

Statistical bulletin

Deaths involving COVID-19 by local area and socioeconomic deprivation: deaths occurring between 1 March and 31 July 2020

Provisional counts of the number of deaths and age-standardised mortality rates involving the coronavirus (COVID-19) between 1 March and 31 July 2020 in England and Wales.

Contact:
Sarah Caul
Health.Data@ons.gov.uk
+44 (0)1633 456490

Release date:
28 August 2020

Next release:
To be announced

Table of contents

1. [Main points](#)
2. [Introduction](#)
3. [Country and region](#)
4. [Local authorities](#)
5. [Local Health Boards in Wales](#)
6. [Middle-layer Super Output Areas](#)
7. [Rural and urban areas](#)
8. [Travel to Work Areas](#)
9. [English Index of Multiple Deprivation](#)
10. [Welsh Index of Multiple Deprivation](#)
11. [Deaths involving COVID-19 by local area and socioeconomic deprivation data](#)
12. [Glossary](#)
13. [Measuring the data](#)
14. [Strengths and limitations](#)
15. [Related links](#)

1 . Main points

- There were 51,831 deaths occurring in England and Wales between 1 March and 31 July 2020 and registered by 15 August 2020 that involved the coronavirus (COVID-19); this represented 20.0% of all deaths occurring over this period, which was 259,199 deaths.
- Taking into account the size and age structure of the population, there were 90.2 deaths involving COVID-19 per 100,000 people in England and Wales over the period March to July 2020; this was 90.9 per 100,000 people in England compared with 75.7 per 100,000 people in Wales.
- All English regions and Wales recorded an increase in age-standardised mortality rates involving COVID-19 between March and April 2020, followed by decreases in May, June and July 2020.
- Of the 336 local authority areas in England and Wales, 71 areas had no deaths in July involving COVID-19 (that were registered by 15 August), and a further 239 recorded fewer than 10 deaths involving COVID-19; this may change as more deaths are registered.
- Only two areas recorded more than 20 deaths involving COVID-19 occurring in July: Leicester with 24 deaths (10.0 deaths per 100,000 population) and Ashford with 21 deaths (16.2 deaths per 100,000 population).
- In England, the age-standardised mortality rate for deaths involving COVID-19 in the most deprived areas in July 2020 was 3.1 deaths per 100,000 population; as seen in previous months, this was more than double the mortality rate in the least deprived areas (1.4 deaths per 100,000 population).
- The number of deaths in each deprivation quintile in Wales was below 20 for deaths involving COVID-19 occurring in July (and registered by 15 August).

Rates used in this release have not been adjusted to take into account the period observed and therefore may differ to other rates published. More information can be found in Section 13: Measuring the data.

2 . Introduction

This bulletin contains provisional analysis of all deaths that occurred in England and Wales between 1 March and 31 July 2020, registered up to 15 August 2020, where the coronavirus (COVID-19) was involved, focusing on differences between local areas. For this analysis, we use the term “involving COVID-19” when referring to deaths that had COVID-19 mentioned anywhere on the death certificate, whether it was the underlying cause of death or not.

The information used to produce these statistics is based on details collected when certified deaths are registered with the local registration office. In England and Wales, deaths should be registered within five days of the death occurring, but there are some situations (such as referral to a coroner) that result in later registration. Therefore, there are likely to be some deaths involving COVID-19 that occurred in the period 1 March to 31 July 2020 that are yet to be registered, meaning they will not be included in this analysis.

Figures on deaths published by the Office for National Statistics (ONS) differ from those produced by the Department of Health and Social Care (DHSC) and the UK's public health agencies for two main reasons: the time between death and reporting of the death and the ONS's wider inclusion criteria. The statement [The different uses of figures on deaths from COVID-19 published by DHSC and the ONS](#) helps to explain the differences.

Deaths involving COVID-19 are reported for each week in our [Deaths registered weekly in England and Wales provisional](#) release. The weekly numbers reported as “occurring” change over time, as more deaths are registered that happened in past weeks. Unlike most ONS publications on deaths, this bulletin is based on occurrence (date of death), not date of registration.

The following analysis looks at the number of deaths and age-standardised mortality rates by different geographies and level of deprivation. There may be some interaction between geographies and level of deprivation, but this will need further investigation.

As the number of deaths involving COVID-19 has decreased to levels lower than March, this release will no longer be updated on a monthly basis. There are currently no specific plans to update this release after this report, but we will continue to review deaths involving COVID-19 and will release an update when appropriate.

3 . Country and region

Between 1 March and 31 July 2020, there were 259,199 deaths occurring in England and Wales that were registered by 15 August 2020; of these, 51,831 deaths involved the coronavirus (COVID-19). When adjusting for size and age structure of the population, there were 90.2 deaths involving COVID-19 per 100,000 people in England and Wales in the time period; this was made up of 90.9 deaths per 100,000 people in England and 75.7 deaths per 100,000 people in Wales.

