

Article

Coronavirus (COVID-19) weekly insights: latest health indicators in England, 8 January 2021

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

- It is estimated that 1 in 50 people in England (2.06%) had COVID-19 in the most recent week (week ending 2 January, Coronavirus (COVID-19) Infection Survey (CIS)).
- Positivity rates have continued to increase in all regions in England, with the highest rate (3.56%) in London (week ending 2 January, CIS).
- The proportion of cases compatible with the new variant of COVID-19 has increased in all regions, with the highest percentage seen in London (week ending 2 January, CIS).
- The rate of confirmed COVID-19 hospital admissions increased to 27.8 per 100,000 people in the week ending 3 January 2021, almost twice the rate seen in the week ending 6 December (14 per 100,000 people).
- In the week ending 25 December, the number of registered deaths involving COVID-19 in England decreased, though the number of registrations was impacted by the Christmas Day Bank Holiday.
- Deaths involving COVID-19 represented 24.6% of all deaths in England compared with 22.5% in the previous week (ending 18 December).
- 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).
- Between 22 December and 3 January 85% of adults reported they would be either very likely or fairly likely to have the COVID-19 vaccine if offered, which is an increase from 78% during the period 10 to 13 December 2020 (Opinions and Lifestyle Survey, Great Britain).

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 in late November, infections and hospitalisations started increasing again in mid-December. The number of people testing positive for genes compatible with new variant of COVID-19 has been increasing across England. The majority of 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 . Infections, hospital admissions and deaths

New COVID-19 infections and hospital admissions have been increasing since the beginning of December. The number of registered deaths involving COVID-19 decreased in the most recent week. However, as the number of deaths registered in England and Wales was impacted by the Christmas Day Bank Holiday, this trend should be interpreted with caution.

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.

Figure 1: Number of deaths involving COVID-19 decreased, but infection and hospital admission rates have been increasing since the beginning of December

Estimated COVID-19 positivity rates, hospital admissions and number of deaths, England, 1 August 2020 to 3 January 2021

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.

[Data download](#)

The Coronavirus (COVID-19) Infection Survey (CIS) estimated that 1,122,000 people in England had COVID-19 between 27 December 2020 and 2 January 2021. This is equal to about 1 in 50 people or 2.06% of the population. The percentage of people testing positive (positivity rate) has continued to increase in the most recent week. The positivity rate is now more than twice as high as in the first week of December (29 November to 05 December), when 0.88% 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. This is similar to values reported by CIS in that period.

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.

In the week ending 3 January 2021, the hospital admission rate of COVID-19 confirmed that patients increased to 27.8 per 100,000 people from 21.5 per 100,000 in the previous week. This is almost twice the rate seen in the week ending 6 December 2020 (14 admissions per 100,000 people). The number of COVID-19 patients being admitted to intensive care units (ICU) and high-dependency units (HDU) also increased in the latest week, to 1.7 per 100,000 from 1.3 in the previous week.

Proportion of deaths involving COVID-19 in England increased from the previous week

The number of deaths involving COVID-19 in England fell by 3.6% to 2,631 in the week ending 25 December. However, the number of deaths registered was impacted by the Christmas Day Bank Holiday. Deaths involving COVID-19 represented 24.6% of all deaths in England compared with 22.5% in the previous week (ending 18 December).

4 . New variant of COVID-19

Positivity rates for cases compatible with the new variant have sharply increased since the beginning of December 2020. Positive cases compatible with the new variant of the coronavirus have continued to increase in all regions in the most recent week (ending 2 January 2021). Positivity rates for new variant compatible cases are highest in London, the East of England and the South East.

Figure 2: The highest rates of people testing positive for the new variant compatible genes are seen in London and the East of England

Positivity rates for cases which are compatible with the new variant (ORF1ab- and N-gene positive) and other variants of coronavirus (COVID-19) on nose and throat swabs, daily, by region 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. Data should be interpreted with caution. There is uncertainty given that not all cases that are positive for genes compatible with the new variant will be the new variant.

