

Life Expectancy in Scotland 2020-2022 Provisional Figures



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This statistical report details provisional life expectancy estimates for Scotland. It also includes life expectancy estimates for councils and health boards.

Key Findings

- Life expectancy in Scotland was 76.5 years for males and 80.7 years for females in 2020-2022
- It has decreased by 3 weeks for males and 5.7 weeks for females since 2019-2021
- Life expectancy was highest in East Renfrewshire for females and East Dunbartonshire for males and lowest in Glasgow city for both males and females in 2020-2022
- Most of Scotland's council areas have seen a fall in life expectancy over the last few years

2020-2022 provisional figures

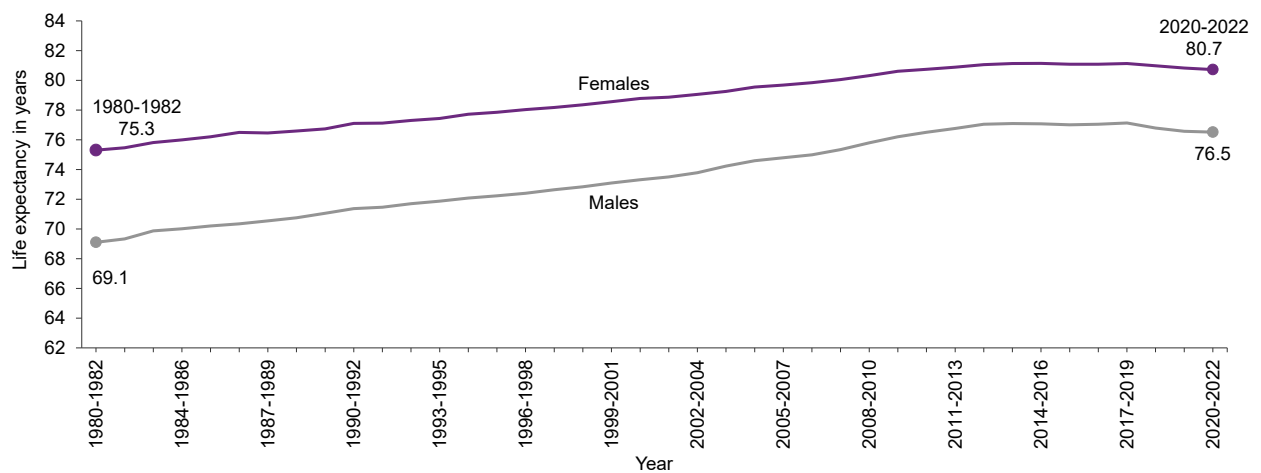
Life expectancy figures are calculated from three years of death registrations and population estimates. The mid-year population estimates for 2022 are not available at the time of publication this year because they will be calculated once the data from Scotland's census is available. These provisional life expectancy figures use 2022 populations from the population projections. The Scotland level populations for 2022 are taken from the 2020 national population projections ([international migration variant](#)) and the subnational populations for 2022 are taken from the [2018 subnational population projections](#). Next year, these life expectancy figures will be recalculated using the new populations from the census and the last ten years will also be recalculated using rebased population estimates.

Life expectancy at birth

In Scotland, life expectancy at birth for 2020-2022 was 76.5 years for males and 80.7 years for females. This is a decrease of 3 weeks for males and 5.7 weeks for females since 2019-2021.

Between the early 1980s and early 2010s, life expectancy was increasing in Scotland. In 2012-2014 the trend changed and life expectancy stopped increasing and began to plateau. Since 2018-2020, life expectancy has fallen each year.

Figure 1: Life expectancy at birth, estimates over time



The slowing in life expectancy improvements

Between 2000-2002 and 2012-2014, life expectancy was increasing by around 16 weeks per year for males and 10 weeks per year for females. Between 2012-2014 and 2017-2019, this slowed considerably to increase by less than one week per year for both males and females. Since 2017-2019, life expectancy has fallen by almost 11 weeks per year for males and just over 7 weeks per year for females.

