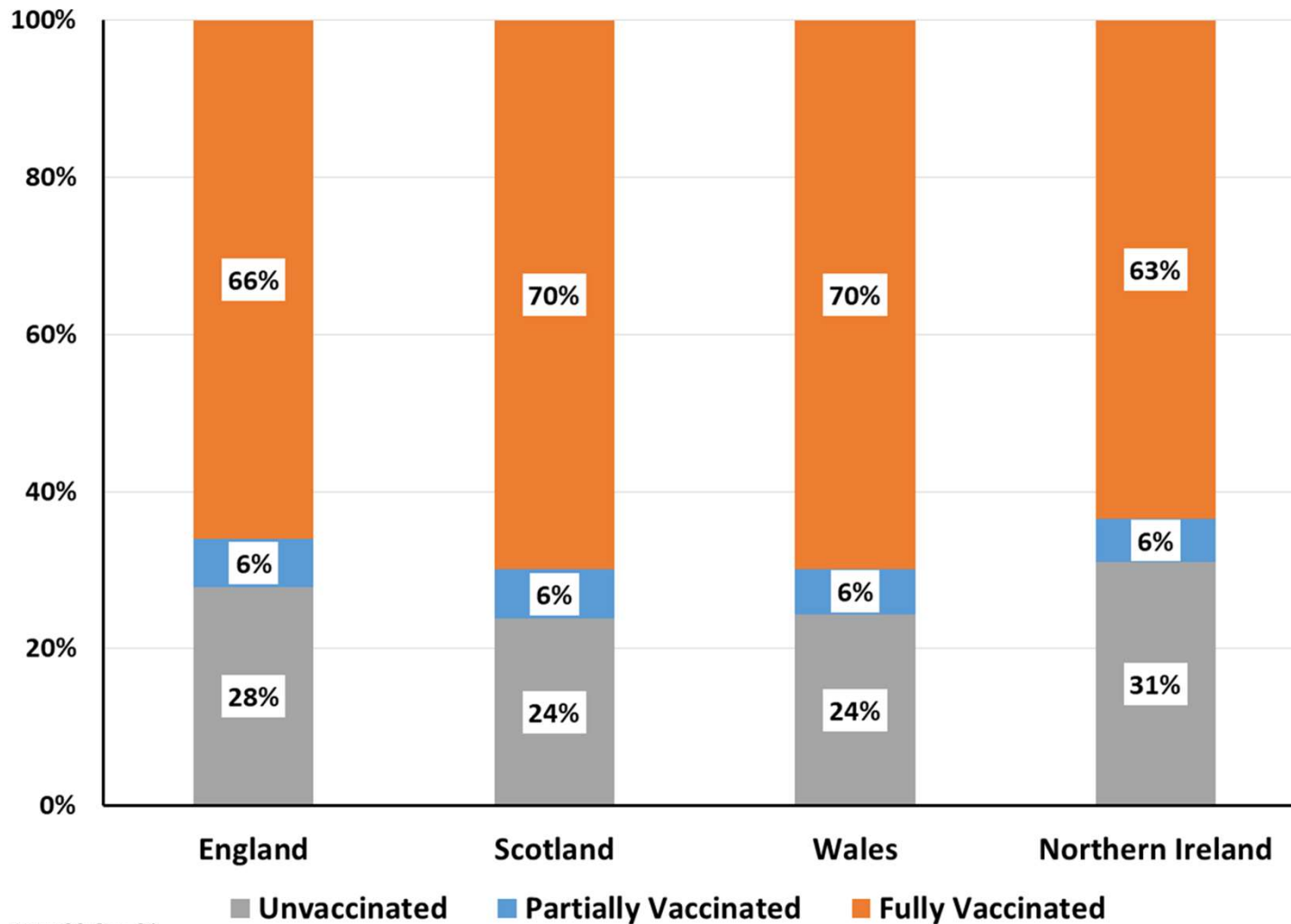


1. Vaccinations
2. Cases
3. Hospitalisations & Deaths
4. Children
5. International picture

With many thanks to Bob Hawkins for his help in collating the data

Vaccination data

Percentage of Total Population Unvaccinated (no dose given), Partially Vaccinated (1 dose) and Fully Vaccinated (2 doses) as at 22 September



