

Statistical bulletin

# Coronavirus (COVID-19) Infection Survey, estimates of the UK workforce in self- isolation by sector: 5 December 2021 and 29 January 2022

Estimates of the proportion of the UK workforce by work sector and the proportion of the working-age population (regardless of employment status) by country that are self-isolating because of coronavirus (COVID-19).

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# 1 . Main points

- In the two weeks ending 29 January 2022, the percentage of people self-isolating because of coronavirus (COVID-19) increased in three work sectors: teaching and education, social care and health care.
- The sectors with the highest percentage of the workforce in self-isolation on 29 January 2022 were social care, at 4.0% (95% confidence interval 2.9% to 5.4%), and teaching and education, at 3.9% (95% confidence interval 3.0% to 5.0%).
- The retail sector had the lowest estimated percentage of the workforce in self-isolation, at 2.2% (95% confidence interval 1.6% to 2.9%).
- In England, the percentage of the working-age population (aged 17 to 69 years) self-isolating because of COVID-19 increased in the two weeks ending 29 January 2022.

## 2 . Self-isolation by UK work sector

This release uses data from the Coronavirus (COVID-19) Infection Survey (CIS) to provide modelled estimates of the proportion of the workforce self-isolating because of COVID-19 by work sector.

In this article, “work sector” is self-reported and is not compatible with other definitions of sector such as [Standard Industrial Classifications \(SIC\)](#). More information on how work sector was defined and the methods used in our models can be found in the [Measuring the data](#) section.

Estimates are based on data collected between 5 December 2021 and 29 January 2022, during a period of rising infections and changing self-isolation requirements because of the Omicron variant. The latest information and guidance in England, Wales, Scotland, and Northern Ireland can be found on the [gov.uk](#) website.

A single UK-wide set of estimates by sector is reported in this section because of smaller sample sizes for some work sectors within each nation. These estimates are based on individuals aged 16 years and over, who reported being in employment.

In the two weeks ending 29 January 2022, there was an increase in the percentage of people self-isolating because of COVID-19 in the following three work sectors: teaching and education, social care and health care. There were signs of increases across all other work sectors, but these trends remain uncertain (Figure 1).

On 29 January 2022, the sectors with the highest percentage of the workforce in self-isolation were social care, at 4.0% (95% confidence interval 2.9% to 5.4%), and the teaching and education sector, at 3.9% (95% confidence interval 3.0% to 5.0%). The retail sector had the lowest estimated percentage of the workforce in self-isolation, at 2.2% (95% confidence interval 1.6% to 2.9%).

### **Figure 1: The sectors with the highest estimated percentage of people self-isolating because of COVID-19 were teaching and education and social care**

Estimated percentage of the workforce self-isolating because of coronavirus (COVID-19), by work sector, 5 December 2021 to 29 January 2022, UK

#### **Notes:**

1. All results are provisional and subject to revision.
2. These statistics refer to self-reported self-isolation in working adults (aged 16 years and over) living in private households.

## Download the data

[.xlsx](#)

The percentage of the workforce in self-isolation on 29 January 2022 has shown signs of reaching similar levels to the early January 2022 peak in some work sectors. Social care, health care, and food production, agriculture and farming have reached estimates within one percentage point of their early January 2022 peak. It is estimated that the teaching and education sector may have passed its early January 2022 peak.

During the peak in early January 2022, the social care sector had the highest rate of self-isolation, with an estimated 4.5% (95% confidence interval 3.7% to 5.5%) in self-isolation.

## 3 . Self-isolation by country

We provide self-isolation estimates by country for the working-age population in this section because of smaller sample sizes for some work sectors within each nation. These estimates include working-age adults (aged 17 to 69 years) regardless of employment status.

The estimated percentage of the working-age population self-isolating because of coronavirus (COVID-19) increased throughout December, peaking between 1 and 3 January 2022 in all UK countries. Following the peak, self-isolation rates declined across all countries in the first two weeks of January, before beginning to level out and show possible signs of another increase in the latest two-week period (figure 2).

In England, the percentage of the working-age population self-isolating because of COVID-19 increased in the two weeks ending 29 January 2022. An estimated 2.2% (95% credible interval 2.0% to 2.3%) of the working-age population were in self-isolation on 15 January 2022, compared with 2.7% (95% credible interval 2.4% to 2.9%) on 29 January 2022.

