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Latest numbers on COVID-19 in the UK – 18 March 2022

1. Vaccination
2. BA.2
3. Prevalence of Covid
4. Hospitalisations & Deaths
5. Children
6. Ventilation

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

Vaccination

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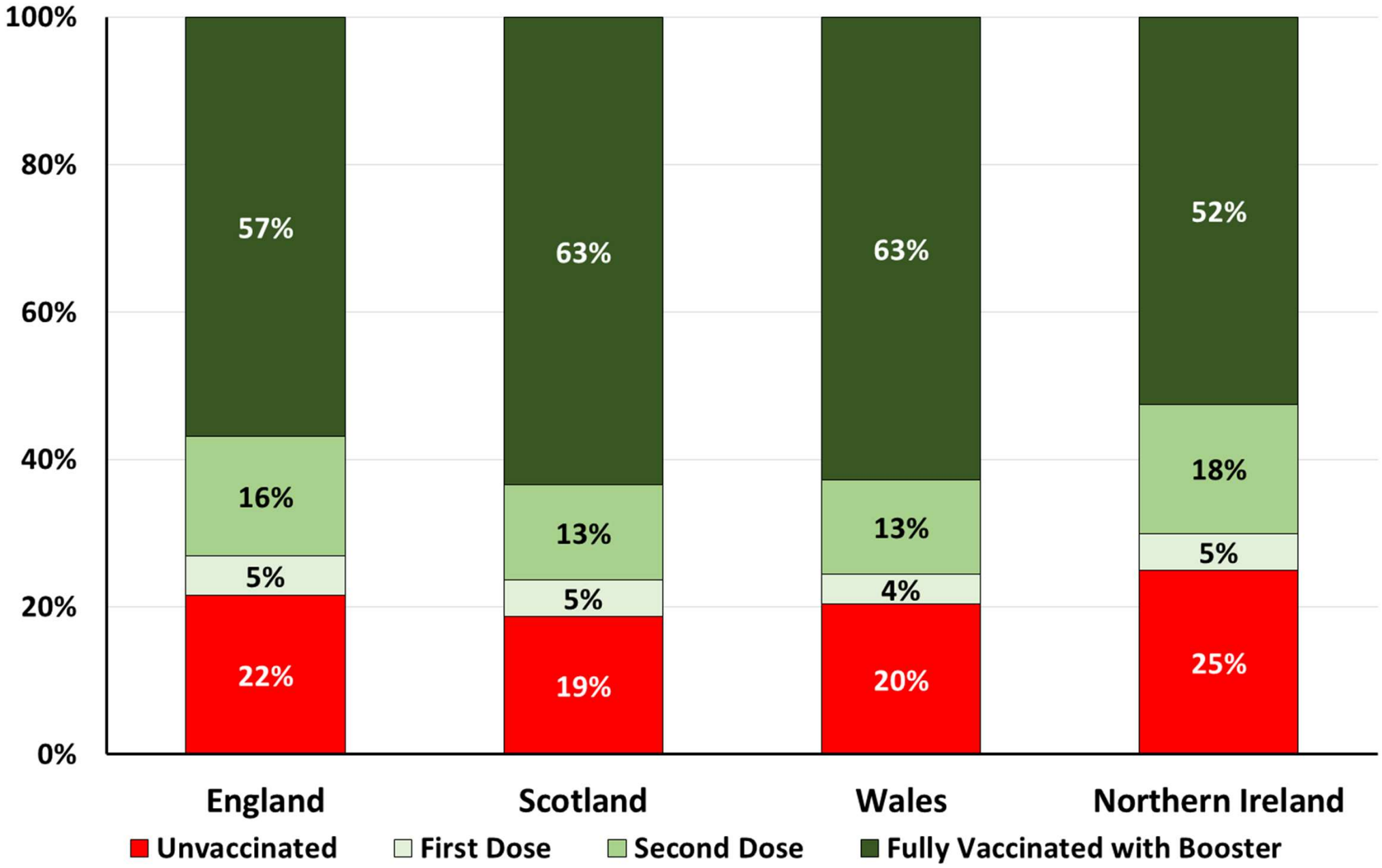
Percent of Total Population Unvaccinated, First Dosed, Second Dose, and Fully Vaccinated with Booster as at Mar 16

(Source: Covid Daily Update and Mid-2020 ONS Population Estimates)



Date: 16-Mar-22

Thanks to Bob Hawkins for the chart

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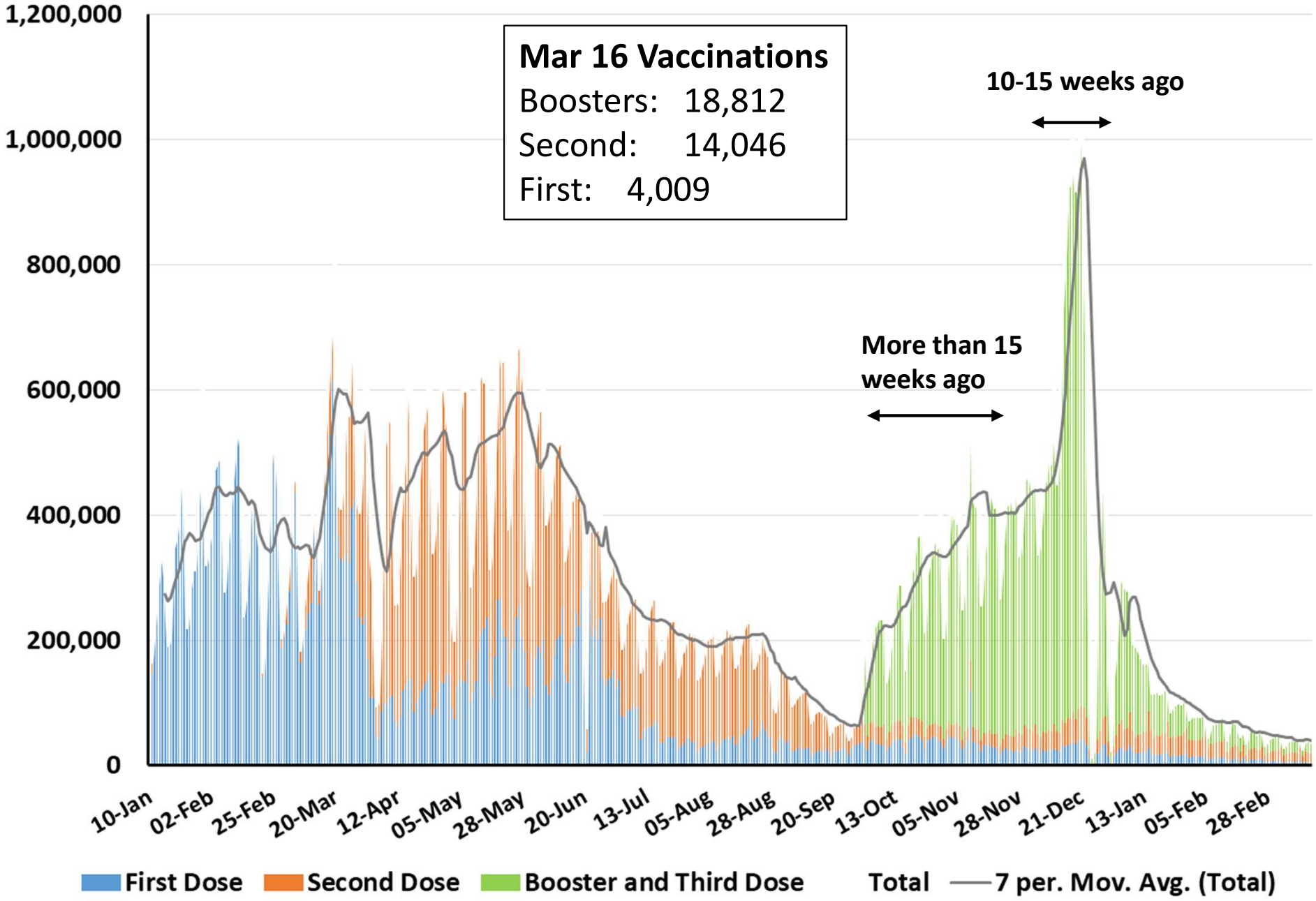
Number of First, Second, and Booster Doses given by Day in the UK
Jan 11, 2021 to Mar 16, 2022
(Source: Covid Daily Update)



Thanks to Bob Hawkins for the chart

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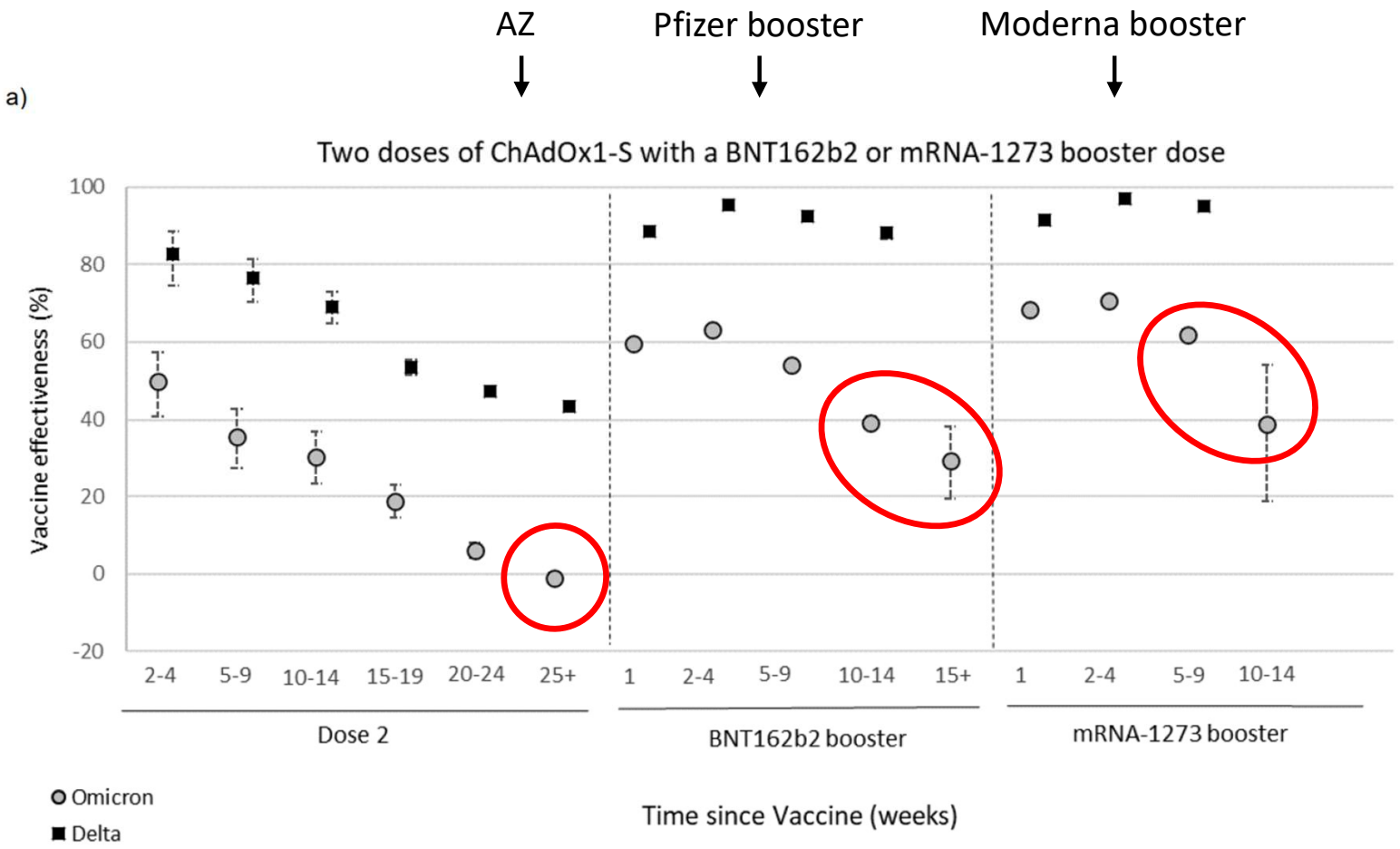
UKHSA estimates of waning of vaccines against Omicron: symptomatic disease



From https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1061532/Vaccine_surveillance_report_-_week_11.pdf

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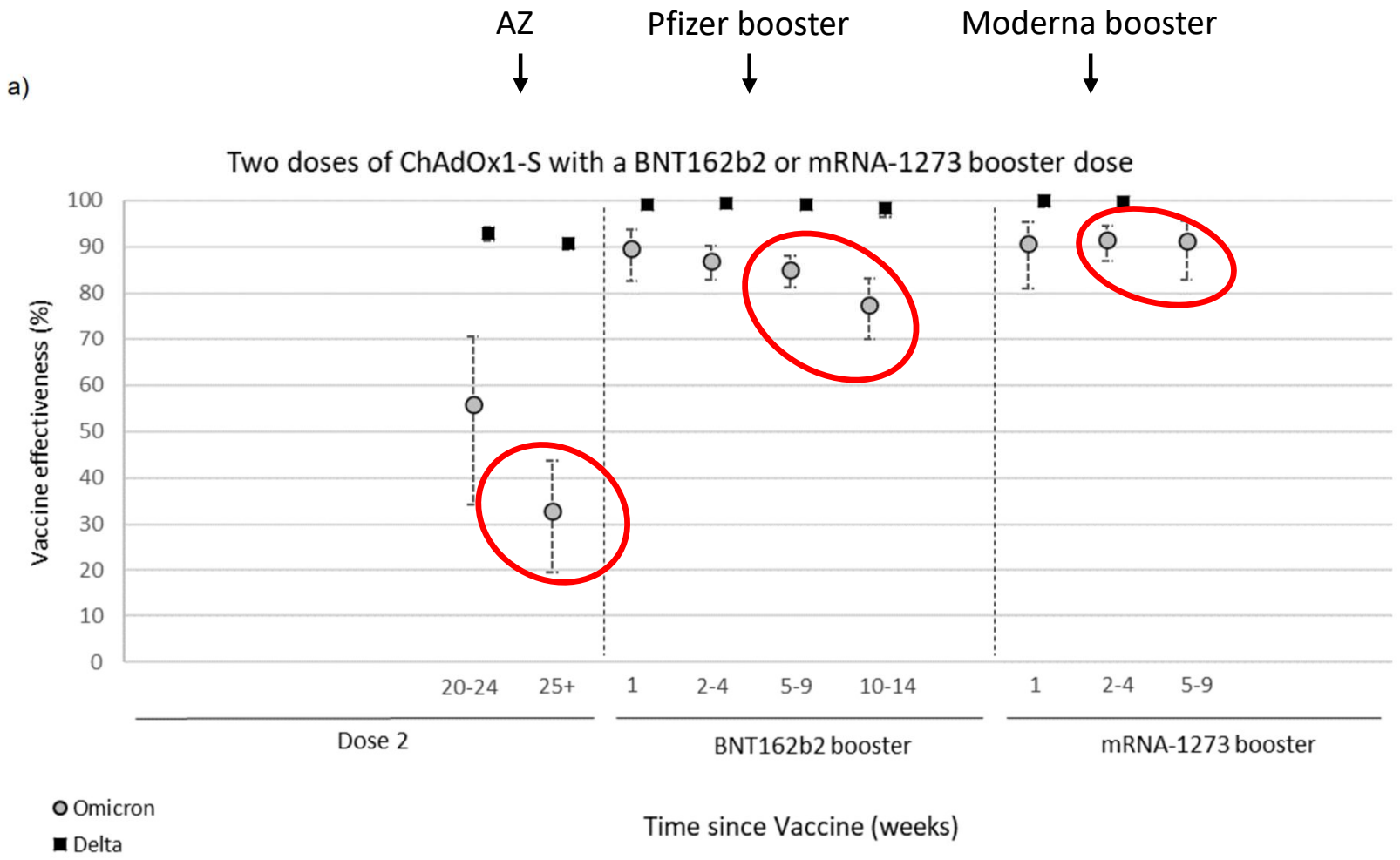
UKHSA estimates of waning of vaccines against Omicron: hospitalisation



