Office for National Statistics

Statistical bulletin

Coronavirus (COVID-19) Infection Survey, characteristics of people testing positive for COVID-19, UK: 30June 2021

Characteristics of people testing positive for COVID-19 from the Coronavirus (COVID-19) Infection Survey. This survey is being delivered in partnership with University of Oxford, University of Manchester, Public Health England andWellcomeTrust.This study is jointly led by the ONS and the Department for Health and Social Care (DHSC) working with the University of Oxford and Lighthouse Laboratories to collect and test samples.

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1 . Main points

- In the weeks prior to 14 June 2021, the percentage of the population testing positive for coronavirus (COVID-19) in the UK continued to be low for those in patient-facing healthcare job roles, but has increased in those not in patient-facing healthcare job roles.
- The number of socially distanced and physical contacts that adults and school-age children reported with people outside their household has increased since March 2021 up to 14 June 2021 across the UK.
- In June 2021, 61% (95% confidence interval: 52% to 69%) of people who tested positive for COVID-19 with a strong positive test reported symptoms within 35 days of the test in the UK.
- The most commonly reported symptoms among people testing positive for COVID-19 with a strong positive test were cough, fatigue and headache.

About this bulletin

We have changed from presenting analysis on the characteristics of people testing positive for COVID-19 in a fortnightly article to a fortnightly bulletin series. Our previous articles presenting analysis on the characteristics of people testing positive for COVID-19 are still available.

In this bulletin, we refer to the number of COVID-19 infections within the community population; community in this instance refers to private residential households, and it excludes those in hospitals, care homes and/or other institutional settings in the UK.

This bulletin presents analysis on the characteristics of those testing positive for SARS-CoV-2, the coronavirus causing the COVID-19 disease in the UK. We include current COVID-19 infections, which we define as testing positive for SARS-CoV-2, with or without having symptoms, on a swab taken from the nose and throat.

More about coronavirus

- Find the latest on coronavirus (COVID-19) in the UK.
- Explore the latest coronavirus data.
- All ONS analysis, summarised in our coronavirus roundup.
- View all coronavirus data.
- Find out how we are working safely in our studies and surveys.

More information on our headline estimates of the overall number of positive cases in England, Wales, Northern Ireland and Scotland are available in our latest weekly bulletin. It should be noted that the analysis on the characteristics and behaviours of those testing positive in this bulletin is for a different time period than the headline figures presented in the most recent bulletin. The reference periods for the various analyses are clearly stated at the start of each section, as well as further information on what the analysis covers. More information about the methods used for our models is available in our methodology article.

2 . Percentage testing positive for COVID-19 by adults in patient-facing and not in patient-facing healthcare job roles, UK

About this analysis

This section provides modelled estimates on positivity rates by adults in patient-facing and not in patient-facing healthcare job roles for the UK. Patient-facing healthcare job roles include working in healthcare establishments such as hospitals, and do not include job roles in social care or care homes. The models used to produce positivity rates for adults in patient-facing and not in patient-facing job roles include only swab test results from individuals aged 16 to 74 years. Those not working are included within the group not in patient-facing healthcare job roles. This analysis covers the time period between 21 September 2020 and 14 June 2021.

The percentage of the population testing positive in the UK continued to be low for those in patient-facing healthcare job roles, but has increased in those not in patient-facing healthcare job roles

In the weeks prior to 14 June 2021, the percentage of the population testing positive for coronavirus (COVID-19) in the UK continued to be low for those in patient-facing healthcare job roles, but has increased in adults not in patient-facing healthcare job roles. This is after a peak in both groups in January 2021, which was more pronounced for adults in patient-facing job roles than those not in patient-facing healthcare job roles.

Figure 1: In the weeks prior to 14 June 2021, the percentage of the population testing positive in the UK continued to be low for those in patient-facing healthcare roles, but has increased in those not in patient-facing healthcare roles

Estimated percentage of the population testing positive for COVID-19 on nose and throat swabs by adults in patient-facing and not in patient-facing healthcare job roles, UK, 21 September 2020 to 14 June 2021

Download the data

Notes:

1. All results are provisional and subject to revision.
2. There are fewer people in patient-facing healthcare job roles in our sample than those not in patient-facing healthcare roles (which includes those not working). Therefore, the estimates for patient-facing healthcare job roles have a larger degree of uncertainty, represented by wider confidence intervals.
3. This analysis covers the entirety of the UK and is therefore not comparable to analysis published before 20 May 2021, which includes individuals in non-patient and patient-facing job roles by age in England.

