3) years for males and 11.0 (±0.3) years for females.

HLE at age 65-69 has not had the same decline in recent years as HLE at birth. Male HLE at 65-69 has decreased slightly over the last few years while female HLE at 65-69 has actually increased slightly. Neither of these changes are statistically significant. This suggests that the recent decline in HLE at birth may be driven by worsening health in younger age groups.

How are these figures impacted by COVID-19?

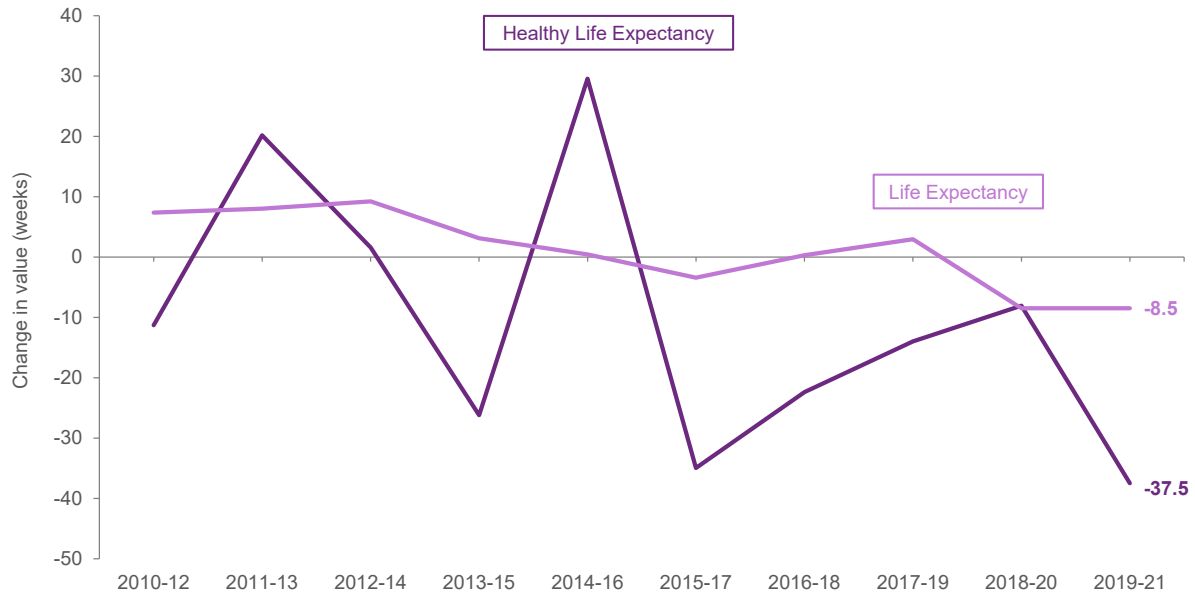
These HLE figures are calculated with data from 2019, 2020 and 2021. This means that two years of the COVID-19 pandemic are included in the data so we might expect to see some effect on the estimates.

Because HLE estimates have large confidence intervals, it is difficult to compare year on year change and measure the effect of COVID-19. In addition, the survey data that the figures are based on only asks people to say whether they are in good health or poor health (see the methodology document for more details) and does not collect further details about what might be causing poor health.

We have however done some analysis of the effect of COVID-19 on life expectancy. You can read this in the 2019-2021 edition of our report Life Expectancy in Scotland.

Change in HLE compared with change in overall life expectancy

Figure 3a: Yearly change in healthy life expectancy and life expectancy at birth, 2010-2012 to 2019-2021, females



In 2019-2021:

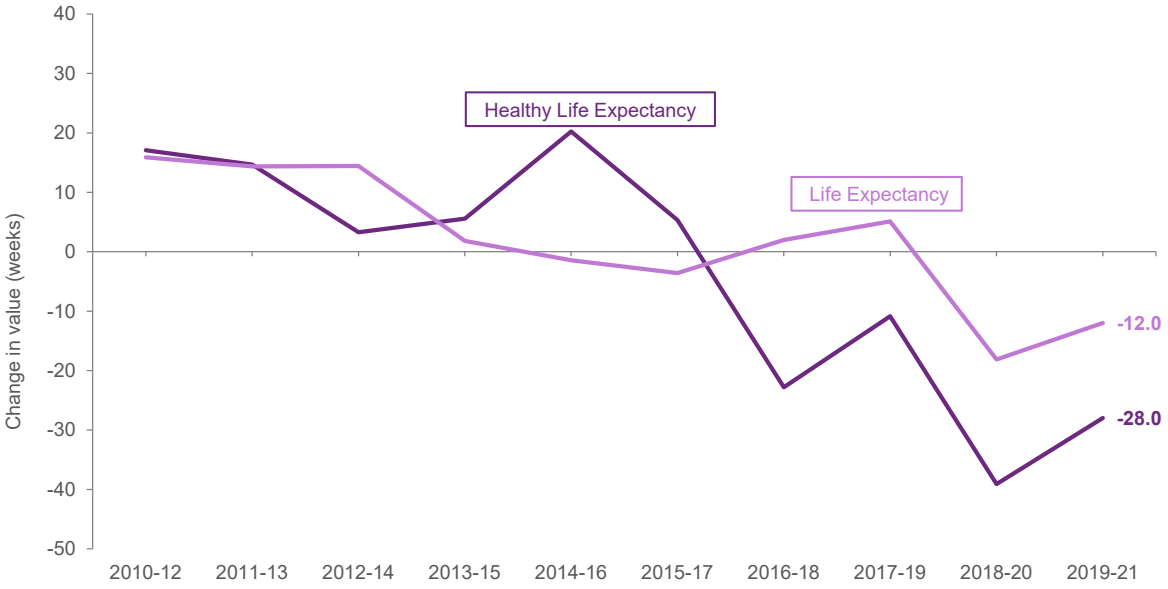
- Female healthy life expectancy has decreased by 37.5 weeks (0.7 years) from the previous estimate in 2018-2020.

