Office for National Statistics

Article

Coronavirus (COVID-19) weekly insights: latest health indicators in England, 18 December 2020

This article brings together latest coronavirus (COVID-19) data in England. Exploring how these measures interact with each other can improve understanding of the severity and spread of the pandemic. This weekly summary gives an overview of the current situation and explores variations for different age groups and regions.

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1 . Main points

- 78% of adults reported they would be either very likely or fairly likely to have the coronavirus (COVID-19) vaccine if offered (Opinions and Lifestyle Survey, Great Britain, 10 to 13 December).

- Following a decline in infections in the community in recent weeks, infections have increased in the last week (week ending 12 December, Coronavirus (COVID-19) Infection Survey (CIS)).

- Positivity rates have increased sharply in London, with increases also seen in the East of England, East Midlands and South East (week ending 12 December, CIS).

- The rate of confirmed COVID-19 hospital admissions increased to 15.2 per 100,000 people in the week ending 13 December, from 14 per 100,000 in the previous week (week ending 6 December).

- In the week ending 4 December, the number of deaths involving COVID-19 in England decreased for the first time since the week ending 4 September.

- Multiple sources report that between 7% and 9% of the population had detectable antibodies in the recent weeks, which suggests that most of the population is still vulnerable to infection (November to December).

- Following changes in COVID-19-related restrictions for the Christmas period, half of adults (50%) reported planning to form a Christmas bubble (Opinions and Lifestyle Survey, Great Britain, 10 to 13 December).

2 . Overview

In this weekly summary, we present the main findings from the latest coronavirus (COVID-19) data for England. This article is a collaboration between the Office for National Statistics (ONS), Joint Biosecurity Centre (JBC) and Public Health England (PHE).

Following a decline in the number of people testing positive for COVID-19 in England over the last few weeks, infections and hospitalisations have started increasing in the most recent week. Despite recent increases, most people do not have antibodies to COVID-19, suggesting most of the population is still vulnerable to infection.

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.

3 . Preventative measures and vaccine attitudes

The proportion of people following preventative measures to help slow the spread of the coronavirus (COVID-19) remained high in the last week (Opinions and Lifestyle Survey, Great Britain, 10 to 13 December 2020). The majority of people reported that in the last seven days, they always or often washed their hands after returning home (90%), used a face covering (97%), avoided physical contact when outside their home (89%) and maintained social distance (87%).

When asked about attitudes towards COVID-19 vaccination, 78% adults said they would be either very likely or fairly likely to have the vaccine if offered. This proportion increased with age; 63% of those aged between 16 and 29 years compared with 95% of adults aged 70 years and above reported they would be very or fairly likely to take the vaccine if offered.

10% of adults reported they would be either very unlikely or fairly unlikely to have the COVID-19 vaccine if offered. The most common reported reasons for this by these adults were:

- feeling worried about the side effects (52%)

- wanting to wait and see how well the vaccine works (52%)

- feeling worried about the long-term effects on their health (46%)

Figure 1: 78% of adults said they would be very or fairly likely to have the COVID-19 vaccine if offered

