Office for National Statistics

Statistical bulletin

Coronavirus (COVID-19) Infection Survey, UK: 24 September 2021

Estimates forEngland, Wales, Northern Ireland and Scotland.This survey is being delivered in partnership with the 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 laboratory to collect and test samples.

Contact:
Rhiannon Yapp and Byron Davies
infection.survey.analysis@ons.gov.uk
+44 1633 560499

Release date:
24 September 2021

Next release:
1 October 2021

Table of contents

1 . Main points

- In England, the percentage of people testing positive for coronavirus (COVID-19) decreased in the week ending 18 September 2021; we estimate that 620,100 people within the community population in England had COVID-19 (95% credible interval: 577,100 to 663,900), equating to around 1 in 90 people.

- In Wales, the percentage of people testing positive increased in the most recent two weeks, but the trend is uncertain in the week ending 18 September 2021; we estimate that 50,700 people in Wales had COVID-19 (95% credible interval: 39,900 to 62,700), equating to around 1 in 60 people.

- In Northern Ireland, the trend in the percentage of people testing positive is uncertain in the week ending 18 September 2021; we estimate that 30,300 people in Northern Ireland had COVID-19 (95% credible interval: 22,800 to 39,200), equating to around 1 in 60 people.

- In Scotland, the percentage of people testing positive appeared level in the week ending 18 September 2021; we estimate that 120,200 people in Scotland had COVID-19, (95% credible interval: 101,000 to 141,500) equating to around 1 in 45 people.

Within this bulletin, we summarise some of the latest results from the Coronavirus (COVID-19) Infection Survey. For more detailed information on our methods you can view our methodology article. You can also read our article to find out more about comparing methods used in the Coronavirus (COVID-19) Infection Survey and NHS Test and Trace to better understand comparisons in data sources.

About this bulletin

In this bulletin, we refer to the number of current 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 institutional settings, rates of COVID-19 infection are likely to be different. More information about the COVID-19 pandemic from the Office for National Statistics (ONS) and other sources can be found in our Coronavirus (COVID-19) latest insights.

The positivity rate is the percentage of people who have tested positive for COVID-19 on a polymerase chain reaction (PCR) test at a point in time. We use current COVID-19 infections to mean testing positive for SARS-CoV-2, with or without having symptoms, on a swab taken from the nose and throat. This is different to the incidence rate, which is a measure of only the new PCR positive cases in a given time period. All analysis was produced with our research partners at the University of Oxford.

More information on COVID-19 and taking part in our survey

- For more information, please visit the CIS participant guidance page.
- If you have any further questions, please email the CIS operations team: COVID-19@ons.gov.uk.
- Find the latest on coronavirus (COVID-19) in the UK.
- Explore the latest coronavirus data from the ONS and other sources.
- View all coronavirus data.
- Find out how we are working safely in our studies and surveys.

Early management information from the Coronavirus (COVID-19) Infection Survey is made available to government decision-makers to inform their response to COVID-19. Occasionally we may publish figures early if it is considered in the public interest. We will ensure that we pre-announce any ad hoc or early publications as soon as we can. These will include supporting information where possible to aid user understanding. This is consistent with guidance from the Office for Statistics Regulation (OSR).

How the data in this bulletin can be used

The data can be used for:

- estimating the number of current positive cases in the community, including cases where people do not report having any symptoms

- identifying differences in numbers of positive cases between different regions

- estimating the number of new cases and change over time in positive cases

The data cannot be used for:

- measuring the number of cases and infections in care homes, hospitals and/or other institutional settings

- providing information about recovery time of those infected

2 . Percentage of people who had COVID-19 in England, Wales, Northern Ireland and Scotland

In the week ending 18 September 2021, the percentage of people testing positive for coronavirus (COVID-19) decreased in England. The trend was uncertain in Northern Ireland and appeared level in Scotland. In Wales, the percentage of people testing positive increased in the most recent two weeks, but the trend was uncertain in the week ending 18 September 2021.

