Latest numbers on COVID-19 in the UK – 5 November 2021

1. Cases
2. REACT study results
3. Long Covid
4. Hospitalisations & Deaths
5. Vaccinations
6. New variant AY.4.2
7. International perspective

With many thanks to Bob Hawkins for his help in collating the data
Cases
7-day rolling average of number of Lateral Flow and PCR tests taken each day to 3 November in England

Data from https://coronavirus.data.gov.uk
Number of new UK confirmed COVID-19 cases by reported date (people who have had a positive test) to 4 November 2021

Data from https://coronavirus.data.gov.uk

Half term starts in England
Cases per 100,000 people per rolling week by home nation by date of test to 31 October

Half term starts in England

Data from https://coronavirus.data.gov.uk
Proportion of people tested who test positive (positivity rates) to 30 October

Data from:
Scotland: https://www.opendata.nhs.scot/dataset/covid-19-in-scotland

Visualisation courtesy of Bob Hawkins
Two weeks ago I said that we should see rates in school children fall over half term – that plus teen vaccination might put a bit of a break on increases.
Cases per 100,000 people per week for different age groups in England to 30 Oct

Data from https://coronavirus.data.gov.uk/
REACT Study

Round 14: 9-27 Sept: 100,527 PCR tests returned
Round 15a: 19–29 Oct: 67,208 PCR tests returned

Data from
https://www.imperial.ac.uk/medicine/research-and-impact/groups/react-study/real-time-assessment-of-community-transmission-findings

Charts by Bob Hawkins
COVID-19 Prevalence by Region for England
Comparison of 29 Oct 2021 with Prior Round
(Source: REACT 1 Study Reports)

SW almost 4x higher

https://www.imperial.ac.uk/medicine/research-and-impact/groups/react-study/real-time-assessment-of-community-transmission-findings/
COVID-19 Prevalence by Age for England
Comparison of 29 Oct 2021 with Prior Round
(Source: REACT 1 Study Reports)

Kids more than 2x higher

Over 75s also more than 2x higher

Note different age ranges to ONS infection survey

https://www.imperial.ac.uk/medicine/research-and-impact/groups/react-study/real-time-assessment-of-community-transmission-findings/
COVID-19 Prevalence by Number of Children in Household for England
Comparison of 29 Oct 2021 with Prior Round
(Source: REACT 1 Study Reports )

https://www.imperial.ac.uk/medicine/research-and-impact/groups/react-study/real-time-assessment-of-community-transmission-findings/
COVID-19 Prevalence by Deprivation for England
Comparison of 29 Oct 2021 with Prior Round
(Source: REACT 1 Study Reports)

https://www.imperial.ac.uk/medicine/research-and-impact/groups/react-study/real-time-assessment-of-community-transmission-findings/
Long Covid
Percentage of population living with “Long Covid” (symptoms lasting at least 4 weeks) by age over time (ONS survey)

Data from https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/datasets/alldatarelatingtoprevalenceofongoingsymptomsfollowingcoronaviruscovid19infectionintheuk
Hospitalisations and deaths
Number of people in hospital per million people – UK nations
7 day rolling average to 4 November

Data from https://coronavirus.data.gov.uk.
Number of hospital admissions with Covid every day in England to 2 November

Data from https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-hospital-activity/
Number of people in mechanically ventilated beds per million people – UK nations
7 day rolling average to 4 November

Data from https://coronavirus.data.gov.uk.
Proportion of critical care patients in England with and without Covid on the 1st May 2021

Data from https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-hospital-activity/
Proportion of critical care patients in England with and without Covid on the 4th November 2021

Data from https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-hospital-activity/
Number of deaths within 28 days of +ve COVID test reported per day across the UK to 4 November

We have recorded over 1,000 deaths a week for the last two weeks

86% of ONS registered deaths with Covid are because of Covid.
Very similar to January wave (85%-90%)