Percentage of people reporting how likely they would be to take the COVID-19 vaccine if offered, Great Britain, 10 to 13 December 2020
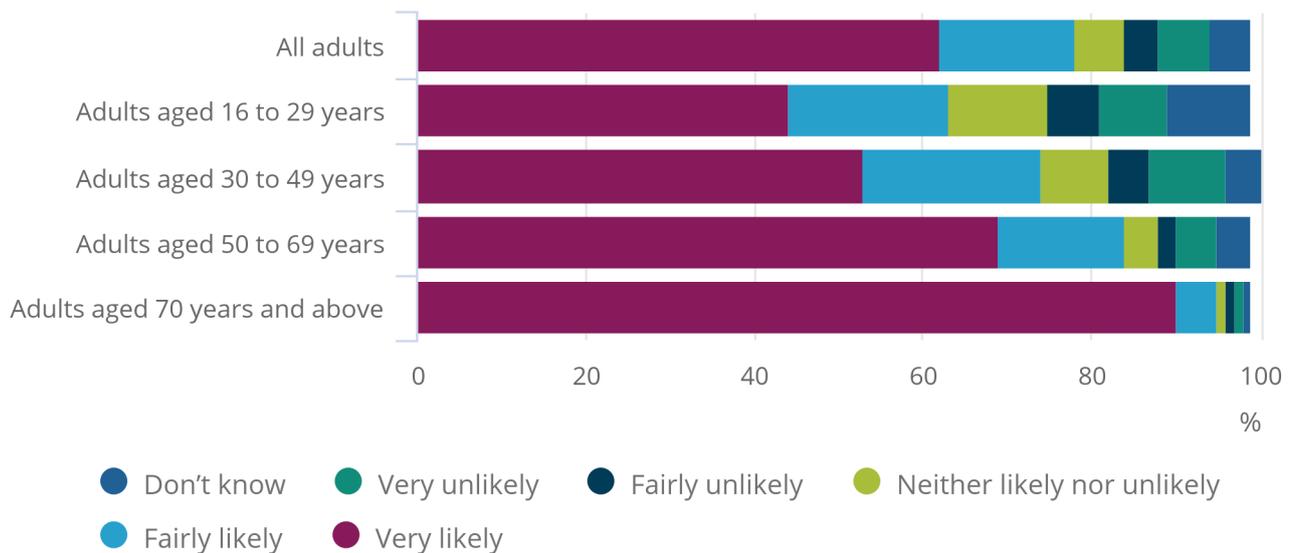
Source: Office for National Statistics – Opinions and Lifestyle Survey

Notes:

1. Question: "If a vaccine for the coronavirus (COVID-19) was offered to you, how likely or unlikely would you be to have the vaccine?".

2. Base population for percentage: all adults.

3. Response for the category "Prefer not to say" has been removed from the chart because of a reported proportion among all adults of 1% or less.

4. Confidence intervals are provided in the datasets associated with this bulletin. As a general rule, if the confidence interval around one estimate overlaps with the interval around another, we cannot say with certainty that there is more than a chance difference between the two estimates.

5. Totals may not sum to 100% because of rounding and removal of the response category "Prefer not to say".

4 . Infections, hospital admissions and deaths

From late August, coronavirus (COVID-19) infections, hospital admissions and deaths in England all began to rise following a low point in summer 2020. In recent weeks, infections and hospital admission rates have been falling, but they have recorded an increase in the most recent week. However, the number of registered deaths involving COVID-19 decreased for the first time since the week ending 4 September.

There is a period of time between a person becoming infected with COVID-19 and being admitted to hospital or dying because of it. Therefore, we expect to see a delay between a change in infection levels and corresponding changes in the numbers of hospital admissions and deaths.

While the percentage of people testing positive for COVID-19 started to fall a few weeks ago, this is the first week when we saw a decrease in deaths involving COVID-19. This might change again in the coming weeks as infections started to rise last week, although we cannot be certain of this.

Figure 2: Number of deaths involving COVID-19 decreased, but infection and hospital admission rates increased in the most recent week

Estimated COVID-19 positivity rates, hospital admissions and number of deaths, England, 1 August to 13 December 2020

Notes:

1. All figures are provisional and subject to revision.

2. Infection statistics refer to infections reported in the community, by which we mean residential households. These figures exclude infections reported in hospitals, care homes and/or other institutional settings.

3. Figures exclude deaths of non-residents.

4. Based on date a death was registered rather than occurred.

5. The International Classification of Diseases, 10th edition (ICD-10) definitions are as follows: coronavirus (COVID-19) (U07.1 and U07.2).

6. We use the term "involving COVID-19" when referring to deaths that had COVID-19 mentioned anywhere on the death certificate, whether as an underlying cause or not.

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The Coronavirus (COVID-19) Infection Survey (CIS) estimated that 567,300 people in England had COVID-19 between 6 December and 12 December 2020. This is equal to about 1 in 95 people (or 1.04% of the population). The percentage of people testing positive (positivity rate) has increased in the most recent week. The positivity rate is now over 14 times higher than in the first week of September, when only 1 in 1,400 people (0.07% of the population) tested positive.

