

Article

Deaths involving COVID-19 in the care sector, England and Wales: deaths registered between week ending 20 March 2020 and week ending 2 April 2021

Provisional figures on deaths registered involving the coronavirus (COVID-19) during wave one (week ending 20 March 2020 to week ending 11 September 2020) and wave two (week ending 18 September 2020 to week ending 2 April 2021) of the pandemic in care homes, in England and Wales.

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Release date:
11 May 2021

Next release:
To be announced

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1 . Main points

- Since the beginning of the coronavirus (COVID-19) pandemic, there were 173,974 deaths of care home residents (wherever the death occurred) in England and Wales, this is an increase of 19.5% compared with the five-year average (145,560 deaths); of these, 42,341 involved COVID-19 accounting for 24.3% of all deaths of care home residents.
- Deaths of care home residents involving COVID-19 increased sharply in wave one, however there were a higher proportion of deaths involving COVID-19 in wave two (25.7%) than wave one (23.1%).
- Caution is advised comparing between the two waves since the higher proportion of deaths involving COVID-19 in wave two could be attributed to undiagnosed COVID-19 cases in the first wave.
- By contrast, there were more total deaths of care home residents above the five-year average in wave one (27,079 excess deaths) than in wave two (1,335 excess deaths).
- This may be because of delayed access to care services and rapid testing during wave one; and lower care home occupancy, vaccine availability and mortality displacement in wave two.
- During the first and second wave, COVID-19 was the leading cause of death in male care home residents while Dementia and Alzheimer disease was the leading cause of death in female care home residents.
- Dementia and Alzheimer disease was the most common pre-existing condition found among deaths due to COVID-19 in both male and female care home residents in wave one and wave two.

The figures within this article are based on when a date was registered, not the date a death occurred and should not be compared with occurrence data in [previous articles](#).

2 . Overview

There have been fluctuations in occupancy rates of care homes as a result of the coronavirus (COVID-19) pandemic therefore we have been unable to accurately estimate a care resident population for 2021, because of this mortality rates have not been calculated within this publication.

Using death registration data, the Office for National Statistics (ONS) has defined the waves of the pandemic as:

- Wave one: deaths registered up to 12 September 2020
- Wave two: deaths registered from 12 September 2020 (inclusive)

The first care home resident death involving COVID-19 was registered on 17 March 2020 therefore the week ending 20 March 2020 will form the beginning of wave one in this article. Wave two is from 12 September 2020 up to the most recent data we have available (week ending 2 April 2021). Wave one and wave two constitute 26 and 29 weeks respectively.

"Deaths of care home residents" refers to both (a) deaths occurring in a care home to residents, and (b) deaths where the deceased resided in a care home but died elsewhere. The figures should not be confused with "deaths in care homes" reported in other publications, which refers only to category (a).

The term "due to COVID-19" refers to deaths with an underlying cause of death as COVID-19, the term "involving COVID-19" refers to deaths that had COVID-19 mentioned anywhere on the death certificate.

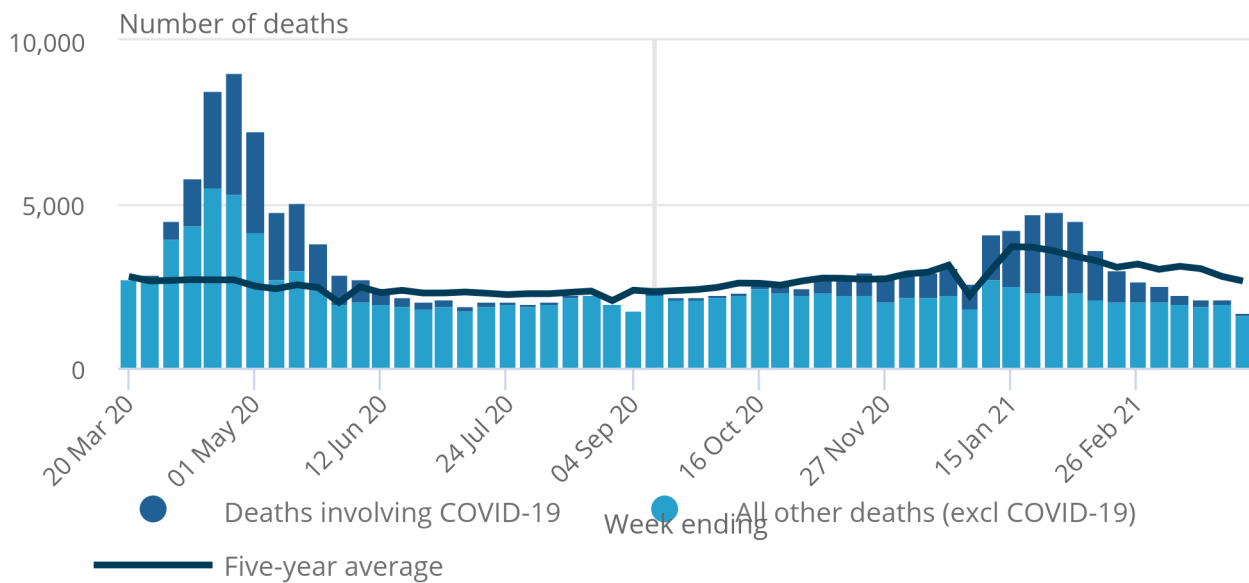
3 . Deaths involving COVID-19 among care home residents

