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Latest numbers on COVID-19 in the UK – 12th March 2021

Things are continuing to improve.

1. Cases
2. Hospitalisations
3. Deaths
4. Vaccinations
5. Lateral Flow Device tests

With many thanks to Bob Hawkins and Catherine Finnecy for their help in collating the data and discussions on interpretation.

Cases

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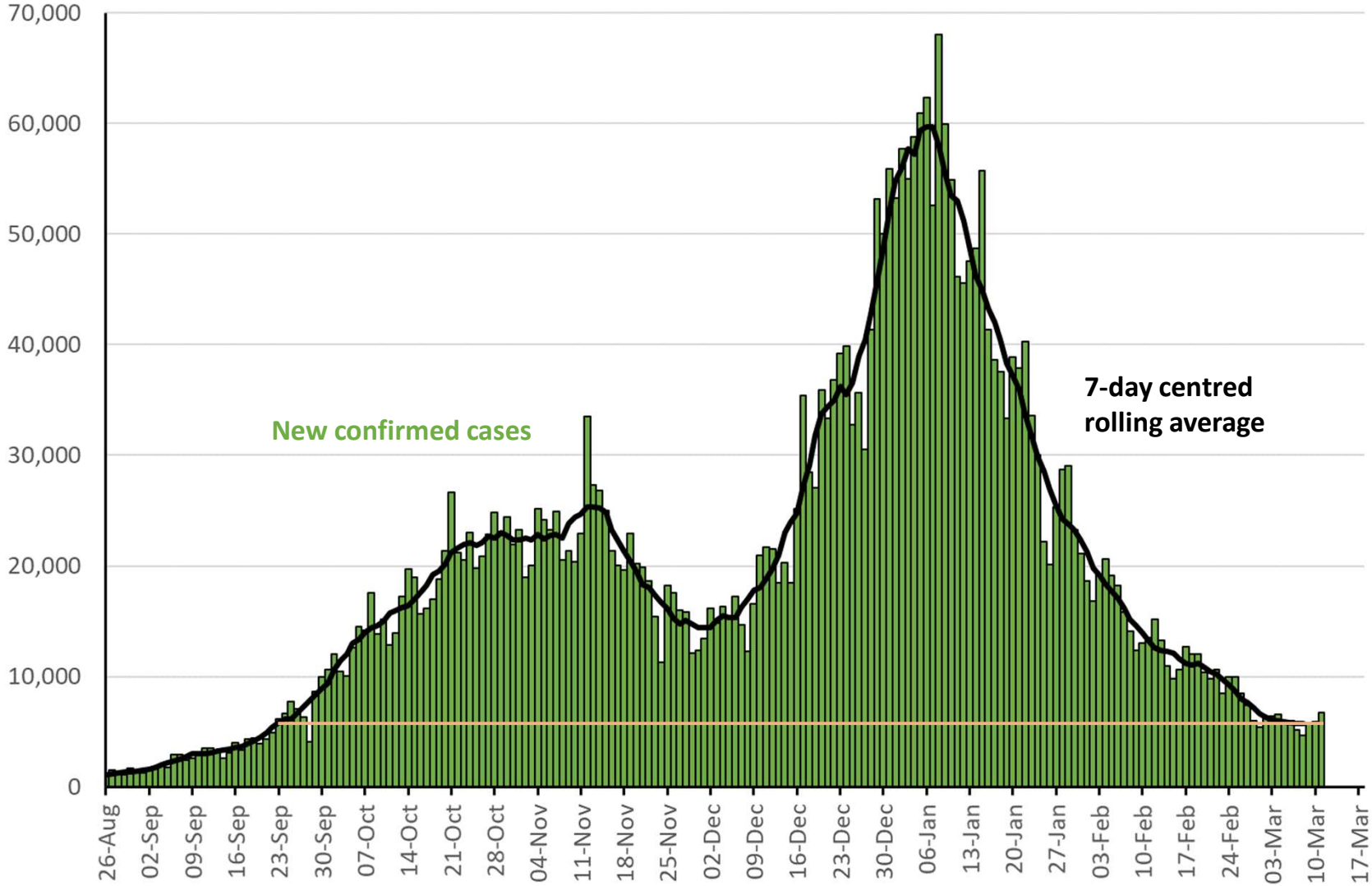
Number of new UK confirmed COVID-19 cases by reported date (people who have had a positive test)



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

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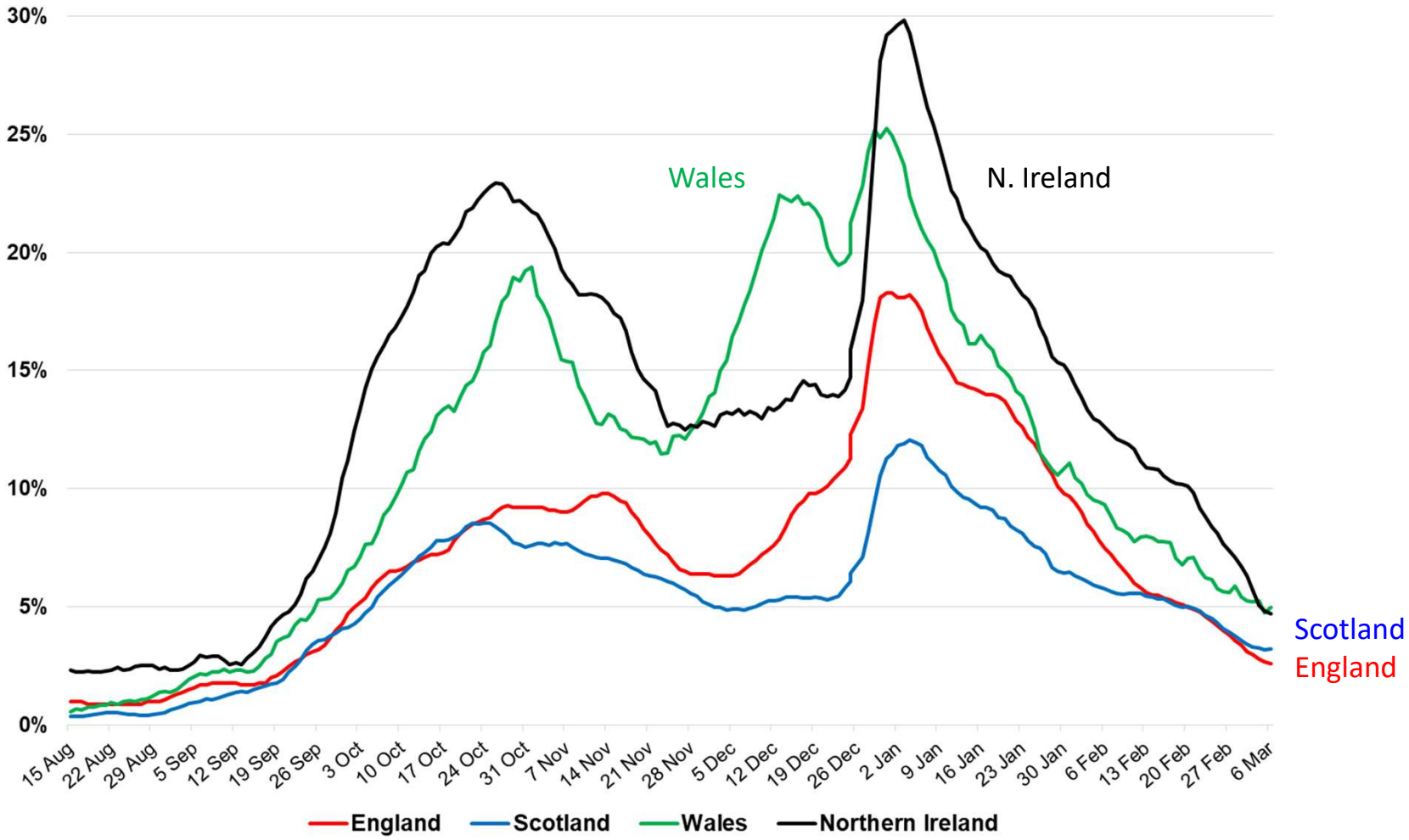
Positivity rates – UK nations – by date of test to 6th March

All rates are calculated based on PCR tests only and are comparable across the Home Nations

% of people tested who are positive



Data from:
Scotland: https://www.opendata.nhs.scot/dataset/covid-19-in-Scotland
Wales: https://public.tableau.com/profile/public.health.wales.health.protection#!/vizhome/RapidCOVID-19virology-Public/Headlinesummary
NI: https://www.health-ni.gov.uk/publications/daily-dashboard-updates-covid-19-november-2020
England: https://coronavirus.data.gov.uk . ONS https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionsurveypilot/latest