The Real-time Assessment of Community Transmission (REACT) study estimated 0.94% of the population to be infected between 13 November and 3 December. Similar to CIS, the most recent REACT positivity rates remain at much higher levels (over seven times higher) than in the beginning of September, when only 0.13% of people tested positive.

CIS and REACT both estimate how many infections there are in the community, although they use different methods. For more information see Data sources and quality. Estimates from both studies show similar trends over time.

Figure 3: Coronavirus (COVID-19) Infection Survey (CIS) and Real-time Assessment of Community Transmission (REACT) study show similar trends over time

Estimated percentage of community population testing positive for COVID-19, 27 April to 12 December, 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. CIS estimates until 5 July are fortnightly weighted estimates and after that date they are weekly modelled estimates.

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In the week ending 13 December, the hospital admission rate of COVID-19-confirmed patients increased to 15.2 per 100,000 people from 14 per 100,000 in the previous week.

Number of deaths involving COVID-19 decreased by 7%

While infections and hospital admissions increased, the number of deaths involving COVID-19 in England fell by 7.0% to 2,623 in the week ending 4 December. This is the first time since the week ending 4 September that the number of deaths involving COVID-19 has decreased. Deaths involving COVID-19 represented 22.9% of all deaths in England, a decrease from 24.2% in the previous week.

5 . Regional differences

Between 6 December and 12 December 2020, the Coronavirus (COVID-19) Infection Survey (CIS) showed trends varied substantially across English regions. The percentage of people testing positive has increased sharply in London, with increases also seen in the East of England, East Midlands and South East. Positivity rates have continued to decrease in the North West and Yorkshire and The Humber.

Figure 4: The sharpest increase in the proportion of people testing positive was seen in London

Estimated percentage of the population testing positive for the coronavirus (COVID-19) on nose and throat swabs, daily, by region since 1 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.

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In the most recent week, CIS reported the highest positivity rates in the East Midlands (1.41%) and London (1.40%). The South West had a much lower proportion of people testing positive compared with all other regions (0.41%).

The Real-time Assessment of Community Transmission (REACT) reported highest positivity rates in Yorkshire and The Humber (1.25%) and the West (1.24%) and East (1.19%) Midlands. The lowest percentage of people testing positive was seen in the South West (0.58%) and East of England (0.58%).

Regional positivity rates might differ between CIS and REACT because of different testing periods. REACT includes samples taken up to 3 December and CIS between 6 and 12 December.

Figure 5: Percentage of people testing positive is lowest in the South West

Estimated percentage of the population testing positive for the coronavirus (COVID-19), England, 13 November to 12 December

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

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Hospital admission rates increased in the majority of English regions

In the week ending 13 December 2020, confirmed COVID-19 hospital admission rates increased in six of the nine English regions. Trends vary considerably across regions, with increases recorded in regions with lower admission rates and decreases in regions with higher rates. However, this was not the case for the North East, which continues to have the highest hospital admission rate in England at 23.7 per 100,000 people, an increase from 21.0 per 100,000 in the week before.

High admission rates were also seen in the West and East Midlands last week, even though they are lower in both regions compared with the previous week. The lowest admission rates in England were seen in the South West (at 12.5 per 100,000 people), despite an increase recorded in this region.

Figure 6: Hospital admissions and deaths involving COVID-19 by region

Change in hospital admission rates and numbers of deaths involving COVID-19 from previous week, England, weeks ending 13 December and 4 December

Notes:

1. All figures are provisional and subject to revision.

2. Figures exclude deaths of non-residents.

3. Based on date a death was registered rather than occurred.

4. The International Classification of Diseases, 10th edition (ICD-10) definitions are as follows: coronavirus (COVID-19) (U07.1 and U07.2).

5. We use the term "involving COVID-19" when referring to deaths that had COVID-19 mentioned anywhere on the death certificate, whether as an underlying cause or not.

