Office for National Statistics

Article

Coronavirus (COVID-19) Infection Survey: characteristics of people testing positive for COVID-19 in England, September 2020

Characteristics of people testing positive for COVID-19 from the COVID-19 Infection Survey. This survey is being delivered in partnership with University of Oxford, University of Manchester, Public Health England and Wellcome Trust.

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1 . Main points

- Latest estimates show that Coronavirus (COVID-19) infections have increased in recent weeks; in this article we provide more analysis on the characteristics and behaviours of those testing positive between 23 July and 10 September.
- Between 23 July and 10 September, COVID-19 Infection rates have increased primarily in the least deprived areas within each region.
- Positivity rates have increased over time amongst those aged under 35 years who had socially-distanced direct contact with six or more people aged 18 to 69 years, suggesting socially-distanced direct contact in younger age groups is an increasingly important factor in contracting COVID-19.
- In recent weeks, COVID-19 positivity rates have been higher amongst people who have travelled abroad, although increases are seen in both those who have and have not travelled.
- There is no evidence that working location is driving the greater increase in positivity rate in younger age groups in recent weeks.
- There is evidence that Asian or Asian British individuals were more likely to have ever tested positive for antibodies against SARS-CoV-2 on a blood test than White individuals, suggesting they were more likely to have had COVID-19 in the past; although the methods used for analysis differ, all findings for characteristics of individuals testing positive for COVID-19 antibodies in this article are consistent with findings presented in our previous article.

2 . What this analysis covers

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

This article presents analysis on the characteristics of those testing positive for SARS-CoV-2 – the coronavirus causing the COVID-19 disease – based on findings from the COVID-19 Infection Survey in England. We include both 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, and past infections, which we define as testing positive for antibodies to SARS-CoV-2.

More information on our headline estimates of the overall number of positive cases in England, Wales and Northern Ireland are available in our latest bulletin.

Further information on what the analysis covers is provided at the start of each section.

3 . COVID-19 positivity rates from nose and throat swab test results in England by characteristics

About this analysis

The analysis in this section is based on statistical modelling of the trend in rates of nose and throat swabs testing positive for COVID-19 by different characteristics. The modelling used is similar to that used to produce national trend modelling of COVID-19 infections in our weekly bulletin. More information about the methods used in the model is available in our methodology article.

The analysis uses all available nose and throat swab test results which have information on the different characteristics available, and we present the trends from 23 July up until the most recent data used for that model. All analyses in this section adjust for the effect of region. The modelled estimates are presented at a reference value for region, in this case the reference value is the East Midlands. This does not affect the overall trend over time, but estimated percentages for other regions would vary in level.

The total percentage of people in England estimated to have had COVID-19 over time from the start of the survey up until the most recent week available is presented in our weekly bulletin, which shows that the number of infections has increased in recent weeks. Our weekly bulletin also presents evidence that COVID-19 infection rates have increased most in younger age groups under the age of 35 years.

In Section 3, we present new analysis examining how positivity rates have varied over time amongst different groups of the population, and in most cases, how these compare in those aged under 35 years and aged 35 years and over. The analysis in our bulletin is presented over a different time period to the analysis in this article.

COVID-19 Infection rates have increased primarily in the least deprived areas

The Index of Multiple Deprivation (IMD) (PDF, 2.18MB) is the official measure of relative deprivation in England. It combines indicators of individuals' living conditions from seven domains – income, employment, education, health, crime, housing and environment – to rank the deprivation experienced by people in small areas of England in relation to other small areas in England. People can be regarded as deprived if they lack any kind of resources, not just income.

For this analysis these small areas have been grouped into five categories, with the first quintile including the most deprived 20% of areas, and the fifth quintile including the least deprived 20% of areas.

Figure 1 presents the estimated percentage of those living in areas of varying deprivation testing positive for the coronavirus (COVID-19) between 23 July and 10 September 2020. Our positivity rates are presented for a reference region, and within each region positivity rates are increasing fastest in the least deprived quintiles in recent weeks. We see similar effects whether we adjust for the fact that positivity rates are increasing at different rates in different regions or not. More deprived areas may have also seen small increases, but due to the wide credible intervals we cannot be certain.