[Data download](#)

5 . Regional differences

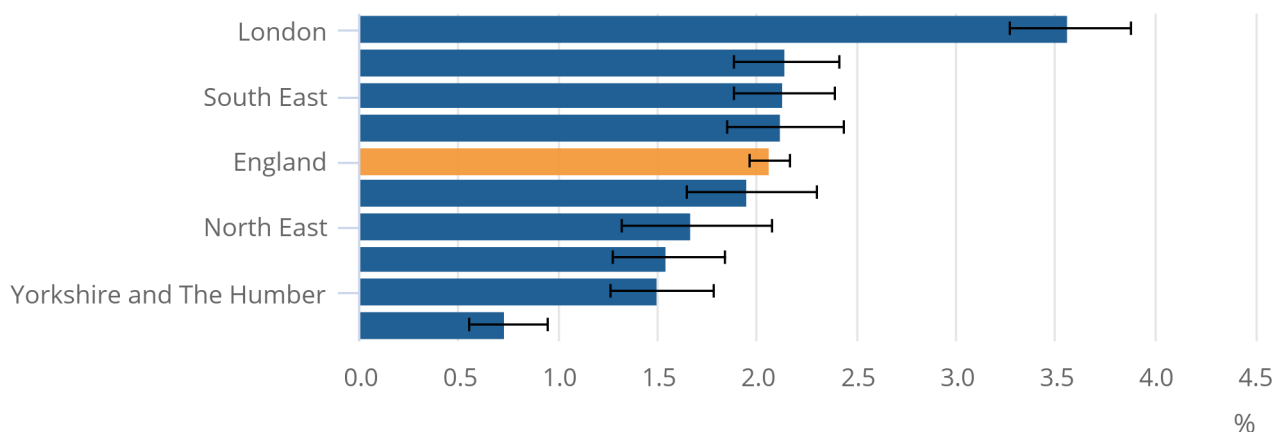
In the week ending 2 January 2021, the percentage of people testing positive continued to rise across all regions in England (Coronavirus (COVID-19) Infection Survey (CIS)).

Figure 3: Positivity rates in London are almost double the national value

Estimated percentage of the population testing positive for the coronavirus (COVID-19) on nose and throat swabs, by region, on 30 December 2020, England

Figure 3: Positivity rates in London are almost double the national value

Estimated percentage of the population testing positive for the coronavirus (COVID-19) on nose and throat swabs, by region, on 30 December 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.

In the most recent week, CIS reported the highest positivity rate in London (3.56% of the population). This is almost double the national value (1.7 times higher). The South West continues to have the lowest proportion of people testing positive compared with all other regions (0.73%).

Hospital admission rates increased in all English regions

In the week ending 3 January 2021, confirmed COVID-19 hospital admission rates increased in all regions of England.

For the last two weeks the highest admission rates have been in London, which recorded a rate of 43.4 per 100,000 people in the week ending 3 January. The East Midlands saw the largest increase in admission rates, rising to 28.8 per 100,000 people from 18.3 in the previous week.

The North West recorded the lowest hospital admission rates in the most recent week, at 14.3 per 100,000. The smallest increase was seen in Yorkshire and the Humber, where the rate rose to 17.9 per 100,000 people, from 15.6 in the previous week.

Figure 4: 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 3 January 2021 and 25 December 2020

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.

[Data download](#)

The South East had the highest number of deaths involving COVID-19

Deaths involving COVID-19 decreased in the week ending 25 December 2020 in five out of nine English regions, with the largest decrease seen in Yorkshire and The Humber. The South East had the highest number of deaths involving COVID-19 (415 deaths), although the number of COVID-19 deaths in this region is a decline compared with the previous week.

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 (2.80% on 30 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 2 January, the percentage of people testing positive has increased in all age groups apart from school age children and those aged 35 to 49 years.

Hospital admission rates have increased or stayed at a similar level for all age groups

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 73,700 deaths involving COVID-19 in England to date, almost 90% were among people aged 65 years and over.

Hospital admissions increased among all age groups, apart from in children aged 5 to 14 years, in the week ending 3 January 2021. The largest rise in admission rates was seen among those aged over 85 years, where 244.2 per 100,000 people were admitted to hospital in the most recent week, up from 196.6 in the previous week. This is almost 30 times the rate among those aged 15 to 44 years. Rates have been the highest among those aged over 85 years throughout the pandemic.

The hospital admission rate is lowest among children aged between 5 and 14 years, at 1.1 per 100,000 people.

In the week ending 25 December, the number of deaths involving COVID-19 in England decreased in most age groups compared with the previous week, except for in people aged 15 to 44 years (two more deaths), 65 to 74 years (7 more deaths) and 75 to 84 years (35 more deaths). The biggest decrease was seen in those aged 85 years and over, with 103 fewer deaths than the previous week.

Figure 5: COVID-19 infections, hospital admissions and deaths by age

Estimated percentage of the population testing positive for COVID-19 in the week ending 2 January 2021, hospital admission rates per 100,000 in the week ending 3 January 2021 and deaths registered in the week ending 25 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: 30 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.

