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Latest numbers on COVID-19 in the UK – 8 April 2022

1. Vaccination
2. Prevalence of Covid
3. Hospitals
4. Deaths
5. Children
6. Long covid & longer term impacts of Covid
7. New variants

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

Vaccination

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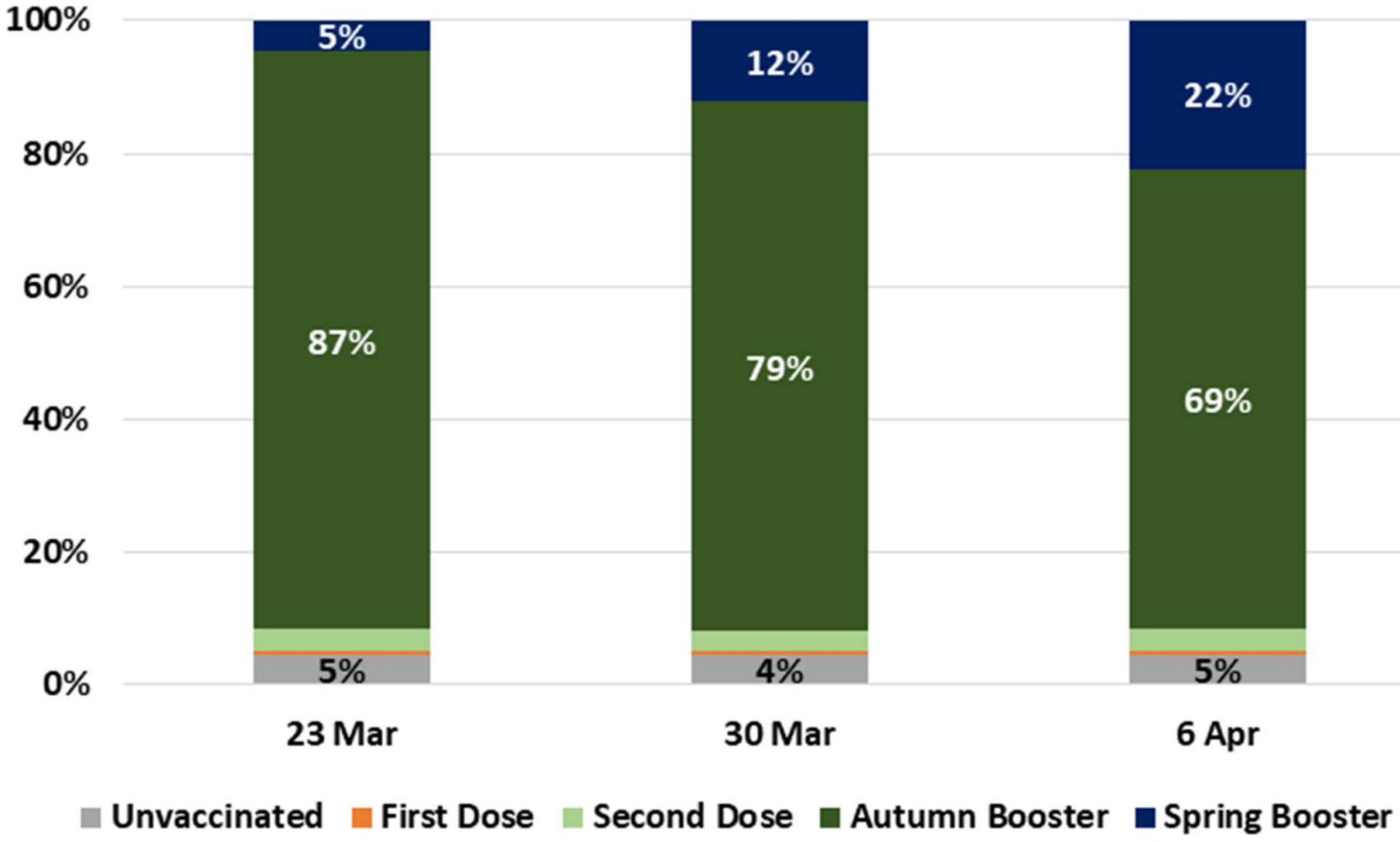
Percent of Over 75 Year Olds in England that are Unvaccinated, First Dose, Second Dose, Autumn Booster and Fully Vaccinated with Spring Booster: Weekly Trend

(Source: Covid Daily Update, NHS Vaccination Daily Report, and Mid-2020 ONS Population Estimates)



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

Prevalence of Covid

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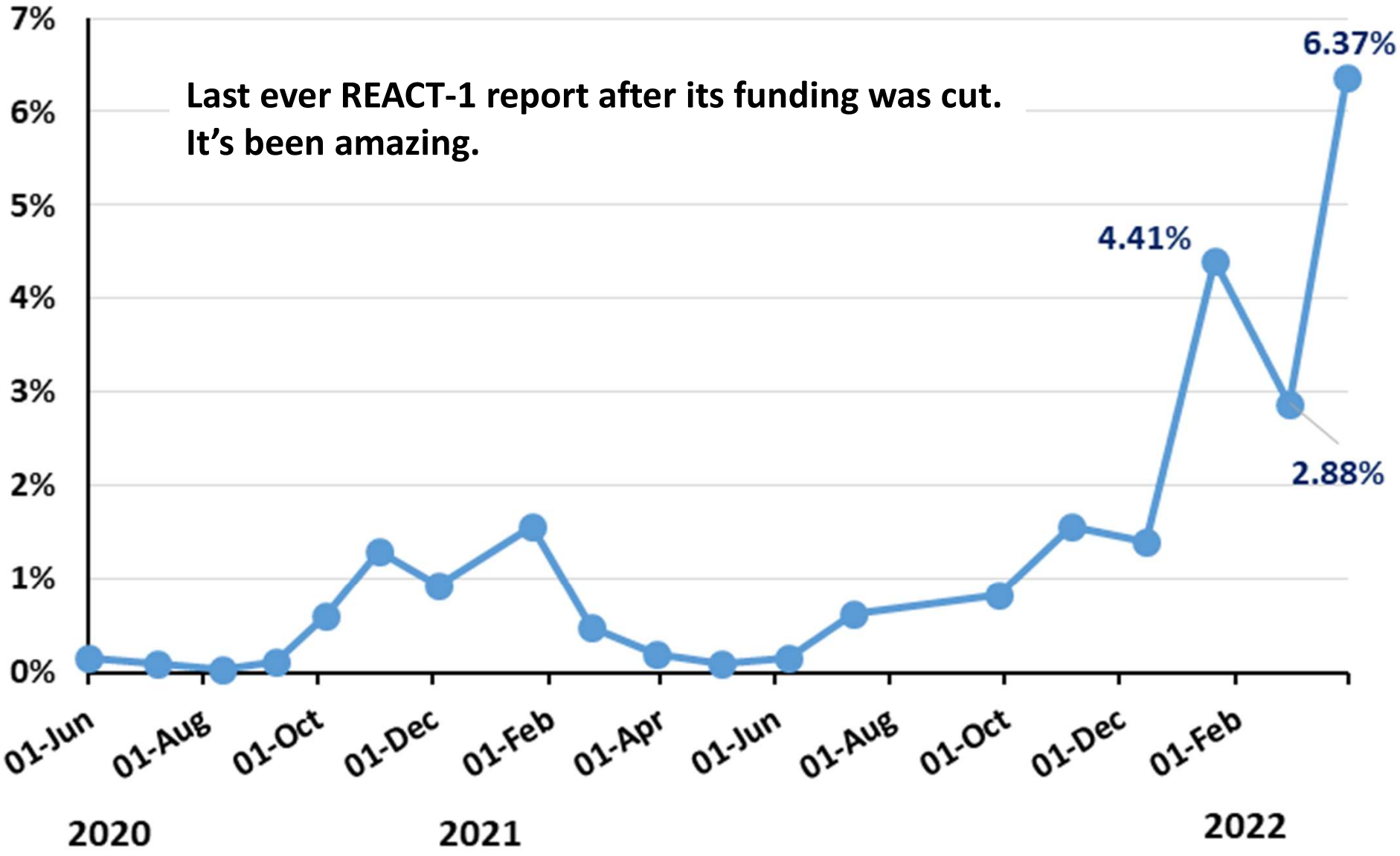
COVID-19 Prevalence for England
1 Jun 2020 to 31 Mar 2022

(Source: REACT 1 Study Reports – between 100,000-170,000 people tested each round)



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

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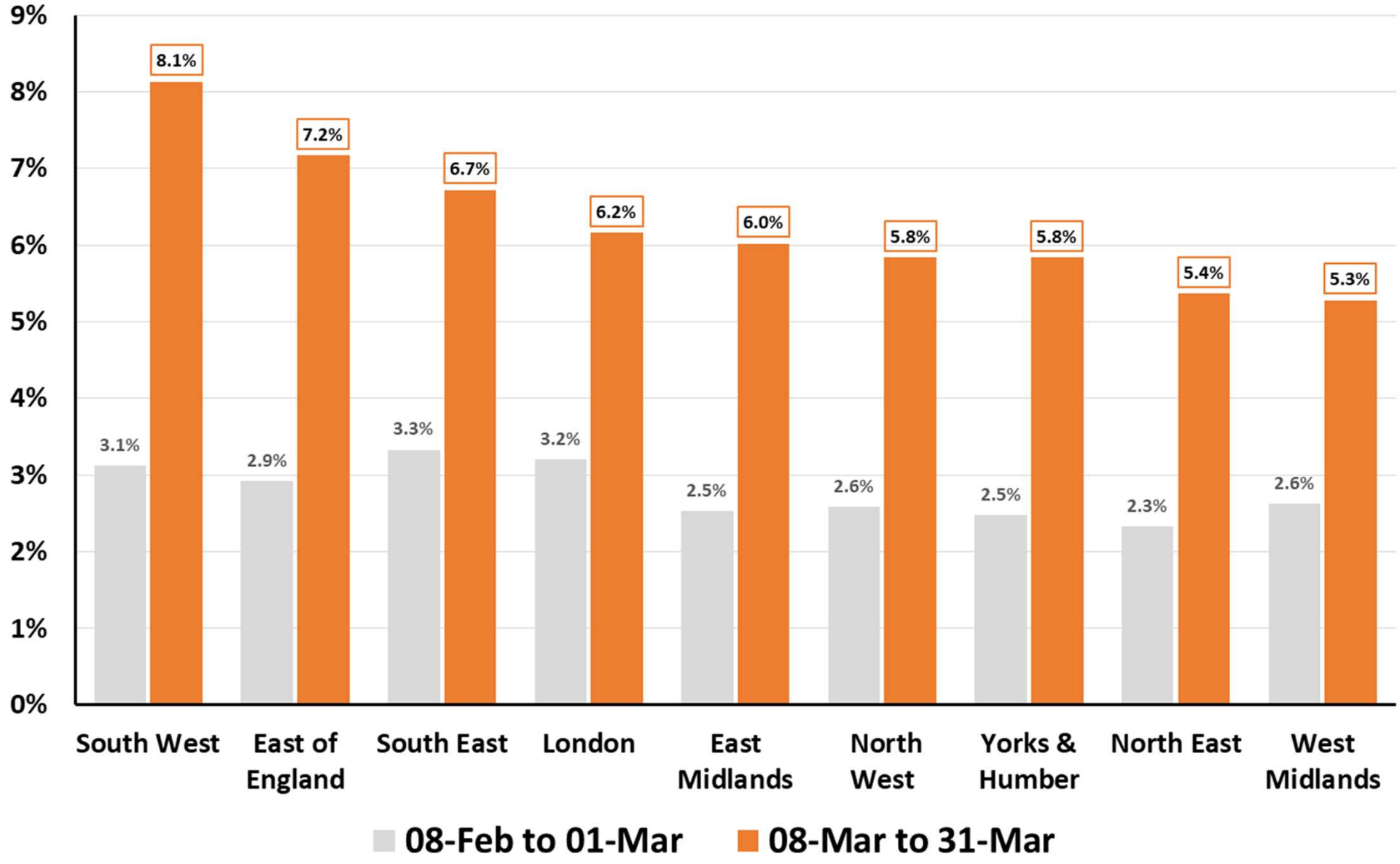
COVID-19 Prevalence by Region for England
Comparison of 8-31 Mar 2022 with Prior Round

(Source: REACT 1 Study Reports)



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

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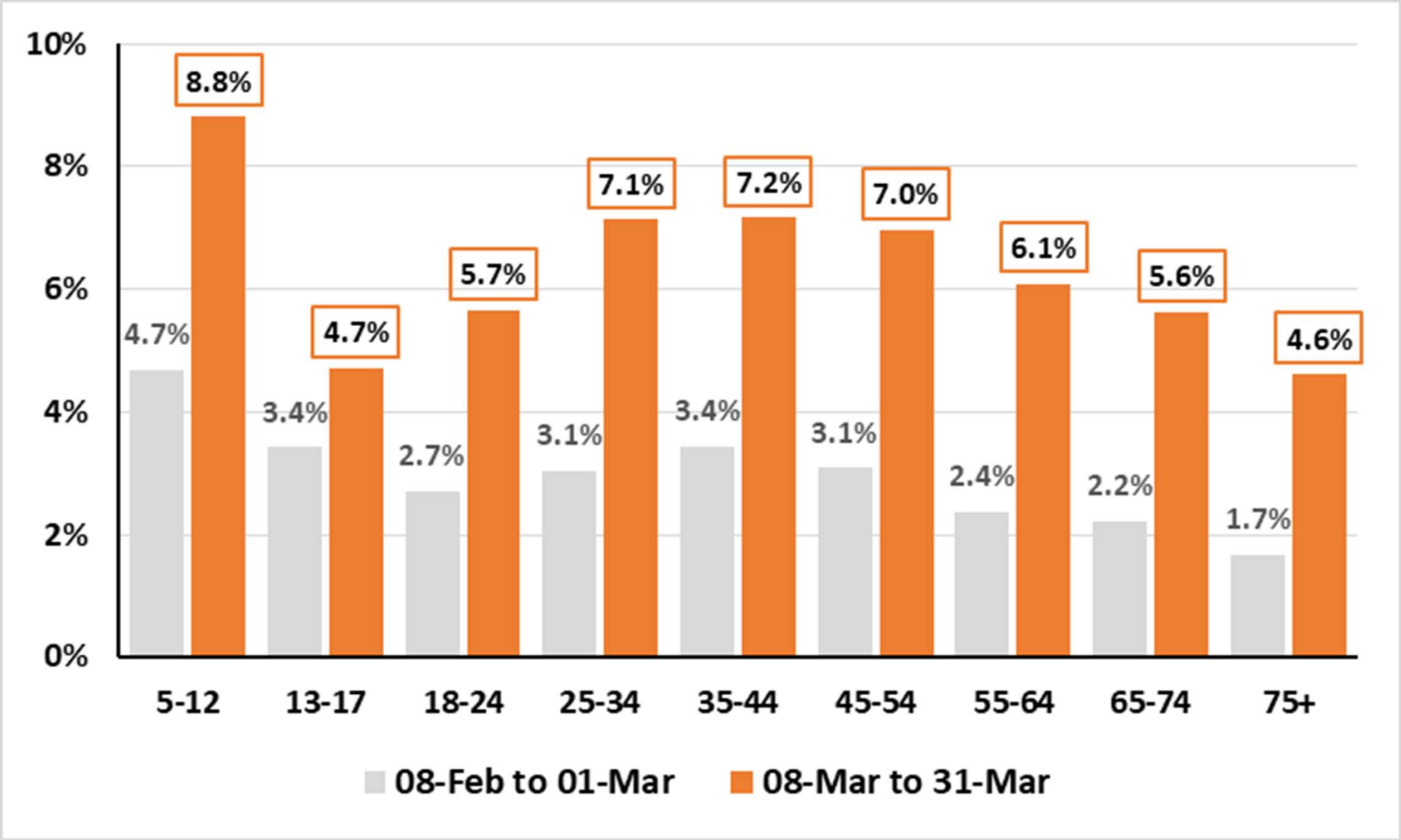
COVID-19 Prevalence by Age for England
Comparison of 8-31 Mar 2022 with Prior Round

(Source: REACT 1 Study Reports)