These estimates are based on statistical modelling of the trend in rates of positive nose and throat swab results. All our estimates are subject to uncertainty given that a sample is only part of the wider population. Therefore, caution should be taken in over-interpreting any small movements in the latest trends.

Table 1: Official reported estimates of the percentage of the population testing positive for COVID-19, UK countries
Estimated percentage of the population testing positive for coronavirus (COVID-19) on nose and throat swabs, UK, 12 September to 18 September 2021

Country	Estimated average % of the population that had COVID-19	95% credible interval		Estimated average number of people testing positive for COVID-19	95% credible interval		Estimated average ratio of the population that had COVID-19	95% credible interval	
		Lower	Upper		Lower	Upper		Lower	Upper
England	1.14	1.06	1.22	620,100	577,100	663,900	1 in 90	1 in 95	1 in 80
Wales	1.67	1.31	2.06	50,700	39,900	62,700	1 in 60	1 in 75	1 in 50
Northern Ireland	1.65	1.24	2.14	30,300	22,800	39,200	1 in 60	1 in 80	1 in 45
Scotland	2.28	1.92	2.69	120,200	101,000	141,500	1 in 45	1 in 50	1 in 35

Source: Office for National Statistics – Coronavirus (COVID-19) Infection Survey

Notes

1. All estimates are subject to uncertainty given that a sample is only part of the wider population. The model used to provide these estimates is a Bayesian model: these provide 95% credible intervals. A credible interval gives an indication of the uncertainty of an estimate from data analysis.

2. The ratios presented are rounded to the nearest 100 if over 1,000, to the nearest 10 if under 1,000 and to the nearest 5 if under 100.

3. These ratios do not represent a person's risk of becoming infected, since risk of infection depends on a number of factors such as contact with others or whether a person has been vaccinated.

Because of the relatively small number of tests in Wales, Northern Ireland and Scotland in our sample, credible intervals are wide and therefore results should be interpreted with caution. These wide credible intervals mean that differences between the central estimates within and between nations may appear smaller or more exaggerated than they really are.

Figure 1: The percentage of people testing positive decreased in England, was uncertain in Wales and Northern Ireland, and appeared level in Scotland in the week ending 18 September 2021

Estimated percentage of the population testing positive for coronavirus (COVID-19) on nose and throat swabs, UK, 7 August 2020 to 18 September 2021

Notes:

1. All estimates are subject to uncertainty, given that a sample is only part of the wider population. The model used to provide these estimates is a Bayesian model: these provide 95% credible intervals. A credible interval gives an indication of the uncertainty of an estimate from data analysis.

2. Official reported estimates are plotted at a reference point believed to be most representative of the given week.

3. The official estimate presents the best estimate at that point in time. Modelled estimates are used to calculate the official reported estimate. The model smooths the series to understand the trend and is revised each week to incorporate new test results, providing the best indication of trend over time.

4. Survey fieldwork for the pilot study began in England on 26 April 2020. In Wales, fieldwork began on 29 June 2020, in Northern Ireland fieldwork began on 26 July 2020 and in Scotland fieldwork began on 21 September 2020.

5. To improve data visualisation, we have displayed official estimates from the week ending 13 August 2020 onwards, which include the second and third waves of the pandemic. The full time series of our official estimates from 27 April 2020 onwards are available in the accompanying datasets.

Download the data

.xlsx

About our estimates

Our headline estimates of the percentage of people testing positive in England, Wales, Northern Ireland and Scotland are the latest official estimates. We include different measures to support our estimation and this section outlines the appropriate uses of all the approaches.

Official estimates should be used to understand the positivity rate for a single point in time. This is based on the modelled estimate for the latest week and is our best and most stable estimate, used in all previous outputs. The modelled estimate is more suited to understanding the recent trend. This is because the model is regularly updated to include new test results and smooths the trend over time. These modelled estimates can be found in the Coronavirus (COVID-19) Infection Survey datasets.