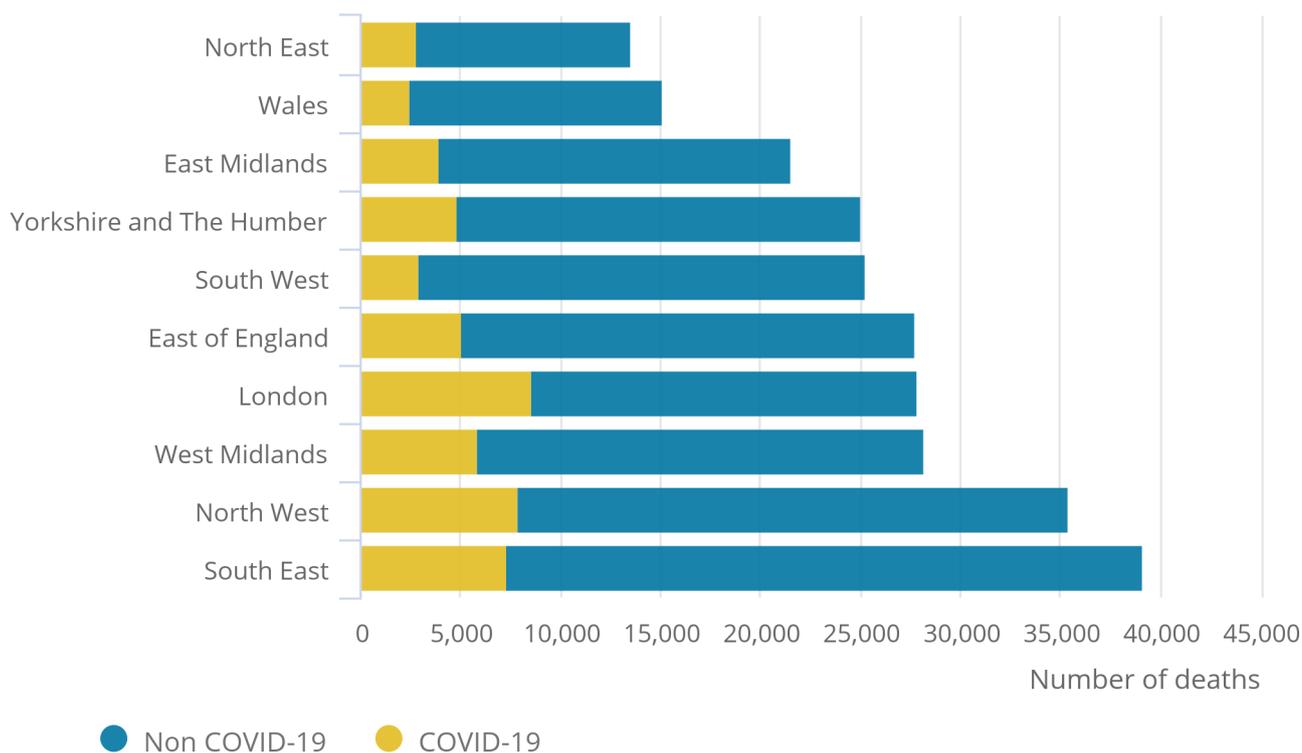
The age-standardised rate in England and Wales was 8.3 deaths involving COVID-19 per 100,000 people in March 2020, 53.4 deaths per 100,000 people in April 2020, 20.8 deaths per 100,000 people in May 2020, 5.9 deaths per 100,000 population in June 2020 and 1.8 deaths per 100,000 population in July. As more deaths are registered, the age-standardised rate is likely to increase, especially in the latest month of July. The rate in each month was statistically significantly different to every other month.

Figure 1: London had the highest proportion of deaths involving the coronavirus (COVID-19) between March and July 2020

Number of deaths involving and not involving the coronavirus (COVID-19), Wales and regions of England, deaths occurring between 1 March and 31 July 2020

Figure 1: London had the highest proportion of deaths involving the coronavirus (COVID-19) between March and July 2020

Number of deaths involving and not involving the coronavirus (COVID-19), Wales and regions of England, deaths occurring between 1 March and 31 July 2020



Source: Office for National Statistics – Deaths involving COVID-19 by local area and socioeconomic deprivation

Notes:

1. Deaths occurring between 1 March 2020 and 31 July 2020 and registered by 15 August 2020.
2. Figures exclude death of non-residents and are based on May 2020 boundaries.
3. Coronavirus (COVID-19) was the underlying cause or was mentioned on the death certificate as a contributory factor (International Classification of Diseases, tenth edition (ICD-10) codes U07.1 and U07.2).
4. Figures are provisional.

Over this five-month period, the English region with the highest number of deaths occurring from all causes was the South East with 39,154 deaths; of these, 7,321 deaths involved COVID-19 (18.7% of deaths). The lowest number of deaths was in the North East with 13,507 deaths, of which 2,826 involved COVID-19 (20.9% of deaths).

The region with the highest proportion of deaths involving COVID-19 was London with 8,536, making up 30.6% of the 27,908 total deaths. The lowest proportion of deaths involving COVID-19 was in the South West with 2,906, making up 11.5% of the 25,262 total deaths.

However, the lowest number of COVID-19 deaths overall was in Wales with 2,526 deaths, making up 16.8% of all deaths.

Looking at July alone, the South East had the highest number of deaths involving COVID-19 with 206 deaths (3.6% of deaths in the South East), whereas the North West had the highest proportion of deaths involving COVID-19 with 4.0% of all deaths (193 deaths).

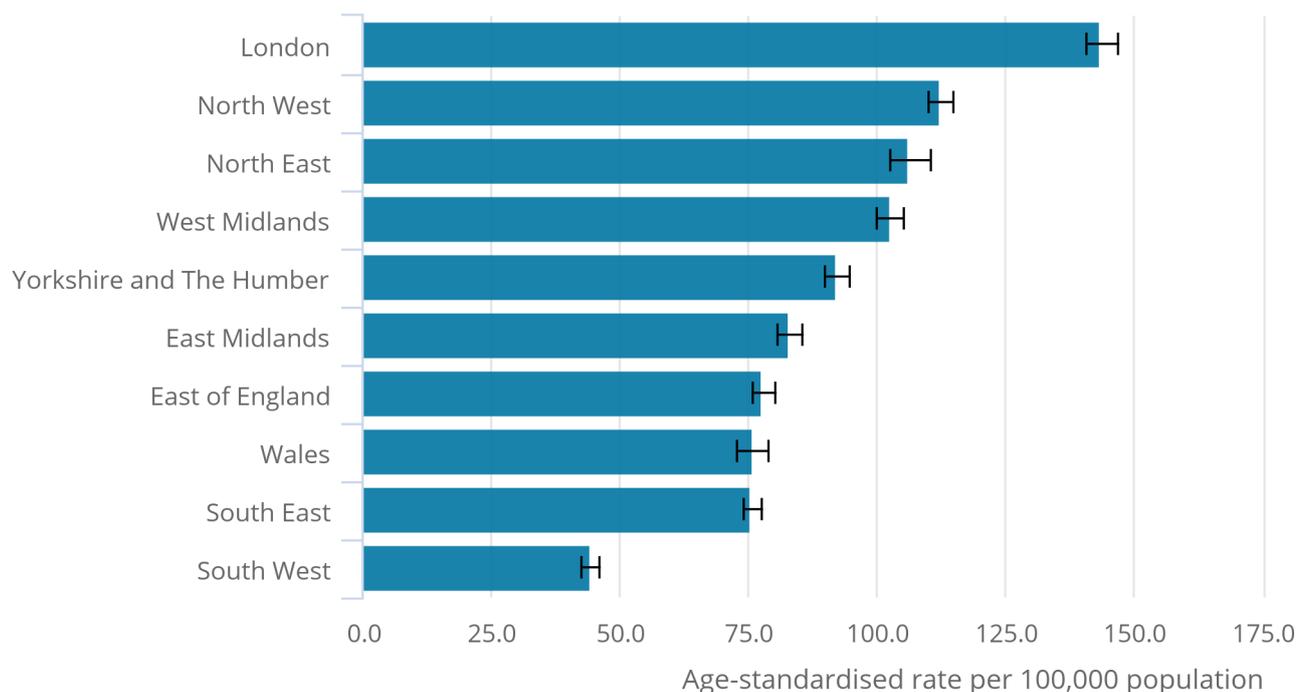
The lowest number and proportion of deaths involving COVID-19 was in the South West with 23 deaths, 0.6% of all deaths in the South West.

