

Statistical bulletin

# Coronavirus (COVID-19) related deaths by occupation, England and Wales: deaths registered up to and including 20 April 2020

Provisional analysis of deaths involving the coronavirus (COVID-19), by different occupational groups, among males and females aged 20 to 64 years in England and Wales.

Contact:  
Dr Ben Windsor-Shellard and  
Jasveer Kaur  
health.data@ons.gov.uk  
+44 (0)1633 456068

Release date:  
11 May 2020

Next release:  
To be announced

## Table of contents

1. [Main points](#)
2. [Overview of coronavirus-related deaths by occupation](#)
3. [Men and coronavirus-related deaths, by occupation](#)
4. [Women and coronavirus-related deaths, by occupation](#)
5. [Deaths involving COVID-19 among health and social care workers](#)
6. [Occupation exposure for COVID-19](#)
7. [Coronavirus \(COVID-19\) related deaths by occupation data](#)
8. [Glossary](#)
9. [Measuring the data](#)
10. [Strengths and limitations](#)
11. [Related links](#)

# 1 . Main points

- A total of 2,494 deaths involving the coronavirus (COVID-19) in the working age population (those aged 20 to 64 years) of England and Wales were registered up to and including 20 April 2020.
- Nearly two-thirds of these deaths were among men (1,612 deaths), with the rate of death involving COVID-19 being statistically higher in males, with 9.9 deaths per 100,000 compared with 5.2 deaths per 100,000 females (882 deaths).
- Compared with the rate among people of the same sex and age in England and Wales, men working in the lowest skilled occupations had the highest rate of death involving COVID-19, with 21.4 deaths per 100,000 males (225 deaths); men working as security guards had one of the highest rates, with 45.7 deaths per 100,000 (63 deaths).
- Men and women working in social care, a group including care workers and home carers, both had significantly raised rates of death involving COVID-19, with rates of 23.4 deaths per 100,000 males (45 deaths) and 9.6 deaths per 100,000 females (86 deaths).
- Healthcare workers, including those with jobs such as doctors and nurses, were not found to have higher rates of death involving COVID-19 when compared with the rate among those whose death involved COVID-19 of the same age and sex in the general population.
- Among men, a number of other specific occupations were found to have raised rates of death involving COVID-19, including: taxi drivers and chauffeurs (36.4 deaths per 100,000); bus and coach drivers (26.4 deaths per 100,000); chefs (35.9 deaths per 100,000); and sales and retail assistants (19.8 deaths per 100,000).
- This analysis does not prove conclusively that the observed rates of death involving COVID-19 are necessarily caused by differences in occupational exposure; we adjusted for age, but not for other factors such as [ethnic group](#) and [place of residence](#). We have also published an article that explores possible differences in [occupation exposure](#) to COVID-19.

## 2 . Overview of coronavirus-related deaths by occupation

This bulletin presents analysis of deaths involving the coronavirus (COVID-19) in different occupational groups among those aged 20 to 64 years in England and Wales. [Occupation](#) was defined using the [Standard Occupational Classification 2010 \(SOC 2010\)](#). There are nine major groups of occupations (for example, skilled trades occupations), which then subdivide into 25 sub-major groups (for example, skilled construction and building trades). Sub-major groups can be subdivided into a further 90 minor groups (for example, building finishing trades) and more than 350 individual occupations (for example, painters and decorators). For further information on the definition of occupation, see the [Glossary](#).

This analysis includes deaths involving COVID-19 that were registered up to, and including, 20 April 2020. Unlike our other analyses on COVID-19 that have been based on the date of death (occurrence), for this analysis we included all deaths involving COVID-19 registered at the time of analysis. By doing so, we captured as much information on occupation as possible, allowing a more granular look at specific occupations where the number of deaths allows.

The analysis is based on provisional data, and findings could change as more deaths are registered. In particular, there may be deaths in some occupations that have not yet been registered because a coroner's inquest is required. The results of the analysis do not prove conclusively that the observed rates of death involving COVID-19 are necessarily caused by differences in [occupational exposure](#). In the analysis we adjusted for age, but not for other factors such as [ethnic group](#), [place of residence](#) or [deprivation](#). Additionally, the analysis only considers the occupation of the deceased. We have not taken account of the occupations of others in the household, which could increase exposure to other members of the same household. The findings should be interpreted bearing in mind the warnings in the [Strengths and limitations](#) section.