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Highest number of deaths involving COVID-19 continues to be recorded in the North West

The number of deaths involving COVID-19 decreased in all English regions except the West Midlands, the East of England and London in the week ending 4 December. Even though the North West saw a decrease, it still recorded the highest number of deaths involving COVID-19 (458) followed by Yorkshire and The Humber (444) and the West Midlands (381).

6 . Age differences

According to the Coronavirus (COVID-19) Infection Survey (CIS), the percentage of positive tests continues to be highest among secondary school-age children (2.52% on 9 December 2020). Similarly, the Real-time Assessment of Community Transmission (REACT) reported highest positivity rates for people aged 13 to 17 years (2.04% between 13 November and 3 December).

In the week ending 12 December, the percentage of people testing positive has increased in all age groups, apart from those in school Year 12 to 24 years old, and those aged 50 to 69 years. For these groups, positivity rates stayed at a similar level to the week before.

Hospital admission rate for people aged 85 years and over is almost 50 times higher than for those aged between 15 and 44 years

Even though more young people have been infected, hospital admissions and deaths involving the coronavirus (COVID-19) are highest among those aged over 65 years. Of more than 65,700 deaths involving COVID-19 in England to date, almost 90% were among people aged 65 years and over.

Hospital admissions increased among all groups aged 45 years and over in the week ending 13 December. Hospital admission rates increased the most among people aged 85 years and over, rising from 146.8 to 172.9 per 100,000 people. Rates have been the highest in this age group throughout the pandemic. Their hospital admission rate is almost 50 times higher than for those aged between 15 and 44 years. The hospital admission rate is lowest among children aged between 5 and 14 years, at 0.6 per 100,000 people.

In the week ending 4 December, the number of deaths involving COVID-19 in England decreased in all age groups aged 45 years and over compared with the previous week. The biggest decrease was seen for those aged 85 years and over (100 fewer deaths).

Figure 7: COVID-19 infections, hospital admissions and deaths by age

Estimated percentage of the population testing positive for COVID-19 in the week ending 12 December, hospital admission rates per 100,000 in the week ending 13 December and deaths registered in the week ending 4 December 2020, by age, England

Notes:

1. All figures are provisional and subject to revision.

2. Infection statistics refer to infections reported in the community, by which we mean residential households. These figures exclude infections reported in hospitals, care homes and/or other institutional settings.

3. Infection statistics are based on statistical modelling conducted by CIS research partners at the University of Oxford.

4. Infection estimates are given for the reference date: 9 December.

5. Figures exclude deaths of non-residents.

6. Based on date a death was registered rather than occurred.

7. The International Classification of Diseases, 10th edition (ICD-10) definitions are as follows: coronavirus (COVID-19) (U07.1 and U07.2).

8. We use the term "involving COVID-19" when referring to deaths that had COVID-19 mentioned anywhere on the death certificate, whether as an underlying cause or not.

Download the data

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7 . COVID-19 antibody prevalence

Most people do not have COVID-19 antibodies

The presence of coronavirus (COVID-19) antibodies suggests that a person previously had the infection. The Coronavirus (COVID-19) Infection Survey (CIS) reported an increase in the proportion of people with antibodies from 6.9% in October to 8.7% in November 2020.

The percentage of people with antibodies among NHS blood donors (6.8%, 9 November to 6 December 2020) also increased compared with the previous month (5.7%, 14 October to 8 November). Despite the increase, the results suggest that most of the population is still vulnerable to infection (November to December).

The percentage of people with COVID-19 antibodies varies substantially across regions. CIS estimated the highest antibody positivity in London, northern regions of England and the West Midlands. Similarly, antibody positivity among NHS blood donors is highest in the North West (11%) and London (8.9%).