From https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1061532/Vaccine_surveillance_report_-_week_11.pdf

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Immunity in care home residents declines quickly

Results

For 15,518 older residents, VE declined from 50·7% (15·5, 71·3) to 17·2% (-23·9, 44·6) against infection; from 85·4% (60·7, 94·.6) to 54·3% (26·2, 71·7) against hospitalisation; and from 94·4% (76·4, 98·7) to 62·8% (32·9, 79·4) against death, when comparing 2-12 weeks and ≥12 weeks after two doses. For 19,515 staff, VE against infection declined slightly from 50·3% (32·7, 63·3) to 42·1% 29·5, 52·4). High VE was restored following a third dose, with VE of 71·6% (53·5, 82·7) and 78·3% (70·1, 84·3) against infection and 89·9% (80·0, 94·6) and 95·8% (50·4, 99·6) against hospitalisation, for residents and staff respectively; and 97·5% (88·1, 99·5) against death for residents.

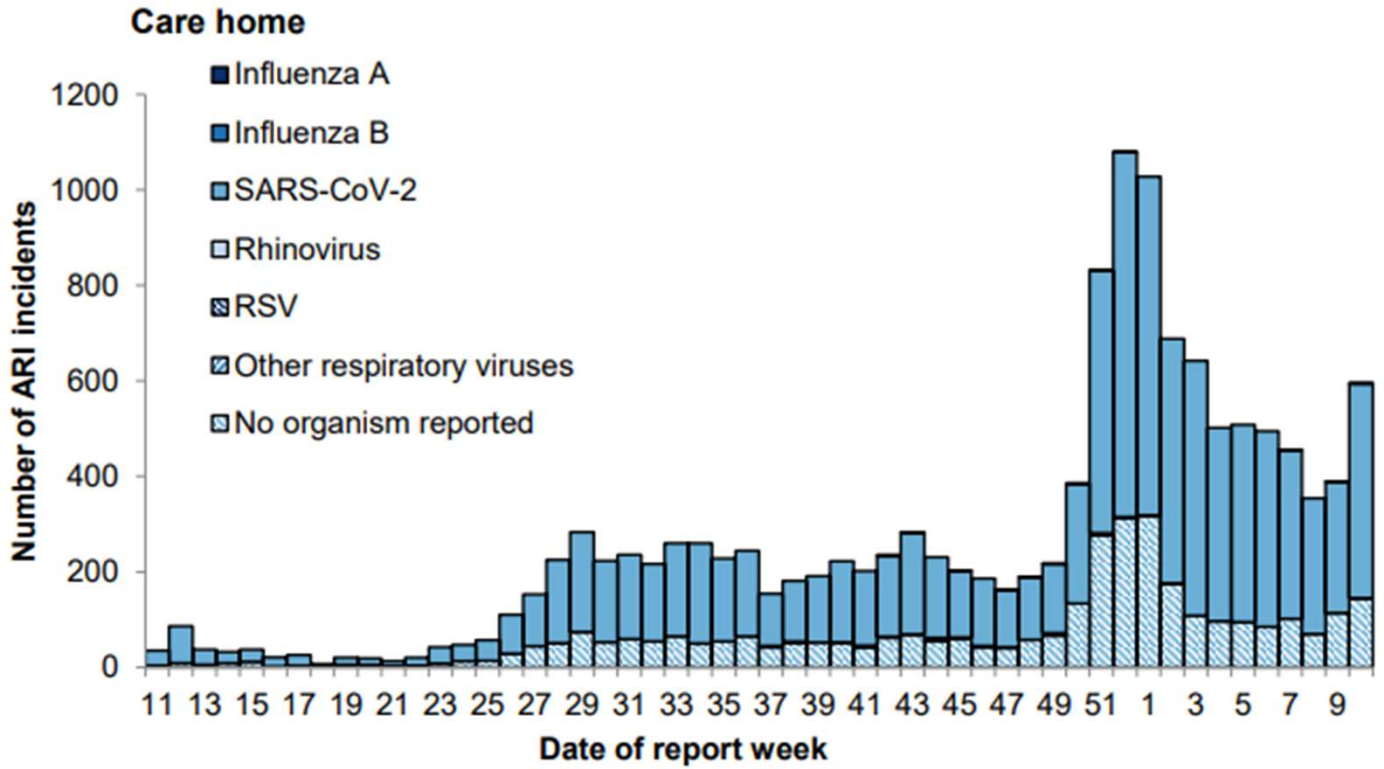
Interpretation

Substantial waning of VE is observed against all outcomes in residents from 12 weeks after a primary course of AstraZeneca or mRNA vaccines. Boosters restore protection, and maximise immunity across all outcomes. These findings demonstrate the importance of boosting and the need for ongoing surveillance of VE in this vulnerable cohort.

UCL Vivaldi study https://www.medrxiv.org/content/10.1101/2022.03.09.22272098v1.full.pdf

Outbreaks in Care Homes increasing

Figure 21: Number of acute respiratory infection (ARI) incidents in care homes by virus type, England



UKHSA weekly surveillance report:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1061534/Weekly_Flu_and_COVID-19_report_w11.pdf

BA.2 Omicron variant

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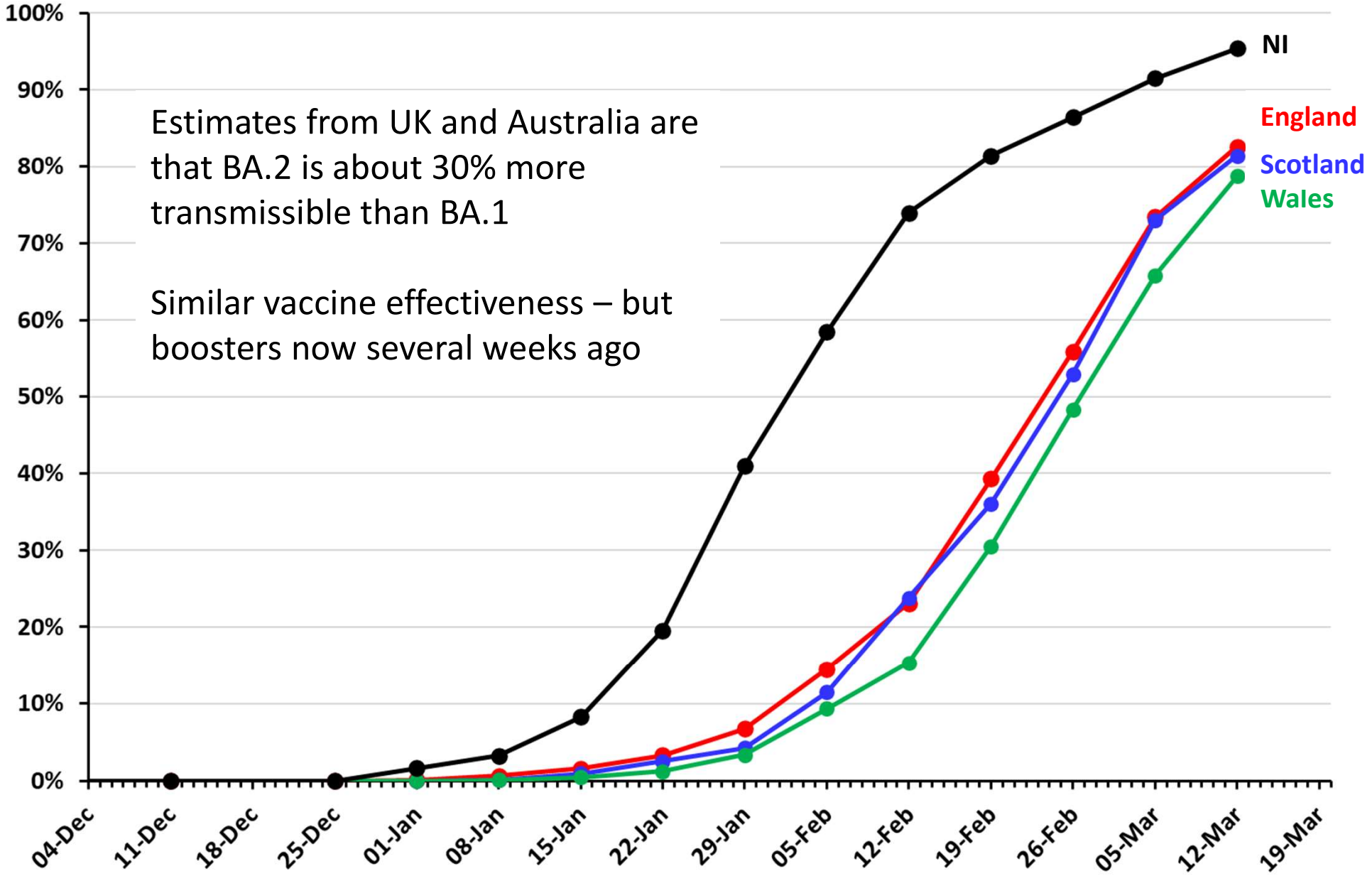
Proportion of sequenced cases that are **BA.2** over time by home nation to week ending 12 Mar 2022.



Data from COG UK, https://www.cogconsortium.uk/priority-areas/data-linkage-analysis/public-data-analysis/

Prevalence of Covid

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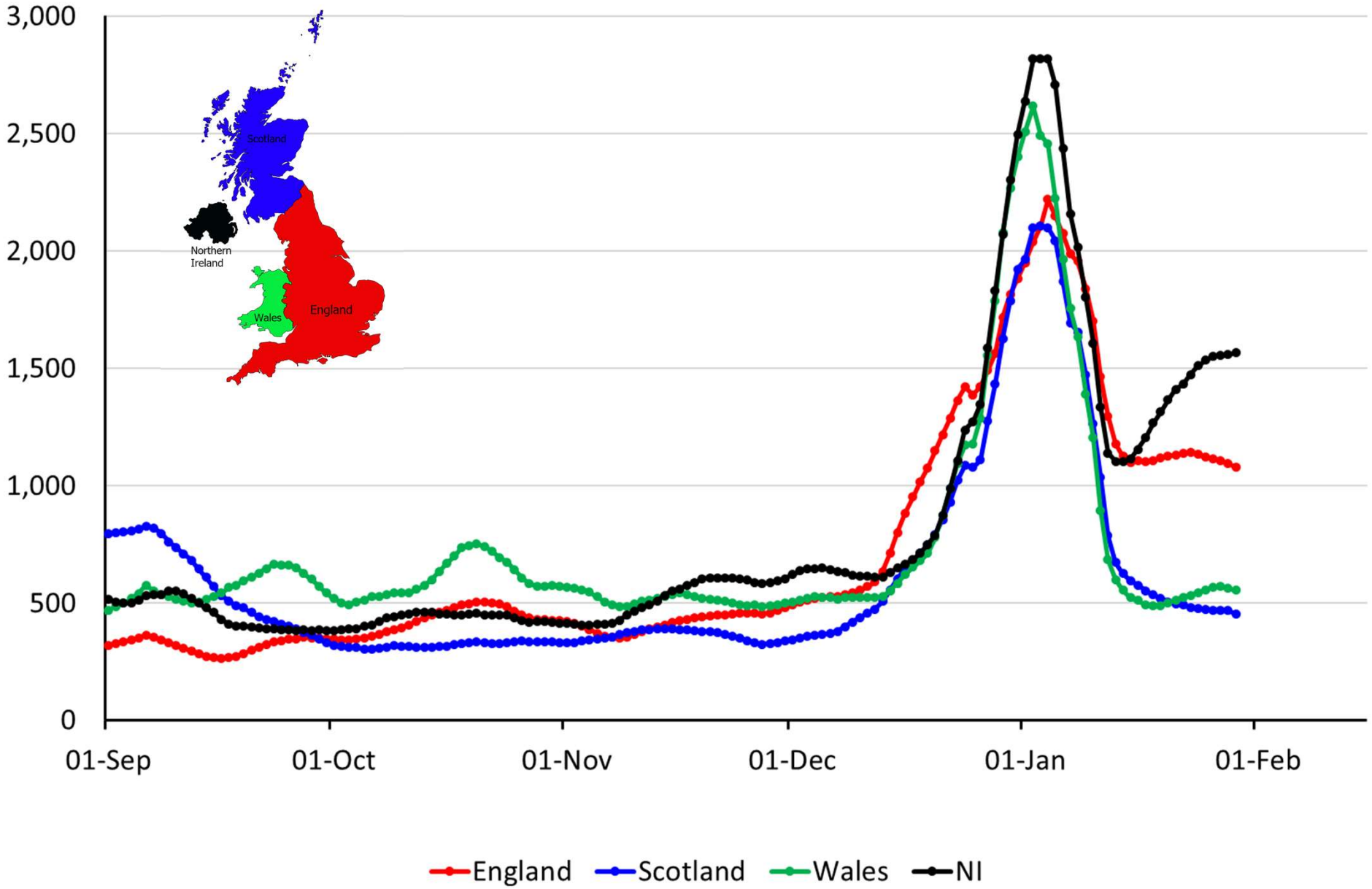
Cases per 100,000 people per rolling week by home nation by date of test to 12 March 2022