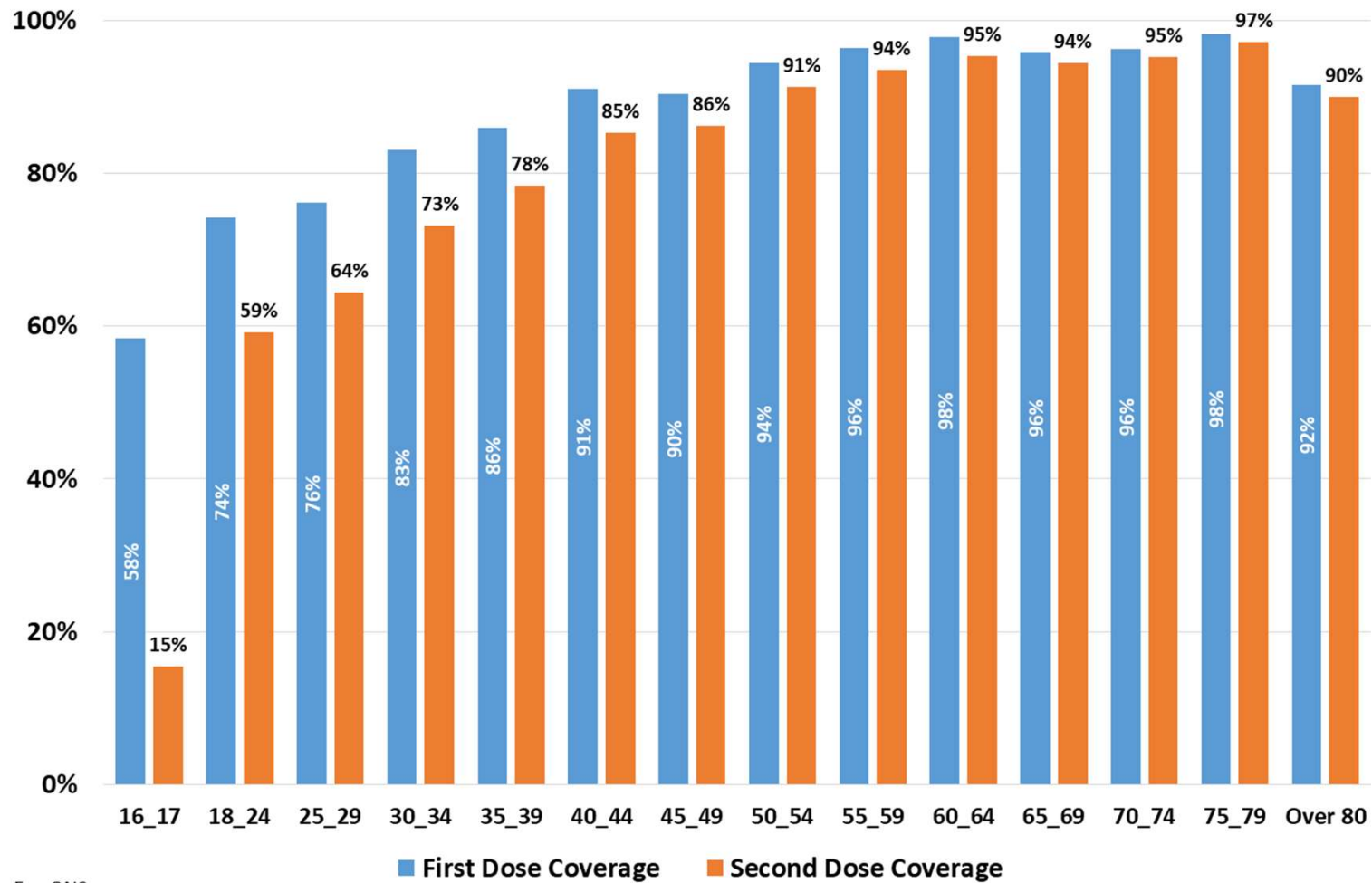
Date: 22-Sep-21

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

Thanks to Bob Hawkins for the chart

ONS 2020 population estimates

Vaccine coverage by Age for England to 22 September

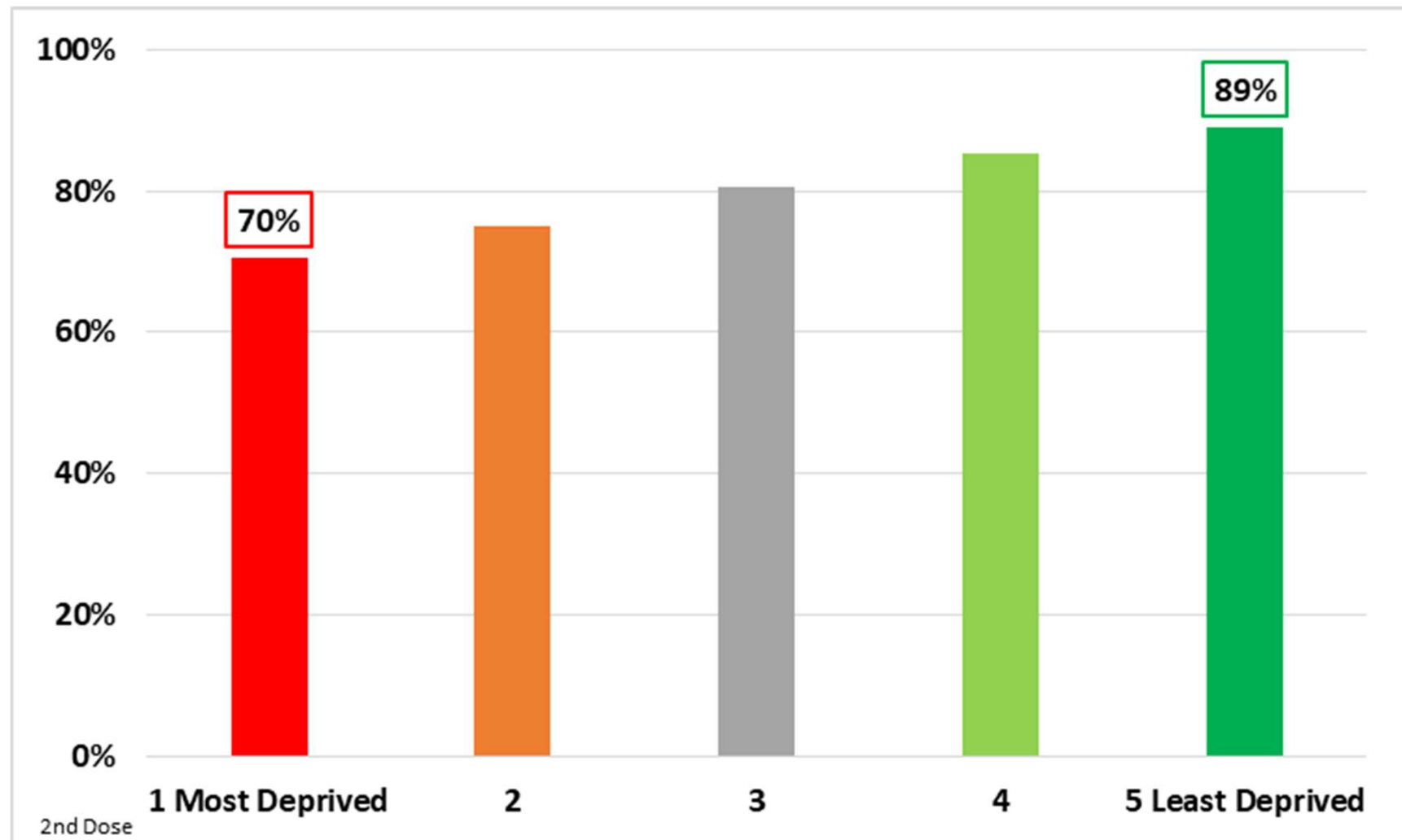


Data from <https://coronavirus.data.gov.uk/>

Thanks to Bob Hawkins for the chart

Mid-2020 ONS Population Estimates

2nd dose coverage by deprivation for England to 31 August

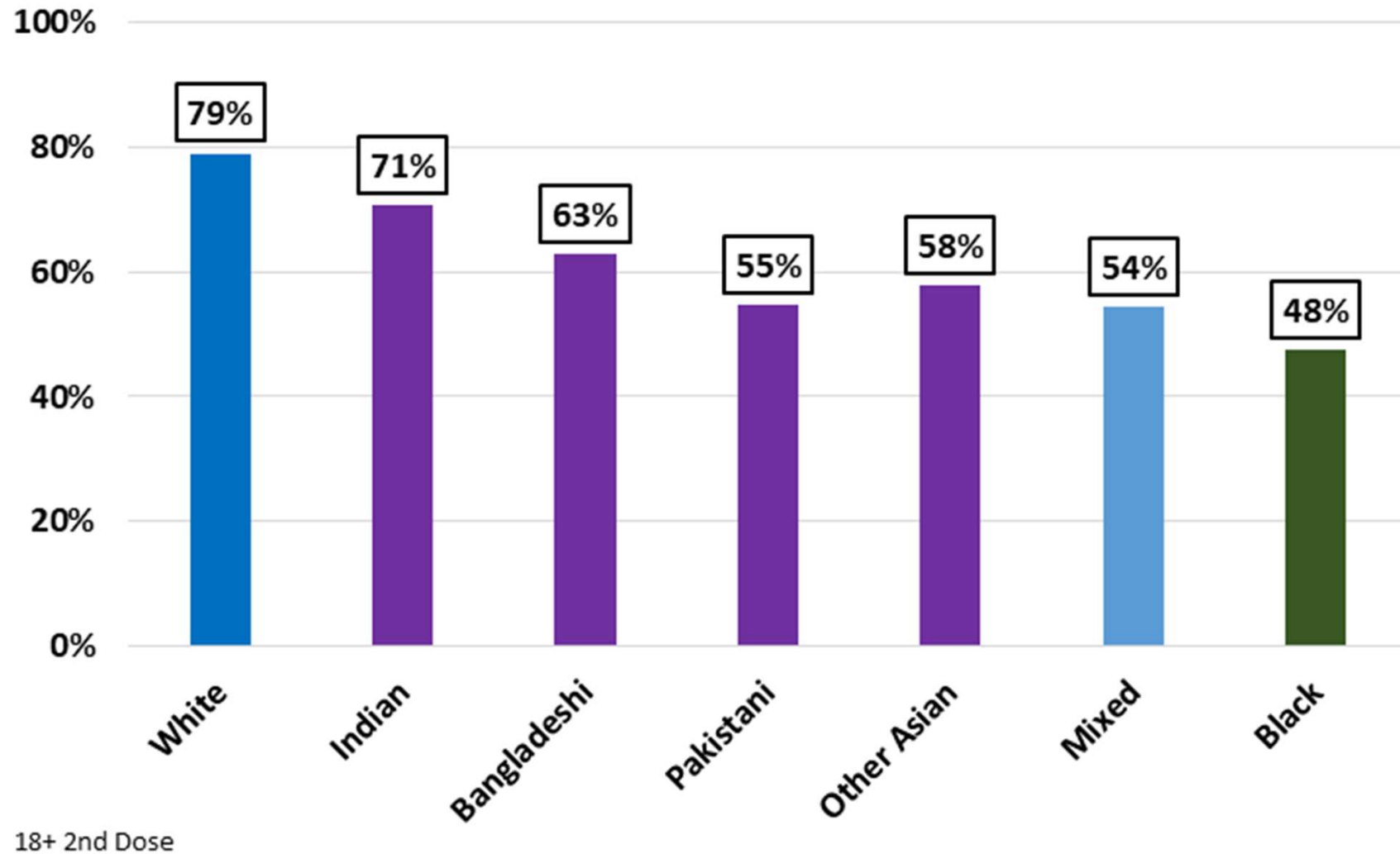


Data from <https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-vaccinations/>

Thanks to Bob Hawkins for the chart

Mid-2020 ONS Population Estimates

2nd dose coverage by ethnicity for England to 31 August



Data from <https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-vaccinations/>

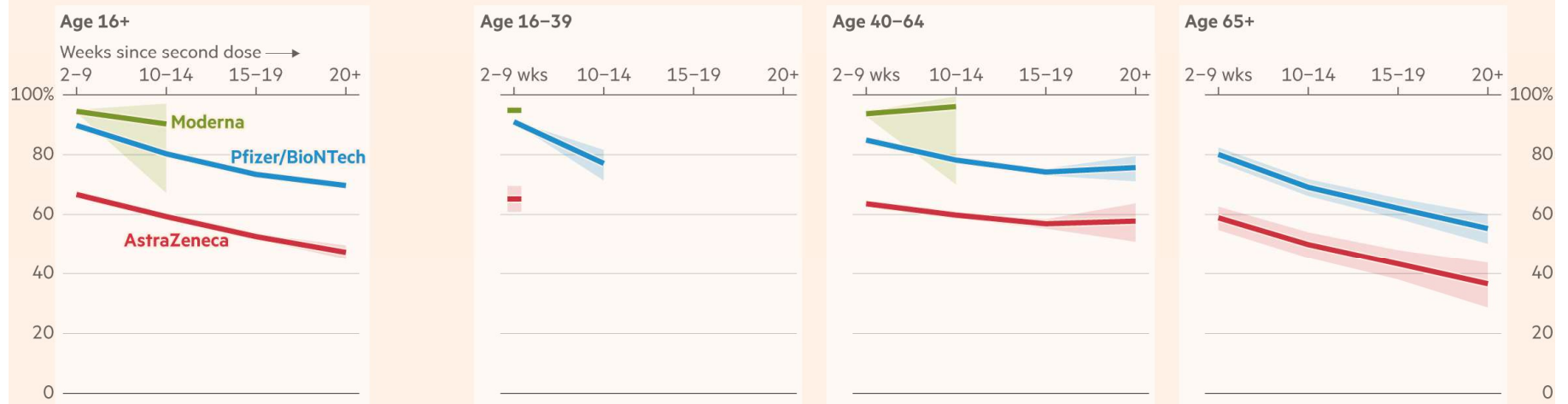
Thanks to Bob Hawkins for the chart

Mid-2020 ONS Population Estimates

The case for boosters

Protection against symptomatic infection tends to be lower among older age groups, and also shows more pronounced waning among these groups

Two-dose efficacy against **symptomatic infection** by number of weeks since second dose, broken down by vaccine, age-group and dosing interval



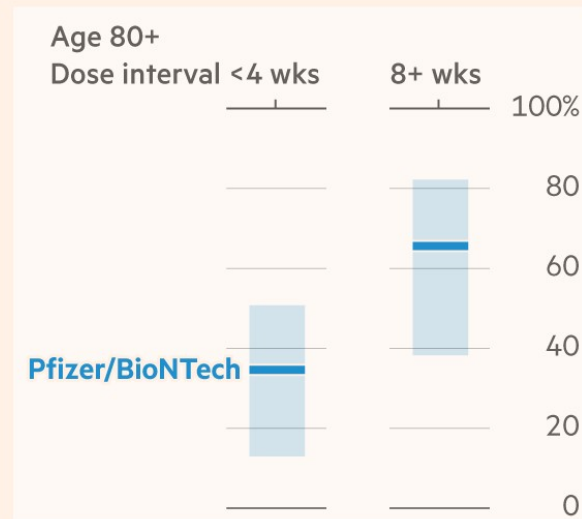
Source: Public Health England
© FT

Chart from John Burn-Murdoch at the Financial Times
<https://twitter.com/jburnmurdoch/status/1438100712441974786?s=20>

The case for boosters

A three-week gap between first and second doses appears to produce weaker levels of protection than a longer dosing interval

Two-dose efficacy against **symptomatic infection** among people aged 80+, 25 weeks after the second dose, broken down by length of interval between first and second dose



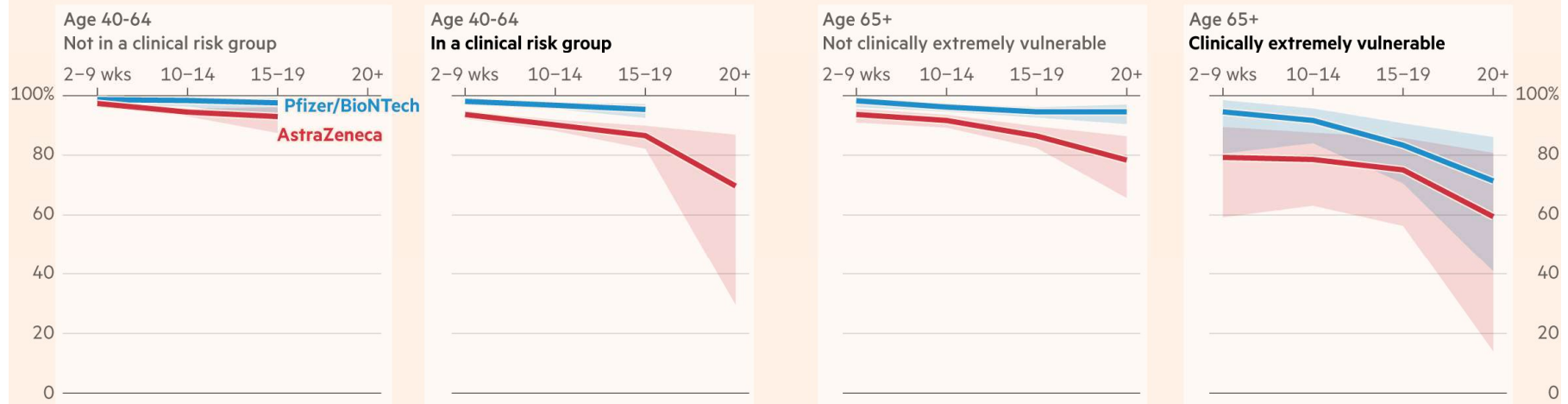
Source: Public Health England
© FT

Chart from John Burn-Murdoch at the Financial Times
<https://twitter.com/jburnmurdoch/status/1438100712441974786?s=20>

The case for boosters

Underlying health conditions play a large part in the observed waning of protection against severe disease. Little waning is found among those without serious conditions

Two-dose efficacy against **hospital admission** by number of weeks since second dose, broken down by vaccine, age-group and underlying health conditions

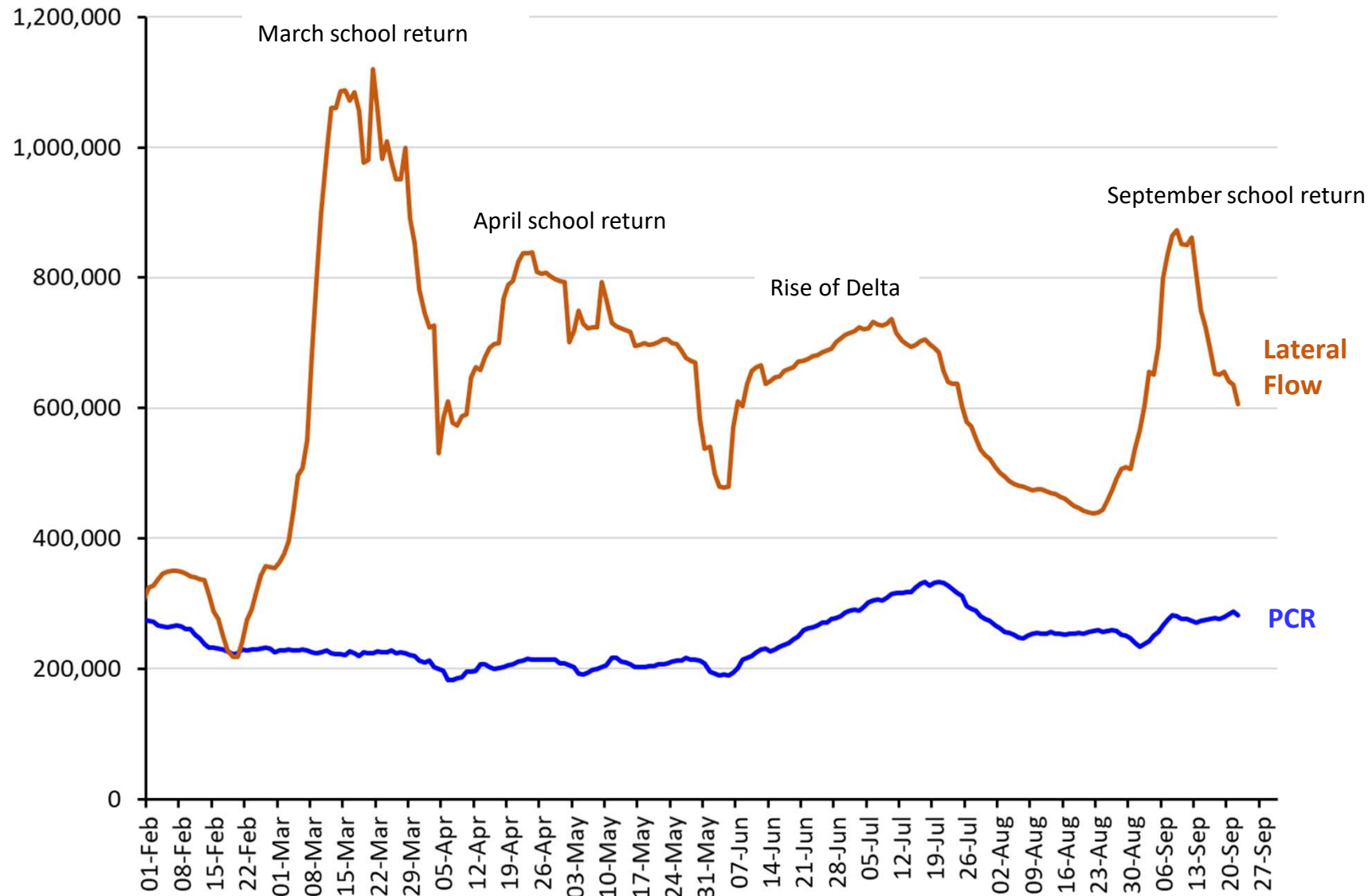


Source: Public Health England
© FT

Chart from John Burn-Murdoch at the Financial Times
<https://twitter.com/jburnmurdoch/status/1438100712441974786?s=20>

Cases

7-day rolling average of the number of lateral flow (rapid) and PCR tests taken (registered) every day in England to 22 September



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

Secondary school rapid testing

Figure 3: number of LFD tests conducted by staff and students in secondary schools, England

