

Coronavirus (COVID-19) Review: data and analysis, March to October 2020

Helen Fox and Ellys Monahan

COVID19Analysis@ons.gov.uk

Levels of infection and preventative measures

This section includes analysis on the number of new infections, prevalence rates and preventative measures taken by society to reduce the transmission of the virus

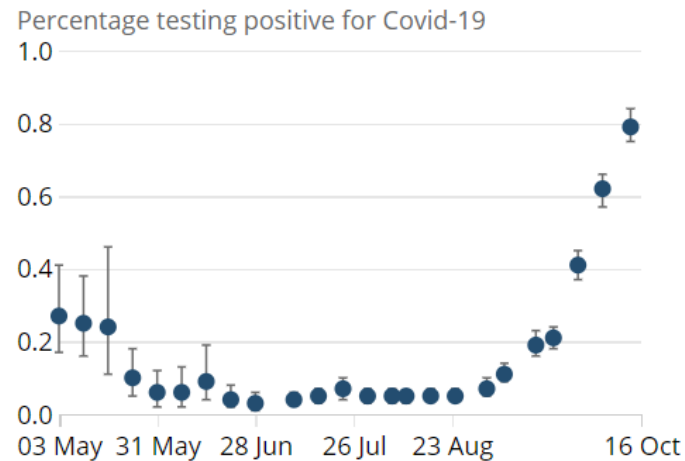
Positivity rates have rapidly increased in recent weeks

- In August there was some evidence of a small increase in the percentage of people testing positive for COVID-19 in July, following a low point in June. However, the estimates show that the number on infections has increased rapidly in September.
- The latest estimates from this survey show that the number of infections has continued to increase in recent weeks.
- In the most recent week (10 to 16 October 2020):
 - An estimated 433,300 people (95% credible interval: 407,500 to 459,300) within the community population in England had the coronavirus (COVID-19) during the most recent week; equating to around 1 in 130 people (95% credible interval: 1 in 130 to 1 in 120).

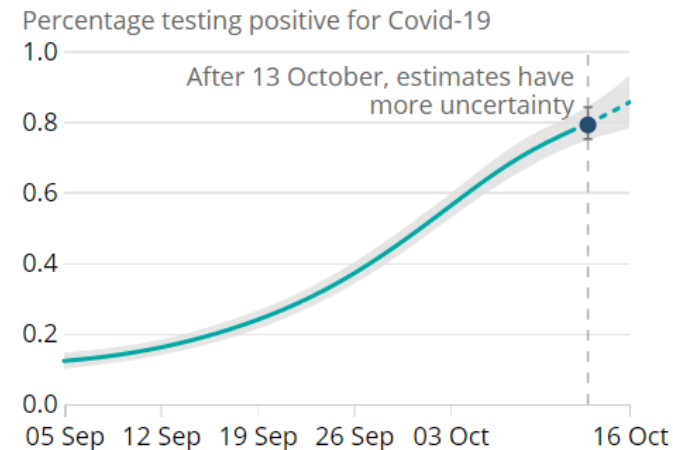
“Positivity rate” means the number and percentage of people who have COVID-19 at a point in time. This positivity rate is not the same as prevalence – to measure prevalence, we would need to know the true sensitivity and specificity of our nose and throat swab test.

Estimated percentage of the population in England testing positive for the coronavirus (COVID-19) on nose and throat swabs based on modelled estimates from 5 September 2020

Official reported estimates of the rate of COVID-19 infections in the community in England.



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.