Figure 1: COVID-19 infection rates have increased primarily in the least deprived areas

Estimated percentage testing positive for the coronavirus (COVID-19) on nose and throat swabs, daily, by index of deprivation quintiles between 23 July and 10 September 2020, England

Download the data

Notes:

1. All results are provisional and subject to revision.
2. These statistics refer to infections reported in the community, by which we mean private households. These figures exclude infections reported in hospitals, care homes and/or other institutional settings.
3. The modelled estimates are presented at the reference value for a region which is the East Midlands. This does not affect the overall trend over time, but estimated percentages for other regions would vary in level.
4. This modelling is based on data from 26 April to 10 September. We have presented the model for the most recent period (23 July to 10 September).

Individuals aged under 35 years are showing increases in all areas, regardless of deprivation. In those aged 35 years and over, increases in positivity rates over time have only occurred in the less deprived areas.

Figure 2: Individuals aged under 35 years are showing increases in all areas, regardless of deprivation

Estimated percentage testing positive for the coronavirus (COVID-19) on nose and throat swabs, daily, by index of deprivation quintiles and age between 23 July and 10 September 2020, England

Download the data

Notes:

1. All results are provisional and subject to revision.
2. These statistics refer to infections reported in the community, by which we mean private households. These figures exclude infections reported in hospitals, care homes and/or other institutional settings.
3. The modelled estimates are presented at the reference value for a region which is the East Midlands. This does not affect the overall trend over time, but estimated probabilities for other regions would vary in level.
4. This modelling is based on data from 26 April to 10 September. We have presented the model for the most recent period (23 July to 10 September).

Marked increase in COVID-19 positivity rates amongst White individuals aged under 35 years, compared with White individuals aged 35 years and over

Due to small numbers, this analysis compares people identifying as White ethnic groups with all those identifying with any other ethnic group (including Asian or Asian British, Black, African, Caribbean or Black British, Mixed or Multiple ethnic groups, and Other ethnic groups).

There has been a marked increase in positivity rates amongst White individuals aged under 35 years, compared with White individuals aged 35 years and over. However, rates in White individuals aged 35 years and over have also increased slightly in the most recent weeks compared with a low point in August.

Due to small numbers, the credible intervals are wide in ethnic minority groups; therefore, we cannot say how positivity rates have varied over time for these groups. However, there is no evidence that recent overall increases in positivity are predominantly due to increases in those from other ethnic groups.

In previous analysis we found individuals identifying as Asian or Asian British were more likely to test positive for COVID-19 than individuals identifying as White. The limited number of positive cases meant it was difficult to draw conclusions about the remaining ethnic groups. This previous analysis did not consider changes over time or differences by age. The trends over time show this difference through to mid to late August, when positivity rates started to increase markedly amongst individuals aged under 35 years identifying with White ethnic groups.

Figure 3: Evidence suggests an increase in White individuals aged under 35 years, with less certainty around the trends in those identifying with other ethnic groups

Estimated percentage of the population testing positive for the coronavirus (COVID-19) on nose and throat swabs, daily, by ethnicity and age between 23 July and 10 September 2020, England

Download the data

Notes:

1. All results are provisional and subject to revision.
2. These statistics refer to infections reported in the community, by which we mean private households. These figures exclude infections reported in hospitals, care homes and/or other institutional settings.
3. The modelled estimates are presented at the reference value for a region which is the East Midlands. This does not affect the overall trend over time, but estimated probabilities for other regions would vary in level.
4. This modelling is based on data from 26 April to 10 September. We have presented the model for the most recent period (23 July to 10 September).

Positivity rates have increased over time amongst those aged under 35 years who had socially-distanced contact with six or more people aged 18 to 69 years in the last 30 days, suggesting socially-distanced contact in younger age groups is an increasingly important factor in contracting COVID-19

We ask individuals how many people aged under 18 years, 18 to 69 years, or 70 years and over, outside their own household, they have had socially-distanced direct contact with in the seven days before each visit. Because there is a time delay between being exposed to someone with COVID-19 and testing positive, and because some people with symptoms may already be self-isolating when a swab is taken, this analysis classifies people based on the maximum number of contacts reported in each age group over the 30 days prior to each swab test result.

For individuals aged under 35 years, positivity rates have increased over time amongst those who report having had socially-distanced direct contact with six or more people aged 18 to 69 years. For individuals aged 35 years and over there is no evidence of increases in positivity for any number of reported socially-distanced direct contacts.

