

Statistical bulletin

# Coronavirus (COVID-19) Infection Survey, UK: 8 January 2021

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.

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# 1 . Main points

- In the most recent week, the percentage of people testing positive for the coronavirus (COVID-19) in England has continued to increase; during the most recent week (27 December 2020 to 2 January 2021), we estimate 1,122,000 people (95% credible interval: 1,070,600 to 1,175,700) within the community population in England had the coronavirus (COVID-19), equating to around 1 in 50 people (95% credible interval: 1 in 50 to 1 in 45).
- During the most recent week of the study (27 December 2020 to 2 January 2021), London had the highest proportion testing positive; we estimate that 3.56% of people in London had COVID-19 (95% credible interval: 3.26% to 3.87%), equating to around 1 in 30 people (95% credible interval: 1 in 30 to 1 in 25).
- The percentage of those testing positive has recently decreased in Wales; during the most recent week (27 December 2020 to 2 January 2021), we estimate that 44,100 people in Wales had COVID-19 (95% credible interval: 33,700 to 56,300), equating to around 1 in 70 people (95% credible interval: 1 in 90 to 1 in 55).
- The percentage testing positive in Northern Ireland appears to no longer be decreasing in the most recent week; during the most recent week (27 December 2020 to 2 January 2021), we estimate that 9,100 people in Northern Ireland had COVID-19 (95% credible interval: 5,400 to 14,000), equating to around 1 in 200 people (95% credible interval: 1 in 340 to 1 in 130).
- The percentage testing positive in Scotland has increased over the most recent week; during the most recent week (25 to 31 December 2020), we estimate that 45,900 people in Scotland had COVID-19 (95% credible interval: 37,900 to 54,900), equating to around 1 in 115 people (95% credible interval: 1 in 140 to 1 in 95).
- In the most recent time period (28 December 2020 to 2 January 2021), London, the East of England and the South East have the highest percentage of positive cases that are compatible with the new variant of the virus.

This bulletin contains some data that were released early on Tuesday 5 January. This management information from the Coronavirus (COVID-19) Infection Survey is made available to government decision makers to inform their response to COVID-19. Due to the national situation at the time, the public interest lay in early release of these numbers. This is consistent with [guidance](#) from the Office for Statistics Regulation.

We will ensure that we pre-announce as soon as possible any ad hoc or early publications. These will include supporting information where possible to aid user understanding.

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.

The positivity rate is the percentage of people who have tested positive for COVID-19 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 infections in a given time period.

All analysis was produced with our research partners at the University of Oxford.

## Have you been asked to take 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](mailto:COVID-19@ons.gov.uk).

## 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 . Number of people in England who had COVID-19

During the most recent week of the study, we estimate that 1,122,000 people in England had the coronavirus (COVID-19) (95% credible interval: 1,070,600 to 1,175,700)<sup>1</sup>. This equates to 2.06% (95% credible interval: 1.96% to 2.16%) of the population in England or around 1 in 50 people (95% credible interval: 1 in 50 to 1 in 45). The ratios presented are rounded to the nearest five. This is based on statistical modelling of the trend in rates of positive nose and throat swab results.

Official estimates of the percentage of people testing positive over time are presented in Figure 1. In the most recent week, the percentage of people testing positive in England has continued to increase.

In the latest six-week period, there were 523,452 swab tests, and a total of 6,104 positive tests, in 5,565 people from 4,249 households. In the latest two-week period, there were 123,738 swab tests, and a total of 2,268 positive tests, in 2,191 people from 1,620 households.

Our headline estimate of percentage testing positive in England is the official estimate. We include different measures to support our estimation and the below outlines the appropriate uses of all of the approaches.

Official estimates should be used to understand the positivity rate for a single point in time. This estimate, based on the modelled estimate for the latest week, is our best and most stable estimate and is used in all previous outputs. The modelled estimate can be used to understand the recent trend. The modelling includes a set period of data and smooths the estimate over time.

As this is a household survey, our figures do not include people staying in hospitals, care homes and/or other institutional settings. In these settings, rates of COVID-19 infection are likely to be different. More information about rates of COVID-19 in care homes can be found in [Impact of coronavirus in care homes in England: 26 May to 19 June 2020](#).

### **Figure 1: In the most recent week, the percentage of people testing positive in England has continued to increase**

Official estimates of the percentage of the population in England testing positive for the coronavirus (COVID-19) on nose and throat swabs from 3 May 2020

**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. 95% credible intervals are calculated so that there is a 95% probability of the true value lying in the interval.
2. Official reported estimates are plotted at a reference point believed to be most representative of the given week. Details of which day was used for each week can be found in the [dataset](#) that accompanies this bulletin.

[Download the data](#)

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.

### **Figure 2: The most recent modelled estimate shows signs that the percentage testing positive has continued to increase**

Estimated percentage of the population in England testing positive for the coronavirus (COVID-19) on nose and throat swabs based on modelled estimates from 22 November 2020

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

#### **Notes:**

1. These results are provisional and subject to revision.
2. 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. 95% credible intervals are calculated so that there is a 95% probability of the true value lying in the interval.
3. Official reported estimates are plotted at a reference point believed to be most representative of the given week. Details of which day was used for each week can be found in the [dataset](#) that accompanies this bulletin.
4. Modelled estimates include all swab results that are available at the time the official estimates are produced. Additional swab tests that become available after this are included in subsequent models, meaning that modelled estimates can change slightly as additional data are included.

[Download the data](#)

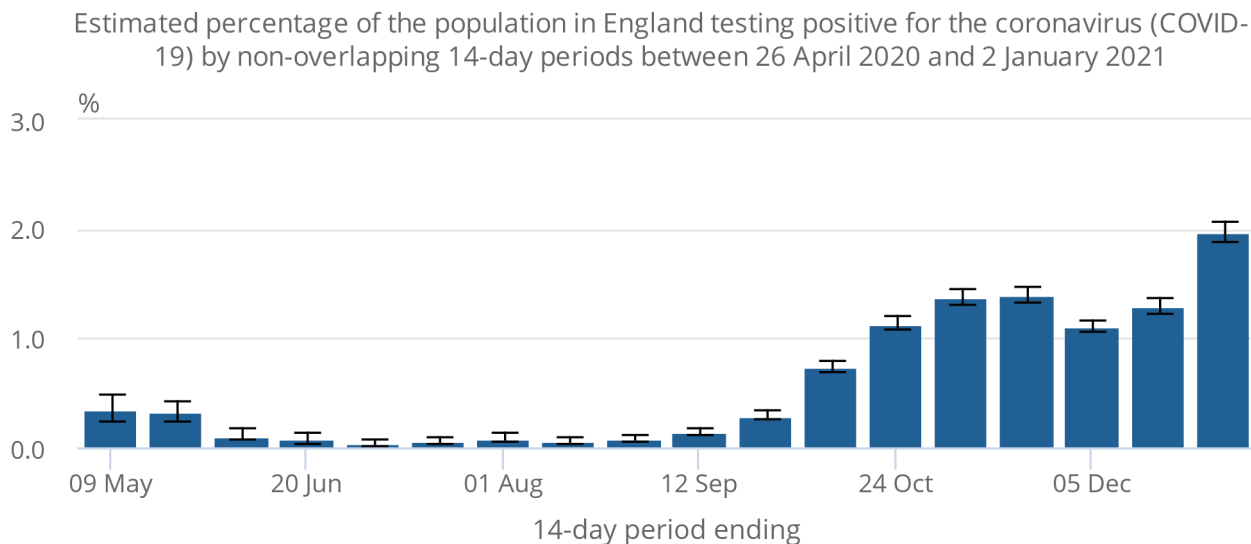
The estimates for non-overlapping 14-day periods (which underpin our modelled official estimates) are presented in Figure 3. These estimates are provided for context. The [dataset](#) that accompanies this bulletin includes the 14-day estimates and the unweighted sample counts. The 14-day time periods presented in Figure 3 overlap with those presented in the data tables in our [previous publication](#), so direct comparisons are not possible.