Visualisation courtesy of Bob Hawkins

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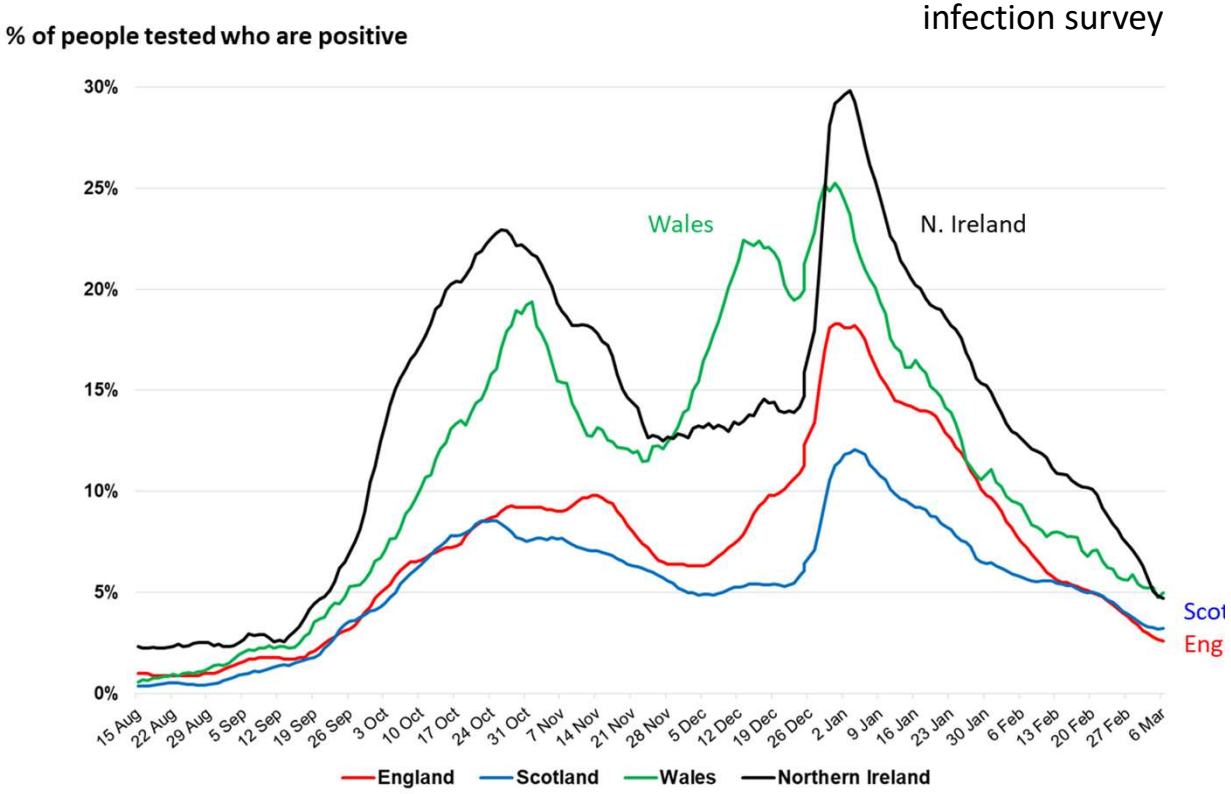
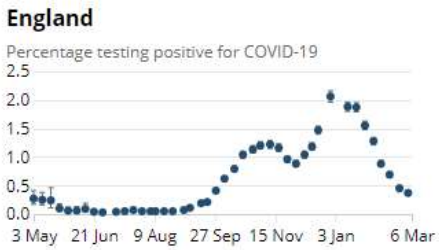
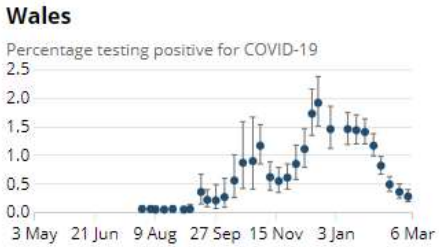
Positivity rates – UK nations – by date of test to 6th March

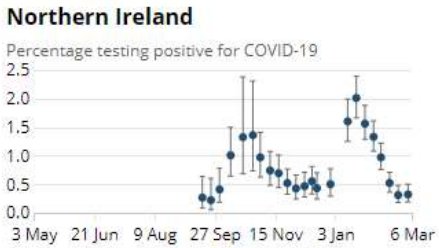
All rates are calculated based on PCR tests only and are comparable across the Home Nations

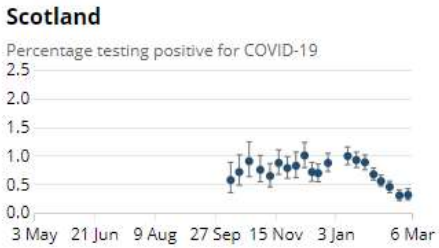
Consistent with ONS infection survey











Data from:
Scotland: https://www.opendata.nhs.scot/dataset/covid-19-in-Scotland
Wales: https://public.tableau.com/profile/public.health.wales.health.protection#!/vizhome/RapidCOVID-19virology-Public/Headlinesum
NI: https://www.health-ni.gov.uk/publications/daily-dashboard-updates-covid-19-november-2020
England: https://coronavirus.data.gov.uk . ONS https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionsurveypilot/latest

Visualisation courtesy of Bob Hawkins

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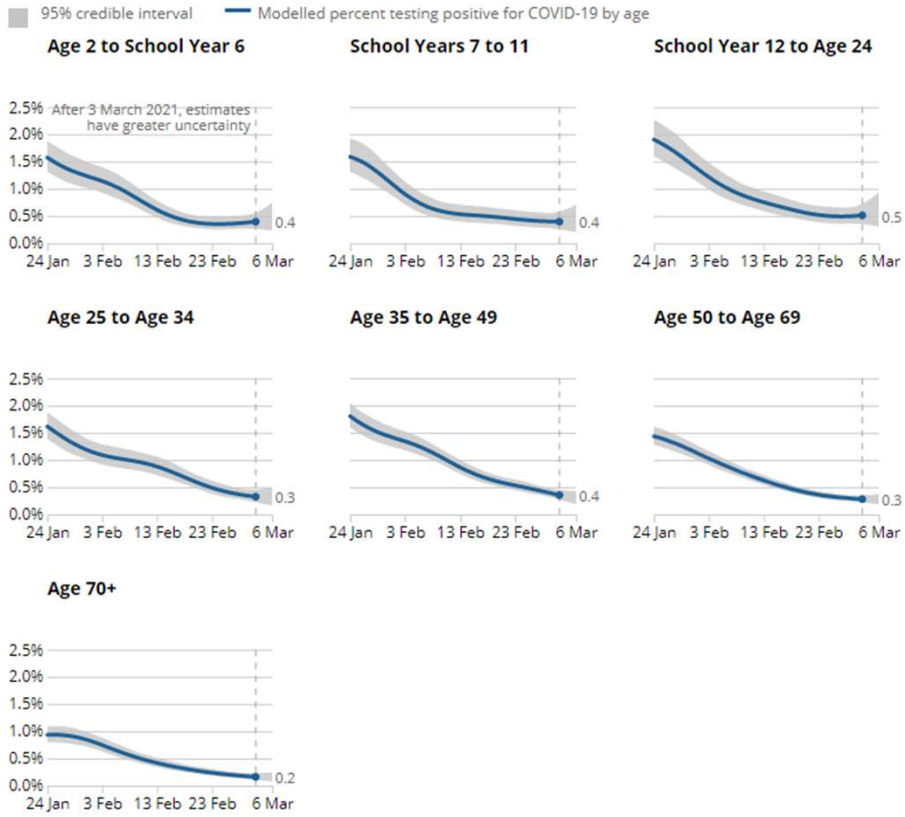
Age distribution of cases

ONS infection survey shows that cases are highest, and reducing the slowest, now in children and young adults.

Figure 4: The percentage testing positive in England has decreased in all age groups except primary school-aged children where the trend is uncertain

Estimated percentage of the population testing positive for the coronavirus (COVID-19) on nose and throat swabs, daily, by age group since 24 January 2021, England



Data from: https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionsurveypilot/latest#age-analysis-of-the-number-of-people-who-had-covid-19

