

# COVID-19 deaths

## 2022

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This report analyses the number of deaths involving coronavirus (COVID-19) registered in Scotland in 2022.

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## 1. Main points

- There were 3,933 deaths involving coronavirus (COVID-19) in 2022. This was 32% (1,885) less than in 2021.
- Taking into account the size and age-structure of the population, the mortality rate for deaths involving COVID-19 was 74 per 100,000 people in 2022. This is down from 108 per 100,000 in 2021 and 128 per 100,000 people in 2020.
- After adjusting for age, people living in the most deprived areas were 1.7 times as likely to die with COVID-19 as those in the least deprived areas in 2022. The size of this gap has narrowed from 3.0 times as likely in 2021 and 2.3 times as likely in 2020.
- Of all deaths involving COVID-19 in 2022, 96% had at least one pre-existing condition. Around one fifth of people whose death involved COVID-19 had dementia or Alzheimer's disease which was the most common main pre-existing condition.

### What does this publication cover?

This publication provides analysis of deaths involving COVID-19 registered in Scotland in 2022. This release brings together data which is already published in our weekly and monthly deaths publications to provide an annual analysis of COVID-19 deaths. Provisional data for 2023 are available in the weekly and monthly tables linked below.

This publication also provides further breakdowns of COVID-19 deaths by occupation and pre-existing conditions.

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#### What are you looking for?

#### Where is it?

Annual data in this report

[COVID-19 deaths 2022](#)

Monthly mortality rates

[Monthly mortality tables](#)

Weekly number of deaths

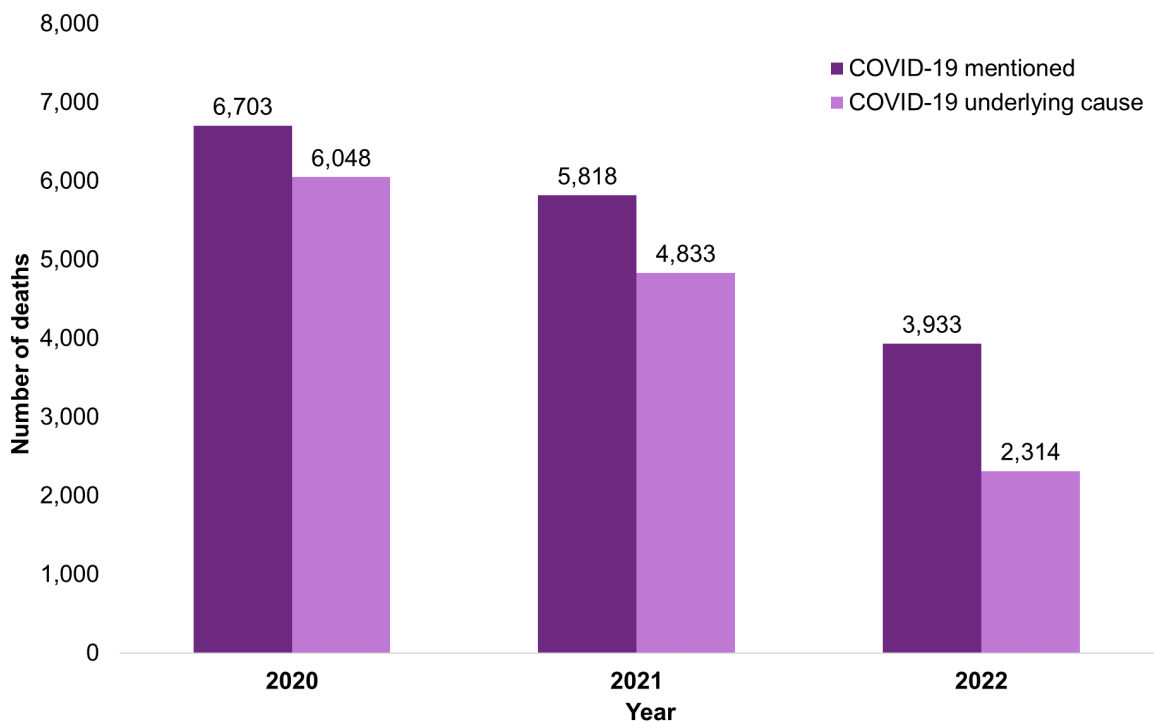
[Weekly deaths registered](#)

## 2. COVID-19 deaths in Scotland

In 2022, there were 3,933 deaths where coronavirus (COVID-19) was mentioned on the death certificate in Scotland, a decrease from 5,818 (1,885 or 32% less) in 2021.