Figure 2: London had the highest age-standardised mortality rate of deaths involving the coronavirus (COVID-19) between March and July 2020

Age-standardised mortality rates for deaths involving the coronavirus (COVID-19), per 100,000 population, English regions and Wales, deaths occurring between 1 March and 31 July 2020

Figure 2: London had the highest age-standardised mortality rate of deaths involving the coronavirus (COVID-19) between March and July 2020

Age-standardised mortality rates for deaths involving the coronavirus (COVID-19), per 100,000 population, English regions and Wales, deaths occurring between 1 March and 31 July 2020



Source: Office for National Statistics – Deaths involving COVID-19 by local area and socioeconomic deprivation

Notes:

1. Deaths occurring between 1 March 2020 and 31 July 2020 and registered by 15 August 2020.
2. Figures exclude death of non-residents and are based on May 2020 boundaries.
3. Coronavirus (COVID-19) was the underlying cause or was mentioned on the death certificate as a contributory factor (International Classification of Diseases, tenth edition (ICD-10) codes U07.1 and U07.2).
4. Rates have been standardised using European Standard Population 2013 (ESP 2013) and are expressed per 100,000 people.
5. Rates have not been adjusted to take into account the period of interest. They use the annual population as a base and may differ from rates presented in other publications.
6. Figures are provisional.

For the months March through to July 2020, London had the highest age-standardised mortality rate, with 143.4 deaths per 100,000 population involving COVID-19. This was statistically significantly higher than any other English region or Wales, while the next highest rate of 112.2 deaths per 100,000 population was found in the North West. Conversely, the South West saw the lowest age-standardised mortality rate of 44.1 deaths per 100,000 people. This was statistically significantly lower than any other English region or Wales. For all areas, for the five months combined, males had a significantly higher mortality rate than females. More information can be found in the accompanying dataset.

Figure 3: The age-standardised mortality rate of deaths involving the coronavirus (COVID-19) was highest in April for all English regions and Wales

Age-standardised mortality rates for deaths involving the coronavirus (COVID-19), per 100,000 people, English regions and Wales, deaths occurring in March, April, May, June and July 2020

Figure 3: The age-standardised mortality rate of deaths involving the coronavirus (COVID-19) was highest in April for all English regions and Wales

Age-standardised mortality rates for deaths involving the coronavirus (COVID-19), per 100,000 people, English regions and Wales, deaths occurring in March, April, May, June and July 2020



Source: Office for National Statistics – Deaths involving COVID-19 by local area and socioeconomic deprivation

Notes:

1. Deaths occurring between 1 March 2020 and 31 July 2020 and registered by 15 August 2020.
2. Figures exclude death of non-residents and are based on May 2020 boundaries.
3. Coronavirus (COVID-19) was the underlying cause or was mentioned on the death certificate as a contributory factor (International Classification of Diseases, tenth edition (ICD-10) codes U07.1 and U07.2).
4. Rates have been standardised using European Standard Population 2013 (ESP 2013) and are expressed per 100,000 people.
5. Rates have not been adjusted to take into account the period of interest. They use the annual population as a base and may differ from rates presented in other publications.
6. Figures are provisional.

In July, Wales and all English regions recorded statistically significantly lower age-standardised mortality rates involving COVID-19 than March.

The highest age-standardised mortality rate of deaths involving COVID-19 in July was in the North West with 2.8 deaths per 100,000 population. The lowest was in the South West with 0.3 deaths per 100,000 population, statistically significantly lower than any other English region and Wales.

Age-standardised rates will increase as more deaths are registered, especially in the more recent months.

4 . Local authorities

Along with our weekly provisional release for England and Wales, we publish number of deaths by local authority and health board by week and place of occurrence (hospital, home, care home, hospice, other communal establishment and elsewhere). The following analysis looks at age-standardised mortality rates of local authorities in England and Wales.

Figure 4: Age-standardised mortality rates for deaths from all causes and deaths involving the coronavirus (COVID-19), local authorities in England and Wales, deaths occurring between 1 March and 31 July 2020

Notes:

1. Deaths occurring between 1 March 2020 and 31 July 2020 and registered by 15 August 2020.
2. Figures exclude death of non-residents and are based on May 2020 boundaries.
3. Coronavirus (COVID-19) was the underlying cause or was mentioned on the death certificate as a contributory factor (International Classification of Diseases, tenth edition (ICD-10) codes U07.1 and U07.2).
4. Rates have been standardised using European Standard Population 2013 (ESP 2013) and are expressed per 100,000 people.
5. Rates have not been adjusted to take into account the period of interest. They use the annual population as a base and may differ from rates presented in other publications.
6. Figures are provisional.

[Download the data](#)

Figure 4 is a map of local authorities in England and Wales, showing age-standardised mortality rates for deaths involving the coronavirus (COVID-19) and all causes between March and July 2020.