[Data download](#)

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 (6.9%, 16 November to 13 December 2020) also increased compared with the previous month (6.0%, 21 October to 13 November). Despite the increase, the results suggest that most of the population is still vulnerable to infection (November to December).

8 . Preventative measures: behaviours 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, 22 December 2020 to 3 January 2021). 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 (88%).

When asked about attitudes towards a COVID-19 vaccination, 85% of adults said that they would be either very likely or fairly likely to have the vaccine if offered. This is an increase from 78% over the period 10 to 13 December 2020.

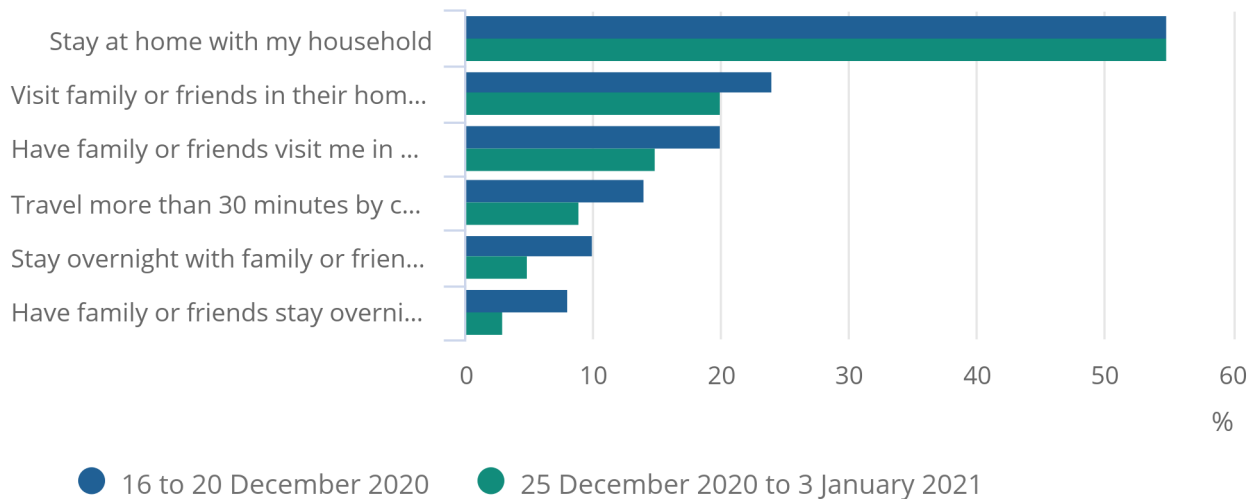
A lower percentage of adults who responded to the survey over the Christmas period reported visiting friends or family over the Christmas period, compared with those who had reported planning to do so in the week before (16 to 20 December).

Figure 6: A lower percentage of people carried out social activities during the Christmas period, compared with previous plans

Proportion of people reporting social activities they planned and carried out during the Christmas period, Great Britain, 16 December 2020 to 3 January 2021

Figure 6: A lower percentage of people carried out social activities during the Christmas period, compared with previous plans

Proportion of people reporting social activities they planned and carried out during the Christmas period, Great Britain, 16 December 2020 to 3 January 2021



Source: Office for National Statistics – Opinions and Lifestyle Survey

Notes:

1. Questions: "Over the Christmas period, which of the following travel or social activities are you planning to do?" (16 to 20 December 2020) and "Over the Christmas period, which of the following travel or social activities did you carry out?" (25 December 2020 to 3 January 2021).
2. Base population for percentage: 16 to 20 December 2020 – all adults; 25 December 2020 to 3 January 2021 – adults who responded the survey over this period.
3. Totals may not sum to 100% due to rounding.

On 19 December, the UK government announced changes to rules that previously allowed people to form a "Christmas bubble" with up to three households for the Christmas period 23 to 27 December. Instead, people in some parts of the UK were able to form an exclusive "Christmas bubble" on 25 December. Following the announcement 44% of people reported that they had formed an exclusive Christmas bubble on 25 December, compared with 50% that planned to do so before the announcement (10 to 13 December).

Almost a fifth (18%) of adults reported that they found it very difficult or difficult to follow the government rules. Of those, nearly half (48%) reported that the reason was they had already made plans before the rules for Christmas changed.

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 8 January 2021

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 6 January 2021

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 8 January 2021

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).

New variant

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 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.

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](#) (CIS) 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 research program looking at how the virus is spreading across the country. 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.