Source: [Coronavirus \(COVID-19\) Infection Survey: UK, 23 October 2020](#)

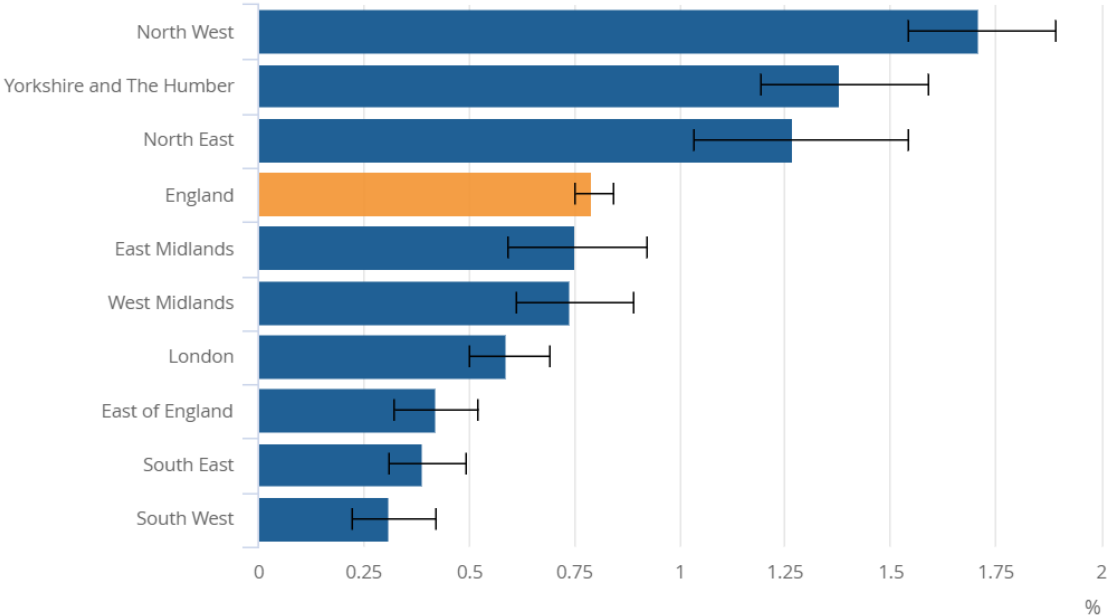
Lead analysts: [Sarah Walker](#) and [Ruth Studley](#)

There is clear evidence of variation in COVID-19 infection rates across the regions of England

Regional estimates

- During the most recent week of the study (10 to 16 October 2020), there is clear evidence of variation in COVID-19 infection rates across the regions of England, with the highest rates continuing to be seen in the North West, and Yorkshire and The Humber and the North East.
- North East, North West, and Yorkshire and The Humber have all seen steep increases in recent weeks.
- There has been growth in positivity in most regions of England over the last two weeks with the exception of the South West.

Estimated percentage of the population testing positive for the coronavirus (COVID-19) on nose and throat swabs across regions, England, 13 October 2020 (reference point of the most recent week from modelling)



Source: [Coronavirus \(COVID-19\) Infection Survey: UK, 23 October 2020](#)

Lead analysts: [Sarah Walker](#) and [Ruth Studley](#)

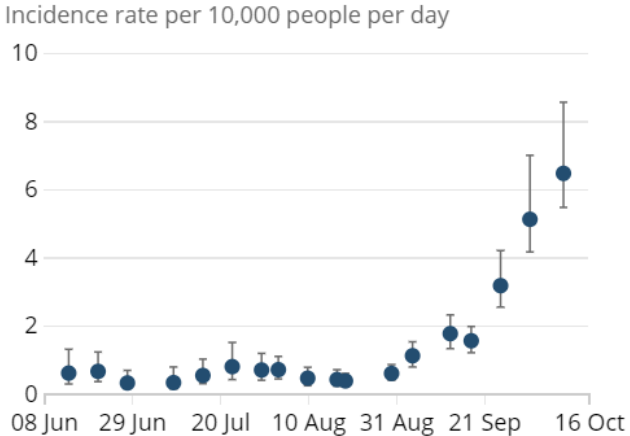
There has been a marked increase in the incidence rate over the last six weeks

- The incidence rate for England has continued to increase in recent weeks.
- It is estimated that during the most recent week of the study (10 to 16 October 2020), there were 6.46 new coronavirus (COVID-19) infections per 10,000 people per day (95% credible interval: 5.46 to 8.55).
- This equates to 35,200 new infections per day (95% credible interval: 29,800 to 46,600).