Of the 336 local areas in England and Wales, 71 areas had no deaths involving COVID-19 in July that were registered by 15 August and a further 239 recorded fewer than 10 deaths involving COVID-19. These small numbers mean that age-standardised mortality rates were not able to be calculated for these areas.

A further 24 areas had between 10 and 19 deaths; this meant that we were able to calculate age-standardised rates, although these were deemed to be “unreliable”. To create a “reliable” age-standardised mortality rate, 20 deaths are needed. The two areas that had 20 deaths or more were Leicester and Ashford.

Leicester had the highest number of deaths in July 2020 with 24 deaths and a rate of 10.0 deaths per 100,000 population. This was higher than the number of deaths recorded in March (16 deaths and a rate of 7.0 deaths per 100,000 population) but lower than the numbers of deaths recorded in April (153 deaths), May (87 deaths) and June (35 deaths).

Ashford recorded 21 deaths in July 2020; this was lower than the numbers of deaths in April, May and June (53, 47 and 47 deaths respectively). The rate in July was 16.2 deaths per 100,000 population, statistically significantly lower than April, May and June. There were only three deaths that occurred in March, meaning that an age-standardised rate was not available.

There was only one area in Wales with enough deaths involving COVID-19 to calculate an age-standardised mortality rate in July and that was Wrexham with 15 deaths a rate of 11.1 deaths per 100,000 population.

The [accompanying dataset](#) provides a sex breakdown as well as breakdowns by month of death and whether the death involved COVID-19.

[Comparisons of all-cause mortality between European countries and regions](#) was released on 30 July 2020. This looks at comparable age-standardised mortality rates across Europe at the local authority level (NUTS3 geography).

5 . Local Health Boards in Wales

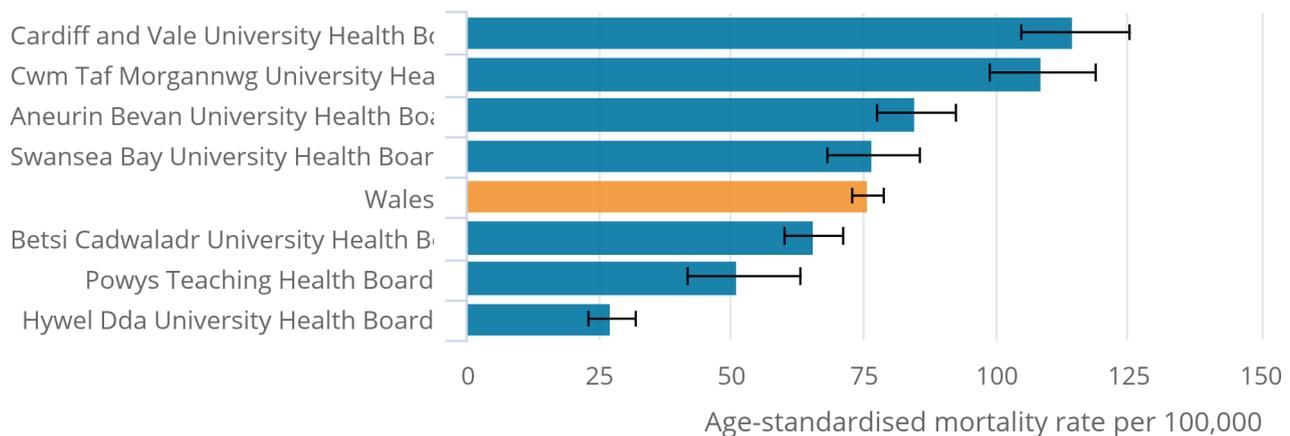
As well as local authorities, Wales also has seven Local Health Boards.

Figure 5: Hywel Dda University Health Board had the lowest age-standardised mortality rate of deaths involving the coronavirus (COVID-19) in Wales during March to July 2020

Age-standardised mortality rates of deaths involving the coronavirus (COVID-19), Local Health Boards in Wales, deaths occurring between 1 March and 31 July 2020

Figure 5: Hywel Dda University Health Board had the lowest age-standardised mortality rate of deaths involving the coronavirus (COVID-19) in Wales during March to July 2020

Age-standardised mortality rates of deaths involving the coronavirus (COVID-19), Local Health Boards in Wales, deaths occurring between 1 March and 31 July 2020



Source: Office for National Statistics – Deaths involving COVID-19 by local area and socioeconomic deprivation

Notes:

1. Deaths occurring between 1 March 2020 and 31 July 2020 and registered by 15 August 2020.
2. Figures exclude death of non-residents and are based on May 2020 boundaries.
3. Coronavirus (COVID-19) was the underlying cause or was mentioned on the death certificate as a contributory factor (International Classification of Diseases, tenth edition (ICD-10) codes U07.1 and U07.2).
4. Rates have been standardised using European Standard Population 2013 (ESP 2013) and are expressed per 100,000 people.
5. Rates have not been adjusted to take into account the period of interest. They use the annual population as a base and may differ from rates presented in other publications.
6. Figures are provisional.

Across March to July, the two Local Health Boards with the highest age-standardised mortality rates involving the coronavirus (COVID-19) were both statistically significantly higher than the overall Wales rate (75.7 deaths per 100,000 people). They were Cardiff and Vale University Health Board with 114.7 deaths per 100,000 population and Cwm Taf Morgannwg University Health Board with 108.6 deaths per 100,000 population. Aneurin Bevan University Health Board is no longer statistically significantly higher than the overall rate but remains the third highest.

The lowest age-standardised mortality rate for deaths involving COVID-19 was in Hywel Dda University Health Board with 27.3 deaths per 100,000 population, which was statistically significantly lower than the overall Wales rate and all Local Health Boards.

The only Welsh Local Health Board to have enough deaths in July to create a statistically reliable rate was Betsi Cadwaladr University Health Board with 35 deaths and a rate of 4.2 deaths per 100,000 population; this was statistically significantly higher than the overall Wales rate for July (1.9 deaths per 100,000 population).

6 . Middle-layer Super Output Areas

Super Output Areas (SOAs) are small-area statistical geographies covering England and Wales. Each area has a similarly sized population and remains stable over time. For this analysis, Middle-layer Super Output Areas (MSOAs) have been used. The [accompanying dataset](#) shows the number of all deaths as well as deaths involving the coronavirus (COVID-19).