The estimates for non-overlapping 14-day periods (which underpin our modelled official estimates) and the unweighted sample counts are included in the Coronavirus (COVID-19) Infection Survey datasets. These estimates are produced using a different method of weighting to the model and are available for people who wish to compare infection levels over time in this way. For more information on our methods and quality surrounding the estimates please see our COVID-19 Infection Survey methods article and Quality and Methodology Information report.

All estimates presented in this bulletin are provisional results. As swabs are not necessarily analysed in date order by the laboratory, we have not yet received test results for all swabs taken on the dates included in this analysis. Estimates may therefore be revised as more test results are included.

3 . Sub-national analysis of the number of people who had COVID-19

The overall picture for England is a result of the different trends across regions. During the week ending 18 September 2021, the percentage of people testing positive continued to fluctuate across regions. The estimated percentage of people testing positive for coronavirus (COVID-19) continued to increase in the North West and decreased in Yorkshire and The Humber, London, and the South East. For all other regions, trends were uncertain. Caution should be taken in over-interpreting any small movements in the latest trend.

In the data used to produce these estimates, the number of people sampled in each region who tested positive for the coronavirus (COVID-19) was low relative to England overall. This means there is a higher degree of uncertainty in the regional estimates for this period, as indicated by larger credible intervals.

Figure 2: The percentage of people testing positive for COVID-19 decreased in Yorkshire and The Humber, London and South East in the week ending 18 September 2021

Estimated daily percentage of the population testing positive for coronavirus (COVID-19) on nose and throat swabs by region, England, 8 August to 18 September 2021

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 percentage of people testing positive by region was calculated using a similar modelling approach to the national daily estimates in Section 2: Percentage of people who had COVID-19 in England, Wales, Northern Ireland and Scotland.

4. The analysis is conducted over a six-week period, which means specific positive cases move into and then out of the sample. This causes variability between estimates over time, which is expected given the lower number of positive tests within each region, compared with England as a whole.

5. The credible intervals widen slightly at the end as there is a delay between the swab being taken and reporting of results.

Download the data

.xlsx

Sub-regional analysis for the UK

Sub-regional estimates are based on a different model to our headline estimates and should not be compared. In the data used to produce these estimates, the number of people sampled in each sub-regional area who tested positive was lower, relative to their respective overall national samples. This means there is a higher degree of uncertainty in the sub-regional estimates and caution should be taken when interpreting or ranking them.

The percentage testing positive varies across sub-regions of the UK. In Figure 3, we have presented modelled estimates from 12 September 2021 to 18 September 2021 for sub-regions in England, Wales, Northern Ireland and Scotland.

Figure 3: The percentage testing positive varied across sub-regions of the UK in the week ending 18 September 2021

Estimated percentage of the population testing positive for coronavirus (COVID-19) on nose and throat swabs by sub-regional geography, UK, 12 September 2021 to 18 September 2021

Notes:

1. All results are provisional and subject to revision.

2. Sub-regional estimates are based on a different model to our headline estimates. Our sub-regional estimates are calculated as an average over a seven-day period and should not be compared with our headline positivity estimates which are for a single reference date. Therefore, the sub-regional figures may differ from the headline estimates because they are averaged over a longer time period. If a trend is changing, the figures shown in Figure 3 may not reflect the change we are seeing in our headline estimates.

3. 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.

4. All estimates are subject to uncertainty, given that a sample is only part of the wider population. The model used to provide these estimates is a Bayesian model: these provide 95% credible intervals. A credible interval gives an indication of the uncertainty of an estimate from data analysis. The credible intervals can be found in the Coronavirus (COVID-19) Infection Survey datasets.

5. Please note, due to different trends across the four countries, we have modelled Wales, Scotland, and Northern Ireland separately to England.