- Female life expectancy has decreased by 8.5 weeks (0.2 years) from the previous estimate.
- Females spend on average 76% of their life expectancy in good health.

Life expectancy for females has not changed much since 2010-2012 although it has fallen over the past two years. Over the same period, female HLE has fluctuated more but has generally decreased in recent years.

Female life expectancy has been consistently higher than male life expectancy across the time series. Female HLE has also been higher than male HLE, but by a much smaller margin. This means that females spend a greater proportion of life in poor health than males. The proportion of life spent in good health has also been decreasing more rapidly for females than males.

Figure 3b: Yearly change in healthy life expectancy and life expectancy at birth, 2010-2012 to 2019-2021, males

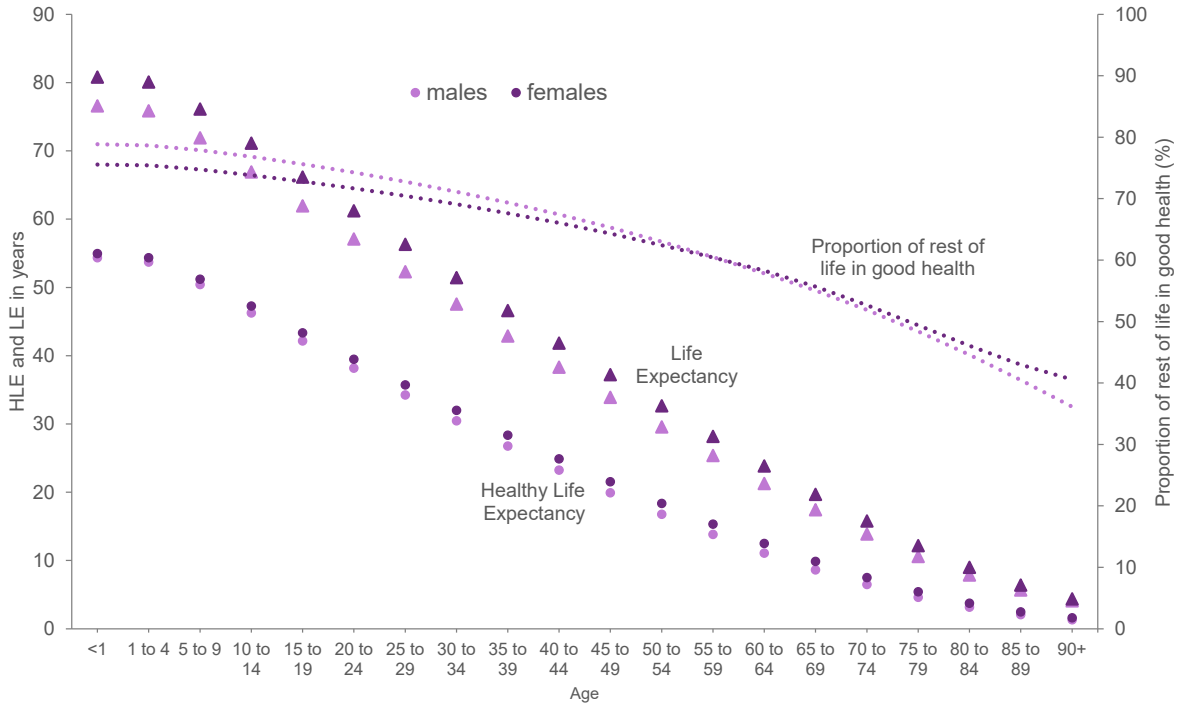


In 2019-2021:

- Male healthy life expectancy decreased by 28.0 weeks (0.5 years) from the previous estimate in 2018-2020.
- Male life expectancy decreased by 12.0 weeks (0.2 years) from the previous estimate.
- Males spend on average 79% of their life expectancy in good health.

Although both life expectancy and HLE have fallen for males in recent years, HLE has done so at a faster rate. This means that a greater proportion of life is likely to be spent in poor health now than in previous years.