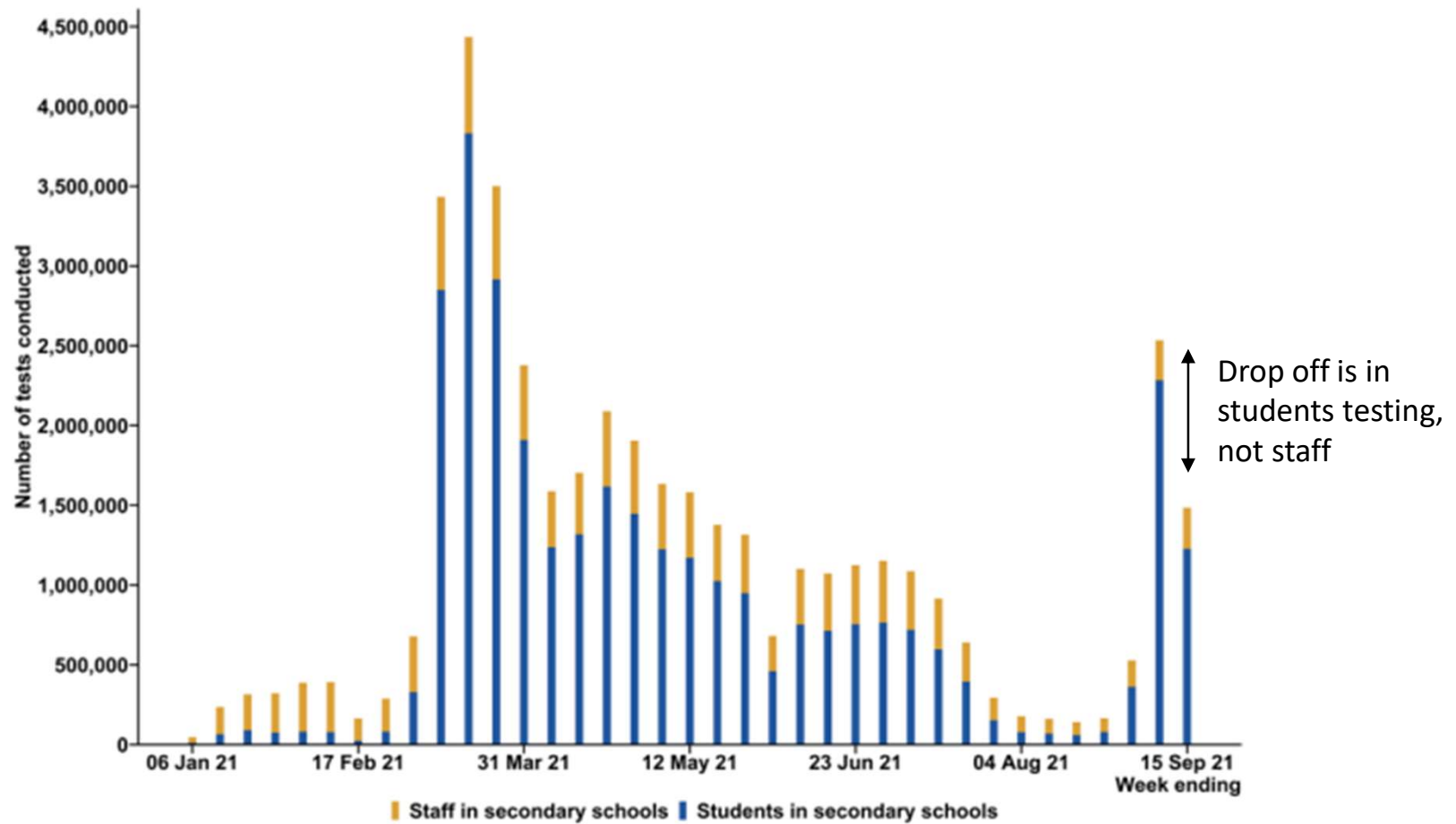
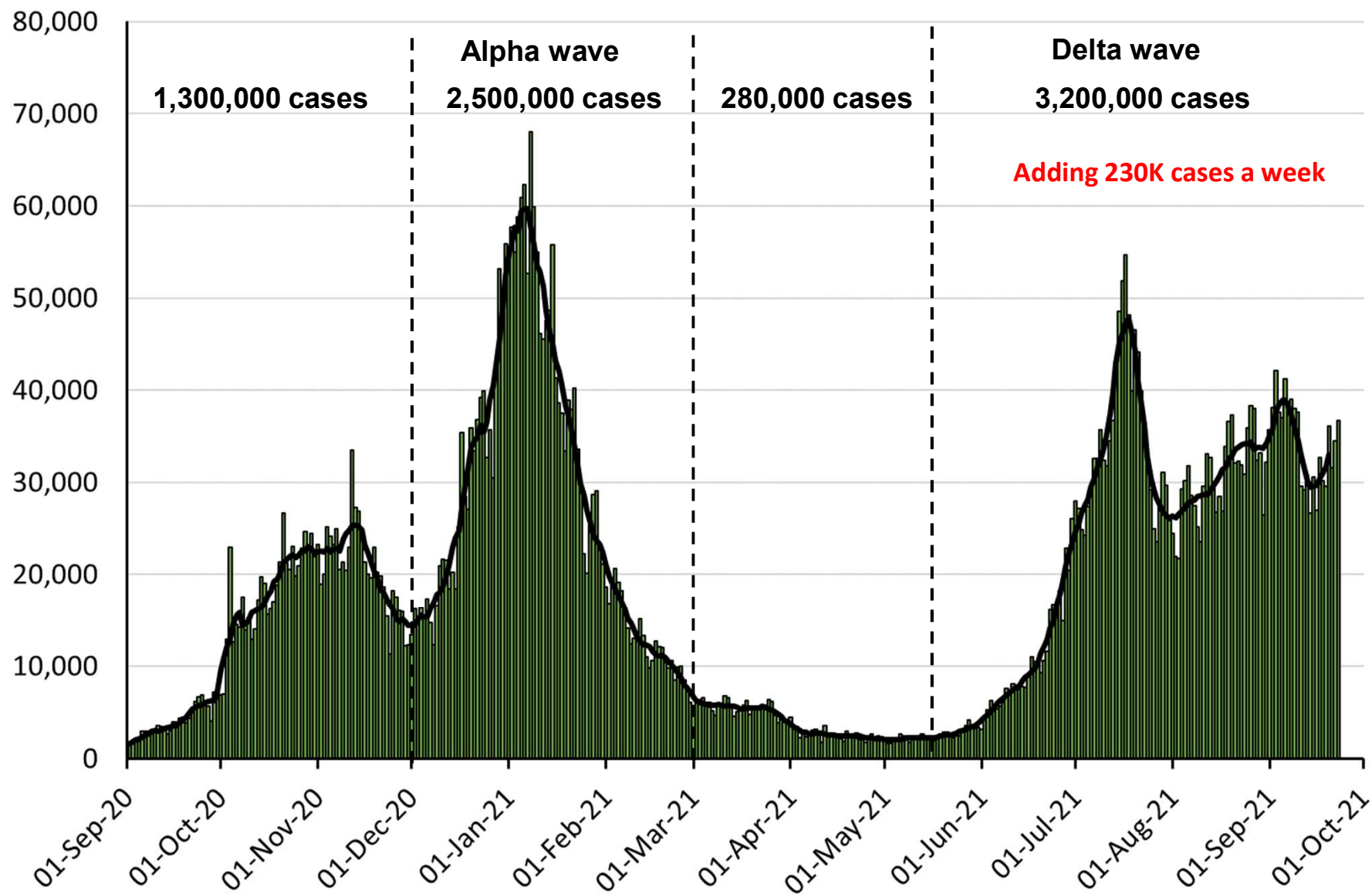
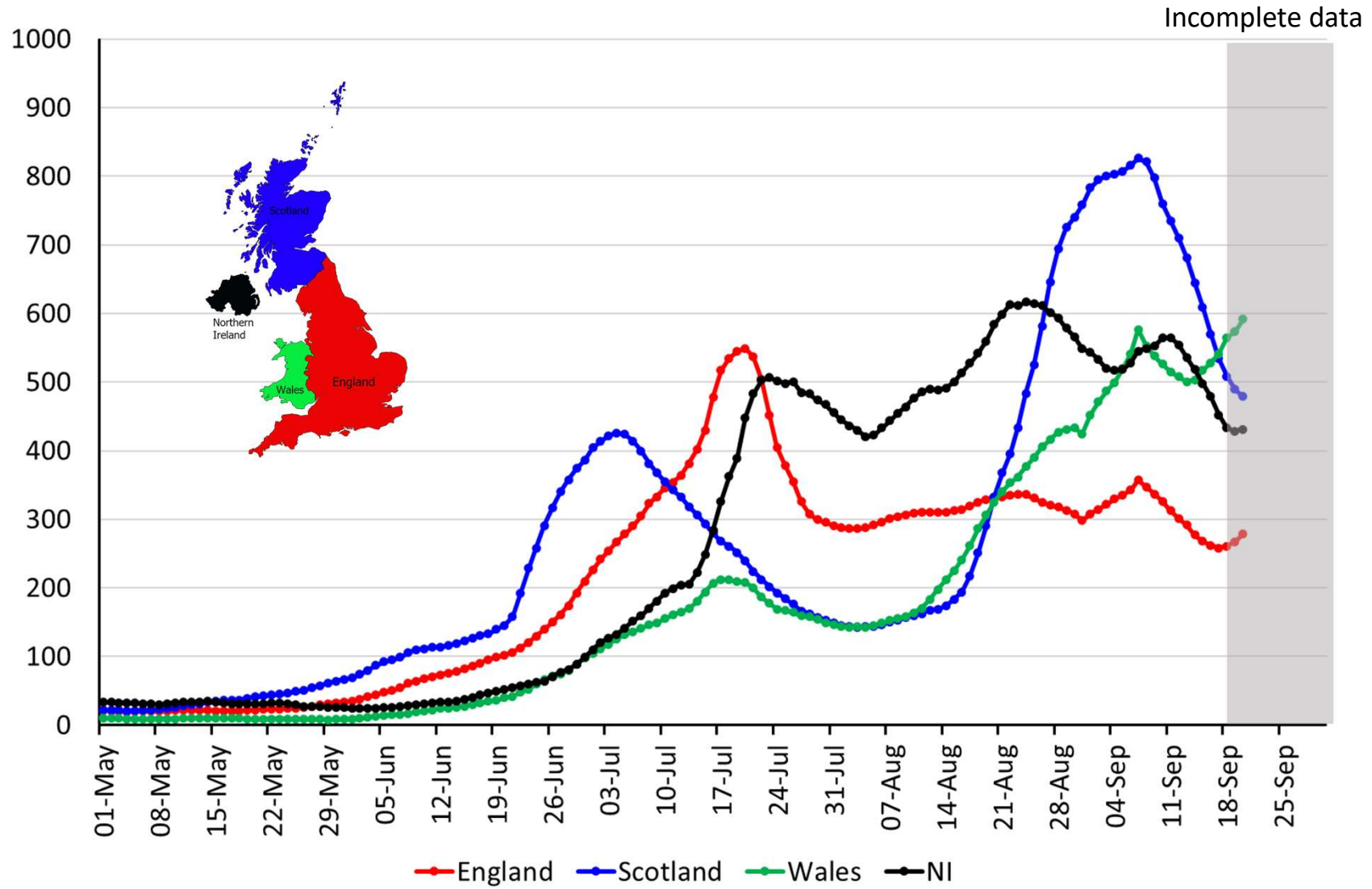


Chart from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1019949/Rapid_testing_210923_v2.pdf

Number of new UK confirmed COVID-19 cases by reported date (people who have had a positive test) to 23 September



Cases per 100,000 people per week by home nation by date of test to 20 September

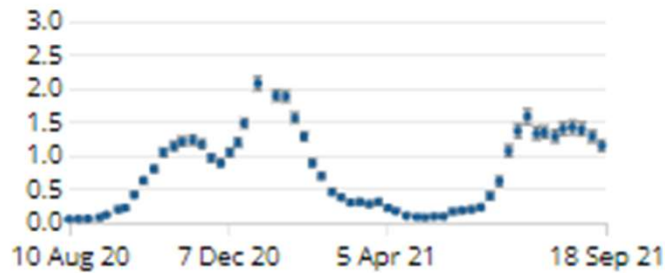


Data from <https://coronavirus.data.gov.uk>

ONS infection survey data on people testing positive (prevalence)

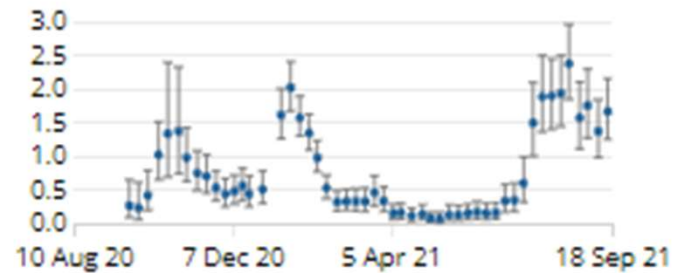
England

Percentage testing positive for COVID-19



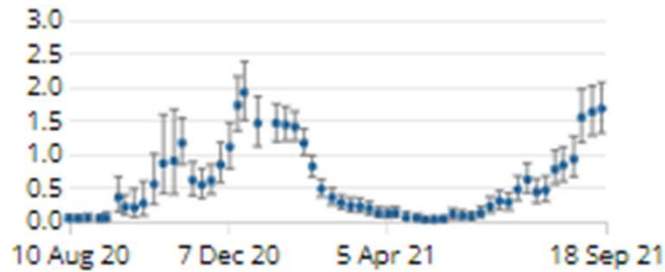
Northern Ireland

Percentage testing positive for COVID-19



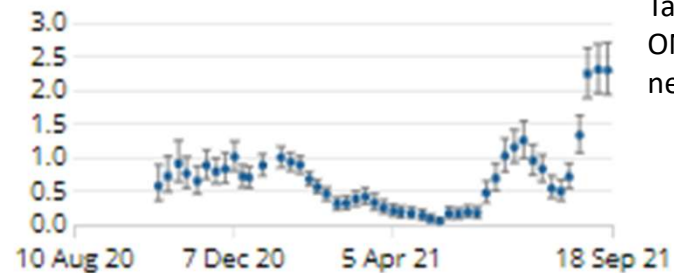
Wales

Percentage testing positive for COVID-19



Scotland

Percentage testing positive for COVID-19



Takes longer for
ONS to drop than
new cases

Chart from

<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionsurvey/pilot/24september2021>