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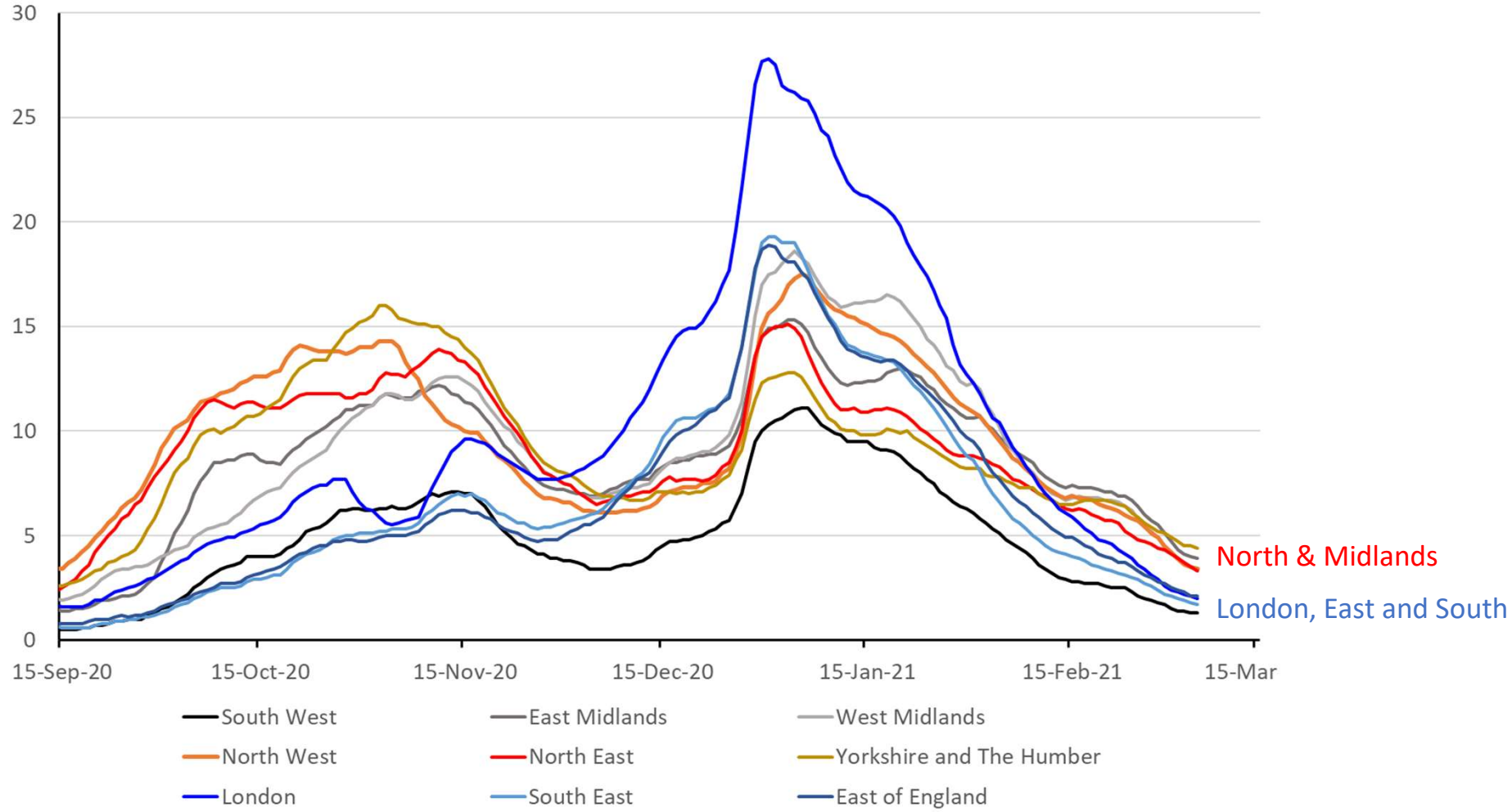
Positivity rates – English regions – by date of test to 6th March

PCR tests only

% of people tested who are positive



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

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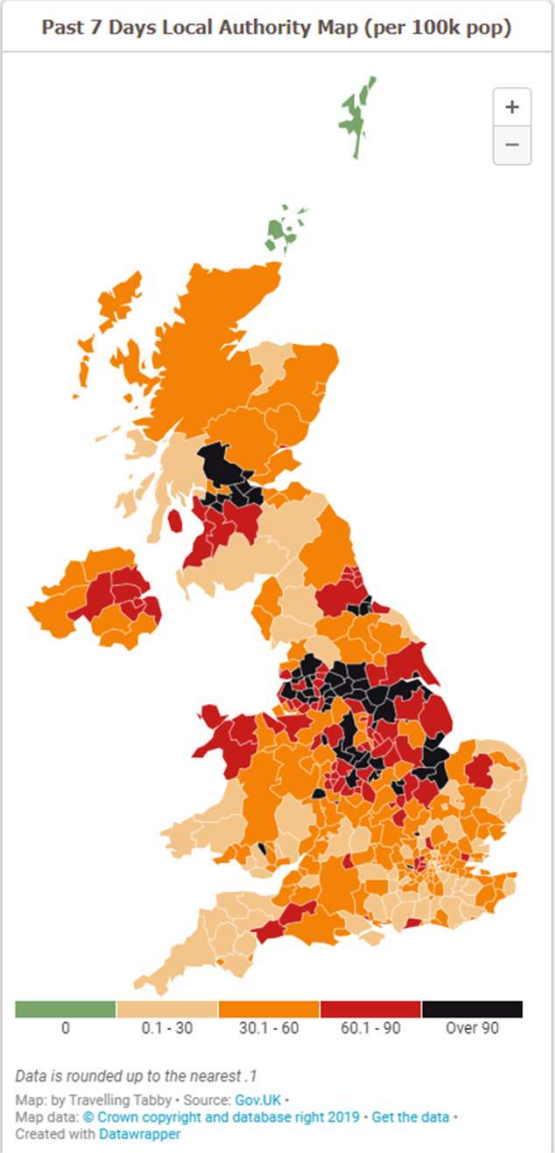
Map of where cases are week to 6th March



Graph from https://www.travellingtabby.com/uk-coronavirus-tracker/local

Hospitalisations

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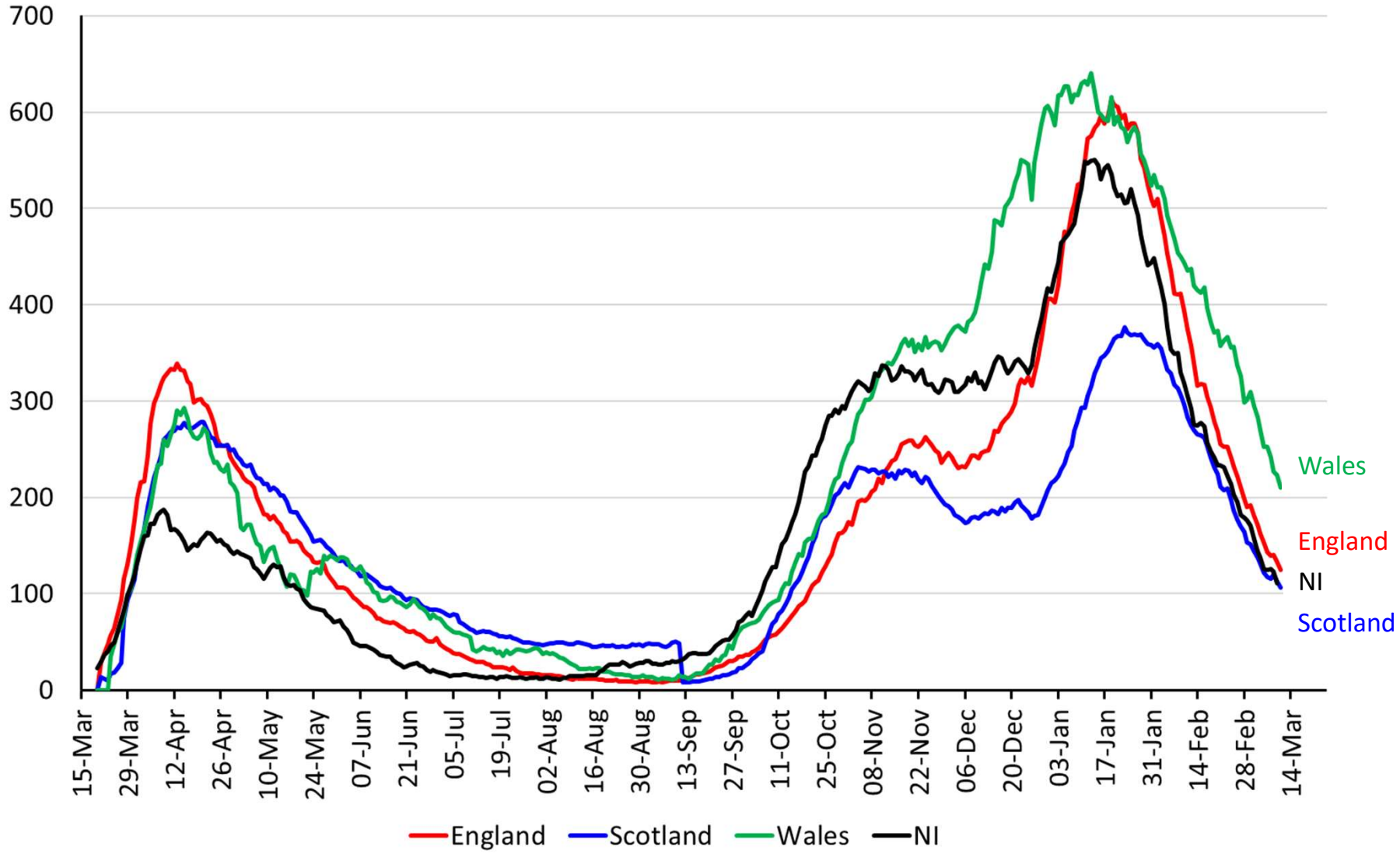
Number of people in hospital per million people – UK nations