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

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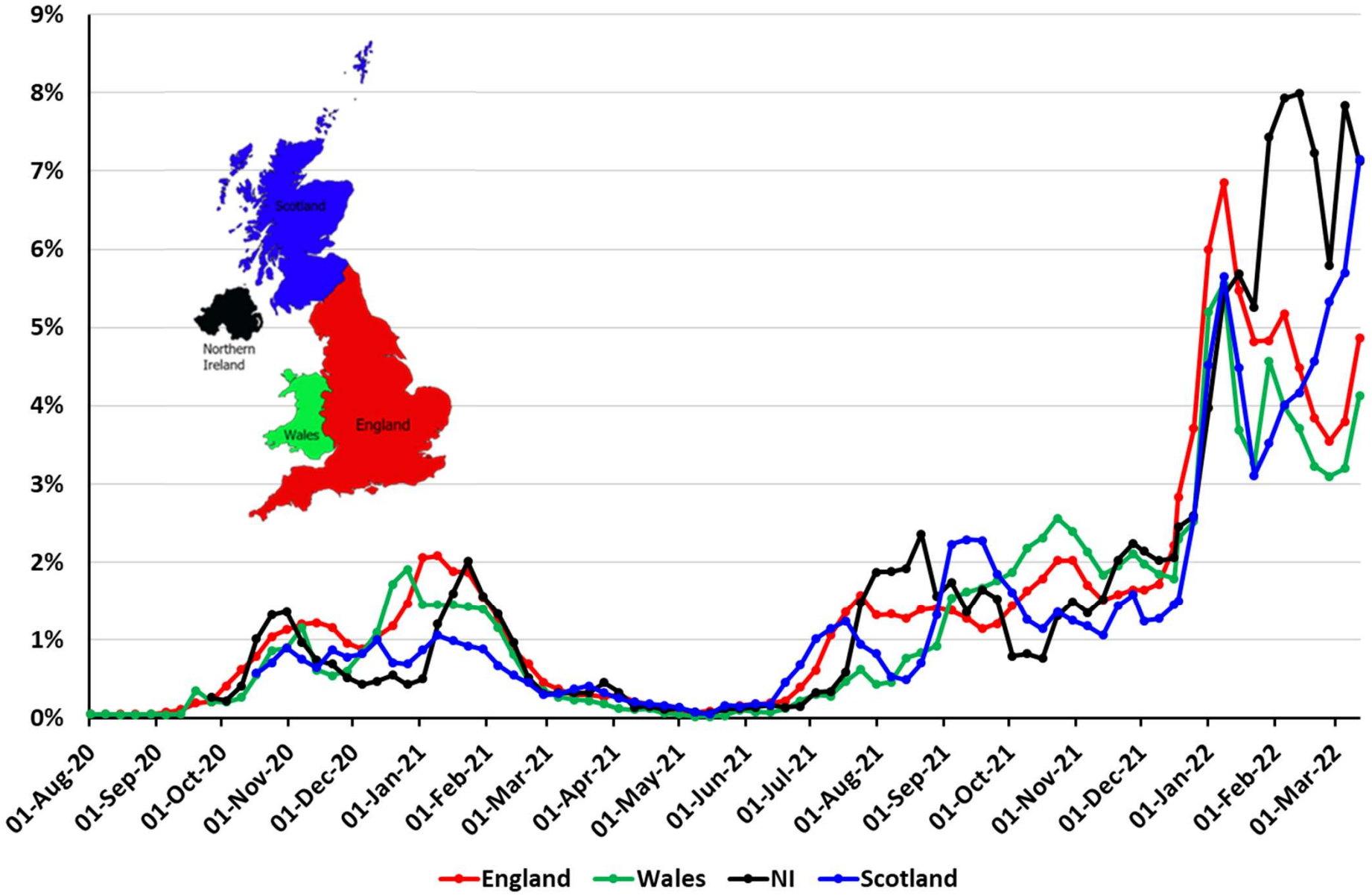
Percent of population testing positive each week by nation: 1 Aug 2020 to 12 March 2022 ONS Infection Survey (random testing)



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

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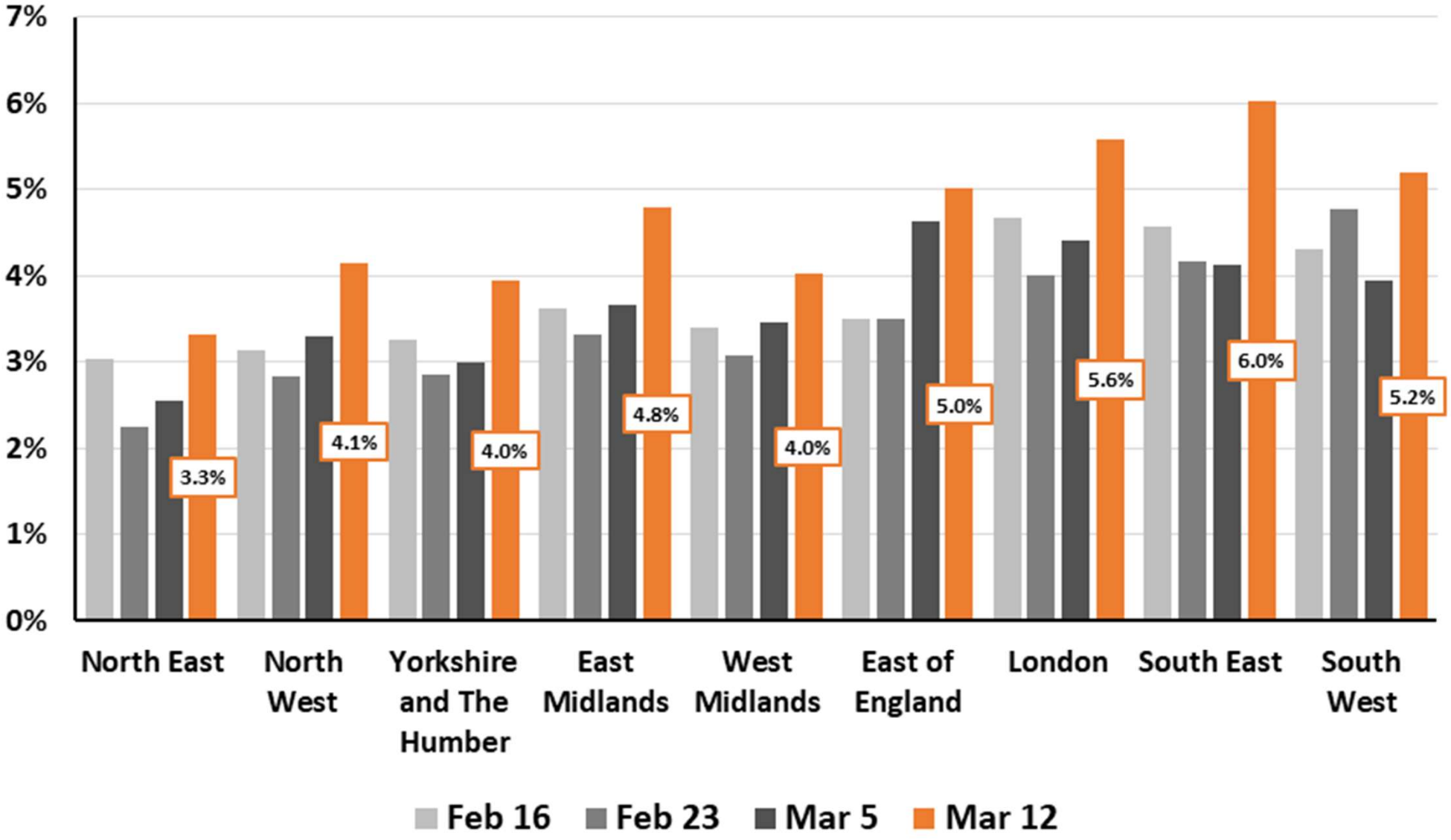
Percent Testing Positive by Region: 12 Mar vs Prior Weeks

(Source: Coronavirus (COVID-19) Infection Survey results, UK: 18 Mar 2022)



Data from
https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionsurveypilot/previousReleases .

Thanks to Bob Hawkins for the chart

Hospitals

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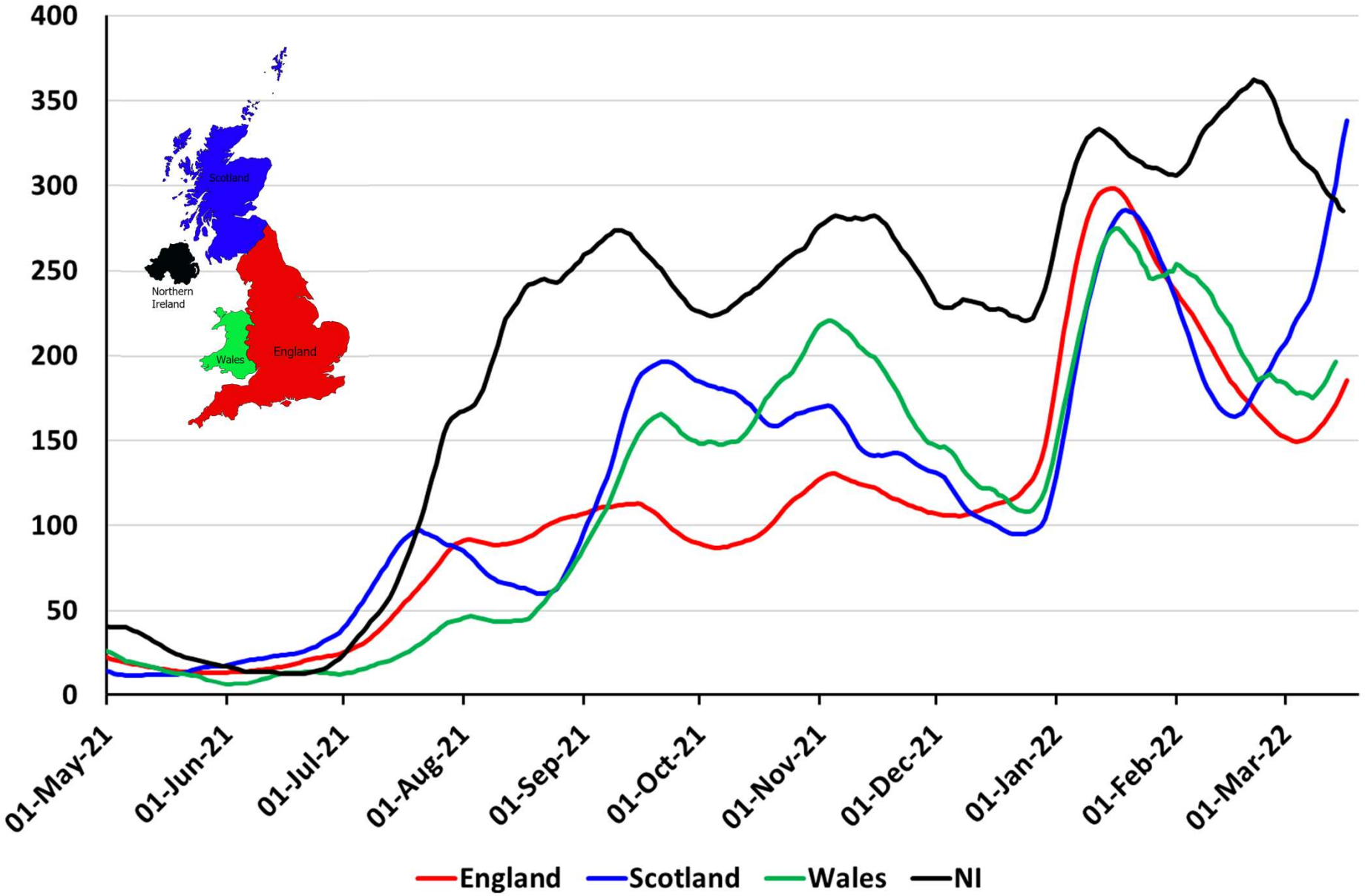
Number of people in hospital with Covid per million people – UK nations
7 day rolling average to 17 Mar 2022



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

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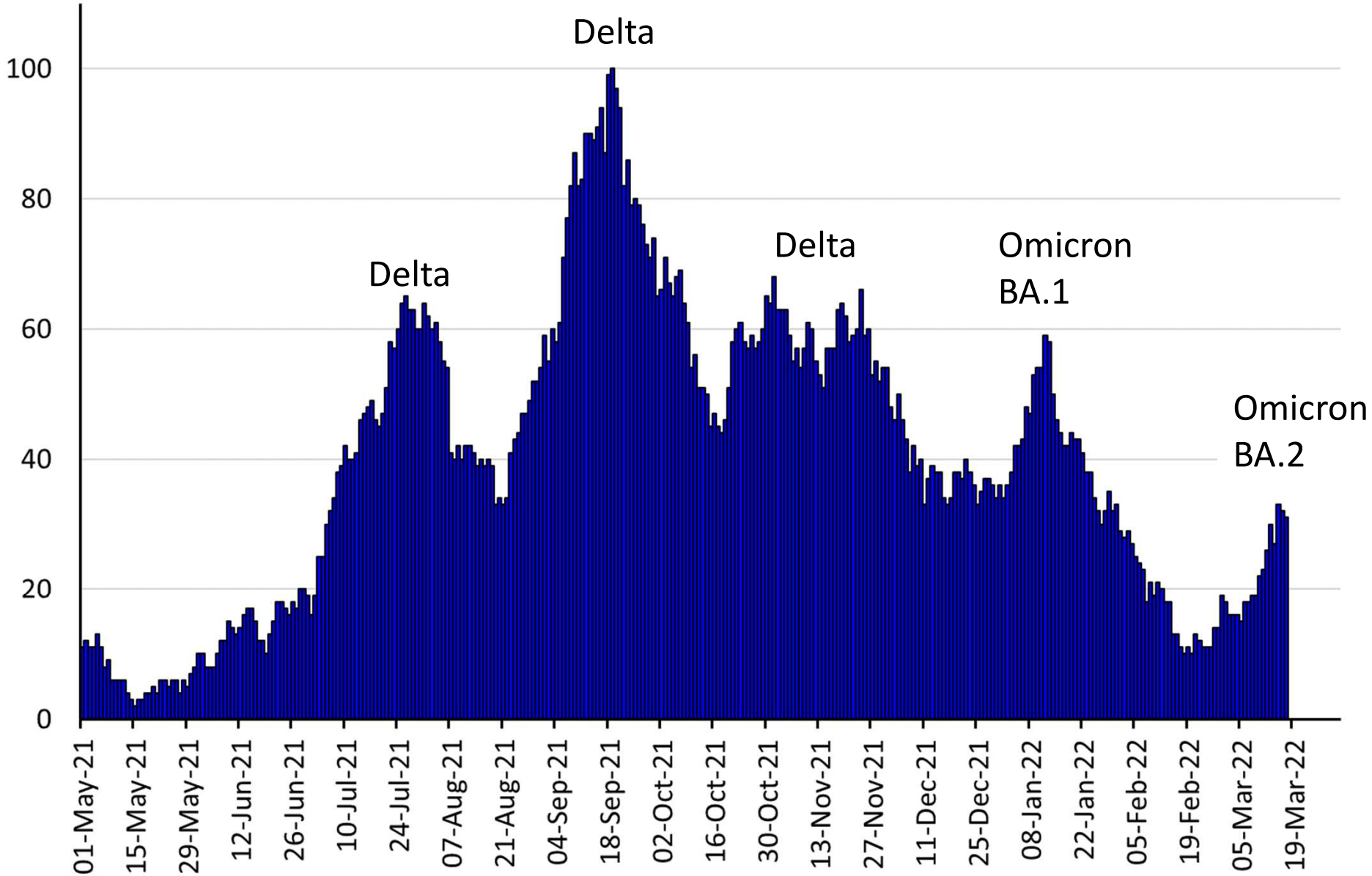
Number of people with Covid-19 in mechanically ventilated beds in Scotland to 17 March 2022