This means that reporting having had socially-distanced direct contact with a larger number of people appears to be an increasingly important factor in increasing positivity rates in the younger age groups.

We estimate positivity rates based on socially-distanced direct contact as reported by each participant; interpretation of what socially-distanced contact is may vary between participants.

Figure 4: Positivity rates have increased over time amongst those aged under 35 years who had socially-distanced direct contact with six or more people aged 18 to 69 years

Estimated percentage testing positive for the coronavirus (COVID-19) on nose and throat swabs, daily, by number of socially-distanced direct contacts with 18- to 69-year-olds and age, between 23 July and 10 September 2020, England

Download the data

Notes:

1. All results are provisional and subject to revision.
2. These statistics refer to infections reported in the community, by which we mean private households. These figures exclude infections reported in hospitals, care homes and/or other institutional settings.
3. The modelled estimates are presented at the reference value for a region which is the East Midlands. This does not affect the overall trend over time, but estimated probabilities for other regions would vary in level.
4. The modelling is based on data from 23 July to 10 September when the question on socially-distanced contact was added to the survey.

We also present the estimated percentage of those testing positive for COVID-19 who have had socially-distanced direct contact with people aged under 18 years and aged 70 years and over in the dataset that accompanies this article. Numbers of these contacts are lower overall. There is no evidence that the number of socially-distanced direct contacts with people in these age groups is affecting trends in positivity in those aged either under 35 years or 35 years and over. This suggests that socially-distanced direct contact with under 18-year-olds or those aged 70 years and over is not driving increases in positivity.

In recent weeks, positivity rates have been higher amongst people who have travelled abroad

This analysis presents trends in positivity rates comparing those who travelled abroad in the 30 days prior to the swab test with those who did not travel abroad.

In recent weeks, positivity rates have been higher amongst people who have travelled[1], although rates have increased in both groups. Credible intervals are wide in those who have travelled abroad.

Figure 5: In recent weeks, positivity rates have been higher amongst people who have travelled abroad

Estimated percentage testing positive for the coronavirus (COVID-19) on nose and throat swabs, daily, by travel behaviour in the last 30 days, between 23 July and 10 September 2020, England

Download the data

Notes:

1. All results are provisional and subject to revision.
2. These statistics refer to infections reported in the community, by which we mean private households. These figures exclude infections reported in hospitals, care homes and/or other institutional settings.
3. The modelled estimates are presented at the reference value for a region which is the East Midlands. This does not affect the overall trend over time, but estimated probabilities for other regions would vary in level.
4. The modelling is based on data from 2 August to 10 September when the question on travel was added to the survey.

No evidence that patient-facing roles or working location are driving the greater increase in positivity rate in younger age groups in recent weeks

The models used to produce positivity rates for patient-facing roles and working location include only swab test results from individuals of working age (aged 16 to 74 years), as these characteristics are only relevant for this group of people.

There is no evidence that there is currently any difference in positivity rates between individuals in patient-facing roles and all other working age adults (aged 16 to 74 years), for either those under 35 years or 35 years and over. This modelling is based on data from 26 April to 5 September, and we present the trend from 23 July to 5 September.

In the earlier months of the study we did find that infection rates were higher for those working in patient-facing roles. However, analysis presented in our previous article suggested this heightened risk of infection had reduced or disappeared, which is consistent with new analysis available in our data tables. Because of relatively small numbers of patient facing individuals in the sample there is high uncertainty, as shown in the large credible intervals. Our findings are also consistent with recently published results from the Real-time Assessment of Community Transmission (REACT 1) study.

Figure 6: There is no evidence that working location is driving the greater increase in positivity rate in younger age groups in recent weeks

Estimated percentage testing positive for the coronavirus (COVID-19) on nose and throat swabs, daily, by working location and age, between 23 July and 5 September 2020, England

Download the data

Notes:

1. All results are provisional and subject to revision.
2. These statistics refer to infections reported in the community, by which we mean private households. These figures exclude infections reported in hospitals, care homes and/or other institutional settings.
3. The modelled estimates are presented at the reference value for a region which is the East Midlands. This does not affect the overall trend over time, but estimated probabilities for other regions would vary in level.
4. This modelling is based on data from 26 April to 5 September. We have presented the model for the most recent period (23 July to 5 September).