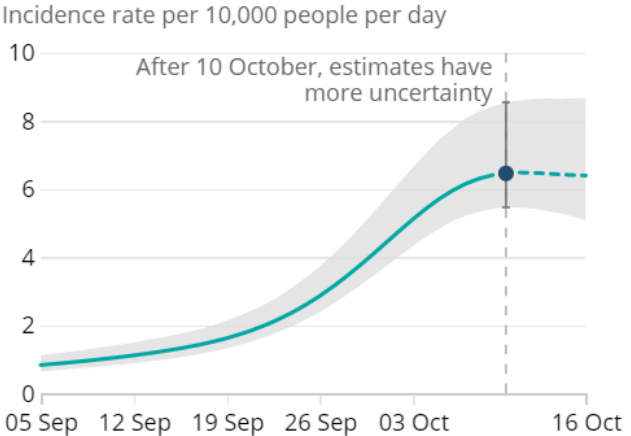
Incidence is the rate of occurrence of new cases of the disease over a given period of time. Incidence refers to the number of individuals who have a positive test in the study divided by time from joining the study to their last test. Individuals who are positive when they join the study are not included in this calculation.

Estimated numbers of new infections with the coronavirus (COVID-19), England, with modelled estimates from 5 September 2020

Official reported estimates of the rate of new COVID-19 infections in the community in England.



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.



Source: [Coronavirus \(COVID-19\) Infection Survey: UK, 23 October 2020](#)

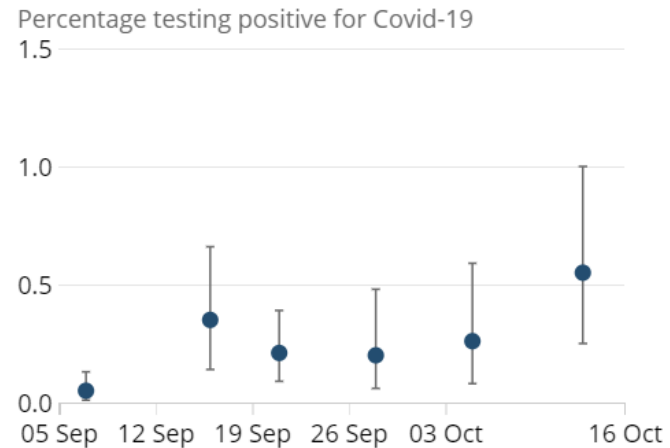
Lead analysts: [Sarah Walker](#) and [Ruth Studley](#)

The number of COVID-19 cases in Wales has increased in recent weeks

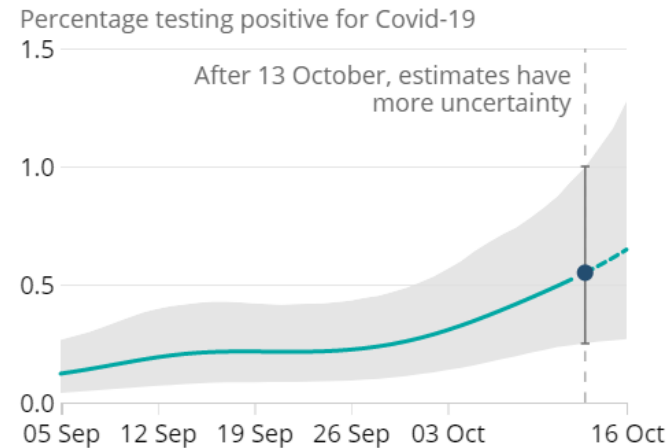
- Because of the relatively small number of tests and a low number of positives in our sample, credible intervals are wide and therefore results should be interpreted with caution.
- During the most recent week of the study (10 to 16 October 2020), we estimate that 16,700 people in Wales had the coronavirus (COVID-19) (95% credible interval: 7,600 to 30,400).
- This equates to 0.55% (95% credible interval: 0.25% to 1.00%) of the population in Wales or around 1 in 180 people (95% credible interval: 1 in 400 to 1 in 100).
- In Wales, the modelled estimates for the latest six-week period are based on 13,270 swab tests collected over this period. During these weeks, there were a total of 43 positive swabs taken from 33 people from 25 households.