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

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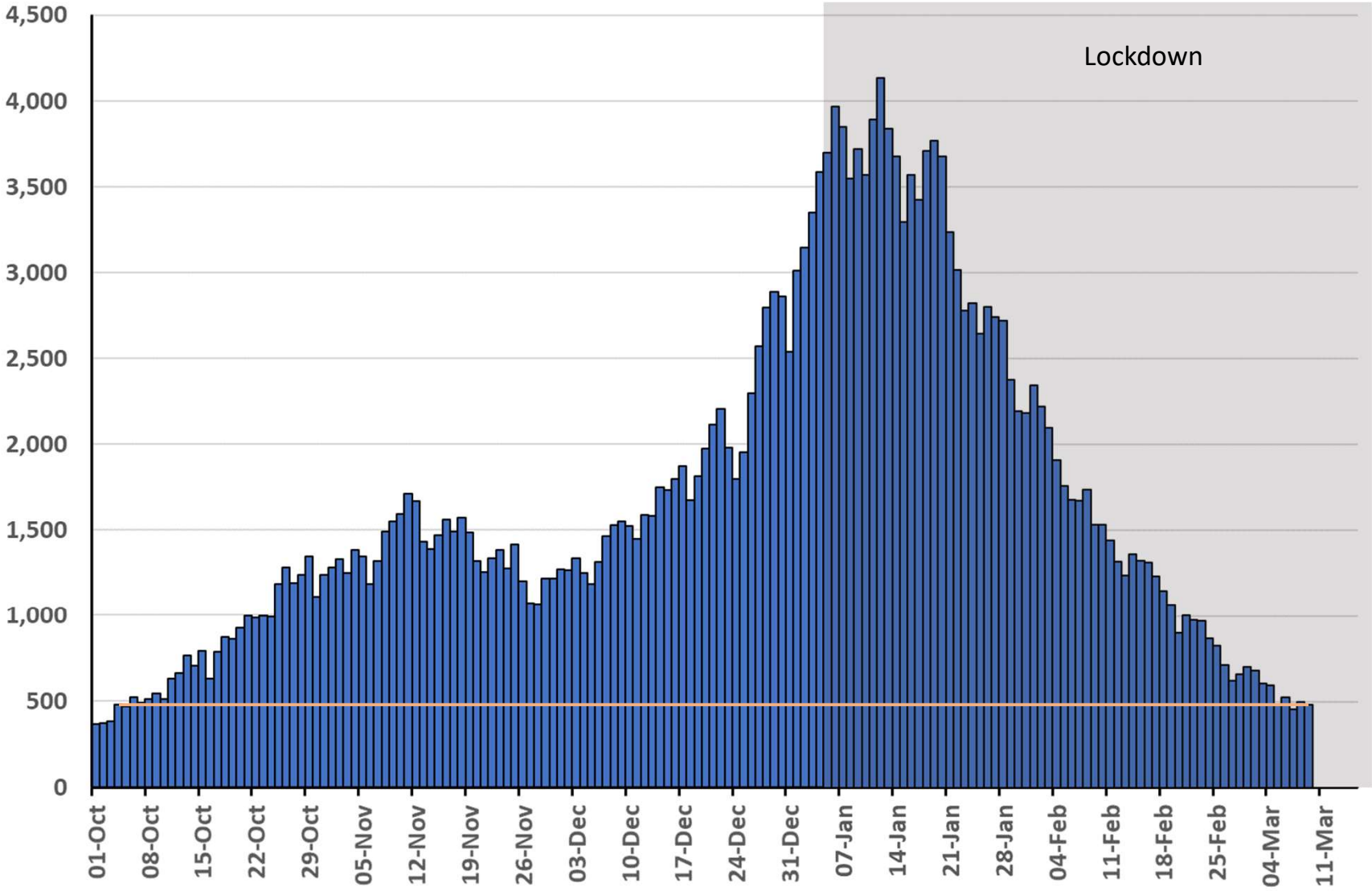
Number of new hospital admissions with COVID-19 per day in England to 9th March



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

Deaths

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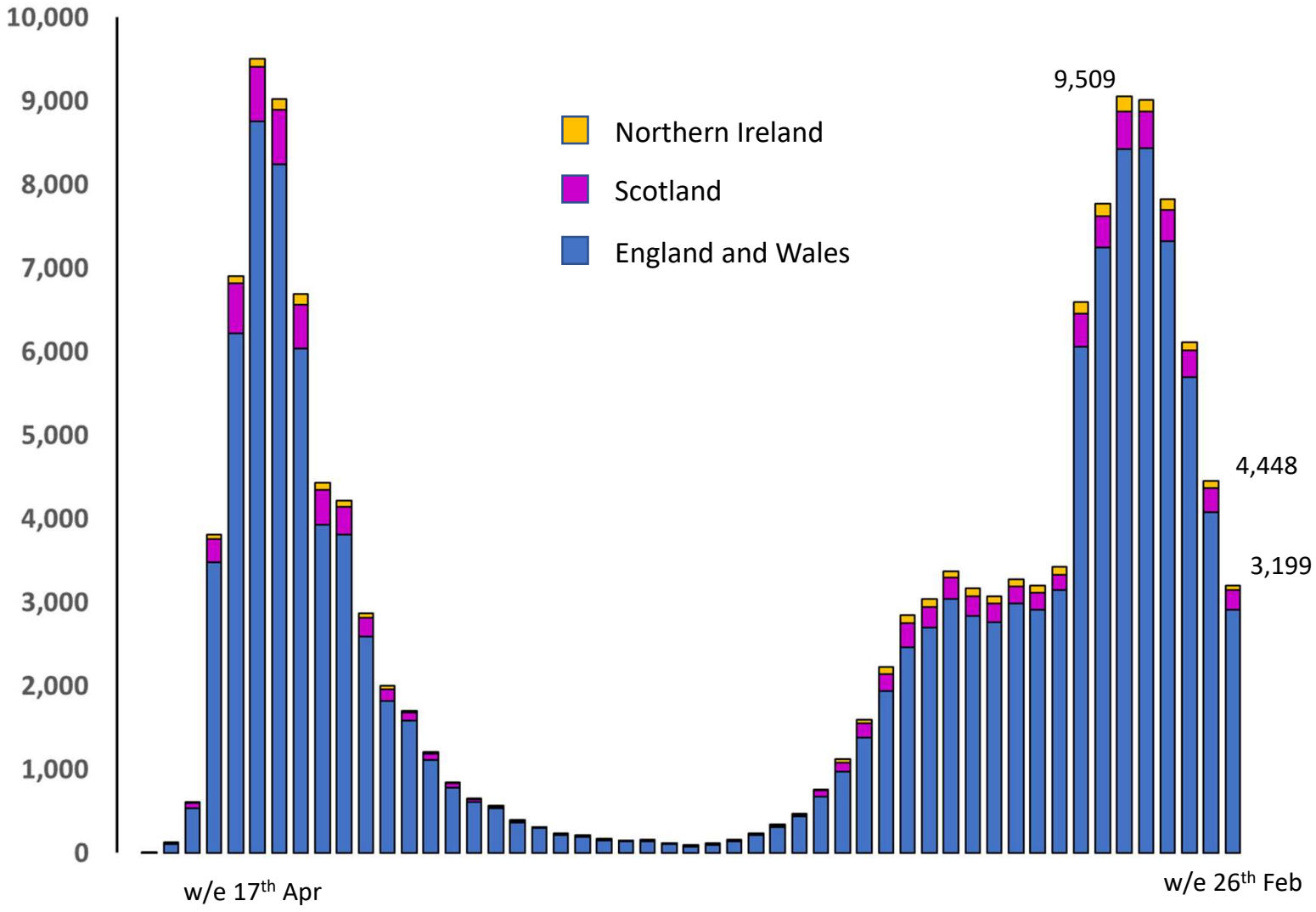
Number of new UK deaths from COVID-19 registered per week, to 26th February



Data from :
England and Wales: www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsregisteredweeklyinenglandandwalesprovisional/latest
Scotland: https://data.gov.scot/coronavirus-covid-19/detail.html
Northern Ireland: www.nisra.gov.uk/publications/weekly-deaths