Download the data

.xlsx

4 . Age analysis of the number of people who had COVID-19

Age analysis by category for England

Our age categories separate children and young people by school age:

- "age 2 years to school Year 6" includes children in primary school and below

- "school Year 7 to school Year 11" includes children in secondary school

- "school Year 12 to age 24 years" includes young adults who may be in further or higher education

This means that 11- to 12-year-olds and 16- to 17-year-olds have been split between different age categories depending on whether their birthday is before or after 1 September.

Estimates are based on smaller sample sizes within each age group relative to England overall. There is a higher degree of uncertainty as indicated by larger credible intervals. These can be found in the accompanying England dataset.

As with the regional picture, the number of people testing positive for coronavirus (COVID-19) continued to fluctuate across age groups. In the week ending 18 September 2021, the percentage of people testing positive increased for those aged 2 to school Year 6 and those in school Year 7 to school Year 11. In the same week, the trend was uncertain for those aged 50 to 69 years and decreased in all other age groups.

The percentage of people testing positive was highest in young people at secondary school. In the week ending 18 September 2021, 2.81% (95% credible interval: 2.35% to 3.33%) of children in school Year 7 to school Year 11 tested positive for COVID-19.

Figure 4: The percentage of people testing positive increased for those aged 2 years to school Year 6 and school Year 7 to school Year 11 in the week ending 18 September 2021

Estimated daily percentage of the population testing positive for coronavirus (COVID-19) on nose and throat swabs by age group, England, 8 August 2021 to 18 September 2021

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.

Download the data

.xlsx

Estimates for non-overlapping 14-day periods (which underpin our modelled estimates) by age group are available in our Coronavirus (COVID-19) Infection Survey datasets and are provided as an alternative measure over time for context.

We are unable to produce the same grouped analysis as presented in Figure 4 for the devolved administrations because of smaller sample sizes within each age group. We are able to produce analysis on positivity by single year of age for Wales, Northern Ireland and Scotland using a different model and these estimates can be found in the Coronavirus (COVID-19) Infection Survey datasets.

Data by single year of age for England is not available this week. Previous estimates up to 11 September can be found in the Coronavirus (COVID-19) Infection Survey datasets.

5 . Number of new COVID-19 infections in England, Wales, Northern Ireland and Scotland

The incidence rate is a measure of new polymerase chain reaction (PCR)-positive cases in a given time period. We include estimates of the incidence rate in our Coronavirus (COVID-19) Infection Survey datasets.

In the week ending 4 September 2021, the number of new PCR-positive COVID-19 cases continued to increase in Wales and appeared level in England. In the same week, the trend in the number of new PCR-positive COVID-19 cases was uncertain in Northern Ireland. For Scotland, the incidence rate increased in the two weeks up to 4 September 2021, but the trend was uncertain in the week ending 4 September 2021. Credible intervals are very wide because of relatively small sample sizes, and care should be taken in interpreting results.

The reference date used for our official estimates of incidence of PCR-positive cases is 14 days prior to the positivity reference day, meaning that there is a two-week lag between the incidence estimate and the positivity estimate. This is necessary as estimates later than this date are more likely to change as we receive additional data. While we believe that the incidence estimates are useful, they can be volatile and subject to change as more data become available. For more information on how we calculate estimates of incidence please see COVID-19 Infection Survey: methods and further information.

6 . Number of people testing positive for COVID-19 by variant

Since the end of May 2021, infections compatible with the Delta variant have been the most common in England and in recent weeks in all four UK countries. Our most recent results show over 99% of all coronavirus (COVID-19) infections (in the four weeks to 30 August 2021) where we were able to obtain a genetic sequence were the Delta variant.

Because of this high proportion of a single variant, we have not included breakdown of infections by variant based on gene positivity patterns from our swab test. We last published our main variant analysis in Coronavirus (COVID-19) Infection Survey, UK: 23 July 2021, where more details can be found.