3 . Number and age of people individuals had contact with, in England, Wales, Northern Ireland and Scotland

About this analysis

This section looks at how often individuals are reporting social contact (either socially distanced or physical contact) with other people outside their own household, regardless of whether they have tested positive for coronavirus (COVID-19). We asked individuals how many people aged 17 years and under, 18 to 69 years, and 70 years and over, outside their household, they have had contact with up to seven days prior to each visit. "Contact" refers to either of the following:

- socially distanced contact - direct contact with social distancing only
- physical contact - physical contact, such as a handshake or personal care, including wearing personal protective equipment (PPE)

This analysis covers the time period between 20 September 2020 and 12 June 2021 in England, and 29 November 2020 and 12 June 2021 for Wales, Northern Ireland and Scotland. The analysis for Wales, Northern Ireland and Scotland starts at a later date because data collection for these countries started at a later date.

Further information on the schedule for school re-openings can be viewed for England, Wales, Northern Ireland and Scotland. Information on lockdown easing can be viewed for England, Wales, Northern Ireland and Scotland.

We have produced estimates that have been weighted to be representative of the total population in England, Wales, Northern Ireland and Scotland. Analysis includes all people taking part in the survey and we present contact analysis for school-age children (age two years to school Year 11) and adults (school Year 12 and above). We report the number of contacts in the following groups:

- 0 (no reported contact)
- 1 to 5 (reported contacts)
- 6 to 10 (reported contacts)
- 11 to 20 (reported contacts)
- 21 or more (reported contacts)

Socially distanced contacts - school-age children

We present the proportion of school-age children reporting each category of socially distanced contact in England, Wales, Northern Ireland and Scotland in Figure 2.

Across all four UK countries, the proportion of socially distanced contacts school-age children had with those aged under 70 years has been increasing since March 2021, with a dip occurring in mid-April 2021 in England, Wales and Scotland corresponding to the Easter school holidays. The increases from March 2021 correspond to the full or phased re-opening of schools in England, Wales, Northern Ireland and Scotland, dependant on policies for each country.

The proportion of socially distanced contacts school-age children had with those aged 70 and over has increased gradually since mid-January 2021 in England, and since March 2021 in Wales, Northern Ireland and Scotland.

There is a consistent trend over time and across all nations with school-age children reporting to have more socially distanced contacts with those aged under 18 years than with those aged 18 to 69 years or aged 70 years and over.

Figure 2: The number of socially distanced contacts school age children reported having with people aged under 70 years has been increasing since March 2021 across the UK

Proportion of school-age children by number of socially distanced contacts with different age groups, UK, 20 September 2020 to 12 June 2021

Download the data

Notes:

1. These results are provisional and subject to revision.
2. This analysis includes all participants between 20 September 2020 to 12 June 2021 in England and participants between 29 November 2020 to 12 June 2021 in Wales, Northern Ireland and Scotland, regardless of whether they tested positive or negative for COVID-19.

Socially distanced contacts - adults

We present the proportion of adults reporting each category of socially distanced contact in England, Wales, Northern Ireland and Scotland in Figure 3.

Across all four UK countries, the proportion of socially distanced contacts across all age groups for adults has been increasing since March 2021. Adults also consistently reported more socially distanced contacts with those aged 18 to 69 years than with people under the age of 18 years or 70 years and over across all four UK countries over the time period studied.

Figure 3: In adults, the number of reported socially distanced contacts across all age groups has been increasing since March 2021

Proportion of adults by number of socially distanced contacts with different age groups, UK, 20 September 2020 to 12 June 2021

Download the data

Notes:

1. These results are provisional and subject to revision.
2. This analysis includes all participants between 20 September 2020 to 12 June 2021 in England and participants between 29 November 2020 to 12 June 2021 in Wales, Northern Ireland and Scotland, regardless of whether they tested positive or negative for COVID-19.

Physical contacts - school-age children

Among school-age children, the trends in physical contacts are very similar to socially distanced contact trends across the UK, with increases in contacts from March 2021 onwards.

As with socially distanced contacts, school-age children consistently reported having more physical contacts with those aged under 18 years than with those aged 18 to 69 years or 70 years and over in England, Wales, Northern Ireland and Scotland.

Physical contacts - adults

Among adults, trends in physical contacts over time are also very similar to socially distanced contact trends across the UK, with increases in contacts from March 2021 onwards, although the number of physical contacts was lower.

Adults in England, Wales, Northern Ireland and Scotland reported having consistently more physical contacts with those aged 18 to 69 years than with those aged under 18 years or aged 70 years and over in the time period studied.

Additional information on the proportions of physical contacts by school-age children and adults can be found in the accompanying dataset.

Our findings are generally similar to those reported in the Opinions and Lifestyle Survey (OPN), which examines the impact of the coronavirus pandemic on people, households and communities in Great Britain. The most recent OPN bulletin reported that among adults in Great Britain, from 16 to 20 June 2021:

- The proportion of adults reporting meeting up indoors (44% this week, 46% last week) or outdoors (60% this week, 63% last week) with someone not in their household, childcare or support bubble in the past seven days decreased slightly this week following previous increases in these proportions as lockdown restrictions eased.

