Things are very bad and will get worse for at least a few weeks.

1. Cases
2. Hospitalisations
3. Deaths
4. Lockdown
5. Vaccination data

With many thanks to Bob Hawkins 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

New confirmed cases
7-day rolling average
Lockdown
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
Number of tests conducted in the community (“Pillar 2”) in the UK

Data from https://coronavirus.data.gov.uk
Timeliness of test results: proportion of test results received quickly

Number of new confirmed COVID-19 cases / 100,000 people / week – UK nations – “specimen date” (to 2nd Jan)

Rolling 7-day sum of cases / 100,000 people

Specimen date: Date someone had a test

Because it takes a few days for results to come through, can’t use most recent few days of data.

Data from https://coronavirus.data.gov.uk
Percentage positivity – UK nations – “specimen date” to 2\textsuperscript{nd} Jan

Consistent with ONS.

Data from:
- Scotland: https://www.opendata.nhs.scot/dataset/covid-19-in-Scotland
- England: https://coronavirus.data.gov.uk

Visualisation courtesy of Bob Hawkins
Cases per 100,000 people for all Scottish Local Authorities
Comparison of week ending Jan 2 to prior week

Data from https://coronavirus.data.gov.uk
Visualisation courtesy of Bob Hawkins
Cases per 100,000 people for all Welsh Local Authorities
Comparison of week ending Jan 2 to prior week

Local Authorities Ranked by Cases

Data from https://coronavirus.data.gov.uk
Visualisation courtesy of Bob Hawkins
Cases per 100,000 people for all N. Irish Local Authorities
Comparison of week ending Jan 2 to prior week

Local Authorities Ranked by Cases

Data from https://coronavirus.data.gov.uk
Visualisation courtesy of Bob Hawkins
ONS: 1 in 50 people in England test positive
1 in 30 people in London
London, SE and East *might* be starting to plateau

Cases per 100,000 people for all English Local Authorities
Comparison of week ending Jan 2 to prior week

Data from [https://coronavirus.data.gov.uk](https://coronavirus.data.gov.uk)
Visualisation courtesy of Bob Hawkins
Cases per 100,000 people by age

Figure 4: Weekly laboratory confirmed COVID-19 case rates per 100,000, tested under Pillar 1 and Pillar 2, by age group

Cases per 100,000 people by age

Figure 4: Weekly laboratory confirmed COVID-19 case rates per 100,000, tested under Pillar 1 and Pillar 2, by age group

ONS: “the percentage of people testing positive has increased in all age groups apart from school age children and those aged 35 to 49 years.”

Hospitalisations
Number of people in hospital per million people – UK nations (daily 7 day average)

Data from [https://coronavirus.data.gov.uk](https://coronavirus.data.gov.uk).
Number of people in ICU-level beds in England with Covid-19 (to 6th Jan)

This is in context where fewer patients are going to ICU because treatment protocols have changed.

75% of patients in ICU are under the age of 71 (ICNARC).

Data from https://coronavirus.data.gov.uk
Number of new hospital admissions with COVID-19 per day in England to 5th Jan

3,099 patients

3,697 patients

Christmas Day

Data from https://coronavirus.data.gov.uk/
7-day average of daily number of new hospital admissions with COVID-19 per day / million people across different regions in England to 5th Jan

Data from https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-hospital-activity/
Number of people in hospital in England with Covid-19 (to 7th Jan)

The number of patients in English hospitals is 49% higher than the April peak.

Data from https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-hospital-activity/
We are not having a “normal” bad winter

“No different to a bad flu season?”
How England’s winter Covid surge compares to flu seasons
Weekly ICU admissions of Covid-19 patients per million people in winter 2020-21

Source: PHE annual winter flu and Covid reports
© FT

Charts from John Burn-Murdoch
We are not having a “normal” bad winter

“Hospitals are always full in December”... is it that simple?
How current pressure on hospitals compares to a typical winter

Total number of adult critical care beds occupied in London over winter 2020-21

Source: NHS Urgent and Emergency Care Daily Situation Reports
© FT

Charts from John Burn-Murdoch
We are not having a “normal” bad winter

Chart from Bob Hawkins.

We are not having a “normal” bad winter

Chart from Bob Hawkins.

Data
Deaths
Number of new UK deaths from COVID-19 registered per week, to 25th December

Data from:
England and Wales: www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/deaths/bulletins/deathsregisteredweeklyinenglandandwalesprovisional/latest
Northern Ireland: www.nisra.gov.uk/publications/weekly-deaths
Number of deaths within 28 days of +ve COVID test reported per day across the UK to 7\textsuperscript{th} Jan

Data from https://coronavirus.data.gov.uk/
Number of deaths within 28 days of +ve COVID test reported per day across the UK to 7th Jan – by wave (31st August boundary)

Data from https://coronavirus.data.gov.uk/
Vaccination data
Numbers of people vaccinated (1st jab) per week in the UK

Need to get to 2 million per week – 7x more than now

Data from https://coronavirus.data.gov.uk/
It is still a race against time

Figure 17: Number of acute respiratory infection (ARI) incidents in care homes by virus type from week 27, England

Vaccine data

Government should report for uptake:

- How many people were offered vaccine (by vaccine) and how many had it
- Breakdown by age group, ethnicity, deprivation and region
- Separate stats for health care workers and carers
- How much vaccine is not used is each week
- How much is on order and timelines

Government should start measuring and reporting impact:

- Cases, hospitalisation and deaths by age groups, overall & by vaccinated / not vaccinated
- The above broken down by ethnicity, deprivation and region

Note that over 75’s are not generally not the main spreaders of Covid – i.e. preventing them getting ill won’t have that much impact on spread (but it will on illness and death).
Lockdown...?
Spread of new variant: ONS to 2\textsuperscript{nd} January

Figure 14: During the most recent period the highest percentage of people testing positive and compatible with the new variant are seen in London and the East of England.

Estimated percentage of positive cases which are compatible with the new variant (ORF1ab- and N-gene positive) based on people who have tested positive for the coronavirus (COVID-19) on nose and throat swabs, by UK countries and English regions.

Graph from https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionsurveypilot/latest
Will this lockdown be enough?

In Spring we got R to maybe 0.6 at best. The new variant is estimated to increase R by 0.4 – 0.7.

If new variant becomes dominant everywhere, R might still not fall below 1.

Plus:
- “key worker” definition has been broadened
- More children going to school than in March
- Nurseries / childminders are allowed
- We have support and childcare bubbles
- Anyone can go to work if they cannot reasonably work from home
- 2m distancing is not strictly enforced
- Streets are busier

We do now have high levels of mask wearing – will this be enough to offset all of the above *and* the new variant?
How does this new lockdown compare to spring?

Graph from https://twitter.com/dannyjnwong/status/1347495710984433664
Summary

Case numbers rising everywhere, particularly England and Northern Ireland.

Hospitals are under enormous pressure which is only going to get worse over the next few weeks.

Deaths will continue to increase rapidly for at least a few more weeks. We will exceed wave 1 numbers soon.

Lockdown might struggle reduce cases significantly.

Vaccination so continuing but needs to accelerate and we need more data.