Figure 1: The sharpest rise in COVID-19 deaths occurred in wave one, but overall a higher proportion of deaths involved COVID-19 in wave two

Number of weekly deaths of care home residents registered from 14 March 2020 to 2 April 2021, England and Wales

Figure 1: The sharpest rise in COVID-19 deaths occurred in wave one, but overall a higher proportion of deaths involved COVID-19 in wave two

Number of weekly deaths of care home residents registered from 14 March 2020 to 2 April 2021, England and Wales



Source: Office for National Statistics - Deaths involving COVID-19 in the care sector

Notes:

1. Figures for 2020 (week ending 20 March 2020 to 25 December 2020) are final and all weeks of 2021 (week ending 8 January 2021 to 2 April 2021) are provisional.
2. Week 53 2020 (week ending 1 January 2021) has been removed since there is no five-year average comparison, total deaths and deaths involving COVID-19 for Week 53 2020 were 2,343 and 746 respectively.
3. The International Classification of Diseases, 10th edition (ICD-10) definitions for the coronavirus (COVID-19) are U07.1, U07.2, U09.9 and U10.9.
4. The average for 2015 to 2019 provides a comparison of the number of deaths expected per week in a usual (non-pandemic) year.

Between Week 12 2020 (week ending 20 March 2020) and Week 13 2021 (week ending 2 April 2021), 173,974 deaths of care home residents were registered in England and Wales. This is an increase of 19.5% compared with the five-year average (145,560 deaths).

Total deaths of care home residents decreased between wave one and wave two (89,528 and 84,446 deaths respectively). Total deaths at the peak of wave one were 3.4 times higher than the five-year average compared with 1.3 times higher at the peak of wave two. Overall, excess deaths (see [Glossary](#)) of care home residents were 1.4 times higher in wave one (27,079 excess deaths) compared with 1.0 times higher in wave two (1,335 excess deaths).

Of the 173,974 deaths (registered between week ending 20 March 2020 and week ending 2 April 2021), 42,341 mentioned "novel coronavirus" (COVID-19), accounting for 24.3% of all care home resident deaths. Using the rate of change calculation (see [Glossary](#)), the peak of deaths involving COVID-19 in care homes was reached nearly two times faster in wave one than in wave two. While the sharpest rise in deaths involving COVID-19 occurred in wave one there was a higher proportion of deaths involving COVID-19 in wave two. In wave one, 20,664 deaths of care home residents (23.1%) mentioned COVID-19 compared with 21,677 deaths (25.7%) in wave two.

However, the higher proportion of deaths involving COVID-19 in wave two could be attributed to undiagnosed COVID-19 cases in the first wave because of less testing and less clinical experience with a new disease.

We would expect to see the observed increase in "confirmed" COVID-19 cases in wave two because of an [increase in testing](#). In line with this, of the 20,664 deaths involving COVID-19 of care home residents in wave one, 17,400 (84.2%) were "confirmed" COVID-19 and 3,246 (15.7%) were "suspected" COVID-19. Of the 21,677 deaths involving COVID-19 in wave two, 21,541 (99.4%) were "confirmed" and 117 (0.5%) were "suspected".

Caution needs to be taken when interpreting these results since the higher number of excess deaths in wave one could be because of:

- [delayed access to care services](#) such as local [COVID-19 alert level system](#) and [personal protective equipment \(PPE\)](#) at the beginning of the pandemic
- unavailability of [rapid testing during wave one of the pandemic](#)
- availability of [vaccinations during wave two](#)
- "[mortality displacement](#)" where the higher number of deaths in wave one could be contributing to the lower levels observed in wave two, because some people who may have otherwise died in wave two could have died in wave one
- lower levels of care home occupancy in wave two; possible reasons for this could include; the care home population may not yet have returned to normal after a greater number of deaths earlier in the year, care homes limiting capacity because of social distancing measures and a delay in individuals moving into care homes due to perceived risk of infection. See [Direct and Indirect Impacts of COVID-19 on Excess Deaths and Morbidity \(PDF, 1.81MB\)](#).