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

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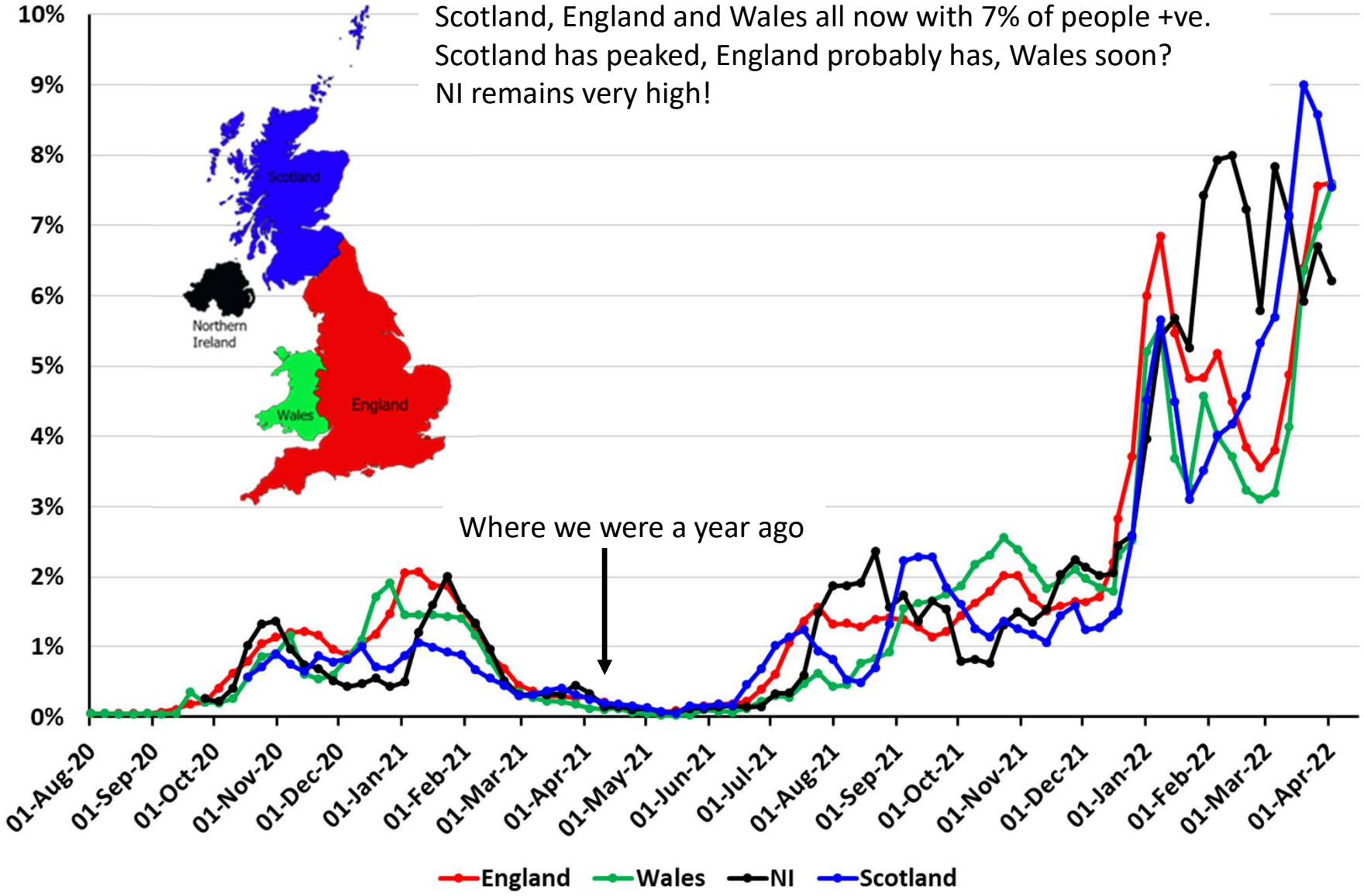
Percent of population testing positive each week by nation: 1 Aug 2020 to 3 April 2022 ONS Infection Survey (random testing)



Data from https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/datasets/coronaviruscovid19infectionsurveydata .

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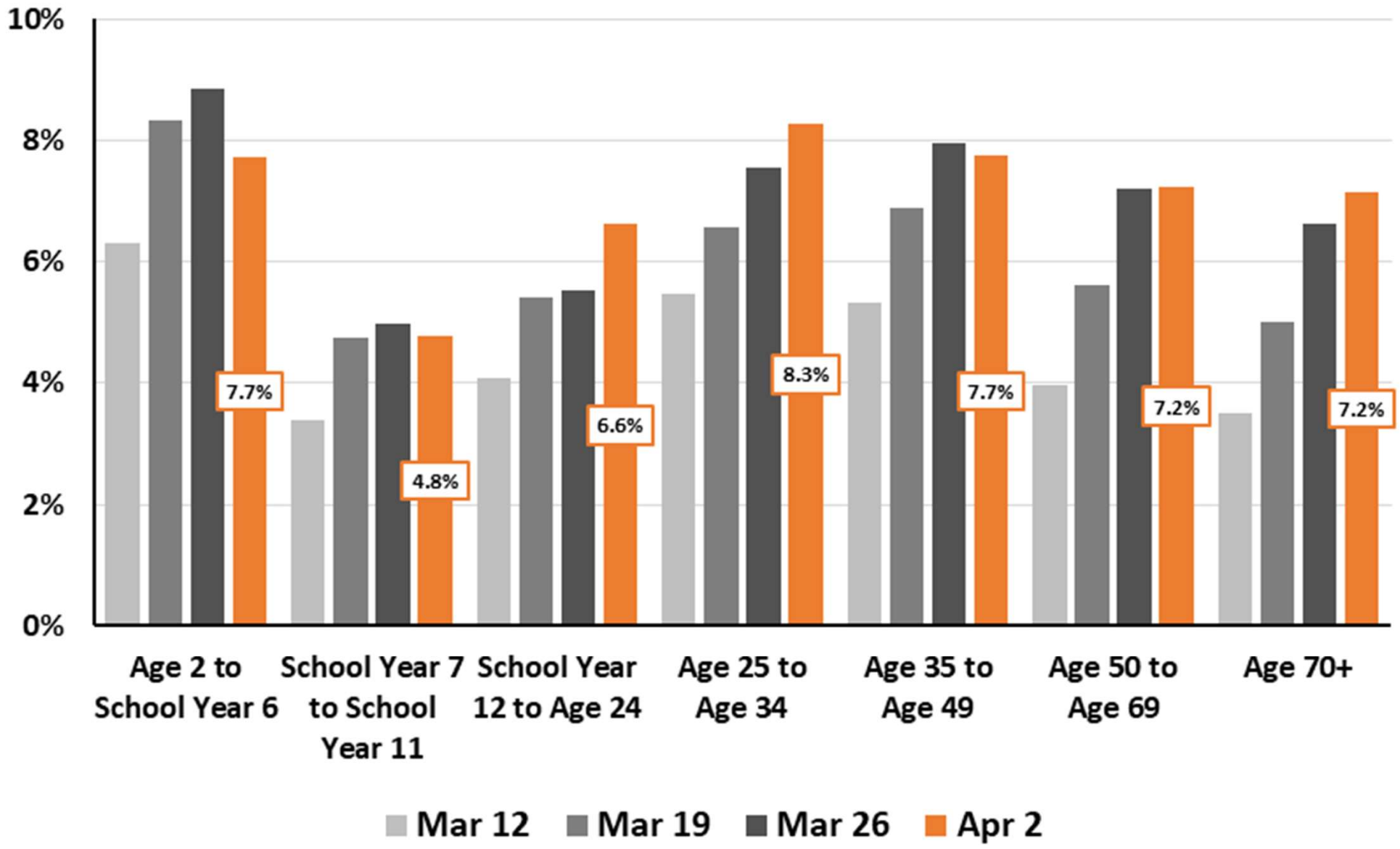
Percent Testing Positive by Age for England: 2 Apr vs Prior Weeks

(Source: ONS Coronavirus (COVID-19) Infection Survey results)



Hospitals

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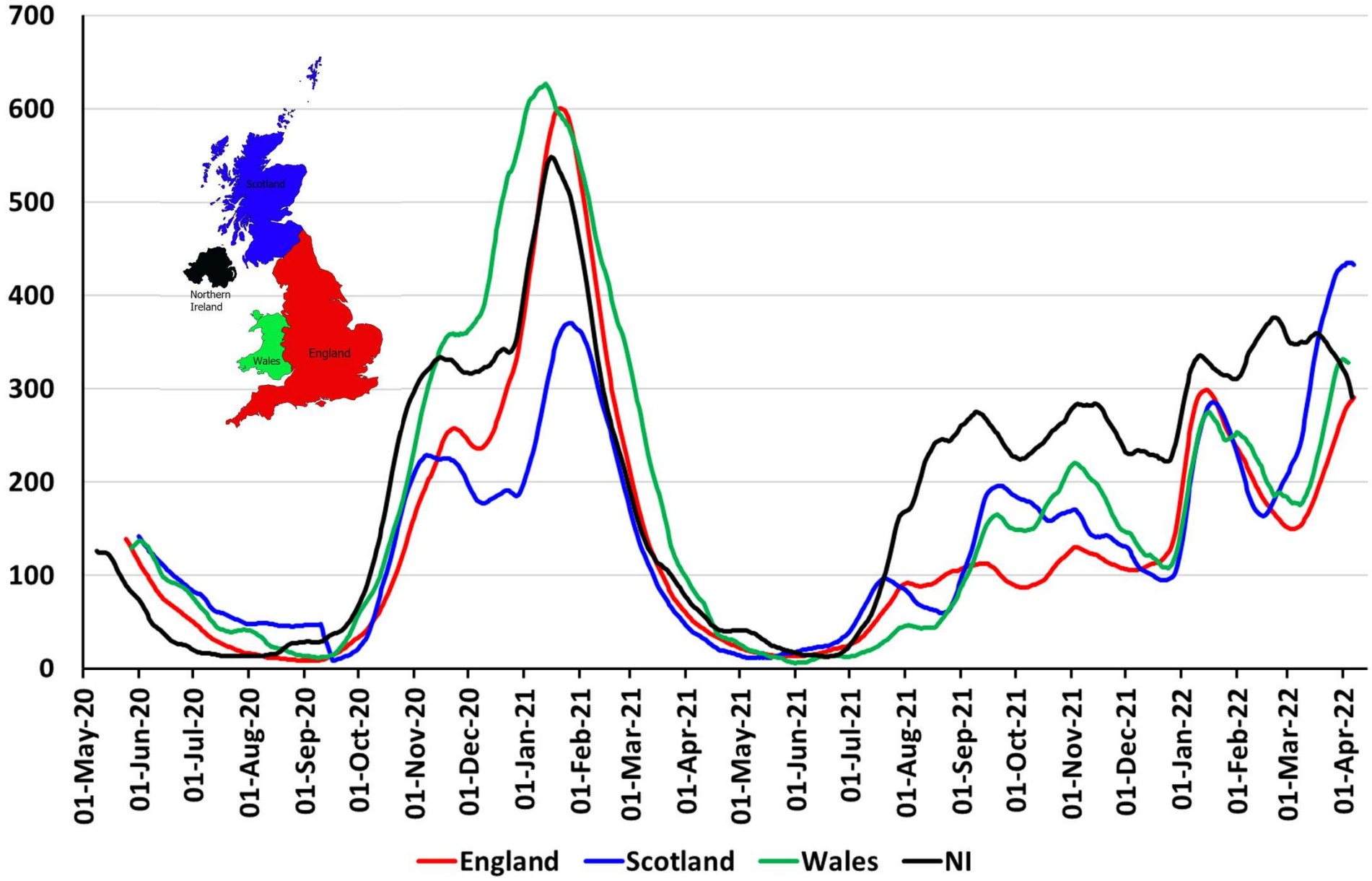
Number of people in hospital with Covid per million people – UK nations
7 day rolling average to 7 Apr 2022



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

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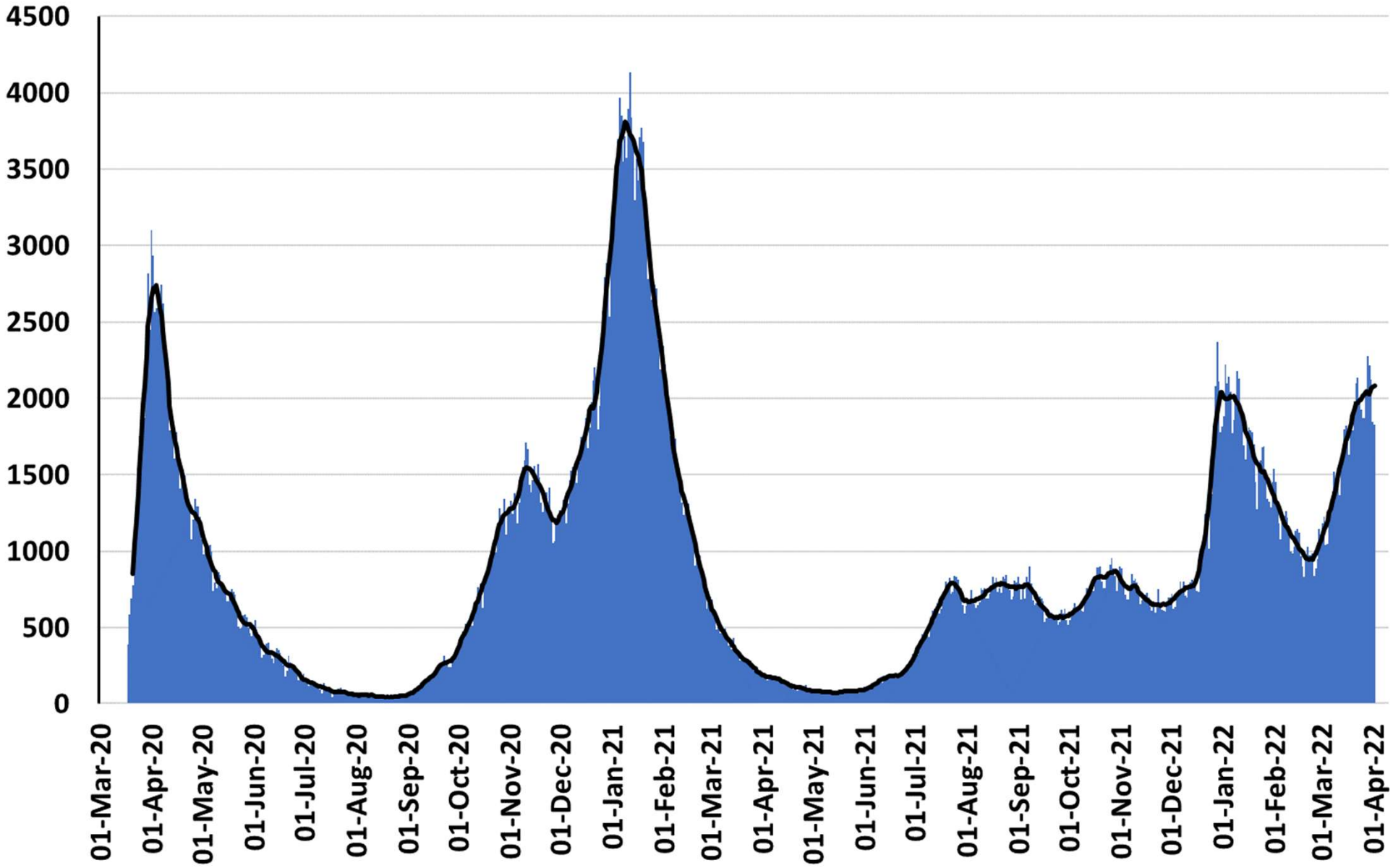
Number of daily hospital admissions with Covid in England to 5 Apr 2022