We have highlighted occupations that have [statistically significantly](#) higher rates of death involving COVID-19 when compared with the rate of death involving COVID-19 among people of the same age and sex in the general population.

Separate analysis on the [occupations with the highest potential exposure to COVID-19](#) has also been published.

#### **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](#).
- Find out how our studies and surveys are [serving public need](#).

For deaths registered up to, and including, 20 April 2020, there were 2,494 deaths involving COVID-19 in the working age population (aged 20 to 64 years) of England and Wales.

Nearly two-thirds of these deaths (64.6%) were among men, with 1,612 deaths compared with 35.4% among (882 deaths) among women. Males had a statistically higher rate of death involving COVID-19, with 9.9 deaths per 100,000 males of the working population compared with 5.2 deaths per 100,000 females.

The following analyses include data where information on the occupation of the deceased was available on the death certificate. Of the deaths recorded among the working age population in this period, 74.3% (or 1,852 out of 2,494 deaths) contained information on occupation. Further information on the data, including the main reasons for missing occupation, can be found in [Measuring the data](#).

### **3 . Men and coronavirus-related deaths, by occupation**

Among men, five of the nine major occupational groups had statistically higher age-standardised mortality rates of death involving the coronavirus (COVID-19) than the rate of death involving COVID-19 among men of the same age in the general population (Figure 1).

The major group with the highest rate of death involving COVID-19 was Elementary workers with 21.4 deaths per 100,000 males (225 deaths). The occupations in this group include those performing mostly routine tasks, such as construction workers and cleaners. The major group with the next highest rate was Caring, leisure and other service occupations (17.9 deaths per 100,000 males, or 72 deaths), which include occupations such as nursing assistants, care workers and ambulance drivers.

Other major occupational groups with high mortality rates of death involving COVID-19, when compared with the rate among men of working age in the population, included:

- Process, plant and machine operatives occupations (15.5 deaths per 100,000 males; 242 deaths)
- Sales and customer service occupations (14.3 deaths per 100,000 males; 54 deaths)
- Administrative and secretarial occupations (13.9 deaths per 100,000 males; 66 deaths)

**Figure 1: Men working in low-skilled or caring, leisure and other service occupations had the highest rates of death involving COVID-19**

## Age-standardised mortality rates of death involving the coronavirus (COVID-19) in England and Wales, by major occupational group, deaths registered up to, and including, 20 April 2020

[Download the data](#)

### Notes:

1. Deaths involving the coronavirus (COVID-19) include those with an underlying cause, or any mention, of U07.1 (COVID-19, virus identified) or U07.2 (COVID-19, virus not identified).
2. Figures are for residents of England and Wales aged 20 to 64 years.
3. Occupations defined using the Standard Occupational Classification 2010 (SOC 2010).
4. Figures are for the most recent death registrations available at the time of analysis: deaths involving COVID-19 registered between 9 March and 20 April 2020.
5. Age-standardised rates are only presented for occupations with 20 or more deaths.

Elementary workers, the major group with the highest mortality rate, can be subdivided into several smaller groups of occupations. Figure 2 shows the six subgroups of Elementary workers for which reliable rates could be calculated – except for Elementary cleaning and Elementary storage occupations, all had higher rates of death involving COVID-19 compared with the rate among men of the same age in the general population.

The highest rate was seen in Elementary security occupations, with 43.2 deaths per 100,000 males (equivalent to 70 deaths). Among the specific occupations included in this group, security guards and related occupations had the highest rate with 45.7 deaths per 100,000 males, equivalent to 63 deaths.

Those working in Elementary process plant occupations also had a [statistically significantly](#) higher rate of 37.7 deaths per 100,000 males (31 deaths) compared with all men aged 20 to 64 years.

Low-skilled workers in construction (25.9 deaths per 100,000 males, or 22 deaths) and low-skilled service occupations (19.3 deaths per 100,000 males, or 23 deaths) also had high rates of death involving COVID-19. The latter, other low-skilled service occupations, includes jobs such as hospital porters, kitchen and catering assistants, and waiters. Because of the smaller numbers of deaths, we were unable to calculate reliable mortality rates for these specific occupations.