Therefore, all these factors may be a contributory to the lower excess deaths in wave two.

For information on England and Wales separately and comparator figures from the Care Quality Commission and Care Inspectorate Wales please see [accompanying dataset](#).

4 . Place of death for care home residents

In England and Wales, excess deaths of care home residents in care homes were highest in wave one (25,615 excess deaths) compared with wave two (2,537 excess deaths). This is compared to hospitals where there were 1,407 excess deaths in wave one however, in wave two overall deaths were below the five-year average by 1,223 deaths (Figure 2).

Figure 2: The number of excess deaths of care home residents occurring in care homes is larger than the excess deaths in hospitals

Number of excess deaths by place of occurrence registered from 14 March 2020 to 2 April 2021, England and Wales

Notes:

1. Figures for 2020 (week ending 20 March 2020 to 25 December 2020) are final and all weeks of 2021 (week ending 1 January 2021 to 2 April 2021) are provisional.
2. Week 52 five-year average is used to compare against Week 53 2020 deaths (week ending 1 January 2021).
3. The International Classification of Diseases, 10th edition (ICD-10) definitions for the coronavirus (COVID-19) are U07.1, U07.2, U09.9 and U10.9.
4. The average for 2015 to 2019 provides a comparison of the number of deaths expected per week in a usual (non-pandemic) year.

Download the data

[.xlsx](#)

5 . Country and regional breakdown of deaths involving COVID-19 among care home residents

Since the announcement of the UK [lockdown](#) on 23 March 2020 there have been differing [regional lockdown measures](#) implemented across England and Wales. It is important to consider any differences in regional lockdowns when interpreting the data.

Figure 3: The North East had the highest proportion of deaths involving COVID-19 in wave one, but Wales had the highest proportion in wave two

Number of weekly deaths of care home residents registered from 14 March 2020 to 2 April 2021, English regions and Wales

Notes:

1. Based on area of usual residence.
2. Figures for 2020 (week ending 20 March 2020 to 25 December 2020) are final and all weeks of 2021 (week ending 8 January 2021 to 2 April 2021) are provisional.
3. Week 53 2020 (week ending 1 January 2021) has been removed since there is no five-year average comparison, please see [accompanying datasets for figures](#).
4. The International Classification of Diseases, 10th edition (ICD-10) definitions for the coronavirus (COVID-19) are U07.1, U07.2, U09.9 and U10.9.
5. The average for 2015 to 2019 provides a comparison of the number of deaths expected per week in a usual (non-pandemic) year.
6. Figures exclude deaths of non-residents.

Download the data

[.xlsx](#)

The highest proportion of deaths involving COVID-19 of care home residents in wave one was in the North East (29.9%) and Wales had the highest proportion in wave two (28.8%). This contrasts with non-care home residents (see [Glossary](#)), with London reporting the highest proportion of deaths involving COVID-19 in wave one (25.5%) and wave two (30.5%).