We will continue to monitor infections by variant and will reintroduce the charts and analysis by gene matching pattern when considered helpful. More information on how we measure variants from positive tests on the survey can be found in our Understanding COVID-19 Variants blog.

Variant analysis

The World Health Organization (WHO) have defined names for Variants of Concern and Variants of Interest. These are variants that the UK government has under surveillance (PDF, 2.51MB) :

UK variants of concern:

- Alpha: B.1.1.7, first identified in the UK

- Beta: B.1.351, first identified in South Africa

- Gamma: P.1, first identified in Brazil

- Delta: B.1.617.2, first identified in India

UK variants under investigation (WHO variants of interest):

- Lambda: C.37

- Mu: B.1.621

The Alpha variant (B.1.1.7) of COVID-19, identified in the UK in mid-November 2020, has changes in one of the three genes that COVID-19 swab tests detect, known as the S-gene. This means that in cases compatible with this variant, the S-gene is not detected by the current test. Therefore Alpha (B.1.1.7) has the pattern ORF1ab+N (S-gene negative), and cases with that gene pattern were labelled "compatible with the Alpha variant" in our previously published variant analysis. Other variants – including both Delta (B.1.617.2) and Beta (B.1.351) – are positive on all three genes, with the pattern ORF1ab+S+N. Almost all ORF1ab+S+N cases in the UK will now be the Delta variant, so this group was labelled "compatible with the Delta variant" in our previously published variant analysis.

The Cycle threshold (Ct) value is the number of cycles that each polymerase chain reaction (PCR) test goes through before a positive result is detectable. If there is a high quantity of the virus present, a positive result will be identified after a low number of cycles. However, if there is only a small amount of the virus present, then it will take more cycles to detect it. These values are used as a proxy for the quantity of the virus, also known as the viral load. The higher the viral load, the lower the Ct value. These values are helpful for monitoring the strength of the virus and for identifying patterns that could suggest changes in the way the virus is transmitting. The Ct values of COVID-19 positive tests are provided in the [Coronavirus (COVID-19) Infection Survey: technical dataset](#) that accompanies this bulletin.

We try to read all letters of the virus' genetic material for every positive nose and throat swab with sufficient virus to do so (Ct less than 30). This is called whole genome sequencing. Positive samples are hand-picked at the testing centre and shipped to a sequencing lab, after which they are sequenced and the genetic data processed. Sequencing is not successful on all these samples, or only part of the genome is sequenced. This is especially so for the higher Ct values, which are common in our data as we often catch people early or late in infection when viral loads tend to be lower (and hence Ct values are higher).

Where we successfully sequence over half of the genome, we use the sequence data to work out which type of variant is present in each virus. This method can tell us which variant might be responsible for any potential increase in cases which are either "compatible with the Delta variant" or "compatible with the Alpha variant". However, because we cannot get a sequence from every positive result, there is more uncertainty in these estimates.

These data are provided in the [Coronavirus (COVID-19) Infection Survey: technical dataset](#) using the international standard labels.

Genome sequencing takes longer to produce results, so the genome sequencing results relate to an earlier time period than our most recent positivity data. Our most recent results from genome sequencing show that in the four weeks up to the week ending 30 August 2021, the vast majority (over 99%) of sequences obtained were Delta (B.1.617.2).

The sequencing is produced by Public Health England and analysis is produced by research partners at the University of Oxford. Of particular note are Dr Katrina Lythgoe, Dr David Bonsall, Dr Tanya Golubchik, and Dr Helen Fryer. Genome sequencing is funded by the COVID-19 Genomics UK (COG-UK) consortium. COG-UK is supported by funding from the Medical Research Council (MRC) part of UK Research and Innovation (UKRI), the National Institute of Health Research (NIHR) and Genome Research Limited, operating as the Wellcome Sanger Institute.

More information on how we measure variants from positive tests on the survey can be found in our [Understanding COVID-19 Variants blog](#).