### Figure 2: Among the lowest skilled workers, men working in Elementary security occupations had the highest rate of death involving COVID-19

Age-standardised mortality rates of death involving the coronavirus (COVID-19) in England and Wales, deaths registered up to, and including, 20 April 2020

[Download the data](#)

### Notes:

1. Deaths involving the coronavirus (COVID-19) include those with an underlying cause, or any mention, of U07.1 (COVID-19, virus identified) or U07.2 (COVID-19, virus not identified).
2. Figures are for residents of England and Wales aged 20 to 64 years.
3. Occupations defined using the Standard Occupational Classification 2010 (SOC 2010).
4. Figures are for the most recent death registrations available at the time of analysis: deaths involving COVID-19 registered between 9 March and 20 April 2020.
5. Age-standardised rates are only presented for occupations with 20 or more deaths.

## **Male care workers and home carers had a higher rate of death involving COVID-19 than men of the same age in the general population**

The major occupation group with the next highest mortality rate for deaths involving COVID-19, Caring, leisure and other service occupations, can also be divided into smaller groups. Of these, most of the deaths were among the caring personal service occupations group, with a rate of 26.3 deaths per 100,000 males, equivalent to 53 deaths. At the lowest level of granularity, this finding was largely explained by the rate among those providing care and support within residential care establishments, within day care establishments or to people in their own homes – that is, care workers and home carers (32.0 deaths per 100,000 males, or 32 deaths).

## **Road transport drivers, including male taxi and cab drivers and chauffeurs, had some of the highest rates of death involving COVID-19**

Of the remaining major occupational groups with high rates among men, those who worked in Process, plant and machine operative occupations had one of the highest number of deaths overall (242 deaths). This group includes occupations whose main tasks are to operate and monitor industrial equipment; assemble products; and drive and assist in the operation of transport vehicles and other machines.

In this group, at a more granular level, road transport drivers were found to account for the largest proportion of deaths (69.0% of the major group deaths, or 18.5 deaths per 100,000 males).

Among road transport drivers (Figure 3), taxi and cab drivers and chauffeurs had the highest rate, with 36.4 deaths per 100,000 males (76 deaths). Other occupations with significantly higher rates include bus and coach drivers, with 26.4 deaths per 100,000 males (29 deaths).

### **Figure 3: Among road transport drivers, taxi and cab and chauffeurs had the highest rate of death involving COVID-19**

**Age-standardised mortality rates of death involving the coronavirus (COVID-19) in England and Wales, deaths registered up to, and including, 20 April 2020**

[Download the data](#)

**Notes:**

1. Deaths involving the coronavirus (COVID-19) include those with an underlying cause, or any mention, of U07.1 (COVID-19, virus identified) or U07.2 (COVID-19, virus not identified).
2. Figures are for residents of England and Wales aged 20 to 64 years.
3. Occupations defined using the Standard Occupational Classification 2010 (SOC 2010).
4. Figures are for the most recent death registrations available at the time of analysis: deaths involving COVID-19 registered between 9 March and 20 April 2020.
5. Age-standardised rates are only presented for occupations with 20 or more deaths.

The [accompanying reference tables](#) contain more data on deaths involving COVID-19 among men. Other specific occupations found to have statistically significantly higher rates, when compared with the rate among men in the general population of the same age, included chefs (35.9 deaths per 100,000 males, or 31 deaths) and sales and retail assistants (19.8 deaths per 100,000 males, or 24 deaths).

## 4 . Women and coronavirus-related deaths, by occupation

Among women, only one of the nine major occupational groups had a [statistically significantly](#) higher mortality rate for deaths involving the coronavirus (COVID-19) than the rate of death involving COVID-19 among women of the same age in the general population: Caring, leisure and other service occupations had a rate of 7.5 deaths per 100,000 females, equivalent to 130 deaths.

As with men, most of these deaths (88 deaths) were among caring personal occupations, where the rate of female deaths involving COVID-19 was 10.1 deaths per 100,000 females. These deaths were largely from female care workers and home care workers (12.7 deaths per 100,000 females, or 66 deaths).

The [accompanying reference tables](#) contain more data on deaths involving COVID-19 among women.

**Figure 4: Women working in caring, leisure and other service occupations had the highest rate of death involving COVID-19 compared with women of the same age in the general population**

**Age-standardised mortality rates of death involving the coronavirus (COVID-19) in England and Wales, deaths registered up to, and including, 20 April 2020**

[Download the data](#)

**Notes:**

1. Deaths involving the coronavirus (COVID-19) include those with an underlying cause, or any mention, of U07.1 (COVID-19, virus identified) or U07.2 (COVID-19, virus not identified).
2. Figures are for residents of England and Wales aged 20 to 64 years.
3. Occupations defined using the Standard Occupational Classification 2010 (SOC 2010).
4. Figures are for the most recent death registrations available at the time of analysis: deaths involving COVID-19 registered between 9 March and 20 April 2020.
5. Age-standardised rates are only presented for occupations with 20 or more deaths.