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

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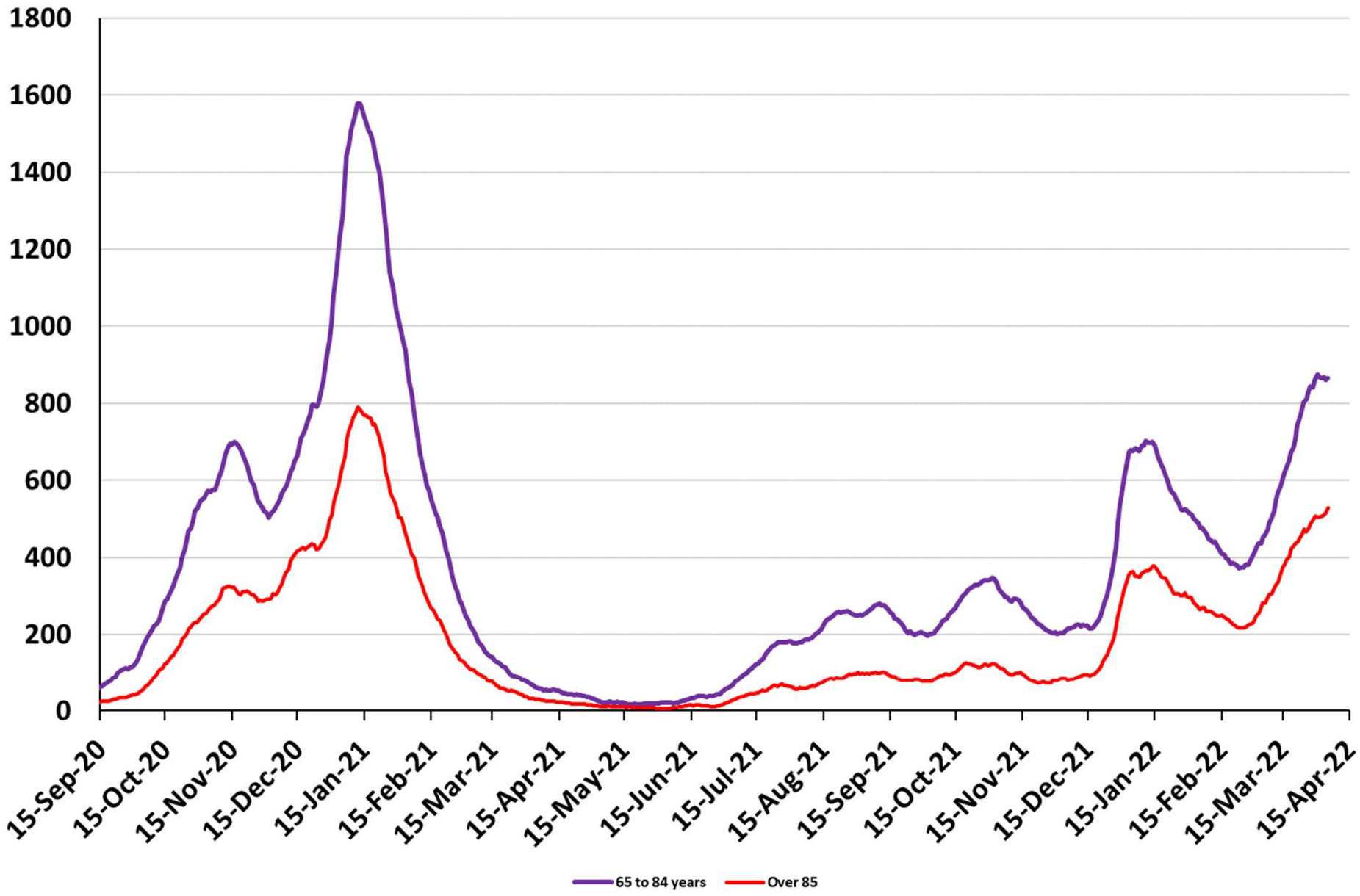
Hospital admissions per day in England for 65-84 year olds and over 85s since September 2020



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

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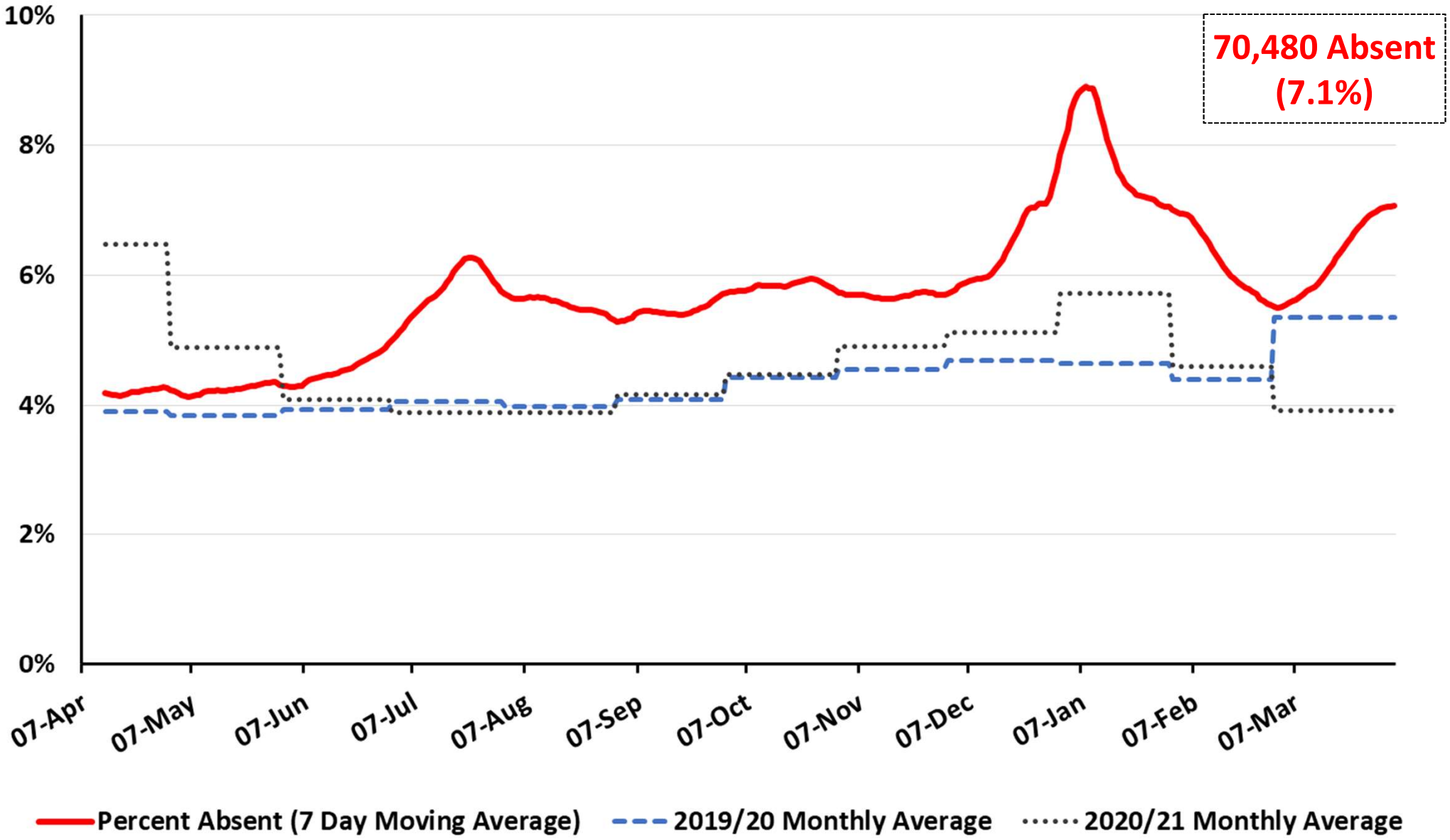
Percent of Staff Absent from NHS Acute Hospital Trusts in England 7 Apr 2021– 3 Apr 2022 Compared to prior Years

(Source: NHS England Urgent and Emergency Care Daily Situation Reports 2021-22)



England

https://www.england.nhs.uk/statistics/statistical-work-areas/uec-sitrep/urgent-and-emergency-care-daily-situation-reports-2021-22/

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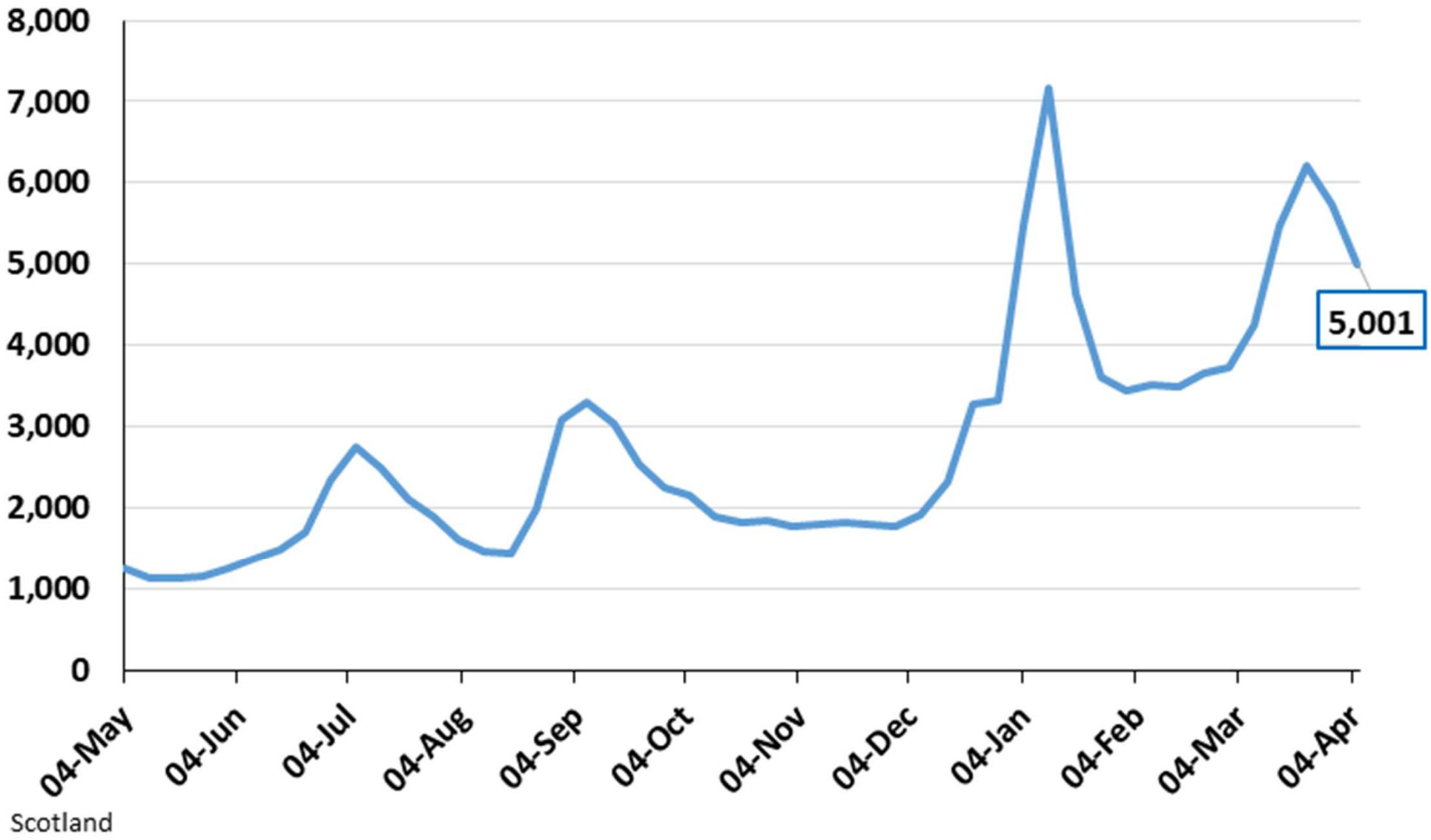
Number of Staff Absent from NHS Hospitals in Scotland
4 May 2021– 5 Apr 2022

(Source: Scotland Coronavirus (COVID-19): trends in daily data)



https://www.gov.scot/publications/coronavirus-covid-19-trends-in-daily-data/

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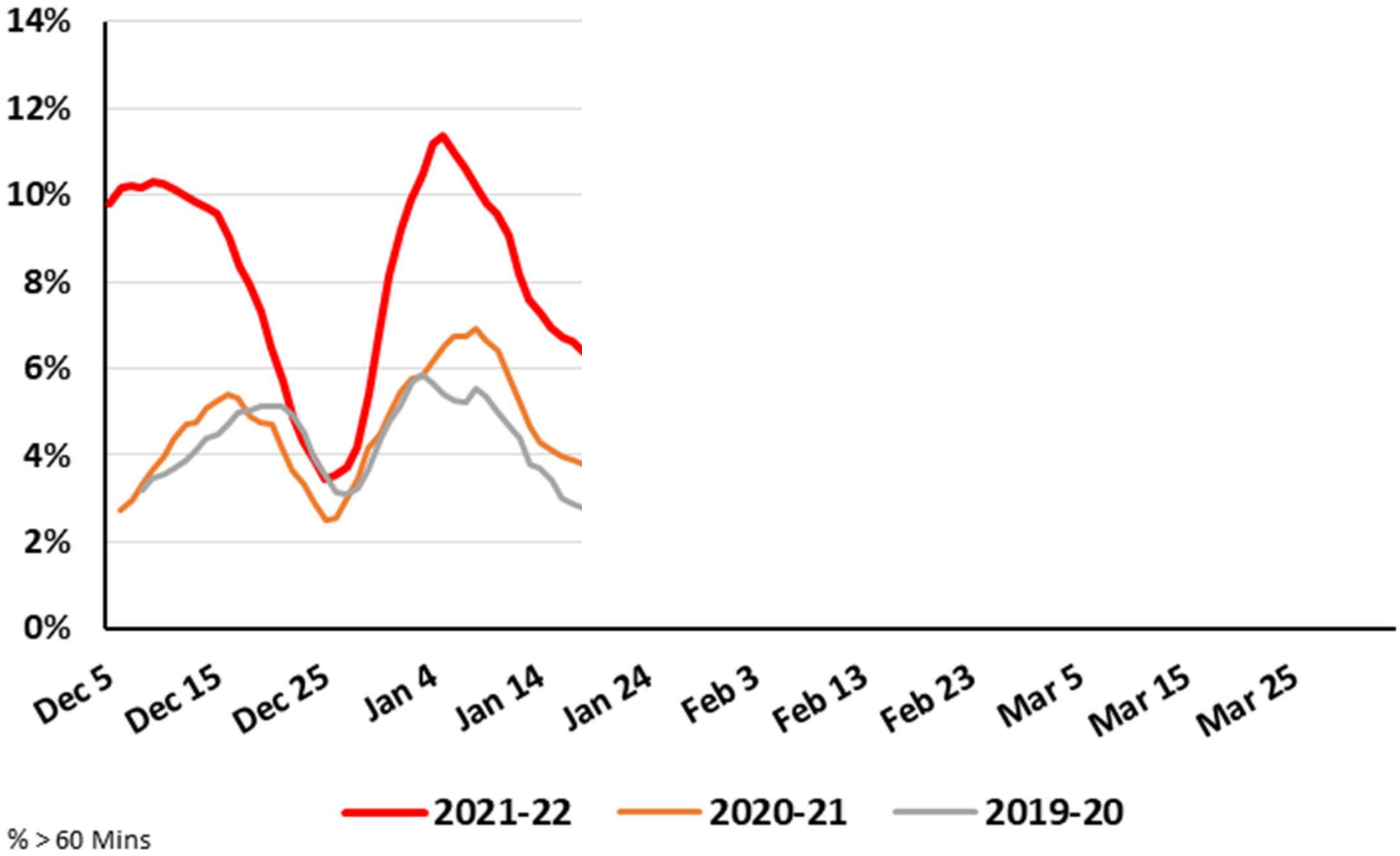
Percent of Ambulances Taking More Than 60 Minutes to Handover Patients in England: 2021-22 versus Prior Years

(Source: NHS England Winter Situation Reports)



https://www.england.nhs.uk/statistics/statistical-work-areas/uec-sitrep/urgent-and-emergency-care-daily-situation-reports-2021-22/