The percentage testing positive in the latest 14-day period (20 December 2020 to 2 January 2021) was 1.98% (95% confidence interval: 1.89% to 2.07%).

**Figure 3: The weighted fortnightly estimate to 2 January 2021 (which underpins our modelled official estimates) shows the percentage testing positive in England has continued to increase**

Estimated percentage of the population in England testing positive for the coronavirus (COVID-19) by non-overlapping 14-day periods between 26 April 2020 and 2 January 2021

Figure 3: The weighted fortnightly estimate to 2 January 2021 (which underpins our modelled official estimates) shows the percentage testing positive in England has continued to increase



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

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. Caution should be taken around using the 14-day estimate as averaging the percentage testing positive over the past 14-day period can mask changes in the percentage testing positive that have occurred over the most recent two weeks.

Information about how the modelled and 14-day non-overlapping estimates are calculated can be found in our [methods article](#).

We are continuously refining and looking to improve our modelling and presentations. We would welcome any feedback via email: [infection.survey.analysis@ons.gov.uk](mailto:infection.survey.analysis@ons.gov.uk).

For information about the potential impact of false-positive and false-negative test results, see our [methods article](#).

## More about coronavirus

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

## Notes for: Number of people in England who had COVID-19

1. This is based on model estimates from the reference point of the most recent week (27 December 2020 to 2 January 2021), Wednesday 30 December 2020. More information on reference dates can be found in [Section 15: Measuring the data](#).

## 3 . Regional analysis of the number of people in England who had COVID-19

In the data used to produce these estimates, the number of people sampled in each region who tested positive for the coronavirus (COVID-19) is 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.

During the most recent week of the study (27 December 2020 to 2 January 2021), London has the highest percentage of people testing positive. The South West has a lower proportion of people testing positive compared with all other regions.

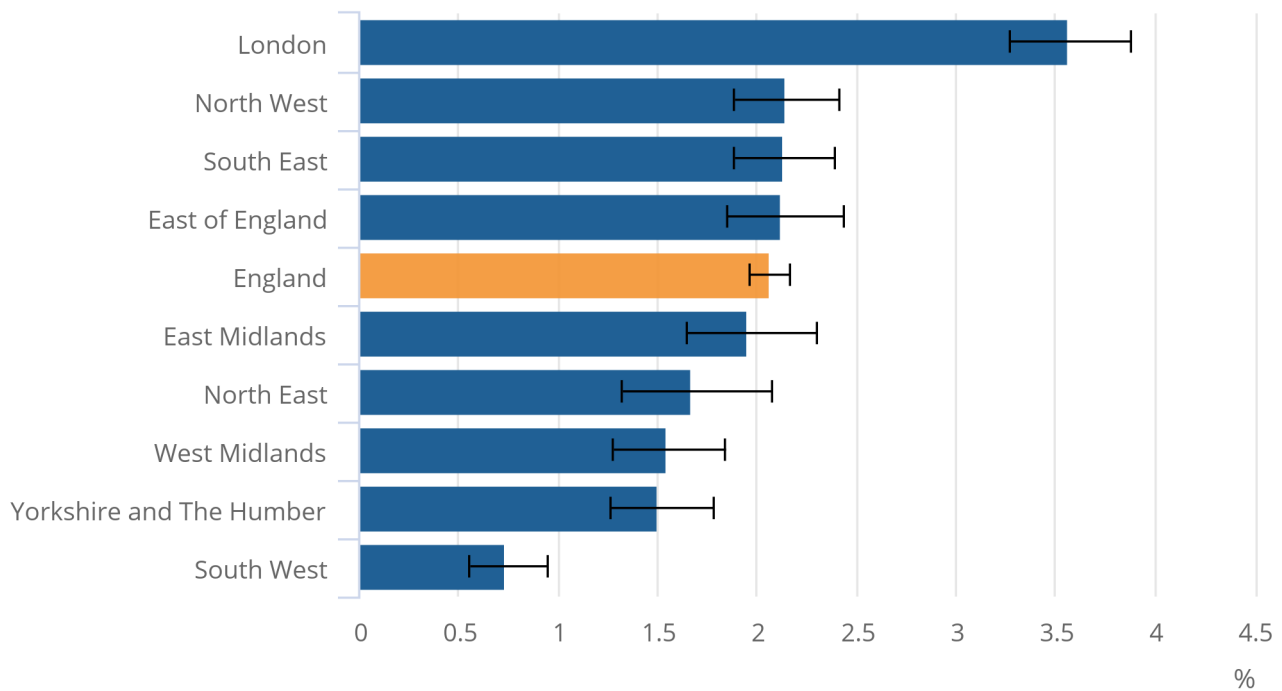


#### Figure 4: London has the highest proportions of people testing positive in the most recent week

Estimated percentage of the population testing positive for the coronavirus (COVID-19) on nose and throat swabs across regions, England, 30 December 2020 (reference point of the most recent week from modelling)

### Figure 4: London has the highest proportions of people testing positive in the most recent week

Estimated percentage of the population testing positive for the coronavirus (COVID-19) on nose and throat swabs across regions, England, 30 December 2020 (reference point of the most recent week from modelling)



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

#### 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.

Trends over time vary substantially between regions and can be seen in Figure 5. The proportion of people testing positive for COVID-19 has continued to rise across all regions in recent weeks. Caution should be taken in over-interpreting any small movements in the latest trend. In particular due to a break in data collection over the Christmas period, no data was collected on 24 to 26 December 2020 and 1 January 2021, there will be greater uncertainty than normal with the estimates published in this report.

The percentage of people testing positive by region was calculated using a similar modelling approach to the national daily estimates in [Section 2: Number of people in England who had COVID-19](#).

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.

### **Figure 5: The proportion of people testing positive has continued to rise across all regions in recent weeks**

Estimated percentage of the population testing positive for the coronavirus (COVID-19) on nose and throat swabs, daily, by region since 22 November 2020, England

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

#### **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](#)

Estimates for non-overlapping 14-day periods (which underpin our modelled estimates) for regions in England are available in our [dataset](#), and are provided for context.

## **4 . Sub-regional analysis of the number of people in England who had COVID-19**

The analysis in this section presents modelled estimates for the most recent week of data at the sub-regional level. In the data used to produce these estimates, the number of people sampled in each area who tested positive for the coronavirus (COVID-19) is lower relative to the England overall sample and the regional samples. This means there is a higher degree of uncertainty in the sub-regional estimates for this period and caution should be taken when interpreting or ranking these estimates, and the uncertainty of the estimates and wide credible intervals should be taken into account.

During the most recent period of the study (27 December 2020 to 2 January 2021), the highest rates can be seen in areas in London and the East of England. The lowest rates can be seen in the South West.

### **Figure 6: Over the most recent period, the highest percentage testing positive can be seen in areas in London and the East of England**

Estimated percentage of the population testing positive for the coronavirus (COVID-19) on nose and throat swabs, by sub-regional geography, England, from modelling the most recent six days of data 28 December 2020 to 2 January 2021

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

## Notes:

1. These results are provisional and subject to revision.
2. 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. 95% credible intervals are calculated so that there is a 95% probability of the true value lying in the interval.
3. Official reported estimates are plotted at a reference point believed to be most representative of the given week. Details of which day was used for each week can be found in the [dataset](#) that accompanies this bulletin.