Map of case rates in the UK

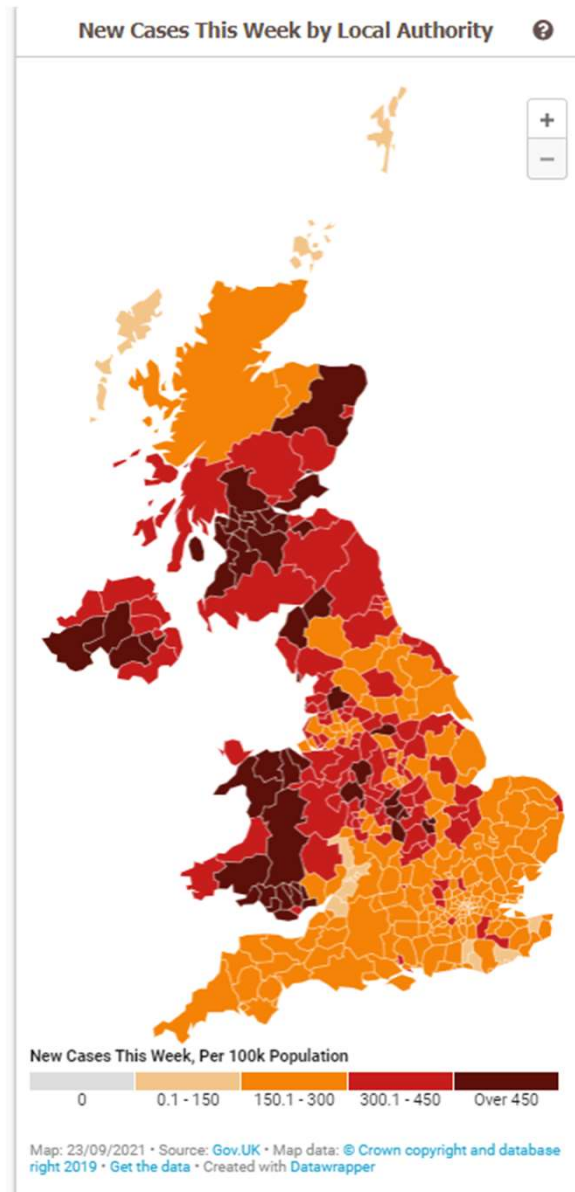
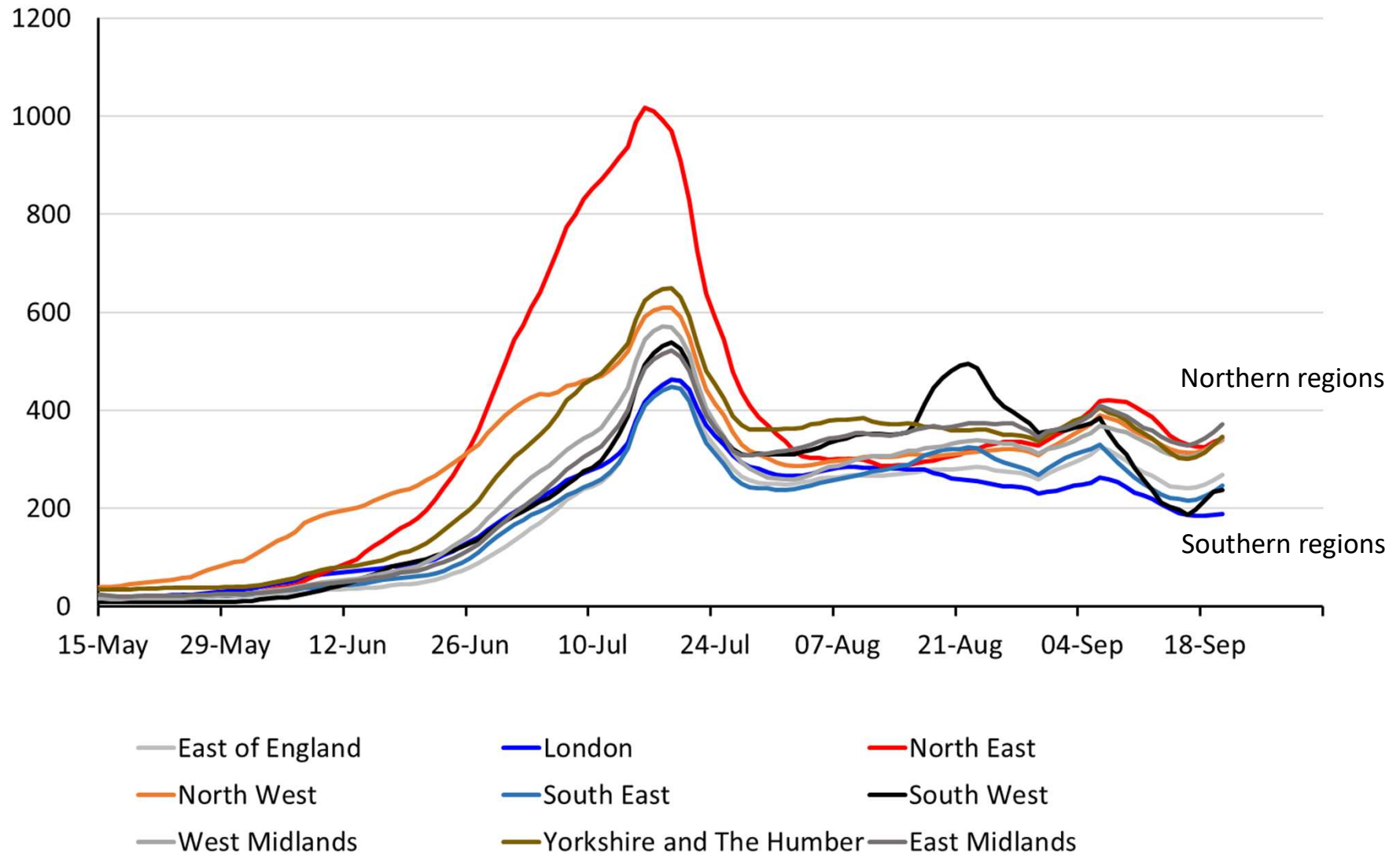


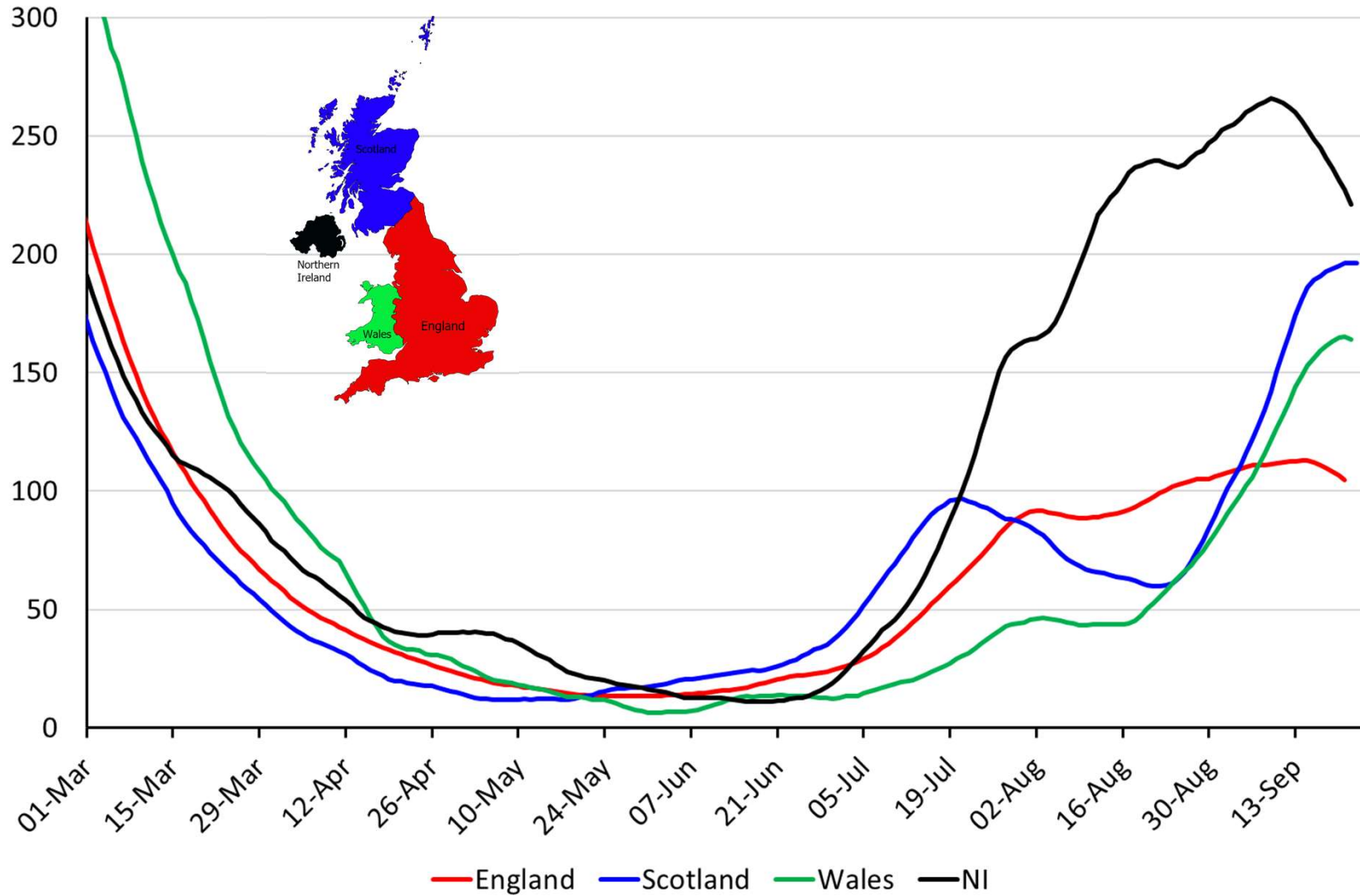
Chart from <https://www.travellingtabby.com/uk-coronavirus-tracker/local>

Cases per 100,000 people per week by English region by date of test to 20 September



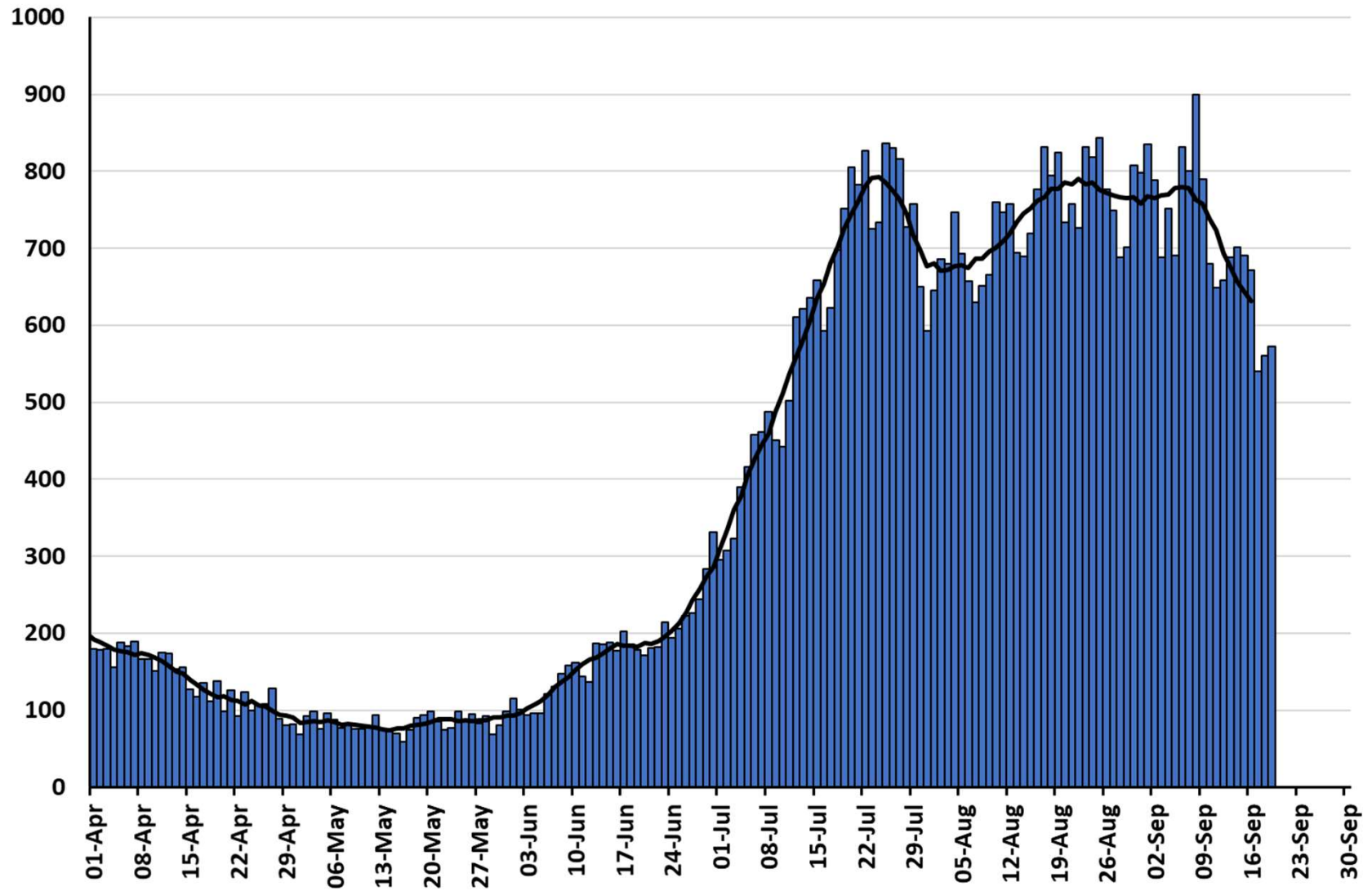
Hospitalisations and deaths

Number of people in hospital per million people – UK nations 7 day rolling average to 20 September