Figure 8: People in London are most likely to have COVID-19 antibodies

Estimated percentage of people testing positive for antibodies to SARS-CoV-2 from a blood sample in November 2020, England
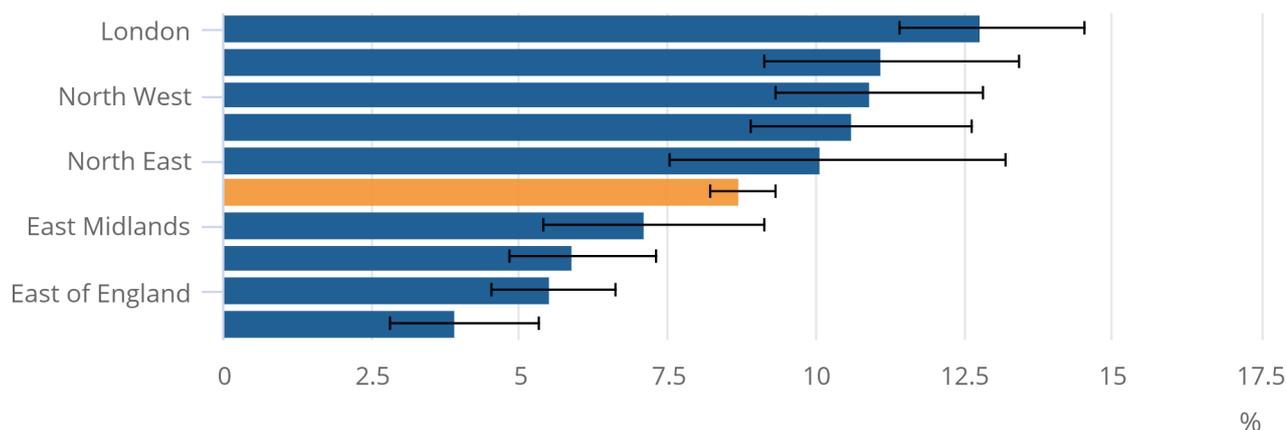
Source: Office for National Statistics - Coronavirus (COVID-19) Infection Survey

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 up to 27 November were included in the November 2020 estimate.

8 . Christmas plans

For the Christmas period 23 to 27 December, the governments of the UK have announced changes to social contact restrictions to allow people to be with their friends and family. This allows people to form a "Christmas bubble" with up to three households in total during this period.

According to the Opinions and Lifestyle Survey (Great Britain, 10 to 13 December 2020), just over half of adults (56%) reported it was very easy or easy to understand the rules for forming a Christmas bubble. Half of adults (50%) reported planning to form a Christmas bubble.

The most frequently reported planned activity for the Christmas period was staying at home with their household (55% compared with 48% last year). The percentage of adults planning social activities with family and friends over the Christmas period has decreased compared with the year before. These included:

- visiting them and not staying overnight (26% compared with 52% last year)

- having them visit but not stay overnight (19% compared with 39% last year)

- staying overnight with them (11% compared with 28% last year)

- having them stay overnight (10% compared with 21% last year)

- meeting up in restaurants, cafés or bars (4% compared with 44% last year)

9 . Collaboration

This report was prepared by the Office for National Statistics (ONS) in collaboration with our partners at the Joint Biosecurity Centre (JBC) and Public Health England (PHE).

10 . Coronavirus data

Coronavirus (COVID-19) Infection Survey
Dataset | Released 18 December 2020
Findings from the Coronavirus (COVID-19) Infection Survey, England, Wales, Northern Ireland and Scotland.

Coronavirus (COVID-19) infections in the community in England
Dataset | Released 14 December 2020
Characteristics of people testing positive for the coronavirus (COVID-19) in England taken from the COVID-19 Infection Survey.

Deaths registered weekly in England and Wales, provisional
Dataset | Released 15 December 2020
Provisional counts of the number of deaths registered in England and Wales, by age, sex and region, in the latest weeks for which data are available. Includes the most up-to-date figures available for deaths involving the coronavirus (COVID-19).

Coronavirus and the social impacts on Great Britain
Dataset | Released 18 December 2020
Indicators from the Opinions and Lifestyle Survey (OPN) to understand the impact of the coronavirus (COVID-19) pandemic on people, households and communities in Great Britain. Includes breakdowns by at-risk age, sex and underlying health condition.

This release uses data from REACT and Public Health England. For links to the data and an explanation of how the sources differ, see Data sources and quality.