Vaccination data

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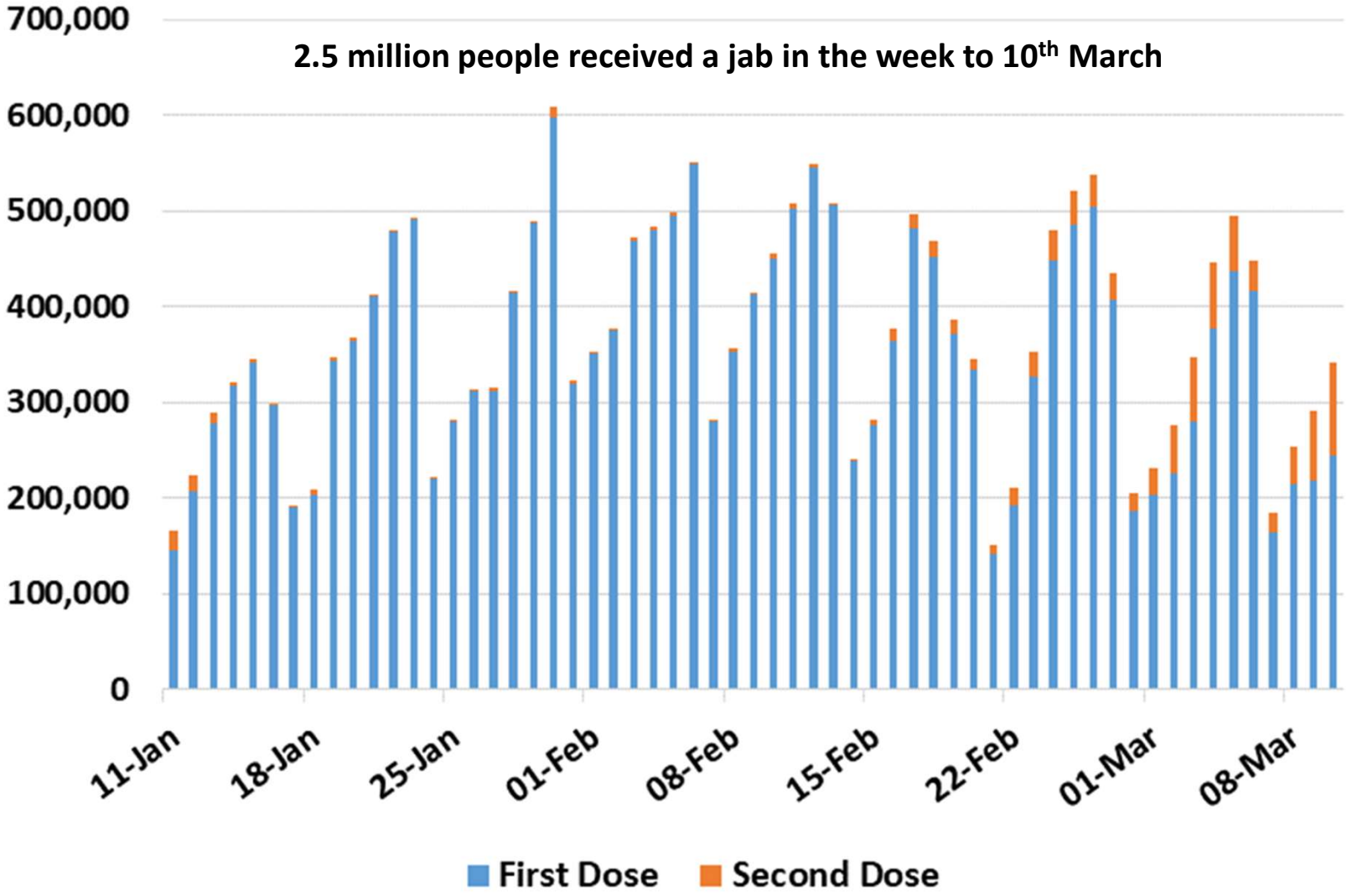
Number of 1st and 2nd doses given by day in the UK to 10th March



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

Thanks to Bob Hawkins for the chart

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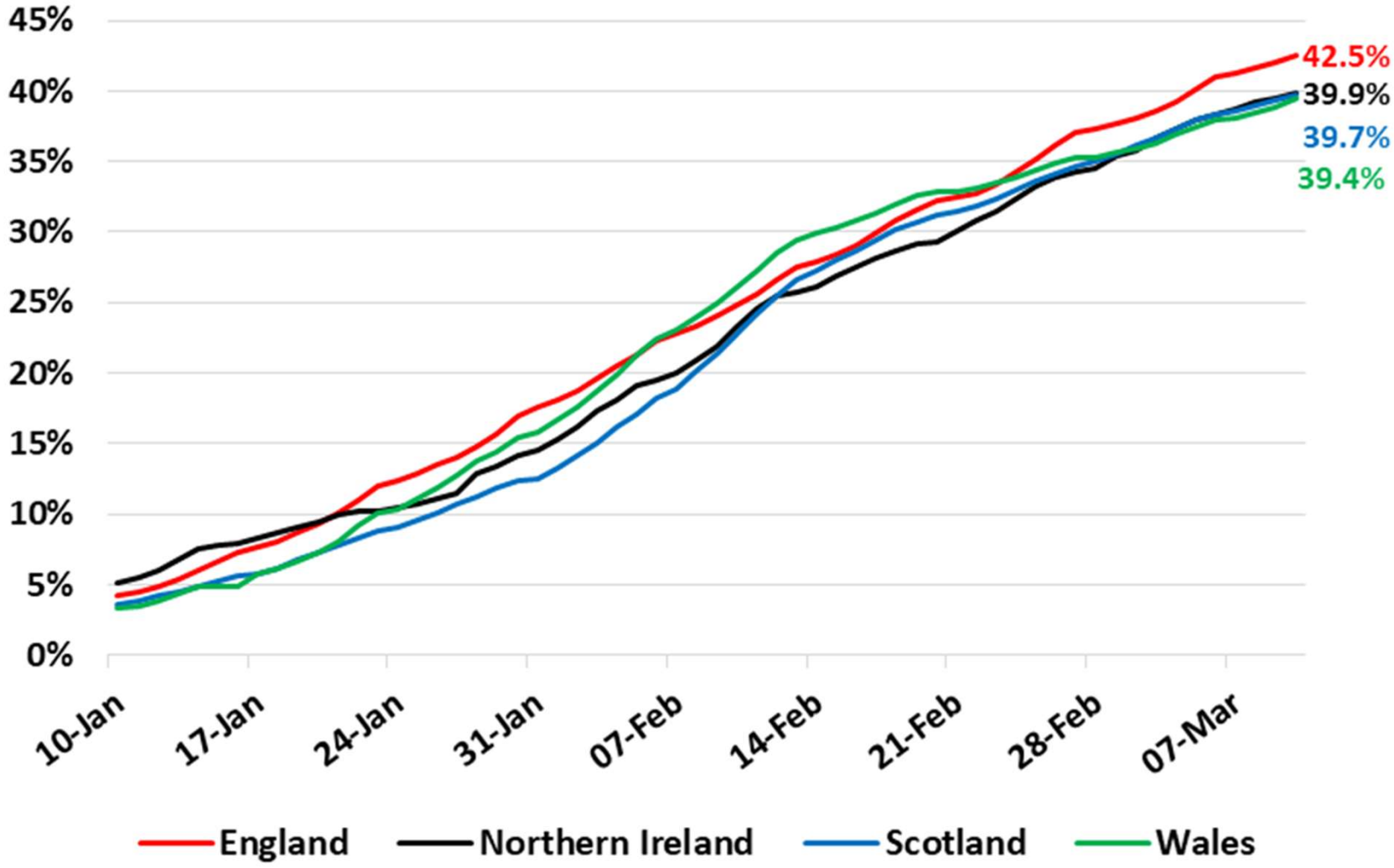
Proportion of people over 16 years old vaccinated over time for each nation to 10th March



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

Thanks to Bob Hawkins for the chart

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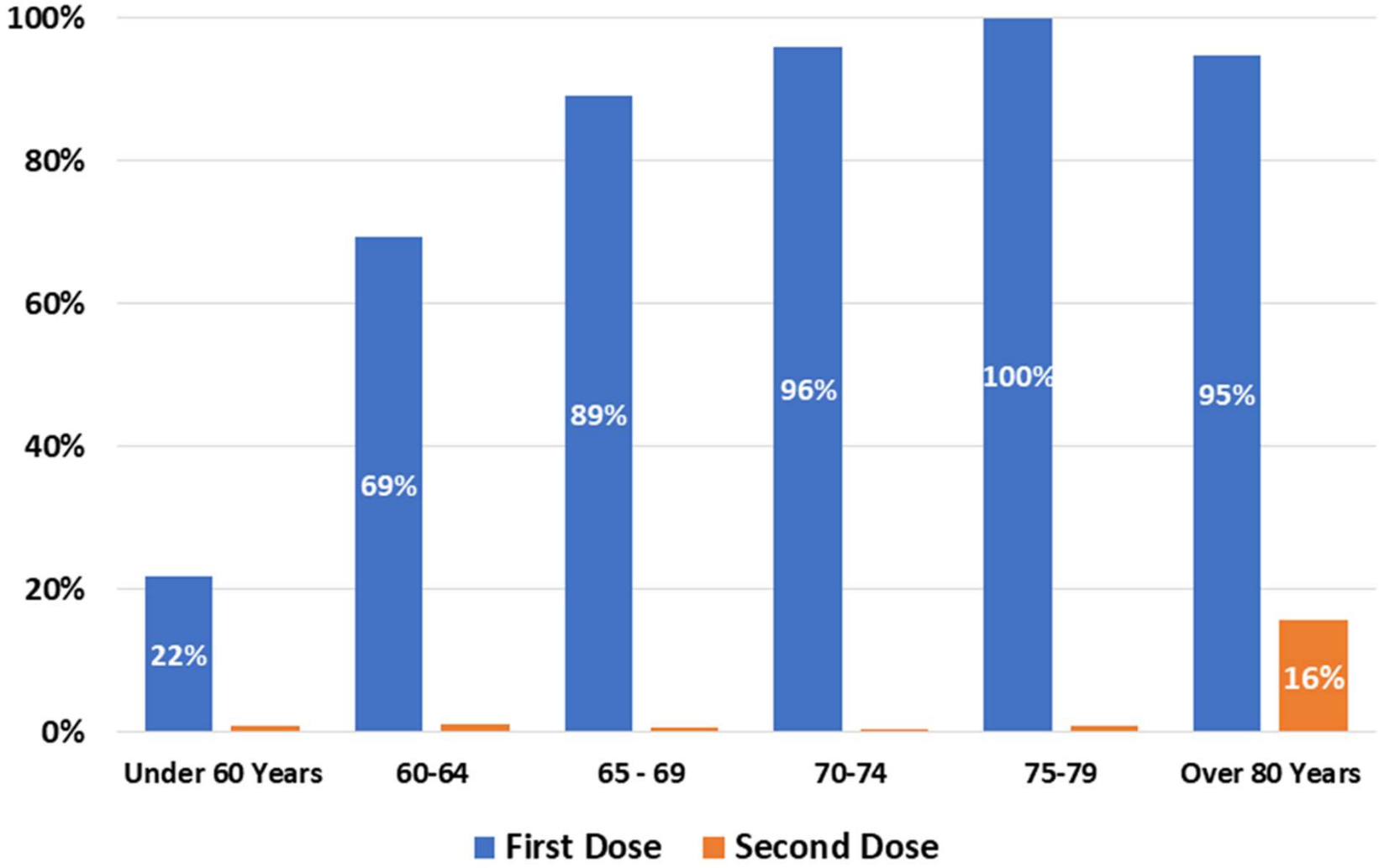
England: population coverage by age to 7th March

