

# Health state life expectancy estimates for Middle layer Super Output Areas, England and Wales: 2019 to 2023

Estimates of health expectancy at birth for small area populations based on self-assessed health and self-assessed activity limitation.

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## Table of contents

1. [Main points](#)
2. [Health expectancies for England and Wales](#)
3. [Data on health state life expectancy for Middle layer Super Output Areas](#)
4. [Glossary](#)
5. [Data sources and quality](#)
6. [Related links](#)
7. [Cite this statistical bulletin](#)

# 1 . Main points

In 2019 to 2023, across Middle layer Super Output Areas (MSOAs):

- In England, median healthy life expectancy (HLE) at birth for males was 65.3 years; there was a gap of more than 13 years between the areas at the lowest 10% (57.1 years) and highest 10% (71.0 years) of HLE.
- In England, median HLE at birth for females was 66.8 years; there was a gap of 14 years between the areas at the lowest 10% (58.6 years) and highest 10% (72.6 years) of HLE.
- In Wales, median HLE at birth for males was 62.5 years; there was a gap of more than 12 years between the areas at the lowest 10% (56.6 years) and highest 10% (68.8 years) of HLE.
- In Wales, median HLE at birth for females was 63.8 years; there was a gap of more than 12 years between the areas at the lowest 10% (57.3 years) and highest 10% (70.0 years) of HLE.
- Disability-free life expectancy (DFLE) at birth also showed variation across MSOAs in England and Wales, although the range of estimates was slightly narrower than for HLE for both males and females.
- By using Census 2021 data, we can produce health state life expectancy estimates at MSOA level; this is the smallest geography for which these estimates can be produced with sufficient certainty, but estimates should be interpreted alongside the confidence intervals included in our accompanying dataset.

These small area estimates of health state life expectancy use health state information from Census 2021 and are not comparable with our regular estimates using Annual Population Survey data. These estimates are also not comparable with our previous small area estimates, which used a different method. More information is available in [Section 5: Data sources and quality](#).

## 2 . Health expectancies for England and Wales

This bulletin presents health state life expectancy. This is a collective term for summary measures of health that add a quality dimension to estimates of life expectancy. We report healthy life expectancy (HLE) and disability-free life expectancy (DFLE).

Across Middle layer Super Output Areas (MSOAs) in England and Wales, HLE and DFLE at birth in 2019 to 2023 varied substantially between areas. Females generally had higher HLE and DFLE than males in both countries.

Our interactive map (Figure 1) allows users to explore HLE and DFLE across MSOAs in England and Wales. Users can focus on a specific local area by clicking on the map or searching for a local area in the search bar.

### **Figure 1: Healthy life expectancy and disability-free life expectancy at birth varied substantially between areas for both males and females in 2019 to 2023**

**Healthy life expectancy and disability-free life expectancy at birth by sex, by Middle layer Super Output Area, England and Wales, 2019 to 2023**

#### **Notes**

1. Middle layer Super Output Areas (MSOA21s) are Census 2021 statistical geographies. They typically contain 5,000 to 15,000 usual residents with 2,000 to 6,000 households.
2. Geographical boundaries are correct as of February 2026.

## England

In England, median HLE at birth was 65.3 years for males and 66.8 years for females (Table 1). There was a wide range of HLE across MSOAs. The interquartile range, which describes the spread across the middle 50% of areas, was 7.4 years for males and 7.8 years for females. The difference between the 10th and 90th percentiles, known as the interdecile range, was 13.4 years for males and 14.0 years for females. This shows that the range was more than 13 years between areas at the lowest 10% and highest 10% of HLE.

We observed a similar pattern for DFLE. Median DFLE at birth was 66.3 years for males and 67.0 years for females. However, variation between areas was slightly smaller than for HLE. The interquartile range was 6.6 years for males and 6.5 years for females, while the interdecile range was 12.3 years for males and 12.0 years for females.