Data from [https://coronavirus.data.gov.uk/](https://coronavirus.data.gov.uk/)
Number of deaths within 60 days of +ve COVID test by date of death from to 3 to 31 October 2021

| Death within 60 days of positive COVID-19 test by date of death between week 40 and week 43 2021 | Total   | Unlinked* | Not vaccinated | Received one dose (1-20 days before specimen date) | Received one dose, ≥21 days before specimen date | Second dose ≥14 days before specimen date |
|----------------------------------------------------------------------------------------------------------------|
| Under 18                                                        | 8       | 0         | 7             | 0                                                  | 0                                                   | 1                                              | 0                               |
| 18-29                                                           | 14      | 0         | 9             | 0                                                  | 0                                                   | 0                                              | 5                               |
| 30-39                                                           | 38      | 2         | 24            | 0                                                  | 0                                                   | 3                                              | 9                               |
| 40-49                                                           | 110     | 2         | 56            | 0                                                  | 0                                                   | 6                                              | 46                              |
| 50-59                                                           | 241     | 4         | 104           | 0                                                  | 0                                                   | 7                                              | 126                             |
| 60-69                                                           | 535     | 3         | 157           | 0                                                  | 0                                                   | 20                                             | 355                             |
| 70-79                                                           | 980     | 4         | 131           | 0                                                  | 0                                                   | 23                                             | 822                             |
| ≥80                                                              | 1897    | 4         | 181           | 1                                                  | 63                                                  | 1648                                           |                                  |

NB: with our current case rates, deaths would be far far higher without vaccination. These high death numbers are because we are not controlling covid sufficiently not because the vaccines don’t work!

2,470 fully vaccinated people over 70 died with Covid in those 4 October weeks.

This is consequence of high community cases & some vaccine waning

Table from UKHSA Vaccine surveillance report 4 Nov 2021
Vaccination data
Percent of Total Population Unvaccinated (no dose given), Partially Vaccinated (1 dose), Fully Vaccinated (2 doses) and Booster (3 Doses) as at Nov 3
(Source: Covid Daily Update and Mid-2020 ONS Population Estimates)

Thanks to Bob Hawkins for the chart
Percent of 12-15 and 16-17 Year Olds with First Doses by Home Nation as at Nov 3

First Dose coverage by Deprivation for 12-17 Year Olds in England as at Oct 31
(Source: UKHSA Weekly Vaccination Reports, MSOA IMD data from Tom Forth and Mid-2020 ONS Population Estimates)
First Dose coverage by Deprivation for 18+ Year Olds in England as at Oct 31
(Source: UKHSA Weekly Vaccination Reports, MSOA IMD data from Tom Forth and Mid-2020 ONS Population Estimates)
Over 50s vaccination coverage in England by age up to 3 Nov 2021
(uses ONS 2020 population estimates)

Data from https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-vaccinations/
Chart courtesy of Bob Hawkins
England at Risk Population Given Booster Vaccinations and Total Number Qualified: Sep 30 - Nov 3
(Source: Covid Daily Update and PHE Daily Vaccination Update)

So we've only vaccinated about 55% of those who received their 2nd dose 6 months ago

Number of First, Second, and Booster Doses given by Day in the UK
Jan 11 to Nov 3
(Source: Covid Daily Update)
Variants: AY.4.2
Proportion of sequenced cases in England that are AY.4.2 to 30 Oct 2021 by home nation

Note that most recent week is less complete data & little recent data for N Ireland (but previously low)

Data from [http://sars2.cvr.gla.ac.uk/cog-uk/](http://sars2.cvr.gla.ac.uk/cog-uk/)
Proportion of sequenced cases in England that are each subtype to 23 Oct 2021.
Note that most recent week is less complete data.

If it has growth advantage of 15% / week, AY.4.2 might be dominant by mid Jan and almost all cases by mid Feb 2022. Much slower than Delta vs Alpha, where Delta achieved dominance in 8 weeks.

Data from https://covid-surveillance-data.cog.sanger.ac.uk/download/lineages_by_ltlc_and_week.tsv
Proportion of sequenced positive tests that are AY.4.2 in England each week to 23 October 2021

Data from https://covid-surveillance-data.cog.sanger.ac.uk/download/lineages_by_ltlia_and_week.tsv
SAGE Minutes from 14 Oct 2021

1. There should be no complacency around the risk posed by further viral evolution. Emergence of a variant of Delta or a variant from a different lineage that becomes dominant globally is a very real possibility. Ensuring sufficient capacity to monitor for variants, and capability to characterise new variants and conduct predictive vaccinology, is crucial.

