A mixed week – some good news but also some less good news.

1. Cases
2. Hospitalisations & Deaths
3. Vaccinations
4. Schools
5. European picture

With many thanks to Bob Hawkins, Luke Shepherd and Catherine Finnecy for their help in collating the data and discussions on interpretation.
Cases
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
Case rates – UK nations – by date of test to 13th March

Number of cases per 100,000 people per week

Data from: https://coronavirus.data.gov.uk
“In Scotland, the percentage of people testing positive has appeared to show some increase in the week ending 13 March 2021”

Data from: https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionsurveypilot/latest
Consistent with ONS infection survey, except that East Midlands might be increasing.
Positivity rates – English regions – by date of test to 13th March

% of people tested who are positive (PCR tests only)

ONS Surveys: Over last week, more people have gone out to work and left home for non-essential shopping, to take kids to school, to meet up in a public space.

Protective behaviours have remained high.

Data from https://coronavirus.data.gov.uk
Hospitalisations and Deaths
Hospitalisations and deaths
Vaccination data
Number of 1\textsuperscript{st} and 2\textsuperscript{nd} doses given by day in the UK to 17\textsuperscript{th} March

3.2 million people received a jab in the week to 17\textsuperscript{th} March

Data from [https://coronavirus.data.gov.uk/](https://coronavirus.data.gov.uk/)
Thanks to Bob Hawkins for the chart
Number of 1\textsuperscript{st} and 2\textsuperscript{nd} doses given by day in the UK to 17\textsuperscript{th} March

11-12 million people need their 2\textsuperscript{nd} dose by end April

Data from https://coronavirus.data.gov.uk/
Thanks to Bob Hawkins for the chart
Proportion of adults given at least one dose over time for each nation to 17\textsuperscript{th} March

Data from https://coronavirus.data.gov.uk/
Thanks to Bob Hawkins for the chart
Vaccine impact in over 80s after 1 dose (Public Health England)

100,000 unvaccinated over-80s

100,000 vaccinated over-80s

* Infections will depend on current state of epidemic. 300 out of 100,000 is an illustrative number. One dose of vaccine provides about 60% protection once more than 14 days out from first dose.

Efficacy estimates from
Vaccine impact in over 80s after 1 dose (Public Health England)

100,000 unvaccinated over-80s

300* might get Covid

45 might need hospital

40 might die

100,000 vaccinated over-80s

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100,000 **unvaccinated** over-80s

- 300* might get Covid
- 45 might need hospital

100,000 **vaccinated** over-80s

- 120* might get Covid
  - Approx. 60% reduction

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120* might get Covid
10 might need hospital

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Efficacy estimates from
Vaccine impact in over 80s after 1 dose (Public Health England)

**100,000 unvaccinated over-80s**
- 300* might get Covid
- 40 might die
- 45 might need hospital

**100,000 vaccinated over-80s**
- 120* might get Covid
- 10 might need hospital
- 7 might die
- Approx. 60% reduction
- Approx. 75-80% reduction
- Approx. 80-85% reduction

* Infections will depend on current state of epidemic. 300 out of 100,000 is an illustrative number. One dose of vaccine provides about 60% protection once more than 14 days out from first dose.

Efficacy estimates from
Schools
Number of tests taken in Scotland this year

Primary schools went back 22\textsuperscript{nd} February with mitigations.

Chart from https://www.travellingtabby.com/scotland-coronavirus-tracker/
Number of positive cases by date of test and age group (0-64yrs) in Scotland
(Note: y-axes are different scales)

Data from https://www.opendata.nhs.scot/dataset/covid-19-in-scotland/resource/9393bd66-5012-4f01-9bc5-e7a10accacf4
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
Number of positive daily cases confirmed by PCR in England by date of test

PCR confirmed cases are still reducing: week on week by 8%

People without symptoms taking LFDs at home (or in health care settings) where a positive result is confirmed via PCR

Symptomatic people

Data from https://coronavirus.data.gov.uk/details/cases?areaType=nation&areaName=England
**Number of positive daily cases detected only through LFDs by date of test**

People without symptoms testing positive using LFDs in work, school or council settings where a positive result is **NOT** confirmed via PCR

Students do a third test near the beginning of this week

Schools return. Secondary school students did 2 tests each over this week

Data from [https://coronavirus.data.gov.uk/details/cases?areaType=nation&areaName=England](https://coronavirus.data.gov.uk/details/cases?areaType=nation&areaName=England)
Number of positive daily cases detected only through LFDs by date of test

People without symptoms testing positive using LFDs in work, school or council settings where a positive result is **NOT** confirmed via PCR

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Data from [https://coronavirus.data.gov.uk/details/cases?areaType=nation&areaName=England](https://coronavirus.data.gov.uk/details/cases?areaType=nation&areaName=England)

You can’t easily look at positivity rates because:
- people are taking the tests multiple times
- It should be only asymptomatic people and we don’t know really what to expect
- Differences in confirmatory PCR testing practice
- Test can / will miss true positives, and will also give false positives.
Number of positive daily cases detected only through LFDs by date of test

Data from https://coronavirus.data.gov.uk/details/cases?areaType=nation&areaName=England

People without symptoms testing positive using LFDs in work, school or council settings where a positive result is **NOT** confirmed via PCR

Schools return. Secondary school students did 2 tests each over this week

From this week onwards, LFDs for school children and staff will be done at home – more false negatives.

Cases get confirmatory PCR tests – fewer false positives.

All testing is voluntary.

Will be very different to last 10 days – will be **very difficult** to know how to interpret numbers!
ONS infection survey to w/e 13th March

Figure 4: The percentage testing positive in England has decreased in those aged school Year 7 and older over the last two weeks.

Estimated percentage of the population testing positive for the coronavirus (COVID-19) on nose and throat swabs, daily, by age group since 31 January 2021, England.

Data from: https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionsurveypilot/latest
European picture and variants
Data from https://ourworldindata.org/. Graph by & thanks to Luke Shepherd.
European vaccination – 1st January to 16th March

Percentage of population who have received at least 1 dose

Percentage of fully vaccinated population

Data from https://ourworldindata.org/. Graph by & thanks to Luke Shepherd
European vaccination – 1\textsuperscript{st} January to 16\textsuperscript{th} March

Percentage of population who have received at least 1 dose

Percentage of \textbf{fully vaccinated} population

COVID-19: New Philippines-linked coronavirus variant investigated in England after two cases found

Los Angeles Times

Coronavirus strains from California and the U.K. in battle for U.S. dominance

Data from \url{https://ourworldindata.org/}. Graph by & thanks to Luke Shepherd
Variants being tracked by Public Health England

Graph from Duncan Robertson: https://twitter.com/Dr_D_Robertson/status/1372619667668398083?s=20
Summary

Hospitalisations and deaths are still falling but cases are flat or increasing.

Vaccination going well – and clear positive impact from first dose. We do now have to start doing mass second doses, which will slow down roll out to under 50s until we can increase supply significantly.

Some indication that returning to school is increasing cases in children – will need to watch next two weeks very carefully to see if this continues and whether it spreads to older age groups. In England, the testing system makes this very difficult.

Situation in Europe concerning but countries are responding which might reduce the size of a third wave.

New, potentially concerning, variants are popping up every few weeks.

As we reflect on the year just passed, we need to learn from it so that we’re not still here next March.