Table 1: Healthy life expectancy at birth differed by more than 13 years between MSOAs with the lowest and highest estimates in England in 2019 to 2023

Healthy life expectancy (HLE) and disability-free life expectancy (DFLE) at birth by sex, distribution across Middle layer Super Output areas (MSOAs), England, 2019 to 2023

| Percentile          | HLE male | HLE female | DFLE male | DFLE female |
|---------------------|----------|------------|-----------|-------------|
| 10th percentile     | 57.7     | 58.6       | 59.1      | 60.0        |
| 25th percentile     | 61.3     | 62.5       | 62.7      | 63.3        |
| Median              | 65.3     | 66.8       | 66.3      | 67.0        |
| 75th percentile     | 68.7     | 70.3       | 69.3      | 69.9        |
| 90th percentile     | 71.0     | 72.6       | 71.4      | 72.0        |
| Interquartile range | 7.4      | 7.8        | 6.6       | 6.5         |
| Interdecile range   | 13.4     | 14.0       | 12.3      | 12.0        |

Source: Health state life expectancy estimates for Middle layer Super Output Areas (MSOAs), England and Wales from the Office for National Statistics

### Notes

1. The interquartile range is the difference between the 25th and 75th percentiles, showing the spread of estimates for the middle half of MSOAs. The interdecile range is the difference between the 10th and 90th percentiles, showing the spread between areas with relatively low and relatively high estimates, excluding the lowest 10% and highest 10% of areas.

## Wales

In Wales, median HLE at birth was 62.5 years for males and 63.8 years for females (Table 2). The interquartile range was 7.4 years for males and 7.7 years for females. The interdecile range was 12.3 years for males and 12.7 years for females, indicating substantial variation in HLE between areas.

Median DFLE at birth was 62.3 years for males and 63.1 years for females. As in England, variation in DFLE across MSOAs was slightly narrower than for HLE. The interquartile range was 7.0 years for males and 6.7 years for females, while the difference between the 10th and 90th percentiles was 11.3 years for males and 11.6 years for females.

Table 2: Healthy life expectancy at birth differed by more than 12 years between MSOAs with the lowest and highest estimates in Wales in 2019 to 2023

Healthy life expectancy (HLE) and disability-free life expectancy (DFLE) at birth by sex, distribution across Middle layer Super Output Areas (MSOAs), Wales, 2019 to 2023

| Percentile          | HLE male | HLE female | DFLE male | DFLE female |
|---------------------|----------|------------|-----------|-------------|
| 10th percentile     | 56.6     | 57.3       | 57.2      | 57.5        |
| 25th percentile     | 59.0     | 59.9       | 59.4      | 60.0        |
| Median              | 62.5     | 63.8       | 62.3      | 63.1        |
| 75th percentile     | 66.4     | 67.7       | 66.4      | 66.7        |
| 90th percentile     | 68.8     | 70.0       | 68.5      | 69.2        |
| Interquartile range | 7.4      | 7.7        | 7.0       | 6.7         |
| Interdecile range   | 12.3     | 12.7       | 11.3      | 11.6        |

Source: Health state life expectancy estimates for Middle layer Super Output Areas (MSOAs), England and Wales from the Office for National Statistics

### Notes

1. The interquartile range is the difference between the 25th and 75th percentiles, showing the spread of estimates for the middle half of MSOAs. The interdecile range is the difference between the 10th and 90th percentiles, showing the spread between areas with relatively low and relatively high estimates, excluding the lowest 10% and highest 10% of areas.

## 3 . Data on health state life expectancy for Middle layer Super Output Areas

[Health state life expectancy estimates for Middle layer Super Output Areas, England and Wales](#)  
Dataset | Released 30 July 2026  
Healthy life expectancy and disability-free life expectancy, at birth, by sex and Middle layer Super Output Area and other area types in England and Wales.