Figure 4: Healthy life expectancy at all ages in Scotland, 2019-2021



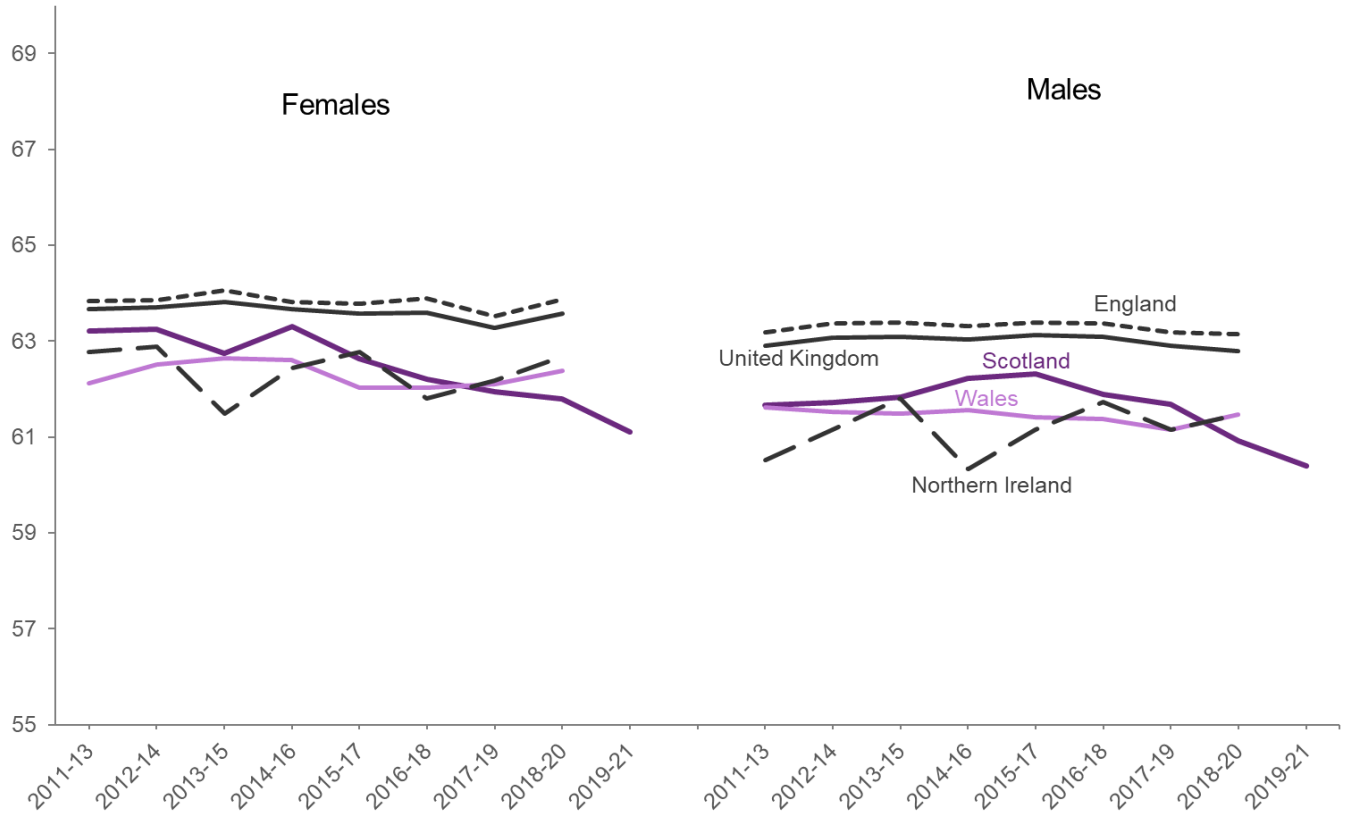
As age increases, the number of years of life expectancy and HLE both decrease (as you might expect). HLE decreases with age at a slower rate than life expectancy.

Males have a higher proportion of remaining life expectancy in good health than females up until the 55-59 age group. After this age group, females have a higher proportion of life in good health.

Healthy life expectancy across the UK

Scotland has had lower HLE than the UK average over the last decade. Of all UK countries, England has consistently had the highest HLE, while Scotland, Wales and Northern Ireland have had lower and fairly similar figures. The most recent year with HLE data for all UK countries is 2018-2020.

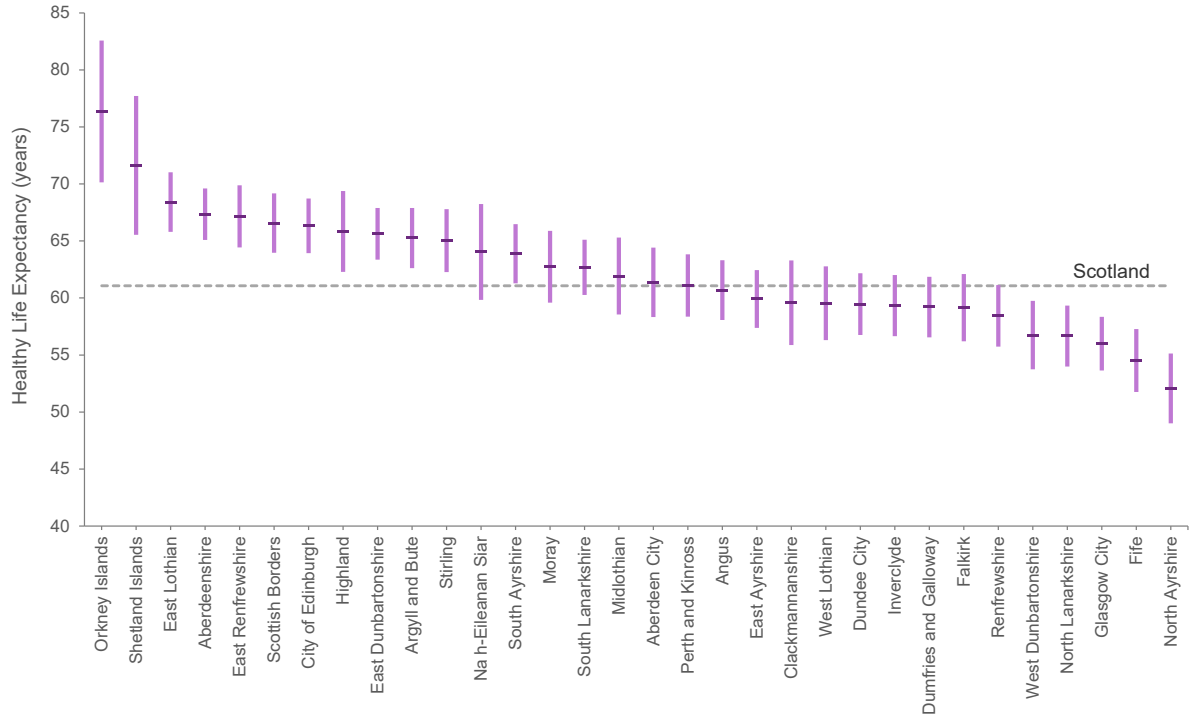
Figure 5: Healthy Life Expectancy across the UK, 2011-2013 to 2019-2021