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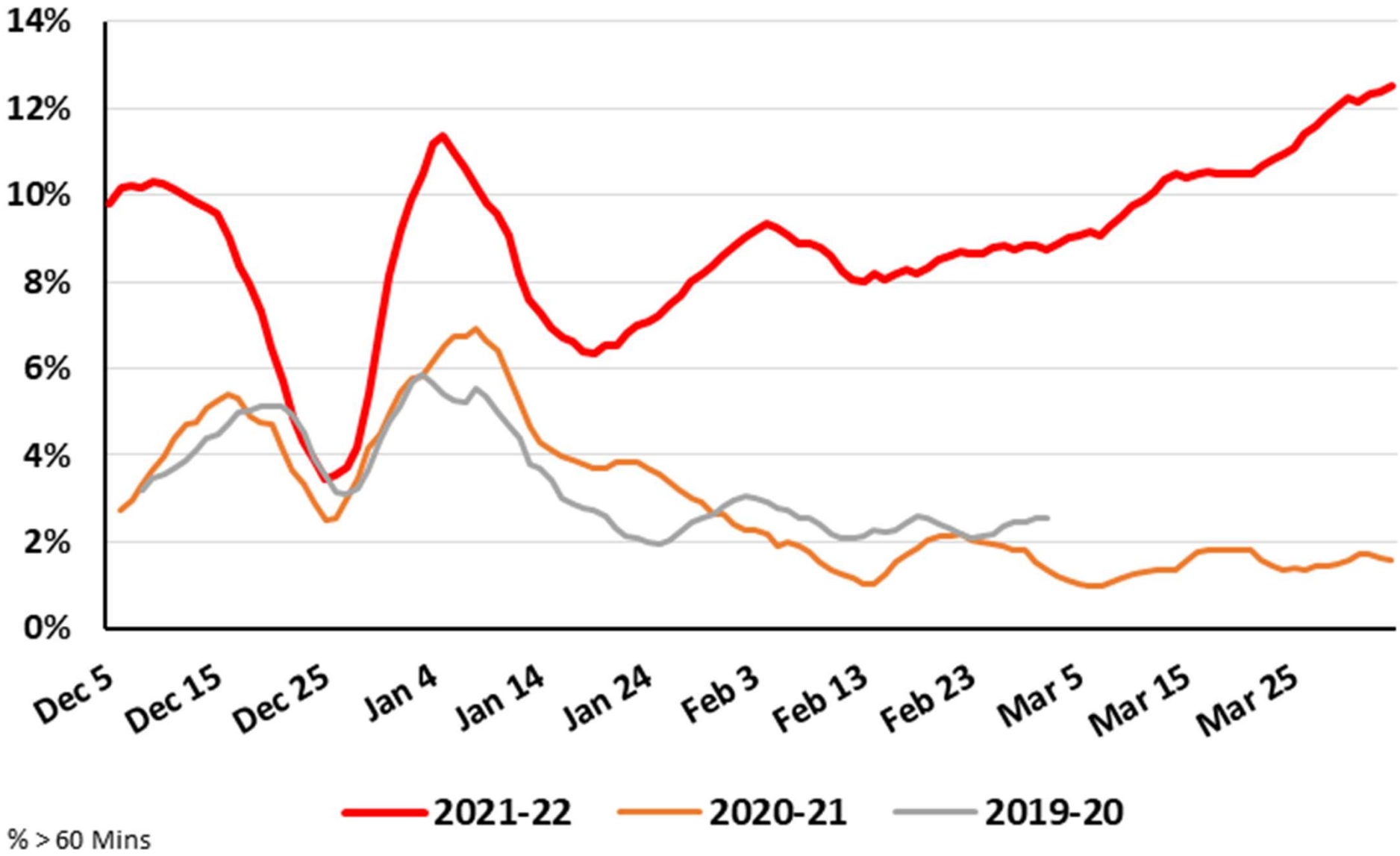

https://www.england.nhs.uk/statistics/statistical-work-areas/uec-sitrep/urgent-and-emergency-care-daily-situation-reports-2021-22/

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Percent of Ambulances Taking More Than 60 Minutes to Handover Patients in England: 2021-22 versus Prior Years

(Source: NHS England Winter Situation Reports)

https://www.england.nhs.uk/statistics/statistical-work-areas/uec-sitrep/urgent-and-emergency-care-daily-situation-reports-2021-22/

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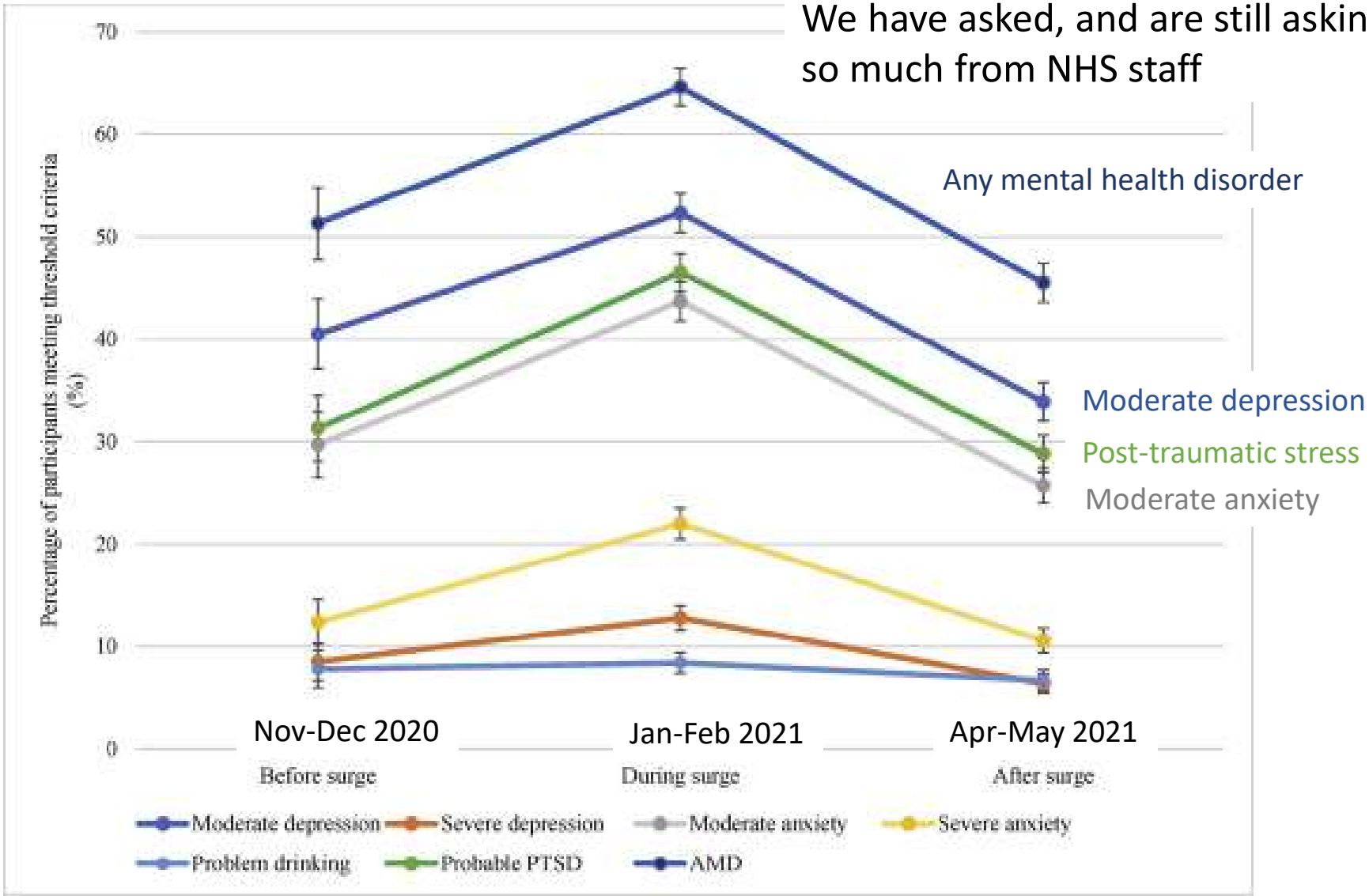
Proportion of ICU staff with different mental health problems before, during and after the January 2021 Covid wave across 56 English ICUs

We have asked, and are still asking, so much from NHS staff

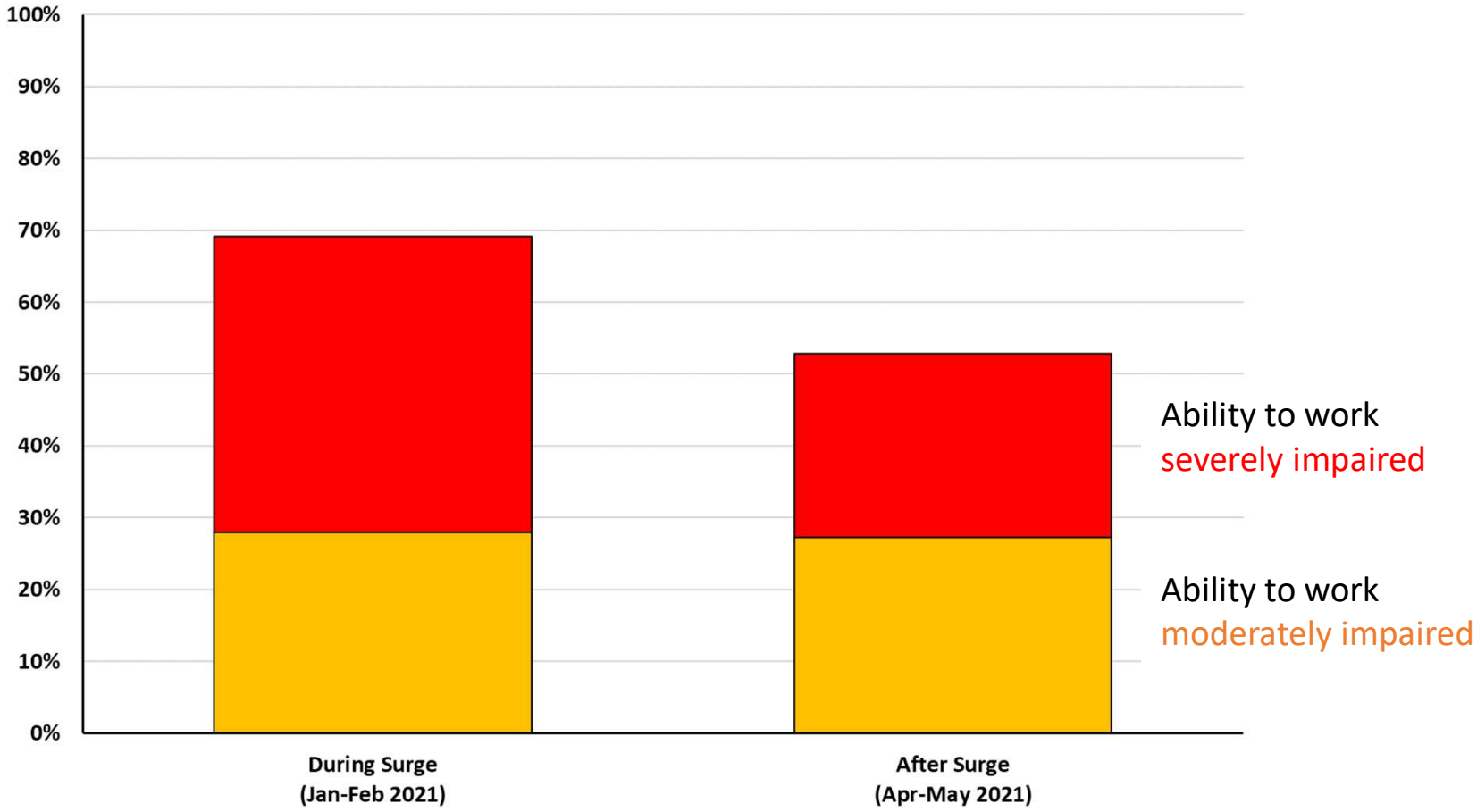


Hall et al, 2022, https://www.bjanaesthesia.org/article/S0007-0912(22)00140-4/fulltext#secsectitle0045

Proportion of ICU staff with different mental health problems before, during and after the January 2021 Covid wave across 56 English ICUs

Study also used Work and Social Adjustment Scale (WSAS) to ask staff to what extent they felt their ability to work was impaired. We do NOT want those caring for the country's sickest patients to be impaired!

They wanted to see what proportion of staff reported being severely or moderately functionally impaired.



Hall et al, 2022, https://www.bjanaesthesia.org/article/S0007-0912(22)00140-4/fulltext#secsectitle0045

Deaths

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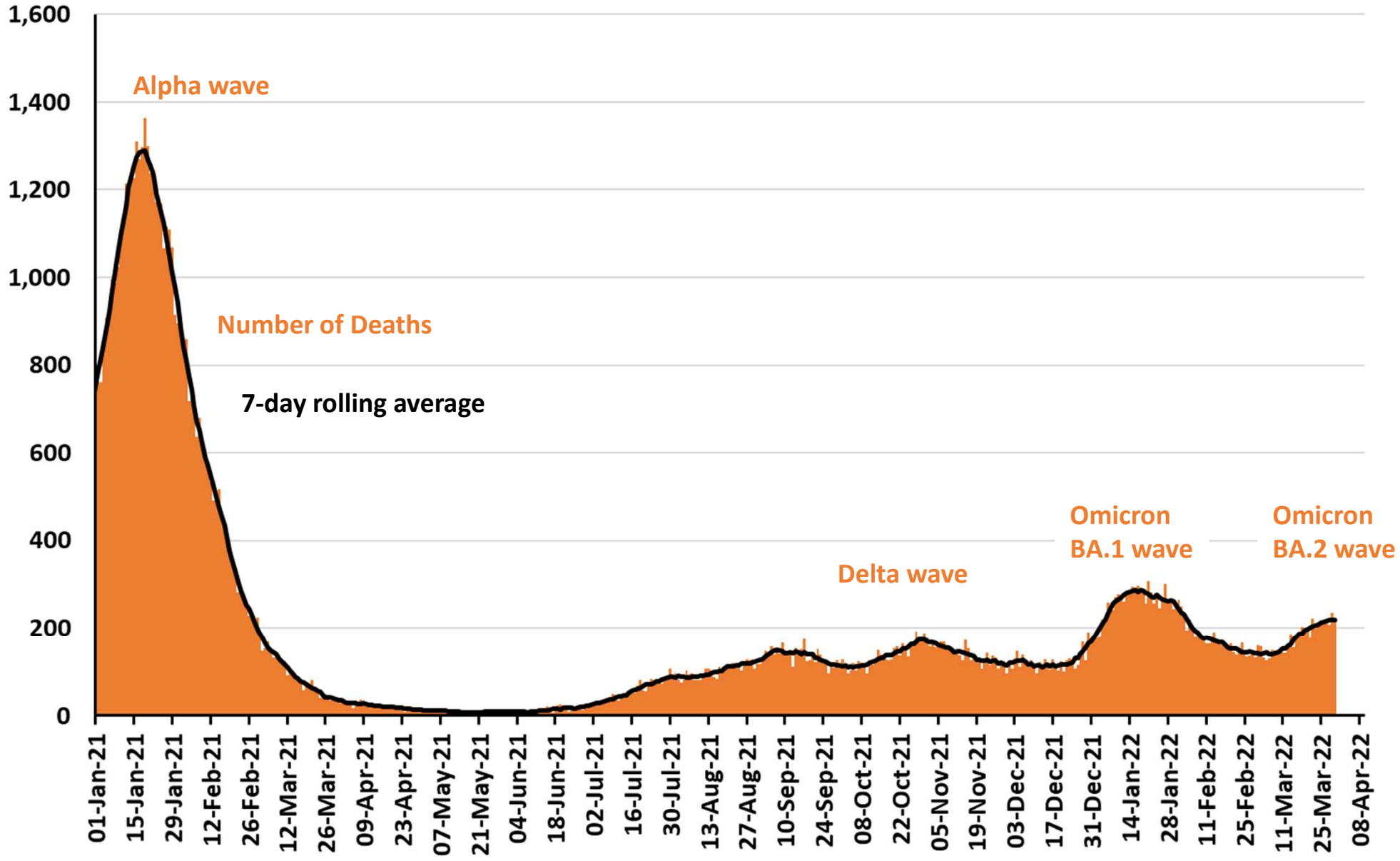
Number of deaths within 28 days of +ve COVID test by date of death across the UK to 29 March 2022