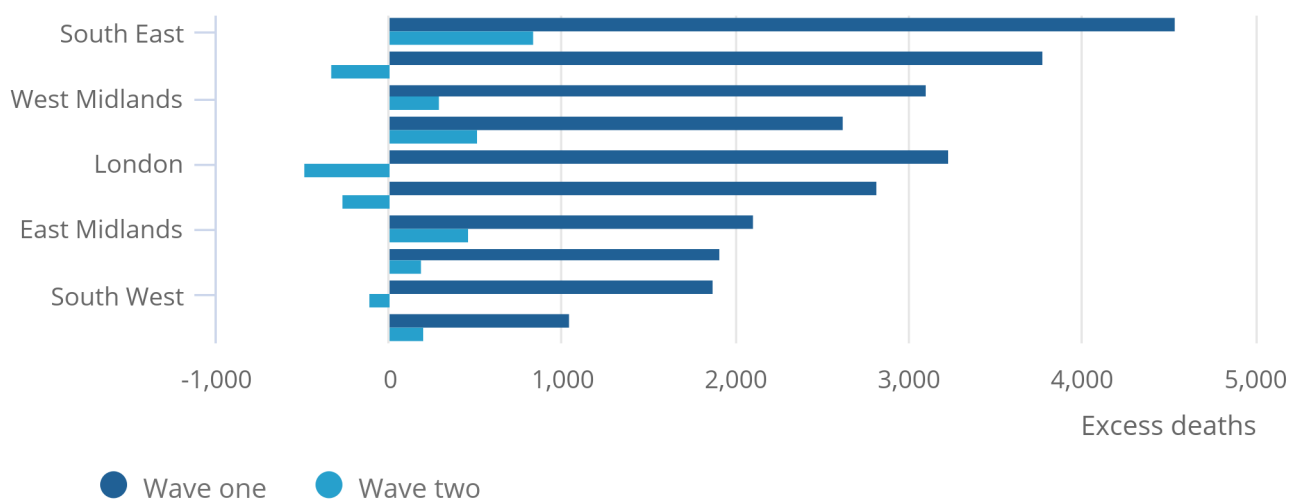
The South West had the lowest proportion of deaths involving COVID-19 in wave one (15.9%). In wave two, London had the lowest proportion of deaths involving COVID-19 (20.3%) in care home residents. In non-care home residents, the South West had the lowest proportion of deaths involving COVID-19 in both wave one (6.8%) and wave two (12.3%).

Figure 4: Excess deaths were above the five-year average in all English regions and Wales in wave one

Number of excess deaths of care home residents registered from 14 March 2020 to 2 April 2021, English regions and Wales

Figure 4: Excess deaths were above the five-year average in all English regions and Wales in wave one

Number of excess deaths of care home residents registered from 14 March 2020 to 2 April 2021, English regions and Wales



Source: Office for National Statistics - Deaths involving COVID-19 in the care sector

Notes:

1. Based on area of usual residence.
2. Figures exclude deaths of non-residents.
3. Week 52 five-year average is used to compare against Week 53 2020 (week ending 1 January 2021) deaths.
4. The average for 2015 to 2019 provides a comparison of the number of deaths expected per week in a usual (non-pandemic) year.

The South East had the highest number of excess deaths in care home residents in wave one (4,543 excess deaths) and wave two (841 excess deaths) (Figure 4). The only regions below the five-year average in wave two were the South West (100 fewer deaths), Yorkshire and The Humber (257 fewer deaths), North West (331 fewer deaths), and London (481 fewer deaths).

6 . Characteristics of care home residents who died from COVID-19

Figure 5: The highest proportions of deaths involving COVID-19 were for younger residents in wave one compared with wave two and older residents in wave two compared with wave one

Percentage of deaths of care home residents involving COVID-19 registered from 14 March 2020 to 2 April 2021, England and Wales

Notes:

1. The International Classification of Diseases, 10th edition (ICD-10) definitions for the coronavirus (COVID-19) are U07.1, U07.2, U09.9 and U10.9.

Download the data

[.xlsx](#)

In England and Wales, there was a higher proportion of deaths involving COVID-19 among male (26.6%) than female (22.9%) care home residents (Figure 5).

There was a higher proportion of deaths involving COVID-19 in wave two for both male (26.4% in wave one and 26.9% in wave two) and female (21.0% in wave one and 24.9% in wave two) care home residents.

Male care home residents aged 75 to 79 years had the highest proportion of deaths involving COVID-19 of any age group in wave one (29.6%). In wave two, male care home residents aged 80 to 84 years (28.8%) had the highest proportion of deaths involving COVID-19 of any age group.

Similar to the pattern observed in males, female care home residents aged 75 to 79 years had the highest proportion of deaths involving COVID-19 in wave one (24.7%). In wave two, female care home residents aged 85 to 89 years (26.0%) had the highest proportion of deaths involving COVID-19.

Figures are presented for England and Wales separately in the [accompanying dataset](#).

7 . Leading cause of death among care home residents

The Office for National Statistics's (ONS's) [leading causes of death](#) groupings are based on a list developed by the World Health Organization (WHO). This categorises causes of death using the International Classification of Diseases, 10th edition (ICD-10) into groups that are epidemiologically more meaningful than single ICD-10 codes, for the purpose of comparing the most common causes of death in the population.