11 . Glossary

Positivity rate

In this article we refer to the positivity rate as the proportion of people that have tested positive for the coronavirus (COVID-19) using nose and throat swab tests. The Coronavirus COVID-19 Infection Survey (CIS) estimates positivity in the community population. CIS positivity rates refer to everybody that had the infection within a given week. This is different to the incidence rate, which refers to the proportion of "new" positive COVID-19 cases. Please note that the NHS Test and Trace records infections among people experiencing symptoms or referred for testing (for example, by their employer). It only includes new COVID-19 cases when computing the positivity rates (incidence of the disease).

Antibodies

Evidence of a previous infection and a degree of immunity to the virus. You can read more about antibody testing in the Department of Health and Social Care guidance.

12 . Data sources and quality

Coronavirus (COVID-19) Infection Survey

The Office for National Statistics (ONS) Coronavirus (COVID-19) Infection Survey estimates the number of infections in the community population in England, Wales, Northern Ireland and Scotland.

People tested are from randomly selected residential households and may or may not have any coronavirus (COVID-19) symptoms. Nose and throat swabs are taken from all household members aged two years and over. It excludes those in hospitals, care homes or other institutional settings. Positivity rates are calculated for seven-day periods and adjusted to represent the population. Results are published in a weekly bulletin, with a release on the characteristics of people testing positive published monthly. The survey is delivered in partnership with University of Oxford, University of Manchester, Public Health England and Wellcome Trust.

Real-time Assessment of Community Transmission (REACT) Study

The REACT Study also estimates the number of infections in the community population. The study tests randomly selected individuals (rather than households) over the age of five years. Results are calculated for time periods ranging from 18 to 32 days for each testing round.

Differences between REACT and CIS include data collection procedures and modelling approaches. Unlike CIS, REACT does not carry out follow-up visits with subjects. Because of this, the incidence rate cannot be calculated for REACT studies. REACT-2 additionally tracks COVID-19 antibody prevalence using finger-prick blood tests. REACT is commissioned by the Department of Health and Social Care (DHSC) and carried out by Imperial College in partnership with Ipsos MORI.

Hospital admissions

Data on hospital admissions is provided by Public Health England and comes from the Severe Acute Respiratory Infection (SARI) Watch surveillance system. SARI Watch monitors the number of patients with confirmed flu and COVID-19 admitted to hospital and critical care units (ICU and HDU). Admission rates are recorded by age and region. These data are provisional and subject to revision, and previous estimates may be updated in subsequent weeks.

Deaths

Figures for deaths involving COVID-19 included in this publication are from the ONS's [weekly provisional counts of the number of deaths registered in England and Wales](#). This includes deaths with COVID-19 mentioned on the death certificate. Figures are based on the date the death was registered, not when it occurred. There is usually a delay of at least five days between occurrence and registration. More information on this issue can be found in the [Impact of registration delays release](#).

Preventative measures, social contact and lockdown experiences

This publication includes indicators from the [Opinions and Lifestyle Survey](#) collected to understand the impact of the coronavirus pandemic on people, households and communities in Great Britain.

Strengths and limitations of data sources

This publication collates data from a range of sources reporting on the coronavirus pandemic. Each of these sources has their own strengths and limitations.

The Coronavirus (COVID-19) Infection Survey and REACT data both track COVID-19 infections in the community, by testing samples of the population. Their estimates of positivity rates contain uncertainty. There is uncertainty in the estimates, swab tests results and in the quality of data collected in the questionnaire.

Death figures in this article are based on the date the death was registered, not when it occurred. There is usually a delay of at least five days between occurrence and registration. More information on this issue can be found in our [Impact of registration delays release](#).

13 . Related links

[National flu and COVID-19 surveillance reports](#)
Public Health England report | Updated weekly
National influenza and COVID-19 report, monitoring COVID-19 activity, seasonal flu and other seasonal respiratory illnesses.

[Real-time Assessment of Community Transmission study findings](#)
Web page | Updated as and when data become available
REACT is a programme of home testing for COVID-19 in England. The study was commissioned by the Department of Health and Social Care and carried out by Imperial College London, Imperial College Healthcare NHS Trust and Ipsos MORI.

[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) 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.

[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.