Estimated percentage of the population in Wales testing positive for the coronavirus (COVID-19) on nose and throat swabs since 05 September 2020

Official reported estimates of the rate of COVID-19 infections in the community in Wales.



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.



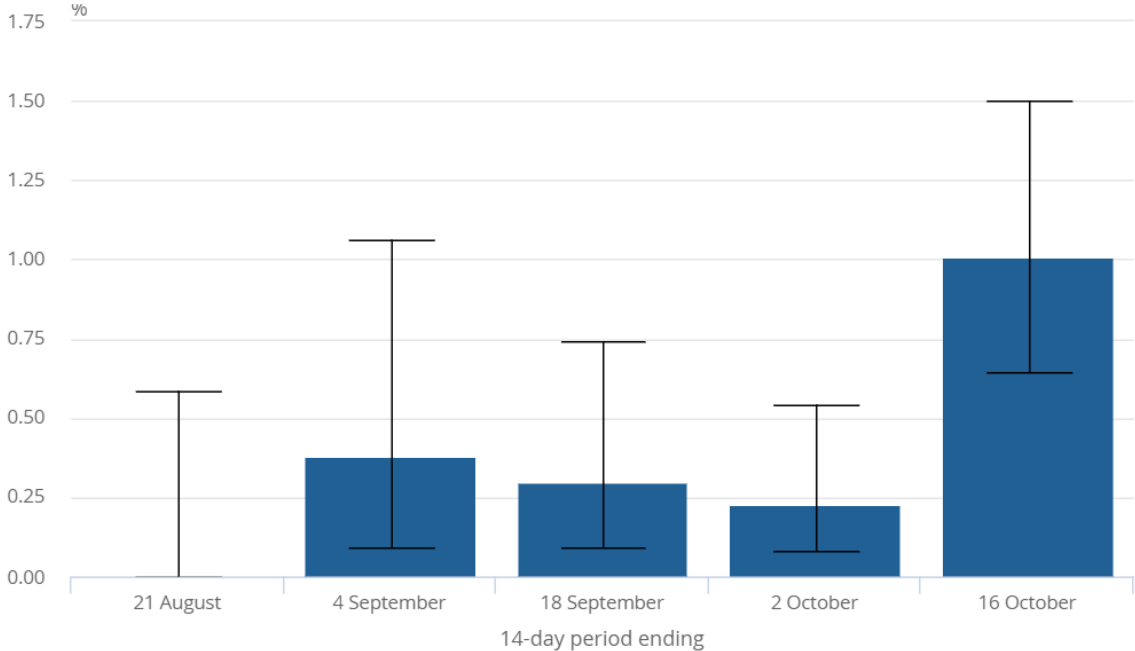
Source: [Coronavirus \(COVID-19\) Infection Survey: UK, 23 October 2020](#)

Lead analysts: [Sarah Walker](#) and [Ruth Studley](#)

The rate of infection in Northern Ireland is increasing, however it is too early to say that this constitutes a trend

- Because of the relatively small number of tests and positive swab results within our sample, confidence intervals are wide and therefore results should be interpreted with caution.
- During the most recent two weeks of the study (3 to 16 October 2020), we estimate that 1.01 % of people in Northern Ireland had the coronavirus (COVID-19) (95% confidence interval: 0.64% to 1.50%).
- This equates to 1 in 100 people (95% confidence interval: 1 in 160 to 1 in 70).
- In Northern Ireland, the weighted estimates for the latest two-week period are based on swab test results from 2,932 participants collected over this period. During these weeks, there were 28 people from 24 households who tested positive.