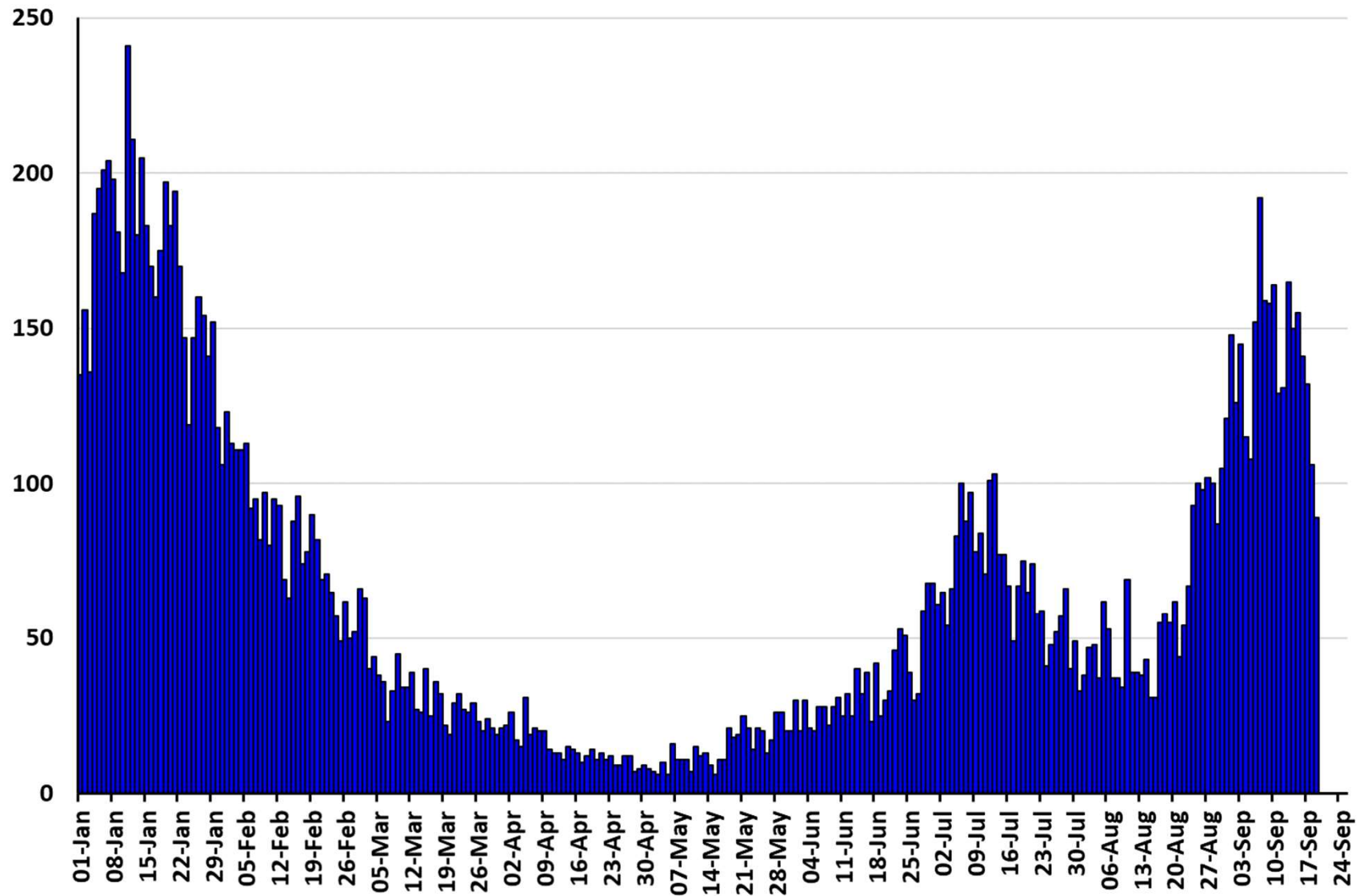
Data from <https://coronavirus.data.gov.uk>.

Number of hospital admissions with Covid in England per day to 19 September (recent few days missing)



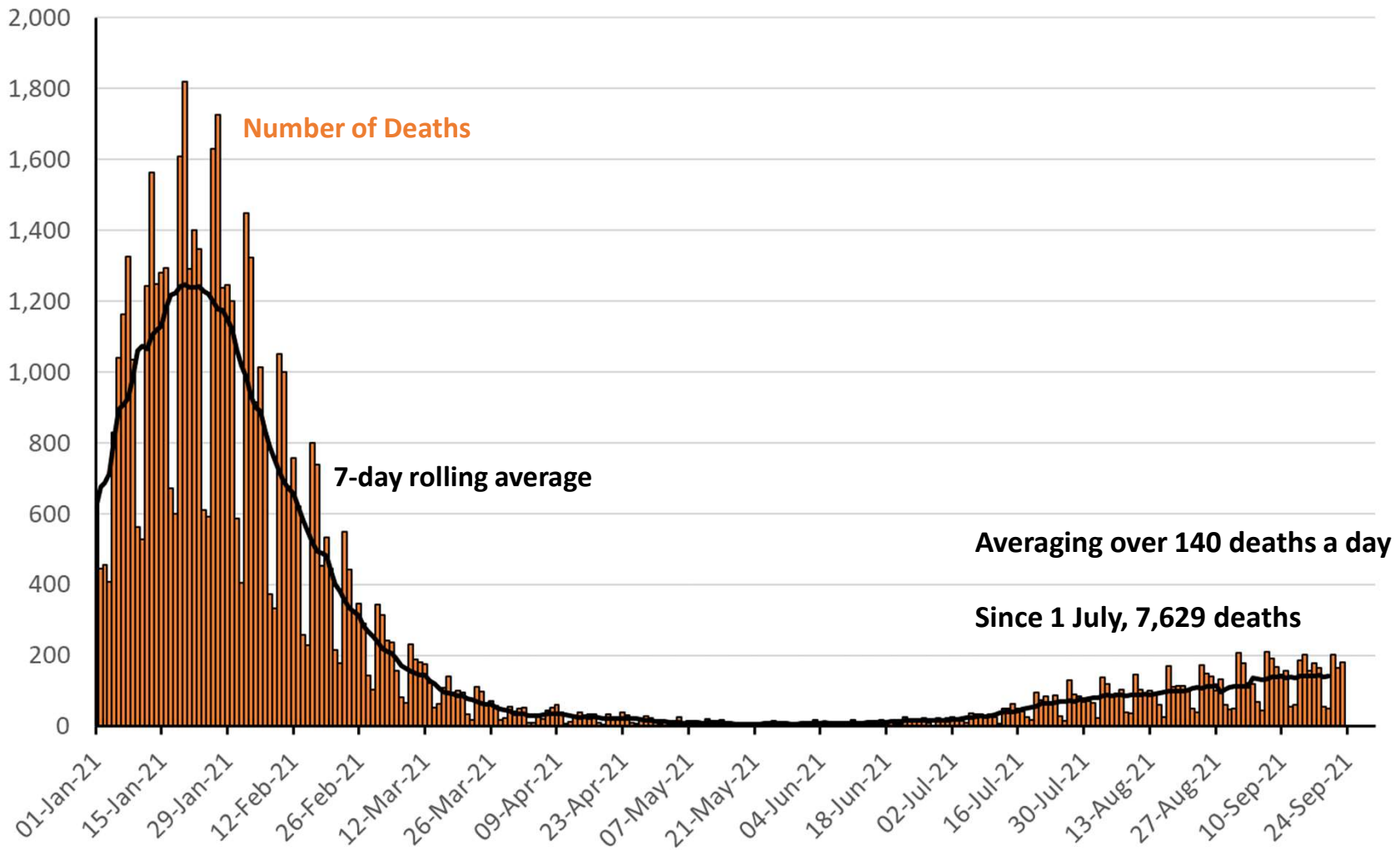
Data from <https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-hospital-activity/>

Number of hospital admissions with Covid in Scotland per day to 19 September



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

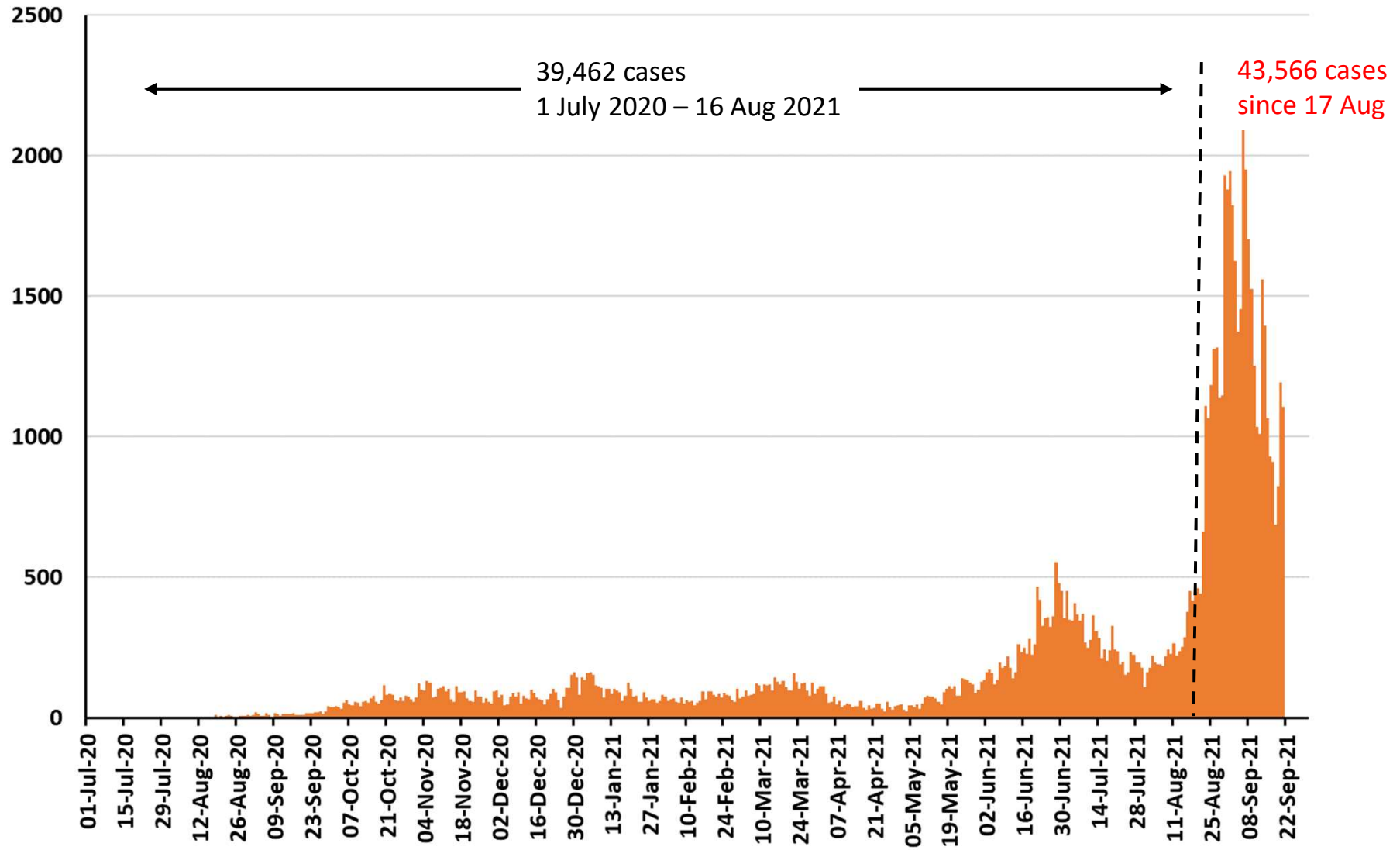
Number of deaths within 28 days of +ve COVID test reported per day across the UK to 23 September