Source: Office for National Statistics, life state expectancies 2018-2020

Healthy life expectancy in council areas

Figure 6a: Healthy life expectancy at birth in council areas with 95% confidence intervals, 2019-2021, females



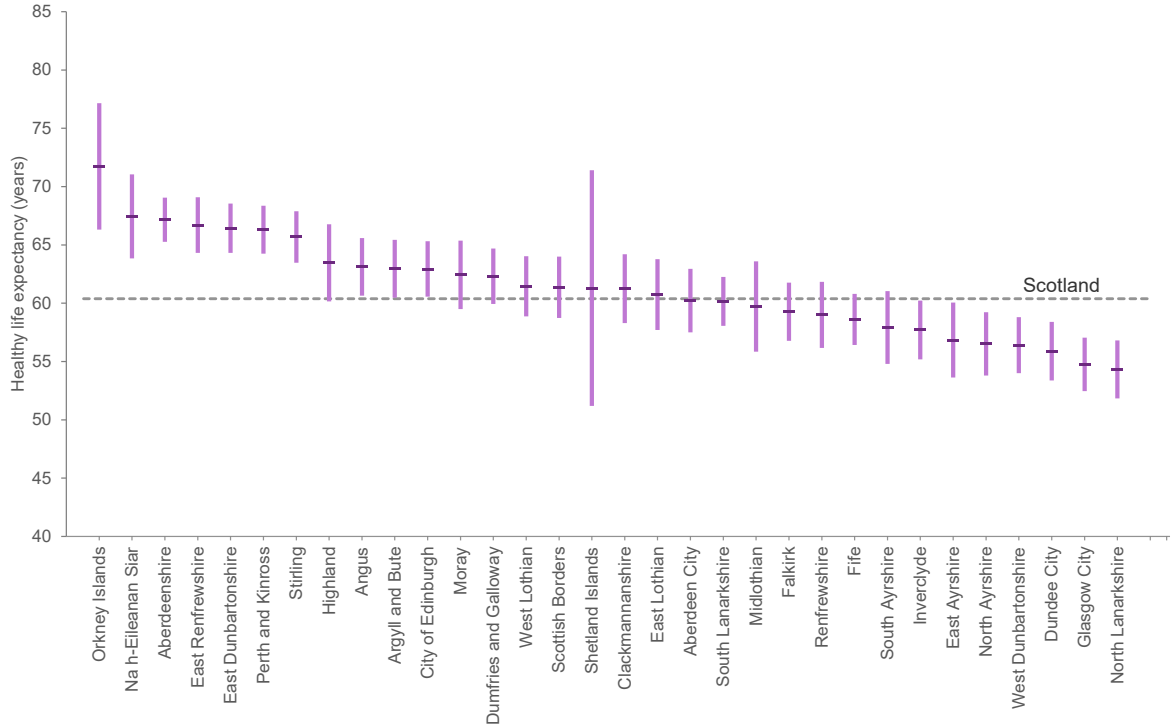
For females in 2019-2021:

- The councils with the highest healthy life expectancy at birth were Orkney Islands (76.4 (±6.2) years), Shetland Islands (71.6(±6.1) years) and East Lothian (68.4 (±2.6) years).
- The councils with the lowest healthy life expectancy at birth were North Ayrshire (52.1 (±3.1) years), Fife (54.5 (±2.8) years) and Glasgow City (56.0 (±2.3) years).

Healthy Life expectancy estimates are less reliable in smaller populations

Some of the smaller council areas and health boards have very wide confidence intervals. For example, in Shetland, HLE for males is 61.2 years. The confidence interval is ± 10.1 years, which means the real HLE could be anything from 51.2 years (a very low HLE) to 71.3 years (quite a high HLE). You need to use great care when comparing the estimates of these small areas with wide confidence intervals.