Positivity rates have increased for people aged under 35 years who work outside of the home, and are presented in the dataset that accompanies this article. However, at this stage there is no evidence to suggest that working location is driving the greater increase in positivity rate in younger age groups. This is largely due to the wider credible intervals in those under 35 years working from home and not working, which mean there may be similar increases in these groups. Positivity rates have remained relatively constant for people aged 35 years and over in all work locations. This modelling is based on data from 26 April to 5 September, and we present the trend from 23 July to 5 September.

Notes for COVID-19 positivity rates from nose and throat swab test results in England by characteristics:

1. Participants reported travelling abroad to the following countries: Belgium, Croatia, Czech Republic, France, Germany, Greece, Italy, Malta, Portugal, Spain, and The Canaries

4 . Likelihood of testing positive for COVID-19 antibodies in England by characteristics

About this analysis

The analysis in this section of the article is based on blood test results taken from a randomly selected subsample of individuals aged 16 years and over, which are used to test for antibodies against SARS-CoV-2. This can be used to identify individuals who have had the infection in the past.

It takes between two and three weeks for the body to make enough antibodies to fight the infection but once a person recovers, antibodies remain in the blood at low levels, although these levels can decline over time to the point that tests can no longer detect them. Having antibodies can help to prevent individuals from getting the same infection again. We measure the presence of antibodies to understand who has had COVID-19 in the past, although the length of time antibodies remain at detectable levels in the blood is not fully known. It is also not yet known how having detectable antibodies, now or at some time in the past, affects the chance of getting COVID-19 again.

The analysis in this section is different to the analysis and results presented in earlier sections of this article, which are based on swab test results identifying current infections.

The latest headline figures for the overall number of people in England and by region of England testing positive for antibodies are available in our latest bulletin. The analysis in our bulletin is presented over a different time period to the analysis in this article.

Methods used in this section

This section covers the likelihood of individuals ever testing positive for coronavirus (COVID-19) on an antibody test by different characteristics. The results are presented in two models:

- entire population model: includes all participants regardless of age (individuals aged 16 years and over)
- working age population model: includes all individuals of working age (those aged 16 to 74 years)

The modelled analysis is based on blood sample results provided by study participants since the start of the study on 26 April up to 2 September 2020.

Both models include a set of general characteristics: age, sex, ethnicity, household size and whether individuals think they have had COVID-19 in the past. The working age model also includes characteristics that relate to work: working location and whether individuals work in patient-facing healthcare roles.

Estimates are modelled to identify the risk associated with each characteristic, while controlling for the effects of other characteristics. This gives a better reflection of the true risk associated with each characteristic. This approach differs from our previous article, in which estimates of antibody positivity rates were presented separately for each characteristic without considering how these different characteristics were related to each other. More information on the modelling used is available in Section 6: COVID-19 Infection Survey methodology.

Interpreting the charts

Results are presented as odds ratios. When a characteristic (for example, being male) has an odds ratio of one, this means that there is neither an increase nor a decrease in the likelihood of infection compared with a reference category (for example, being female). An odds ratio of higher than one means that there is an increased likelihood of infection compared with the reference category. An odds ratio of lower than one means that there is a reduced likelihood of infection compared with the reference category. The reference categories are presented in Figures 7 and 8 as "Comparison groups".

The odds ratios are presented with 95% confidence intervals. If the range of the confidence interval crosses the threshold of one, we cannot say with any certainty whether infection is more or less likely for that characteristic compared with the reference category, even if the estimate is not close to one. In some instances, this will be because we estimate there to be no differences (where the odds ratio estimate is close to one), but it can also reflect less information about a characteristic in our sample (that is, wide confidence intervals).

Results from the entire population model for England

Figure 7 presents the likelihood of past COVID-19 infection for the general characteristics based on 8,074 blood samples taken between 26 April up to 2 September 2020. A more detailed explanation of how to interpret the graph is available in Section 6: COVID-19 Infection Survey methodology.

Figure 7: Modelled likelihood of testing positive for COVID-19 antibodies by general characteristics

The odds ratios of any individual testing positive for coronavirus (COVID-19) antibodies in a blood sample by age, sex, ethnic group, household size and whether the individual thinks they have had COVID-19 previously, England, 26 April to 2 September 2020

Download the data

Notes:

1. These results are provisional and subject to revision.
2. These statistics refer to infections reported in the community, by which we mean private households. These figures exclude infections reported in hospitals, care homes or other institutional settings.