4 . Symptoms profile of strong positive cases, UK

About this analysis

This analysis considers individuals with any strong positive test (including repeated positive tests) that had a Ct value less than 30 between 1 December 2020 and 14 June 2021 in the UK. This analysis considers all symptoms reported at visits within 35 days of the first positive test of the episode, and at each visit we ask about symptoms in the last seven days. This includes symptoms reported even when there is a negative test within this timeframe or a positive test with a higher Ct value. The strength of the test is determined by how quickly the virus is detected, measured by a cycle threshold (Ct) value. The lower the Ct value, the higher the viral load and stronger the positive test. We look at strong positive test results with a Ct of less than 30 to exclude the possibility that symptoms are not identified because we pick up individuals very early or later on in their infection. More details on this analysis can be found in Section 9.

Individuals taking part in the survey were asked at each visit whether they had experienced a range of possible symptoms[1] in the seven days before they were tested, and also separately whether they felt that they had symptoms compatible with a coronavirus (COVID-19) infection in the last seven days.

In Figure 5 we have categorised reported symptoms into the following:

- any: any specific self-reported symptom, including cough, fever, shortness of breath, loss of taste, loss of smell, myalgia, fatigue, sore throat, headache, abdominal pain, diarrhoea, nausea or vomiting; or any symptom compatible with COVID-19
- classic: cough, fever, shortness of breath, loss of taste, loss of smell
- gastrointestinal (GI): abdominal pain, nausea or vomiting, diarrhoea
- loss of taste or smell only

To date, 80% of positive cases in June[2] 2021 and 46% of positive cases in May 2021 were Delta variant compatible. Prior to this very few Delta compatible cases were identified. This means that any change between May and June when compared with previous months may be because the Delta variant has a different symptoms profile to the Alpha variant. In addition, when the percentage of the population testing positive for COVID-19 is increasing, as it has been recently, the survey is likely to identify more people closer to the start of their infection with lower Ct values. We have recently seen a decrease in Ct values, indicating an increase in strong positive test results at the start of infection, which may result in more people reporting symptoms.

In the UK, people testing positive for COVID-19 with a strong positive test were more likely to report "classic" symptoms than gastrointestinal or loss of taste or smell only

This analysis is based on all individuals who test positive for COVID-19 with a strong positive test (Ct <30) and considers what percentage of these individuals reported symptoms within 35 days of the first positive test in the episode.

In June 2021[2], 61% (95% confidence interval: 52% to 69%) of people testing positive for COVID-19 in the UK reported symptoms. The confidence intervals are wider because of lower numbers of people testing positive in our survey from March 2021 onwards. Symptoms reported were more likely to be "classic" symptoms than gastrointestinal or loss of taste or smell only.

Figure 4: In the UK, 61% of people testing positive for COVID-19 reported symptoms in June 2021

Percentage of people with symptoms, including only those who have strong positive tests (Ct less than 30), UK, 1 December 2020 to 14 June 2021

Download the data

Notes:

1. All results are provisional and subject to revision.
2. Symptoms are self-reported and were not professionally diagnosed.
3. The data presented are unweighted percentages of people with any positive test result that had a Ct value less than 30.

Figure 5: In the UK, people testing positive for COVID-19 with a strong positive test were more likely to report "classic" symptoms than gastrointestinal or loss of taste or smell only

Percentage of people with symptoms, including only those who have strong positive tests (Ct less than 30), UK, 1 December 2020 to 14 June 2021

Download the data

Notes:

1. All results are provisional and subject to revision.
2. Symptoms are self-reported and were not professionally diagnosed.
3. The data presented are unweighted percentages of people with any positive test result that had a Ct value less than 30.
4. “Classic symptoms” include any of the following: cough, fever, shortness of breath, loss of taste, loss of smell.

Figure 6 shows that the most commonly reported symptoms in the UK have consistently been cough, headache and fatigue. The least commonly reported symptoms have consistently been abdominal pain, diarrhoea and nausea or vomiting.

Figure 6: The most commonly reported symptoms among people testing positive for COVID-19 with a strong positive test were cough, fatigue and headache

Percentage of people with symptoms, including only those who have strong positive tests (Ct less than 30), UK, 1 December 2020 to 14 June 2021

Download the data

Notes:

1. All results are provisional and subject to revision.
2. Symptoms are self-reported and were not professionally diagnosed.
3. The data presented are unweighted percentages of people with any positive test result that had a Ct value less than 30.

