Latest numbers on COVID-19 in the UK – 30 October 2020

Mostly bad.

1. Growth of cases, hospitalisations and deaths

2. What do we know about how it’s spreading?

3. How can we reverse growth?

With many thanks to Catherine Finnecy for help in collating and understanding the data and Luke Shepherd for the international plots.
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](https://coronavirus.data.gov.uk).

### Number of new confirmed COVID-19 cases / 100,000 people – UK nations

- **England**: rule of six & 10pm curfew.
- **Scotland**: restrictions in central belt.
- **Wales**: circuit breaker.
- **Northern Ireland**: circuit breaker.
- **Scotland**: stronger restrictions in central belt.
- **England**: tier system.
- **Some places**: ban on household mixing.
Number of new confirmed COVID-19 cases / 100,000 people – England regions

Number of new confirmed COVID-19 cases / 100,000 people – England regions

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

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

Just over 1 doubling from April peak (3 weeks...?)
3-day average of daily number of new hospital admissions with COVID-19 per day / million people across different regions in England

Where London was around lockdown day in March

Data from https://www.england.nhs.uk/statistics/statistical-work-areas/covid-19-hospital-activity/
Number of new UK deaths from COVID-19 per week

These are registered deaths where COVID-19 was mentioned on the death certificate, regardless of location.

- 234 w/e 25\textsuperscript{th} Sept
- 474 w/e 9\textsuperscript{th} Oct
- 333 w/e 2\textsuperscript{nd} Oct
- 762 w/e 16\textsuperscript{th} Oct
- 158 w/e 18\textsuperscript{th} Sept

Data from:
- Northern Ireland: [www.nisra.gov.uk/publications/weekly-deaths](https://www.nisra.gov.uk/publications/weekly-deaths)
Number of deaths within 28 days of +ve COVID test reported per day in England

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

Next two weeks 4,000?

Two weeks after that 8,000?

So what can we do to reverse growth?

People infected mid August

2 wks 152

2 wks 416

2 wks 867

2 wks 2,147
What do we know about current spread?

Big young people spike now coming down – but older age groups still increasing
What do we know about current spread?

![Graph showing weekly incidence of laboratory confirmed COVID-19 cases per 100,000 population in nursery/preschool, primary school, secondary school and college/university age cohorts, week 33 to 43.](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/930819/Weekly_COVID-19_and_Influenza_Surveillance_Graphs_W44.pdf)

But, when you look closer, *school age children* are increasingly catching COVID.
What do we know about current spread?

Secondary schools


[Data from https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/coronaviruscovid19infectionsurveypilot/latest]
What do we know about current spread?

Hospitality and schools among most common locations.

A closer look at the Netherlands

Closure of bars and restaurants may be slowing growth but curfew did not do much. Household mixing still allowed.
A closer look at France

Marseille closes bars and restaurants

Paris closes bars and restaurants

Overnight curfew extended to 38 more departments

Lockdown, Schools open

With thanks to Luke Shepherd for producing the charts
Level 2 – rule of 6, bars + restaurants open
Level 3 – can only mix with 1 household, gyms, museum close, outdoor dining, pub restrictions
Level 4 – No household mixing, shops, hairdressers etc close, take away / outdoor only
Level 5 – Stay at home. Schools, universities, creches stay open.

With thanks to Luke Shepherd for producing the charts
What can be done?

We need to **reduce** cases **rapidly**. This means getting R below 1 (currently R somewhere between **1.2** and **1.6**).

If we can get R to **0.6** (total lockdown) then cases will **halve** about every **week**.

Getting R to **0.85** means cases will **halve** about every **3 weeks**. Could do this with closing a lot of things except schools.

**We believe we need to aim to get cases below 5,000 confirmed cases per day and reform test and trace to be able to cope with that number.**
What should be done?

New cases per day in England

Slow comes at a cost. Total number of cases over those 4 months:
- R=0.6: 500,000
- R=0.85: 800,000
- R=0.95: 1.7 million

Choose less restrictive set of measures to reduce R to just below 1, indefinitely.

Lockdown with open schools for 9 weeks

“Hard lockdown” for 3 weeks

Relax measures to maintain R=1 once cases low enough

Only see impact on cases in 1 week’s time
COVID continues to spread across Wales and England – but Scotland levelling off, Northern Ireland coming down. Wales should see impact from its firebreak next week.

We are just over one “doubling” away from reaching the peak of hospital admissions seen in April. This is 17-20 days at current rates.

The government **urgently** needs to halt and reverse growth.

Trade-offs between severity of circuit break and duration. Keeping schools open would require more restrictions for longer.

The **better** Test and Trace is, the **fewer** restrictions are needed once cases are below 5,000. **Supporting** people to isolate is crucial.