[Download the data](#)

## 5 . Age analysis of the number of people in England who had COVID-19

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

- “age two years to school Year 6” includes those children in primary school and below
- “school Year 7 to school Year 11” includes those children in secondary school
- “school Year 12 to age 24 years” includes those young adults who may be in further or higher education

This means that 11- to 12-year-olds have been split between the youngest age categories depending on whether they are in school Year 6 or 7 (birthday before or after 1 September).

Similarly, 16- to 17-year-olds are split depending on whether they are in school Years 11 or 12 (birthday before or after 1 September).

In the most recent week, the percentage of people testing positive has increased in all age groups apart from school age children and those aged 35 to 49 years. Rates in primary school age children are no longer increasing, but this change is relatively recent and needs to be viewed with caution. The percentage of people testing positive is now over 1% for those aged 70 years and over. Caution should be taken in over-interpreting small movements in the narrower age groups, which have wider credible intervals. This is based on statistical modelling of nose and throat swab test results.

In the data used to produce these estimates, the number of people sampled in the different age groups who tested positive for COVID-19 is lower relative to England overall. This means there is a higher degree of uncertainty in estimates for individual age groups over this period, as indicated by larger credible intervals.

### **Figure 7: In the most recent week, the percentage testing positive has increased in all age groups apart from school age children and those aged 35 to 49 years**

Estimated percentage of the population testing positive for the coronavirus (COVID-19) on nose and throat swabs, daily, by age group since 22 November 2020, England

**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.

Estimates for non-overlapping 14-day periods (which underpin our modelled estimates) by age group are available in our [dataset](#), and are provided for context.

Currently in our main analysis, individuals in school Years 12 and 13 have been grouped with young adults up to age 24 years. We are considering the most appropriate category for these individuals to be grouped with for future bulletins.

## **6 . Incidence rate in England**

Incidence (the number of new infections in a set period of time), helps us understand the rate at which infections are growing within the population and supports our main measure of prevalence to provide a fuller understanding of the coronavirus (COVID-19). We have estimated incidence by directly measuring when a participant in our study who has previously tested negative, subsequently tests positive, and comparing this with the number of participants who remain negative.

When enrolled on the survey, participants are swabbed weekly for five weeks and then move to monthly swabbing. Increasing the Coronavirus (COVID-19) Infection Survey sample size to 150,000 participants per fortnight enabled the majority of participants to be swabbed weekly, providing us with regular and timely updates on the number of new infections and the "time at risk". The proportion swabbed monthly has now increased and we have reviewed our estimation of incidence, determining options that will adapt our approach to reflect changes in data capture and survey design. We committed to regular reviews of our methods and survey design as part of our ongoing quality assurance process to ensure our estimates remain of the highest quality possible and continue to meet our user needs. This review ensures we will continue to provide an accurate estimate of incidence and to make sure our statistics continue to be of high quality. Our aim is to re-introduce our estimate of incidence later this month. We will confirm a date nearer the time.

## **7 . Number of people in Wales who had COVID-19**

During the most recent week of the study<sup>1</sup>, we estimate that 44,100 people in Wales had the coronavirus (COVID-19) (95% credible interval: 33,700 to 56,300). This equates to 1.45% (95% credible interval: 1.11% to 1.85%) of the population in Wales or around 1 in 70 people (95% credible interval: 1 in 90 to 1 in 55). The ratios are rounded to the nearest five. Our modelling suggests that the percentage of those testing positive has recently decreased in Wales. This is based on exploratory modelling of throat and nose swab results.

Because of the relatively small number of tests and a low number of positives in our sample, credible intervals are wide and therefore results should be interpreted with caution.

In the latest six-week period, there were 18,440 swab tests, and a total of 224 positive tests, in 187 people from 148 households. In the latest two-week period, there were 4,341 swab tests, and a total of 60 positive tests, in 58 people from 48 households.

Our headline estimate of the percentage testing positive in Wales is the official estimate. We include alternative estimates in our report to support our estimation. Appropriate uses of these alternative estimates can be found below.

Official estimates should be used to understand the positivity rate at a single point in time. This estimate, based on the modelled estimate for the latest week, is our best and most stable estimate and is used in all previous headline outputs. The modelled estimate can be used to understand the recent trend. The modelling includes a set period of data and smooths the estimate over time.

## **Figure 8: The percentage of those testing positive has recently decreased in Wales**

Estimated percentage of the population in Wales testing positive for the coronavirus (COVID-19) on nose and throat swabs since 22 November 2020

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

### **Notes:**

1. These results are provisional and subject to revision.
2. 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. 95% credible intervals are calculated so that there is a 95% probability of the true value lying in the interval.
3. Official reported estimates are plotted at a reference point believed to be most representative of the given week. Details of which day was used for each week can be found in the [dataset](#) that accompanies this bulletin.
4. Modelled estimates include all swab results that are available at the time the official estimates are produced. Additional swab tests that become available after this are included in subsequent models, meaning that modelled estimates can change slightly as additional data are included.

[Download the data](#)

The estimates for non-overlapping 14-day periods (which underpin our modelled official estimates) are presented in Figure 9. These 14-day estimates are provided for context. The [dataset](#) that accompanies this bulletin includes the 14-day estimates and the unweighted sample counts. The 14-day time periods presented in Figure 9 overlap with those presented in the data tables in our previous publication, so direct comparisons are not possible.

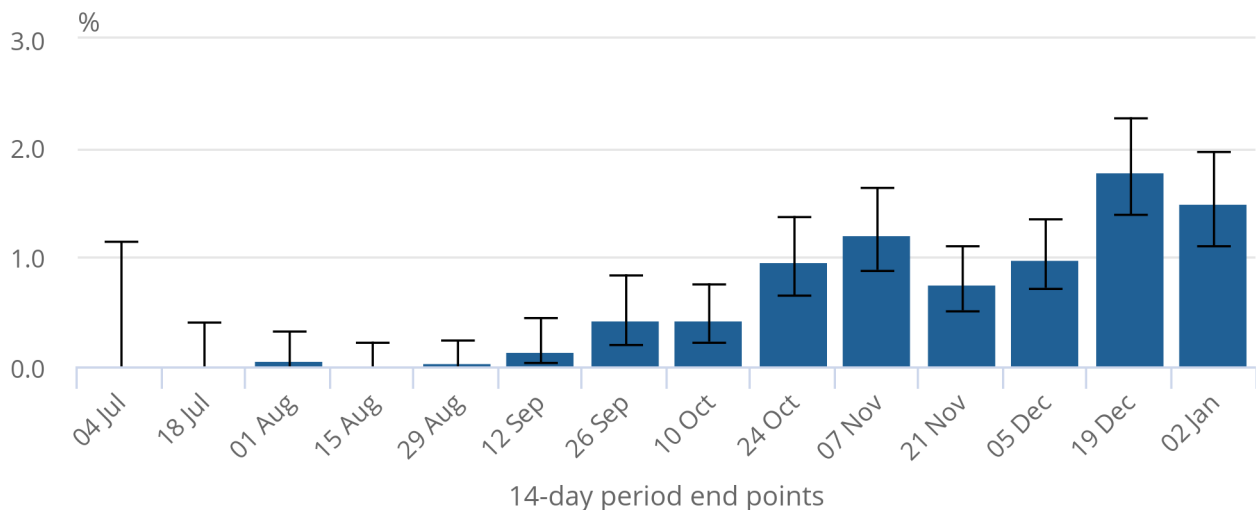
The percentage testing positive in Wales in the latest 14-day period (20 December 2020 to 2 January 2021) was 1.49% (95% confidence interval: 1.10% to 1.97%).