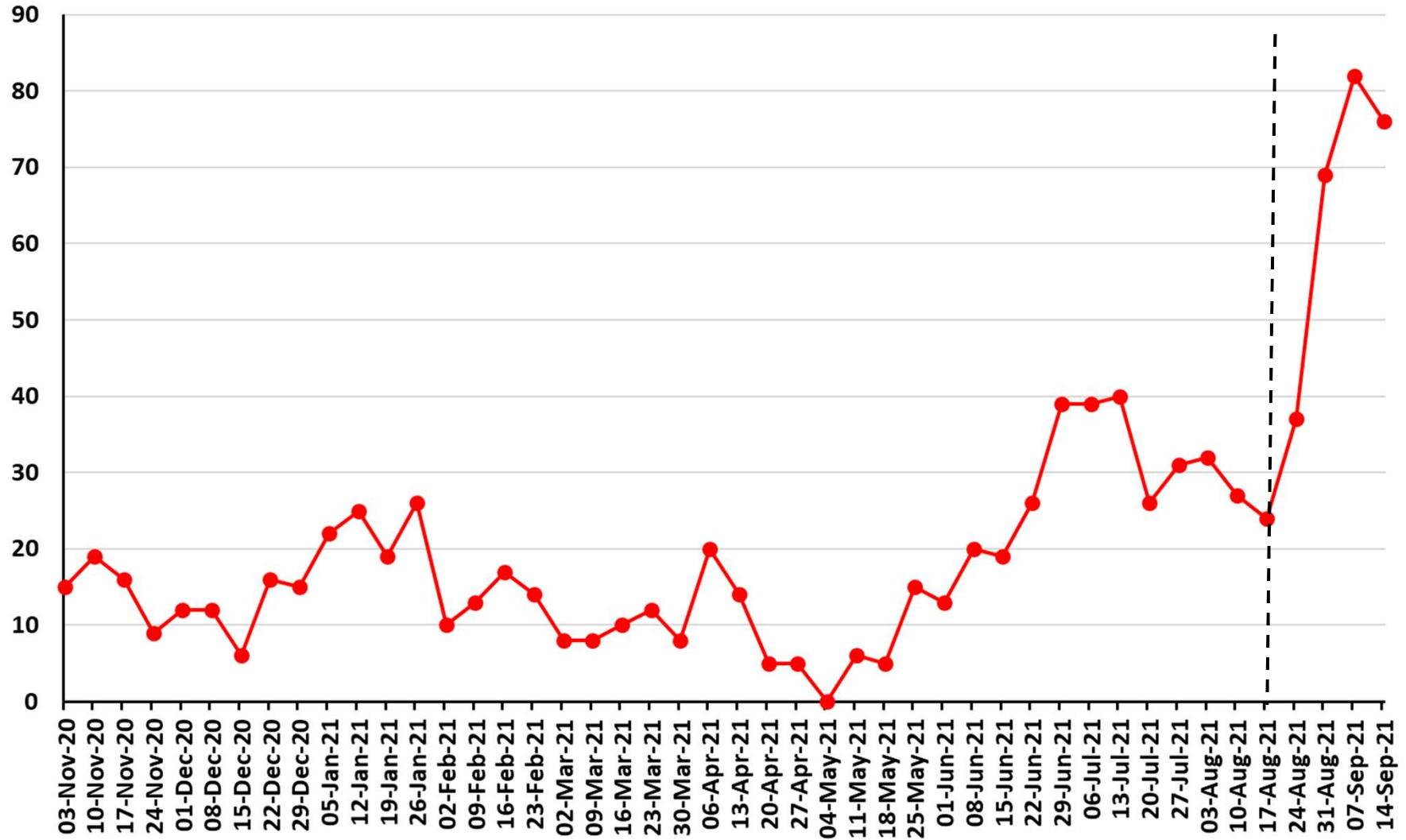
Data from <https://coronavirus.data.gov.uk/>

Children

Confirmed cases in Under 15s in Scotland per day: 1 July 2020 to 20 September 2021

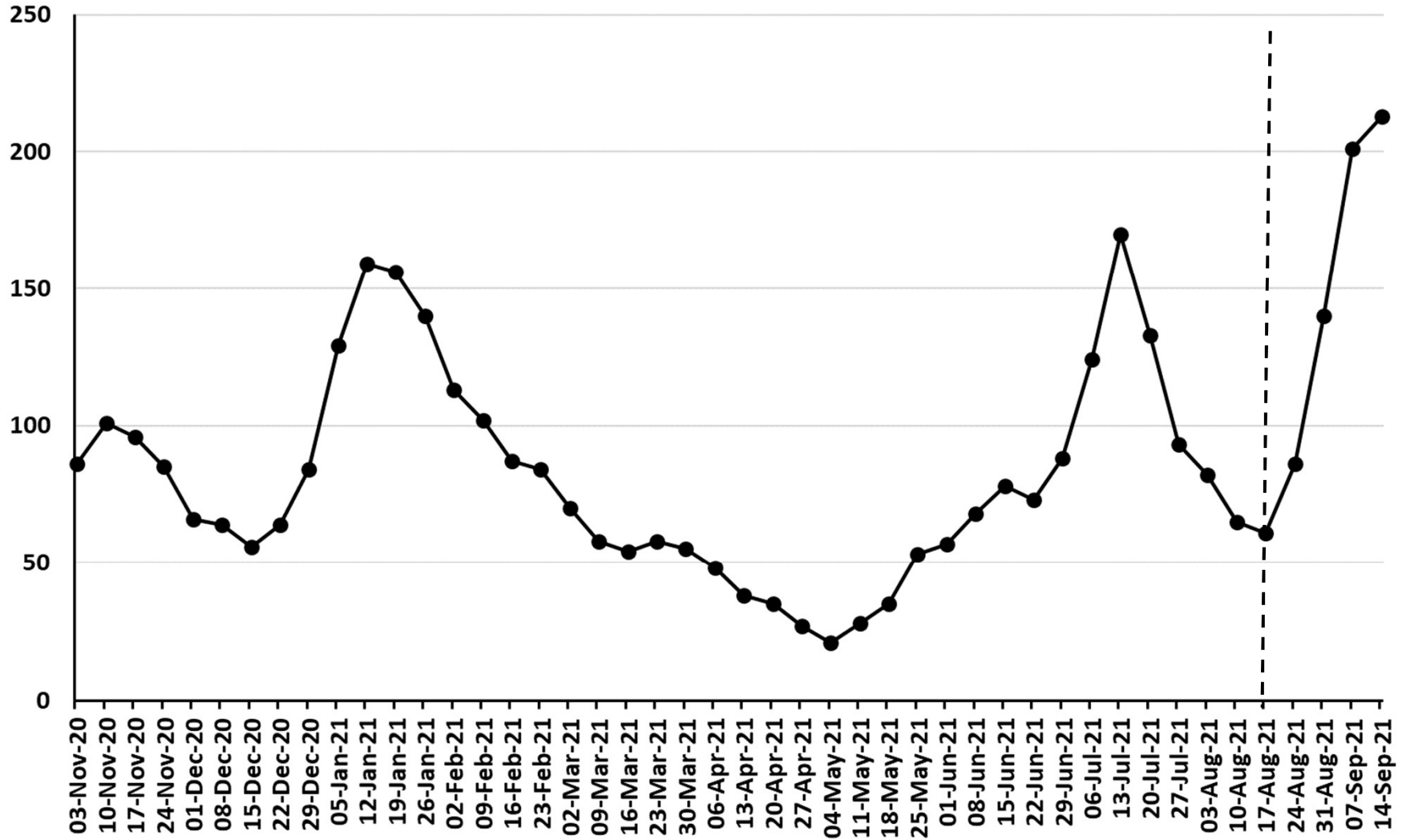


Total Covid hospital admissions in Under 18s in Scotland per week



Total Covid hospital admissions in 30-49 yr olds in Scotland per week

Over 74% of 30s and 86% of 40s are double vaccinated.



Case rates in Wales by age

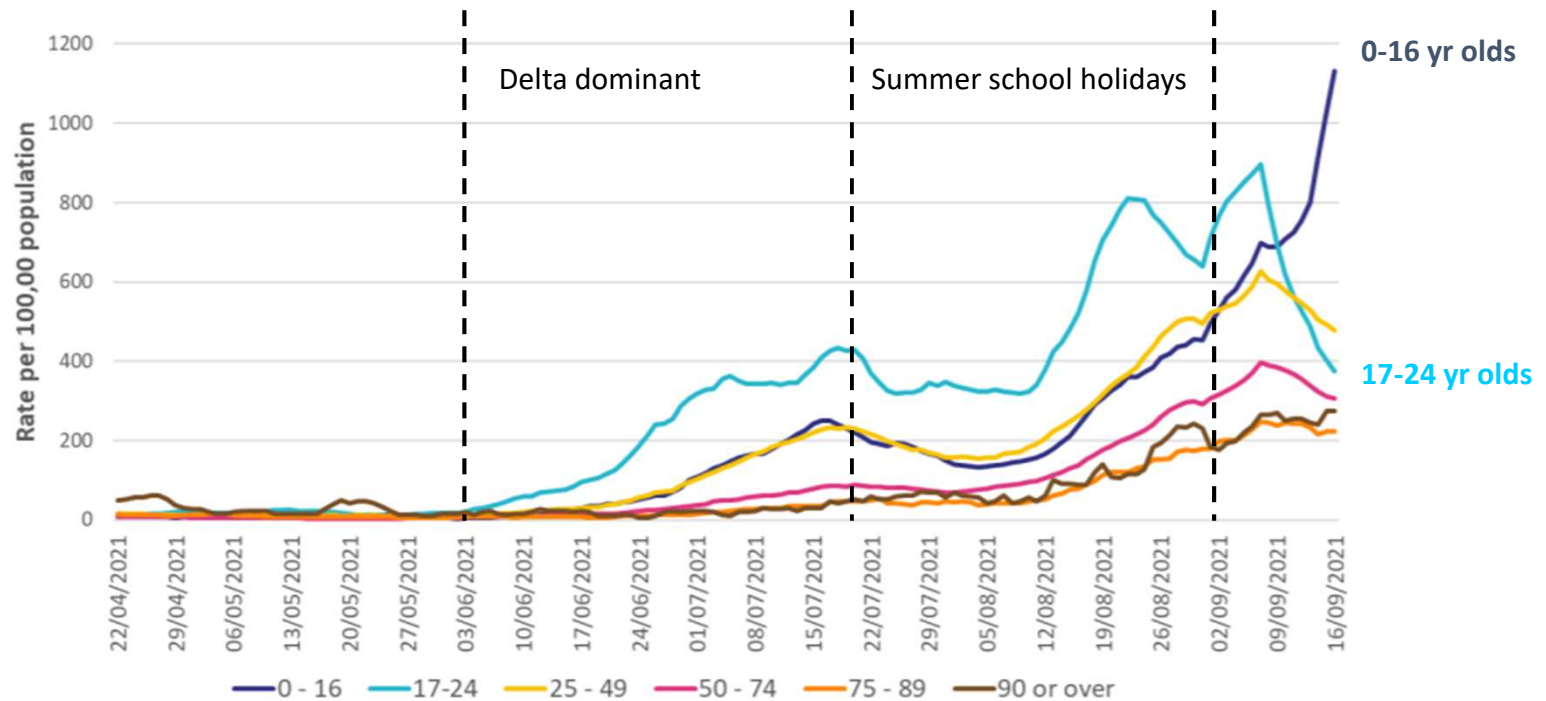


lechyd Cyhoeddus
Cymru
Public Health
Wales

Canolfan Arolygu
Clefydau Trosglwyddadwy
Communicable Disease
Surveillance Centre

Status: sensitive

Figure 8 - Confirmed cases of COVID-19 per 100,000 population in the previous 7 days, by sample date and age*



Graph from

[https://www2.nphs.wales.nhs.uk/CommunitySurveillanceDocs.nsf/61c1e930f9121fd080256f2a004937ed/8c1b98e1224d7ceb802586220036a168/\\$FILE/Latest%20PHW%20COVID%20Rapid%20Surveillance%20-%20LA%20Summary%20Trends%20Report%20-%20final.pdf](https://www2.nphs.wales.nhs.uk/CommunitySurveillanceDocs.nsf/61c1e930f9121fd080256f2a004937ed/8c1b98e1224d7ceb802586220036a168/$FILE/Latest%20PHW%20COVID%20Rapid%20Surveillance%20-%20LA%20Summary%20Trends%20Report%20-%20final.pdf)