Figure 6b: Healthy life expectancy at birth in council areas with 95% confidence intervals, 2019-2021, males

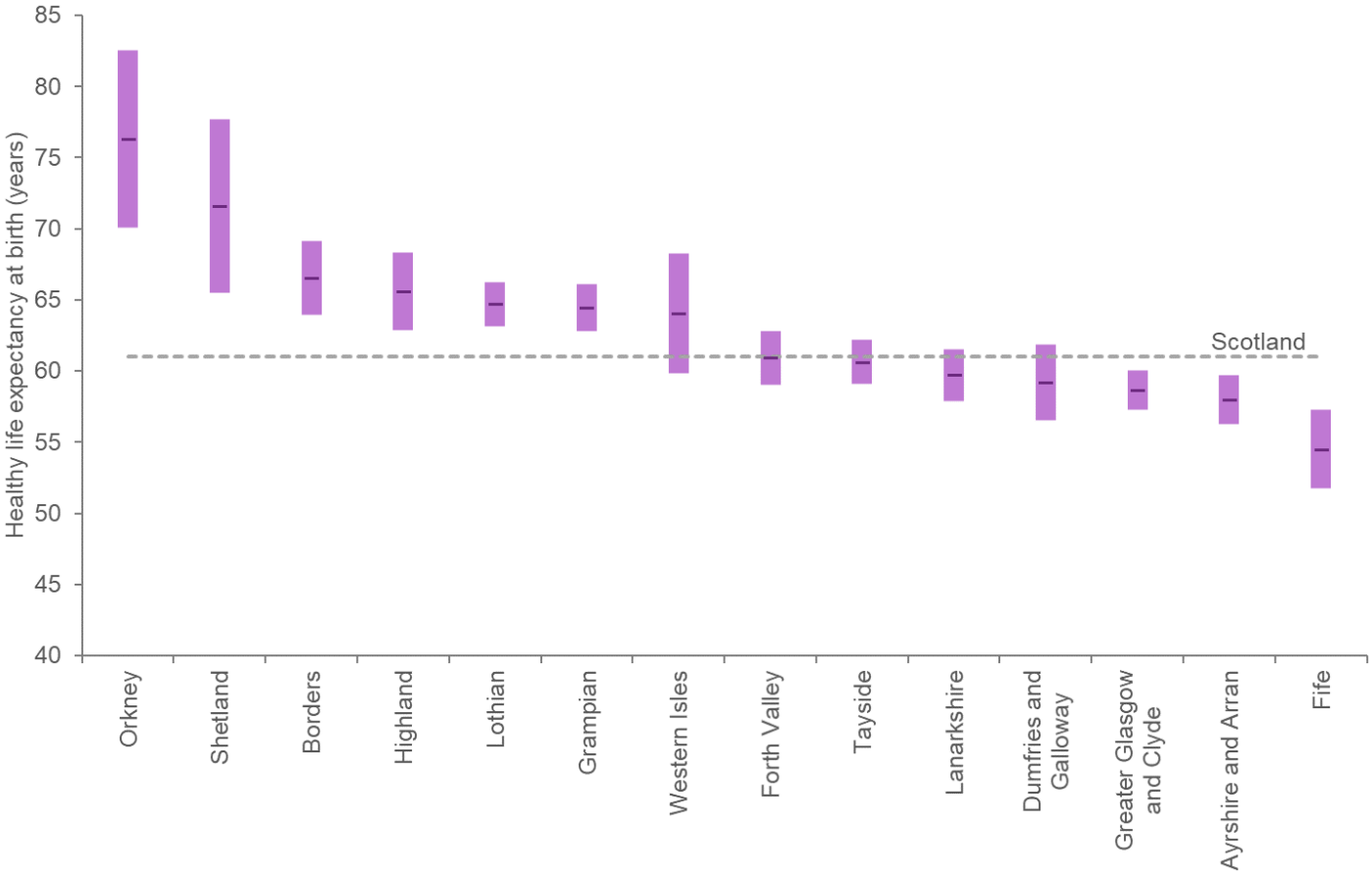


For males in 2019-2021:

- The councils with the highest healthy life expectancy at birth were Orkney (71.7 (±5.4) years), Na h-Eileanan Siar (67.4 (±3.6) years) and Aberdeenshire (67.2 (±1.9) years).
- The councils with the lowest healthy life expectancy at birth were North Lanarkshire (54.3 (±2.5) years), Glasgow City (54.8 (±2.3) years) and Dundee City (55.9 (±2.5) years).