Estimated percentage of the population in Northern Ireland testing positive for the coronavirus (COVID-19) by non-overlapping 14-day periods between 6 August and 16 October 2020



Source: [Coronavirus \(COVID-19\) Infection Survey: UK, 23 October 2020](#)

Lead analysts: [Sarah Walker](#) and [Ruth Studley](#)

It is too early to comment on a trend on the proportion of the population testing positive for COVID-19 in Scotland

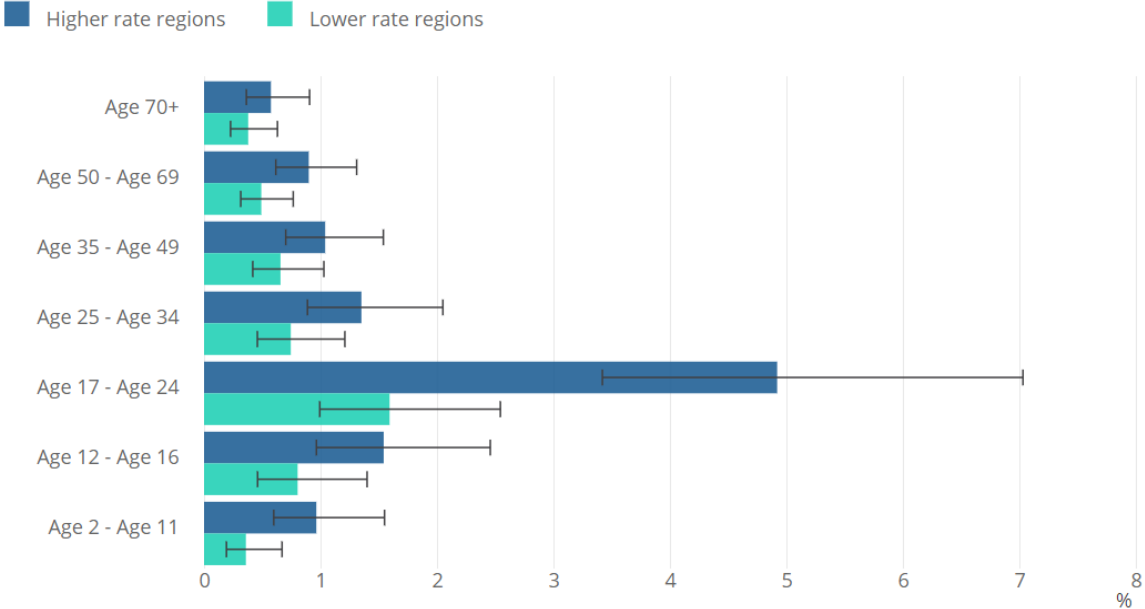
- For the first time, we are able to include an estimate of the number of people testing positive for the coronavirus (COVID-19) in Scotland.
- During the most recent two weeks of the study (3 to 16 October 2020), we estimate that 0.57% of people in Scotland had the COVID-19 (95% confidence interval: 0.35% to 0.88%).
- This equates to 1 in 180 people (95% confidence interval: 1 in 290 to 1 in 110).
- In Scotland, the weighted estimates for the latest two-week period are based on swab test results from 4,639 participants collected over this period. During these weeks, there were 24 people from 20 households who tested positive.

Evidence suggests 17 to 24 year olds have highest percentage of positive COVID -19 tests

Age

- 17- to 24-year-olds have higher positivity rates in both the higher and lower rate regions, however the difference is much greater in the higher rate regions.
- Higher rate regions include the North West, Yorkshire and The Humber and the North East.
- The reference region for the higher rate regions is Yorkshire and The Humber.
- Lower rate regions include the West Midlands, East Midlands, London, South West, East of England and the South East.
- The reference region for the lower rate regions is the East Midlands.