NOTE: percentages are based on population estimates which are **not** perfect



Data & population estimates from https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-vaccinations/

Thanks to Bob Hawkins for the chart

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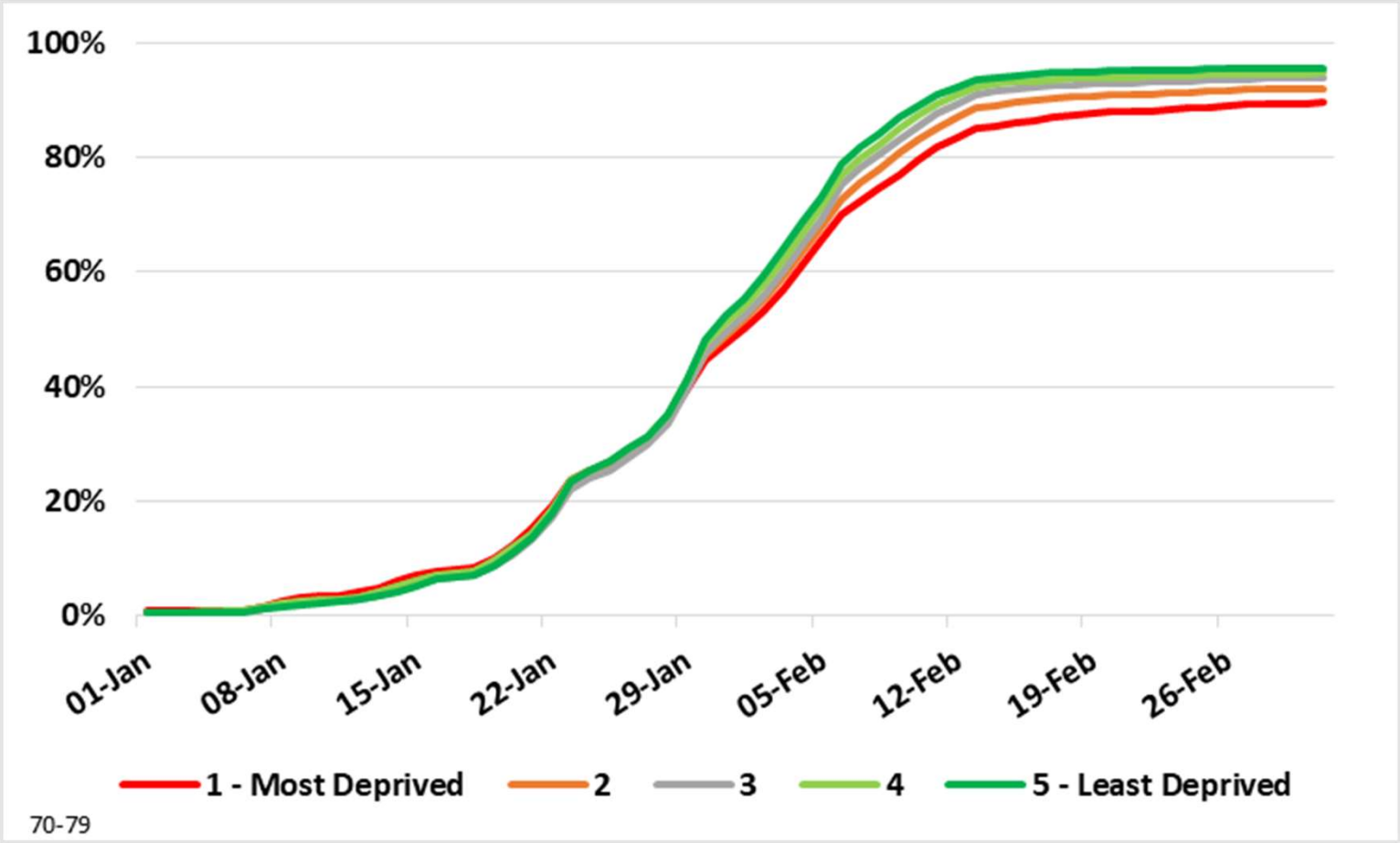
First Dose Coverage for Over 70-79 yrs by deprivation to 3 March



Data from http://opensafely.org/research/2021/covid-vaccine-coverage/
Thanks to Bob Hawkins for the chart

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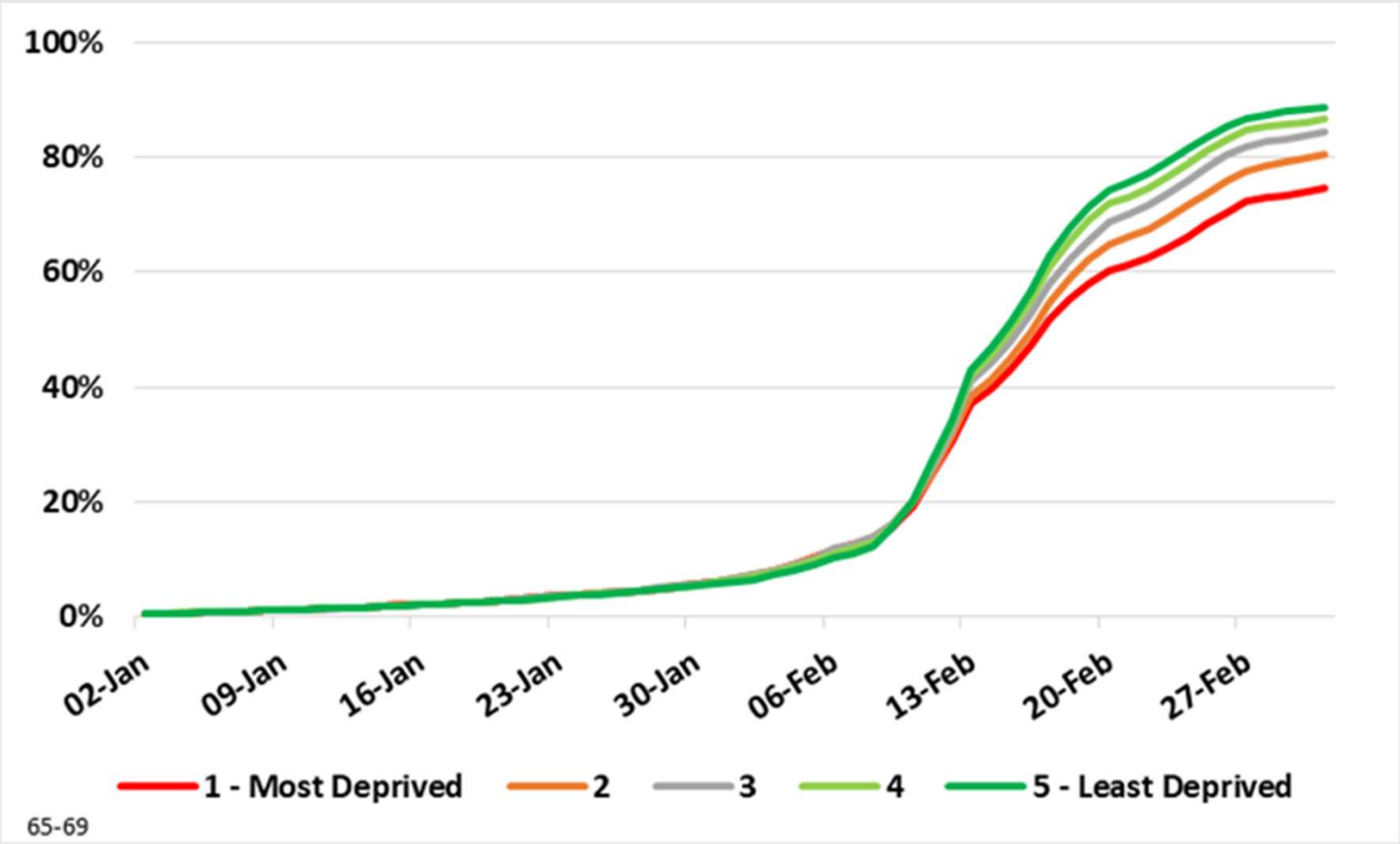
First Dose Coverage for Over 65-69 yrs by deprivation to 3 March