Notes for: Symptoms profile of strong positive cases for England, Wales, Northern Ireland and Scotland

1. The symptoms respondents were asked to report are: fever, muscle ache (myalgia), fatigue (weakness or tiredness), sore throat, cough, shortness of breath, headache, nausea or vomiting, abdominal pain, diarrhoea, loss of taste or loss of smell.
2. Our symptoms analysis includes data from 1 December 2020 up to the most recent date available, which is 14 June 2021. This means that results for June 2021 include data from 1 to 14 June 2021.

5 . Characteristics of people testing positive data

Coronavirus (COVID-19) infections in the community in the UK
Dataset | Released 30 June 2021
Coronavirus (COVID-19) Infection Survey, characteristics of people testing positive for COVID-19, UK

6 . Collaboration

The Coronavirus (COVID-19) Infection Survey analysis was produced by the Office for National Statistics (ONS) in partnership with the University of Oxford, the University of Manchester, Public Health England 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

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.

Credible interval

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

For more information, see our methodology page on statistical uncertainty.

8 . Measuring the data

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

Our methodology article provides further information around the survey design, how we process data and how data are analysed.

Symptoms analysis

The analysis in section 4 looks at each person who tested positive for coronavirus (COVID-19) who had a strong positive test in the UK. The strength of the test is determined by how quickly the virus is detected, measured by a cycle threshold (Ct) value. The lower the Ct value, the higher the viral load and stronger the positive test. Positive results with a high Ct value can be seen in the early stages of infection when virus levels are rising, or late in the infection, when the risk of transmission is low.

Participants who only have positive tests with these high values are excluded from this analysis to exclude the possibility that symptoms are not identified because we pick up individuals either very early or later on in their infection. You can find more information on Ct values in a paper written by academic partners at the University of Oxford.

The analysis on the symptoms profile of strong positive cases in the UK considers individuals with any positive test (including repeated positive tests) that had a Ct value less than 30 between 1 December 2020 and 14 June 2021. Positive episodes are now being defined as "a new positive test 90 days or more after an initial first positive test and following a previous negative test, or, if within 90 days, a subsequent positive test following four consecutive negative tests", rather than using a 90-day threshold alone.

9 . Strengths and limitations

More information on strengths and limitationsis available in the Coronavirus (COVID-19) Infection Survey statistical bulletin.

10 . Related links

Coronavirus (COVID-19) Infection Survey, UK
Bulletin | Updated weekly
Estimates for England, Wales, Northern Ireland and Scotland. This survey is being delivered in partnership with University of Oxford, University of Manchester, Public Health England and Wellcome Trust. This study is jointly led by the Office for National Statistics (ONS) and the Department for Health and Social Care (DHSC) working with the University of Oxford and Lighthouse laboratories to collect and test samples.

Coronavirus (COVID-19) Infection Survey: antibody and vaccination data for the UK
Article | Updated fortnightly
Antibody and vaccination data by UK country and regions in England from the Coronavirus (COVID-19) Infection Survey. This analysis has been produced in partnership with University of Oxford, University of Manchester, Public Health England, and Wellcome Trust. This study is jointly led by the ONS and the Department for Health and Social Care (DHSC) working with the University of Oxford and Lighthouse Laboratories to collect and test samples.

COVID-19 Infection Survey: methods and further information
Methods article | Updated 26 March 2021
Information on the methods used to collect the data, process it, and calculate the statistics produced from the COVID-19 Infection Survey pilot.

Coronavirus (COVID-19) latest insights
Interactive tool | Updated as and when data become available
Explore the latest data and trends about the coronavirus (COVID-19) pandemic from the ONS and other official sources.

Coronavirus (COVID-19) roundup
Web page | Updated as and when data become available
Catch up on the latest data and analysis related to the coronavirus pandemic and its impact on our economy and society.

COVID-19 Infection Survey (CIS)
Article | Updated regularly
Whether you have been invited to take part or are just curious, find out more about our COVID-19 Infection Survey and what is involved.

Coronavirus and vaccination rates in people aged 70 years and over by socio-demographic characteristic, England
Article | Released 29 March 2021
First dose COVID-19 vaccination rates among people aged 70 years and older who live in England, both in private households and communal establishments. Includes estimates for the population as a whole by age and sex, and for ethnic minorities, religious groups, those identified as disabled and by area deprivation.

The prevalence of long COVID symptoms and COVID-19 complications
Article | Released 4 June 2021
Estimates of the prevalence of self-reported "long COVID", and the duration of ongoing symptoms following confirmed coronavirus infection, using UK Coronavirus (COVID-19) Infection Survey data to 6 March 2021.

COVID Symptom Study - what are the new top 5 COVID symptoms?
Web page | Updated 23 June 2021
Daily reports on the ZOE COVID Study app used to identify the current top five symptoms that have emerged in recent weeks, which differ depending on if you've been vaccinated, and how many doses you've had.