

Article

Comparison of weekly death occurrences in England and Wales: up to week ending 3 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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Correction

15 April 2020 14:12

Please note a correction has been made to the statisticians comment regarding the highest weekly total.

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1 . Other pages in this release

- [Deaths registered weekly in England and Wales, provisional: week ending 3 April 2020](#)

2 . Main points

- This short article accompanies the Weekly deaths release for week ending 3 April 2020 and explains the differences between various data sources that report on coronavirus (COVID-19) deaths.
- A total of 4,122 deaths involving COVID-19 were registered in England and Wales between 28 December 2019 and 3 April 2020 (year to date).
- Including deaths that occurred up to 3 April but were registered up to 11 April, the number involving COVID-19 was 6,235.
- For deaths that occurred up to 3 April, the comparative number of death notifications reported by the Department of Health and Social Care (DHSC) on GOV.UK for England and Wales was 4,093.
- NHS England COVID-19 deaths by date of death, which come from the same source as DHSC but are continuously updated, showed 5,186 deaths by 3 April; 793 less than Office for National Statistics (ONS) figures for England by date of death (5,979).
- Please note, the Easter Bank Holiday will have an effect on the number of deaths being registered.

Statistician's comment

Nick Stripe, head of health analysis and life events at the ONS said:

“The latest comparable data for deaths involving COVID-19 with a date of death up to 3 April, show there were 6,235 deaths in England and Wales. When looking at data for England, this is 15% higher than the NHS numbers as they include all mentions of COVID-19 on the death certificate, including suspected COVID-19, as well as deaths in the community.

“The 16,387 deaths that were registered in England and Wales during the week ending 3 April is the highest weekly total since Week 2 (early January) 2000.”

3 . Comparisons

Figure 1 shows the cumulative numbers of deaths relating to the coronavirus (COVID-19) for England and Wales by day up to 3 April 2020, allowing comparison between the daily death counts released by the Department of Health and Social Care (DHSC) on GOV.UK, the Office for National Statistics (ONS) death records by date of registration, and ONS death records by date of death. Figure 2 is for England only and includes NHS England numbers, which are the numbers supplied to DHSC but based on date of occurrence rather than date of notification.

Difference between ONS and DHSC figures

The DHSC releases daily updates on the GOV.UK website counting the total number of deaths reported to it 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, and 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.

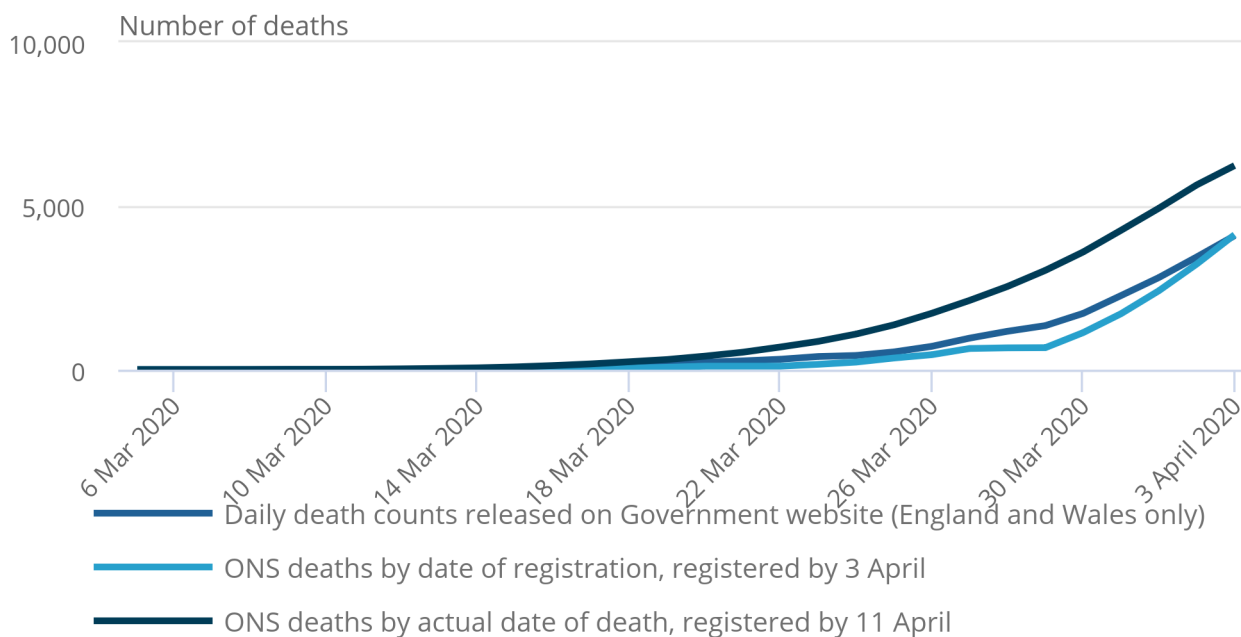
The ONS provides figures based on all deaths registered involving COVID-19 according to death certification, whether in or out of hospital, for England and Wales. We also provide the figures by date of death (occurrence). More information can be found in the [Measuring the data](#) section of our weekly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

Figure 1: The cumulative number of deaths involving COVID-19 in England and Wales using different data sources, up to 3 April 2020

Cumulative number of deaths involving COVID-19 in England and Wales

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Cumulative number of deaths involving COVID-19 in England and Wales



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

Notes:

1. Department of Health and Social Care (DHSC) figures.
2. Figures include deaths of non-residents.
3. Estimates are provisional.
4. The ICD-10 definitions for COVID-19 are U07.1 and U07.2.
5. Daily death counts are released on the GOV.UK website.