## 4 . Glossary

## 95% confidence intervals

A confidence interval is a measure of the uncertainty around a specific estimate. As intervals around estimates widen, the level of uncertainty about where the true value lies increases. At a national level, the overall level of error will be small compared with the error associated with a Middle layer Super Output Area. Confidence intervals around health state life expectancy estimates are calculated from the variance of mortality and health state prevalence. Confidence intervals can be found in our [accompanying dataset](#).

## Disability-free life expectancy

An estimate of years free from a limiting, long-standing illness or health condition. It is based upon a self-rated assessment of how health conditions and illnesses reduce an individual's ability to carry out day-to-day activities.

## Health state life expectancy

A generic term for summary measures of health that add a quality dimension to estimates of life expectancy. This is done by dividing expected lifespan into time spent in different states of health. In this release, health state life expectancy includes measures based on self-reported health-related well-being (healthy life expectancy) and functional health status (disability-free life expectancy). The estimates do not imply that the first period of life is in a "good" health state followed by a period in a "not good" health state.

## Healthy life expectancy

An estimate of years spent in "very good" or "good" general health, based on how individuals perceive their general health.

## Interdecile range

The interdecile range is a measure of how much estimates vary across areas. It is calculated as the difference between the 90th percentile and the 10th percentile, showing the spread between areas with relatively high and relatively low estimates. It excludes the highest 10% and lowest 10% of areas. A larger interdecile range indicates greater variation between areas.

## Interquartile range

The interquartile range (IQR) is a measure of how much estimates vary between areas. It is calculated as the difference between the 75th percentile and the 25th percentile. The IQR shows the spread of the middle 50% of estimates and is less affected by unusually high or low values than measures such as the overall range. A larger IQR indicates greater variation between areas.

## Middle layer Super Output Area

Middle layer Super Output Areas 2021 (MSOA21s) are Census 2021 statistical geographies used for small area statistics. They are built from Lower layer Super Output Areas 2021 (LSOA21s), sit within local authorities, and are designed to have broadly similar population sizes. They typically contain 5,000 to 15,000 usual residents and 2,000 to 6,000 households.

## Percentiles

Percentiles divide a set of estimates into 100 equal parts when arranged from lowest to highest. They can be used to describe the distribution of healthy life expectancy (HLE) or disability-free life expectancy (DFLE) across areas. For example, the 10th percentile is the value below which 10% of areas fall, while the 90th percentile is the value below which 90% of areas fall, and above which 10% of areas fall. The difference between the 10th and 90th percentiles provides a measure of the gap between areas with relatively low and relatively high health expectancy.

## Period life expectancy

The life expectancy estimates used in this bulletin are period-based. Period life expectancy at a given age for an area is the average number of years a person would live if they experienced the area's age-specific mortality rates for that time period throughout their lives. More information is available in our [Period and cohort life expectancy explained methodology](#).

## 5 . Data sources and quality

This bulletin provides estimates of life expectancy and health state life expectancy (HSLE) at Middle layer Super Output Area (MSOA) level for England and Wales. It also includes estimates for selected higher-level geographies, including:

- local authorities
- Integrated Care Boards
- Welsh Health Boards
- English regions
- England
- Wales

Life expectancy estimates are based on death registrations and mid-year population estimates for 2019 to 2023. Deaths and population data were aggregated over five years to improve the reliability of estimates for small areas. The period includes the coronavirus (COVID-19) pandemic, so the estimates reflect mortality conditions during 2019 to 2023. Period life expectancy does not predict how long a baby born during this period will live; instead, it summarises mortality patterns observed during the period.

### Method for estimating life expectancy

Life expectancy was calculated using an abridged life table with a final age group of 90 years and over, using the Chiang II method. These estimates are not comparable with our previous 2009 to 2013 estimates, because they were calculated with a final age group of 85 years and over. Our [Life expectancy estimates template dataset](#) shows how the abridged life table is used to derive life expectancy estimates.