## 5 . Deaths involving COVID-19 among health and social care workers

Deaths among health and social care workers are recorded in a range of occupational groups. Here we present analysis that grouped specific occupations into these two categories.

In our analysis, rates of death involving the coronavirus (COVID-19) among male and female social care workers were found to be [statistically significantly](#) higher than the rates of death involving COVID-19 among those of the same age and sex in England and Wales. A total of 131 deaths involving COVID-19 among social care workers were registered up to, and including, 20 April 2020, with rates of 23.4 deaths per 100,000 males (45 deaths) and 9.6 deaths per 100,000 females (86 deaths). In this group, we included occupations such as care workers and home carers, which accounted for most of the deaths (98 out of 131 deaths, or 74.8%), social workers, managers of residential care institutions and care escorts. Of the individual occupations, we were only able to calculate a reliable rate for care workers and home carers - as stated in [Section 3](#) and [Section 4](#), significantly raised rates for this occupation were found among men and women.

Among healthcare workers, rates of death involving COVID-19 were not found to be statistically different to rates of death involving COVID-19 in the general working population, with 10.2 deaths per 100,000 males (43 deaths) and 4.8 deaths per 100,000 females (63 deaths). In this group, we included occupations such as doctors, nurses and midwives, nurse assistants, paramedics and ambulance staff, and hospital porters.

Of all the individual healthcare professions, a reliable rate could only be calculated for female nurses, which was 6.7 deaths involving COVID-19 per 100,000 females, equivalent to 31 deaths. This rate was not found to be statistically different to the rate of death involving COVID-19 among females of the same age in the general population.

Some healthcare workers may have reduced exposure to COVID-19 during lockdown, for instance, because of people not having dental or optician appointments. It is also possible that some deaths among healthcare workers will be investigated by coroners, delaying the registration of these deaths. As more deaths are registered, it will be important to repeat these analyses to see if there are any changes in the rates of death involving COVID-19 among healthcare workers.

### **Figure 5: Men working as social care workers had a significantly elevated rate of death involving COVID-19**

**Age-standardised mortality rates of death involving the coronavirus (COVID-19) in England and Wales, deaths registered up to, and including, 20 April 2020**

[Download the data](#)



## Notes:

1. Deaths involving the coronavirus (COVID-19) include those with an underlying cause, or any mention, of U07.1 (COVID-19, virus identified) or U07.2 (COVID-19, virus not identified).
2. Figures are for residents of England and Wales aged 20 to 64 years.
3. Occupations defined using the Standard Occupational Classification 2010 (SOC 2010).
4. Figures are for the most recent death registrations available at the time of analysis: deaths involving COVID-19 registered between 9 March and 20 April 2020.
5. Age-standardised rates are only presented for occupations with 20 or more deaths.

## Figure 6: Women working as social care workers had a significantly elevated rate of death involving COVID-19

Age-standardised mortality rates of death involving the coronavirus (COVID-19) in England and Wales, deaths registered up to, and including, 20 April 2020

[Download the data](#)

## Notes:

1. Deaths involving the coronavirus (COVID-19) include those with an underlying cause, or any mention, of U07.1 (COVID-19, virus identified) or U07.2 (COVID-19, virus not identified).
2. Figures are for residents of England and Wales aged 20 to 64 years.
3. Occupations defined using the Standard Occupational Classification 2010 (SOC 2010).
4. Figures are for the most recent death registrations available at the time of analysis: deaths involving COVID-19 registered between 9 March and 20 April 2020.
5. Age-standardised rates are only presented for occupations with 20 or more deaths.

## 6 . Occupation exposure for COVID-19

Recent analysis on the [occupations with the highest potential exposure to the coronavirus \(COVID-19\)](#) shows the jobs that are most likely to be exposed are those involving close proximity with others and those where there is regular exposure to disease. Examples include healthcare workers such as nurses and dental practitioners, though during the pandemic some of these are more likely to be using personal protective equipment.

As with our analysis on the [occupations with the highest potential exposure to COVID-19](#), some experts have concluded that COVID-19 [exposure will be highest among occupations involving frequent and close interaction with others](#), either directly, such as healthcare workers attending to sick patients, or indirectly, such as occupations handling goods.