Of the deaths where COVID-19 was mentioned on the death certificate, it was the underlying cause in 2,314 (59% of all COVID-19 deaths) deaths in 2022, shown in [Figure 1](#).

**Figure 1: Number of deaths involving COVID-19, 2020 to 2022**



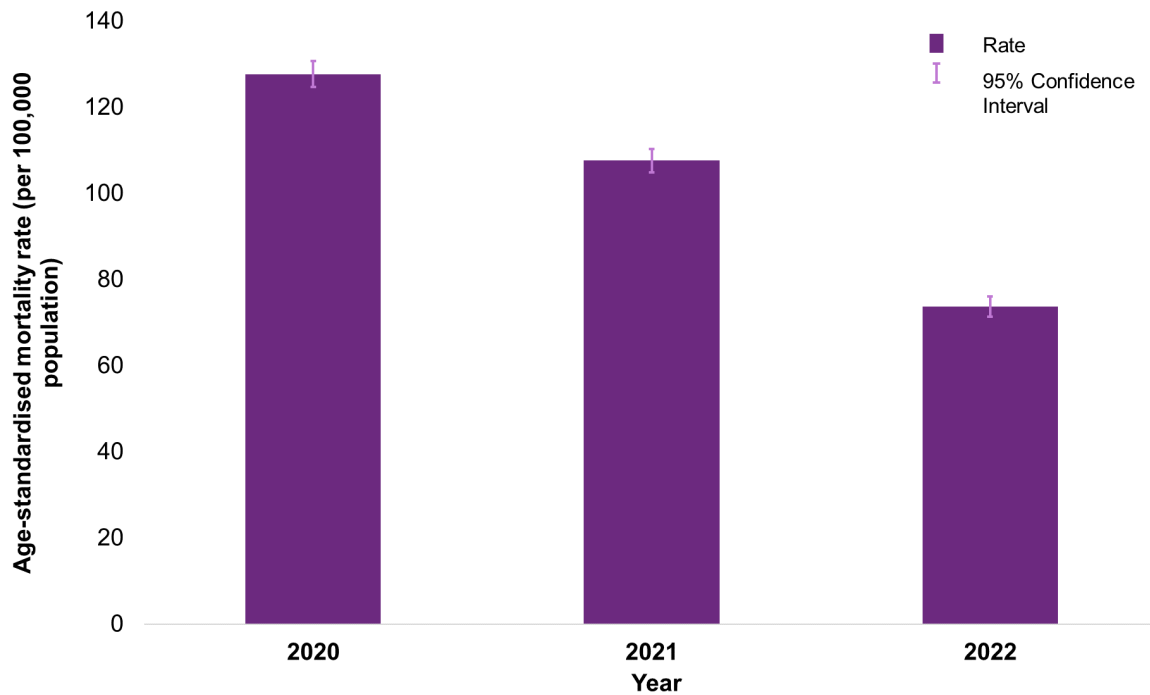
### What are age-standardised mortality rates?

Age-standardised mortality rates are a better measure of mortality than numbers of deaths, as they account for the population size and age structure and provide more reliable comparisons between groups or over time.

More information on the calculation of age-standardised mortality rates is available on our [website](#).

After taking into account the size and age-structure of the population, the rate of mortality from deaths involving COVID-19 was 74 per 100,000 people in 2022. This is a decrease from 108 per 100,000 people in 2021 and 128 per 100,000 people in 2020, shown in [Figure 2](#).