Data from http://opensafely.org/research/2021/covid-vaccine-coverage/

Thanks to Bob Hawkins for the chart

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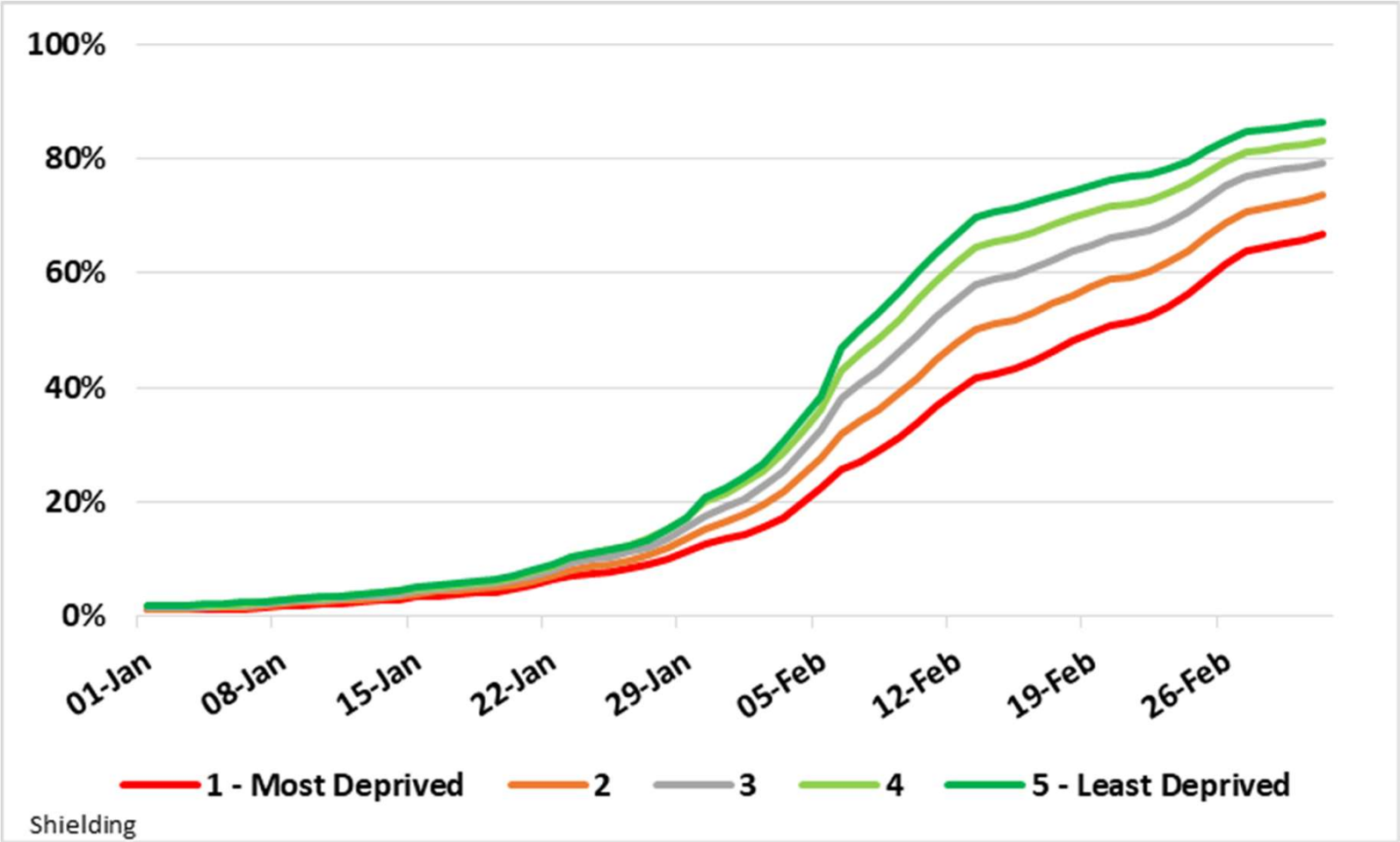
First Dose Coverage for those shielding by deprivation to 3 March



Data from http://opensafely.org/research/2021/covid-vaccine-coverage/

Thanks to Bob Hawkins for the chart

Lateral Flow Device tests

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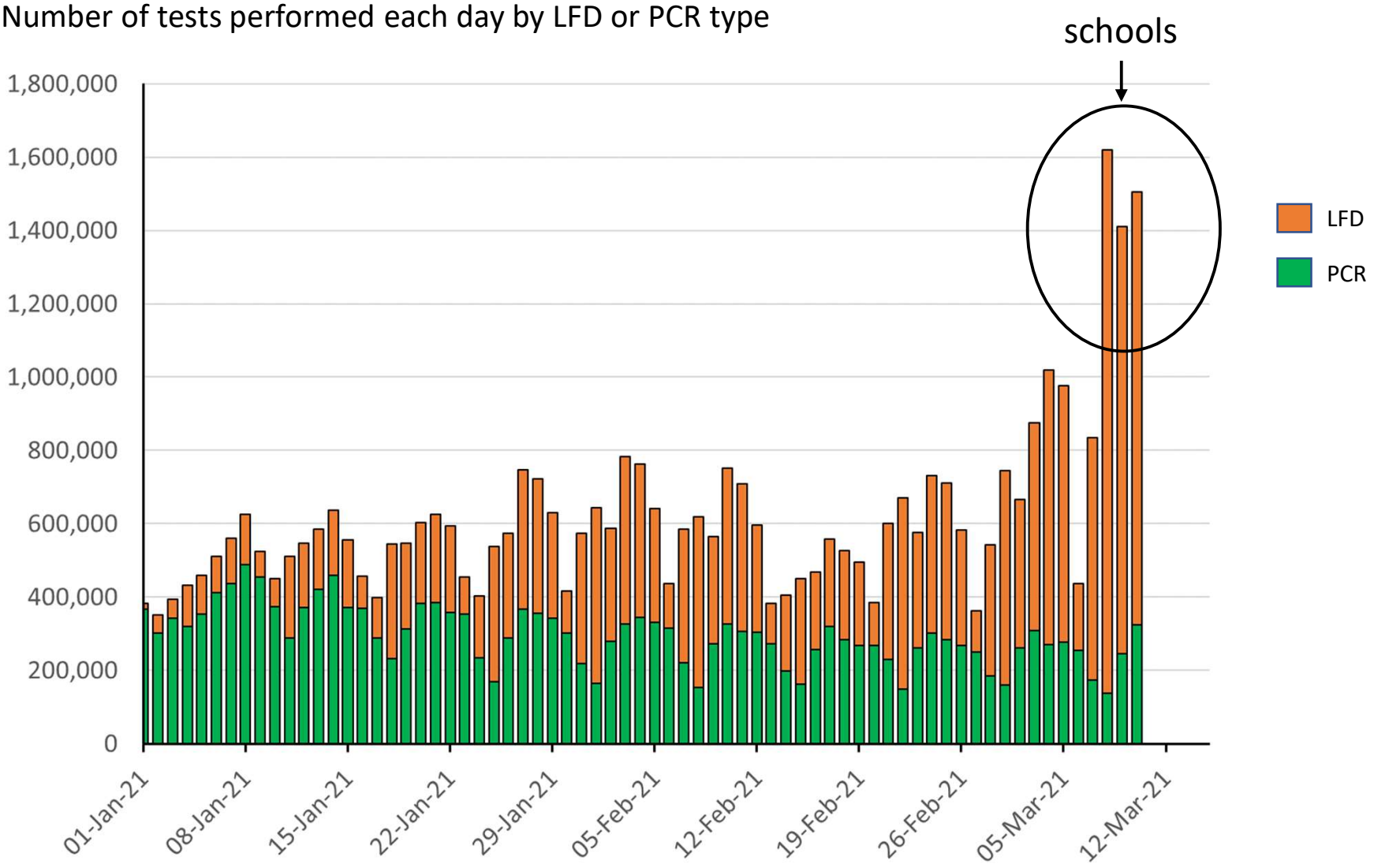
Increasing use of Lateral Flow Device (LFD) tests in England