Table 1: COVID-19 was the leading cause of death in male care home residents and the second leading cause of death in female care home residents in waves one and two

Percentage of care home residents for the five leading causes registered from 14 March 2020 to 2 April 2021, England and Wales

Wave one		Wave two	
Male	%	Male	%
COVID-19	24.7	COVID-19	23.9
Dementia and Alzheimer disease	24.0	Dementia and Alzheimer disease	23.7
Cerebrovascular diseases	4.7	Cerebrovascular diseases	4.8
Ischaemic heart diseases	4.4	Ischaemic heart diseases	4.7
Symptoms signs and ill-defined conditions	3.5	Symptoms signs and ill-defined conditions	3.4
Female		Female	
Dementia and Alzheimer disease	32.6	Dementia and Alzheimer disease	31.0
COVID-19	19.5	COVID-19	22.0
Symptoms signs and ill-defined conditions	7.2	Symptoms signs and ill-defined conditions	6.9
Cerebrovascular diseases	5.4	Cerebrovascular diseases	5.4
Ischaemic heart diseases	3.6	Ischaemic heart diseases	3.6

Source: Office for National Statistics – Deaths involving COVID-19 in the care sector

Notes

1. The International Classification of Diseases, 10th edition (ICD-10) definitions for the coronavirus (COVID-19) are U07.1, U07.2 and U10.9.
2. The symptoms, signs and ill-defined conditions category includes deaths where no more specific diagnosis can be made. More information can be found on the official ICD-10 website.

COVID-19 was the leading cause of death in male care home residents in wave one (24.7% of deaths) and wave two (23.9%). Similarly, COVID-19 was the leading cause of death in males in the non-care resident population (15.0% in wave one and 21.5% in wave two).

Dementia and Alzheimer disease remained the leading cause of death for female care home residents in both waves (32.6% in wave one and 31.0% in wave two). COVID-19 was the second leading cause of death (19.5% in wave one and 22.0% in wave two) of female care home residents. This contrasts with non-care home residents where COVID-19 was the leading cause of death of females in wave one (11.4%) and wave two (18.3%).

England and Wales specific breakdowns are available in the [accompanying dataset](#).

8 . Pre-existing conditions of care home residents whose death was recorded with an underlying cause of COVID-19

We analyse pre-existing conditions (see [Glossary](#)) where COVID-19 was the underlying cause of death, among care home residents. A death record can list up to 15 pre-existing conditions so the number of pre-existing conditions maybe higher than the total for deaths. For more detail, please see [Measuring pre-existing health conditions in death certification - deaths involving COVID-19](#).

Of the care home resident deaths where COVID-19 was the underlying cause, 86.4% (33,228 care home residents) had at least one pre-existing condition with the same proportion being observed in wave one and two (86.4%).

The mean number of pre-existing conditions of care home residents was 1.7 in wave one and wave two, compared with a mean of 2.1 pre-existing conditions among non-care home residents in both waves.

Table 2: Dementia and Alzheimer disease was the most common pre-existing condition among COVID-19 deaths for care home residents

The most common pre-existing conditions mentioned in COVID-19 deaths registered from 14 March 2020 to 2 April 2021, England and Wales

Wave one		Wave two	
Counts			
Male		Male	
Dementia and Alzheimer disease	4,378	Dementia and Alzheimer disease	3,669
Symptoms signs and ill-defined conditions	1,468	Symptoms signs and ill-defined conditions	1,520
Diabetes	1,276	Diabetes	997
No pre-existing conditions	1,064	Ischaemic heart diseases	866
Ischaemic heart diseases	930	No pre-existing conditions	846
Cerebrovascular diseases	853	Chronic lower respiratory diseases	708
Female		Female	
Dementia and Alzheimer disease	5,569	Dementia and Alzheimer disease	5,810
Symptoms signs and ill-defined conditions	2,304	Symptoms signs and ill-defined conditions	3,064
No pre-existing conditions	1,562	No pre-existing conditions	1,756
Diabetes	1,133	Hypertensive diseases	1,140
Hypertensive diseases	1,024	Diabetes	1,105
Chronic lower respiratory diseases	954	Chronic lower respiratory diseases	934

Source: Office for National Statistics – Deaths involving COVID-19 in the care sector

Notes

1. Figures for deaths due to COVID-19 (U07.1, U07.2 and U10.9) rather than deaths involving COVID-19.
2. Deaths with more than one pre-existing condition will be represented for each pre-existing condition mentioned.
3. The symptoms, signs and ill-defined conditions category includes deaths where no more specific diagnosis can be made. More information can be found on the official ICD-10 website.