Estimated percentage testing positive for the coronavirus (COVID-19) on nose and throat swabs, daily, by age and region, between 25 September and 08 October 2020, England



Source: [COVID-19 Infection Survey: characteristics of people testing positive for COVID-19 in England, October 2020](#)

Lead analysts: [Sarah Walker](#) and [Ruth Studley](#)

During some point up until 20 June 2020, over half of care homes in England caring for dementia patients and older people had at least one case of COVID-19 among their staff and residents

- Between 26 May and 20 June 2020, an estimated 56% of 9,081 care homes in England providing dementia care or care of the elderly (part of the Vivaldi project) reported at least one confirmed case of COVID-19 among staff or residents.
- Across the care homes that reported at least one confirmed case of COVID-19, an estimated 20% of residents and 7% of staff tested positive for COVID-19, as reported by care home managers, since the start of the pandemic.
- Findings include some common factors in care homes with higher levels of infection among residents, such as:
 - prevalence of infection in staff
 - more frequent use of bank or agency nurses or carers
 - regional differences (such as in London and the West Midlands)

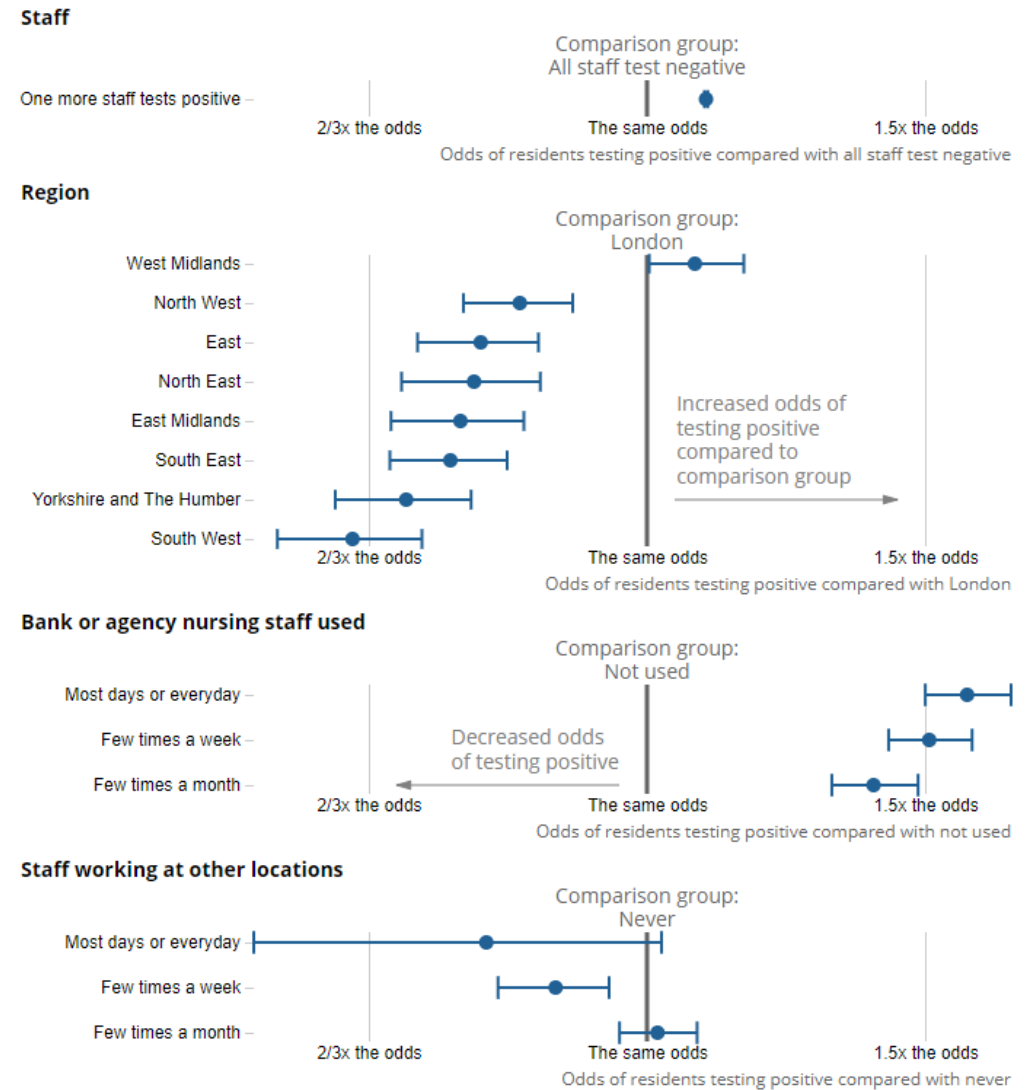
During some point up until 20 June 2020, over half of care homes in England, caring for dementia patients and older people, had at least one case of COVID-19 among their staff and residents