**Figure 9: The weighted fortnightly estimate to 2 January 2021 (which underpins our modelled official estimates) suggests that the percentage testing positive in Wales has decreased in recent weeks**

Estimated percentage of the population in Wales testing positive for the coronavirus (COVID-19) by non-overlapping 14-day periods between 21 June 2020 and 2 January 2021

Figure 9: The weighted fortnightly estimate to 2 January 2021 (which underpins our modelled official estimates) suggests that the percentage testing positive in Wales has decreased in recent weeks

Estimated percentage of the population in Wales testing positive for the coronavirus (COVID-19) by non-overlapping 14-day periods between 21 June 2020 and 2 January 2021



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

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. Caution should be taken around using the 14-day estimate as averaging the percentage testing positive over the past 14-day period can mask changes in the percentage testing positive that have occurred over the most recent two weeks.

The Welsh Government also publishes results from this survey that describe COVID-19 infections in Wales in [English](#) and in [Welsh](#).

**Notes for: Number of people in Wales who had COVID-19**

1. This is based on model estimates from the reference point of the most recent week (27 December 2020 to 2 January 2021), Wednesday 30 December 2020. More information on reference dates can be found in [Section 15: Measuring the data](#).

## 8 . Number of people in Northern Ireland who had COVID-19

During the most recent week of the study<sup>1</sup>, we estimate that 9,100 people in Northern Ireland had the coronavirus (COVID-19) (95% credible interval: 5,400 to 14,000). This equates to 0.50% (95% credible interval: 0.29% to 0.77%) of the population in Northern Ireland or around 1 in 200 people (95% credible interval: 1 in 340 to 1 in 130). The ratios in this bulletin are rounded to the nearest five. Our modelling suggests that in the most recent week, the percentage of people testing positive in Northern Ireland appears to no longer be decreasing. This is based on exploratory modelling of throat and nose swab results.

Because of the relatively small number of tests and a low number of positives in our sample, credible intervals are wide and therefore results should be interpreted with caution.

In the latest six-week period, there were 14,582 swab tests, and a total of 63 positive tests, in 56 people from 48 households. In the latest two-week period, there were 3,032 swab tests, and a total of 11 positive tests, in 10 people from 9 households.

Our headline estimate of the percentage testing positive in Northern Ireland is the official estimate. We include alternative estimates in our report to support our estimation. Appropriate uses of these alternative estimates can be found below.

Official estimates should be used to understand the positivity rate at a single point in time. This estimate, based on the modelled estimate for the latest week, is our best and most stable estimate and is used in all previous headline outputs. The modelled estimate can be used to understand the recent trend. The modelling includes a set period of data and smooths the estimate over time.

### **Figure 10: In the most recent week, the percentage of people testing positive in Northern Ireland appears to be no longer decreasing**

Estimated percentage of the population in Northern Ireland testing positive for the coronavirus (COVID-19) on nose and throat swabs since 22 November 2020

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

#### **Notes:**

1. These results are provisional and subject to revision.
2. 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. 95% credible intervals are calculated so that there is a 95% probability of the true value lying in the interval.
3. Official reported estimates are plotted at a reference point believed to be most representative of the given week. Details of which day was used for each week can be found in the [dataset](#) that accompanies this bulletin.
4. Modelled estimates include all swab results that are available at the time the official estimates are produced. Additional swab tests that become available after this are included in subsequent models, meaning that modelled estimates can change slightly as additional data are included.

[Download the data](#)

The estimates for non-overlapping 14-day periods (which underpin our modelled official estimates) are presented in Figure 11. These 14-day estimates are provided for context. The data are also included in the accompanying [dataset](#).

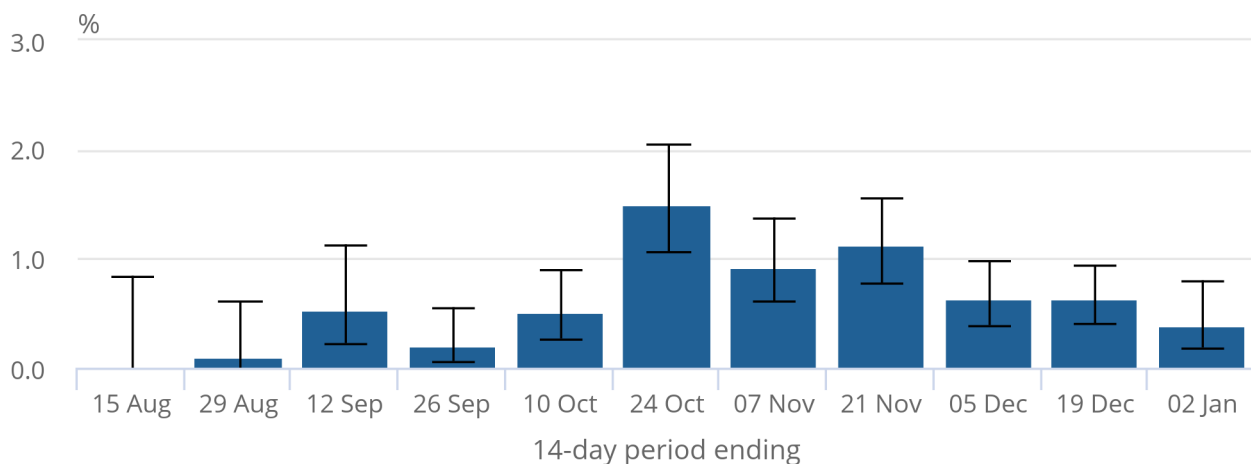
The percentage testing positive in Northern Ireland in the latest 14-day period (20 December 2020 to 2 January 2021) was 0.40% (95% confidence interval: 0.17% to 0.79%).

**Figure 11: The weighted fortnightly estimate to 2 January (which underpins our modelled official estimates) suggests that the percentage testing positive in Northern Ireland was 0.40%**

**Estimated percentage of the population in Northern Ireland testing positive for the coronavirus (COVID-19) by non-overlapping 14-day periods between 2 August 2020 and 2 January 2021**

Figure 11: The weighted fortnightly estimate to 2 January (which underpins our modelled official estimates) suggests that the percentage testing positive in Northern Ireland was 0.40%

Estimated percentage of the population in Northern Ireland testing positive for the coronavirus (COVID-19) by non-overlapping 14-day periods between 2 August 2020 and 2 January 2021



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

**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. Caution should be taken around using the 14-day estimate as averaging the percentage testing positive over the past 14-day period can mask changes in the percentage testing positive that have occurred over the most recent two weeks.

**Notes for: Number of people in Northern Ireland who had COVID-19**



1. This is based on model estimates from the reference point of the most recent week (27 December 2020 to 2 January 2021), Wednesday 30 December 2020. More information on reference dates can be found in [Section 15: Measuring the data](#).

## 9 . Number of people in Scotland who had COVID-19

During the most recent week of the study<sup>1</sup>, we estimate that 45,900 people in Scotland had the coronavirus (COVID-19) (95% credible interval: 37,900 to 54,900). This equates to 0.87% (95% credible interval: 0.72% to 1.04%) of the population in Scotland or around 1 in 115 people (95% credible interval: 1 in 140 to 1 in 95). The ratios in this bulletin are rounded to the nearest five. Our modelling suggests that the percentage testing positive in Scotland has increased over the most recent week. This is based on exploratory modelling of throat and nose swab results.