**Figure 2: Age-standardised rates for deaths involving COVID-19, 2020 to 2022**



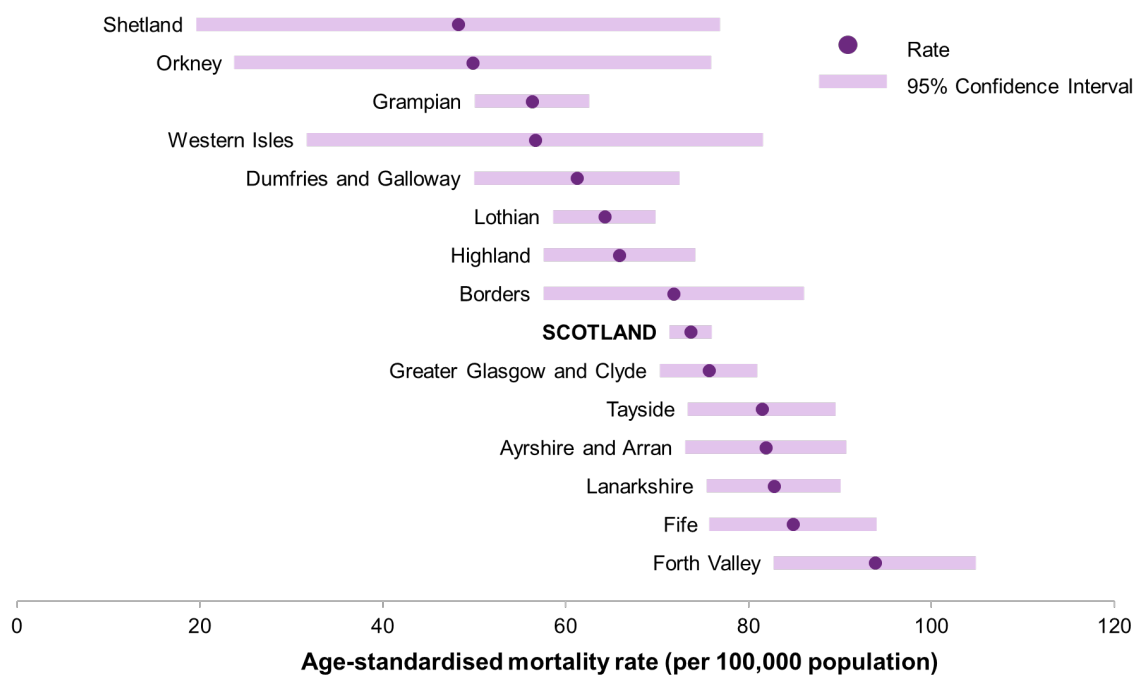
### 3. COVID-19 deaths across Scotland

The mortality rate for deaths involving COVID-19 was higher than the Scottish average in NHS Board areas: Forth Valley, Fife and Lanarkshire, shown in [Figure 3](#).

In contrast, the mortality rate for deaths involving COVID-19 was lower than the Scottish average in NHS Board areas: Grampian, Dumfries and Galloway, and Lothian.

The rates for some other areas were higher or lower than the Scottish average, however the difference from the Scottish average was not statistically significant.