Figure 2: The slowing rate of improvements to life expectancy in Scotland

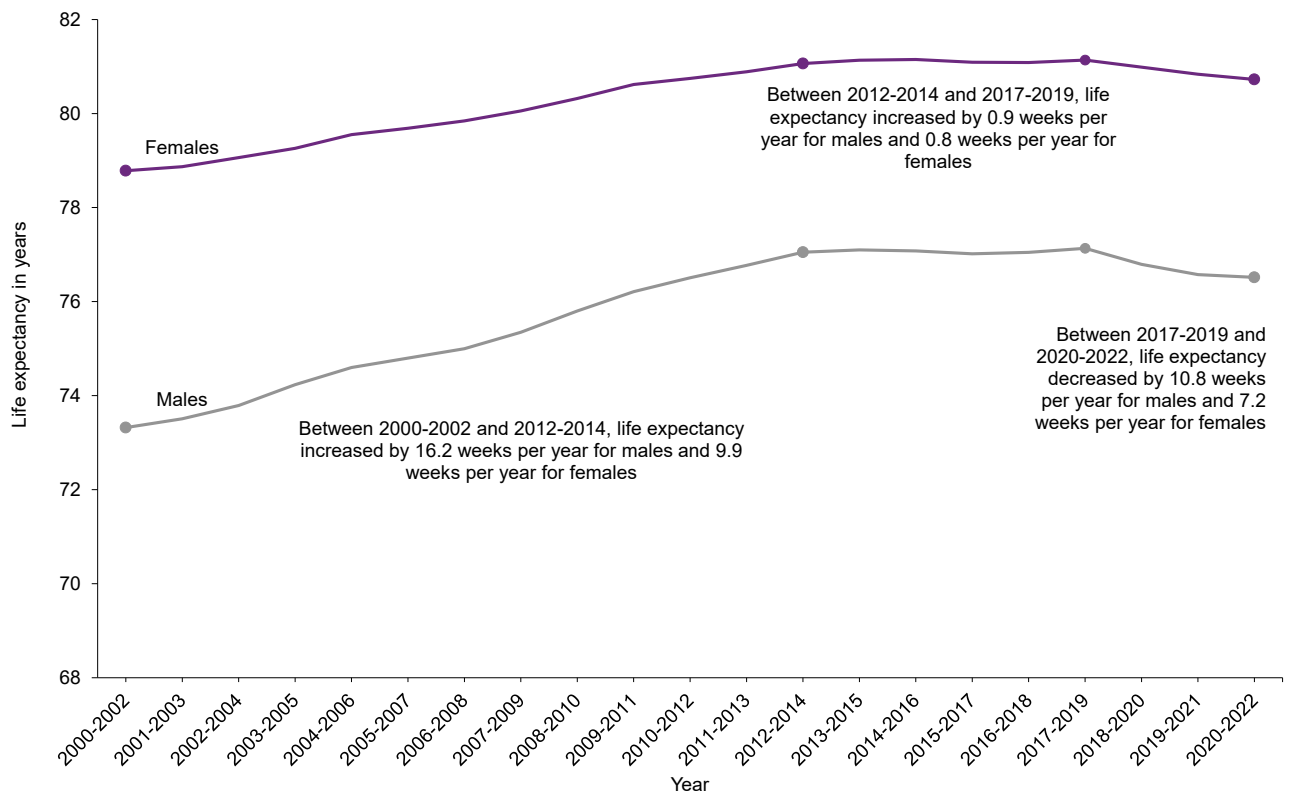


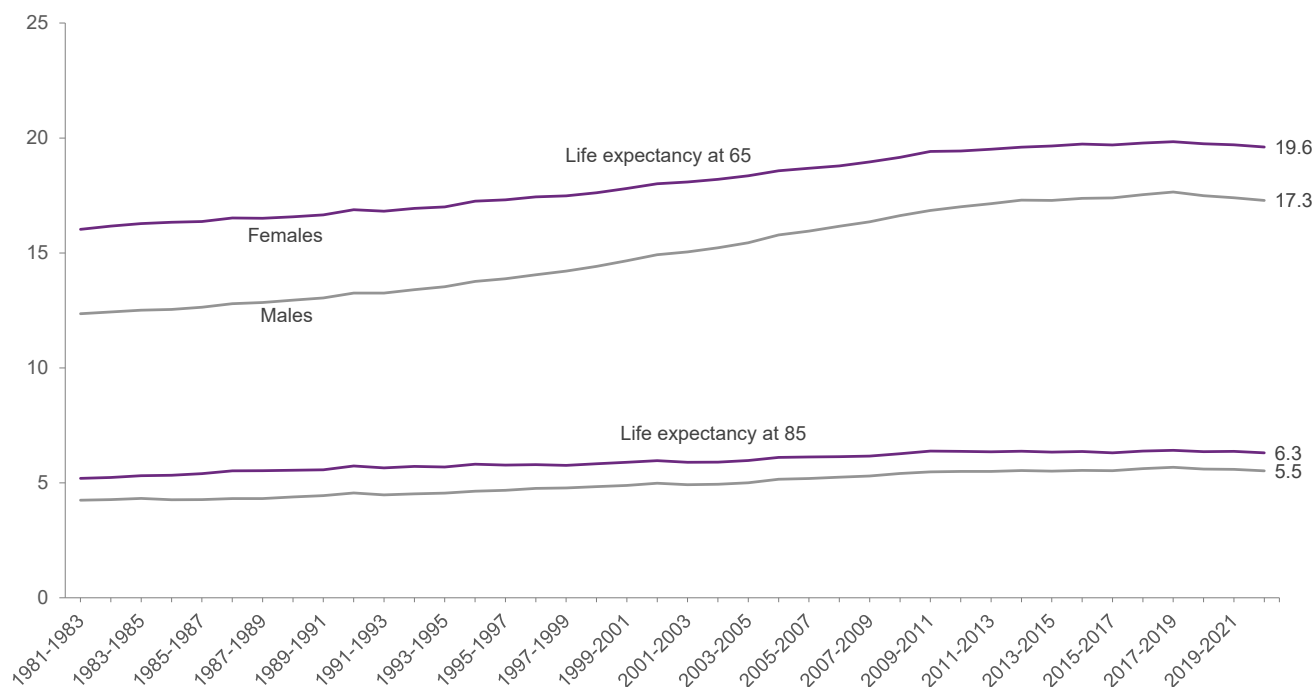
Figure 3: Annual change in life expectancy in Scotland



Life expectancy at older ages

In 2020-2022, life expectancy at age 65 was 17.3 years for males and 19.6 years for females. This is a decrease of five weeks for females and almost six weeks for males since 2019-2021. Life expectancy at age 65 has followed a similar pattern to life expectancy at birth with increases up until 2012-2014 followed by a stall and then a fall since the beginning of the COVID-19 pandemic.

Figure 4: Life expectancy in Scotland at older ages



What is 'life expectancy at older ages'?