From https://coronavirus.data.gov.uk/details/healthcare?areaType=nation&areaName=Scotland

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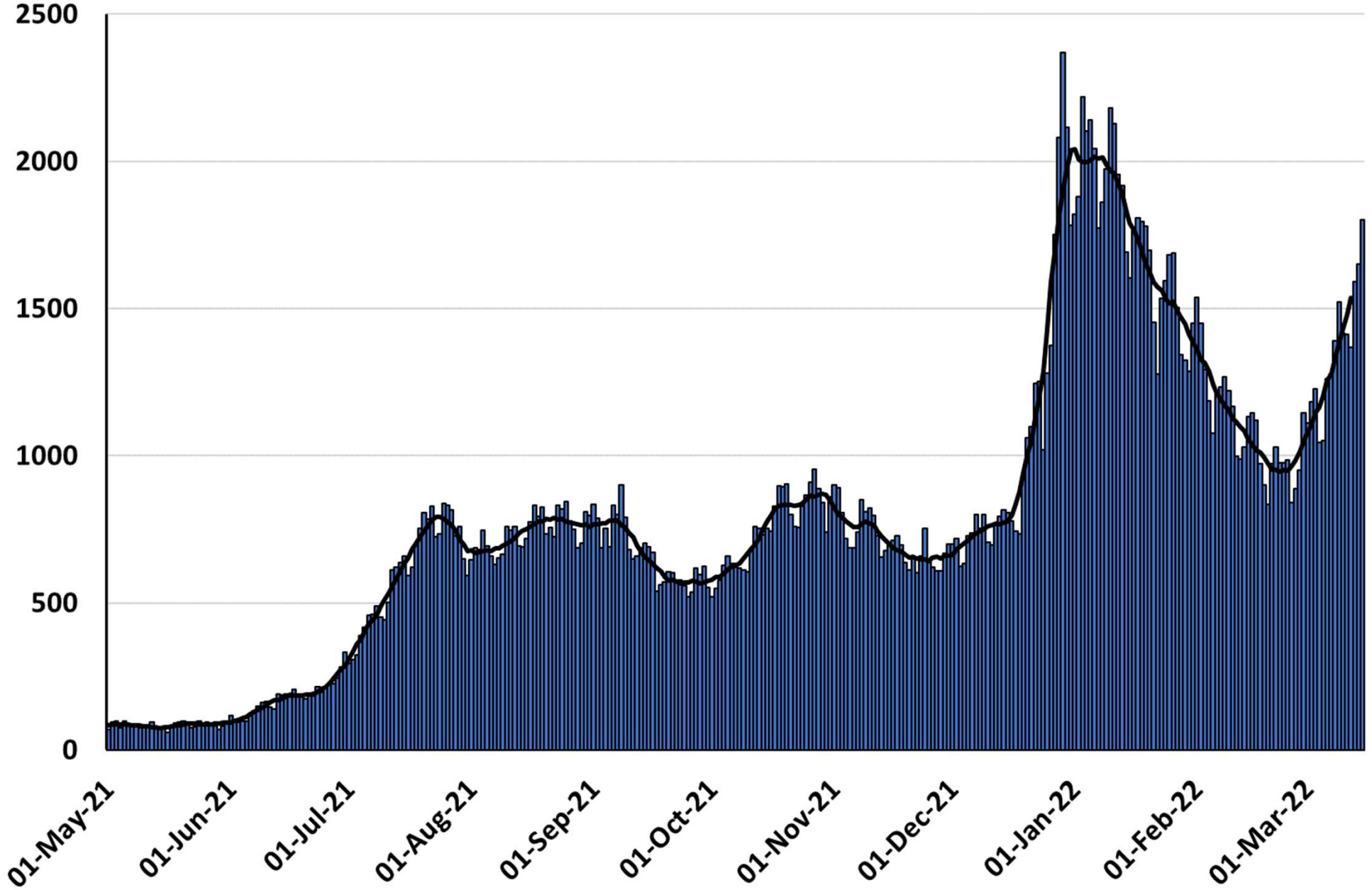
Number of daily hospital admissions with Covid in England to 15 Mar 2022



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

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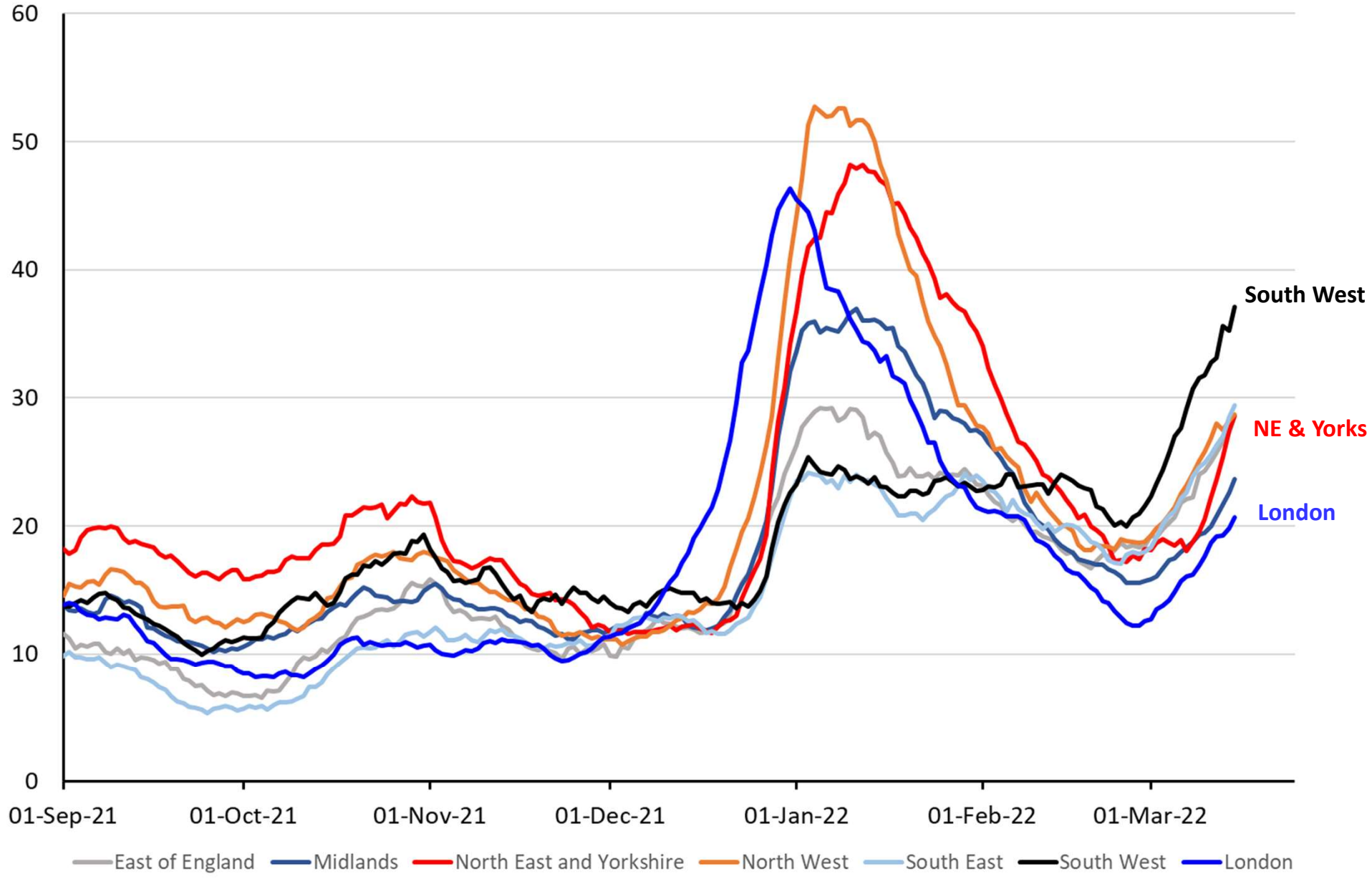
7-day average of daily number of new hospital admissions with COVID-19 per day / million people across different regions in England



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

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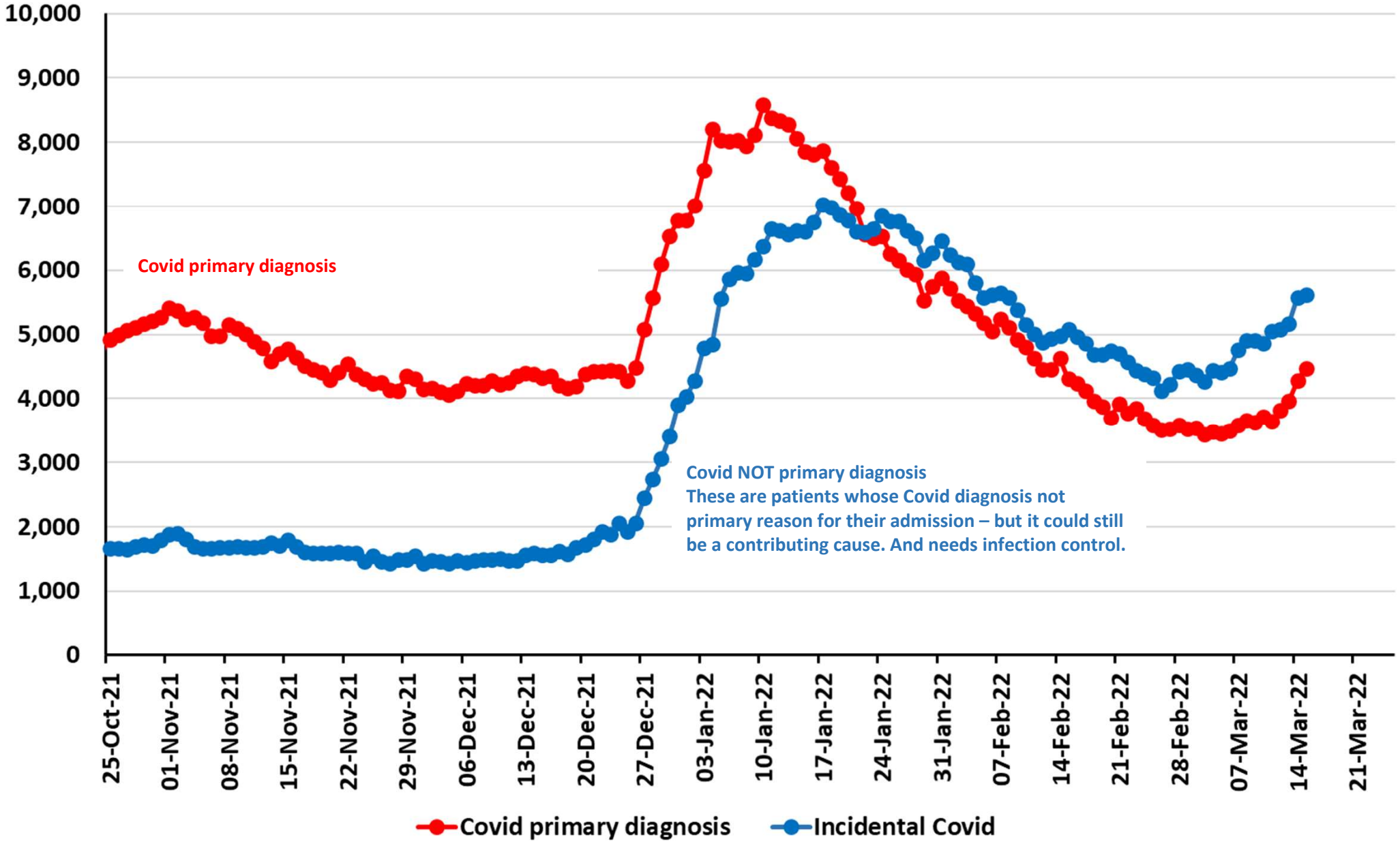
Number of people in hospital with Covid in England by primary reason to 15 March 2022