The following interactive map allows you to see the cumulative number of monthly deaths involving COVID-19 in each area.

Figure 6: Number of deaths involving COVID-19 in Middle Layer Super Output Areas, England and Wales, deaths occurring between 1 March and 31 July 2020

Notes:

1. Points on the map are placed at the centre of the local area they represent and do not show the actual location of deaths. The size of the circle is proportional to the number of deaths.
2. To protect confidentiality, a small number of deaths have been reallocated between neighbouring areas. Given the method used for this, figures for some areas may be different to previously published data.
3. Deaths occurring between 1 March 2020 and 31 July 2020 and registered by 15 August 2020.
4. Figures exclude death of non-residents and are based on May 2020 boundaries.
5. Coronavirus (COVID-19) was the underlying cause or was mentioned on the death certificate as a contributory factor (International Classification of Diseases, tenth edition (ICD-10) codes U07.1 and U07.2).
6. Locally adopted Middle-layer Super Output Area (MSOA) names are provided by House of Commons Library. While these names are not officially supported for National Statistics, they are provided here to help local users.
7. Figures are provisional.
8. Please note, because of the low numbers this chart will not be updated for future months.

7 . Rural and urban areas

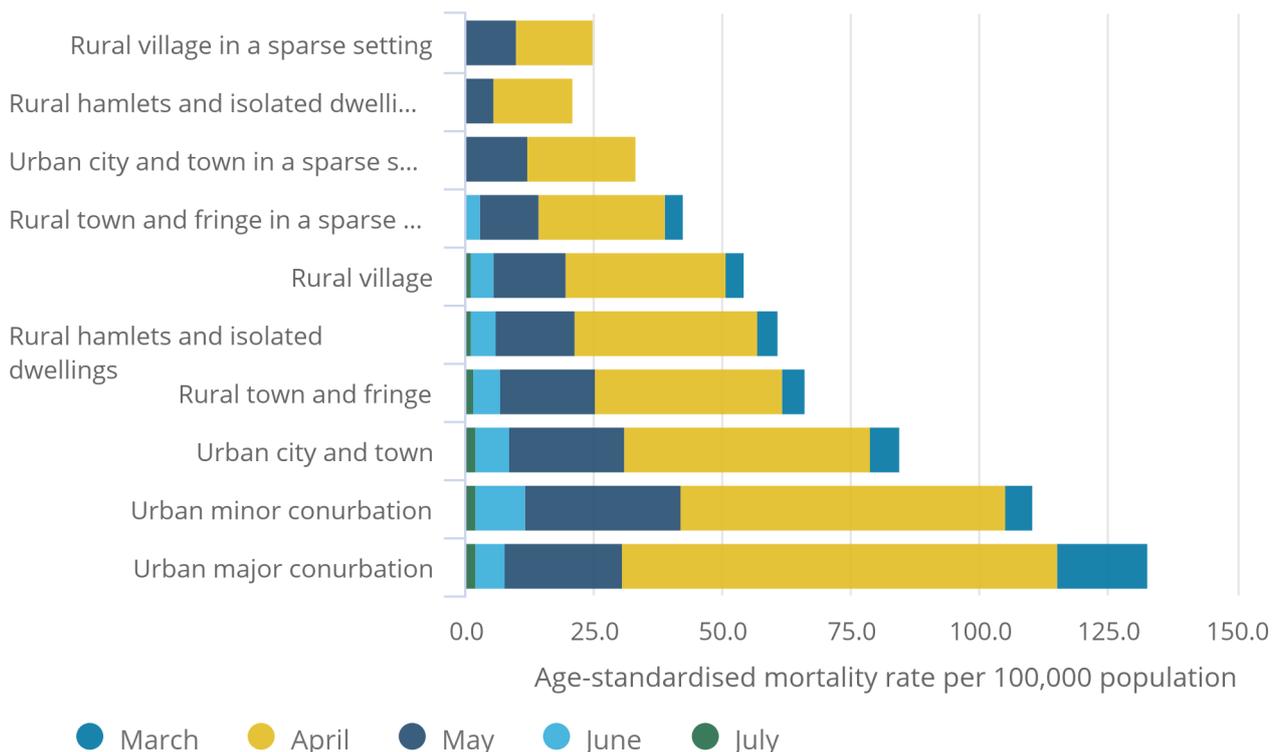
The [Rural Urban Classification for England and Wales](#) is used to distinguish rural and urban areas of different housing sparsity and location for analytical and policy purposes. Areas with 10,000 resident population or more are defined as urban; urban areas are split into major conurbations, minor conurbations, and city and town categories. Rural areas are split between town and fringe, village, and hamlets and isolated dwellings.

Figure 7: Urban major conurbations had a significantly higher age-standardised mortality rate of deaths involving the coronavirus (COVID-19) than any other type of areas, using the Rural Urban Classification

Age-standardised mortality rate of deaths involving the coronavirus (COVID-19), Rural Urban Classification, deaths occurring between 1 March 2020 and 31 July 2020

Figure 7: Urban major conurbations had a significantly higher age-standardised mortality rate of deaths involving the coronavirus (COVID-19) than any other type of areas, using the Rural Urban Classification

Age-standardised mortality rate of deaths involving the coronavirus (COVID-19), Rural Urban Classification, deaths occurring between 1 March 2020 and 31 July 2020



Source: Office for National Statistics – Deaths involving COVID-19 by local area and socioeconomic deprivation

Notes:

1. Deaths occurring between 1 March 2020 and 31 July 2020 and registered by 15 August 2020.
2. Figures exclude death of non-residents and are based on May 2020 boundaries.
3. Coronavirus (COVID-19) was the underlying cause or was mentioned on the death certificate as a contributory factor (International Classification of Diseases, tenth edition (ICD-10) codes U07.1 and U07.2).
4. Rates have been standardised using European Standard Population 2013 (ESP 2013) and are expressed per 100,000 people.
5. Rates have not been adjusted to take into account the period of interest. They use the annual population as a base and may differ from rates presented in other publications.
6. Figures are provisional.
7. Because of the small numbers of deaths, age-standardised mortality rates are not available for areas of sparse settings in July.

