

Article

# Comparison of weekly death occurrences in England and Wales: up to week ending 17 April 2020

This short article accompanies the Weekly deaths release and explains the differences between various data sources that report on coronavirus (COVID-19) deaths.

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## Table of contents

1. [Other pages in this release](#)
2. [Main points](#)
3. [Comparisons](#)
4. [Deaths data](#)
5. [Glossary](#)
6. [Measuring the data](#)
7. [Strengths and limitations](#)
8. [Related links](#)

# 1 . Other pages in this release

- [Deaths registered weekly in England and Wales, provisional: week ending 17 April 2020](#)
- [Death registrations and occurrences by local authority and health board: week ending 17 April 2020](#)
- [Deaths involving COVID-19 in care homes notified to the Care Quality Commission, England](#)

## 2 . Main points

- This short article accompanies the [Weekly deaths release for the week ending 17 April 2020](#) and explains the differences between various data sources that report on coronavirus (COVID-19) deaths.
- A total of 19,112 deaths involving COVID-19 were registered in England and Wales between 28 December 2019 and 17 April 2020 (year to date).
- Including deaths that occurred up to 17 April but were registered up to 25 April, of those we have processed so far, the number involving COVID-19 was 21,284 for England and 1,016 for Wales.
- For deaths that occurred up to 17 April, the comparative number of death notifications reported by the Department of Health and Social Care (DHSC) on GOV.UK was 13,917 for England and 534 for Wales.
- NHS England and Public Health Wales (PHW) report COVID-19 deaths by date of death, which come from the same source as DHSC figures but are continuously updated; these showed 15,293 deaths by 17 April for England and 632 for Wales, which are 5,991 and 384 fewer than Office for National Statistics (ONS) figures for England and Wales respectively by date of death.
- This week we have included Care Quality Commission (CQC) data on notifications of COVID-19 related deaths explicitly stated as occurring in care home settings; from 10 April to 17 April, these total 1,968 deaths, which closely matches the 1,999 COVID-19 related deaths in care home settings that were registered in England over the same time period.
- CQC notifications data are available more quickly than death registration data, we have included CQC notifications up to 24 April in this article; from 10 April to 24 April, CQC had been notified of a total of 4,343 deaths from COVID-19 in care home settings.
- Week 16 included the Easter Monday bank holiday, and the five-year average shows a decrease in registrations over the Easter holiday; however, the [Coronavirus Act 2020](#) allowed registry offices to remain open over Easter, which may have reduced any drop in registrations for Week 16 2020.

## 3 . Comparisons

### More about coronavirus

- Find the latest on [coronavirus \(COVID-19\) in the UK](#).
- All ONS analysis, summarised in our [coronavirus roundup](#).
- View [all coronavirus data](#).

Figure 1 shows the cumulative numbers of deaths relating to the coronavirus (COVID-19) for England and Wales by day up to 17 April 2020, allowing comparison between the daily death counts released by the Department of Health and Social Care (DHSC) on [GOV.UK](#); the reconciled data by date of death released by NHS England and Public Health Wales (PHW); Office for National Statistics (ONS) death records by date of registration; and ONS death records by date of death. Numbers produced by NHS England and PHW are the numbers supplied to the DHSC but based on date of occurrence rather than date of notification.

Figures 3 and 4 are for England only and include numbers of deaths provided by the Care Quality Commission (CQC) for deaths involving COVID-19 in care homes.