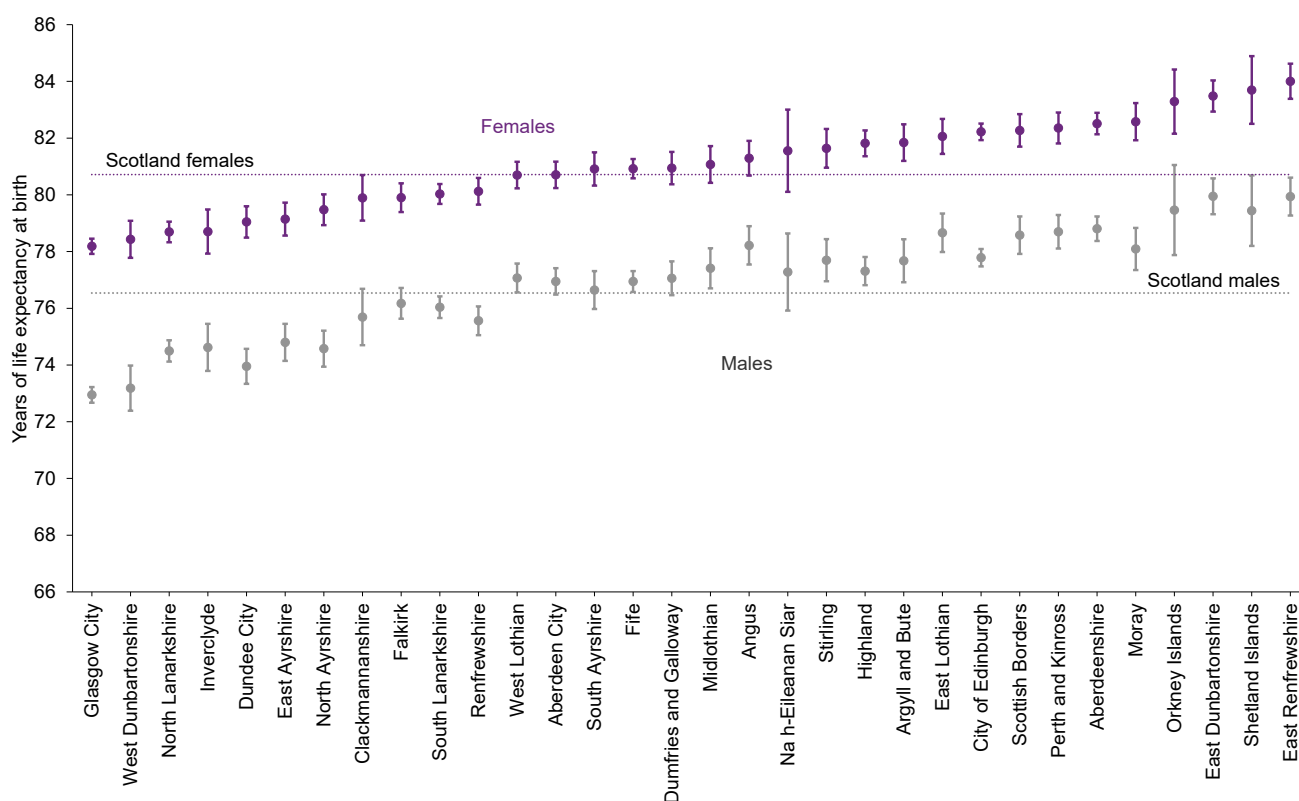
Life expectancy at older ages can be quite a confusing concept- how can a man aged 65 expect to live 17.3 years when life expectancy at birth is 76.5 years?

The best explanation for this is that life expectancy is an average which is affected by people dying at younger ages as well as in old age. While the average male life expectancy at birth is 76.5 years, if he makes it to 65 without dying, then the average number of years left is 17.3.

Life expectancy in Scotland's council areas

Life expectancy was lowest in Glasgow city where it was 72.9 (± 0.3) years for males and 78.2 (± 0.3) years for females. Life expectancy was highest in East Renfrewshire at 84.0 (± 0.6) years for females and in East Dunbartonshire at 79.9 (± 0.7) years for males. It is important to note that the smaller areas, particularly the islands, have large confidence intervals due to their small populations. This means a degree of caution should be used when comparing these figures with one another.

Figure 5: Life expectancy at birth in Council areas with 95% confidence intervals (ordered by female life expectancy)