The highest age-standardised mortality rate involving the coronavirus (COVID-19) for the period March to July 2020 was in urban major conurbations, with 132.8 deaths per 100,000 population. This was statistically significantly higher than all other categories. The next two highest rates were also statistically significantly different to all other categories: urban minor conurbations had 110.6 deaths per 100,000 population, and urban cities and towns had 84.4 deaths per 100,000 population. The lowest rates were all found in sparse settings; rural hamlets and isolated dwellings in a sparse setting had the lowest age-standardised mortality rate of 24.4 deaths per 100,000 population.

Looking at mortality rates involving COVID-19 for the individual months, the highest age-standardised rates for all rural urban classification areas occurred in April 2020, after which rates decreased in May, June and July 2020. The highest mortality rate in May 2020 (29.9 deaths per 100,000 population), June 2020 (9.6 deaths per 100,000 population) and July 2020 (2.4 deaths per 100,000 population) occurred in urban minor conurbations and was statistically significantly higher than all other categories in both May and June. This is in contrast to urban major conurbations, which had the highest rate for the five-month period overall. This is largely because of the contribution of the high number of COVID-19 deaths in London early in the pandemic (March and April).

Given the low number of deaths, age-standardised rates were not available for the four sparse setting areas.

“Major towns and cities” is a statistical geography created to provide comparable definitions of the major towns and cities in England and Wales, excluding London. This definition has been developed specifically for the production and analysis of statistics. The aim is to provide a precise definition, with a focus on the “core” built-up area of a town or city rather than its surrounding area. It should be noted that in this geography, the boundaries do not follow administrative areas and instead are defined to cover the built-up area of each town or city.

Of the 111 major towns and cities (excluding London), the highest age-standardised mortality rate of deaths involving COVID-19 across March to July was in Salford, with a rate of 220.9 deaths per 100,000 population. The lowest rate was 10.0 deaths per 100,000 people in Hastings. For July, only five areas recorded enough deaths to produce an age-standardised rate, but this may change as more deaths are registered.

8 . Travel to Work Areas

Travel to Work Areas (TTWAs) are geographies created to approximate labour market areas. They are derived to reflect self-contained areas in which most people both live and work. TTWAs have been developed so that relatively few commuters cross a TTWA boundary on their way to work. As such, TTWAs are based on statistical analysis rather than administrative boundaries.

The majority of areas in July 2020 had too few deaths involving the coronavirus (COVID-19) to calculate age-standardised mortality rates. Of the 40 areas that recorded an age-standardised rate for July, the highest was in Ashford with 16.4 deaths involving COVID-19 per 100,000 population.

Information on all 173 TTWAs can be found in our [accompanying dataset](#).

9 . English Index of Multiple Deprivation

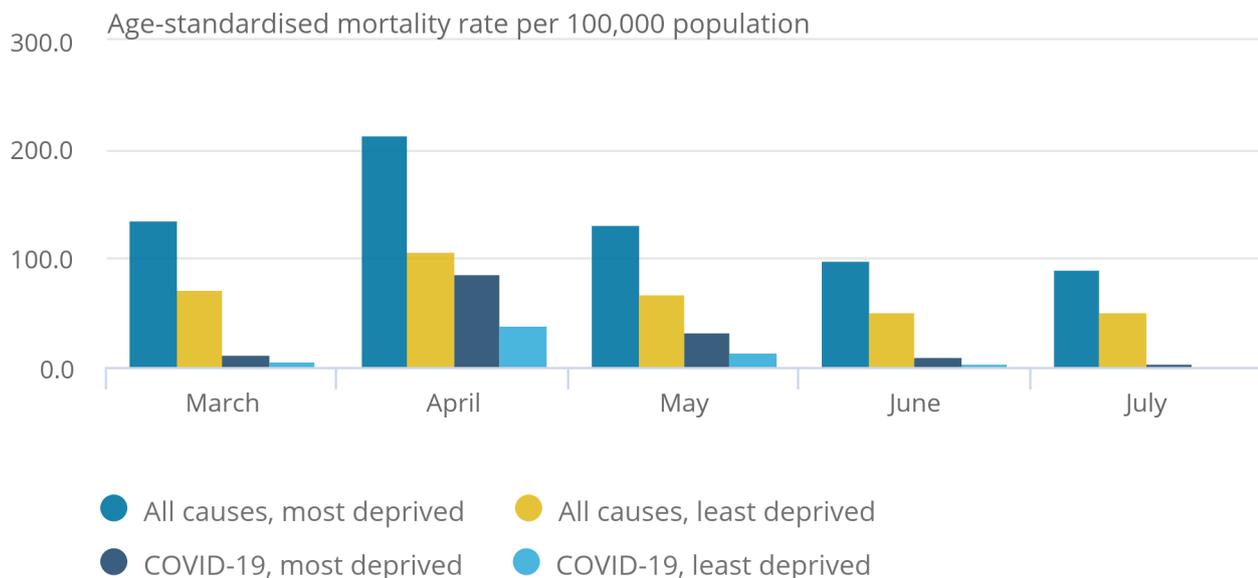
The Index of Multiple Deprivation (IMD) is an overall measure of deprivation based on factors such as income, employment, health, education, crime, the living environment and access to housing within an area. There are different measurements for England and Wales, which are not directly comparable.

Figure 8: The coronavirus (COVID-19) has had a proportionally higher impact on the most deprived areas of England

Age-standardised mortality rates, all deaths and deaths involving the coronavirus (COVID-19), Index of Multiple Deprivation, England, deaths occurring between 1 March and 31 July 2020

Figure 8: The coronavirus (COVID-19) has had a proportionally higher impact on the most deprived areas of England

Age-standardised mortality rates, all deaths and deaths involving the coronavirus (COVID-19), Index of Multiple Deprivation, England, deaths occurring between 1 March and 31 July 2020



Source: Office for National Statistics – Deaths involving COVID-19 by local area and socioeconomic deprivation

Notes:

1. Deaths occurring between 1 March 2020 and 31 July 2020 and registered by 15 August 2020.
2. Figures exclude death of non-residents and are based on May 2020 boundaries.
3. Coronavirus (COVID-19) was the underlying cause or was mentioned on the death certificate as a contributory factor (International Classification of Diseases, tenth edition (ICD-10) codes U07.1 and U07.2).
4. Rates have been standardised using European Standard Population 2013 (ESP 2013) and are expressed per 100,000 people.
5. Deprivation deciles are based on the English Index of Multiple Deprivation, version 2019.
6. Figures are provisional.