7 . Test sensitivity and specificity

The estimates provided in Sections 2 to 6 are for the percentage of the private-residential population testing positive for coronavirus (COVID-19), otherwise known as the positivity rate. We do not report the prevalence rate. To calculate the prevalence rate, we would need an accurate understanding of the swab test's sensitivity (true-positive rate) and specificity (true-negative rate).

While we do not know the true sensitivity and specificity of the test, our data and related studies provide an indication of what these are likely to be. In particular, the data suggest that the false-positive rate is very low – under 0.005%. We do not know the sensitivity of the swab test. However, other studies suggest that sensitivity (the rate of true-positive test results) may be somewhere between 85% and 98%.

You can find more information on sensitivity and specificity in our COVID-19 Infection Survey methods article and our blog that explains why we trust the data from the COVID-19 infection survey. You can find more information on the data suggesting that our test''s false-positive rate is very low in a paper written by academic partners at the University of Oxford.

8 . Coronavirus (COVID-19) Infection Survey data

Coronavirus (COVID-19) Infection Survey: England
Dataset | Released 24 September 2021
Findings from the Coronavirus (COVID-19) Infection Survey for England.

Coronavirus (COVID-19) Infection Survey: Northern Ireland
Dataset | Released 24 September 2021
Findings from the Coronavirus (COVID-19) Infection Survey for Northern Ireland.

Coronavirus (COVID-19) Infection Survey: Scotland
Dataset | Released 24 September 2021
Findings from the Coronavirus (COVID-19) Infection Survey for Scotland.

Coronavirus (COVID-19) Infection Survey: Wales
Dataset | Released 24 September 2021
Findings from the Coronavirus (COVID-19) Infection Survey for Wales.

Coronavirus (COVID-19) Infection Survey: technical data
Dataset | Released 24 September 2021
Technical and methodological data from the Coronavirus (COVID-19) Infection Survey, England, Wales, Northern Ireland and Scotland.

9 . 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, Public Health England (PHE) 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

10 . Glossary

Community

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

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 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.

False-positives and false-negatives

A false-positive result occurs when the tests suggest a person has COVID-19 when in fact they do not. By contrast, a false-negative result occurs when the tests suggest a person does not have COVID-19 when in fact they do. For more information on false-positives and false-negatives, see our methods article and our blog.

Cycle threshold (Ct) values

The strength of a positive coronavirus (COVID-19) 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.

11 . Measuring the data

Reference dates

We aim to provide the estimates of positivity rate (the percentage of those who test positive) and incidence that are most timely and most representative of each week. We decide the most recent week we can report on based on the availability of test results for visits that have already happened, accounting for the fact that swabs have to be couriered to the labs, tested and results returned. On most occasions, the reference dates align perfectly, but sometimes this is not feasible. This week, the reference week for positivity is 12 September to 18 September 2021.

Within the most recent week, we provide an official estimate for positivity rate based on a reference point from the modelled trends. For positivity rates, we can include all swab test results, even from the most recent visits. Therefore, although we are still expecting further swab test results from the labs, there was sufficient data for the official estimate for infection to be based on a reference point after the start of the reference week. To improve stability in our modelling while maintaining relative timeliness of our estimates, we are reporting our official estimates based on the midpoint of the reference week. This week, the reference day for positivity rates is Wednesday 15 September 2021.

The reference date used for our official estimates of incidence of polymerase chain reaction (PCR)-positive cases is 14 days prior to the positivity reference day. This is necessary as estimates later than this date are more likely to change as we receive additional data. This week, the reference week for incidence is 29 August to 4 September 2021 and the reference day is Wednesday 1 September 2021.

Response rates

Response rates for England, Wales, Northern Ireland and Scotland cannot be regarded as final response rates to the survey since those who are invited are not given a time limit in which to respond, and different modes of sampling are not comparable. Response rates for each nation are found in the Coronavirus (COVID-19) Infection Survey: technical dataset. We provide response rates separately for the different sampling phases of the study. Additional information on response rates can be found in our COVID-19 Infection Survey methods article.