**Figure 3: Age-standardised rates for deaths involving COVID-19 by NHS Board area, 2022**



## 4. Multiple deprivation and urban rural

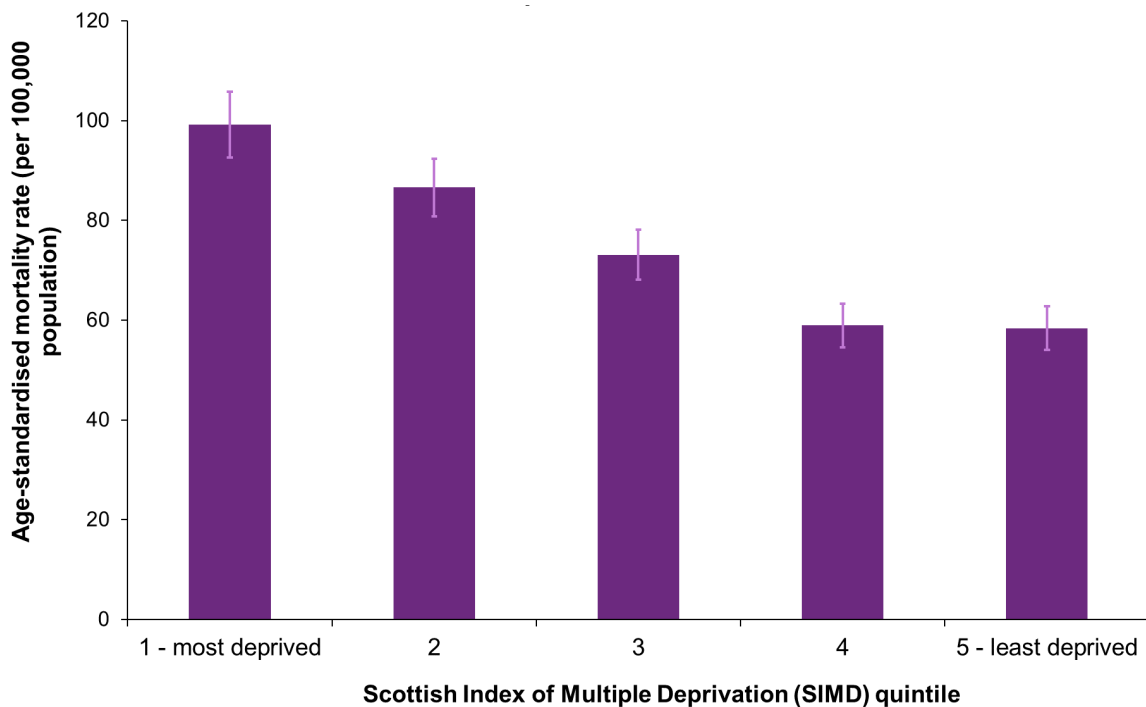
[Figure 4](#) shows rate of deaths involving COVID-19 was 1.7 times as high in the most deprived areas of Scotland (99 per 100,000 population), compared to the least deprived (58 per 100,000 population) in 2022.

Age-standardised death rates from all causes are generally higher in the most deprived areas than in the least deprived areas. In 2022, the rate in the most deprived quintile was 1.8 times the rate in the least deprived quintile for all causes of death.

**Deprivation quintiles** are based on the Scottish Index of Multiple Deprivation (SIMD). This is an area-based measure of deprivation. Quintiles are allocated according to the deceased's usual place of residence.

The size of the gap between the most and least deprived areas has narrowed since the start of the pandemic. In 2020, the rate of deaths involving COVID-19 was 2.3 times as high in the most deprived areas in comparison to the least deprived, and 3.0 times as high in 2021.

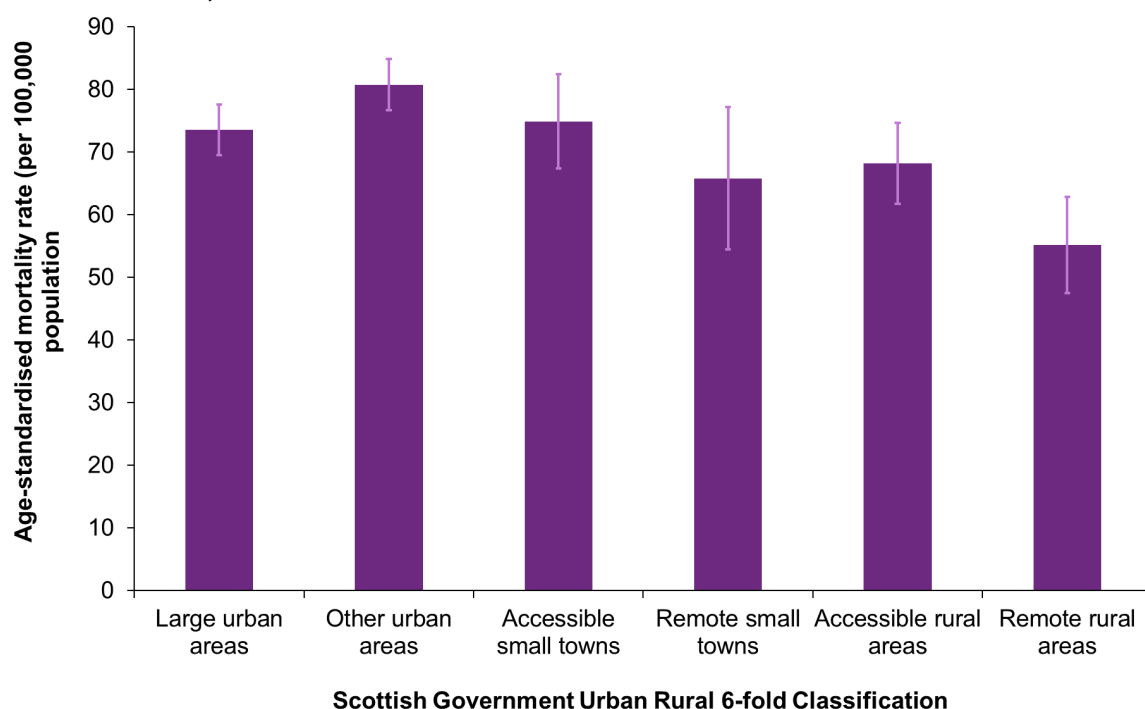
**Figure 4: Age-standardised rate of deaths involving COVID-19 by SIMD quintile, 2022**



