# Coronavirus website

(Don’t forget Winton Centre branding and RiskyTalk link!)

GRAPH HERE AT TOP

[various options as defined by David, but with default being daily deaths with fitted curves and uncertainties because main point of this is to show ‘when are we turning the corner?’]

## **Plot**

Observations as points for daily deaths

Joined lines for cumulative deaths

### **Later annotations**

Add error bands at 0.5,1,2 se

The se comes from either

(a) Poisson fit to the log plot (for early data)

(b) Loess fir

### **Further annotations:**

Key points such as estimated points where the log plot starts to fall off linear

Needs uncertainties around the 1st and 2nd derivative.

### **The input options are (default in bold)**

Cumulative or **Daily**

Cases or **Deaths**

Log (Poisson fit) or **Linear (Loess fit)**

**By date** or aligned on a configurable daily death threshold

### **Countries to have as options,**

Initially plot UK with ability to add 1 more

**UK only**

+US

+Italy

+Spain

+France

+Sweden

+Switzerland

+Australia

+Korea

+China

+Hong Kong

+Japan

+Iran??

Data source:

* <https://covid.ourworldindata.org/data/ecdc/total_deaths.csv>
* [https://covid.ourworldindata.org/data/ecdc/total\_cases.csv](https://covid.ourworldindata.org/data/ecdc/total_deaths.csv)

Text underneath (to echo country selection above - i.e. sentence per country displayed in graph):

The epidemic in [Country name] appears to be slowing/shows no sign of slowing yet, with a confidence level of [X]

(What this means technically is……)

## David’s Comments:

Daily comments on interesting features.

## Tutorial section

Fixed text (with potential videos)

### FAQs for website with graphs

* Where does this data come from?
* What is a ‘log scale’ and what is the point of it?
* How trustworthy is the data?
* What are lines (including the dotted ones)?
* How can there be uncertainty about numbers of deaths?
* How can you tell when the increase in deaths is beginning to slow?

### Parallel site

I’d like to link from that page to one visualising our survey data, which will have a bar chart allowing you to select a question that you want to see the response to and which countries you want displayed, plus a map version showing mean response per country in a colour. Carys working on these now!

### 

### Alex ‘interview’ Qs for David:

(General opening: overall perspective)

* How bad IS this virus really, compared to normal flu, to the infamous Spanish flu, or to SARS?

(Current situation and what we can see from graphs)

- We hear these daily record death tolls from all the different countries, especially Spain and Italy. Is it still getting worse there?

- They’ve been on lockdown for nearly 2 weeks now – are there any signs that that’s working?

- How would we know that the policies are making a difference? Are there any countries where we can see a different pattern caused by different policies?

- People talk about the weather maybe affecting it – how could we tell if that was true or not? Does it look like it is?

- China is such a huge country and yet they seem not to have had anything like as bad a death toll – what’s going on there?

- What’s happening with the US at the moment?

- I heard early on that Germany had a really low death rate – is that true?

(Near future and what to expect/look for from graphs)

- If the UK follows the same pattern as Spain and Italy, what does that mean we are likely to see over the next week or two?

- What numbers should we be taking notice of to understand what’s going on? Deaths, death rates, number of cases, hospitalisation rates, how many days it takes to double the number of deaths?

(Further future and uncertainties/assumptions/subtleties)

- Unless a vaccine is discovered are we just expecting the same number of deaths in the end, and what we’re trying to do is space those out over a longer time period? And if so, what’s that total number of deaths – surely we can know it by now?

- How does that compare with things like heart disease or cancer? Why are we taking all this effort and huge economic hit for this virus when millions of people die every day from other diseases?

- If it turns out that people can get it more than once – that immunity doesn’t last – what does that do to all the models and planning? Are they all assuming complete immunity for those who have had it?

- We’ve heard lots about death rates for different groups: older people, people with pre-existing conditions. Do we have enough data yet to be more certain about what those death rates are, and how they vary for people with different risk factors?

- Are the models of likely deaths literally just for those killed by the virus, or do they take into account people who will die as a consequence of the hospitals being too busy to deal with them?

- Many of the people who are killed by the virus are elderly or ill and would have likely died soon anyway – how many EXTRA deaths purely caused by the virus are there likely to be? When will we have enough data to know?

- If it turns out that lots more people than we think have already had it and didn’t get noticeably ill then what difference does that make to the predictions and models?

(Finishing off with individual versus population perspective)

- How likely am I, personally, to get it and to die from it? How does taking different precautions, or being in a house with someone who gets it, affect that? What’s that risk equivalent to?