Not enough evidence of differences in the likelihood of individuals testing positive for COVID-19 antibodies by age or sex

Figure 7 indicates there is not enough evidence from this analysis to say with confidence that there are differences in the likelihood of people aged 50 to 69 years having ever testing positive for antibodies compared to other age groups because all of the confidence intervals overlap with the “same odds” threshold.

However, our results are compatible with a trend shown in other studies with a decreasing likelihood of testing positive for antibodies with increasing age.

By sex, the evidence suggests that females are either as likely, or less likely than males to ever have tested positive for antibodies, with an odds ratio of 0.8 (95% confidence interval: 0.7 to 1.0).

Individuals identifying as Asian and Asian British are more likely to have tested positive for antibodies to COVID-19 than those identifying as White ethnic groups

Individuals identifying as Asian or Asian British ethnic groups were 2.7 times (95% confidence interval: 1.6 to 4.4) more likely to have ever been infected by COVID-19 over the study period than those identifying as in the White ethnic group. This is based on blood samples taken since the start of the study on 26 April up to 2 September 2020.

For the those identifying with the remaining ethnic groups, it is not possible to draw conclusions about their relative likelihood of testing positive. This is due to low numbers of people and positive cases identifying with ethnic groups other than White, meaning confidence intervals are wide.

Not enough evidence of differences in the likelihood of individuals testing positive for COVID-19 antibodies by household size

People from one person households are either as likely or less likely than people from two person households to have ever tested positive for COVID-19 antibodies, with an odds ratio of 0.8 (95% confidence interval: 0.6 to 1.0).

Due to the confidence intervals overlapping with the same odds threshold, we cannot say for sure whether the other household sizes are less likely to have ever tested positive for antibodies than two person households.

Individuals that think they have had COVID-19 are more likely to test positive for antibodies than those that do not think they have had COVID-19

The study participants were asked whether they think they have had COVID-19 in the past. People who think they have had the virus are 5.4 times more likely (95% confidence interval: 4.4 to 6.7) to have a positive antibody test, indicating past infection, than those who did not think they have had the virus. This is based on blood samples taken between 26 April and 2 September 2020.

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 we are working safely in our studies and surveys.

Results from the working age population model

Figure 8 shows the odds ratios of testing positive for COVID-19 antibodies for characteristics of the working age population (those aged 16 to 74 years) based on 7,027 blood samples taken between 26 April and 2 September 2020. The model controls for the general characteristics in Figure 6 as well as for working location during the study and whether the individual has ever worked in patient-facing healthcare roles.

The odds ratios for the general characteristics from this model were very similar to those in Figure 7. The full model results are available in our data tables.

Figure 8: Modelled likelihood of testing positive for COVID-19 antibodies by working characteristics

The odds ratios of any working age individuals (aged 16 to 74 years) testing positive for coronavirus (COVID-19) antibodies by working location during the study and patient-facing healthcare roles, England, 26 April to 2 September 2020

Download the data

Notes:

1. These results are provisional and subject to revision.
2. These statistics refer to infections reported in the community, by which we mean private households. These figures exclude infections reported in hospitals, care homes or other institutional settings.
3. The model also controls for the following factors: age, sex, ethnic groups, household size, recent contact with known or suspected coronavirus (COVID-19) cases. The full model results are available in our data tables.

It is not possible to say whether there were differences in the likelihood of testing positive for COVID-19 antibodies by working location

It is not possible to say whether people who reported ever working outside the home during the study are more or less likely to test positive for COVID-19 antibodies than those who have never worked outside of the home because the confidence intervals overlap with the same odds threshold.[1] This is based on blood samples taken since the start of the study on 26 April up to 2 September 2020.

Individuals who work in patient-facing roles are more likely to test positive for antibodies for COVID-19 than those who have never worked in patient-facing roles

Individuals who reported ever working in patient-facing roles are 2.7 times more likely than people who have not worked in patient-facing roles to have ever tested positive for antibodies, suggesting past infection (95% confidence interval 1.7 to 4.2).[2] This includes NHS professionals, such as nurses and doctors, but does not include social care workers, or those working in nursing homes or home care workers.