Because of the relatively small number of tests and a low number of positives in our sample, credible intervals are wide and therefore results should be interpreted with caution.

In the latest six-week period, there were 49,492 swab tests, and a total of 396 positive tests, in 306 people from 260 households. In the latest two-week period, there were 13,717 swab tests, and a total of 113 positive tests, in 100 people from 91 households.

Our headline estimate of the percentage testing positive in Scotland is the official estimate. We include alternative estimates in our report to support our estimation. Appropriate uses of these alternative estimates can be found below.

Official estimates should be used to understand the positivity rate at a single point in time. This estimate, based on the modelled estimate for the latest week, is our best and most stable estimate and is used in all previous headline outputs. The modelled estimate can be used to understand the recent trend. The modelling includes a set period of data and smooths the estimate over time.

### **Figure 12: The percentage testing positive in Scotland has increased over the most recent week**

Estimated percentage of the population in Scotland testing positive for the coronavirus (COVID-19) on nose and throat swabs since 20 November 2020

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

**Notes:**

1. These results are provisional and subject to revision.
2. 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. 95% credible intervals are calculated so that there is a 95% probability of the true value lying in the interval.
3. Official reported estimates are plotted at a reference point believed to be most representative of the given week. Details of which day was used for each week can be found in the [dataset](#) that accompanies this bulletin.
4. Modelled estimates include all swab results that are available at the time the official estimates are produced. Additional swab tests that become available after this are included in subsequent models, meaning that modelled estimates can change slightly as additional data are included.
5. Estimates for Scotland do not include data for Orkney, Shetland and the Western Isles because of operational issues. We are working to resolve these issues as soon as possible.
6. Due to additional public holidays in Scotland, official estimates are available to 31 December 2020 whereas official estimates for England, Wales and Northern Ireland are available to 2 January 2021.

[Download the data](#)

The estimates for non-overlapping 14-day periods (which underpin our modelled official estimates) are presented in Figure 13. These 14-day estimates are provided for context. The data are also included in the accompanying [dataset](#).

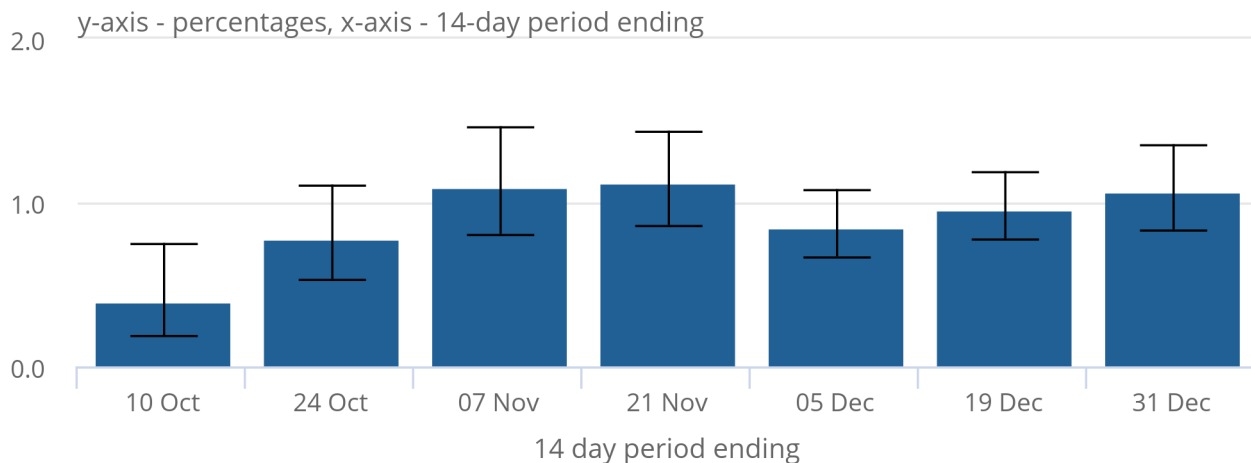
The percentage testing positive in Scotland in the latest 12-day period (20 December to 31 December 2020) was 1.07% (95% confidence interval: 0.83% to 1.35%). Because of additional public holidays official estimates for Scotland are available to 31 December 2020, therefore the weighted fortnightly estimate includes only 12 days (20 to 31 December 2020).

**Figure 13: The weighted fortnightly estimate to 31 December 2020 (which underpins our modelled official estimates) shows the percentage testing positive in Scotland was 1.07%**

Estimated percentage of the population in Scotland testing positive for the coronavirus (COVID-19) by non-overlapping 14-day periods between 27 September and 31 December 2020

Figure 13: The weighted fortnightly estimate to 31 December 2020 (which underpins our modelled official estimates) shows the percentage testing positive in Scotland was 1.07%

Estimated percentage of the population in Scotland testing positive for the coronavirus (COVID-19) by non-overlapping 14-day periods between 27 September and 31 December 2020



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

**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. Estimates for Scotland do not include data for Orkney, Shetland and the Western Isles because of operational issues. We are working to resolve these issues as soon as possible.
4. Caution should be taken around using the 14-day estimate as averaging the percentage testing positive over the past 14-day period can mask changes in the percentage testing positive that have occurred over the most recent two weeks.
5. Due to additional public holidays official estimates for Scotland are available to 31 December 2020, therefore the weighted fortnightly estimate includes only 12 days (20 to 31 December 2020).

**Notes for: Number of people in Scotland who had COVID-19**

1. This is based on model estimates from the reference point of the most recent week (25 to 31 December 2020), Monday 28 December 2020. More information on reference dates can be found in [Section 15: Measuring the data](#).

## 10 . The percentage of those testing positive who are compatible for the new UK variant

This analysis was produced by Sarah Walker at the University of Oxford and looks at the percentage of positive tests which are compatible with new variant of the virus across the UK.

Swabs are tested for three genes present in the coronavirus: N protein, S protein and ORF1ab. Each swab can have any one, any two or all three genes detected. Positives are those where one or more of these genes is detected in the swab other than tests that are only positive on the S-gene, which is not considered a reliable indicator of the virus if found on its own.

The new variant of COVID-19 has genetic changes in the S-gene. This means the S-gene is no longer detected in the current test, and cases that would have previously been positive on all three genes are now positive only on the ORF1ab and the N-gene (not the S-gene).

There are also other reasons why a swab may be positive for only these two genes, including lower viral load in the sample, which is why we have always seen a small percentage of this type of positive result. Absence of the S-gene appears to have become a reliable indicator of the new UK variation in COVID-19 from mid-November, based on the higher levels of virus in these type of positives after this date. Prior to that, the data should not be read as being an indicator of the variant. In contrast the South African variant has different mutations in its viral sequence and cannot be distinguished from genes present or absent on the swab PCR test alone.

There has recently been an increase in the percentage of positive cases where only the ORF1ab- and N-genes were found and a decrease in the percentage of cases with all three genes. We can use this information to approximate the growth of the new variant.

Data should be treated with caution. In particular, there are small numbers of positives detected in Wales, Northern Ireland and Scotland leading to considerable uncertainty surrounding these estimates. There are further uncertainties given that not all cases that are positive on the ORF1ab- and N-genes will be the new variant.