## Difference between ONS, DHSC, NHS England and PHW figures

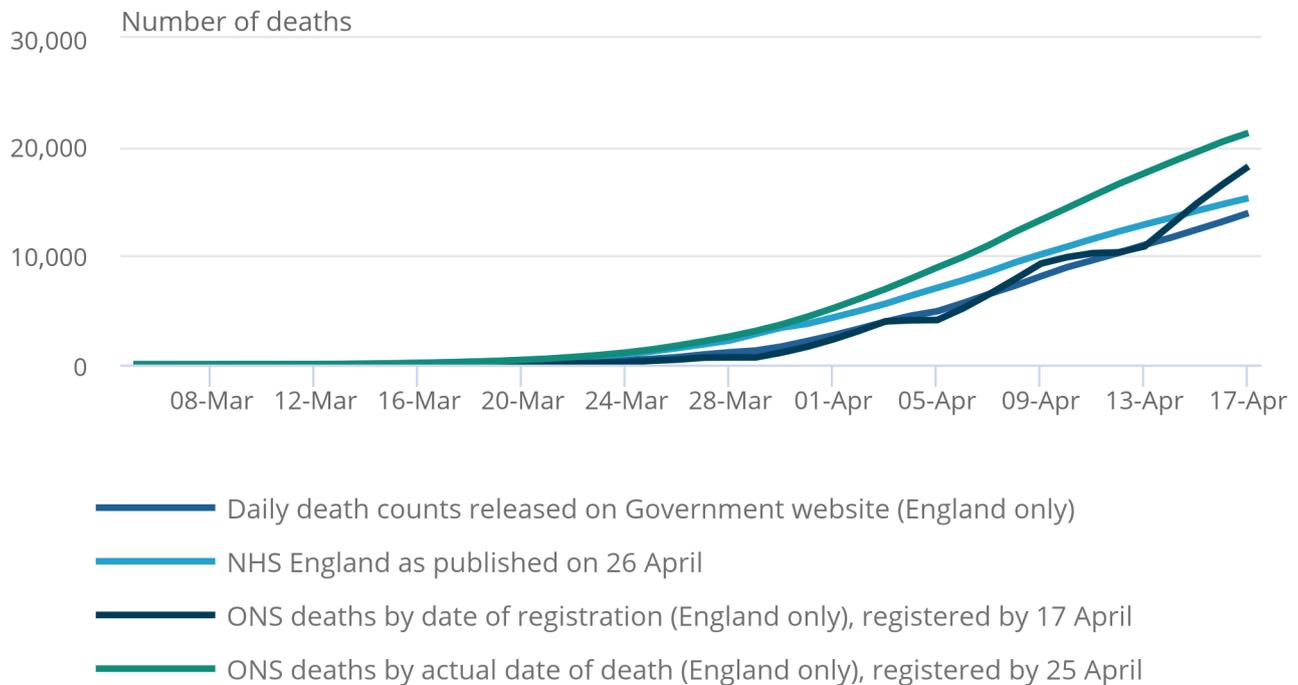
The DHSC release daily updates on [GOV.UK](#) counting the total number of deaths reported to them among patients who had tested positive for COVID-19. This covers all deaths that occurred in hospitals in England and were reported up to 5pm the day before as well as all deaths in Wales, Scotland and Northern Ireland wherever they occurred, if known to the public health agencies. To allow comparison, only the numbers for England and Wales are shown here.

NHS England provide the [data on deaths in hospital in England](#) and PHW provide data on [deaths in Wales](#) that feed into the GOV.UK figure. NHS England and PHW also publish continuously updated series by date of death as opposed to date of notification.

The ONS provides figures based on all deaths registered involving COVID-19 according to death certification, whether in or out of hospital, for England and Wales. We also provide the figures by date of death (occurrence). More information can be found in the [Measuring the data](#) section of our Weekly deaths publication.

**Figure 1: The cumulative number of deaths involving COVID-19 in England using different data sources, up to 17 April 2020**

Figure 1: The cumulative number of deaths involving COVID-19 in England using different data sources, up to 17 April 2020



**Source: Department of Health and Social Care, NHS England and Office for National Statistics**

**Notes:**

1. [Department of Health and Social Care \(DHSC\) figures.](#)
2. [NHS England figures.](#)
3. Figures include deaths of non-residents.
4. All Office for National Statistics (ONS) figures for 2020 are provisional.
5. The ICD-10 definitions for the coronavirus (COVID-19) are U07.1 and U07.2.
6. Daily death counts are released on GOV.UK.