For small areas, some age-sex groups can have very small populations, or no deaths over the five-year period. We addressed the data issues arising from this following the approach used in our [Health Expectancies at Birth for Middle Layer Super Output Areas \(MSOAs\). England: 2009 to 2013 article](#), published in 2015. This method is based on our [Life expectancy and disability-free life expectancy estimates for Middle Super Output Areas: England, 1999 to 2003 report \(PDF, 3.5 MB\)](#).

We used imputation where there were no deaths in the final age group, where deaths exceeded the population, or where the calculated probability of dying in an age interval would otherwise exceed 100%. In these cases, we imputed mortality rates using age-sex specific rates for the relevant deprivation quantile. For England, deprivation deciles were derived from population-weighted Index of Multiple Deprivation (IMD) 2025 scores for the Lower layer Super Output Areas (LSOAs) within each MSOA. For Wales, deprivation quintiles were derived from population-weighted Welsh Index of Multiple Deprivation (WIMD) 2025 scores. This occurred in 162 cases, which are indicated in our [accompanying dataset](#).

All MSOA populations for the period of 2019 to 2023 were above the minimum threshold of 5,000 people, which was determined as sufficient to avoid bias in standard error calculations in instances where the age-specific death rate is zero. This is explained in [Life expectancy at birth: methodological options for small populations \(PDF, 288 KB\)](#).

## Method for estimating health state life expectancy

We calculate HSLE estimates and variance using the [Sullivan method \(PDF, 928 KB\)](#) and use data from Census 2021. Healthy life expectancy (HLE) uses self-reported general health, while disability-free life expectancy (DFLE) uses information on activity limitation because of long-standing illness or health condition. This approach assumes that health state prevalence measured in Census 2021 is representative of prevalence across the 2019 to 2023 period. Where there were no Census 2021 respondents for a specific age-sex-area combination, we imputed health state prevalence using the relevant deprivation quantile, age group and sex.

In cases where there was no population enumerated at Census 2021, we used the national IMD decile-specific health and disability prevalence for that age and sex to calculate HLE and DFLE. This occurred in 14 cases, which are indicated in our accompanying dataset.

For MSOAs where an age band and sex-specific prevalence of "good" health or free from disability was either 0 or 1, it was not possible to calculate the variance of HLE and DFLE. To calculate the variance in these instances, we changed values by adjusting prevalence to 0.99 where age-sex specific prevalence was 1, and to 0.01 where prevalence was 0.

These estimates cannot be directly compared with our estimates published in 2015 because the calculation uses a different final age band (90 years and over, rather than 85 years and over). For DFLE, estimates should also not be compared with the last release for MSOAs, because the Census questions used to derive disability changed between 2011 and 2021.

The method used here for calculating HSLE for small areas is not consistent with the method for our regular annual HSLE release, described in our [Healthy life expectancy quality and methods guide](#). These estimates use different data sources for health state prevalence, and different reference periods and calculations for estimates and uncertainty.

## Quality of estimates

Our accompanying dataset includes flags showing where we imputed mortality or health state prevalence values. These flags should be used when interpreting estimates for individual MSOAs, particularly where small populations or sparse death counts may affect reliability.

We identified implausible life expectancy estimates using a box plot method based on three times the interquartile range. We marked MSOA estimates outside the resulting outer fences as unreliable and moved them to a separate worksheet. These thresholds were below 63.1 years or above 95.0 years for males, and below 69.4 years or above 96.8 years for females.

## 6 . Related links

[Health Expectancies at Birth for Middle Layer Super Output Areas \(MSOAs\), England: 2009 to 2013](#)

Article | Released 25 September 2015

Estimates of health expectancy for small area populations based on self-assessed health and self-assessed activity limitation. Differences between small areas allows the scale of inequality to be determined and which areas are statistically significantly higher or lower than the national and local authority specific average.

[Healthy life expectancy, UK: between 2011 to 2013 and 2022 to 2024](#)

Bulletin | Released 19 February 2026

The number of years people are expected to spend in "good" general health in the UK, including subnational areas.

## 7 . Cite this statistical bulletin

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