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

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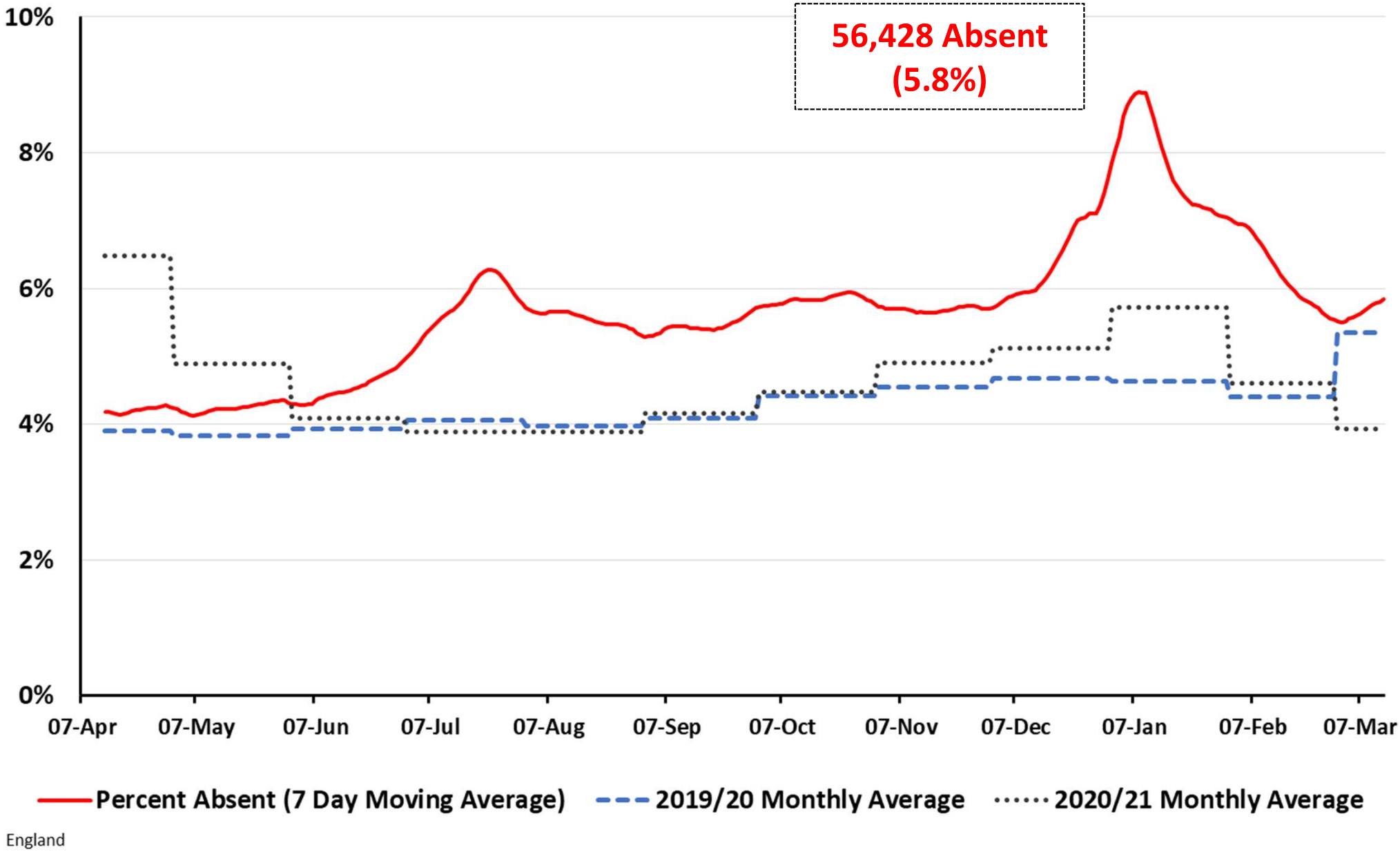
Percent of Staff Absent from NHS Acute Hospital Trusts in England 7 Apr 2021– 13 Mar 2022 Compared to prior Years

(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/

Thanks to Bob Hawkins for the chart

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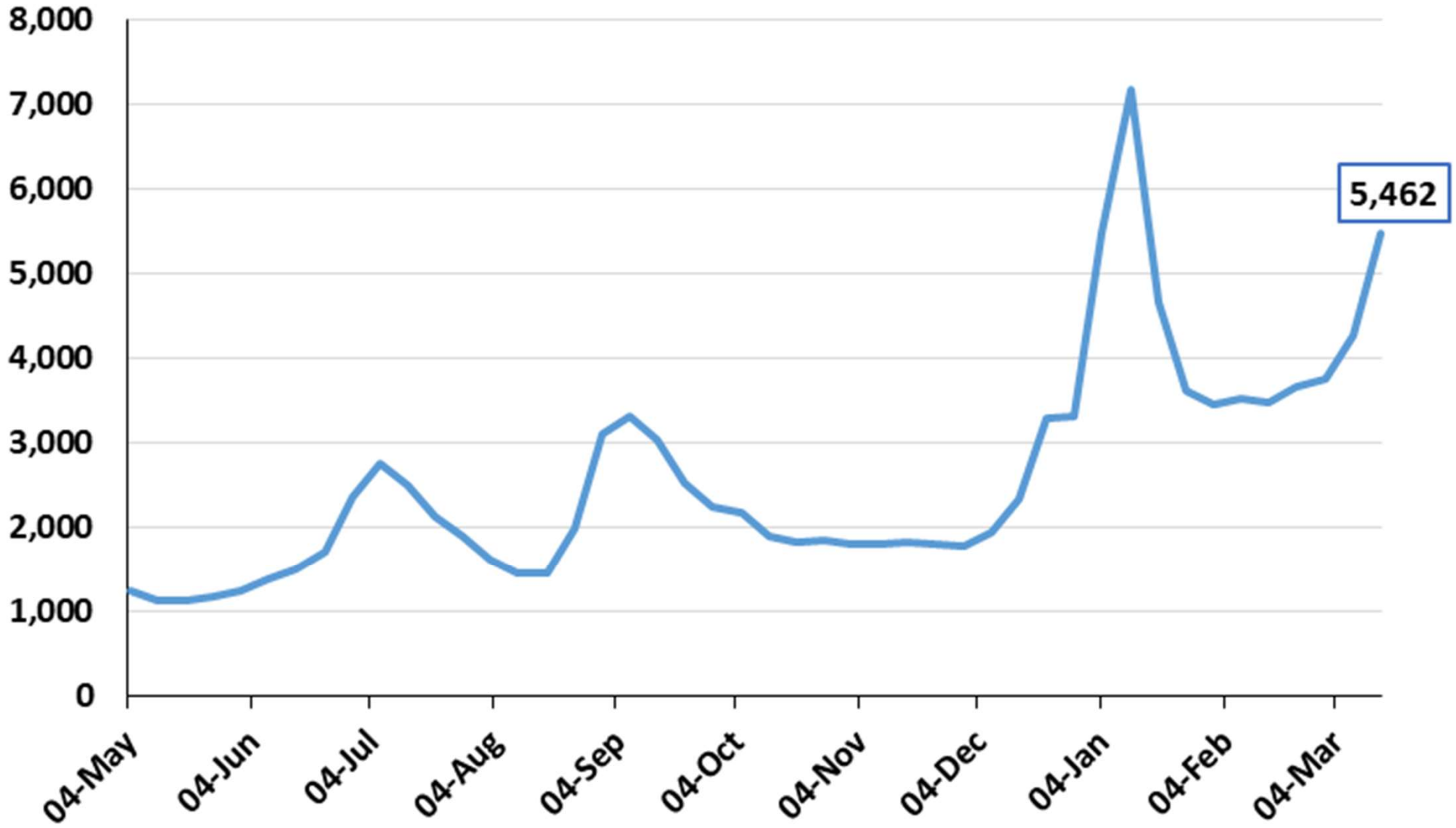
Number of Staff Absent from NHS Hospitals due to Covid in Scotland 7 Apr 2021– 13 Mar 2022

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



Thanks to Bob Hawkins for the chart

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

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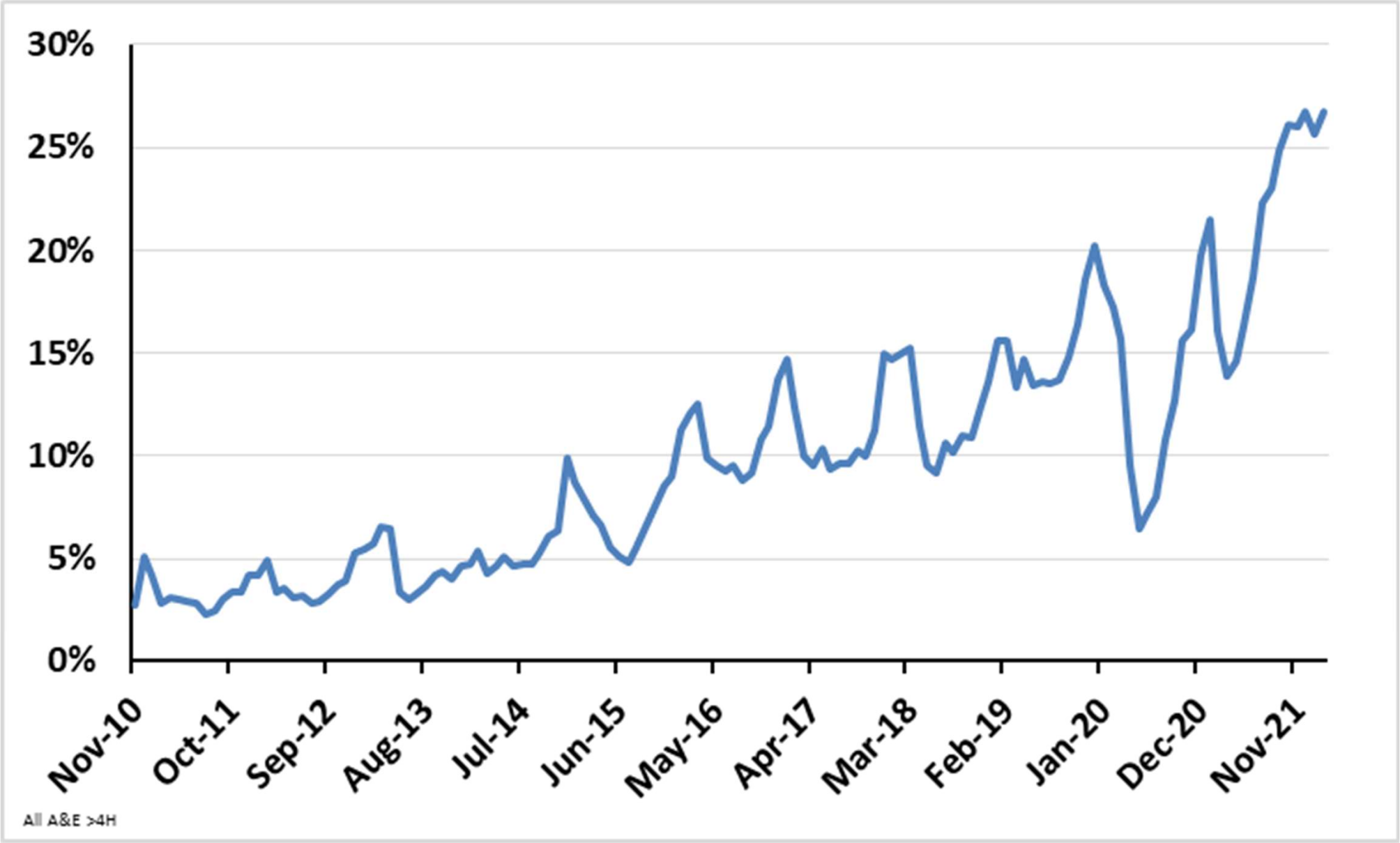
Percent of A&E attendances greater than 4 hours from arrival to admission, transfer or discharge for England: Nov 2010 – Jan 2022

(Source: NHS Monthly A&E Attendances and Emergency Admissions)



Thanks to Bob Hawkins for the chart https://www.england.nhs.uk/statistics/statistical-work-areas/ae-waiting-times-and-activity/

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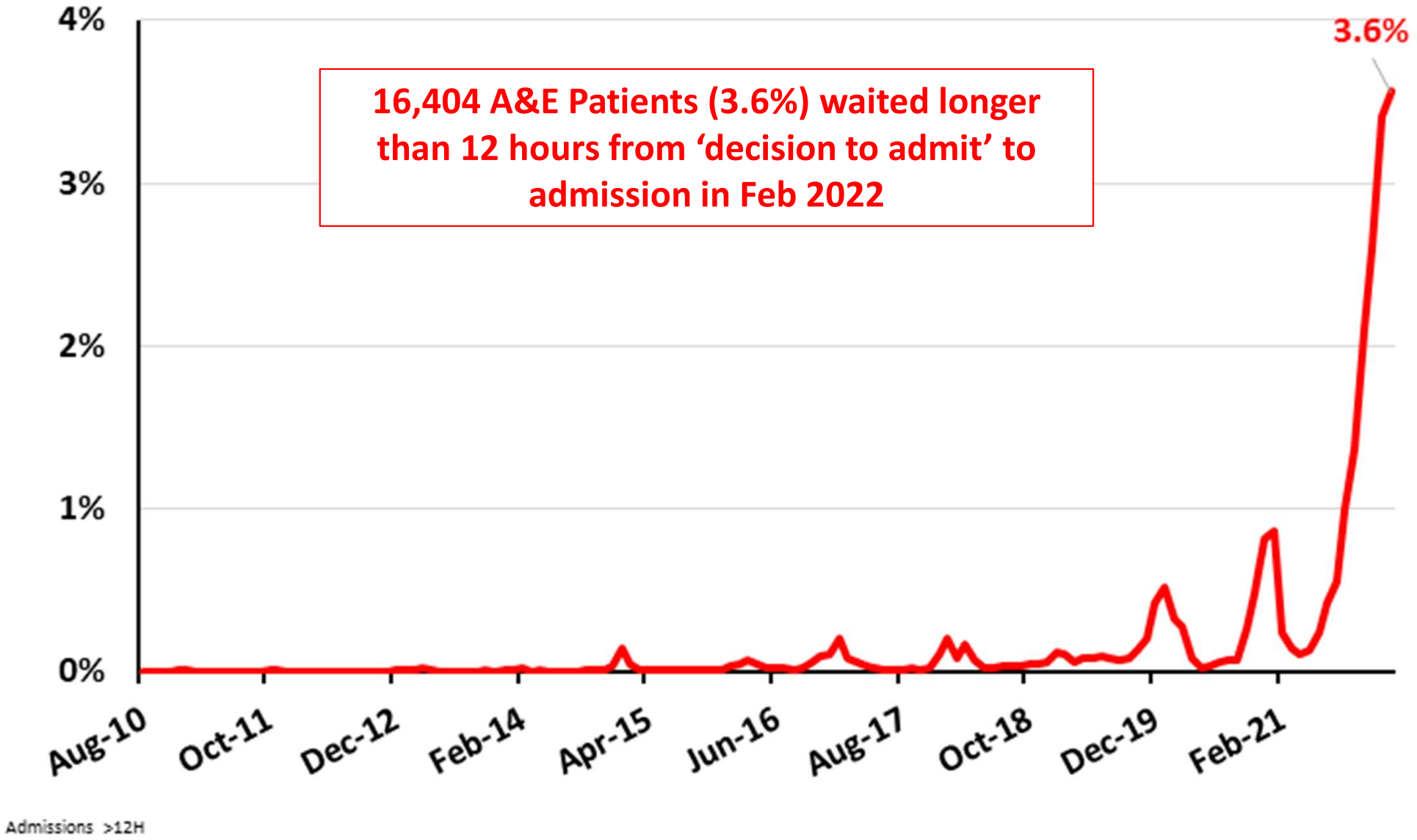
Percent of A&E attendances greater than 12 hours from 'decision to admit' to hospital admission for England: Nov 2010 – Feb 2022