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

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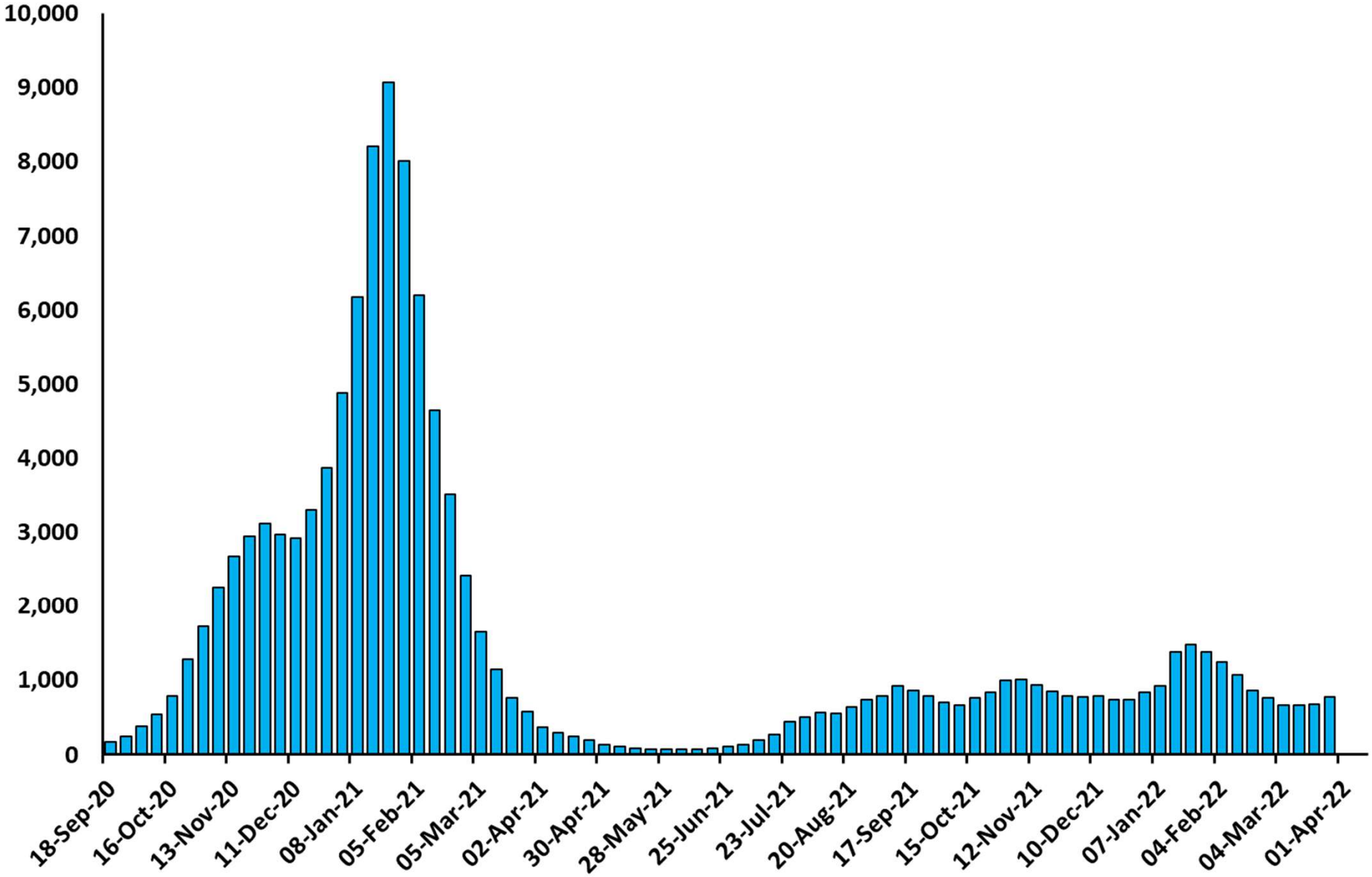
Number of deaths with Covid on the death certificate by week registered in England & Wales to 25 March 2022



Data from https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/weekly-and-monthly-data-on-births-and-deaths/deaths-involving-coronavirus-covid-19-in-scotland

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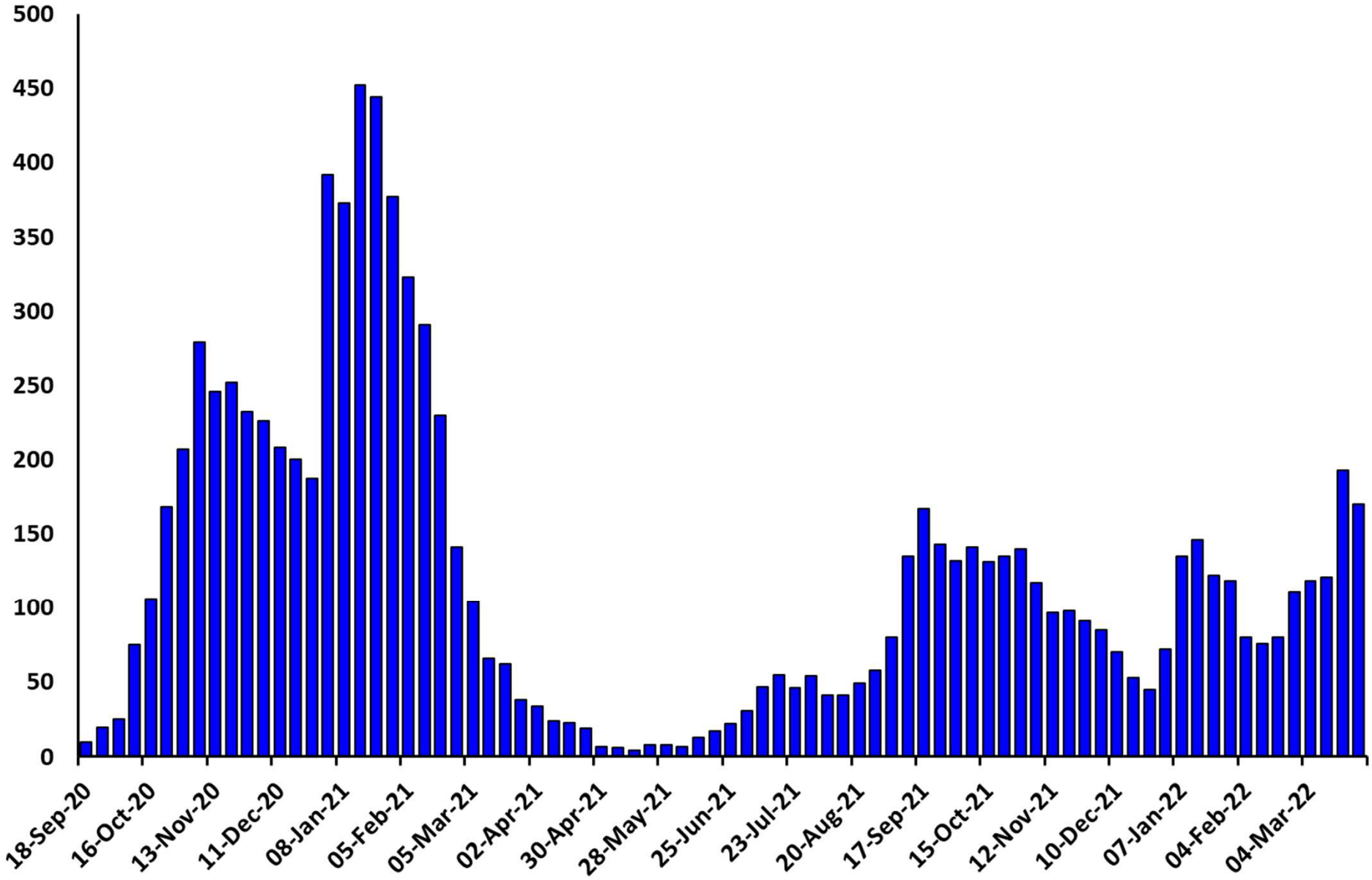
Number of deaths with Covid on the death certificate by week registered in Scotland to 1 April 2022



Data from https://www.nrscotland.gov.uk/statistics-and-data/statistics/statistics-by-theme/vital-events/general-publications/weekly-and-monthly-data-on-births-and-deaths/deaths-involving-coronavirus-covid-19-in-scotland

Children

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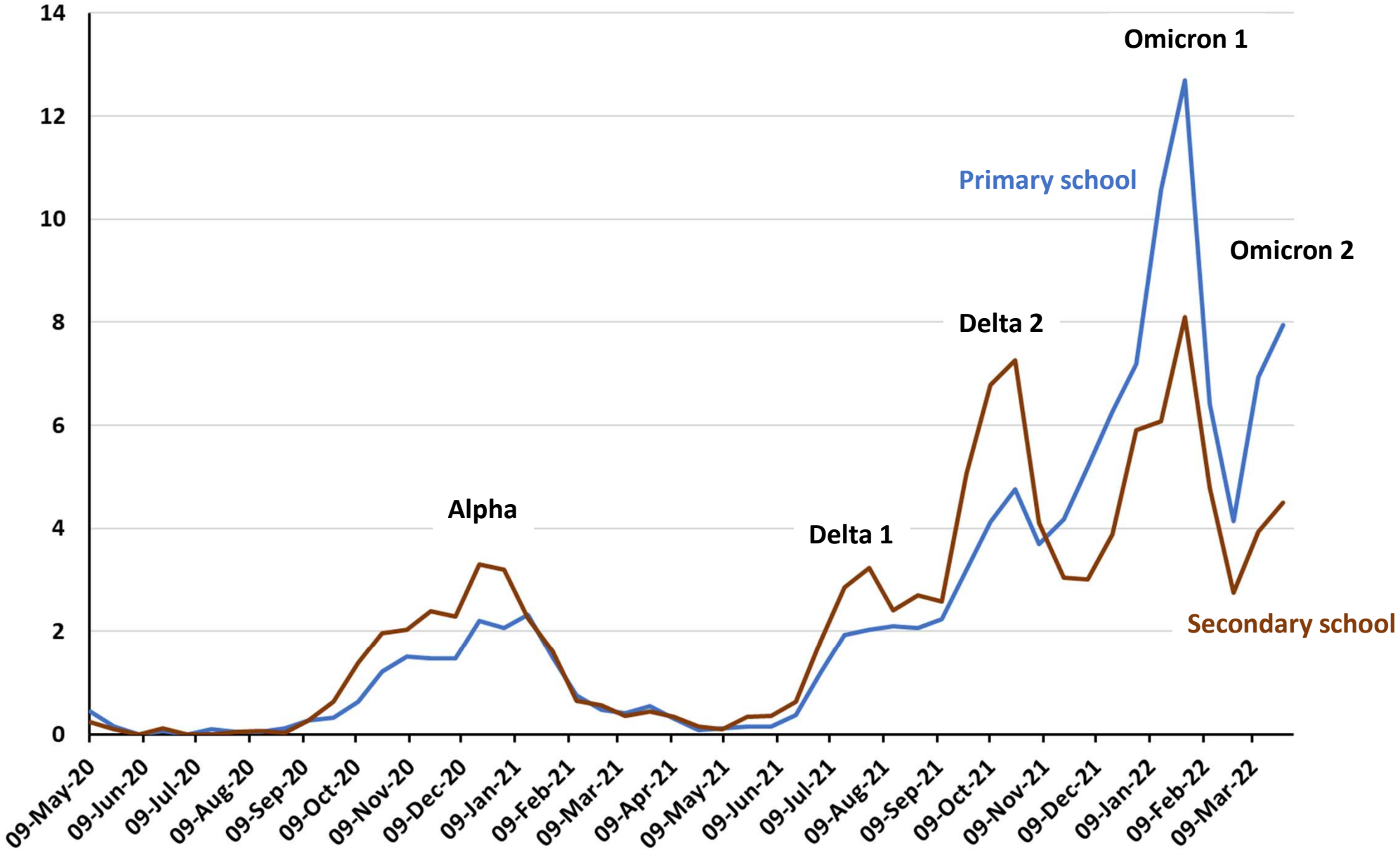
Percentage of children testing positive every fortnight to 2 April 2022 from ONS infection survey. Five distinct waves so far.



Data from https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/datasets/coronaviruscovid19infectionsurveydata

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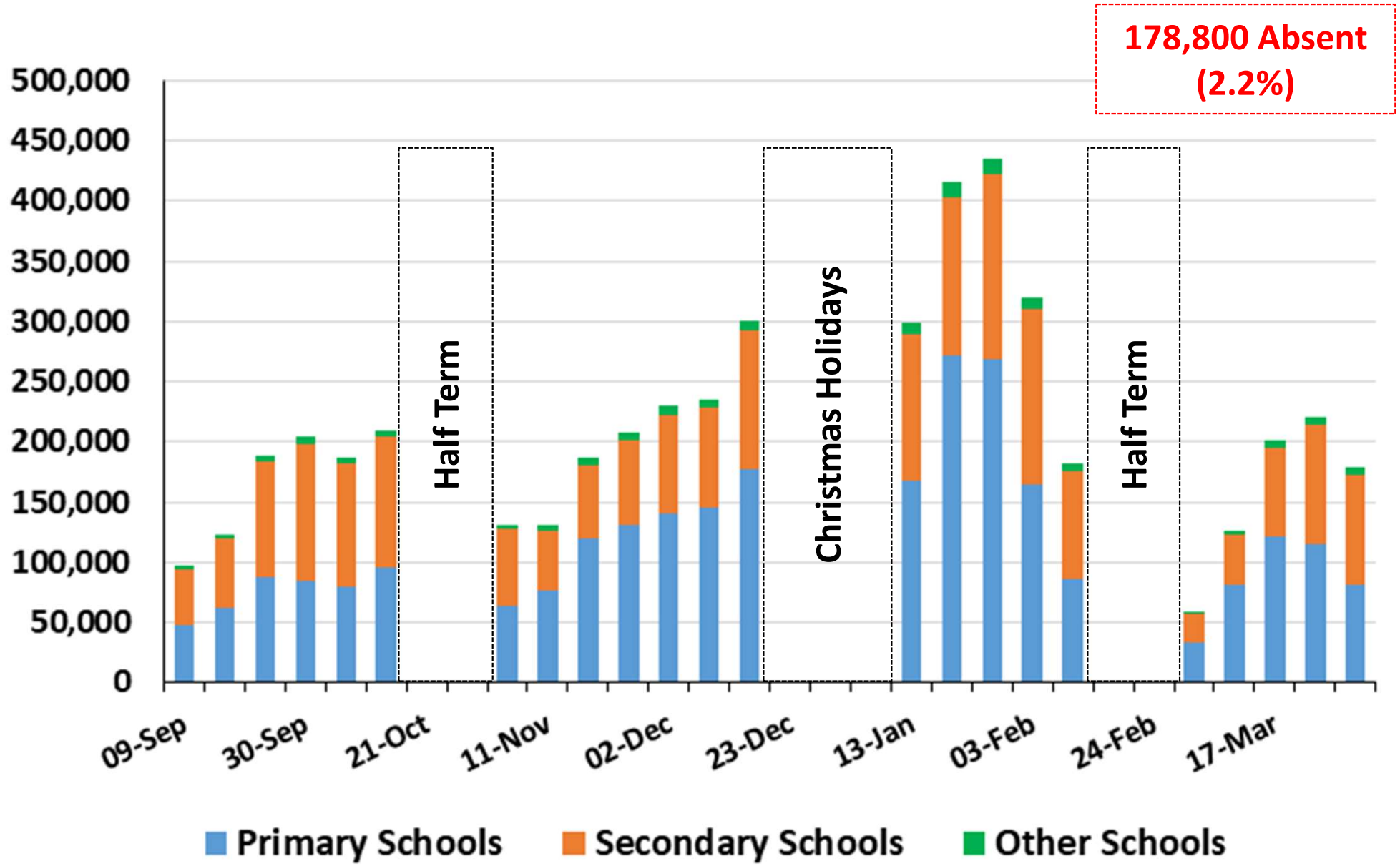
Number of Pupils in All State Schools absent due to Covid-19 for England by School from Sep 7, 2021 to Mar 31, 2022

(Source: Attendance in education and early years settings during the coronavirus (COVID-19) outbreak)



Attendance in education and early years settings during the coronavirus (COVID-19) outbreak, Week 23 2021 – Explore education statistics – GOV.UK (explore-education-statistics.service.gov.uk)