SAGE JUNIPER notes from 29 Oct 2021

(ii) the emergence of a new variant with (partial) vaccine escape properties (Figure 3). Much of the UK’s current population immunity comes from vaccination; a variant that could overcome this immunity would have a fitness advantage and could spread rapidly through the population. As the UK continues to vaccinate and individuals return to pre-COVID rates of mixing there is an increased evolutionary pressure for vaccine escape variants to emerge. Very high prevalence in schools combined with partly vaccinated 12-16 year olds in a highly mixing population provides ideal conditions for vaccine escape emergence.

Data from https://covid-surveillance-data.cog.sanger.ac.uk/download/lineages_by_ltlad_and_week.tsv
International perspective
International perspective: Eastern Europe is going through a serious surge

Chart from https://ourworldindata.org/
International perspective: Eastern Europe is going through a serious surge

Chart from https://ourworldindata.org/
International perspective: Some countries that were doing well are now surging
International perspective: Some countries still doing very well

Chart from https://ourworldindata.org/
International perspective: Some countries still doing very well

Chart from [https://ourworldindata.org/](https://ourworldindata.org/)
The US has authorised use of Pfizer (third of adult dose) in 5-11 year olds and have started that campaign

“COVID-19 cases in children can result in hospitalizations, deaths, MIS-C (inflammatory syndromes) and long-term complications, such as “long COVID,” in which symptoms can linger for months. The spread of the Delta variant resulted in a surge of COVID-19 cases in children throughout the summer. During a 6-week period in late June to mid-August, COVID-19 hospitalizations among children and adolescents increased fivefold. Vaccination, along with other preventative measures, can protect children from COVID-19 using the safe and effective vaccines already recommended for use in adolescents and adults in the United States.”

https://www.cdc.gov/media/releases/2021/s1102-PediatricCOVID-19Vaccine.html
The US has authorised use of Pfizer (third of adult dose) in 5-11 year olds and have started that campaign.

“COVID-19 cases in children can result in hospitalizations, deaths, MIS-C (inflammatory syndromes) and long-term complications, such as “long COVID,” in which symptoms can linger for months. The spread of the Delta variant resulted in a surge of COVID-19 cases in children throughout the summer. During a 6-week period in late June to mid-August, COVID-19 hospitalizations among children and adolescents increased fivefold. Vaccination, along with other preventative measures, can protect children from COVID-19 using the safe and effective vaccines already recommended for use in adolescents and adults in the United States.”

https://www.cdc.gov/media/releases/2021/s1102-PediatricCOVID-19Vaccine.html
The US has authorised use of Pfizer (third of adult dose) in 5-11 year olds and have started that campaign.
International perspective: child vaccination

The US has authorised use of Pfizer (third of adult dose) in 5-11 year olds and have started that campaign.

![Pfizer-BioNTech’s COVID-19 vaccine is over 90% effective at preventing COVID-19 in children ages 5–11.](cdc.gov/coronavirus)
International perspective: vaccine inequality

Vaccine inequalities persist globally. Despite promises at the G7 little seems to be improving. We *could* produce more, donate more and support others to produce more & distribute more.

Chart from https://www.travellingtabby.com/uk-coronavirus-tracker/
• Most recent fall in cases likely due to reduced testing and cases starting to fall in school age children.

• What happens on return to school is uncertain – vaccination unfortunately not that high yet in England – better in Wales & Scotland.

• Hospitalisations and intensive care use are rising – NHS situation is getting worse.
SUMMARY

- Most recent fall in cases likely due to reduced testing and cases starting to fall in school age children.
- What happens on return to school is uncertain – vaccination unfortunately not that high yet in England – better in Wales & Scotland.
- Hospitalisations and intensive care use are rising – NHS situation is getting worse.
- Deaths are also rising. We need to vaccinate faster – both children and older adults. We need to address gaps by deprivation and ethnicity.
- European picture shows you need very high vaccination rates *and* some other measures.
- Global picture shows we are still not doing nearly enough to ensure global vaccine equity.
- Covid is continuing to mutate and the threat of a new variant remains high.
- More people are getting very sick and dying, more and more young people are reporting Long Covid. Children’s education was disrupted last half term and teachers were more likely than other adults to get sick. We need to get cases under control now – and “vaccine plus” approach will help – especially as we are still vaccinating!