Among initial reported cases in Wuhan, China, a [significant proportion of cases have been linked to occupational exposure](#). The first documented cases were among people working in a sea food and wet animal wholesale market, where the virus is thought to have originated. As cases increased, healthcare workers were seen as another high exposure group; [in a series of 138 cases treated in a Wuhan hospital, 29% or 40 of these cases were among healthcare workers](#). The exposure among healthcare workers has also been identified in other countries, including [Italy](#) and the [US](#). Other occupations that have been highlighted as having a possible exposure include [protective service occupations, office and administrative support occupations, educational occupations, community and social services occupations, and construction occupations](#).

## 7 . Coronavirus (COVID-19) related deaths by occupation data

[Coronavirus \(COVID-19\) related deaths by occupation, England and Wales](#)

Dataset | Released 11 May 2020

Provisional counts of the number of deaths and age-standardised mortality rates involving the coronavirus (COVID-19), by occupational groups, for deaths registered up to and including 20 April 2020 in England and Wales. Figures are provided for males and females.

## 8 . Glossary

### Occupation

Occupation was defined using the [Standard Occupational Classification 2010 \(SOC 2010\)](#). Full lists of occupations used in the analysis are reported in the accompanying data tables, and descriptions of these can be found in the [Office for National Statistics \(ONS\) SOC Hierarchy](#). Deaths and the population at risk (see [Measuring the data](#)) were both coded using this classification system.

## 9 . Measuring the data

### Deaths data

The figures described in this bulletin include deaths registered in England and Wales between 9 March and 20 April 2020. Deaths were only included in the analyses if the country of usual residence was also England and Wales.

Deaths were defined using the International Classification of Diseases, 10th Revision (ICD-10). Deaths involving the coronavirus (COVID-19) include those with an underlying cause, or any mention, of ICD-10 codes U07.1 (COVID-19, virus identified) or U07.2 (COVID-19, virus not identified). We applied an age restriction, selecting deaths among those aged 20 to 64 years, because of limitations of occupational mortality data for those below the age of 20 years and those above the age of 64 years.

Occupation is reported on the death certificate at the time of death registration by the informant. This information was then coded using the [Standard Occupational Classification 2010 \(SOC 2010\)](#) (see the [Glossary](#)).

During the period of analysis, a total of 1,612 deaths and 882 deaths involving COVID-19 were registered among men and women aged 20 to 64 years, respectively. Among men, 81.9% of the deaths (or 1,321 deaths) had information on occupation recorded on the death certificate. For women, this figure was 531 deaths (or 60.2%). For the 291 deaths with no recorded information on occupation among men, the majority of these were because the occupation was not stated on the death certificate (87.3% of these deaths, or 254 deaths). Among women, the majority of the 351 records with no information on occupation were recorded as: full-time carers of the home and/or dependent relatives or that they were working voluntarily (55.8% of these deaths, or 196 deaths) or the occupation was not stated (42.7% of these deaths, or 150 deaths). Of the records included in the analysis of COVID-19 deaths by occupation, the mean age at death for men was 56 years and for women it was 55 years.

Further information on death registrations data can be found in the [Mortality statistics in England and Wales QMI](#).

## Population data

Population counts for occupations were obtained from the Annual Population Survey (APS), using data collected in 2019. The APS is the largest ongoing household survey in the UK, based on interviews with members of randomly selected households. The survey covers a range of diverse topics, including information on occupation, which is then coded using the [SOC 2010](#). The population counts were also restricted to those aged 20 to 64 years and were weighted to be representative of those living in England and Wales. Further information on the APS can be found in the [APS QMI](#).

Mortality rates for the broader population of all usual residents in England and Wales were based on the mid-year population estimates for 2018.

## Analysis

Figures in the commentary are based on age-standardised mortality rates. These refer to a weighted average of deaths per 100,000 people of a particular age group that is standardised to the 2013 European Standard Population. They allow for differences in age structure of populations and therefore allow valid comparisons to be made between the sexes and different occupations.

The commentary reports findings for occupations with rates that are [statistically significantly](#) higher than the rate among those of the same age and sex in England and Wales. Significance has been determined using 95% [confidence intervals](#), which provide the range of values within which we are 95% confident that the true value lies. Instances of non-overlapping confidence intervals between figures indicate the difference is unlikely to have arisen from random fluctuation. The 95% confidence intervals for the estimates are available in the [accompanying reference tables](#).