(Source: NHS Monthly A&E Attendances and Emergency Admissions)



Thanks to Bob Hawkins for the chart

https://www.england.nhs.uk/statistics/statistical-work-areas/ae-waiting-times-and-activity/

Deaths

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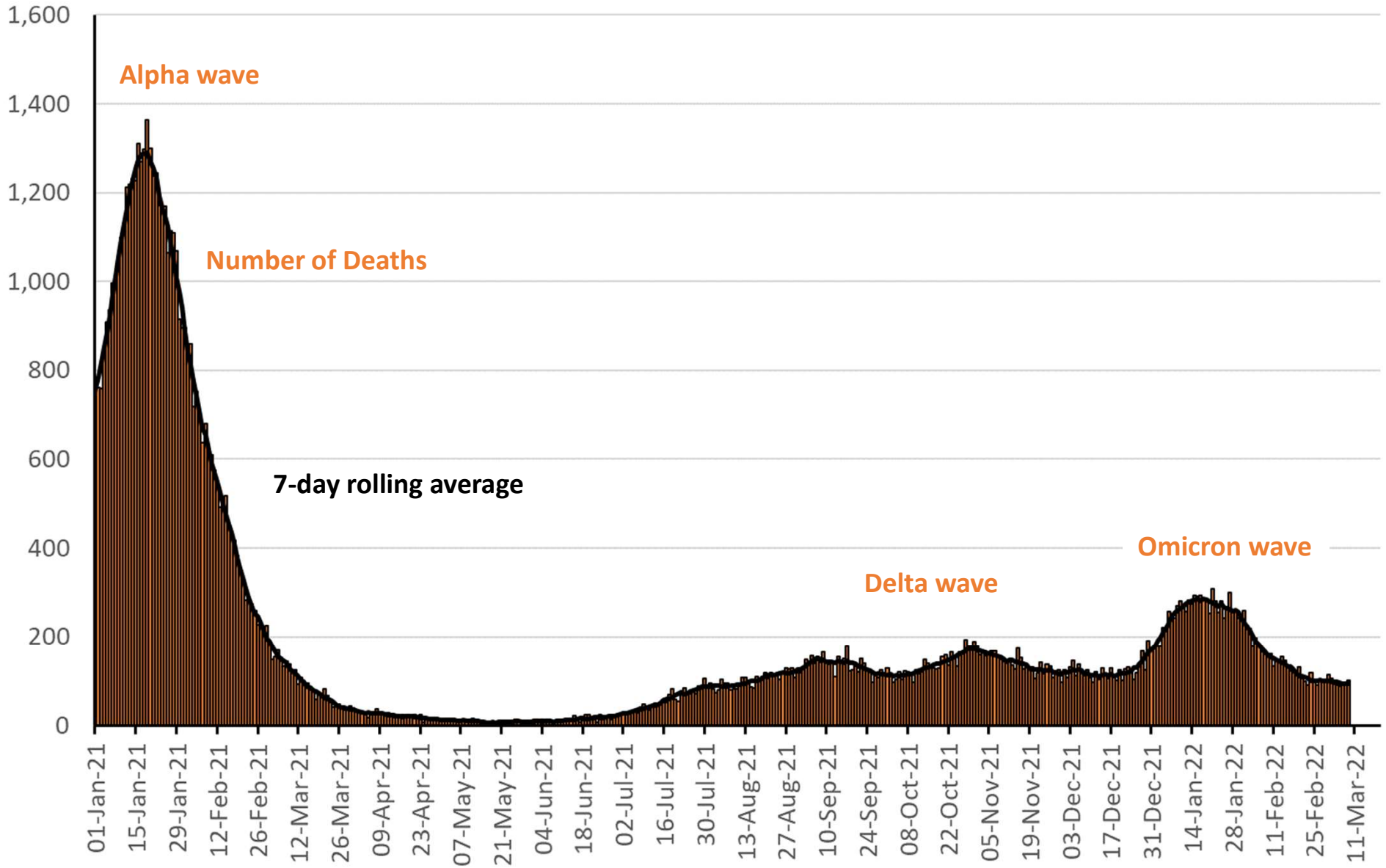
Number of deaths within 28 days of +ve COVID test by date of death across the UK to 10 March 2022



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

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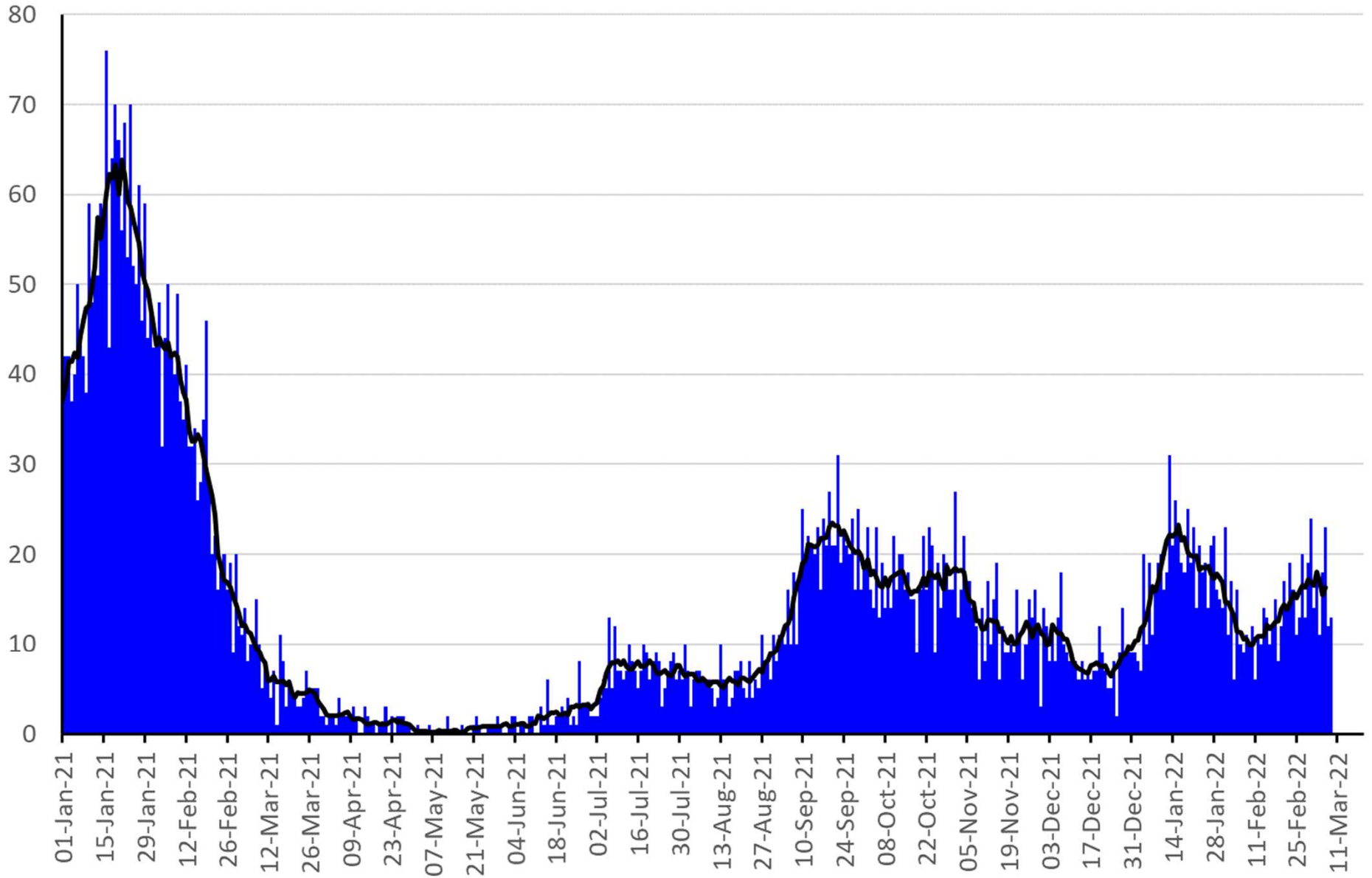
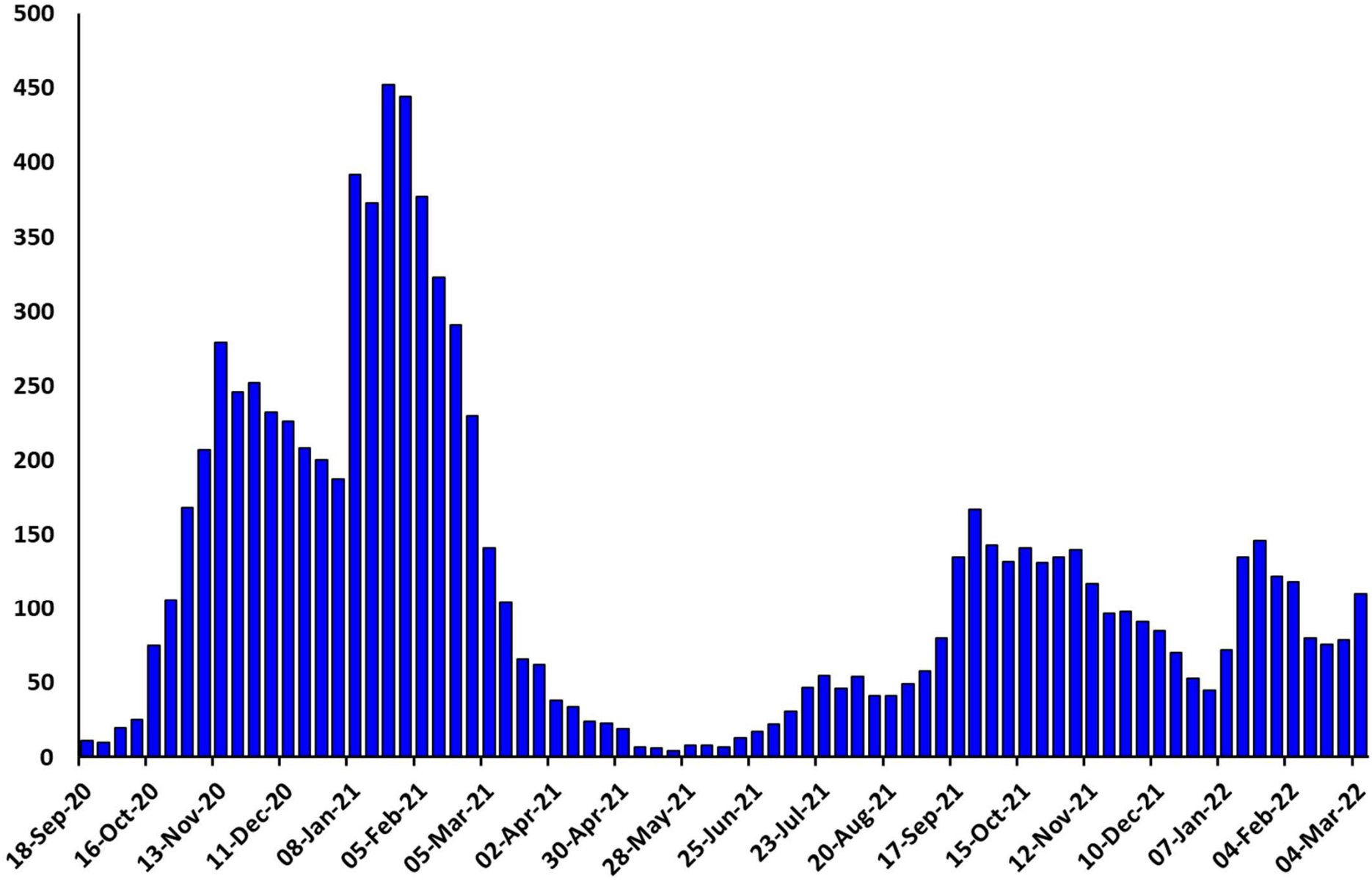
Number of deaths within 28 days of +ve COVID test by date of death in Scotland to 10 March 2022



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

Number of deaths with Covid on the death certificate by week registered in Scotland to 4 March 2022