Although the methods used for analysis differ, all findings for characteristics of individuals testing positive for COVID-19 antibodies in this article are consistent with findings presented in our previous article.

Notes for Likelihood of testing positive for COVID-19 antibodies by characteristics:

1. People's work locations may have changed since the beginning of the pandemic, for this reason this analysis compares those who have ever worked outside of the home against those who have never worked outside of the home, as reported during the study period. The group "Ever worked outside of the home" may include some individuals who have only recently started to do so, or may have done so before the start of the study.

2. People's roles may have changed since the beginning of the pandemic; for this reason, this analysis compares those who have ever worked in patient-facing roles with those who have never worked in a patient-facing role. The group "Ever worked in a patient-facing" role may include some individuals who have only recently started to do so or may have done so before the start of the study.

5 . Coronavirus (COVID-19) Infection Survey data

Coronavirus (COVID-19) infections in the community in England
Dataset | Released 28 September 2020
Characteristics of people testing positive for the coronavirus (COVID-19) in England taken from the COVID-19 Infection Survey.

6 . COVID-19 Infection Survey methodology

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

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ONS COVID-19 Infection Survey dissemination team – Hannah Donnarumma, Unity Amoaku, Sarah Proud, Craig Smith

All analysis was produced in partnership with the University of Oxford, the University of Manchester, Public Health England and Wellcome Trust.

Methodology

The analysis presented in Section 3: Proportion of people in England who had Covid-19 over time by characteristics is based on regression modelling similar to our national trend modelling. More information about the methods used in the model is available in our methodology article. The analysis in Section 3 uses nose and throat swab test results from the start of the study (26 April 2020), or for analysis related to newer questions, from when the question was introduced on 23 July 2020, to model the trend in COVID-19 infections. In this article, we present the trend from 23 July 2020 for all characteristics.

The characteristic models presented in Section 4: Likelihood of testing positive for COVID-19 antibodies by characteristics are mixed-effect multivariable logistic regression models, which simultaneously estimate the effect of different factors that impact on the odds of ever testing positive for COVID-19 within the time frame (23 April to 2 September 2020). They are based on antibody tests conducted on blood samples provided by survey participants. The model takes one observation per participant in the period – their latest positive if they test positive and otherwise their latest negative result. The models include various fixed effects and a random effect for region. The odds ratios from the fixed effects explain relative likelihood of infection while controlling for the effects of the other characteristics. The odds are presented as compared with the odds for testing positive in a reference category (that is, as an odds ratio). This reference category was always the category for which we had the largest sample, for example, each other age category is compared with 50- to 69-year-olds. The random effect allows for the variation at the regional level to be accounted for in these calculations.

We included characteristics within the models to describe two different groups of the population, one of the entire population and one of the working age population. We did not compare multiple models to compare model fit but instead included appropriate characteristics selected based on the interest of stakeholders (government and the public) and based on previously described variation from univariate and other analyses conducted. Because of the relatively low number of positives in the sample across the period, results should be interpreted cautiously.

Our methodology article provides further information around the survey design, how we process data, and how data are analysed. The study protocol specifies the research for the study.

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. 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. 95% credible intervals are calculated so that there is a 95% probability of the true value lying in the interval.

Odds ratio

An odds ratio is a measure of association between a characteristic and an outcome. The odds ratio represents the likelihood that an outcome will occur given a particular characteristic, compared with the likelihood of the outcome occurring in the absence of that characteristic. The odds ratio can be used to determine whether a particular characteristic is a risk factor for a particular outcome and to compare the magnitude of various risk factors for that outcome.

8 . Related links

Coronavirus (COVID-19) Infection Survey pilot
Statistical bulletin | Updated weekly
Initial data from the COVID-19 Infection Survey. This survey is being delivered in partnership with IQVIA, Oxford University and UK Biocentre.

COVID-19 Infection Survey (Pilot): methods and further information
Methods article | Updated 21 September 2020
Estimates for England, Wales, and Northern Ireland. This survey is being delivered in partnership with University of Oxford, University of Manchester, Public Health England and Wellcome Trust.

COVID-19 Infection Survey (CIS)
Article | Updated 14 May 2020
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 (COVID-19) roundup
Blog | 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.