# 10 . Strengths and limitations

## Strengths

In this bulletin, we only refer to occupations that have at least 20 deaths. For these, reliable age-standardised rates can be calculated, reducing the likelihood of the findings being a result of chance. In our [accompanying reference tables](#), rates have been marked as unreliable where there are fewer than 20 deaths, and we have not produced rates for occupations with fewer than 10 deaths. A robust method is used for the analysis: age-standardised rates allow for differences in age structure of populations and therefore allow valid comparisons to be made between the sexes and different occupations.

Quality assurance procedures have been undertaken throughout all stages of the analysis to minimise the risk of error. As an additional step, we have compared some of the data reported here with some of the data being reported in national and local media sources. We found good comparability, with our data appearing to account for most of, if not more than, the numbers of deaths being reported elsewhere (Table 1).

Table 1: Numbers of deaths involving COVID-19, comparing number of deaths web scraped from national and regional media websites and ONS death registration numbers in this release

Occupation	Web scraped numbers		ONS death registration numbers
	Number aged 20 to 64 years	Number where age was unavailable	Number aged 20 to 64 years
Health and social care professions			
Ambulance services	4	2	6
Medical doctors	14	3	11
Nurses and midwives	27	9	41
Care and support staff	26	13	125
Non health and social care professions			
Transport occupations	9	10	30

Source: National and regional media websites and Office for National Statistics

#### Notes

1. From a wide range of national and media outlets we scraped numbers from articles covering deaths related to the coronavirus (COVID-19) among key workers. We took numbers from articles published from 25 March to 27 April 2020. Most sources did not contain information on the date of death, and so it is possible the data could cover a different time period compared to that in this release. [Back to table](#)
2. For some of the web-scraped numbers, information on age was unavailable and so these have been listed separately. [Back to table](#)
3. For the death registration numbers, we included deaths for individual occupations that were the best match for those described in the media sources. The Office for National Statistics (ONS) death registration numbers for ambulance services include ambulance staff and paramedics (Standard Occupational Classification (SOC) codes 6142 and 3213), though for paramedics we did not have any registered deaths; medical doctors includes medical practitioners (SOC 2211); nurses and midwives includes those with a SOC codes of 2231 (nurses) and 2232 (midwives); care and support staff includes nursing auxiliaries and assistants (SOC 6141), dental nurses (SOC 6143), care workers and home carers (SOC 6145), and senior care workers (6146); and transport occupations includes bus and coach drivers (SOC 8213). [Back to table](#)

## Limitations

Some caution is needed in interpreting the findings as this analysis does not prove conclusively that the observed rates of death involving coronavirus (COVID-19) are necessarily caused by differences in occupational exposure. In the analysis we adjusted for age, but not for other factors such as [ethnic group](#), [place of residence](#) or [deprivation](#). We have also published an article that explores possible differences in [occupation exposure](#) to COVID-19. Additionally, the analysis only considers the occupation of the deceased. We have not taken account of the occupations of others in the household, which could increase exposure to other members of the same household.

The results could change as more deaths are registered over the coming weeks and months. In particular, there may be deaths in some occupations that cannot yet be registered because a coroner's inquest is required.

The analysis includes all deaths with information on occupation that have been registered pre- and post-lockdown. When more death registrations data are received, future analysis should see how the rate of death involving COVID-19 differs among occupations in the pre- and post-lockdown periods.

The data were taken from two separate sources: death certificates and the Annual Population Survey (APS). The findings could be impacted by a degree of bias because of the misalignment of occupation data between the two sources.

The occupation recorded on the death certificate is reported by the informant and likely reflects the deceased's main lifetime occupation or the occupation at the time of death. It is also possible that, when they died, the deceased was retired, unemployed or in a different job altogether. Despite this, the occupations found to have higher rates of death involving COVID-19 are generally consistent with recent literature on the occupations that are more likely to be exposed to the virus.

At the time of analysis, we used the most recently available occupation populations, based on data collected in 2019. The analysis may be affected if there has been a rapid increase or decrease in the number of workers in a specific occupation since then.

## 11 . Related links

[Deaths registered weekly in England and Wales, provisional: week ending 1 May 2020](#)

Bulletin | Released 12 May 2020

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

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

Product page | Updated as and 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.

[Coronavirus \(COVID-19\) roundup](#)

Article | Updated as and when data become available

Catch up on the latest data and analysis related to the coronavirus (COVID-19) pandemic and its impact on our economy and society.