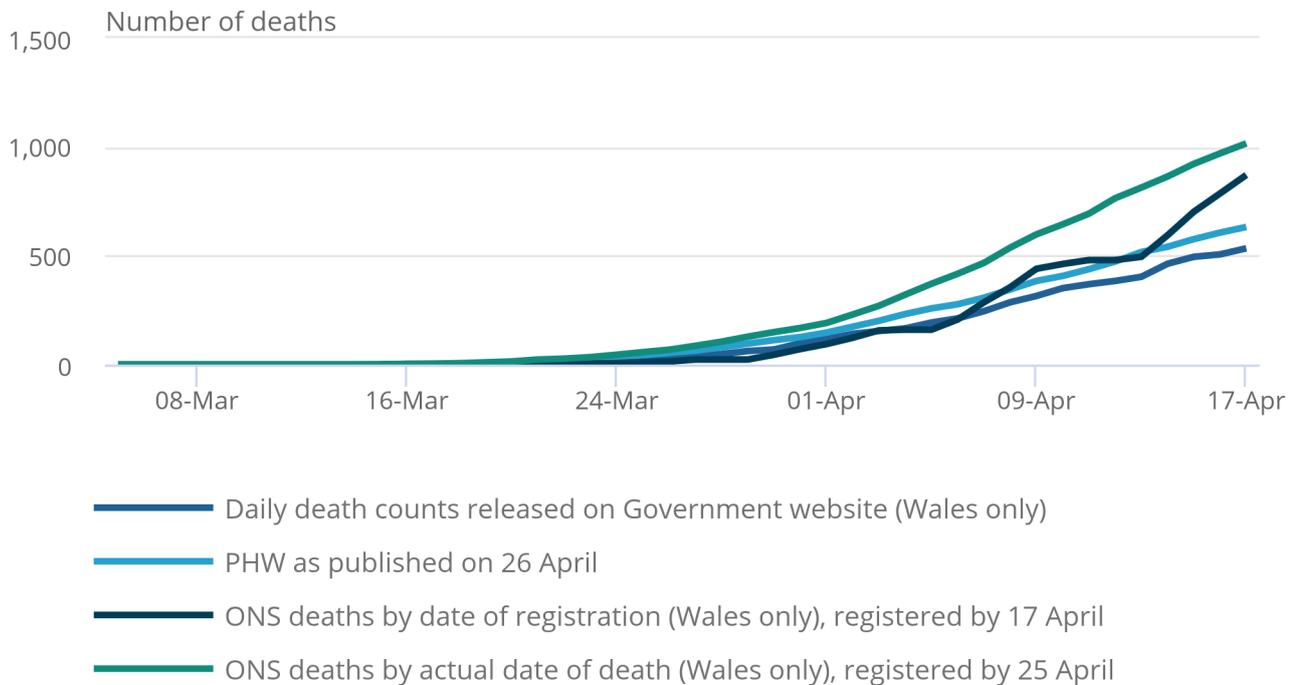
The number of deaths reported to the DHSC by 17 April was 13,917 for England (Figure 1). This is 5,068 fewer than the 18,201 death registrations involving COVID-19 reported by the ONS for the same period. Both data sources have some delay from date of death to reporting.

The number of deaths occurring by 17 April and registered by 25 April was 21,284, which is 8,151 higher than the DHSC reported number. This is because ONS figures for occurrence are based on date of death whereas the DHSC report on date of notification. The next section looks at DHSC numbers based on date of death, which are more in line with ONS occurrences.

The NHS England numbers by date of death, which come from the same source as the DHSC's numbers but are continuously updated, showed 15,293 deaths by 17 April. This is 1,376 more than DHSC deaths but 5,991 fewer than ONS figures for England by date of death.