Data from https://data.gov.scot/coronavirus-covid-19/detail.html#deaths

Children

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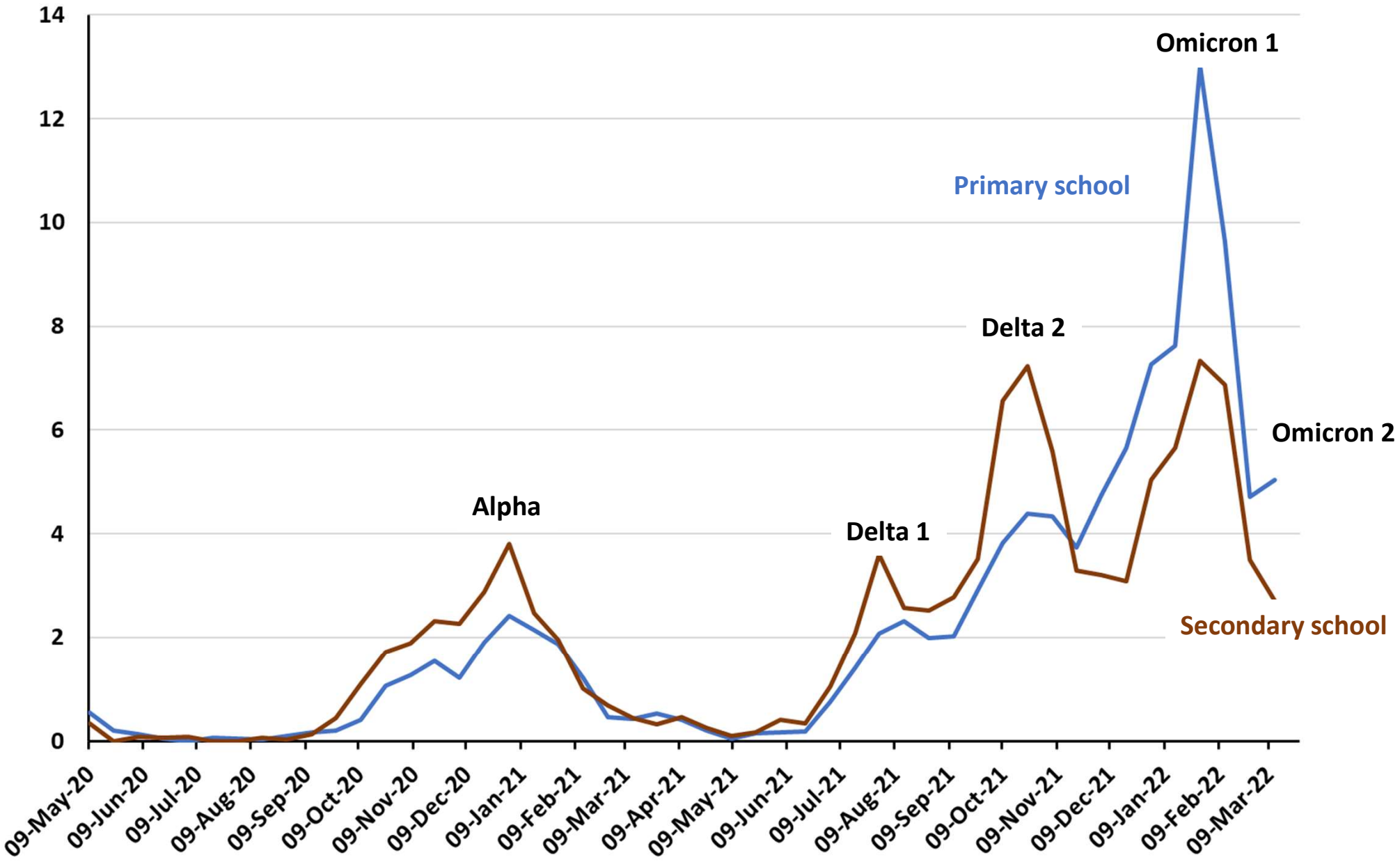
Percentage of children testing positive every fortnight to 5 March 2022 from ONS infection survey



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

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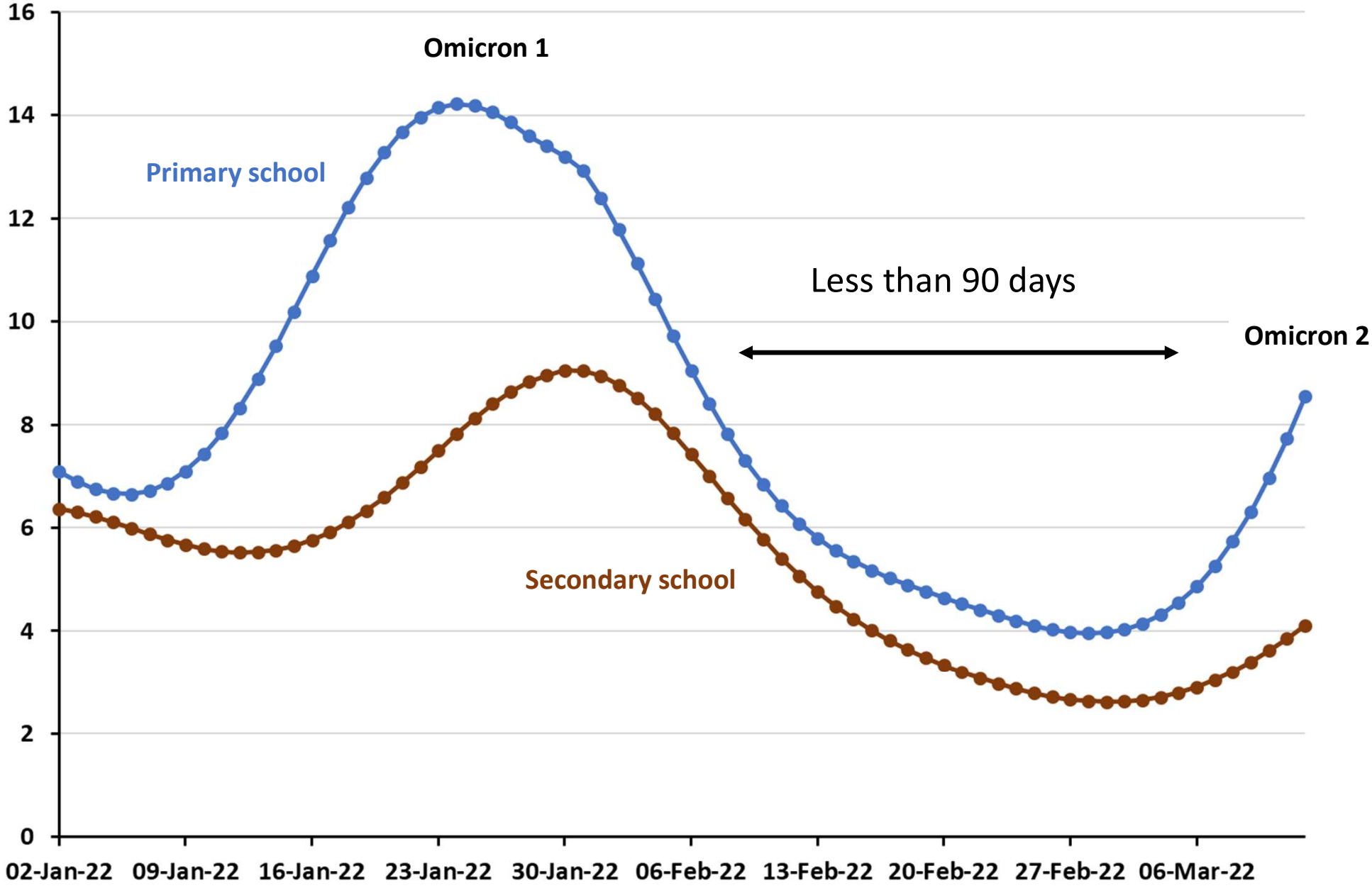
ONS modelled primary and secondary school children prevalence over last two months



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

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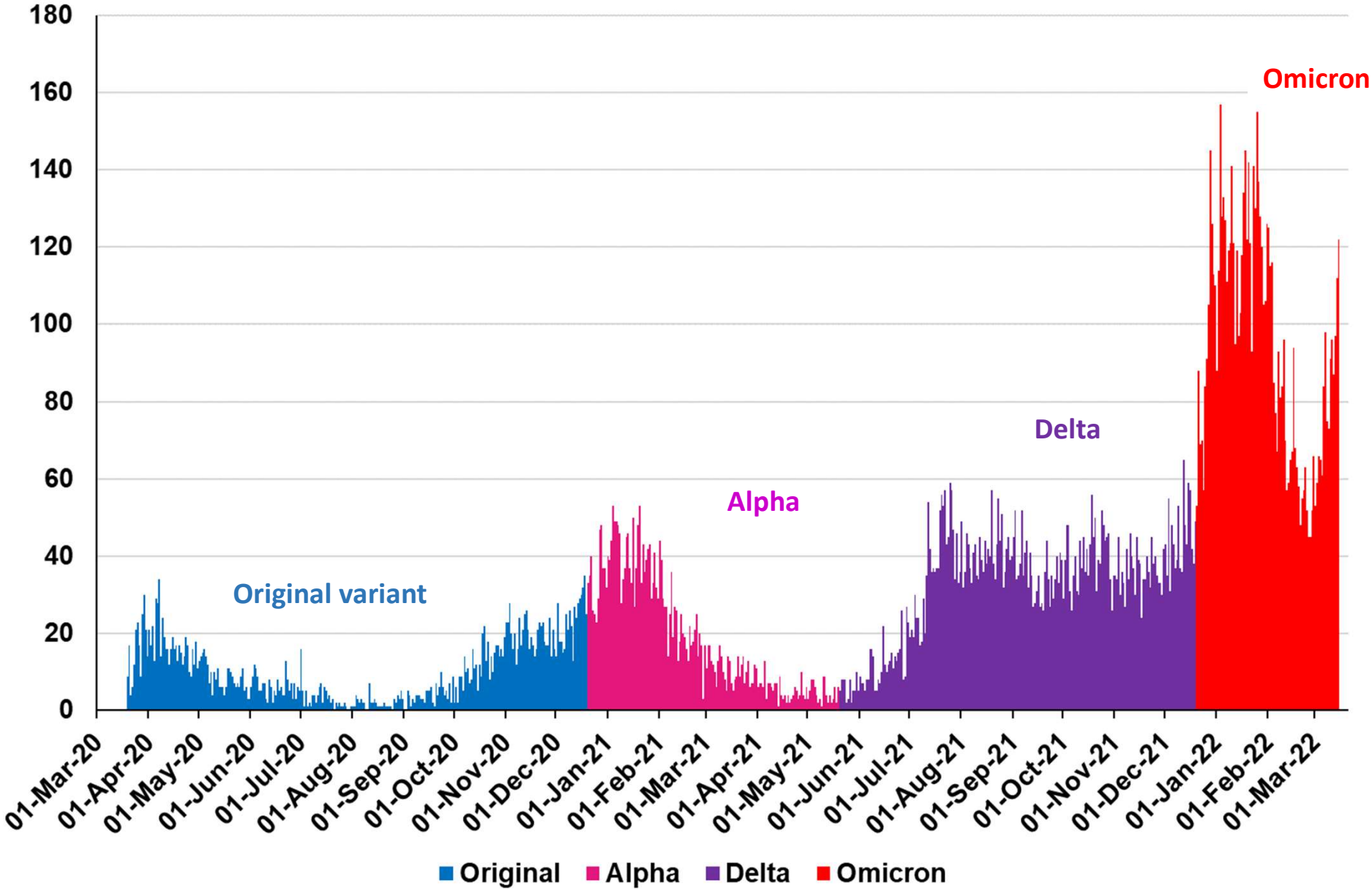
Daily Covid hospital admissions in England for all children (0-18 yrs) since the start of the pandemic to 15 Mar 2022



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

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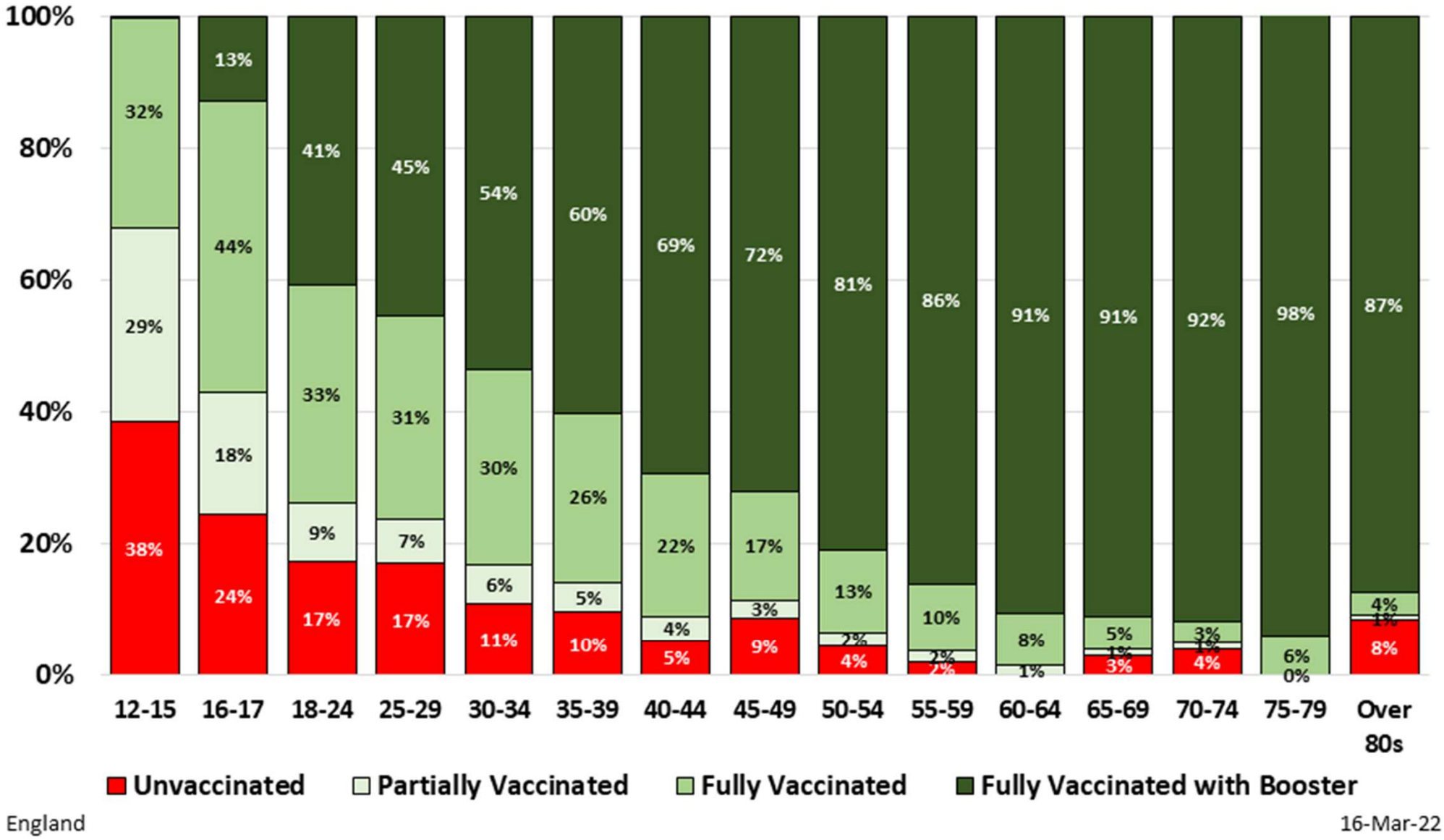
Percent Unvaccinated, First Dosed, Second Dose, and Fully Vaccinated with Booster by Age for England as at Mar 16

(Source: Covid Daily Update and Mid-2020 ONS Population Estimates)



Thanks to Bob Hawkins for the chart

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CDC report: vaccination in 5-15 year olds

"Two doses of Pfizer-BioNTech vaccine received <5 months earlier were moderately effective (31%) in preventing symptomatic and asymptomatic Omicron infection among children aged 5–11 years and 59% effective among adolescents aged 12–15 years. The wide and overlapping CIs indicate that these age-specific VE point estimates might not be significantly different and are similar to a recent report of VE of 45%–51% for 2 doses, received within 150 days, against Omicron COVID-19–associated emergency department and urgent care visits among children and adolescents aged 5–15 years (7). Participants who were infected with Omicron despite receipt of 2 vaccine doses spent an average of one half day less sick in bed than did unvaccinated participants with Omicron infections."