Healthy life expectancy in NHS health boards

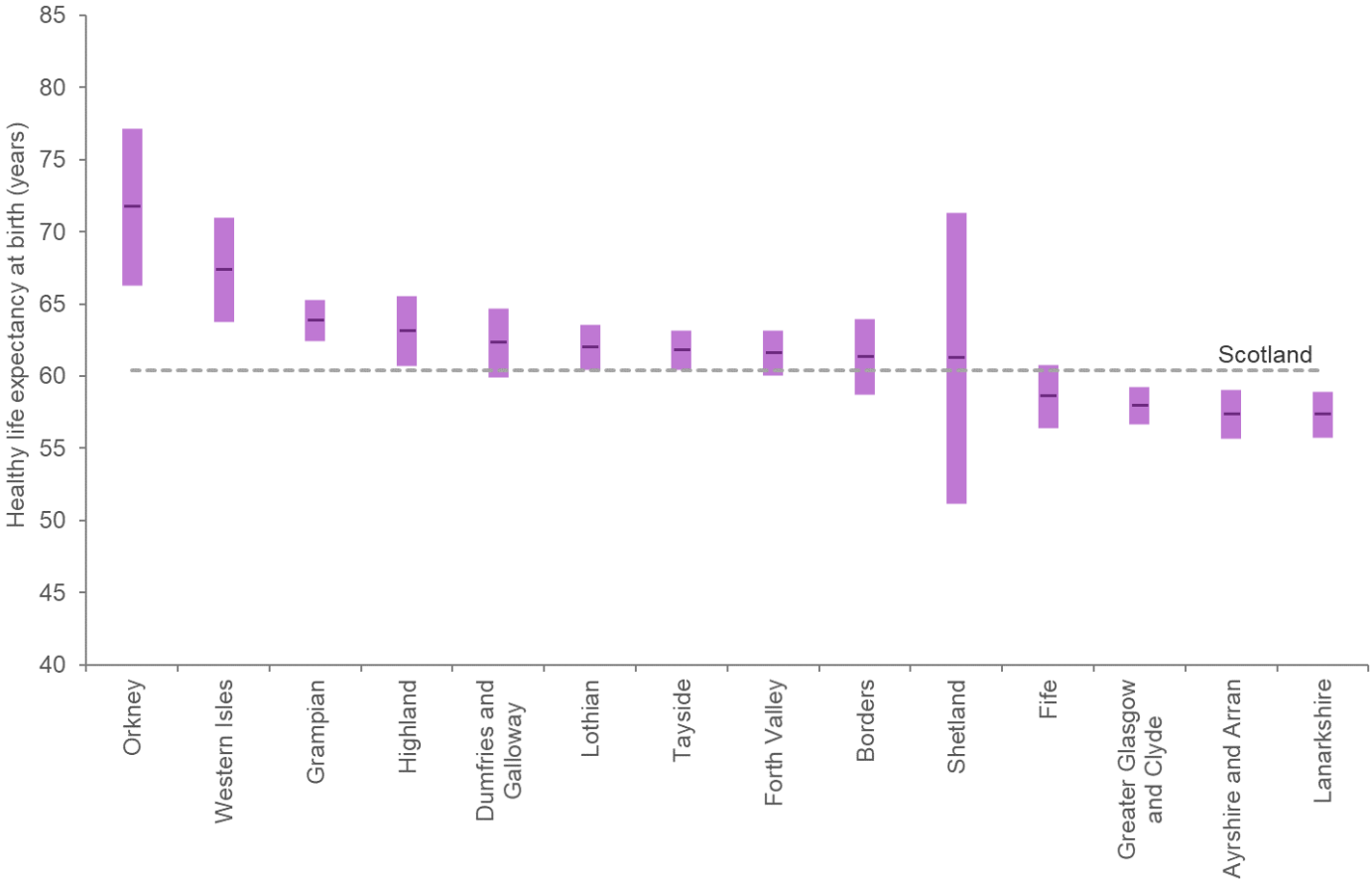
Figure 7a: Healthy life expectancy at birth in health boards with 95% confidence intervals, 2019-2021, females



For females in 2019-2021:

- Orkney, Shetland and Borders had the highest healthy life expectancy estimates of all the health boards (76.4 (±6.2), 71.6 (±6.1) and 66.6 (±2.6) years respectively).
- Fife, Ayrshire and Arran, and Greater Glasgow and Clyde had the lowest healthy life expectancy estimates (54.5 (±2.8), 58.0 (±1.7) and 58.7 (±1.4) years respectively).

Figure 7b: Healthy life expectancy at birth in health boards with 95% confidence intervals, 2019-2021, males