Life expectancy in Scotland's NHS health boards

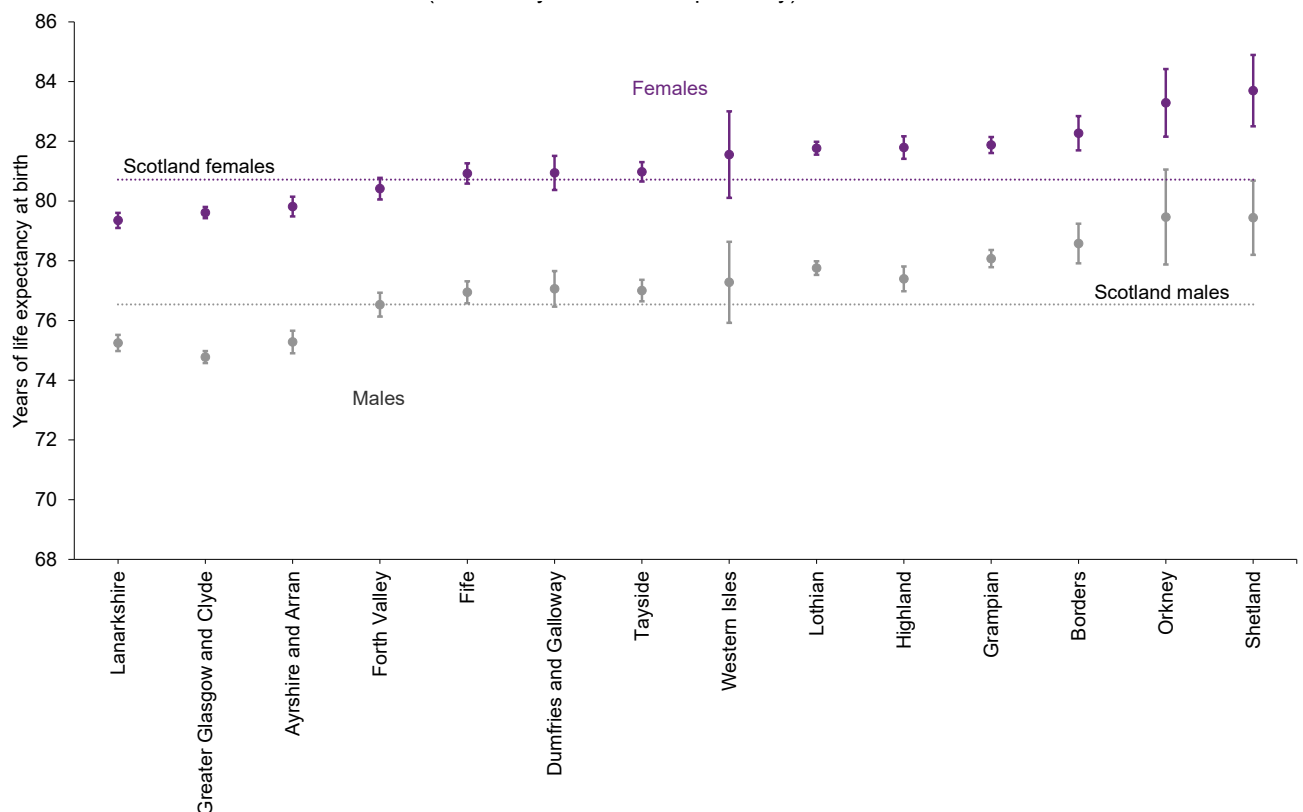
Life expectancy was lowest in Lanarkshire at 79.4 (± 0.3) years for females and in Greater Glasgow and Clyde 74.8 (± 0.2) years for males.

Life expectancy was highest in Shetland at 83.7 (± 1.2) years for females and in Orkney at 79.5 (± 1.6) years for males.

What are 95% confidence intervals?

This is a measure of the uncertainty around the subnational life expectancy estimates. In this report, confidence intervals are quoted in brackets, for example: 81 (± 0.7) years. These represent the range of values that the actual value is likely to lie within. The wider the confidence intervals, the less accurate the estimate is. Estimates from larger populations (such as health boards) will have smaller confidence intervals and therefore be more accurate than estimates from smaller populations (such as parliamentary constituencies) which have large confidence intervals.

Figure 6 Life expectancy at birth in NHS Health Boards with 95% confidence intervals (ordered by female life expectancy)



The stall in life expectancy growth across Scotland

The stall in life expectancy growth seen in Scotland has also been seen in areas within Scotland. In some areas however, the change has been greater than others. In certain council areas, for example Dundee City, South Ayrshire and Inverclyde, the annual rate of growth has fallen dramatically since 2012-2014. Twenty-five council areas have

had a decrease in male life expectancy since 2012-2014 and for females, 22 councils have experienced a decrease.

Figure 12a: Change in the rate of life expectancy growth, before and after 2017-2019, males