After taking into account the size and age-structure of the population, the rate of deaths involving COVID-19 in large urban areas (74 per 100,000 population) was 1.3 times as high as the rate in remote rural areas (55 per 100,000 population) in 2022, shown in [Figure 5](#).

The gap between the mortality rate in the most urban and rural areas has fallen since the start of the pandemic. In 2020, the rate of deaths involving COVID-19 was almost 5 times as high in large urban areas of Scotland, compared to remote rural areas.

**Figure 5: Age-standardised rate of deaths involving COVID-19 by urban rural classification, 2022**





## 5. COVID-19 deaths by pre-existing conditions

Of the 3,933 deaths involving COVID-19 in Scotland in 2022, 96% (3,774) had at least one pre-existing medical condition.

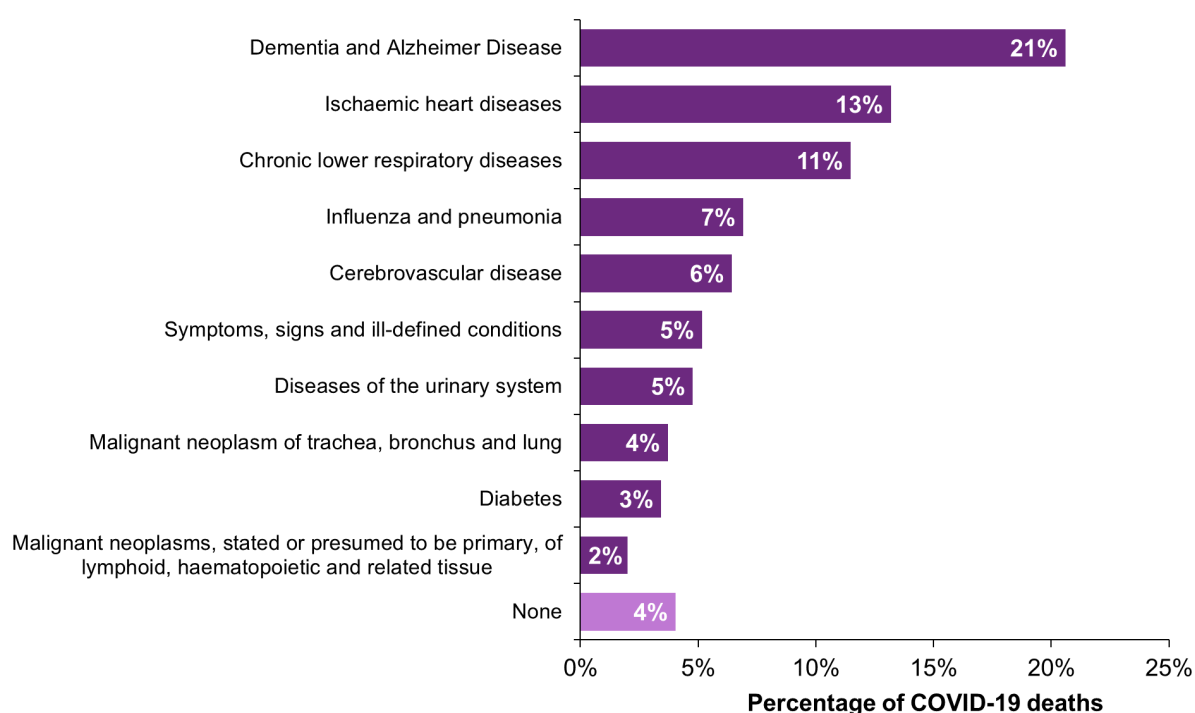
**Pre-existing conditions** are defined as a health condition mentioned on the death certificate which either came before COVID-19 or was an independent contributory factor in the death. Where only COVID-19 was recorded on the death certificate, or only COVID-19 and subsequent conditions caused by COVID-19 were recorded, these deaths are referred to as having no pre-existing conditions.