Case rates in Northern Ireland by age to 19 September

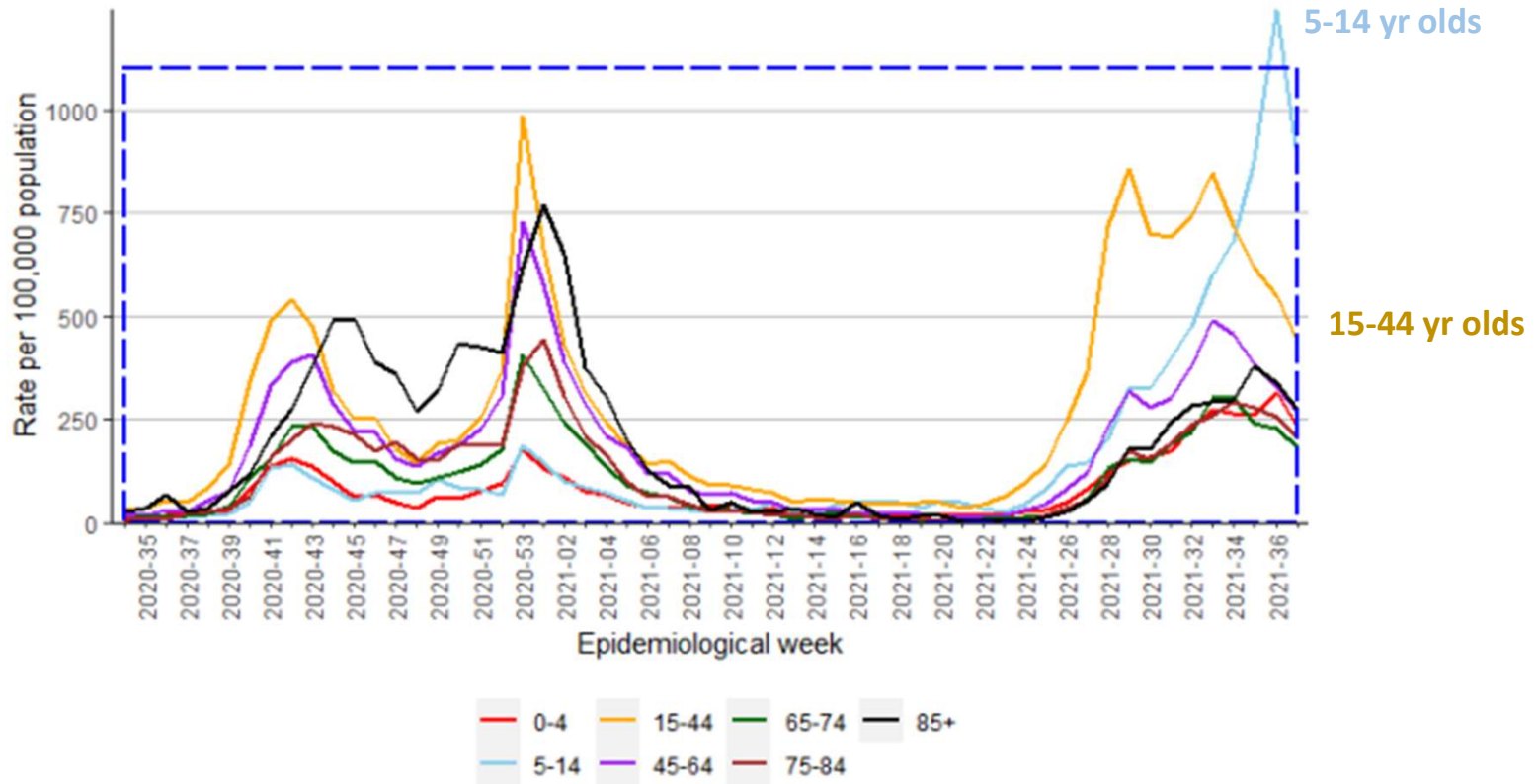


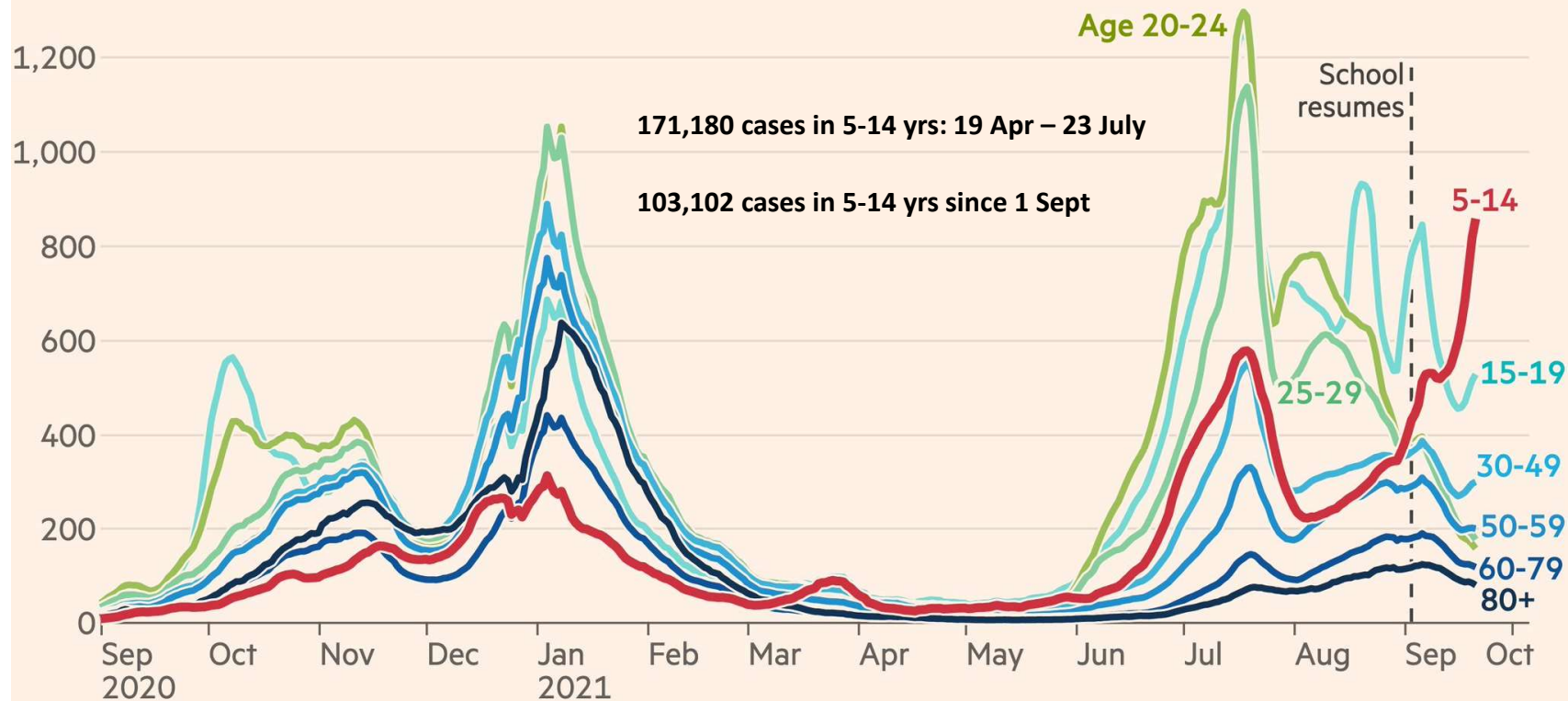
Figure 6. Weekly laboratory confirmed case rates per 100,000 population, by age group, for all testing data combined, 2020-21

Graph from <https://www.publichealth.hscni.net/sites/default/files/2021-09/Weekly%20Epidemiological%20Bulletin%20-%20Week%2037.pdf>

Case rates in England by age

Cases among children in England have surged to a record high, and there are signs this is feeding through to their parents

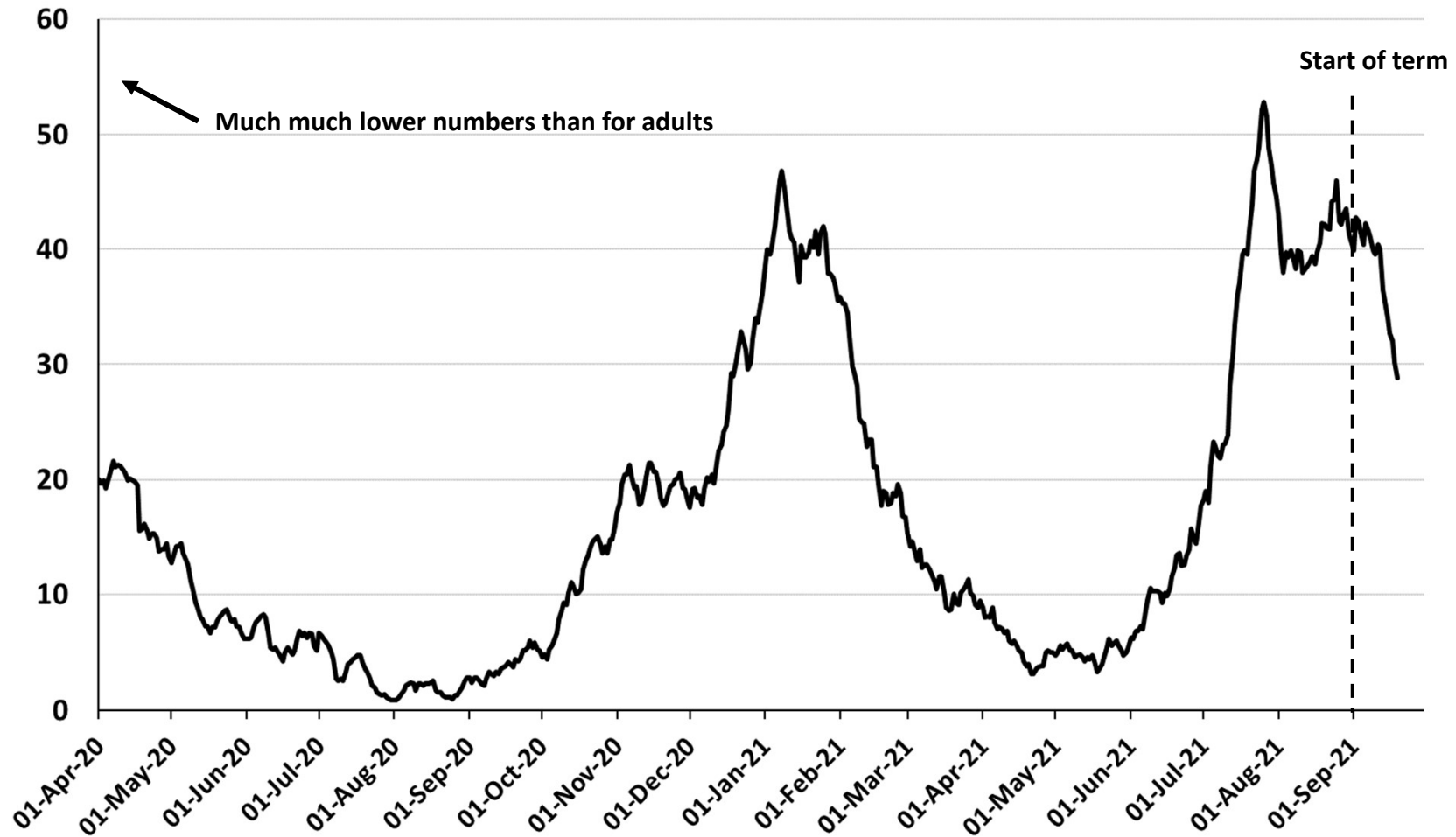
Weekly cases per 100k, by age group



Source: UK government Covid-19 dashboard
© FT

Hospital admissions in Under 18s in England

7 day rolling average of hospital admissions for 0-17 year olds with Covid in England from 1 April 2020 to 19 September 2021



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

Long Covid in children

Different studies have different estimates:

- Different symptoms lists
- Different durations
- Different case ascertainment
- Different population representativeness
- Different definition of “relapsing and remitting”
- Some have a control group and some don’t
- Mostly rely on parental reporting

4 relatively large studies in UK, 4 estimates for persisting symptoms for at least 12 weeks in children

- Molteni et al. (Zoe symptom tracker app): 2%
- Miller et al. (VirusWatch): 5%
- ONS study. (self reported: 6%, 12 symptoms: 1.2%)
- CLoCK Study (largest study by far): ~14%

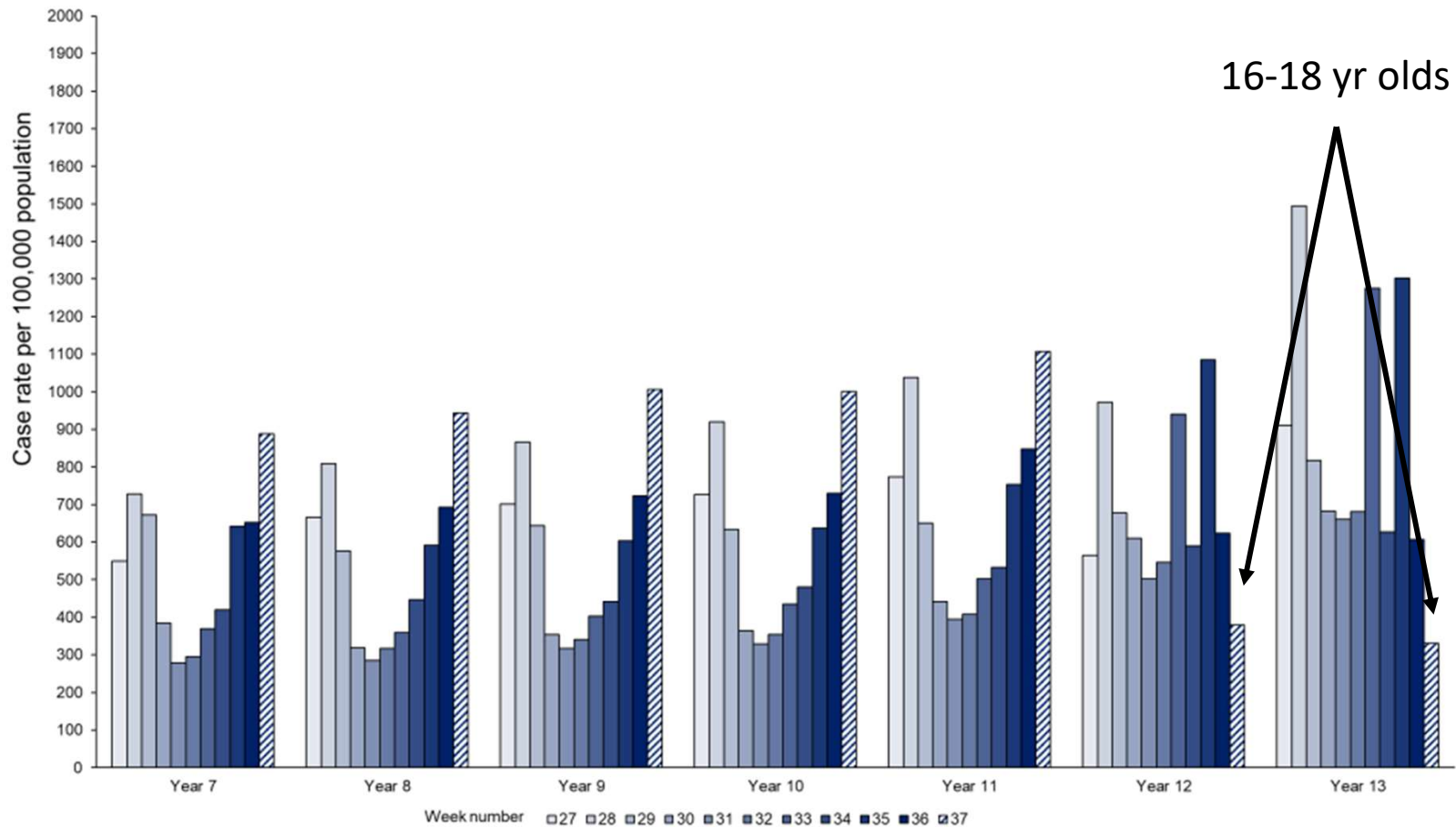
So for every 100,000 children infected, anywhere from 2,000 to 14,000 might end up with Long Covid.