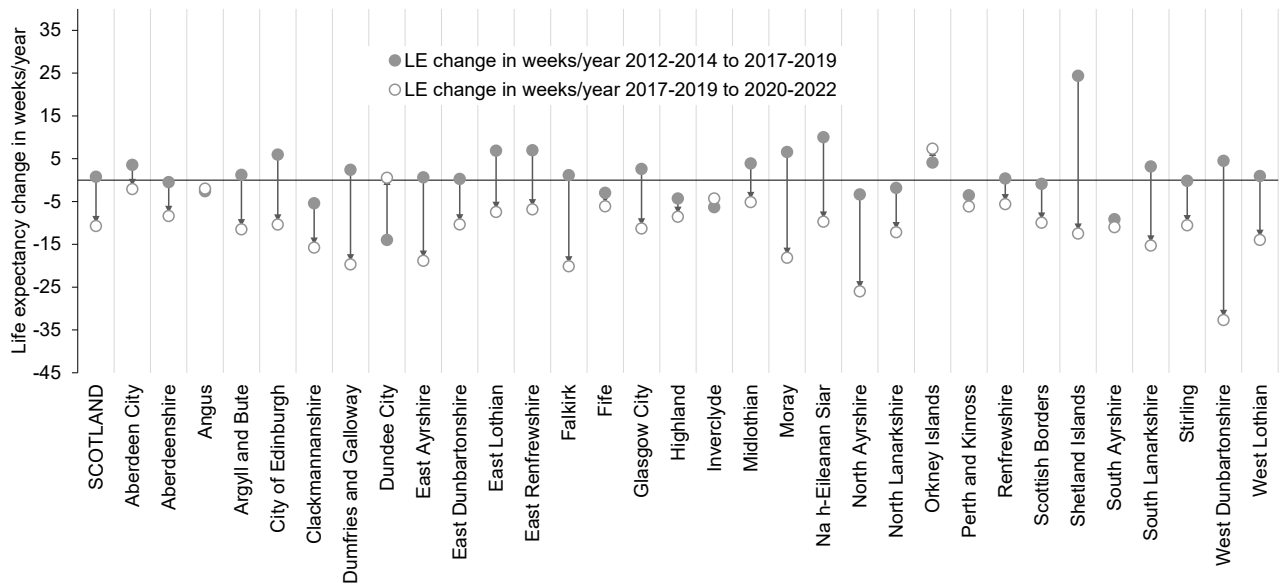
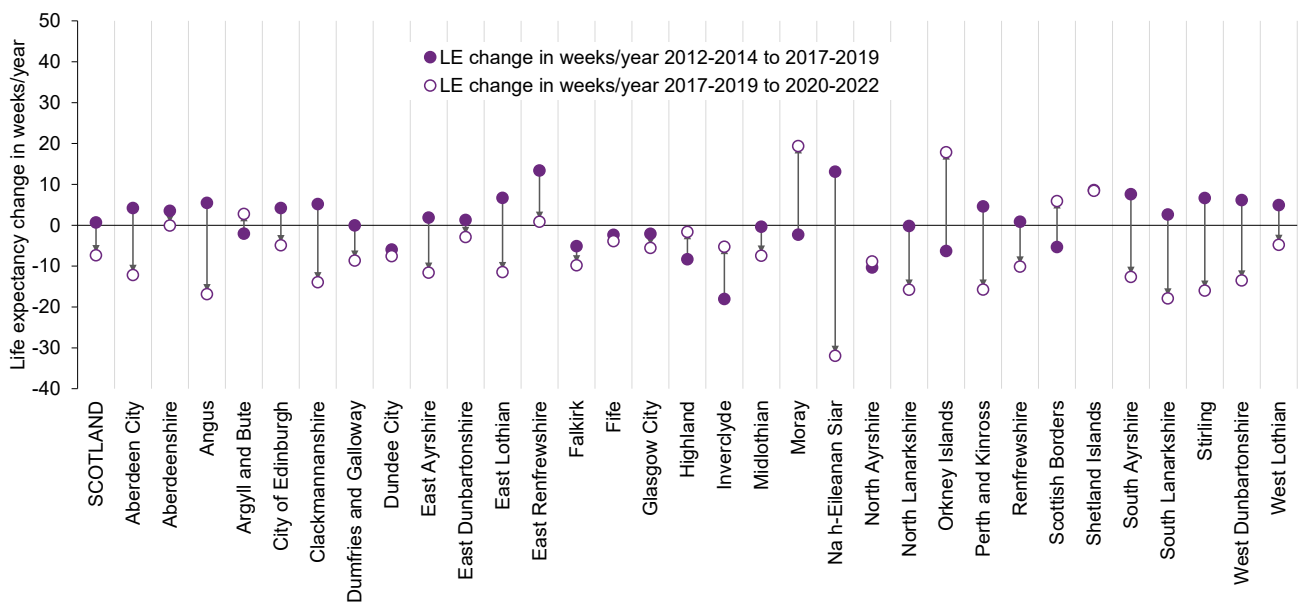


Figure 12b: Change in the rate of life expectancy growth, before and after 2017-2019, females



Life expectancy background

What is 'period' life expectancy?