We have used methodology developed by ONS to determine the main pre-existing condition. This is defined as the one pre-existing condition that is, on average, most likely to be the underlying cause of death for a person of that age and sex had they not died from COVID-19. For more detail on how pre-existing conditions and main pre-existing conditions are derived, refer to the [methodology paper](#).

[Figure 6](#) shows the most common main pre-existing condition was dementia and Alzheimer's disease (21%), followed by ischaemic heart disease (13%) and chronic lower respiratory diseases (11%).

Of all of the deaths involving COVID-19 in 2022, 4% (159) had no pre-existing conditions.

**Figure 6: Main pre-existing condition in deaths involving COVID-19, 2022**



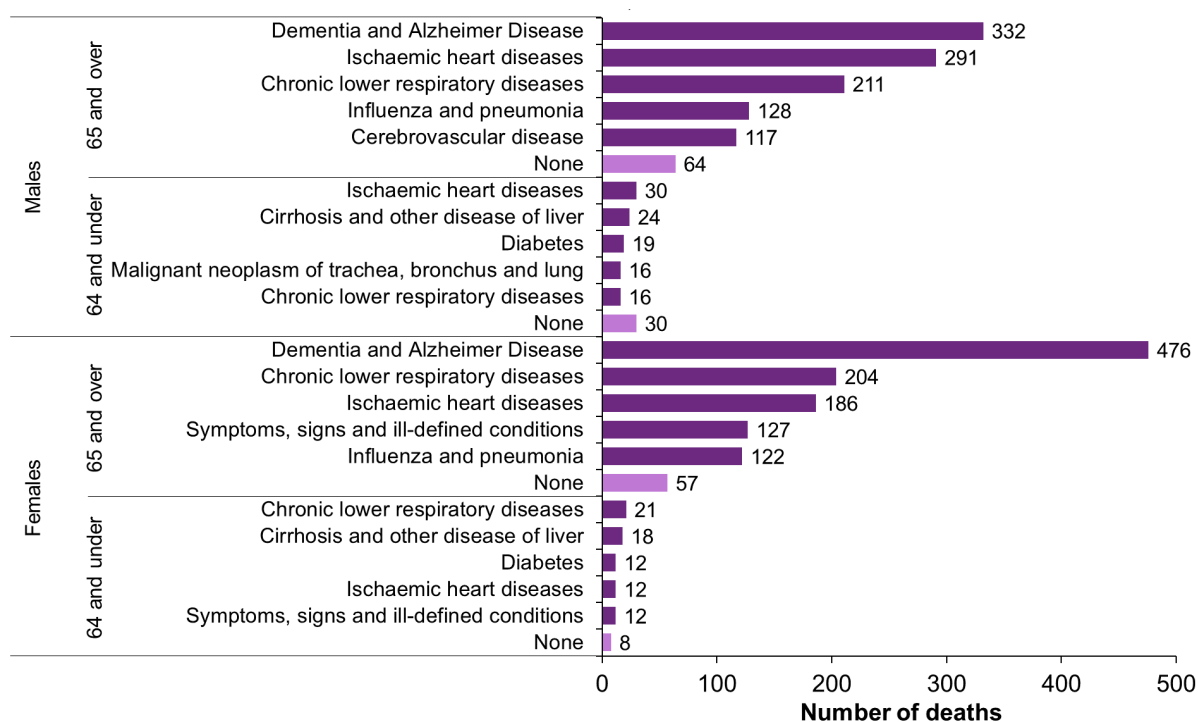
Pre-existing conditions of people who died with COVID-19 differed by age and sex in 2022 as shown in [Figure 7](#).