**Figure 2: The cumulative number of deaths involving COVID-19 in Wales using different data sources, up to 17 April 2020**

Figure 2: The cumulative number of deaths involving COVID-19 in Wales using different data sources, up to 17 April 2020



**Source: Department of Health and Social Care, Public Health Wales and Office for National Statistics**

**Notes:**

1. [Department of Health and Social Care \(DHSC\) figures.](#)
2. [Public Health Wales \(PHW\) figures.](#)
3. Figures include deaths of non-residents.
4. All Office for National Statistics (ONS) figures for 2020 are provisional.
5. The ICD-10 definitions for the coronavirus (COVID-19) are U07.1 and U07.2.
6. Daily death counts are released on GOV.UK.

The number of deaths reported to the DHSC by 17 April was 534 for Wales (Figure 2). This number is 337 fewer than the 871 death registrations involving COVID-19 reported by the ONS for the same period. Both data sources have some delay from date of death to reporting.

The number of deaths occurring by 17 April and registered by 25 April was 1,016, which is 482 higher than the DHSC reported number. This is because ONS figures for occurrence are based on date of death whereas DHSC report on date of notification. The next section looks at DHSC numbers based on date of death, which are more in line with ONS occurrences.

The PHW numbers by date of death, which come from the same source as the DHSC's numbers but are continuously updated, showed 632 deaths by 17 April. This is 98 more than DHSC deaths for Wales but 384 fewer than ONS figures for Wales by date of death.

In contrast to earlier weeks for both England and Wales when the ONS registrations figures were similar to the GOV.UK figures, the ONS registration figures overtook the GOV.UK figures and are now more in line with NHS England and PHW figures. The difference between the NHS England and PHW figures and the ONS figures by date of death is because of the wider coverage of the ONS figures, including deaths outside of hospital and those where COVID-19 was reported on the death certificate but there was no positive test. Looking at the year to date, 22.6% of deaths in England and Wales registered by 17 April involving COVID-19 occurred outside hospital (4,316 deaths).

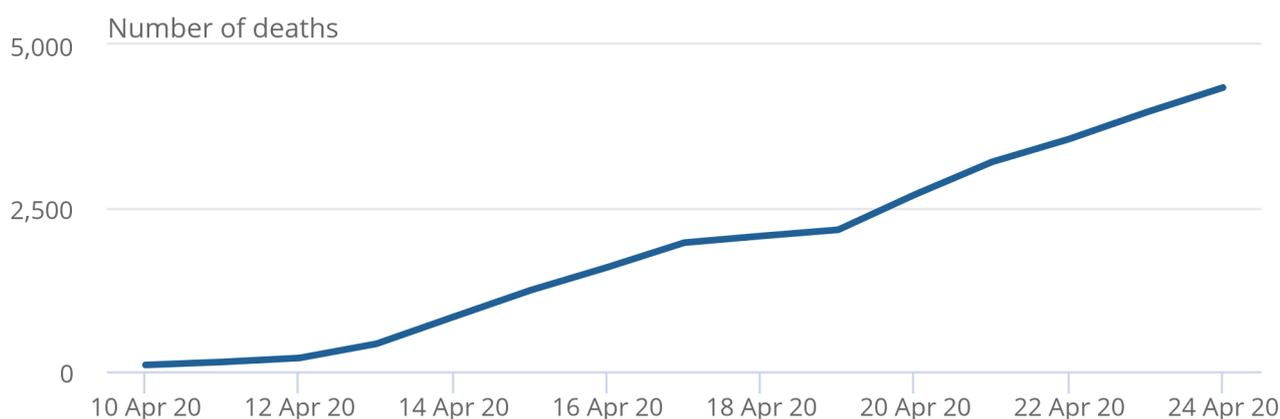
## Deaths in care homes

To improve the timely availability of data on deaths in care homes caused by COVID-19, the ONS and the CQC have agreed to publish provisional counts of deaths of care home residents in care homes, in England, based on statutory notification by care home providers to the CQC.