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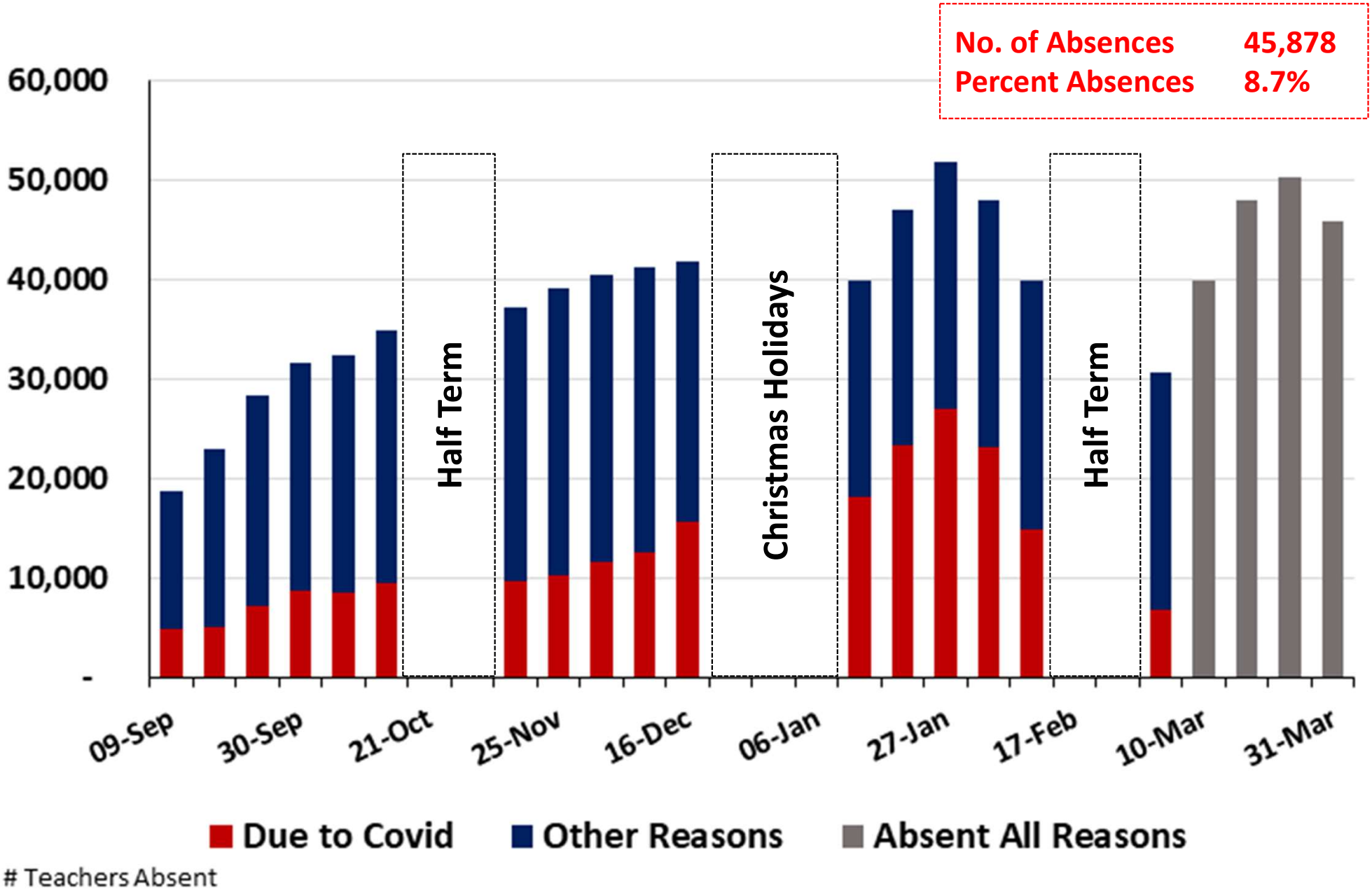
Number of Teachers in All State Schools absent for England from Sep 9, 2021 to Mar 31, 2022

(Source: Attendance in education and early years settings during the coronavirus (COVID-19) outbreak)



Attendance in education and early years settings during the coronavirus (COVID-19) outbreak, Week 23 2021 – Explore education statistics – GOV.UK (explore-education-statistics.service.gov.uk)

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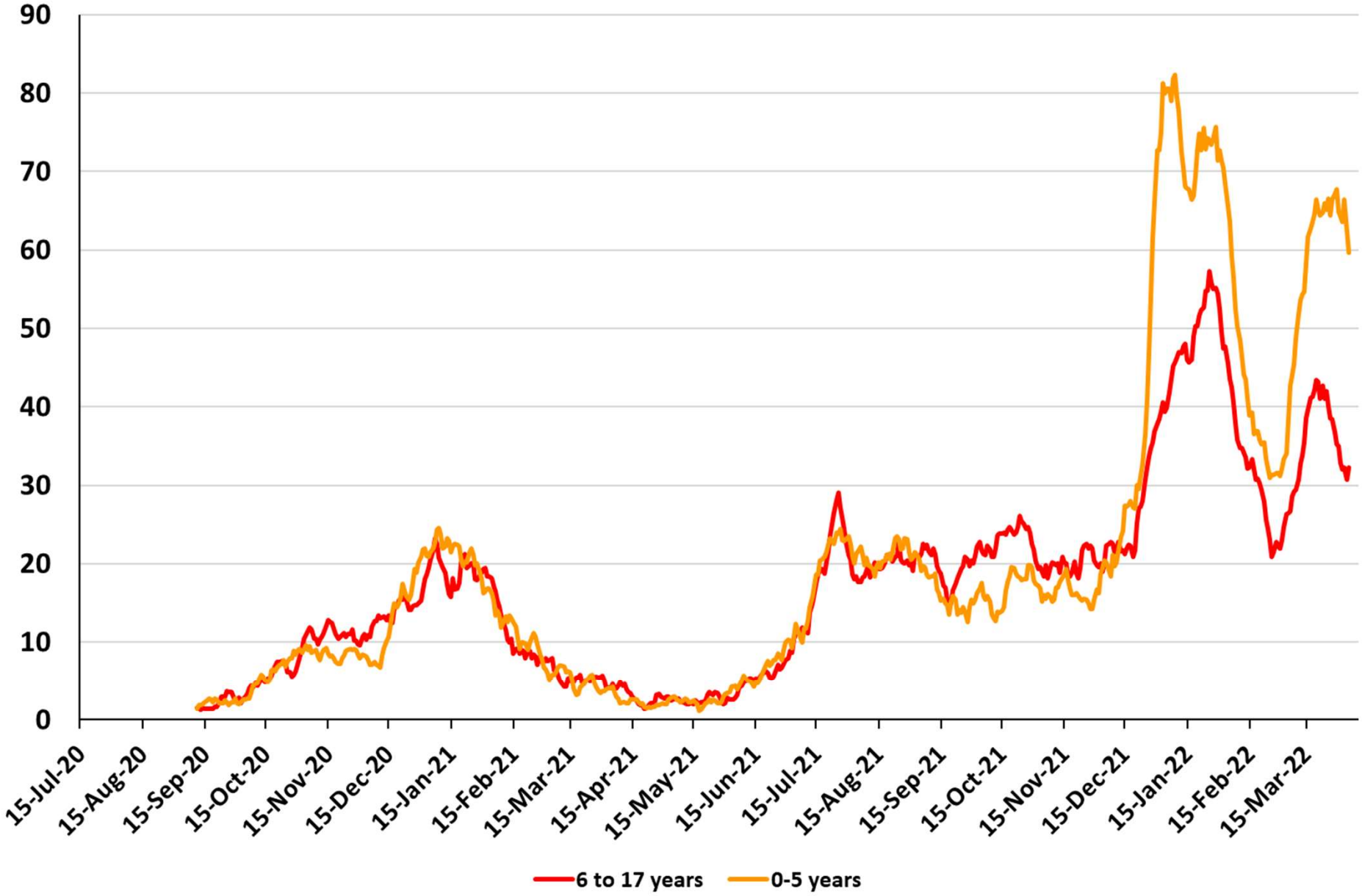
Hospital admissions per day in England for 0-5 year olds and 6-17 year olds since September 2020



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

Long Covid

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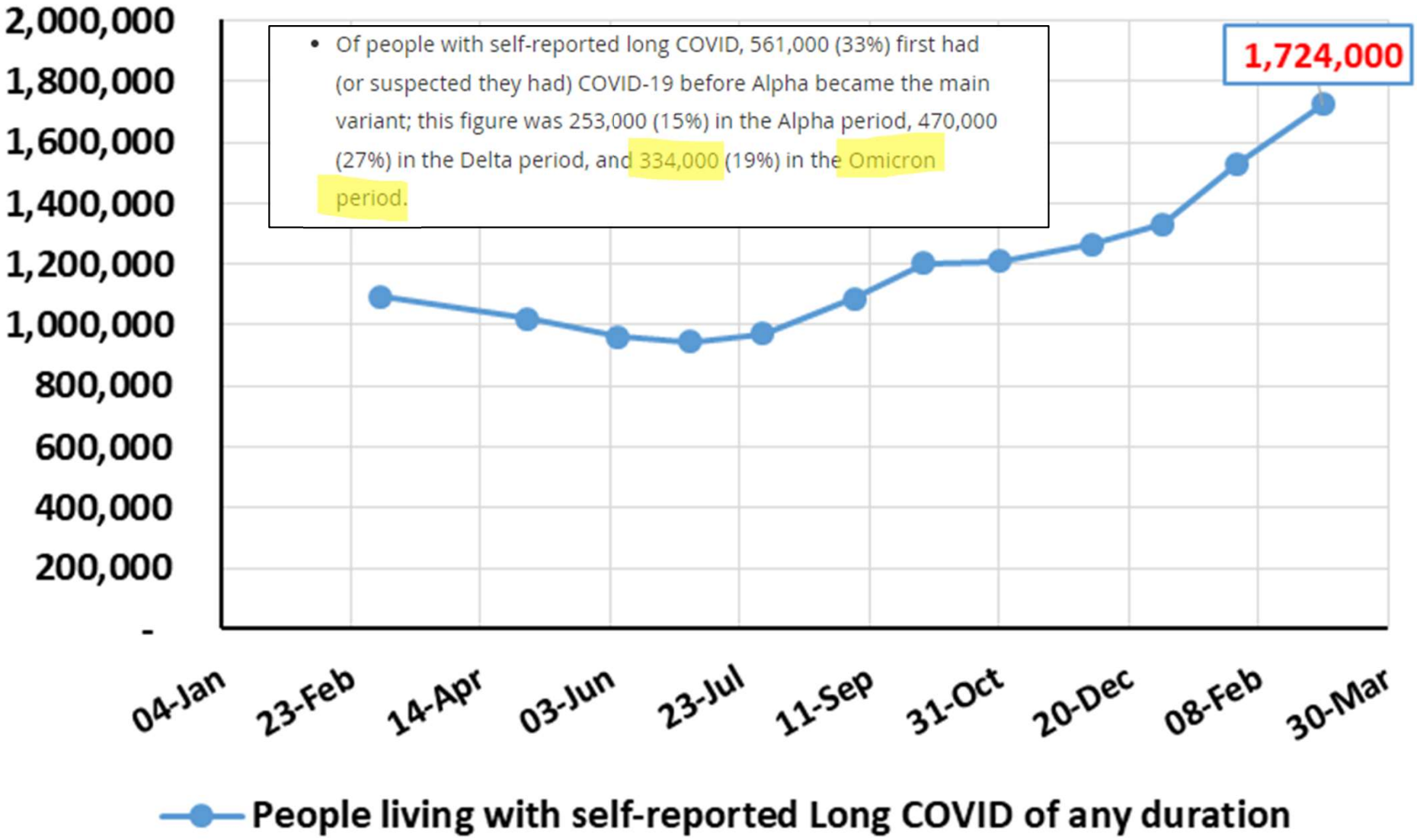
Number of People Living with Self-Reported Long Covid in the UK Mar 6, 2021 to Mar 5, 2022 (up to January infections)

(Source: ONS Prevalence of ongoing symptoms following coronavirus (COVID-19) infection in the UK Reports)



https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/prevalenceofongoingsymptomsfollowingcoronaviruscovid19infectionintheuk/7april2022

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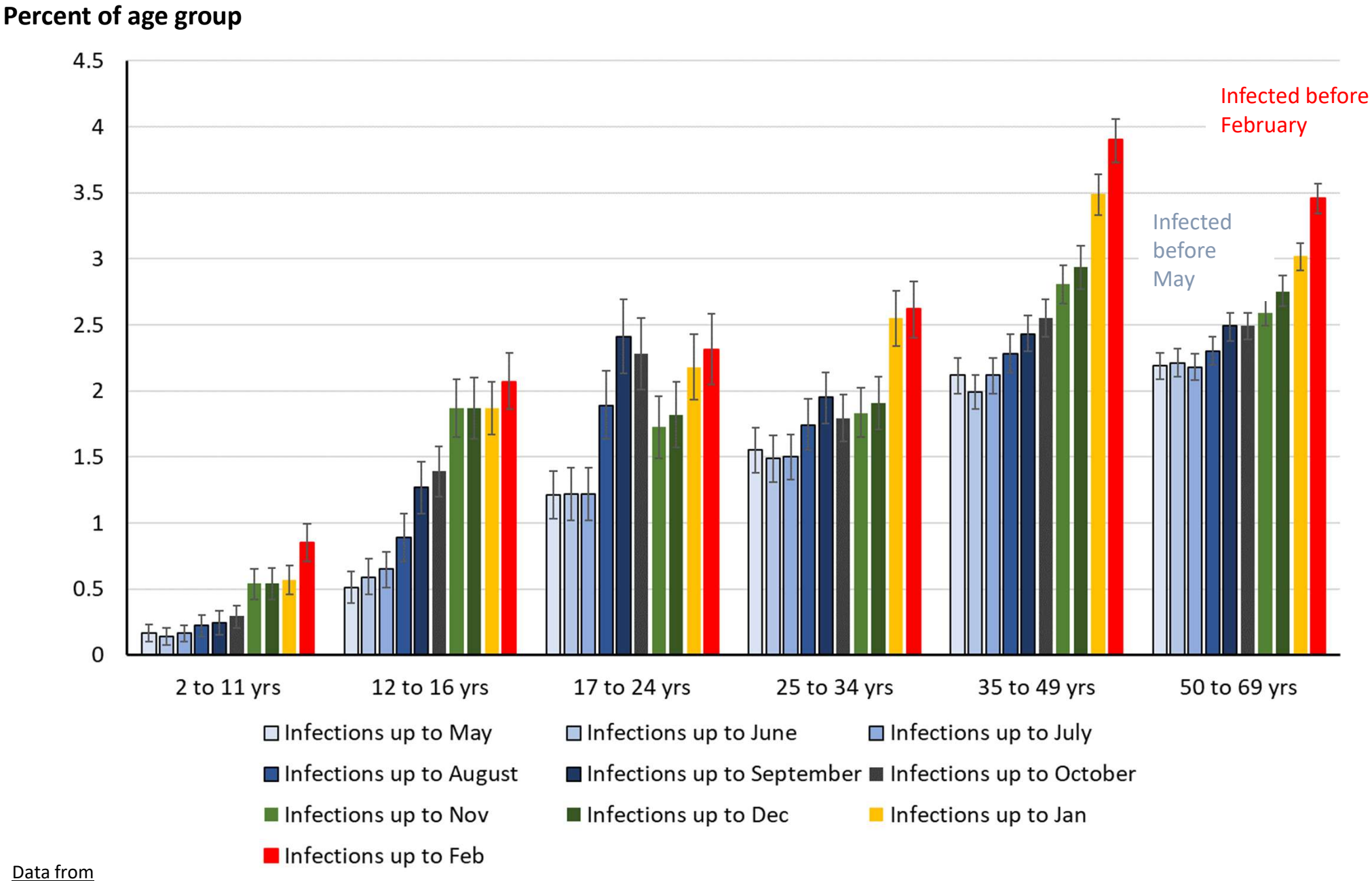
Percentage of population living with "Long Covid" (symptoms lasting at least 4 weeks) by age over time (ONS survey)



Data from
https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/datasets/alldatarelatingtoprevalenceofongoingsymptomsfollowingcoronaviruscovid19infectionintheuk