- There is some evidence that in care homes where staff receive sick pay, there are lower levels of infection in residents compared with those where staff do not receive it
- Findings include some common factors in care home with higher levels of infection among staff, such as:
 - prevalence of infection in residents
 - more frequent use of bank or agency nurses or carers
 - care homes employing staff who work across multiple sites

Odds of COVID-19 infection in care home residents by staff infection, region, use of bank or agency nursing staff, and staff working at other locations

Source: [Impact of coronavirus in care homes in England \(Vivaldi\): 26 May to 19 June 2020](#)

Lead analysts: [Laura Shallcross](#) and [Becky Tinsley](#)



Levels of self-isolation and staying at home dropped as lockdown restrictions eased, but wearing of face coverings rose as they became mandatory in more situations and countries

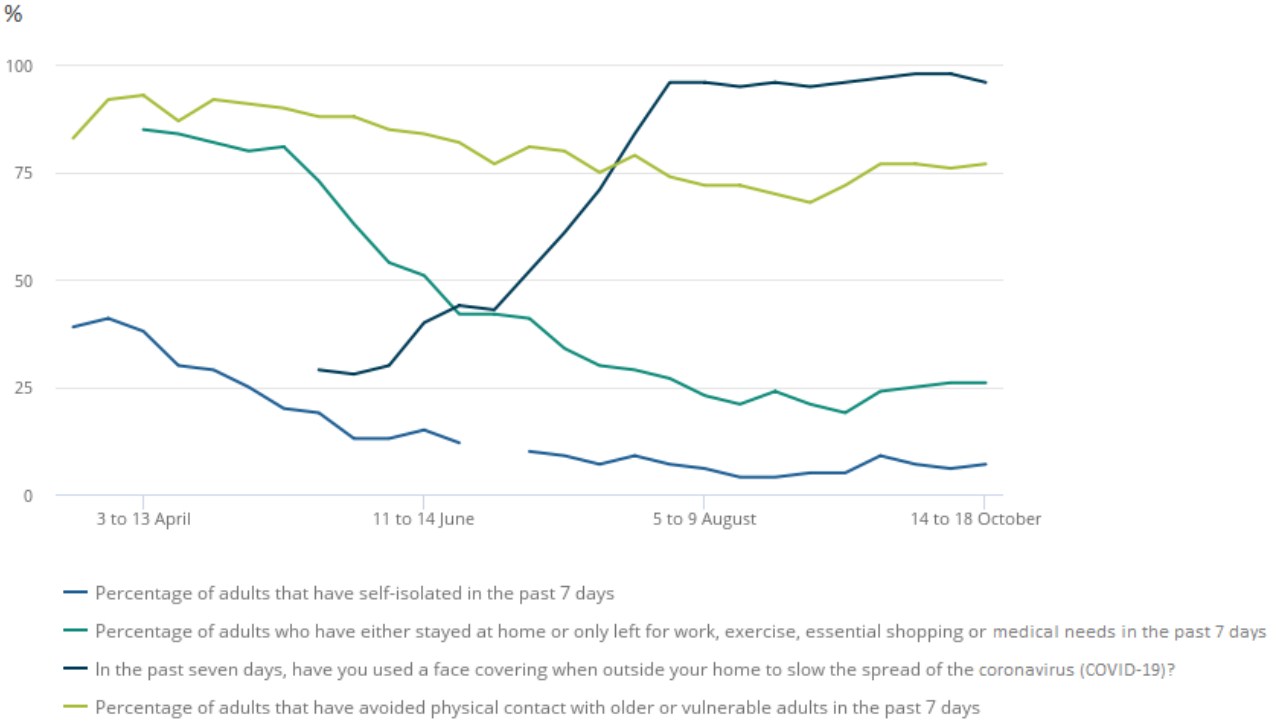
- On average, for the six weeks between 3 April and 17 May 2020, 82% of adults only left their home for essential work, shopping for basic necessities, exercise and medical need each week; this proportion decreased throughout the summer and has been less than 25% since early August.
- For the first three weeks of lockdown (from 23 March 2020), 40% of adults said they were self-isolating, and this was on a downward trend until the end of August 2020 (4%); throughout September, the percentage isolating started slowly increasing again, with 9% of adults saying they had self isolated in the last seven days at the end of September.
- Consistently high levels of adults said they were avoiding physical contact with other people when outside their home – over 90% until the end of May 2020; there has been a slight decrease through July and August 2020, but levels went up again at the end of September with over 85% of people avoiding contact with others.