Sub-regional geographies

We have presented modelled estimates for the most recent week of data at the sub-regional level. To balance granularity with statistical power, we have grouped together local authorities into COVID-19 Infection Survey sub-regions. The geographies are a rules-based composition of local authorities, and local authorities with a population over 200,000 have been retained where possible.

The boundaries for these COVID-19 Infection Survey sub-regions can be found on the Open Geography Portal.

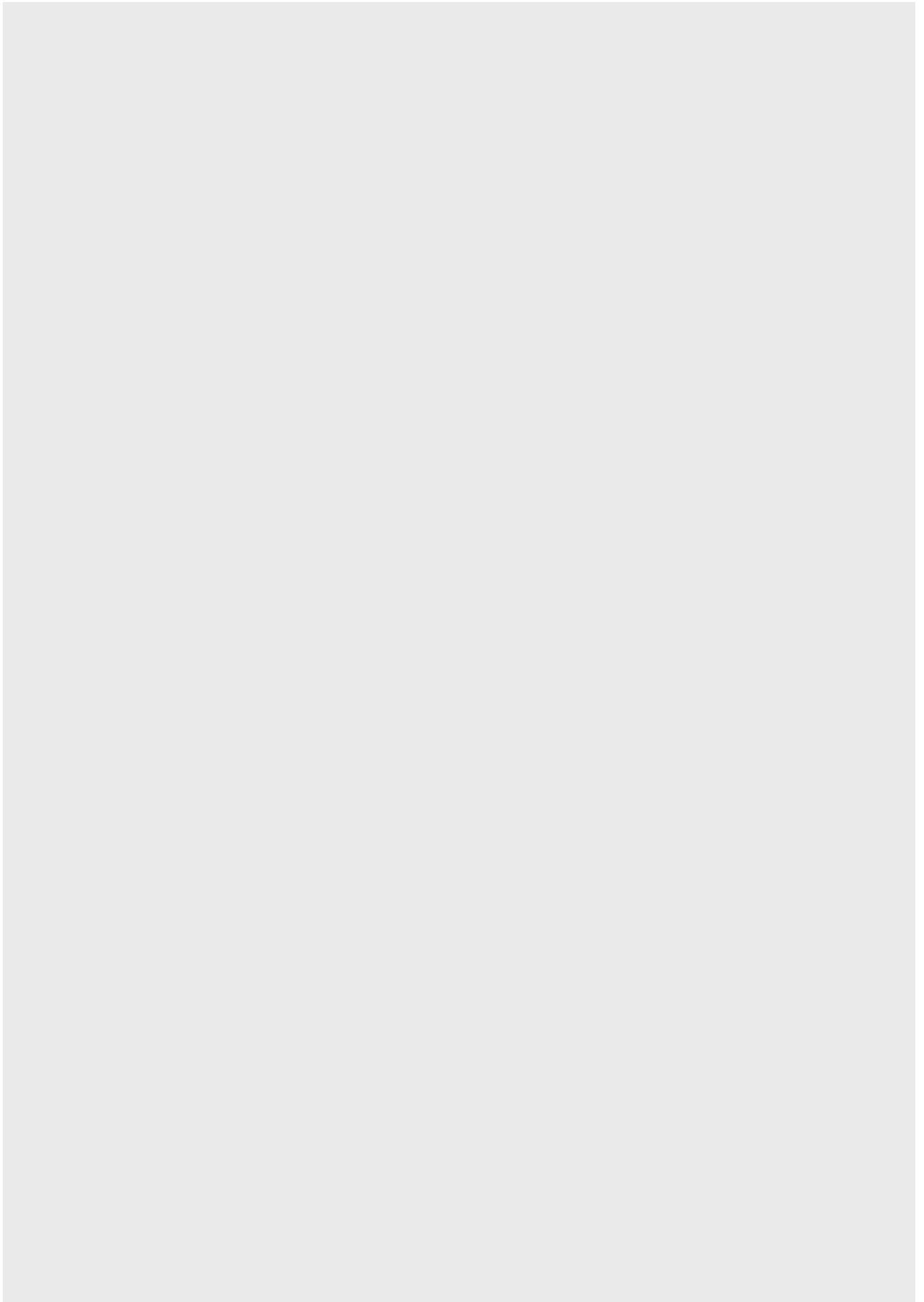## Other Coronavirus Infection Survey (CIS) analysis and studies