Plus even short term illness that affects concentration / memory could have negative effect on education – e.g CLoCK: at 12 weeks, 6% of children testing positive reported confusion or drowsiness compared to 3% of children with negative tests.

Vaccination impact in England?



Weekly incidence of COVID-19 cases per 100,000 population in educational age groups presented by secondary school year groups (Year 7 to Year 13), weeks 27 to 37 (w/e 11 July to w/e 19 September)

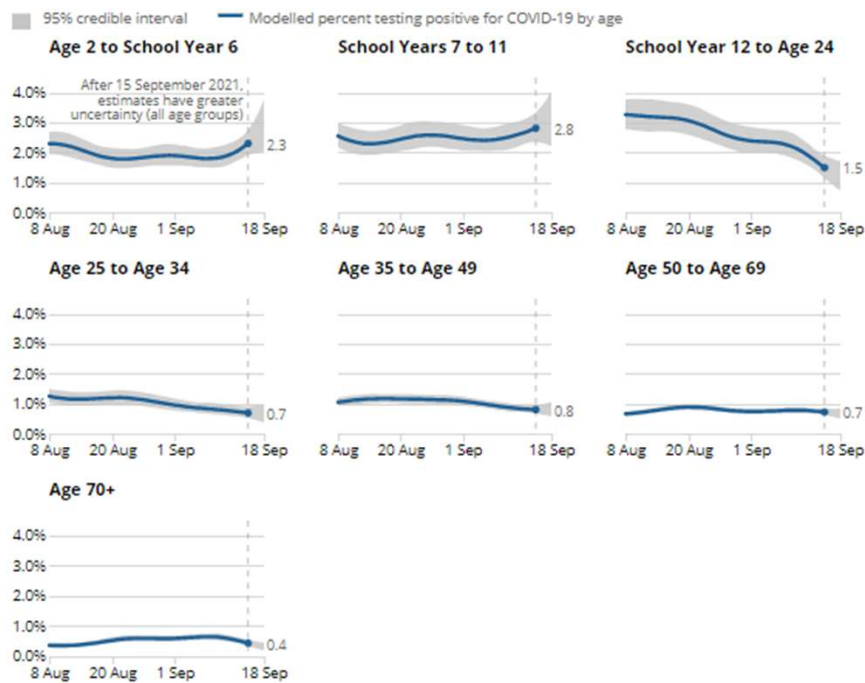


Graph from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1019974/Weekly_COVID-19_and_Influenza_Surveillance_Graphs_w38.pdf

ONS infection survey by age

Figure 4: The percentage of people testing positive increased for those aged 2 years to school Year 6 and school Year 7 to school Year 11 in the week ending 18 September 2021

Estimated daily percentage of the population testing positive for coronavirus (COVID-19) on nose and throat swabs by age group, England, 8 August 2021 to 18 September 2021



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

[Embed code](#)

Graph from

<https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionsurveypilot/24september2021#age-analysis-of-the-number-of-people-who-had-covid-19>

International picture

International perspective: Case rates by age group in Republic of Ireland 3 July to 18 September 2021

COVID-19 weekly incidence* rate across age groups, wave 4 (week 26 - week 37 2021)

*Age-specific population data were taken from Census 2016

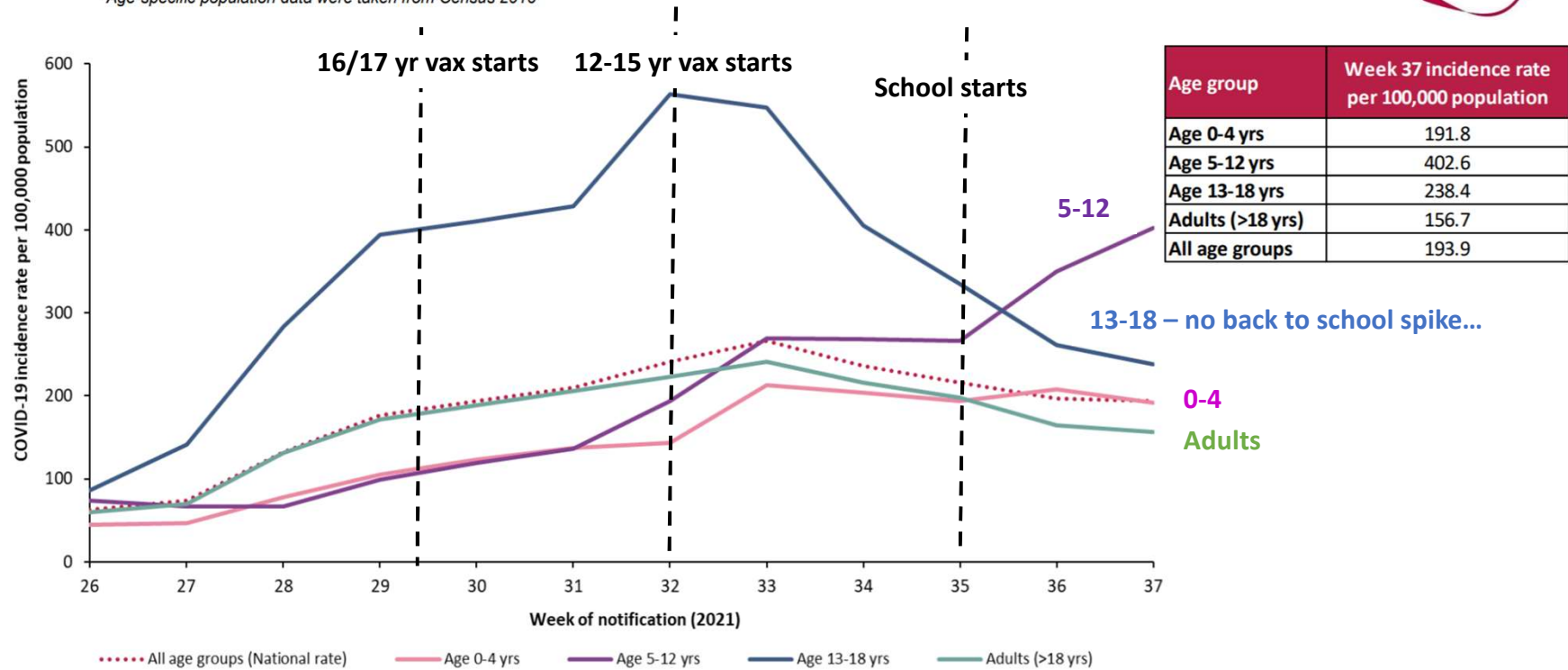


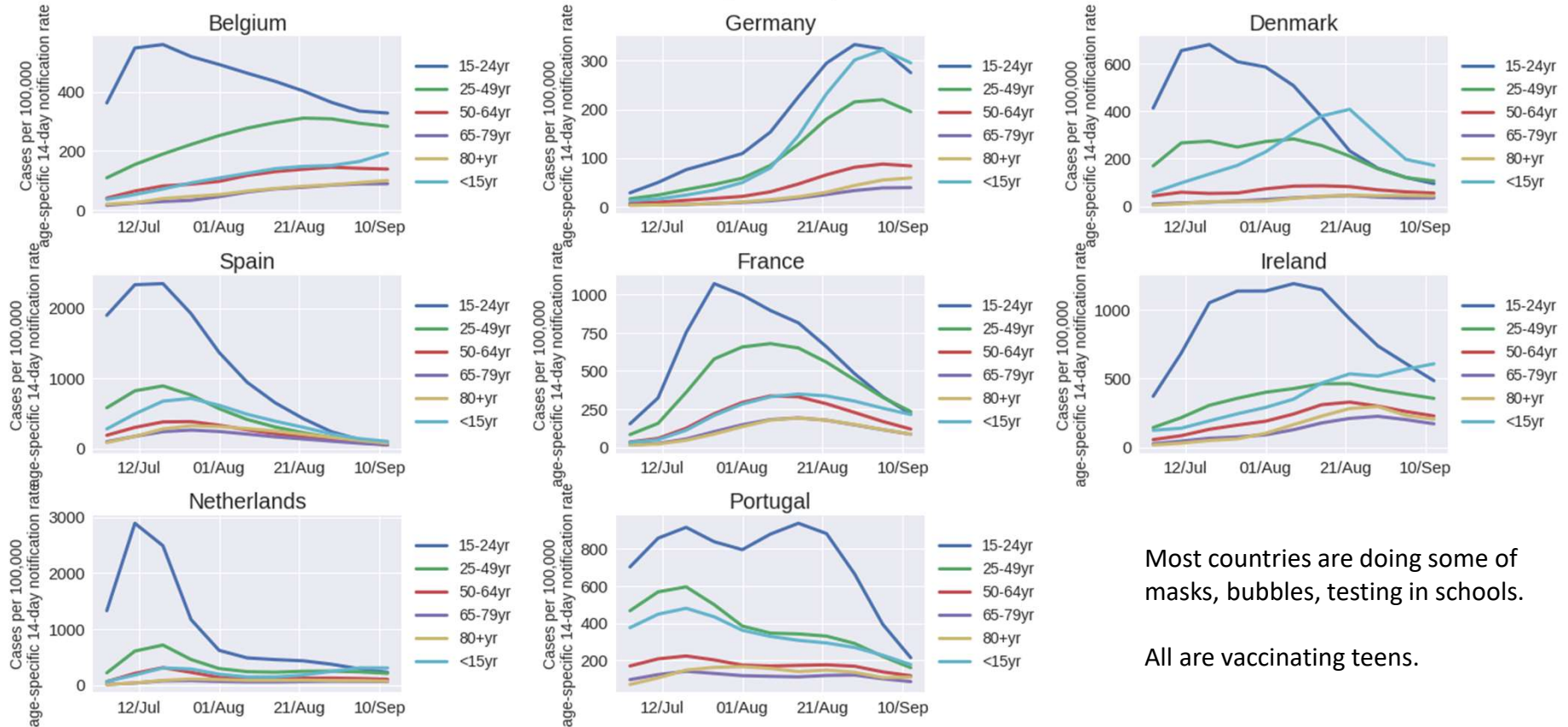
Figure 3c: Weekly age-specific incidence rates of confirmed COVID-19 cases per 100,000 population by age group in Ireland between week 26 and week 37, 2021

Graph from https://www.hpsc.ie/a-z/respiratory/coronavirus/novelcoronavirus/surveillance/epidemiologyofcovid-19irelandcasesaged0-18years/COVID-19%20Weekly%20Report_Cases%20aged%200-18yrs_Week%2037_%20Slideset_HPSC_20210920_Web.pptx.pdf

International perspective: age case rates in Europe

Under 15s are light blue.

Covid Cases by Age: 14-day notification rate
1st July to 19th September



Most countries are doing some of masks, bubbles, testing in schools.

All are vaccinating teens.

[ecdc.europa.eu/en/publications-data]

Thank you to Luke Shepherd for the charts

Summary

- Vaccinations are continuing – 16 and 17 year olds are taking it up but significant inequalities remain. Next big cohorts are vaccinations in 12-15 year olds and boosters.
- Cases high in all nations, particularly Scotland and Wales. Increasing in Wales and England, decreasing in Scotland and flat in N. Ireland
- Hospitalisations falling in England & NI and recent rises flattening in Scotland and Wales. Covid continues to be a considerable burden on a tired and overloaded NHS.
- We are out of step with international peers when it comes to vaccinating children and mitigations in schools. Wales and England now seeing large surges in cases in school age children.
- Some signs that infections in school age children might be filtering through their parents' generation.
- From other countries, it seems likely that a vaccination campaign over the summer could have prevented the current surge in secondary school age children.
- Quick update on variants – new strains are still emerging but nothing can outcompete Delta yet. Delta itself is continuing to mutate (has over 15 different sub strains) but none of them seem markedly worse – yet.