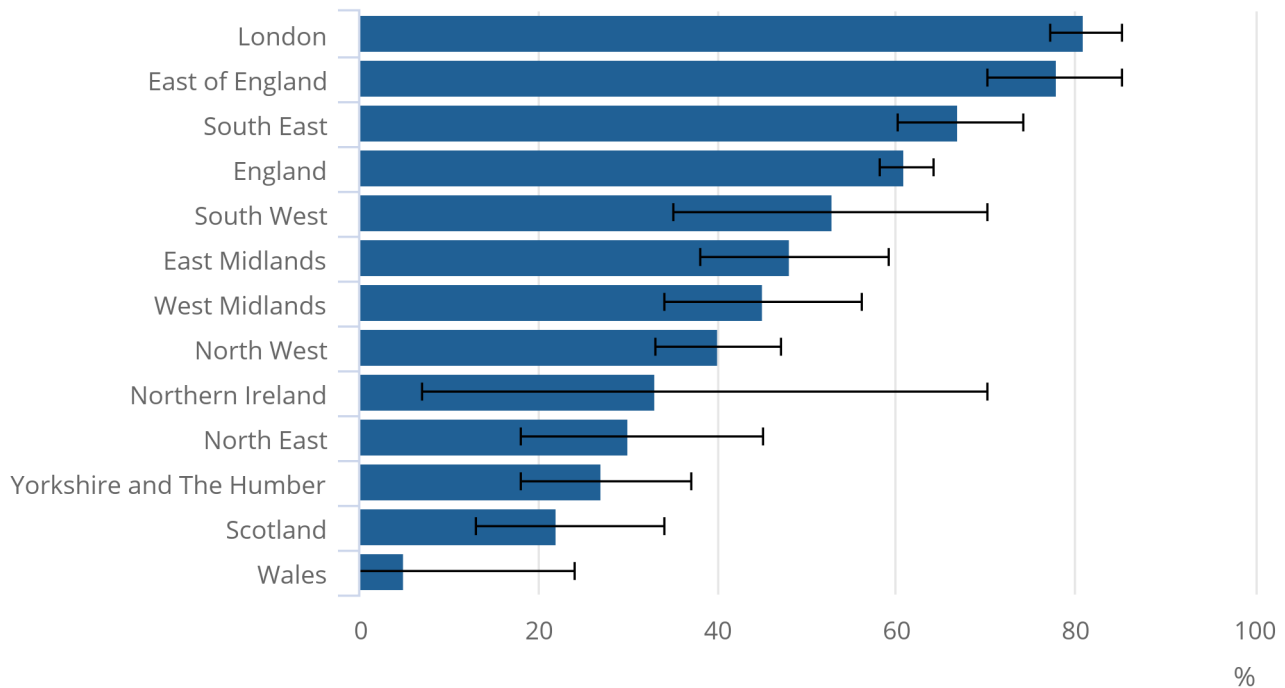
Figure 14 shows the percentage of positive cases during the most recent week (28 December 2020 to 2 January 2021) where only the ORF1ab- and N-genes were found, that is, are compatible with the new variant of the virus. The highest percentages are seen in London, the East of England and the South East. In contrast, the percentages of cases compatible with the new variant remain relatively low in other regions at present; this can also be seen in the positivity rates of new variant compatible by region in Figure 15.

**Figure 14: During the most recent period the highest percentage of people testing positive and compatible with the new variant are seen in London and the East of England**

Estimated percentage of positive cases which are compatible with the new variant (ORF1ab- and N-gene positive) based on people who have tested positive for the coronavirus (COVID-19) on nose and throat swabs, by UK countries and English regions

Figure 14: During the most recent period the highest percentage of people testing positive and compatible with the new variant are seen in London and the East of England

Estimated percentage of positive cases which are compatible with the new variant (ORF1ab- and N-gene positive) based on people who have tested positive for the coronavirus (COVID-19) on nose and throat swabs, by UK countries and English regions



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

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. Data should be treated with caution. In particular, there are small numbers of positives detected in Wales, Northern Ireland and Scotland leading to considerable uncertainty surrounding these estimates. There are further uncertainties given that not all cases that are positive on the ORF1ab- and N-genes will be the new variant.

In England, the percentage testing positive and compatible with the new variant have increased more rapidly since the beginning of December, with rates of other cases now showing an increase in the most recent week.

In Wales, cases that are not compatible with the new variant have started to decrease. The percentage testing positive and compatible with the new variant remains low. However, credible intervals are wide and the sample size is relatively small, meaning there is greater uncertainty in these figures.

In Northern Ireland, decreases over the last few weeks have been due to cases that have a pattern of gene positivity that is not compatible with the new variant of the virus. However, there are early signs of a potential increase in new variant compatible cases.

In Scotland, both the percentage testing positive that are compatible with the new variant and the other cases that are not compatible with the new variant have increased recently.

**Figure 15: In the most recent week, the percentage testing positive and compatible with the new variant has increased in England, Northern Ireland and Scotland**

Modelled percentage of cases that are compatible with the new variant (ORF1ab- and N-gene positive) and other variants based on nose and throat swabs, daily, by country since 22 November 2020, UK

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

**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. Data should be treated with caution. In particular, there are small numbers of positives detected in Wales, Northern Ireland and Scotland leading to considerable uncertainty surrounding these estimates. There are further uncertainties given that not all cases that are positive on the ORF1ab- and N-genes will be the new variant.
4. Because of additional public holidays in Scotland, estimates are available to 31 December 2020 whereas estimates for England, Wales and Northern Ireland are available to 2 January 2021.

[Download the data](#)

Figure 16 shows that cases compatible with the new strain of the virus continued to increase in all regions of England. Other cases have also increased in the South East, East Midlands, Yorkshire and The Humber, North West and North East.

**Figure 16: In the most recent week, the percentage testing positive and compatible with the new variant has continued to increase in all regions**

Modelled percentage of cases which are compatible with the new variant (ORF1ab- and N-gene positive) and other variants based on nose and throat swabs, daily, by region since 22 November 2020, England

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

**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. Data should be treated with caution. There are small numbers of positives detected leading to considerable uncertainty surrounding these estimates. There are further uncertainties given that not all cases that are positive on the ORF1ab- and N-genes will be the new variant.

[Download the data](#)

## 11 . Test sensitivity and specificity

The estimates provided in [Section 2](#), [Section 7](#), [Section 8](#), [Section 9](#) and [Section 10](#) are for the percentage of the private-residential population testing positive for the 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 may be somewhere between 85% and 98%.

To understand the potential impact of false-positives and false-negatives, we can estimate what the prevalence would be for various different observed positivity rates under different assumptions about the test sensitivity and specificity. We do this using Bayesian analysis to calculate what prevalence would be in two different scenarios, one with medium sensitivity and the other with low sensitivity, and both with the same specificity. We can do this for any observed positivity rate.

As an example, the weighted fortnightly estimate for England between 1 and 14 November was 1.27% (95% credible interval: 1.21% to 1.33%). Under a scenario where test sensitivity is between 85% and 95%, and test specificity is between 98.5% and 100%, the weighted fortnightly estimate for England between 1 to 14 November would be 1.39% (95% credible interval: 1.27% to 1.53%). In the unlikely situation where test sensitivity was lower, between 45% and 75%, the weighted fortnightly estimate for England between 1 to 14 November would be 2.11% (95% credible interval: 1.71% to 2.80%).

You can find more information on [sensitivity and specificity in our methods article](#). 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.

## 12 . COVID-19 Infection Survey data

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

Dataset | Released 8 January 2021

Findings from the Coronavirus (COVID-19) Infection Survey, UK.