Dementia and Alzheimer disease was listed in over half of COVID-19 deaths in male and female care home residents in wave one (50.7% and 52.3%) and just under half of COVID-19 deaths in wave two (49.0% and 49.7% respectively). Compared with non-care home residents where the most common pre-existing condition in COVID-19 deaths in males was diabetes in both waves (25.6% in wave one compared with 25.2% in wave two) and hypertensive diseases for female non-care home residents in wave one and two (22.6% in both waves).

9 . Deaths data

[Deaths involving COVID-19 in the care sector, England and Wales](#)

Dataset | Released 11 May 2021

Provisional counts of the number of deaths involving the coronavirus (COVID-19) within the care sector registered from 14 March 2020 to 2 April 2021.

10 . Glossary

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 death certificates mentioning the virus as a contributory factor.

Coronavirus (COVID-19)

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

Excess deaths

Excess deaths are those deaths that are above the five-year average levels. For example, if on average 100 people died on this day over the past five years, but 120 died on the same day this year; this would mean there are 20 excess deaths. Where we have calculated excess deaths for wave two, the week 52 five-year average is used to compare against week 53 2020 deaths.

Non-care home residents

The term "non-care home residents" used in this article refers to the rest of the population excluding our definition of care home residents.

Pre-existing condition

A pre-existing condition is defined as any condition that either preceded the disease of interest in the sequence of events leading to death or was a contributory factor in the death but was not part of the causal sequence.

Where only COVID-19 was recorded on the death certificate, or only COVID-19 and subsequent conditions caused by COVID-19 were recorded, we refer to these deaths as having "No pre-existing conditions".

Rate of change

To calculate rate of change we have summed the deaths up to the peak in wave one and wave two respectively and divided this by the number of weeks to reach the peak in each wave.

11 . Data sources and quality

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](#). The counts of deaths from specific conditions are updated with each [weekly publication](#) as the coding of the underlying cause is not always complete at the time of production. The doctor certifying a death can list all causes in the chain of events that led to the death and pre-existing conditions that may have contributed to the death.

The information used to produce these statistics is based on details collected when certified deaths are registered with the local registration office. Our statistics are based on what the doctor writes on the death certificate. Doctors use their professional knowledge and judgement to decide what caused or contributed to the death. Their opinion does not have to be based on test results. Using this information, we determine an underlying cause of death. More information on this process can be found in our [user guide](#).

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. Our blog [Counting deaths involving COVID-19 helps](#) to explain the differences.

Deaths involving COVID-19, including those in the care sector, are reported for each week in our [Deaths registered weekly in England and Wales, provisional](#) release.

Table 3: Differences in mortality data presented in Office for National Statistics releases

Deaths registered weekly of care home residents in England and Wales	Deaths registered weekly in England and Wales	Deaths in the care sector	Deaths involving COVID-19 in the care sector	Deaths involving COVID-19 in the care sector, wave one and wave two analysis
Provisional data	Provisional data	Final data	Provisional data	Week 12 to 52 are final data, Week 53 2020 and all weeks in 2021 are provisional data
2021	2021	2019	2020	2020 and 2021
Death registrations	Death registrations	Death registrations	Death occurrences	Death registrations
Weekly data presented	Weekly data presented	Annual data presented	Daily data presented	Weekly data presented
Care home resident data (regardless of place of death)	Deaths in a care home only, does not cover deaths to care residents that occur outside a care home	Care home resident data (regardless of place of death)	Care home resident data (regardless of place of death)	Care home resident data (regardless of place of death)

Source: Office for National Statistics – Deaths involving COVID-19 in the care sector

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

In England and Wales, deaths should be registered within five days of the death occurring, but there are some situations that result in the registration of the death being delayed. For example, when a death needs to be investigated by a coroner. More information on this issue can be found in our [impact of registration delays release](#).

Final death registrations have been used for 2020 data up to week 52. From Week 53 2020 and all 2021 data are provisional. As the data are provisional, they are subject to change.

We have used the most up-to-date communal establishment file we have for all data. Therefore, there is some potential for under- and over-coverage within the figures provided.

[There are some differences in death statistics between countries of the UK](#), but these are believed to have a negligible impact on comparability.

Because of the fluctuations in occupancy rates of care homes as a result of COVID-19 we have been unable to accurately estimate the population for 2021, therefore rates have not been included in this publication.

12 . Related links

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

Bulletin | Released 11 May 2021

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

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

Product page | Updated when new data are available

Brings together the latest data and analysis on the coronavirus pandemic in the UK and its effect on the economy and society.

[Coronavirus \(COVID-19\) round up](#)

Article | Updated when new data are available

Catch up on the latest data when analysis related to the coronavirus pandemic and its impact on our economy and society.