Number of tests performed each day by LFD or PCR type



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

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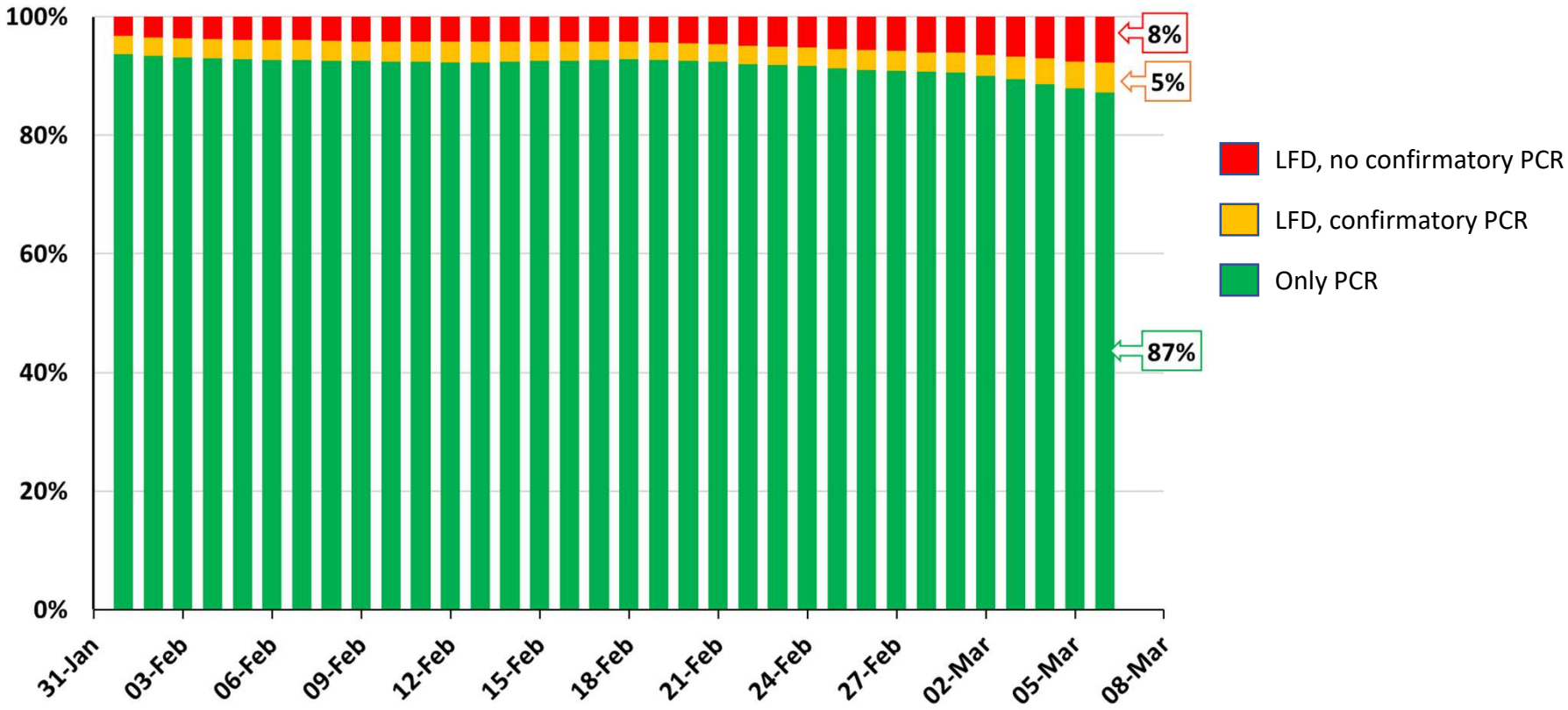
Increasing use of Lateral Flow Device (LFD) tests

Percentage of positives that are from each type of test



Data from https://coronavirus.data.gov.uk
Thanks to Bob Hawkins for the chart

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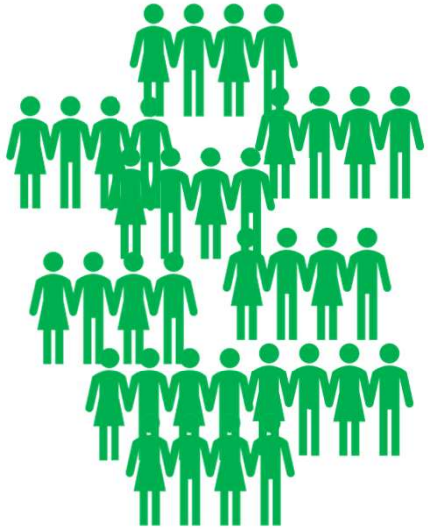
False positives and why confirmatory testing so important for LFD…

1,000,000 asymptomatic people

About 3000 might have Covid



And 997,000 won’t

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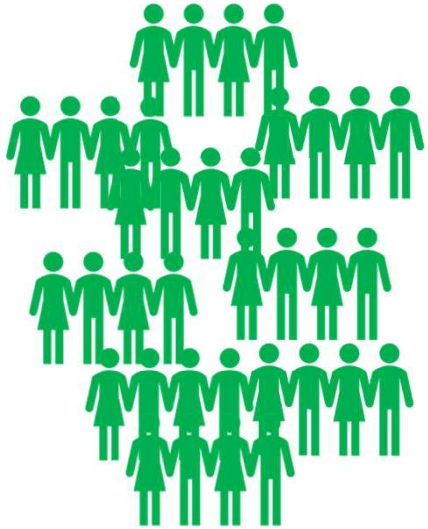
False positives and why confirmatory testing so important for LFD…

1,000,000 asymptomatic people

About 3000 might have Covid

About 1500 might test positive with LFD

And about 1500 will not, and continue mixing



And 997,000 won't

About 1000 might test positive with LFD

And about 996,000 will not, and continue mixing

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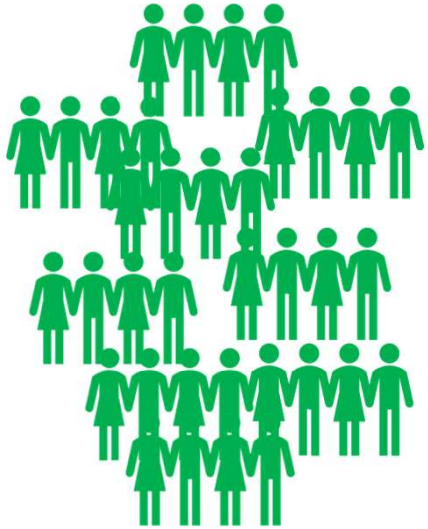
False positives and why confirmatory testing so important for LFD…

1,000,000 asymptomatic people

About 3000 might have Covid

And about 1500 will not, and continue mixing



And 997,000 won't

And about 996,000 will not, and continue mixing

About 2500 positive LFD tests

1500

1000

So someone testing positive with LFD has about a 60% chance of actually having Covid.

As prevalence reduces, this chance reduces.

If prevalence increases, this chance increases too.

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False positives and why confirmatory testing so important for LFD…

1,000,000 asymptomatic people

About 3000 might have Covid

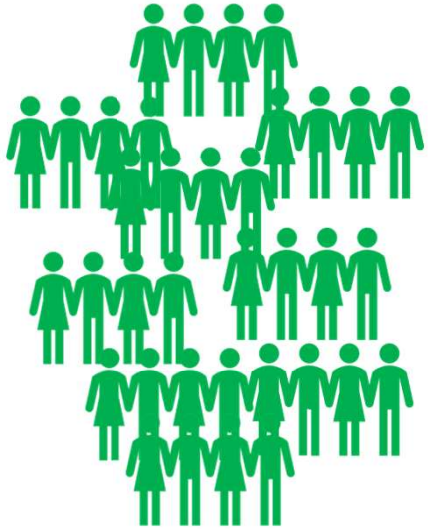
About 1500 might test positive with LFD

PCR

About 1000 might test positive with PCR. Correctly isolate

About 500 might test negative with PCR. Continue mixing

And about 1500 will not, and continue mixing



And 997,000 won't

About 1000 might test positive with LFD

PCR

Maybe 1 person might test positive with PCR. Incorrectly isolate

About 999 might test negative with PCR. Continue mixing

And about 996,000 will not, and continue mixing

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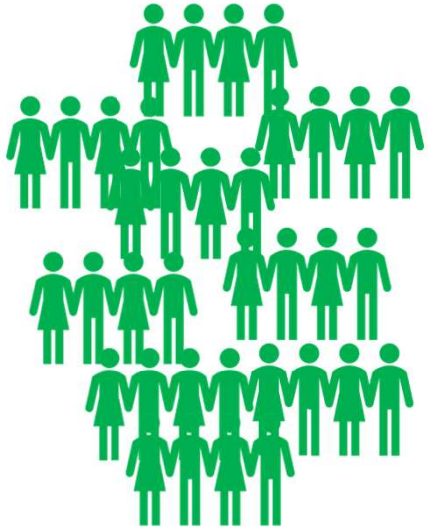
False positives and why confirmatory testing so important for LFD…

1,000,000 asymptomatic people

About 3000 might have Covid



And 997,000 won't

About 1500 might test positive with LFD

And about 1500 will not, and continue mixing

About 1000 might test positive with LFD

And about 996,000 will not, and continue mixing

About 1001 positive LFD **and** PCR tests

1000

1

So someone testing positive with LFD **and** PCR has about a 99.9% chance of actually having Covid.

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Why this makes interpreting case numbers so much harder

- Isolation is hard – disincentive to test children. Will likely be an inequality effect because poorer families less able to isolate.

- Tests are easy to do badly. Very low proportion of school LFD tests coming back positive (about 0.1% compared to 0.5% prevalence in ONS data) could be a sign of poor testing practice (https://twitter.com/deeksj/status/1369983105268932614?s=20).

- Will use become – in practice – more skewed towards children with vague symptoms? Will change interpretation if so – but how will we know?

- In England, school children **can** get confirmatory PCR tests from **next** week – but adults in the community **cannot**. LFD use will increase, as adults start going back to work (e.g. hairdressers, shops, pubs).

- Other home nations require confirmatory PCR for **all** LFDs. So not comparable.

- Positivity rates will become harder to interpret

- Increasing reliance on ONS and REACT type population surveys – but they are slower, have some of their own issues & measure prevalence, not incidence.

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Summary

Cases, hospitalisations and deaths falling in all nations.

Vaccination going really well – but some worrying signs of inequality gradients meaning that potentially many people will remain vulnerable this summer

The increasing, and inconsistent, use of lateral flow device tests will make interpretating case numbers and positivity rates over the coming weeks quite difficult.

Confusion of school testing, and how exactly lateral flow device are used (and acted upon) over the coming weeks will be very important for the impact that school reopening might have.