## 13 . 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

## 14 . 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 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.

### 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](#).

### Incidence rate

The incidence rate is an estimate of how often new cases of COVID-19 occur over a given period of time. In our study, we have previously calculated this by dividing the number of times a person has a positive test for the first time in the study, having first tested negative, by the total time everyone is in the study. We included the time people are in the study between successive negative tests for those who never have a positive test and the time up to halfway (or maximum of seven days, whichever is later) between their last negative and first positive test for those who have a positive test. This reflects the fact that we do not actually know when a person first becomes positive, only when we tested them. People who are positive when they join the study are not included in this calculation. We are currently reviewing our methods for calculating incidence as part of our ongoing quality assurance process.



## 15 . Measuring the data

Data presented in this bulletin come from the Coronavirus (COVID-19) Infection Survey, which looks to identify the percentage of the population testing positive for COVID-19 and whether they have symptoms or not. The survey helps track the current extent of infection and transmission of COVID-19 among the population as a whole. This section of the bulletin provides a short summary of the study data and data collection methods. 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.

### 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 data align perfectly, but sometimes this is not feasible. This week, the reference week is 27 December 2020 to 2 January 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 is 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 30 December 2020.

Due to additional public holidays in Scotland, data are available to 31 December 2020. The reference week for Scotland is therefore 25 to 31 December and the reference date for Scotland is 28 December.

Because of a break in data collection over the Christmas period, no data was collected on 24 to 26 December 2020 and 1 January 2021 (and 2 January 2021 in Scotland), therefore there will be a greater uncertainty than normal with the results published in this bulletin.

### Response rates

At the beginning of the survey, our sample was largely made up of people in England who have taken part in previous Office for National Statistics (ONS) surveys and had agreed to future contact regarding research. We initially invited 20,276 households, and then a further 96,134 in extension weeks. Of those households invited, 42% have provided at least one swab. The likelihood of enrolment decreases over time and response rate information for those initially asked to take part in these first two phases can be considered as relatively final.

In England, we expanded our sampling at the end of July to invite a random sample of households from a list of addresses. As we have expanded, we reached out across the country to enrol new households; this different approach will affect response rates. The number of households invited to participate in the survey in this expansion in England, as of 2 January, was 908,124, of which 13% of households have provided a swab so far, increasing the number of households taking part to 183,389 to date.

Response rates for these expansion weeks 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 should not be compared with response rates for those that have taken part in a previous survey, as this is a different mode of sampling. The total number of households invited will contain households for which the mail was undeliverable and therefore could not respond.

Fieldwork began in Wales on 29 June, and the number of households initially invited to participate was 14,327, of which 28% have provided at least one swab so far. The initial sample was made up of people who had taken part in previous ONS surveys and had agreed to future contact regarding research. At the beginning of October, the survey in Wales was expanded to invite a random sample of households from a list of addresses, and as of 2 January, a further 35,349 households have been invited, of which 7% of household have provided at least one swab so far.

Fieldwork began in Northern Ireland on 26 July, and as of 2 January, 12,604 households in Northern Ireland have been invited to participate, of which 35% of households have provided at least one swab so far. The initial sample was made up of people who had taken part in previous ONS and Northern Ireland Statistics and Research Agency (NISRA) surveys and had agreed to future contact regarding research.

Fieldwork began in Scotland on 21 September, and as of 31 December, the number of households invited to participate in the survey in Scotland, was 134,363, of which 8% have provided at least one swab. This initial sample is taken from a random sample of households from a list of addresses.

Response rates for 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. Since the survey began, we have taken almost 2.3 million swabs from participants across the UK.

Response rates for each nation are found in the [dataset](#) that accompanies this bulletin. We provide response rates separately for the different sampling phases of the study.

## Coverage

Survey fieldwork for the pilot study began in England on 26 April 2020. Survey fieldwork in Wales began on 29 June, and since 7 August we have reported headline figures for Wales. Survey fieldwork began in Northern Ireland on 26 July and since 25 September we have reported headline figures for Northern Ireland. Survey fieldwork in Scotland began on 21 September, and we have reported headline figures for Scotland since 23 October.

Only private residential households, otherwise known as the target population in this bulletin, are included in the sample. People in hospitals, care homes and/or other institutional settings are not included.

The overall target population for England used in this study is 54,524,766. The overall target population for Wales used in the study is 3,039,465. The overall target population for Northern Ireland used in the study is 1,834,846. The overall target population for Scotland used in the study is 5,264,705.

## Sub-regional geographies

We have presented modelled estimates for the most recent week of data at the sub-regional level. To balance the granularity with the statistical power, we have grouped together groups of 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](#).

## Analysing the data

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.

We continue to develop our analysis methods, and these quality enhancements may lead to minor changes in estimates, for example, the positive test counts across the study period.

We are giving increasing prominence to the weighted estimates to ensure we are giving appropriate visibility to all available indicators.

## Other CIS analysis

Our recent release, [Coronavirus \(COVID-19\) Infection Survey: characteristics of people testing positive for COVID-19 in England and antibody data for the UK: December 2020](#), offers more detailed analysis, including further exploration of the characteristics and behaviours of those with COVID-19, including symptoms among those testing positive by patient-facing role by age, ethnicity and number of socially distanced contacts. This characteristics article also includes analysis on the likelihood of testing positive for COVID-19 antibodies in England, Wales, Northern Ireland and Scotland.

## Laboratory confirmed cases in the UK

Public Health England (PHE) presents data on the total number of [laboratory-confirmed cases in the UK](#), which capture the cumulative number of people in the UK who have tested positive for COVID-19. These statistics present all known cases of COVID-19, both current and historical, for the UK, and by nation, by regions of England, and because of the large sample size, by local authority. Further information can be found on the [Coronavirus Dashboard](#). A summary for each nation: [England](#), [Wales](#), [Scotland](#) and [Northern Ireland](#) is also available.

## Testing and tracing systems

Each nation of the UK has a testing and tracing system: for [England](#), [Wales](#), [Northern Ireland](#) and [Scotland](#). These ensure that anyone who develops symptoms of COVID-19 can quickly be tested to find out if they have the virus. Some nations also include targeted asymptomatic testing of NHS and social care staff and care home residents. Additionally, it helps trace close recent contacts of anyone who tests positive for COVID-19 and, if necessary, notify them that they must self-isolate. We have recently published [an article that compares the methods used in the COVID-19 Infection Survey and NHS Test and Trace in England](#).

In comparison with Public Health data and Testing and Tracing data, the statistics presented in this bulletin take a representative sample of the community population (those in private residential households), including people who are not otherwise prioritised for testing. This means that we can estimate the number of people in the community population with COVID-19 who do not report any evidence of symptoms.

## Other studies

This study is one of a number of studies that look to provide information around the coronavirus pandemic within the UK.

## COVID Symptom Study (ZOE app and King's College London), UK

The [COVID Symptom Study app](#) allows users to log their health each day, including whether or not they have symptoms of COVID-19. The study aims to predict which combination of symptoms indicate that someone is likely to test positive for COVID-19. The app was developed by the health science company ZOE with data analysis conducted by King's College London. Anyone over the age of 18 years can download the app and take part in the study. Respondents can report symptoms of children.

The study estimates the total number of people with symptomatic COVID-19 and the daily number of new cases of COVID-19 based on app data and swab tests taken in conjunction with the Department of Health and Social Care (DHSC). The study investigates the “predictive power of symptoms”, and so the data do not capture people who are infected with COVID-19 but who do not display symptoms.

Unlike the data presented in this bulletin, the COVID Symptom Study is not a representative sample of the population. It is reliant on app users and so captures only some cases in hospitals, care homes and other communities where few people use the app. To account for this, the model adjusts for age and deprivation when producing UK estimates. The larger sample size allows for [detailed geographic breakdown](#).