Self-protection: handwashing and face coverings

- Between 14 and 18 October, around 9 in 10 (91%) adults who left their home said they always or often washed their hands with soap and water straight away after returning home from a public place; this is a lower proportion than on 31 May (94%), when lockdown measures started to ease.
- At the beginning of lockdown, over the period 27 March to 6 April, 100% of adults said that they had washed their hands with soap and water to avoid infection.
- As lockdown restrictions started to ease and more people left their home, there was been a steady rise in the number of adults wearing face coverings; at the end of May, before they were mandatory, 29% of adults who had left their home said they had worn a face covering to prevent the spread of the coronavirus (COVID-19), but this has risen to over 95% through August and September after they became compulsory on public transport across Great Britain and in shops and other enclosed spaces in England and Scotland.

More people left their home as lockdown restrictions eased and wearing of face coverings rose as they became mandatory

Trends in preventative measures, Great Britain, March to October 2020



Source: [Opinions and Lifestyle Survey, ONS](#)

Lead analyst: [Andrea Lacey](#)

Approximately 2.2 million clinically extremely vulnerable people were advised to shield from COVID-19 at home from the end of March 2020, and around 60% of those people followed shielding advice completely

- Between mid-May and mid-July 2020 the percentage of CEV people reporting that they completely followed the guidance varied but remained around 60% as the guidance was gradually eased.
- There was a trend of CEV people increasingly completely following shielding guidance by increasing age group; the older the age group, the higher the percentage of people completely following guidance.
- An estimated 328,000 CEV people (15%) lived in a household with children aged under 16 years; 3% (68,000 CEV people) reported that living in this type of household has had an impact on their ability to shield.

Indicators of clinically extremely vulnerable people following shielding advice

England, 14 May to 16 July 2020

	14 to 19 May	28 May to 3 June	9 to 18 June	24 to 30 June	9 to 16 July
Percentage that report completely following shielding advice	63	62	63	58	60
Percentage that report either not leaving the house at all or leaving the house only for exercise	65	67	64	60	48
Percentage receiving no visitors, except for support with personal care	86	87	83	77	65

Source: [Coronavirus and shielding of clinically extremely vulnerable people in England: 9 July to 16 July 2020](#)

Lead analyst: [Tim Gibbs](#)