The CQC is the independent regulator of health and social care in England. Notifications about deaths in care homes must be sent to the CQC without delay and are typically provided within two to three days of death. The data provided by the CQC are counts of deaths each day of care home residents who died in care homes, by date of notification. The data are from 10 April when CQC introduced a new way to understand whether COVID-19 was involved in the death. A death involving COVID-19 is based on the statement from the care home provider to the CQC: the assessment of whether COVID-19 was involved may or may not correspond to a medical diagnosis or test result or be reflected in the death certification. More information on the data provided by the CQC can be found in our [joint transparency statement](#). As with ONS registrations, reduced numbers of notifications occur on the weekend.

**Figure 3: The cumulative number of care home residence deaths in care homes involving COVID-19 in England**

Figure 3: The cumulative number of care home residence deaths in care homes involving COVID-19 in England



**Source: Care Quality Commission data published by the Office for National Statistics**

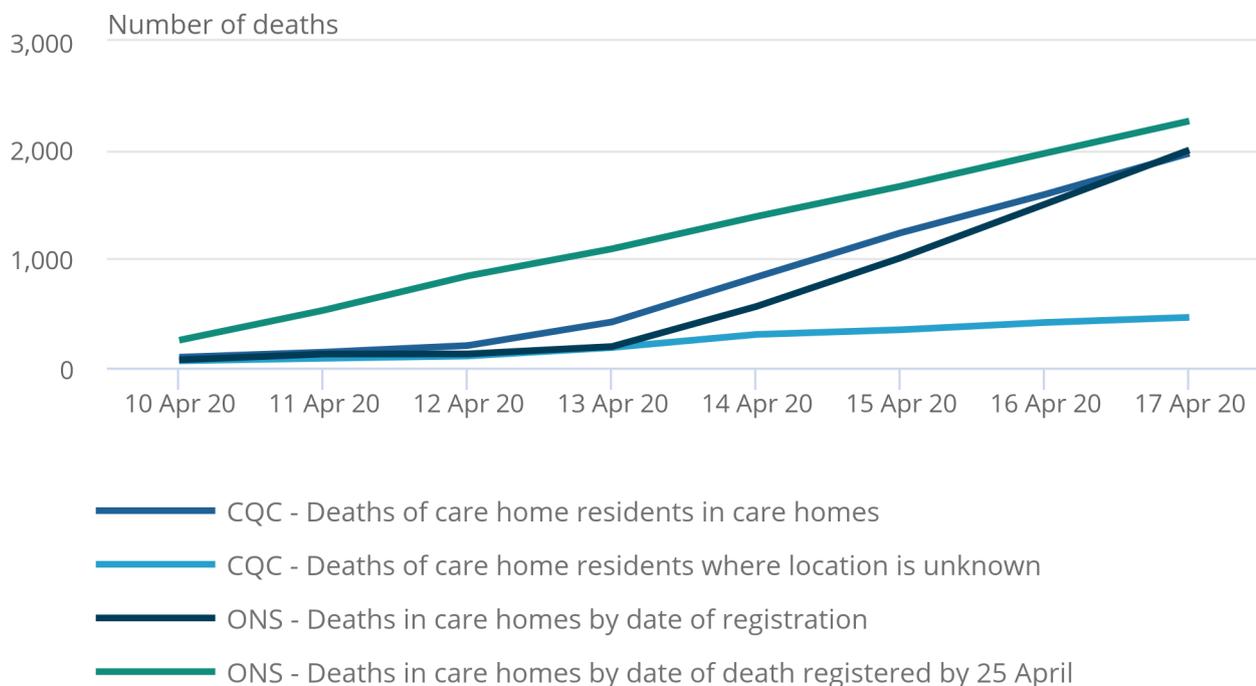
**Notes:**

1. Figures are for deaths that the Care Quality Commission (CQC) is notified of on the days specified. Figures only include deaths that were notified by 24 April 2020, and they may be an underestimate because of reporting delays.
2. Figures are for persons who were resident in and died in a care home.