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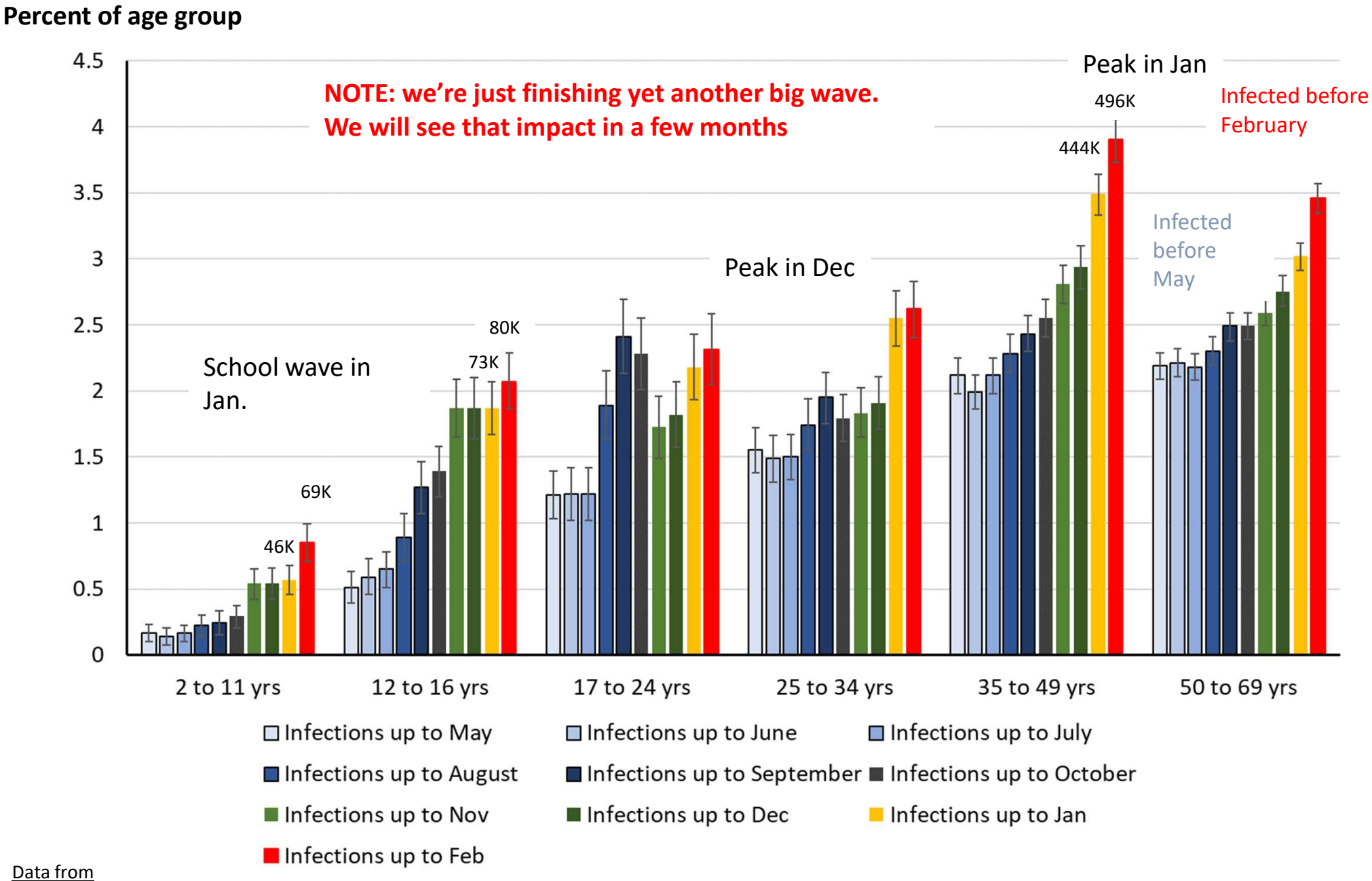

Data from
https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/datasets/alldatarelatingtoprevalenceofongoingsymptomsfollowingcoronaviruscovid19infectionintheuk

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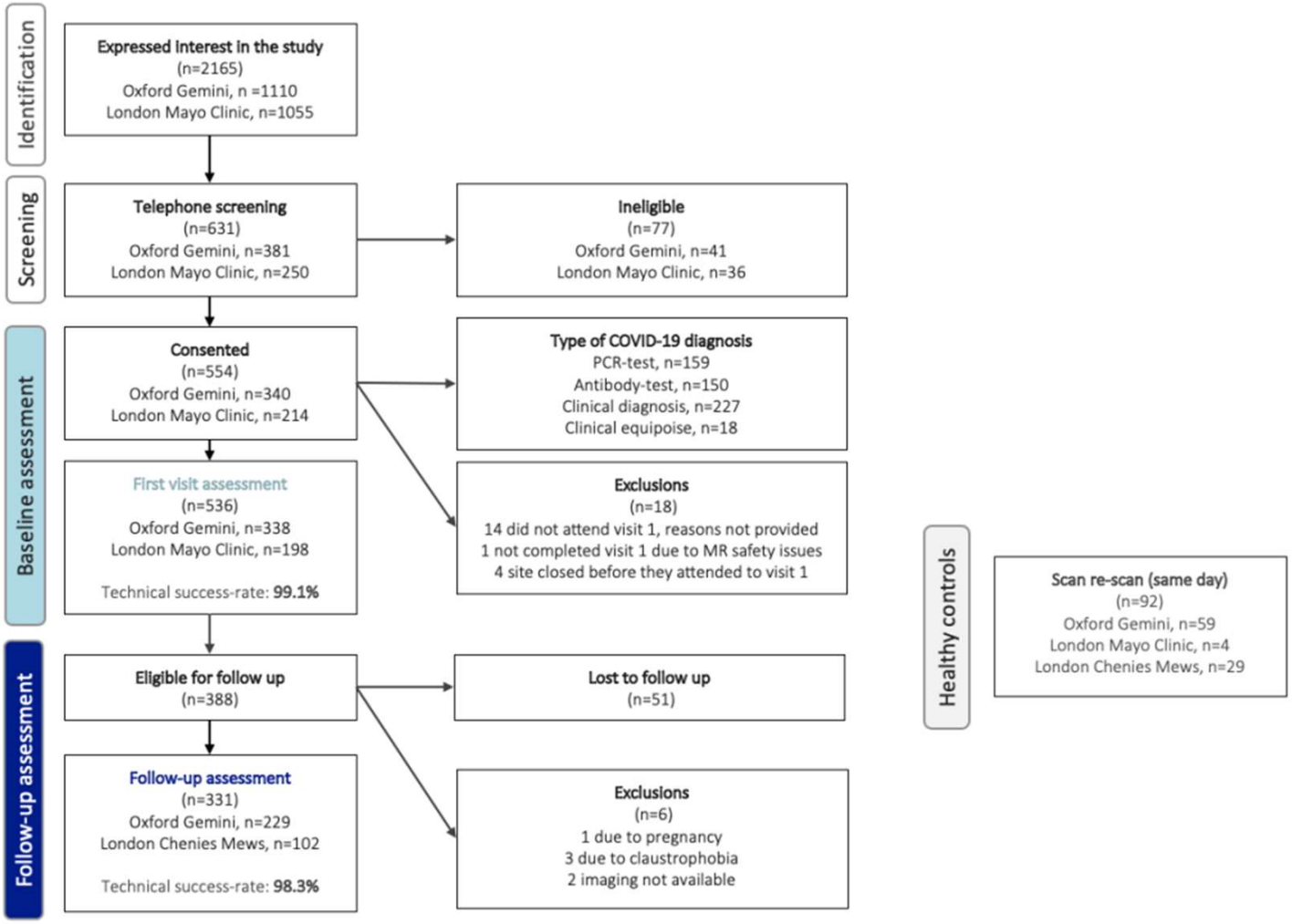
New UK research into organ impairment and Long Covid

Figure 1: Study population from recruitment to follow-up.



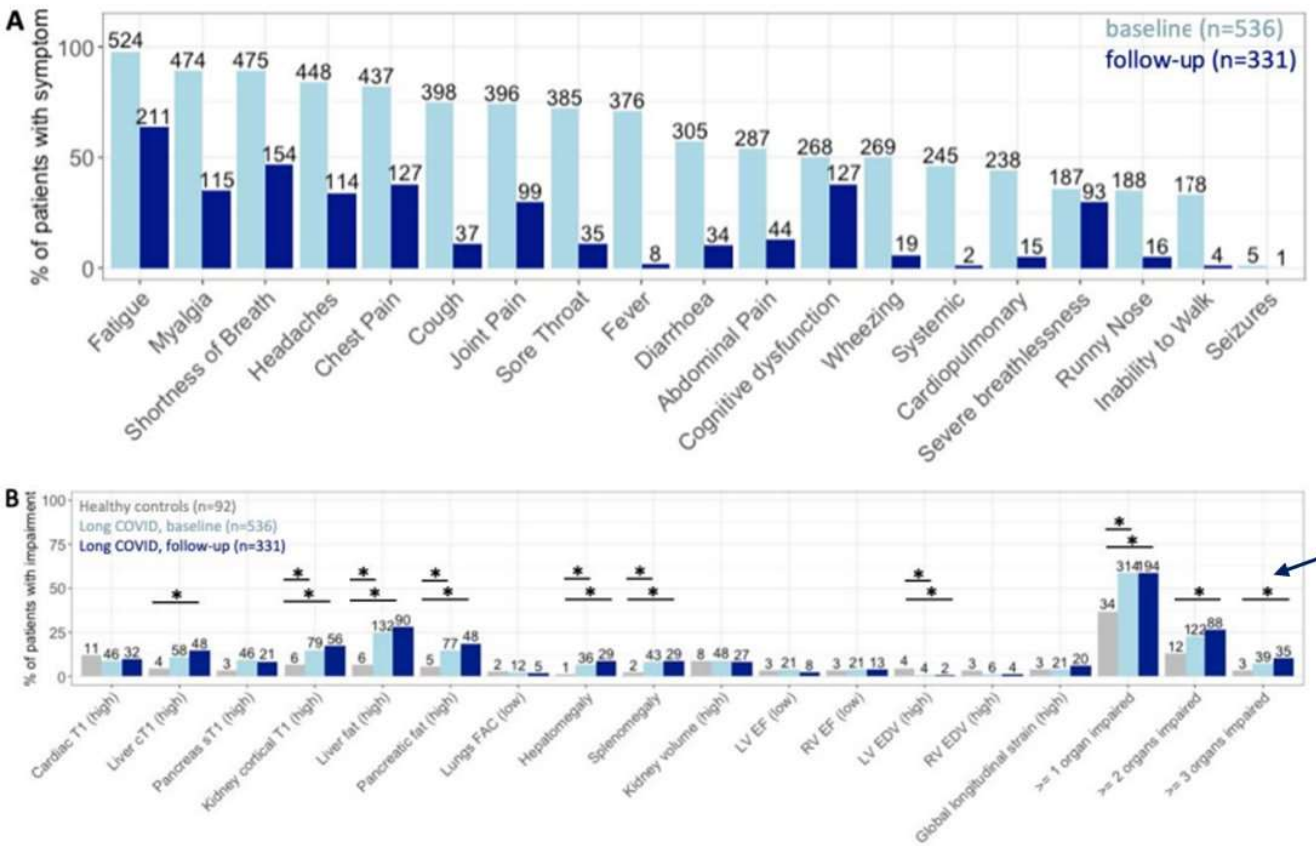
From https://www.medrxiv.org/content/10.1101/2022.03.18.22272607v1.full.pdf

New UK research into organ impairment and Long Covid

6 months post infection

12 months post infection

Figure 2: Proportion of individuals with Long COVID at baseline and follow-up for: (A) symptoms; (B) organ impairment.



Wherever there is a s "*", results significantly worse than for healthy control group

Note for Figure 2B: compared between healthy controls (grey) and at baseline and follow-up (blue). Significant differences ($p<0.05$) are indicated with a star, numbers above columns indicate the sample size (n) for each group.

From https://www.medrxiv.org/content/10.1101/2022.03.18.22272607v1.full.pdf

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New UK research into organ impairment and Long Covid

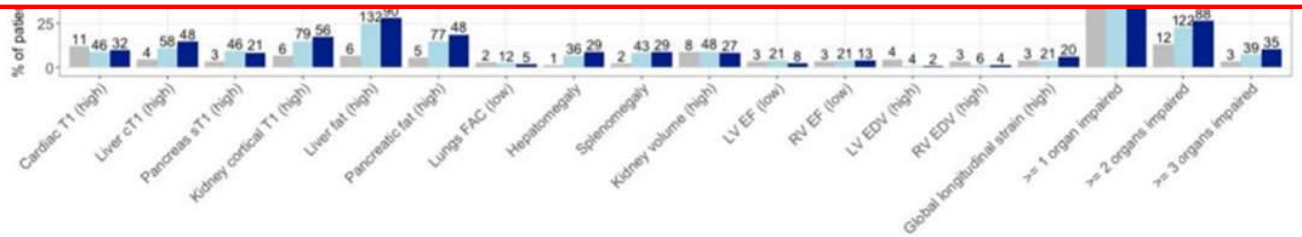
6 months post infection

12 months post inf

Omicron BA.1 wave

Figure 2: Proportion of individuals with Long COVID at baseline and follow-up for: (A) symptoms; (B) organ impairment.

Results: Extreme breathlessness (36% and 30%), cognitive dysfunction (50% and 38%) and poor health-related quality of life (EQ-5D-5L<0.7; 55% and 45%) were common at 6 and 12 months, and associated with female gender, younger age and single organ impairment. At baseline, there was fibro-inflammation in the heart (9%), pancreas (9%), kidney (15%) and liver (11%); increased volume in liver (7%), spleen (8%) and kidney (9%); decreased capacity in lungs (2%); and excessive fat deposition in the liver (25%) and pancreas (15%).



Note for Figure 2B: compared between healthy controls (grey) and at baseline and follow-up (blue). Significant differences (p<0.05) are indicated with a star, numbers above columns indicate the sample size (n) for each group.

From https://www.medrxiv.org/content/10.1101/2022.03.18.22272607v1.full.pdf

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Long term heart problems from Covid

NEWS

Check for updates

New York

Cite this as: *BMJ* 2022;376:o378
http://dx.doi.org/10.1136/bmj.o378
Published: 14 February 2022

Covid-19: Even mild infections can cause long term heart problems, large study finds

Janice Hopkins Tanne

Infection with SARS-CoV-2 can cause cardiovascular problems for up to a year, not just during the acute phase, a large study has found.[1]

The authors from Washington University and the Veterans Administration Health Care System in St Louis, Missouri, reported in *Nature Medicine* that one year after covid-19 infection people were at higher risk of cardiovascular disease, including cerebrovascular disorders, dysrhythmias, ischaemic and non-ischaemic heart disease, pericarditis, myocarditis, heart failure, and thromboembolic disease. Even those who had not been admitted to hospital with covid-19 were at risk of these problems, but the risk increased with the severity of the infection, from people not admitted to hospital to those admitted to intensive care.

cardiovascular problems is to prevent infection in the first place, governments and health systems must prepare to deal with possible big problems in future. In the US more than 72 million people have been infected with covid-19, more than 16 million in the UK, and more than 355 million globally. The cardiovascular problems seen in some people who have had covid-19 are chronic and may have long lasting consequences for the individual and for health systems, economic productivity, and life expectancy, the researchers say.

While there is evidence of long term heart and vascular damage, "Similar things could be happening in the brain and other organs, resulting in symptoms characteristic of long covid, including brain fog," Al-Aly told *Science*.[3]

BMJ: first published as 10.1136/bmj.o378 on 14 February

From https://www.bmj.com/content/bmj/376/bmj.o378.full.pdf

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Long term elevated mortality after Covid (UK Biobank)

Conclusions

In conclusion, this study revealed increased risk of hospitalization and mortality from a wide variety of pulmonary and extra-pulmonary diseases after COVID-19, especially for those with severe disease. On the other hand, we also observed increased all-cause mortality and mortality due to neurocognitive disorders after mild infections. The findings may have important clinical and public health implications given the huge number of people infected by COVID-19. Proper monitoring and assessments for the risk of sequelae may be warranted for patients recovered from severe COVID-19 in particular. Further studies are required to replicate the current findings and to investigate the mechanisms underlying the sequelae, and interventions for prevention and treatment.

18

From https://www.medrxiv.org/content/10.1101/2022.03.23.22272811v1.full.pdf

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Long term deep vein thrombosis, embolism and bleeding problems after Covid (Sweden, more than 1 million positive cases)

Results Compared with the control period, incidence rate ratios were significantly increased 70 days after covid-19 for deep vein thrombosis, 110 days for pulmonary embolism, and 60 days for bleeding. In particular, incidence rate ratios for a first pulmonary embolism were 36.17 (95% confidence interval 31.55 to 41.47) during the first week after covid-19 and 46.40 (40.61 to 53.02) during the second week. Incidence rate ratios during days 1-30 after covid-19 were 5.90 (5.12 to 6.80) for deep vein thrombosis, 31.59 (27.99 to 35.63) for pulmonary embolism, and 2.48 (2.30 to 2.68) for bleeding. Similarly, the risk ratios during days 1-30 after covid-19 were 4.98 (4.96 to 5.01) for deep vein thrombosis, 33.05 (32.8 to 33.3) for pulmonary embolism, and 1.88 (1.71 to 2.07) for bleeding, after adjusting for the effect of potential confounders. The rate ratios were highest in patients with critical covid-19 and highest during the first pandemic wave in Sweden compared with the second and third waves. In the same period, the absolute risk among patients with covid-19 was 0.039% (401 events) for deep vein thrombosis, 0.17% (1761 events) for pulmonary embolism, and 0.101% (1002 events) for bleeding.