As can be seen in Figure 1, the number of deaths reported to the DHSC by 3 April was 4,093 for England and Wales (4,313 deaths for the whole of the UK). The England and Wales number is 29 fewer than the 4,122 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 3 April and registered by 11 April was 6,235, which is 2,142 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 is more in line with ONS occurrences.

Difference between ONS and NHS England figures

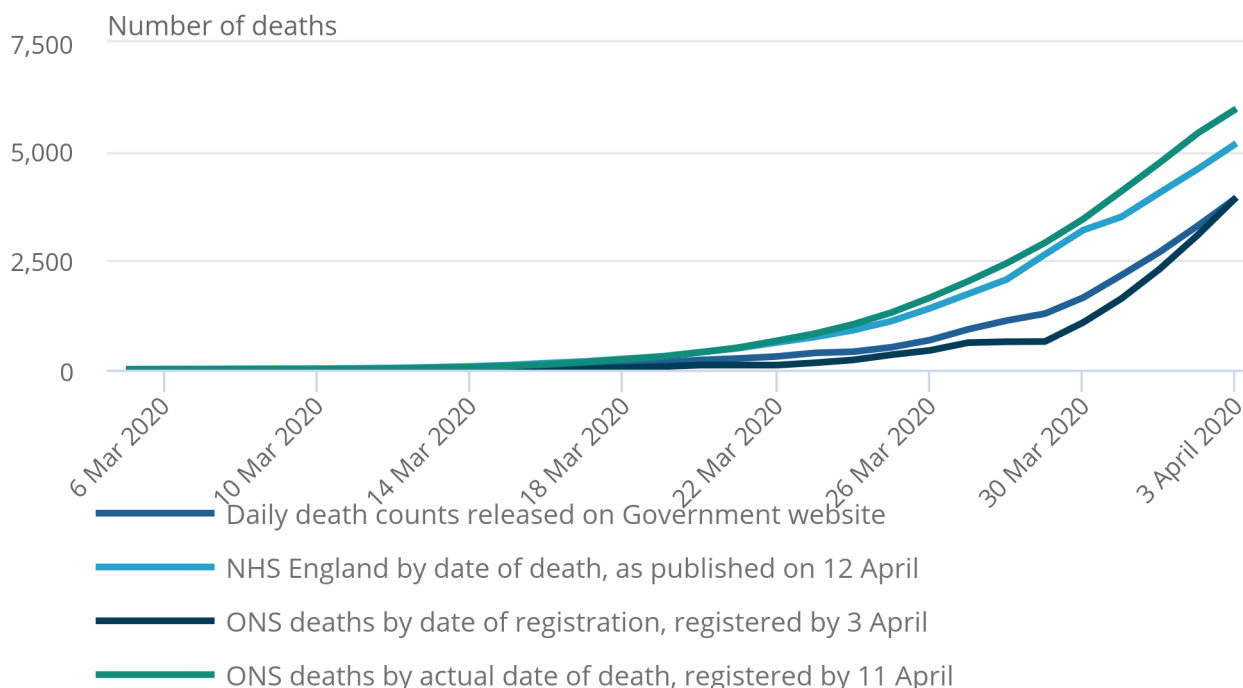
NHS England provide [the data on deaths in hospital in England](#) that feed into the GOV.UK figure and publish a continuously updated series by date of death. They also provide the numbers based on date of death as opposed to date of notification.

Figure 2: The cumulative number of deaths involving COVID-19 in England using different data sources, up to 3 April 2020

Cumulative number of deaths involving COVID-19 in England

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Cumulative number of deaths involving COVID-19 in England



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

Notes:

1. Department of Health and Social Care (DHSC) figures.
2. NHS England figures.
3. Figures exclude deaths of non-residents.
4. Estimates are provisional.
5. The ICD-10 definitions for COVID-19 are U07.1 and U07.2.
6. Daily death counts are released on the GOV.UK website.

The NHS England numbers by date of death, which come from the same source as DHSC but are continuously updated, showed 5,186 deaths by 3 April. This is 1,247 more than DHSC England-only deaths (3,939) but 793 fewer than ONS figures for England by date of death (5,979).

The difference between the NHS England 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, 9.7% of deaths in England involving COVID-19 occurred outside hospital (383 deaths).

Conclusion

ONS and DHSC COVID-19 death numbers have different criteria. The DHSC count deaths where a person has been tested positive for coronavirus, 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.

It can be seen that 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 close 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 provide figures based on deaths registered in England and Wales with COVID-19 (more information can be found in the Measuring the data section of the weekly deaths publication).

4 . Deaths data

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

Dataset | Released 14 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 data on the coronavirus (COVID-19) deaths.

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 11 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 the [GOV.UK](#) website, 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

	DHSC COVID-19 (as published on GOV.UK)	ONS COVID-19 deaths registered	ONS COVID-19 death occurrence (actual date of death)	NHS England
Coverage	UK (however we only include England and Wales breakdowns for comparable coverage with ONS data)	Registrations in England and Wales In discussions with devolved nations to create UK estimates in the near future	Registrations in England and Wales In discussions with devolved nations to create UK estimates in the near future	England
Inclusion	Deaths in hospitals Deaths where patient has been tested for COVID-19	Any place of death, including Nursing homes Deaths where COVID-19 has been mentioned on the death certificate	Any place of death, including Nursing homes Deaths where COVID-19 has been mentioned on the death certificate	Deaths in hospitals Deaths where patient has been tested for COVID-19
Timeliness	Provided daily but not officially registered. Data are provided to NHS-E directly by hospitals. 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. Registered in the week ending the 3 April 2020 (week 14).	Weekly registrations are 11 days behind because of the time taken to register, process and publish. Deaths which occurred in week 14 but were registered up to 11 April 2020.	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. On 16 April we will be publishing more in-depth analysis for deaths involving COVID-19.

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.