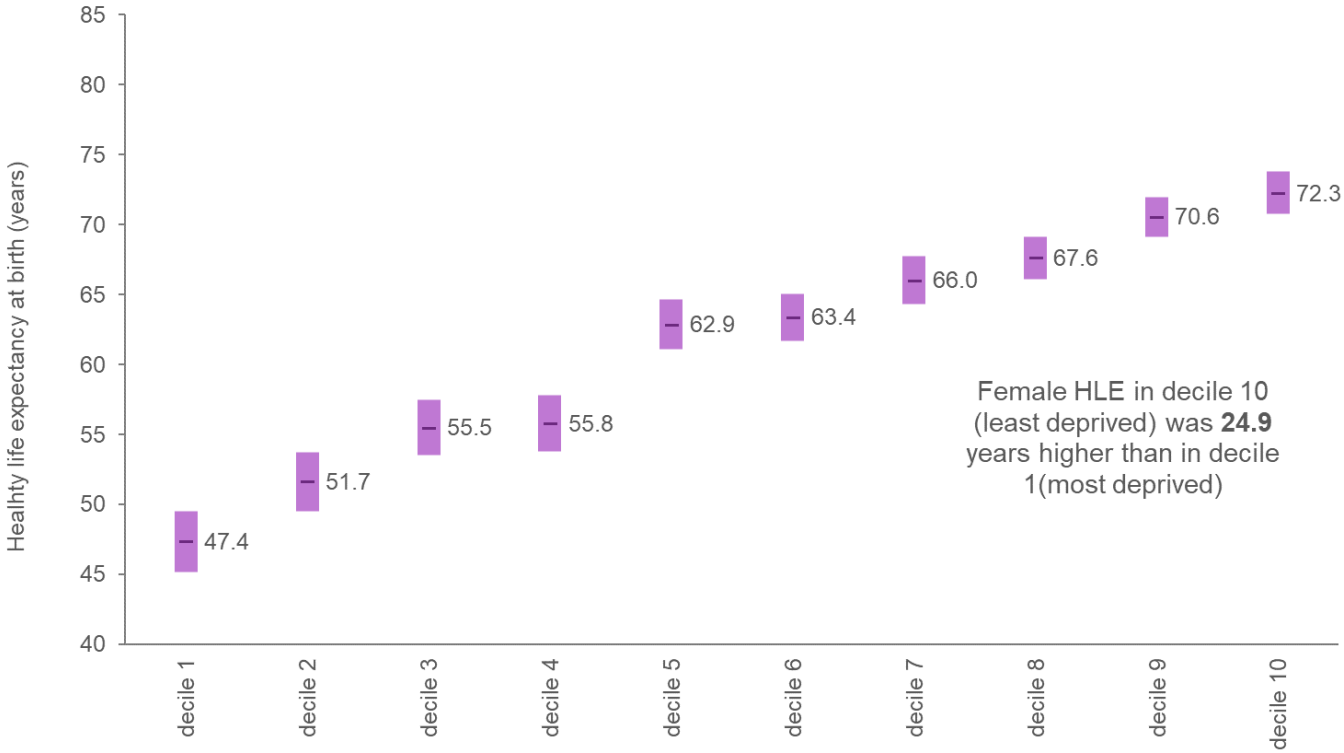


For males in 2019-2021:

- Orkney, Western Isles and Grampian had the highest healthy life expectancy estimates of all the health boards (71.7 (±5.4), 67.4 (±3.6) and 63.9 (±1.4) years respectively).
- Lanarkshire, Ayrshire and Arran and Greater Glasgow and Clyde had the lowest healthy life expectancy estimates (57.3 (±1.6), 57.4 (±1.7) and 58.0 (±1.3) years respectively).

Healthy life expectancy by Area Deprivation

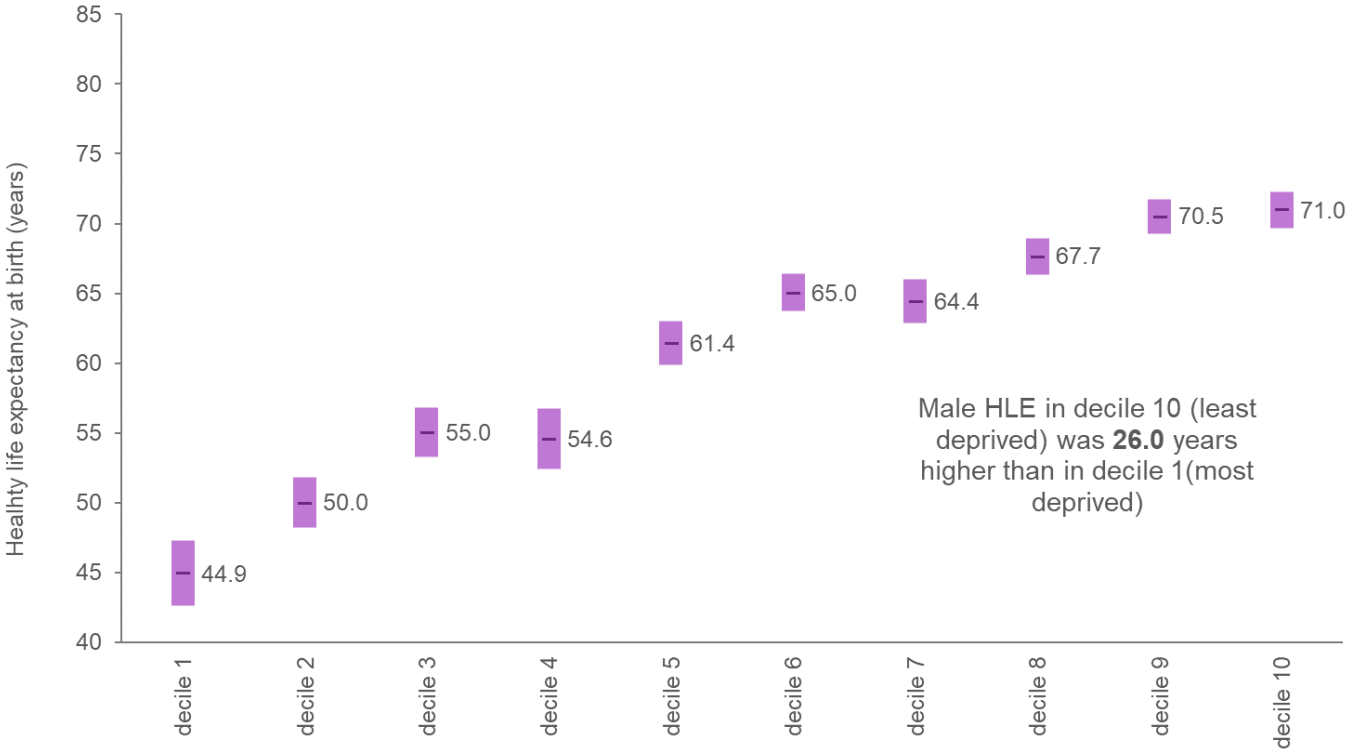
Figure 8a: Healthy life expectancy at birth by SIMD decile with 95% confidence intervals, 2019-2021, females.



In 2019-2021:

- HLE for females in the most deprived areas was 47.4 (±2.2) years
- HLE for females in the least deprived areas was 72.3 (±1.5) years.
- This is a difference of 24.9 years (numbers do not sum due to rounding).

Figure 8b: Healthy life expectancy at birth by SIMD decile with 95% confidence intervals, 2019-2021, males.