This study is one of a number of studies that look to provide information around the coronavirus pandemic within the UK. For information on other studies see Section 11: Measuring the data in our previous bulletin dated 30 April 2021.

12 . Strengths and limitations

These statistics have been produced quickly in response to developing world events. The Office for Statistics Regulation, on behalf of the UK Statistics Authority, has reviewed them against several important aspects of the Code of Practice for Statistics and regards them as consistent with the Code's pillars of trustworthiness, quality and value.

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

13 . Related links

[Coronavirus (COVID-19) Infection Survey: characteristics of people testing positive for COVID-19 in countries of the 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, Public Health England and Wellcome Trust.

[Coronavirus (COVID-19) Infection Survey: antibody and vaccination data for the UK](#)
Article | Updated fortnightly
Antibody and vaccination data by UK country and English regions from the Coronavirus (COVID-19) Infection Survey. This survey is being delivered in partnership with the University of Oxford, University of Manchester, Public Health England and Wellcome Trust.

[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 Office for National Statistics (ONS) and other official sources.

[Coronavirus (COVID-19) latest data and analysis](#)
Web page | Updated as and when data become available
Latest data and analysis on the coronavirus pandemic in the UK and its effect on the economy and society.

[Deaths registered weekly in England and Wales, provisional](#)
Bulletin | Updated weekly
Provisional counts of the number of deaths registered in England and Wales, including deaths involving COVID-19, by age, sex and region, in the latest weeks for which data are available.

[COVID-19 Infection Survey](#)
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.

[COVID-19 Schools Infection Survey, England: Round 6, England: August 2021](#)
Bulletin | Released 11 August 2021
Initial estimates of staff and pupils testing positive for coronavirus (COVID-19) from the COVID-19 Schools Infection Survey across a sample of schools, within selected local authority areas in England. This Schools Infection Survey (SIS) is jointly led by the London School of Hygiene and Tropical Medicine, Public Health England and the Office for National Statistics.

[The prevalence of long COVID symptoms and COVID-19 complications](#)
Article | Released 2 September 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 1 August 2021.

[Coronavirus (COVID-19) Infection Survey technical article: analysis of reinfections of COVID-19: June 2021](#)
Technical article | Released on 29 June 2021
This release provides data about reinfections of COVID-19 from the COVID-19 Infection Survey. This analysis has been produced in partnership with the University of Oxford.

[Coronavirus (COVID-19) Infection Survey technical article: waves and lags of COVID-19 in England, June 2021](#)
Technical article | Released on 29 June 2021
An analysis of published data on the waves and lags of coronavirus (COVID-19) from the Coronavirus (COVID-19) Infection Survey, the Scientific Advisory Group for Emergencies (SAGE) and Public Health England (PHE). This analysis has been produced in partnership with the University of Oxford.

[Coronavirus (COVID-19) Infection Survey technical article: analysis of positivity after vaccination, June 2021](#)
Technical article | Released 17 June 2021
This release provides data about positivity after vaccination from the Coronavirus (COVID-19) Infection Survey. This analysis has been produced in partnership with the University of Oxford.

[COVID-19 Infection Survey: methods and further information](#)
Methodology article | Updated 24 August 2021
Information on the methods used to collect the data, process it, and calculate the statistics produced from the Coronavirus (COVID-19) Infection Survey.