In Wales, Scotland and Northern Ireland, the trend in the percentage of the working-age population self-isolating because of COVID-19 showed some possible signs of an increase in the two weeks ending 29 January 2022 but with high uncertainty.

### **Figure 2: The percentage of the working-age population self-isolating because of COVID-19 increased in England in the two weeks ending 29 January 2022**

Estimated percentage of the working-age population (aged 17 to 69 years) self-isolating because of coronavirus (COVID-19) from 12 December 2021 to 29 January 2022, UK countries

#### **Notes:**

1. All results are provisional and subject to revision.
2. These statistics refer to self-reported self-isolation occurring in working-age adults (aged 17 to 69 years), regardless of employment status, living in private households.
3. During the period shown, self-isolation requirements were frequently updated with different changes taking place at different times across the UK countries.

## Download the data

[.xlsx](#)

## 4 . Home working

Working from home is allowed within the self-isolation requirements but is not possible for all workers. The ability to work from home varies by occupation, meaning the impact of self-isolation will be different in different work sectors.

Previous Office for National Statistics research has found that those in elementary occupations (including cleaners, waiting staff and security guards) are least likely to be able to work from home, together with process, plant and machine operatives. Front line workers were also among those least likely to be able to work from home. These include police officers, paramedics, and firefighters. For more information see the [“Which jobs can be done from home?”](#).

## 5 . Estimates of the UK workforce in self-isolation by sector data

[Coronavirus \(COVID-19\) Infection Survey, estimates of the UK workforce in self-isolation by sector Dataset](#) | Released 14 February 2022

Modelled estimates of the proportion of the workforce self-isolating because of coronavirus (COVID-19) by work sector and modelled estimates of the proportion of the working age population (regardless of employment status) self-isolating because of COVID-19 by country.

## 6 . Collaboration



The Coronavirus (COVID-19) Infection Survey analysis was produced by the Office for National Statistics (ONS) in collaboration with our research partners at the University of Oxford, the University of Manchester, UK Health Security Agency (UK HSA) and Wellcome Trust. Of particular note are:

- Sarah Walker - University of Oxford, Nuffield Department for Medicine: Professor of Medical Statistics and Epidemiology and Study Chief Investigator
- Koen Pouwels - University of Oxford, Health Economics Research Centre, Nuffield Department of Population Health: Senior Researcher in Biostatistics and Health Economics
- Thomas House - University of Manchester, Department of Mathematics: Reader in Mathematical Statistics
- Anna Seale - University of Warwick, Warwick Medical School: Professor of Public Health; UK Health Security Agency, Data, Analytics & Surveillance: Scientific Advisor

## 7 . Glossary

### Confidence interval

A confidence interval gives an indication of the degree of uncertainty of an estimate, showing the precision of a sample estimate. The 95% confidence intervals are calculated so that if we repeated the study many times, 95% of the time the true unknown value would lie between the lower and upper confidence limits. A wider interval indicates more uncertainty in the estimate. Overlapping confidence intervals indicate that there may not be a true difference between two estimates. For more information, see our methodology page on [statistical uncertainty](#).

### Credible interval

A credible interval gives an indication of the uncertainty of an estimate from data analysis. The 95% credible intervals are calculated so that there is a 95% probability of the true value lying in the interval.

### Work sector

Work sector refers to the broad work area, for example, manufacturing and construction. Sector has greater variability than might initially be expected, with different types of occupation within the same sector, and occupations will be included in several sectors. For example, every sector is likely to include accountants, maintenance, catering roles and others.

## 8 . Measuring the data

More information on measuring the data is available in the [Coronavirus \(COVID-19\) Infection Survey \(CIS\) statistical bulletin](#).

The CIS [methodology article](#) provides further information around the survey design, including how data is processed and analysed.

CIS can provide self-isolation estimates across a wide variety of sectors in the UK labour market because of its large sample size. An Office for National Statistics [blog](#) is available with further information about comparing the data collected in CIS with other self-isolation data sources.

### Survey definitions of self-isolation

“Self-isolation” refers to anybody who is not currently leaving their home because of COVID-19 on the date that their swab was taken. There are many possible reasons for self-isolation captured in CIS, and self-isolation does not mean that the participant was not working on the visit date.

Self-isolation is a self-reported measure on the CIS where participants are asked, “Are you currently self-isolating due to COVID-19 (meaning you are not leaving your home)?” The following four yes response options have been collapsed into one category to maximise power to detect changes over time because of low response in individual categories.