Looking at deaths involving the coronavirus (COVID-19), the mortality rate in the least deprived areas (decile 10) in England was less than half of the mortality rate in the most deprived areas across April to July. The age-standardised mortality rate of deaths involving COVID-19 was 3.1 deaths per 100,000 population for the most deprived areas in England in July; this was statistically significantly higher than the 1.4 deaths per 100,000 population in the least deprived areas.

The least deprived areas are also statistically significantly lower across all-cause mortality for the months March to July. Over the five months, on average, the rate of all-cause mortality was 1.9 times higher in the most deprived area than in the least deprived area. This increased to 2.2 times higher when looking at deaths involving COVID-19.

Looking across geographies and the IMD, Figure 7 shows that urban conurbations areas had a higher mortality rate involving COVID-19 than other rural or urban classifications; these urban conurbations areas also make up a larger proportion of the most deprived areas than other classifications.

Breakdowns by sex and each individual IMD decile are available in the [accompanying dataset](#).

10 . Welsh Index of Multiple Deprivation

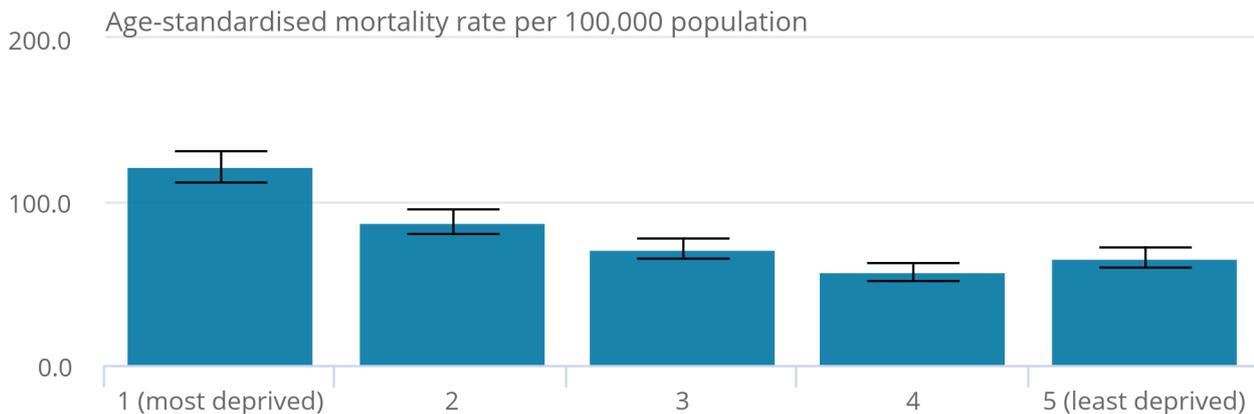
The Index of Multiple Deprivation (IMD) is an overall measure of deprivation based on factors such as income, employment, health, education, crime, the living environment and access to housing within an area. There are different measurements for England and Wales, which are not directly comparable.

Figure 9: The mortality rate involving the coronavirus (COVID-19) in the most deprived areas in Wales was nearly twice as high as that in the least deprived areas

Age-standardised mortality rates, all deaths and deaths involving the coronavirus (COVID-19), Index of Multiple Deprivation, Wales, deaths occurring between 1 March and 31 July 2020

Figure 9: The mortality rate involving the coronavirus (COVID-19) in the most deprived areas in Wales was nearly twice as high as that in the least deprived areas

Age-standardised mortality rates, all deaths and deaths involving the coronavirus (COVID-19), Index of Multiple Deprivation, Wales, deaths occurring between 1 March and 31 July 2020



Source: Office for National Statistics – Deaths involving COVID-19 by local area and socioeconomic deprivation

Notes:

1. Deaths occurring between 1 March 2020 and 31 July and registered by 15 August 2020.
2. Figures exclude death of non-residents and are based on May 2020 boundaries.
3. Coronavirus (COVID-19) was the underlying cause or was mentioned on the death certificate as a contributory factor (International Classification of Diseases, tenth edition (ICD-10) codes U07.1 and U07.2).
4. Rates have been standardised using European Standard Population 2013 (ESP 2013) and are expressed per 100,000 people.
5. Deprivation quintiles are based on the Welsh Index of Multiple Deprivation, version 2019.
6. Rates have not been adjusted to take into account the period of interest. They use the annual population as a base and may differ from rates presented in other publications.
7. Figures are provisional.

The most deprived fifth of areas (quintile) in Wales had a rate of 121.4 deaths involving the coronavirus (COVID-19) per 100,000 people; this was nearly twice as high as the least deprived areas (65.5 deaths per 100,000 people) and over twice as high as the lowest mortality rate in quintile four (57.2 deaths per 100,000 population).

The increase in mortality rate in quintile five compared with quintile four is not found when looking at overall mortality (this is provided in the [dataset](#)). This discrepancy was also found our previous [reports](#). Care should be taken when comparing this increase because of the wide confidence intervals.

11 . Deaths involving COVID-19 by local area and socioeconomic deprivation data

[Deaths involving COVID-19 by local area and deprivation](#)

Dataset | Released 28 August 2020

Provisional counts of the number of deaths and age-standardised mortality rates involving the coronavirus (COVID-19) in England and Wales. Figures are provided by age, sex, geographies down to local authority level and deprivation indices.

12 . Glossary

Age-standardised mortality rates

Age-standardised mortality rates are used to allow comparisons between populations that may contain different proportions of people of different ages. The 2013 European Standard Population is used to standardise rates.