All of the estimates presented in this report are 'period' life expectancy. They are calculated assuming that mortality rates for each age group in the time period (here 2020-2022) are constant throughout a person's life. Period life expectancy is often described as how long a baby born now could expect to live if they experienced today's mortality rates throughout their lifetime. It is very unlikely that this would be the case as it means that future changes in things such as medicine and legislation are not taken into consideration.

Period life expectancy is not an accurate prediction of how long a person born today will actually live, but it is a useful measure of population health at a point in time and is most useful for comparing trends over time, between areas of a country and with other countries.

How national life expectancy is calculated

The latest life expectancy figures are calculated from the mid-year population estimates for Scotland in 2020 and 2021. The populations for 2022 come from the national population projections ([the international migration variant](#) published in 2023) and the number of deaths registered in Scotland during 2020, 2021 and 2022. Life expectancy for Scotland is calculated for each year of age and represents the average number of years that someone of that age could expect to live if death rates for each age group remained constant over their lifetime.

Life expectancy in Scotland is calculated as a three year average, produced by combining deaths and population data for the three year period. Three years of data are needed to provide large enough numbers to make these figures accurate and also to lessen the effect of very 'good' or 'bad' years. Throughout this publication, the latest life expectancy figures refer to the 2020-2022 period.

How sub-national life expectancy is calculated

We calculate life expectancy for areas within Scotland using a very similar method to the national figures but with a few key differences. Firstly, we use age groups rather than single year of age. This is to increase the population size of each age group to reduce fluctuations and make sure we are calculating accurate mortality rates. Secondly, we use a maximum age group of 90+ whereas the national figures are calculated up to age 100. These are known as 'abridged life tables.' Because these methods produce slightly different figures we also calculate a Scotland figure using the abridged method in order to accurately compare with the subnational life expectancy. This Scotland figure is only for comparison and does not replace the headline national figure. For this release only, the 2022 populations come from the [2018 based population projections for Scottish areas](#). You can read more information about the methods in this publication in our [methodology guide](#) on the NRS website.

This year's release

We are referring to the 2020-2022 life expectancy figures as interim figures because they will be superseded in the next release in 2024 when populations from Scotland's census 2022 are available. The populations in this release are taken from the population projections. This release also does not include life expectancy estimates for special geographies such as deprivation quintiles and deciles, urban-rural classification and Scottish Parliamentary constituencies. This is because population projections are not available for these geographies. Estimates of life expectancy by deprivation, rurality and SPC will be included in the 2024 release.

NRS took the decision to publish these interim figures based on the results of a user consultation we ran in 2022. The [results](#) of this are available on the NRS website.

Uses of life expectancy

Life expectancy at birth is a very useful indicator of mortality conditions across a population at a particular point in time. It also provides an objective means of comparing trends in mortality over time, between areas of a country and with other countries. This is used to monitor and investigate health inequalities and to set public health targets. Life expectancy is also used to inform pensions policy, research and teaching.

Related statistics and methodology

- Life tables for the UK and constituent countries are available on the [Office for National Statistics website](#).
- Healthy Life expectancy for Scotland and areas within Scotland are available on the [National Records of Scotland website](#). This includes Scottish council areas, health boards and areas split by Scottish index of multiple deprivation. The next release will be in December 2021.
- The number and causes of deaths registered in Scotland each year are published in the [Vital Events Reference Tables](#).

Methodology and comparisons across the UK

The National Records of Scotland website has a guide that describes the [methodology](#) used to produce the life expectancy statistics for Scotland. This methodology is similar to that used to produce life expectancy estimates in other UK constituent countries.

Quality of administrative data sources

Life expectancy is calculated using mid-year population estimates and deaths data as inputs. Information about the quality of deaths data is available on the [Vital Events section](#) of the NRS website.

Notes on statistical publications

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.

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.

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