- Yes because you have/have had symptoms of COVID-19 or a positive test.
- Yes because you live with someone who has/had symptoms or a positive test, but you haven't had symptoms yourself.
- Yes for other reasons related to you having had an increased risk of getting COVID-19 (for example, having been in contact with a known case, quarantining after travel abroad).
- Yes, for other reasons related to reducing your risk of getting COVID-19 (for example, going into hospital, shielding).

## **Modelling rates of self-isolation**

Rates of self-isolation by work sector were estimated using a Generalised Additive Model (GAM) in adults aged 16 years and over who reported being in work and a work sector. This model provides an estimate of the rate of self-isolation and provides a 95% confidence interval (to show uncertainty of estimates in the model).

Rates of self-isolation by country were estimated using a Generalised Additive Mixed Model (GAMM) in adults aged 17 to 69 years regardless of whether or not they reported being in work. Similarly, this model provides an estimate of the rate of self-isolation in the UK and by country and provides a 95% credible interval (to show uncertainty of estimates in the model).

Rates of self-isolation by work sector and by country were produced using estimated marginal means. This technique estimates how much the rate of self-isolation is affected by differences in factors like work sector or country.

## **Measuring working-age adults**

When analysing the percentage of the working-age population who were self-isolating by country, working-age adults are defined as those aged 17 to 69 years.

This differs from the analysis of self-isolation by work sector. This analysis includes all working individuals aged 16 years and over (either employed or self-employed).

## **Measuring work sectors**

Work sector is self-reported, where working adults aged 16 years and over are asked to select the employment sector they work in, from the following sectors:

- arts, entertainment or recreation
- civil service or local Government
- financial services (including insurance)
- food production, agriculture, farming
- health care
- hospitality
- information technology and communication
- manufacturing or construction
- other occupation sector
- retail sector (including wholesale)
- social care
- teaching and education
- transport (including storage, logistics)
- personal services (for example, hairdressers, tattooists)
- armed forces

Personal services (for example, hairdressers, tattooists) and Armed forces, have been combined with the Other occupation sector category because of low numbers reported working in these groups.

This self-reported definition of sector is not compatible with other definitions of sector such as [Standard Industrial Classifications \(SIC\)](#).

## Other CIS analysis and studies

This study is one of several studies that provide information around the coronavirus pandemic within the UK. For information on other studies see [Section 11: Measuring the data in a previous CIS bulletin, published 30 April 2021](#).

## Quality

Quality and methodology information on strengths, limitations, appropriate uses, and how the data were created is available in the CIS [methods article](#) and the [Coronavirus \(COVID-19\) Infection Survey QMI](#).

# 9 . Strengths and limitations

These statistics have been produced quickly in response to developing world events. The suitability of these modelling techniques has been verified by our academic partners.

The estimates presented in this bulletin contain [uncertainty](#). There are many sources of uncertainty, including uncertainty in the estimates and in the quality of data collected in the questionnaire. Information on the main sources of uncertainty are presented in the [Coronavirus \(COVID-19\) Infection Survey Quality and Methodology Information report](#), the methodology article, and [our blog](#) that explains why we trust the data from the COVID-19 Infection Survey.

## 10 . Related links

### [Coronavirus \(COVID-19\) Infection Survey, UK](#)

Bulletin | Updated weekly

Estimates for England, Wales, Northern Ireland and Scotland.

### [Coronavirus \(COVID-19\) Infection Survey, antibody and vaccination data for the UK](#)

Bulletin | Updated fortnightly

Antibody and vaccination data by UK country and regions in England from the Coronavirus (COVID-19) Infection Survey.

### [Coronavirus \(COVID-19\) Infection Survey, characteristics of people testing positive for COVID-19, UK](#)

Bulletin | Updated fortnightly

The characteristics of people testing positive for coronavirus (COVID-19) from the COVID-19 Infection Survey. This survey is being delivered in partnership with the University of Oxford, the University of Manchester, UK Health Security Agency and Wellcome Trust.

### [COVID-19 Infection Survey: methods and further information](#)

Methods article | Updated 7 February 2022

Information on the methods used to collect the data, process it, and calculate the statistics produced from the COVID-19 Infection Survey.

### [The Coronavirus \(COVID-19\) Infection Survey QMI](#)

Methodology article | Updated 16 July 2021

Quality and Methodology Information for the Coronavirus (COVID-19) Infection Survey (CIS), detailing the strengths and limitations of the data, methods used, and data uses and users.