"This study provides evidence that receipt of 2 doses of Pfizer-BioNTech vaccine is effective in preventing both asymptomatic and symptomatic SARS-CoV-2 infection with the Omicron variant among children and adolescents aged 5–15 years. All eligible children and adolescents should remain up to date with recommended COVID-19 vaccinations."

https://www.cdc.gov/mmwr/volumes/71/wr/mm7111e1.htm?s_cid=mm7111e1_w

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UKHSA report: vaccination in pregnancy protects both the mother and the newborn

There is evidence of high levels of protection against SARS-CoV-2 infection in pregnant women after COVID-19 vaccination (28 to 30) and evidence that vaccination induces higher antibody levels than after disease (30). There is also evidence from a recent US study that 2-doses of mRNA COVID-19 vaccination during pregnancy might help prevent COVID-19 hospitalisations in young infants under 6 months of age (31). Between February and September 2021, 0.4% of 1,714 pregnant women with COVID-19 symptoms who required hospital treatment in the UK had received 2 doses of COVID-19 vaccine and, of 235 pregnant women who were admitted to intensive care with COVID-19 disease in that period, none had received 2 doses of vaccine

From https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1061532/Vaccine_surveillance_report_-_week_11.pdf

Pandemic overview

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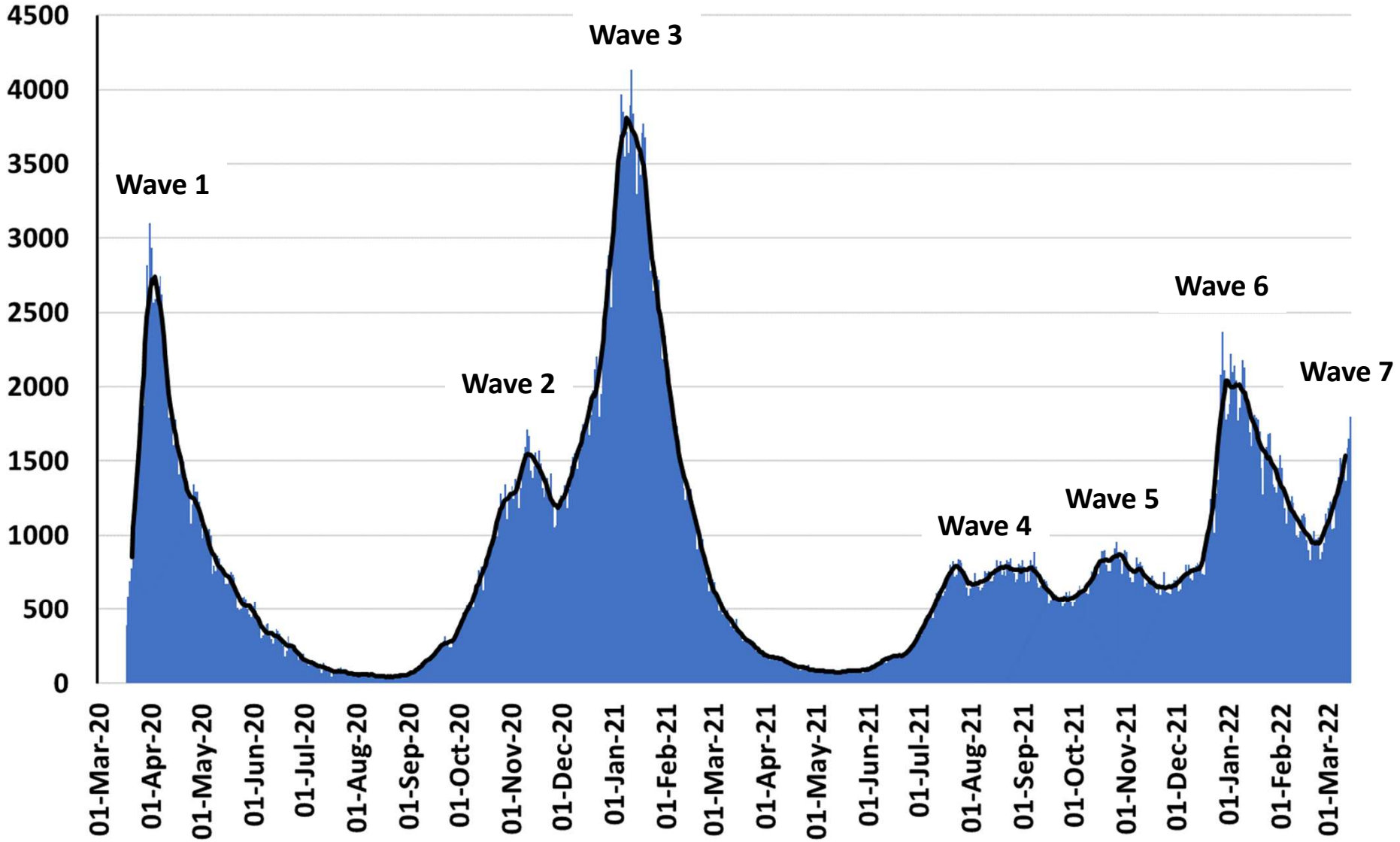
Number of daily hospital admissions with Covid in England to over whole pandemic



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

Ventilation updates

“Scores on the doors”

On 8th Oct 2021 Indie SAGE suggested a “scores on the doors” system for indicating quality of ventilation

COVID “SCORES ON THE DOORS”: AN APPROACH TO VENTILATION/FRESH AIR INFORMATION, COMMUNICATION, AND CERTIFICATION

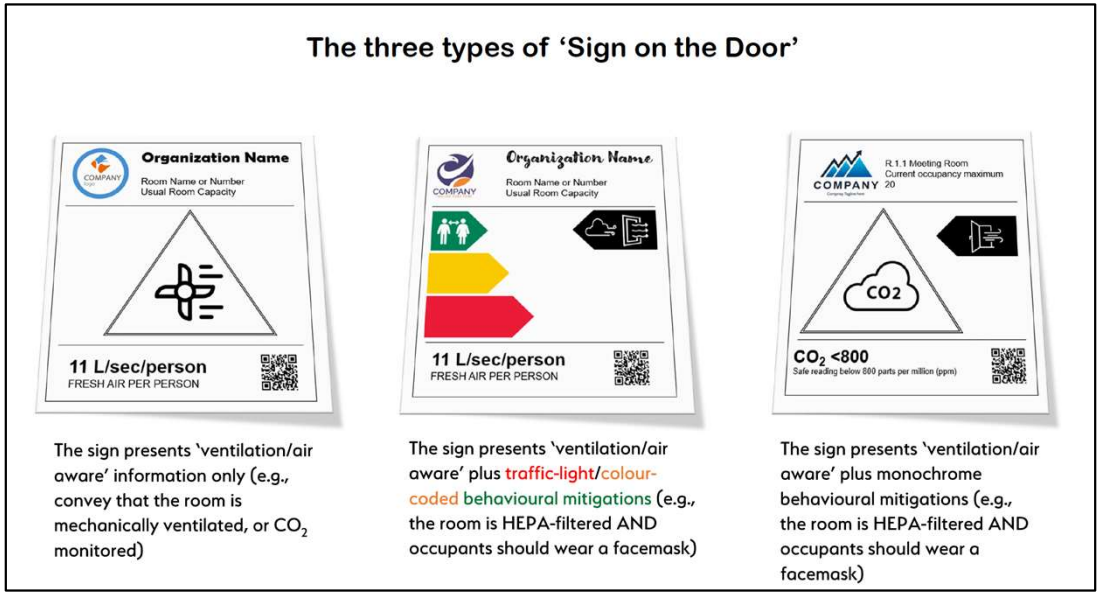
8 Oct 2021 | Mitigation measures, Recent reports

“Scores on the doors”

Since then we have carried on developing the idea together with partners, which has resulted in different simplified versions of the scheme.

It is currently being piloted in a few organisations in England, including two universities, and has been presented to the Scottish Government since when it has been a commitment articulated in Scotland’s Strategic Framework in February 2022. We are actively talking to more potential pilot organisations.

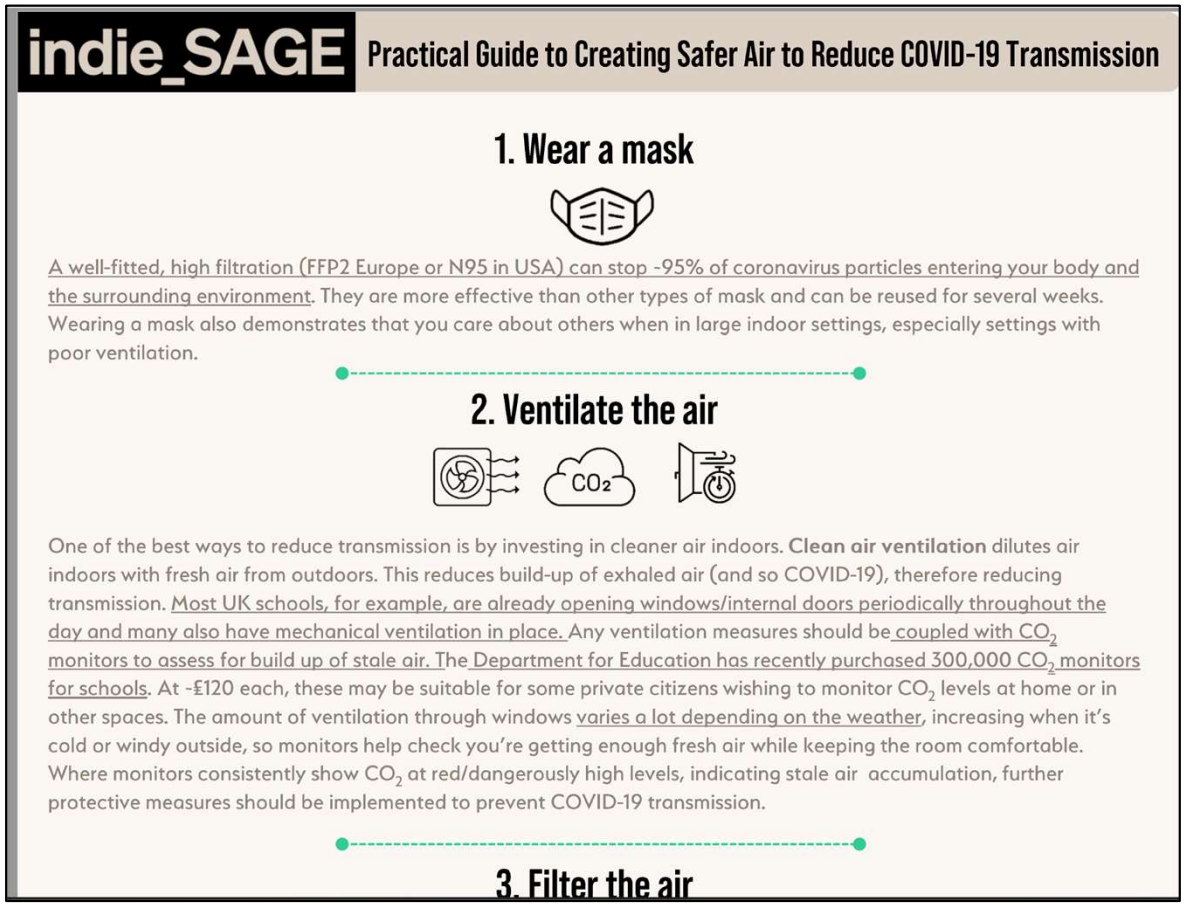
If interested, please email questions@independentsage.org. Details here: https://www.independentsage.org/independent-sage-signs-and-scores-on-the-doors%ef%bf%bc/



Handy ventilation guide

On 4th February we had a briefing about ventilation with Prof Trish Greenhalgh and Dr Adam Squires. We had a lot of feedback that people appreciated their practical advice on masks, fresh air and HEPA filtration.

We have now produced a brief guide summarising their advice and providing further resources: https://www.independentsage.org/independent-sage-practical-guide-to-creating-safer-air-to-reduce-covid-19-transmission/



indie_SAGE Practical Guide to Creating Safer Air to Reduce COVID-19 Transmission

1. Wear a mask

A well-fitted, high filtration (FFP2 Europe or N95 in USA) can stop ~95% of coronavirus particles entering your body and the surrounding environment. They are more effective than other types of mask and can be reused for several weeks. Wearing a mask also demonstrates that you care about others when in large indoor settings, especially settings with poor ventilation.

2. Ventilate the air

One of the best ways to reduce transmission is by investing in cleaner air indoors. **Clean air ventilation** dilutes air indoors with fresh air from outdoors. This reduces build-up of exhaled air (and so COVID-19), therefore reducing transmission. Most UK schools, for example, are already opening windows/internal doors periodically throughout the day and many also have mechanical ventilation in place. Any ventilation measures should be coupled with CO_2 monitors to assess for build up of stale air. The Department for Education has recently purchased 300,000 CO_2 monitors for schools. At ~£120 each, these may be suitable for some private citizens wishing to monitor CO_2 levels at home or in other spaces. The amount of ventilation through windows varies a lot depending on the weather, increasing when it's cold or windy outside, so monitors help check you're getting enough fresh air while keeping the room comfortable. Where monitors consistently show CO_2 at red/dangerously high levels, indicating stale air accumulation, further protective measures should be implemented to prevent COVID-19 transmission.

3. Filter the air

SUMMARY

- ONS shows that the number of people with Covid is rising in all nations

- Number of people in hospital is increasing. We will likely start to see deaths follow in the next few weeks (and already are in Scotland).

- The Omicron subvariant (BA.2) is clearly dominant in all nations and is about **30% more transmissible** than the original Omicron variant (BA.1).

- Boosters are waning, especially in older populations. Primary school children are entering another big wave. Vaccination plus mitigations is needed.

- Clean air is one of best mitigations, ideally through ventilation supplemented with masks and/or filtration as necessary. Independent SAGE has produced a short handy guide on ventilation now on our website and is piloting “Scores on the Doors”.