In 2019-2021:

- HLE for males in the most deprived areas was 44.9 (±2.3) years
- HLE for males in the least deprived areas was 71.0 (±1.3) years.
- This is a difference of 26.0 years (numbers do not sum due to rounding).

For both males and females, the difference in HLE between the most and least deprived areas is much larger than the difference in LE. The result of this is that people in the most deprived areas not only have shorter life expectancy and lower HLE, but they also have a smaller proportion of life spent in good health.

Males in the least deprived areas are expected to spend 86.2% of their life in good health compared with 65.5% in the most deprived areas. Females in the least deprived areas are expected to spend 84.5% of their life in good health compared with 63.1% in the most deprived areas. This means that both males and females in the most deprived areas spend more than a third of their life in poor health.

Healthy life expectancy by Urban and Rural areas

Figure 9a: Healthy life expectancy at birth by urban rural classification with 95% confidence intervals, 2019-2021, females.

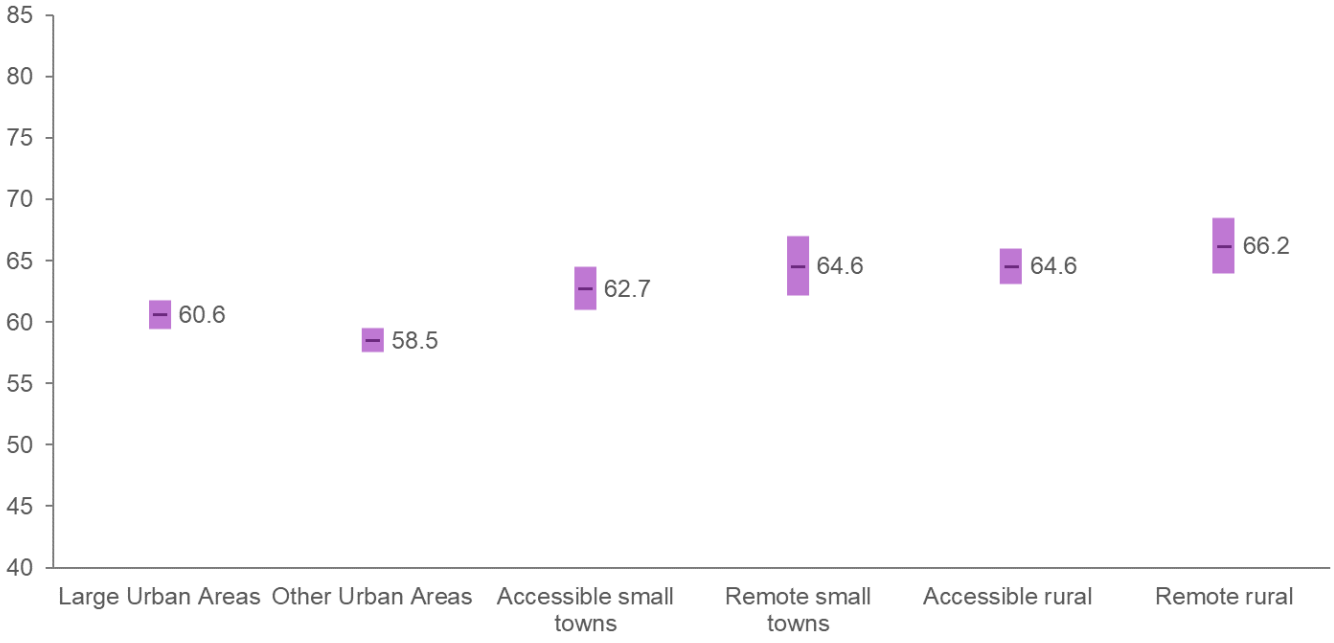


Figure 9b: Healthy life expectancy at birth by urban rural classification with 95% confidence intervals, 2019-2021, males.

In 2019-2021:

- HLE was higher in more rural areas and lower in more urban areas for both males and females
- The difference between the HLE estimates in the most urban and most rural areas for males is 5.5 years.
- The difference between the HLE estimates in the most urban and most rural areas for females is 5.6 years.

Background

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.

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.

Related Statistics

ONS also produce Health State life expectancies which contain healthy life expectancy (and life expectancy) statistics for areas within the UK. At the time of publication the ONS have not produced a report for 2019-2021 in order to include data from the 2021 census which will be ready at a later date

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.

National Records of Scotland

We, the National Records of Scotland, are a non-ministerial department of the devolved Scottish Administration. Our aim is to provide relevant and reliable information, analysis and advice that meets the needs of government, business and the people of Scotland. We do this as follows:

Preserving the past – We look after Scotland's national archives so that they are available for current and future generations, and we make available important information for family history.

Recording the present – At our network of local offices, we register births, marriages, civil partnerships, deaths, divorces and adoptions in Scotland.

Informing the future – We are responsible for the Census of Population in Scotland which we use, with other sources of information, to produce statistics on the population and households.
You can get other detailed statistics that we have produced from the Statistics section of our website. Scottish Census statistics are available on the Scotland's Census website.

We also provide information about future publications on our website. If you would like us to tell you about future statistical publications, you can register your interest on the Scottish Government ScotStat website.

You can also follow us on twitter @NatRecordsScot

Enquiries and suggestions

Please get in touch if you need any further information, or have any suggestions for improvement.

E-mail: statisticscustomerservices@nrscotland.gov.uk

Lead Statistician: Julie Ramsay