For both males and females aged 65 and over, the most common pre-existing medical condition was dementia and Alzheimer’s disease. This was the main pre-existing condition in 27% of all female COVID-19 deaths and 19% of all male COVID-19 deaths in the those aged 65 and over.

For males aged under 65, the most common main pre-existing condition was ischaemic heart diseases (13%). The same proportion of male COVID-19 deaths in those aged under 65 had no pre-existing conditions.

For females aged under 65, the most common pre-existing condition was chronic lower respiratory diseases, accounting for 13% of all females COVID-19 deaths in that age group.

**Figure 7: Main pre-existing condition by age and sex, in deaths involving COVID-19, 2022**



## 6. COVID-19 deaths by occupation

Information on COVID-19 deaths by unit occupation groups can be found in Table 8 of the [COVID-19 deaths tables](#) on the NRS website. Occupations are those stated on the death certificate at the time of their death.

NRS does not have access to population estimates by occupation, age and sex at the level of detail required to calculate age-standardised mortality rates at this level. As a result, it is unwise to compare deaths across occupation grouping.

## 7. Methodology

Deaths involving COVID-19 are defined as those where COVID-19 is mentioned on the death certificate, either as the underlying cause of death or as a contributory cause. Cause of death is coded according to the International Statistical Classification of Diseases and Related Health Conditions 10<sup>th</sup> Revision (ICD-10). The relevant codes included in this publication are U07.1, U07.2, U09.9 and U10.9.

Figures include deaths where 'suspected' or 'probable' COVID-19 appears on the death certificate.

More information on the [methodology](#) used to produce these statistics is available from the NRS website.

## 8. Links to information

Along with this publication, we have also published a number of [tables on COVID-19 deaths](#) available on the NRS website.

- Number of deaths, age-standardised mortality rates (ASMR) and sex for Scotland, NHS Board areas and council areas (Tables 1, 3A-B).
- Number of deaths age group and sex for Scotland, NHS Board areas and council areas (Tables 2, 4A-B).
- Number of deaths, age-standardised mortality rates (ASMR) and sex for SIMD quintiles and urban rural areas (Tables 5 and 6)
- Number of deaths by location (Tables 7A-C)
- Number of deaths by occupation code (Table 8)
- Number of deaths by leading pre-existing condition (Tables 9A-B)
- Number of deaths by pre-existing condition status (Tables 10A-C)

## 9. Notes on statistical publications

### National Statistics

The United Kingdom Statistics Authority (UKSA) has designated these statistics as National Statistics, in line with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics (available on the [UKSA](#) website).

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

All official statistics should comply with all aspects of the Code of Practice for Official Statistics. They are awarded National Statistics status following an assessment by the Authority's regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

It is National Records of Scotland's responsibility to maintain compliance with the standards expected of National Statistics. If we become concerned about whether these statistics are still meeting the appropriate standards, we will discuss any concerns with the Authority promptly. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.

### **Information on background and source data**

Further details on data source(s), timeframe of data and timeliness, continuity of data, accuracy, etc. can be found in the metadata that is published alongside this publication on the NRS website.

### **National Records of Scotland**

We, the National Records of Scotland, are a non-ministerial department of the devolved Scottish Administration. Our aim is to provide relevant and reliable information, analysis and advice that meets the needs of government, business and the people of Scotland. We do this as follows:

Preserving the past – We look after Scotland's national archives so that they are available for current and future generations, and we make available important information for family history.

Recording the present – At our network of local offices, we register births, marriages, civil partnerships, deaths, divorces and adoptions in Scotland.

Informing the future – We are responsible for the Census of Population in Scotland which we use, with other sources of information, to produce statistics on the population and households.

You can get other detailed statistics that we have produced from the [Statistics](#) section of our website. Scottish Census statistics are available on the [Scotland's Census](#) website.

We also provide information about [future publications](#) on our website. If you would like us to tell you about future statistical publications, you can register your interest on the Scottish Government [ScotStat website](#).

You can also follow us on twitter [@NatRecordsScot](#)

### **Enquiries and suggestions**

Please get in touch if you need any further information, or have any suggestions for improvement.

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