On 10 April, the first day the CQC was able to distinguish whether a death involved COVID-19, there were 95 deaths of care home residents in care homes notified to the CQC. From 10 April up to and including 24 April, the latest date for which data are available, the number had increased to 4,343 deaths of residents in care homes involving COVID-19.

**Figure 4: The cumulative number of deaths in care homes involving COVID-19 in England using different data sources, up to 17 April 2020**

Figure 4: The cumulative number of deaths in care homes involving COVID-19 in England using different data sources, up to 17 April 2020



**Source: Care Quality Commission and Office for National Statistics**

**Notes:**

1. Figures exclude non-residents.
2. Figures are provisional.
3. Figures for the Care Quality Commission (CQC) are based on the date the CQC was notified of the death. Figures only include deaths that were notified by 24 April 2020, and they may be an underestimate because of reporting delays.

Up to 17 April, there were 1,968 deaths in care homes involving COVID-19 notified to the CQC (Figure 4). There were an additional 461 deaths of care home residents where the location of death was not stated by the care home provider, shown separately on Figure 4; these deaths may have taken place in a care home, but they could have been in hospital or elsewhere. The ONS has reported that there were 1,999 deaths in care homes registered during the same period and 2,265 deaths in care homes occurring in the same period that were registered by 25 April.

The data from the CQC and ONS registrations follow a similar pattern. The difference is likely to be caused by registration delays. It takes around two to three days for the CQC to be notified of a death, while the ONS has to wait until a death is registered to be included in our statistics, which can take longer. On average, for deaths occurring in March 2020, there was a delay of four days between a death occurring and being registered. ONS death occurrences are higher than CQC figures as these numbers are based on the date of the death rather than date of notification.

An important difference between the two sources is that the ONS reports deaths where COVID-19 was mentioned on the death certificate, while CQC notifications rely on the statement of the care home provider that COVID-19 was suspected or confirmed. CQC does not hold person-level information that allows a direct comparison between the two sources and so an accurate effect of different reporting criteria cannot be determined.

It is acknowledged that care homes will be feeling the effects of the deaths of any of their residents including those that died outside of care homes, for example, in hospitals. The ONS, CQC and PHE are undertaking further work to better understand the total impact on care home residents.

## Conclusion

The ONS and DHSC COVID-19 death numbers have different criteria. The DHSC count deaths where a person has been tested positive for COVID-19, and for England this is in hospitals only. The ONS counts deaths where COVID-19 (including suspected cases) was mentioned on the death certificate, regardless of location.

The ONS registration numbers in Figure 1 align more closely to the DHSC-reported number of deaths, as like the DHSC-reported number it is based on the date a death is known (reported) rather than when it occurred. The [date of death data](#) from NHS England are closer to the ONS occurrence data as they are both based on the date the person died. The figures published on GOV.UK are valuable because they are available very quickly and give an indication of what is happening day by day. Their definition is also clear, so the limitations of the data can be understood. But they do not include all deaths involving COVID-19, such as those in England that are not in a hospital or where no test result was available.

NHS England's reconciled numbers by date of death are valuable as they give a good indication of the lags in the daily deaths in hospital reporting process. They allow analysis by date of death to be carried out, which is a better indicator of the growth in the number of deaths.

Numbers produced by the ONS take longer to prepare because they have to be certified by a doctor, registered and processed. But once ready, they are the most accurate and complete information. The ONS provides figures based on deaths registered in England and Wales with COVID-19 (more information can be found in the [Measuring the data](#) section of our Weekly deaths publication).