Coronaviruses

The World Health Organization (WHO) defines [coronaviruses](#) as “a large family of viruses that are known to cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS)”. Between 2001 and 2018, there were 12 deaths in England and Wales due to a coronavirus infection, with a further 13 deaths mentioning the virus as a contributory factor on the death certificate.

Coronavirus (COVID-19)

COVID-19 refers to the “coronavirus disease 2019” and is a disease that can affect the lungs and airways. It is caused by a type of coronavirus. [Further information](#) is available from the WHO.

Statistical significance

The term “significant” refers to statistically significant changes or differences. Significance has been determined using the 95% confidence intervals, where instances of non-overlapping confidence intervals between estimates indicate the difference is unlikely to have arisen from random fluctuation. In some circumstances, significance has also been tested using z scores.

More information about this z test is available in Appendix 1 of the [Sullivan guide](#).

95% confidence intervals

A confidence interval is a measure of the uncertainty around a specific estimate. If a confidence interval is 95%, it is expected that the interval will contain the true value on 95 occasions if repeated 100 times. As intervals around estimates widen, the level of uncertainty about where the true value lies increases. The size of the interval around the estimate is strongly related to the number of deaths, prevalence of health states and size of the underlying population. At a national level, the overall level of error will be small compared with the error associated with a local area or a specific age and sex breakdown. Therefore, the widths of the confidence intervals reported in this release will have sizable differences.

13 . Measuring the data

More quality and methodology information on strengths, limitations, appropriate uses, and how the data were created is available in the [Mortality statistics in England and Wales QMI](#).

To meet user needs, we are providing more information alongside our usual [Deaths registered monthly in England and Wales](#) dataset. This information is presented by sex and age group. We are also providing age-standardised mortality rates and age-specific mortality rates for recent time periods and breakdowns of deaths involving the coronavirus (COVID-19) by associated pre-existing health conditions.

Rates calculated in this report use the annual population as a base. This will differ from other publications such as [Deaths involving COVID-19, England and Wales](#), which adjusts the populations to take into account the length of time observed and therefore produces a higher rate as the rate is effectively annualised. As population projections and 2019 mid-year population estimates are not available for Lower-layer Super Output Areas (LSOAs) (which are needed to aggregate to Index of Multiple Deprivation (IMD) and some other geographic areas presented in this bulletin), we are unable to annualise the rates. We have therefore used 2018 mid-year population estimates throughout, except for the calculation of rates at country, region and local authority level where we have used 2019 mid-year population estimates.

These figures are different from the daily surveillance figures on COVID-19 deaths published by the Department of Health and Social Care (DHSC) on the [GOV.UK](#) website for the UK as a whole and its constituent countries. Figures in this bulletin are derived from the formal process of death registration and may include cases where the doctor completing the death certificate diagnosed possible cases of COVID-19, for example, where this was based on relevant symptoms but no test for the virus was conducted. Our figures also include any deaths that occur outside hospital.

In contrast to the GOV.UK figures, we include only deaths registered in England and Wales, which is the legal remit of the Office for National Statistics (ONS). Table 1 provides an overview of the differences in definitions between sources.

Table 1: Definitions of COVID-19 deaths between different sources

	DHSC COVID-19 (as published on GOV.UK) before 29 April	DHSC COVID-19 (as published on GOV.UK) between 29 April and 12 August	DHSC COVID-19 (as published on GOV.UK) from 12 August	ONS COVID-19 deaths registered	ONS COVID-19 death occurrence (actual date of death)
Coverage	UK (however we only include England and Wales breakdowns for comparable coverage with ONS data)	UK (however we only include England and Wales breakdowns for comparable coverage with ONS data)	UK (however we only include England and Wales breakdowns for comparable coverage with ONS data)	Registrations in England and Wales Selected UK figures are included in the weekly release	Registrations in England and Wales In discussions with devolved nations to create UK estimates in the near future
Inclusion	Deaths in hospitals	Includes any place of death, including care homes and community	Includes any place of death, including care homes and community	Any place of death, including care homes and community	Any place of death, including care homes and community
	Deaths where the patient has tested positive for COVID-19	Deaths where the patient has tested positive for COVID-19	Deaths where the patient has tested positive for COVID-19 within 28 and 60 days of testing	Deaths where COVID-19 has been mentioned on the death certificate	Deaths where COVID-19 has been mentioned on the death certificate
Timeliness	Provided daily but not officially registered	Provided daily but not officially registered	Provided daily but not officially registered	Weekly registrations are 11 days behind because of the time taken to register, process and publish	Weekly registrations are 11 days behind because of the time taken to register, process and publish

Source: Office for National Statistics – Deaths involving COVID-19 by local area and socioeconomic deprivation

There is usually a delay of at least five days between occurrence and registration. More information on this issue can be found in our [impact of registration delays release](#).

Our [User guide to mortality statistics](#) provides further information on data quality, legislation and procedures relating to mortality and includes a [glossary of terms](#).

14 . Strengths and limitations

Figures are based on the date the death occurred, not when it was registered. There is usually a delay of at least five days between occurrence and registration, so there may be some deaths that occurred in March that are not yet registered. More information on this issue can be found in our [impact of registration delays release](#).

15 . Related links

[Deaths registered in England and Wales: 2019](#)

Bulletin | Released 1 July 2020

Registered deaths by age, sex, selected underlying causes of death and the leading causes of death. Contains death rates and death registrations by area of residence and single year of age.

[Coronavirus \(COVID-19\) product page](#)

Product page | Updated when new data are available

Brings together the latest data and analysis on the coronavirus (COVID-19) pandemic in the UK and its effect on the economy and society.

[Deaths registered weekly in England and Wales, provisional: week ending 14 August 2020](#)

Bulletin | Released 25 August 2020

Provisional counts of the number of deaths registered in England and Wales, including deaths involving COVID-19, by age, sex and region, in the latest weeks for which data are available.

[Where to find statistics on UK deaths involving the coronavirus \(COVID-19\) and infection rates by country](#)

Article | Released 19 May 2020

Links to statistics on COVID-19 deaths and infection rates published by the different constituent countries of the UK.