## Real-time Assessment of Community Transmission-1 and -2 (REACT-1 and -2), England

Like our study, the [Real-time Assessment of Community Transmission-1 REACT-1 survey](#), led by Imperial College London, involves taking swab samples to test for COVID-19 antigens to estimate the prevalence and transmission of the virus that causes COVID-19 in the community. Each round of the study currently involves around 160,000 participants aged five years and over, selected from a random cross-section sample of the general public from GP registration data. Trends in infection by characteristics, such as age, sex, ethnicity, symptoms and key worker status, are also possible through the study.

One of the main differences from our COVID-19 Infection Survey is that the REACT surveys do not require follow-up visits, as the study is interested primarily in prevalence at a given time point. Consequently, the incidence rate cannot be calculated from the REACT studies.

In addition, the [REACT-2 study](#) uses antibody finger-prick tests to track past infections and monitor the progress of the pandemic. Estimates in this bulletin and the REACT study use different tests and different methods, for example, the REACT estimates are based on self-administered and self-read finger prick tests, whereas tests in this survey are carried out by a trained nurse, phlebotomist or healthcare assistant.

## PHE surveillance

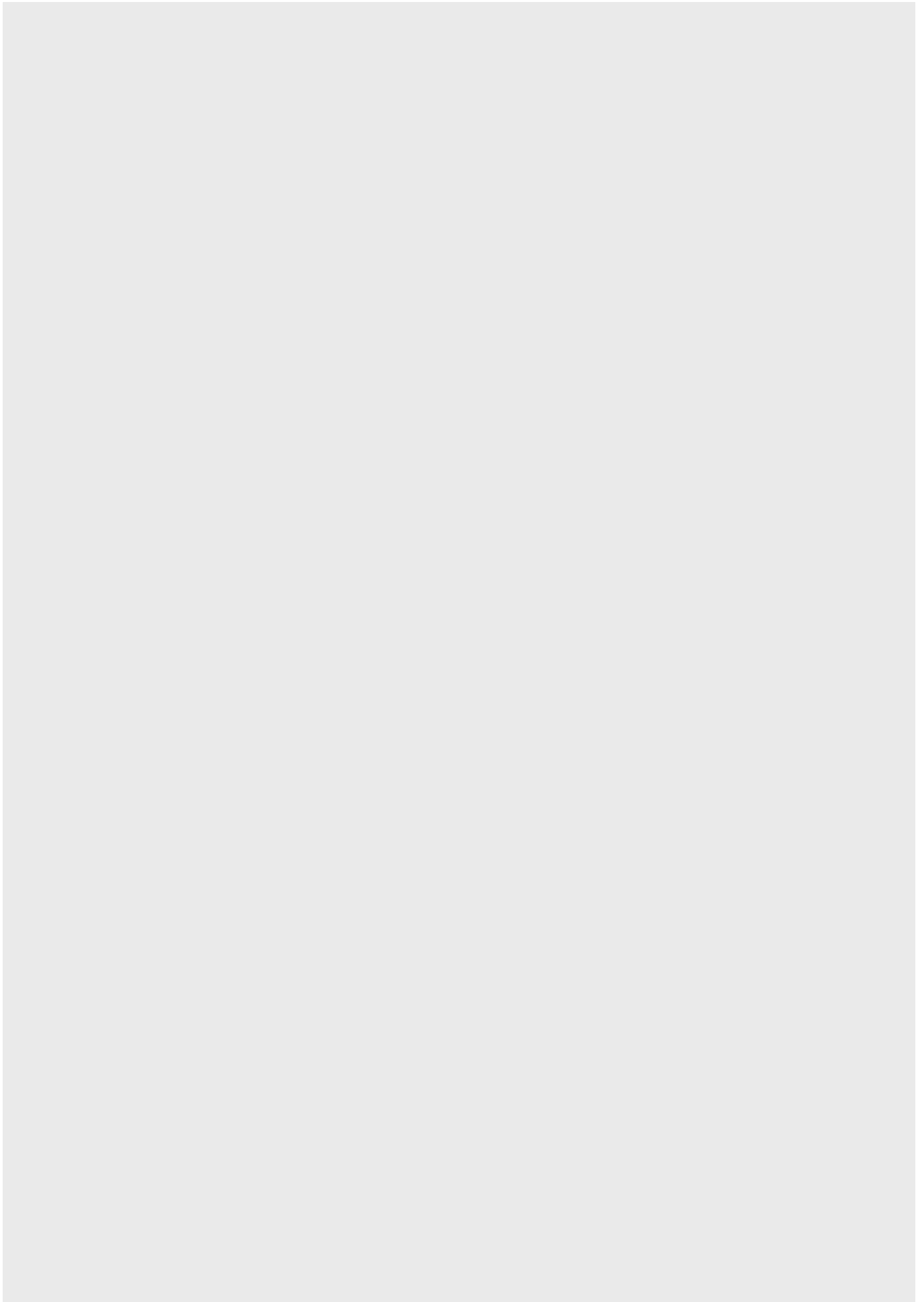
PHE also publish an estimate of the [prevalence of antibodies in the blood](#) in England using blood samples from healthy adult blood donors. PHE provide estimates by region and currently do not scale up to England. Estimates in this bulletin and those published by PHE are based on different tests; PHE estimates are based on testing using the Euroimmun assay method, while blood samples in our survey are tested for antibodies by research staff at the University of Oxford using a novel ELISA. For more information about the antibody test used in this bulletin, see the [COVID-19 Infection Survey protocol](#).

## 16 . 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 methodology article](#).

## 17 . Related links



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

Methodology article | Updated 21 September 2020

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

### [Coronavirus \(COVID-19\) Infection Survey: characteristics of people testing positive for COVID-19 in England and antibody data for the UK](#)

Article | Updated monthly

Characteristics of people testing positive for COVID-19 from the COVID-19 Infection Survey, including antibody data by UK country, and region and occupation for England.

### [Coronavirus \(COVID-19\) weekly insights: latest health indicators in England](#)

Article | Updated weekly

Brings together data about the coronavirus (COVID-19) pandemic in England and explores how these measures interact with each other can improve understanding of the severity and spread of the pandemic.

### [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.

### [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.

### [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.

### [Comparing methods used in the Coronavirus \(COVID-19\) Infection Survey and NHS Test and Trace, England: October 2020](#)

Article | Released 6 October 2020

The methods used in the COVID-19 Infection Survey and NHS Test and Trace in England and why the data cannot be directly compared.

### [New survey results provide first snapshot of the current number of COVID-19 infections in England](#)

Blog | Released 14 May 2020

A large study jointly led by the Office for National Statistics (ONS), in partnership with the Universities of Oxford and Manchester, Public Health England (PHE), and Wellcome Trust, is tracking infections within a representative sample of people of all ages across England. This blog explains what these mean, why they are important and how to compare this survey with other COVID-19 estimates.

### [COVID-19 Infection Survey](#)

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 \(COVID-19\) 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 and higher education students: England](#)

Bulletin | updated weekly

Experimental statistics from a pilot of the Student COVID-19 Insights Survey in England. Includes information on the behaviours, plans, opinions and well-being of higher education students in the context of guidance on the coronavirus (COVID-19) pandemic.

### [The prevalence of long COVID symptoms and COVID-19 complications](#)

Article | Released 16 December 2020

The Office for National Statistics (ONS) has announced plans for estimating the prevalence of, and risk factors for, "long COVID" symptoms and health complications following coronavirus (COVID-19) infection. An initial set of early experimental results has also been released.