The ONS is now publishing on behalf of the CQC [the number of deaths in care homes that are notified to the CQC](#). This gives a more up-to-date number of deaths in care homes than was previously available. In CQC figures, a death involving COVID-19 is based on the statement from the care home provider to the CQC: the assessment of whether COVID-19 was involved may or may not correspond to a medical diagnosis or test result or be reflected in the death certification.

## 4 . Deaths data

[Deaths registered weekly in England and Wales, provisional](#)

Dataset | Released 28 April 2020

Provisional counts of the number of deaths registered in England and Wales, by age, sex and region, in the latest weeks for which data are available. Includes the most up-to-date figures available for deaths involving the coronavirus (COVID-19).

## 5 . Glossary

### Coronavirus (COVID-19) deaths

Coronavirus (COVID-19) deaths are those deaths registered in England and Wales in the stated week where COVID-19 was mentioned on the death certificate as "deaths involving COVID-19". A doctor can certify the involvement of COVID-19 based on symptoms and clinical findings – a positive test result is not required.



## 6 . 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 publish very timely but provisional counts of death registrations in England and Wales in our [Deaths registered weekly in England and Wales, provisional dataset](#). These are presented by sex, age group and regions (within England) as well as for Wales as a whole. To allow time for registration and processing, these figures are published 11 days after the week ends. Because of the rapidly changing situation, in this bulletin we have also given provisional updated totals based on the latest available death registrations, up to 18 April 2020.

Because of the coronavirus (COVID-19) pandemic, our regular weekly deaths release now provides a separate breakdown of the numbers of deaths involving COVID-19: that is, where COVID-19 or suspected COVID-19 was mentioned anywhere on the death certificate, including in combination with other health conditions. If a death certificate mentions COVID-19, it will not always be the main cause of death but may be a contributory factor. This new bulletin summarises the latest weekly information and will be updated each week during the pandemic.

These figures are different from the daily surveillance figures on COVID-19 deaths published by the Department of Health and Social Care (DHSC) on [GOV.UK](#), for the UK as a whole and constituent countries. Figures in this report 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

|                   | <b>DHSC COVID-19<br/>(as published on GOV.<br/>UK )</b>   | <b>ONS COVID-19<br/>deaths registered</b>  | <b>ONS COVID-19 death<br/>occurrence<br/>(actual date of death)</b>   | <b>NHS England</b>   |
|-------------------|---|--|---|--|
| <b>Coverage</b>   | UK (however we only include England and Wales breakdowns for comparable coverage with ONS data)   | Registrations in England and Wales<br><br>In discussions with devolved nations to create UK estimates in the near future                                   | Registrations in England and Wales<br><br>In discussions with devolved nations to create UK estimates in the near future  | England  |
| <b>Inclusion</b>  | Deaths in hospitals<br><br>Deaths where patient has been tested for COVID-19  | Any place of death, including Nursing homes<br><br>Deaths where COVID-19 has been mentioned on the death certificate                                       | Any place of death, including Nursing homes<br><br>Deaths where COVID-19 has been mentioned on the death certificate  | Deaths in hospitals<br><br>Deaths where patient has been tested for COVID-19 |
| <b>Timeliness</b> | Provided daily but not officially registered. Data are provided to NHS-E directly by hospitals<br><br>Data only published once confirmed family have been notified of death | Weekly registrations are 11 days behind because of the time taken to register, process and publish<br><br>Registered in the week ending 17 April (Week 16) | Weekly registrations are 11 days behind because of the time taken to register, process and publish<br><br>Deaths which occurred in Week 16 but were registered up to 25 April | Updated daily for each date of death   |

Source: Office for National Statistics

We will publish accompanying articles periodically, giving enhanced information such as age-standardised and age-specific mortality rates for recent time periods and breakdowns of deaths involving COVID-19 by associated pre-existing health conditions.

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](#).

## 7 . Strengths and limitations

Figures are based on the date the death was registered, not when it occurred. 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](#).

## 8 . Related links

### [Deaths registered in England and Wales: 2018](#)

Bulletin | Released 6 August 2019

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.