Conclusions The findings of this study suggest that covid-19 is a risk factor for deep vein thrombosis, pulmonary embolism, and bleeding. These results could impact recommendations on diagnostic and prophylactic strategies against venous thromboembolism after covid-19.

From https://www.bmj.com/content/377/bmj-2021-069590

New variants

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Coronavirus is continuing to evolve – we are not cresting the last wave

Subvariants of BA.2

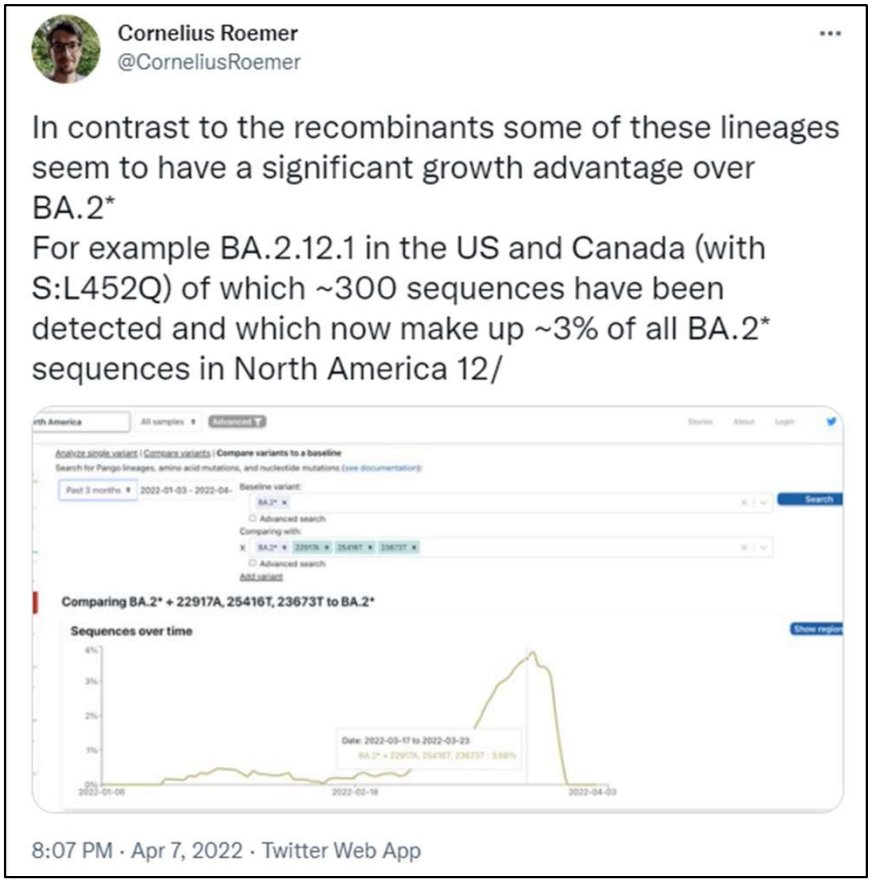
Growth rate

BA.2 has demonstrated an increased growth rate compared to BA.1 in all regions of England. Since mid-February, the growth rate has settled at approximately 75% greater relative growth for BA.2 compared to BA.1.

New mutations are appearing all the time.

Some have led to new BA.2 subtypes (BA.2.2 in Hong Kong, BA.2.3 in UK, BA.2.12 in US)

A few might have a growth advantage.



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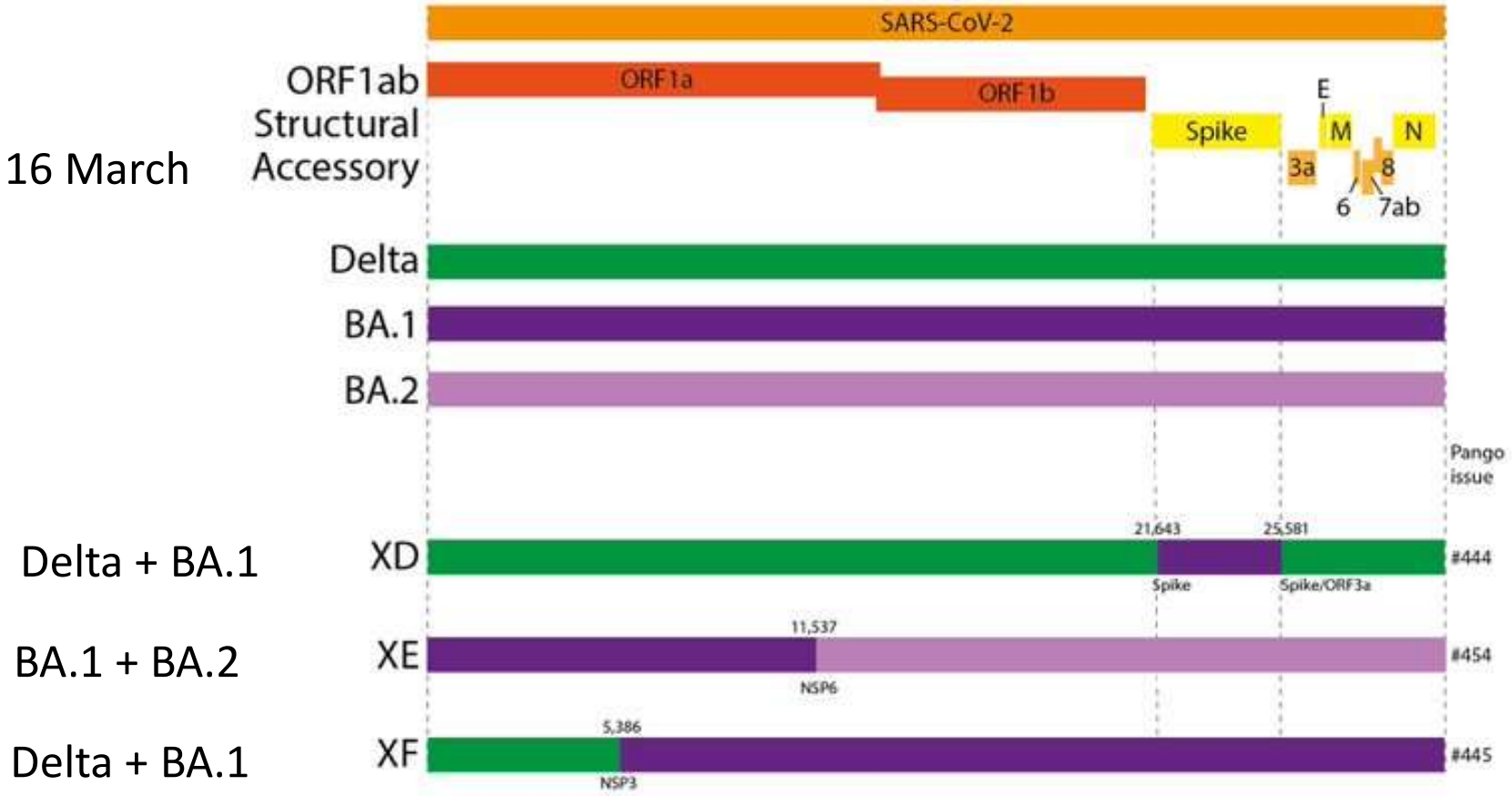
Coronavirus is continuing to evolve – we are not cresting the last wave

Recombinations of Delta, Omicron BA.1 and Omicron BA.2.

Many more than the below have now been found – definitely need BA.2 "spike" to compete and so far none of them look to be too concerning. But need to keep an eye on them.



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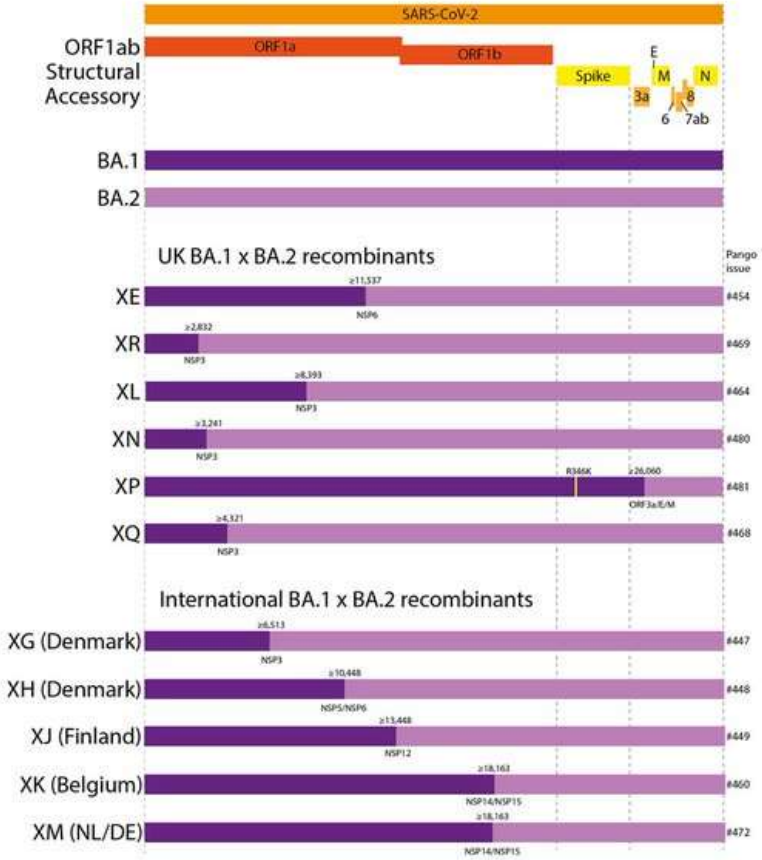
Are we lucky that Delta had gone by the time BA.2 came??

2 April – all BA.1 + BA.2



From https://twitter.com/PeacockFlu/status/1510233225595174913?s=20&t=uRamoB43A2YtpB59OnupOw

Coronavirus is continuing to evolve – we are not cresting the last wave

Entirely new Omicron lineages: BA.4 and BA.5

These have been first identified in South Africa & Botswana – similar to BA.2 (our current dominant variant), but are NOT evolved from BA.2 but emerged separately (presumably from same original process/source?).

Cornelius Roemer @CorneliusRoemer · 15h

The biggest surprise has been the recent emergence of BA.4/BA.5, first detected in South Africa and Botswana.
Both lineages are very similar to BA.2 but both have 2 reversions with respect to it. Hence it's possible that they have arisen from the same reservoir as BA.1/2/3
15/

3 15 97

From https://twitter.com/CorneliusRoemer/status/1512145149966626821?s=20&t=IxWJ3T5jmFyCKAJ7fWlIFg

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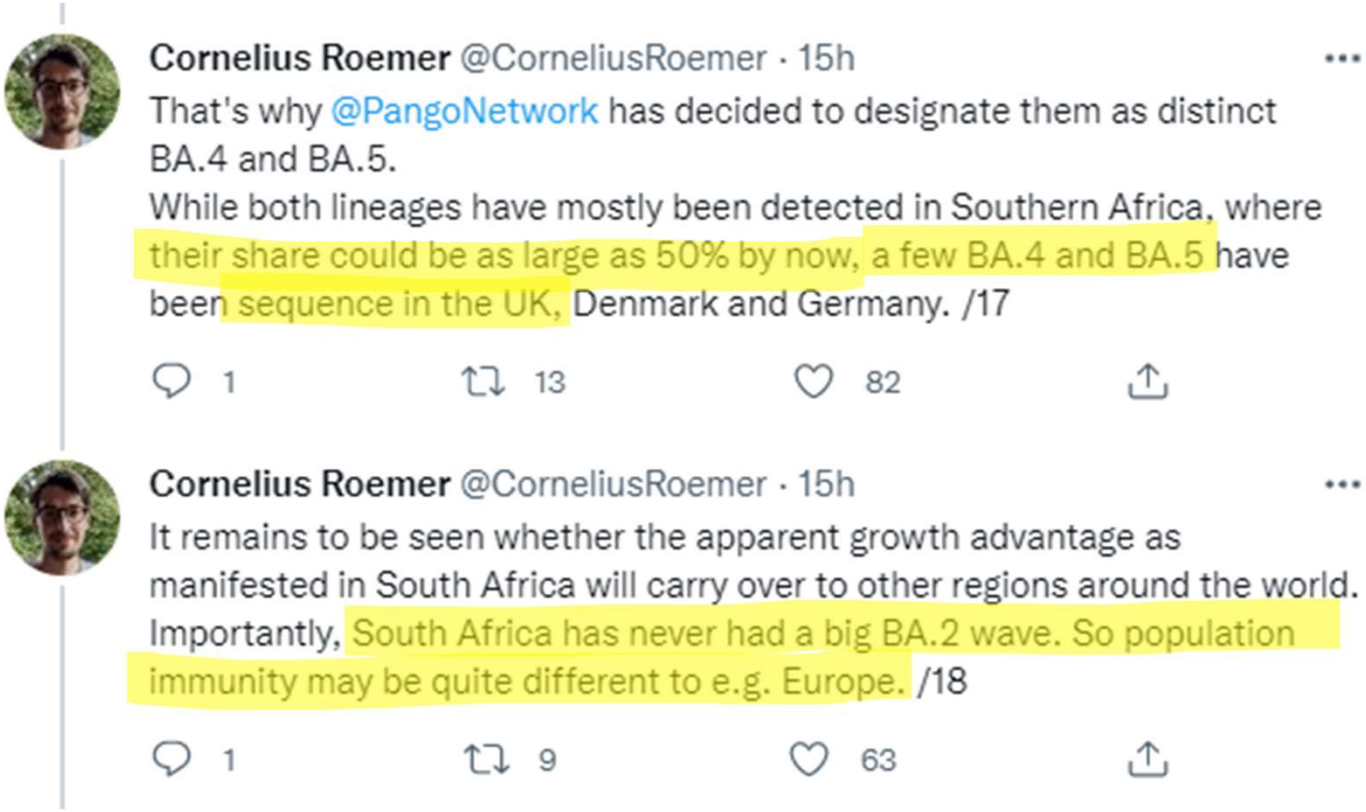

Cornelius Roemer @CorneliusRoemer · 15h

That's why @PangoNetwork has decided to designate them as distinct BA.4 and BA.5.
While both lineages have mostly been detected in Southern Africa, where their share could be as large as 50% by now, a few BA.4 and BA.5 have been sequence in the UK, Denmark and Germany. /17

1 13 82

Cornelius Roemer @CorneliusRoemer · 15h

It remains to be seen whether the apparent growth advantage as manifested in South Africa will carry over to other regions around the world. Importantly, South Africa has never had a big BA.2 wave. So population immunity may be quite different to e.g. Europe. /18

1 9 63

From https://twitter.com/CorneliusRoemer/status/1512145149966626821?s=20&t=IxWJ3T5jmFyCKAJ7fWlIFg

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Coronavirus is continuing to evolve – we are not cresting the last wave

And then potentially an entirely new variant that we don't know about yet!

Aris Katzourakis
@ArisKatzourakis

Omicron arose from the basal diversity of SARS-CoV-2, not from the most successful lineage at the time, Delta. The next concerning lineage could be equally unpredictable, but that does not mean it definitely will not be descended from Omicron.

10:04 AM · Apr 7, 2022 · Twitter Web App

From https://twitter.com/ArisKatzourakis/status/1511993409149538306?s=20&t=IxWJ3T5jmFyCKAJ7fWlIFg

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SUMMARY

- Making good progress in giving vulnerable adults a 4th jab. Not data yet on progress in 5-11s.

- ONS shows that the number of people with Covid remains very high in all nations. We are likely now at or just beyond peak in England and Wales.

- Number of people in hospital remains high. NHS under **extreme** pressure.

- Deaths in Scotland coming down, rising (a little) in England and Wales. Deaths in latter two have not yet peaked.

- Still significant disruption in schools as this term ends. Hopefully next term will be better – but where are the efforts to make schools safer places?

- Long Covid is rising following Omicron BA.1 surge – and this in a highly vaccinated and highly previously infected population. We have not yet seen impact of most recent wave. Also much more research coming out about other long term impacts of Covid.

- The Omicron subvariant BA.2 remains dominant but a lot things going on in variant space. It's not over.