

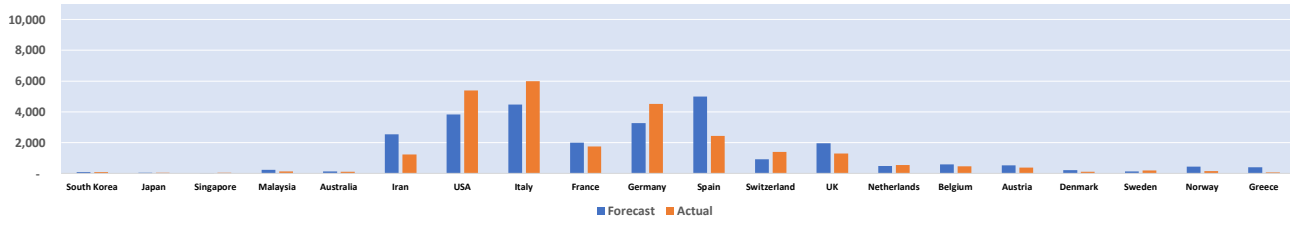
1. Daily update on case numbers

Our short run forecast model assumes Western nations match the reduction in transmission rates achieved in Korea or Italy. From 19th March, we have begun taking data from the Johns Hopkins dashboard, causing a material jump in some countries case numbers that date.

Key points

- 1 Transmission rate in Italy is falling, but only very slowly - same is true in Spain
- 2 High case numbers in German reflect high testing (160k/week) which is encouraging for response planning
- 3 No figures for France - Johns Hopkins not yet updated. UK figures may reflect under-detection

Forecast v actual: total cases



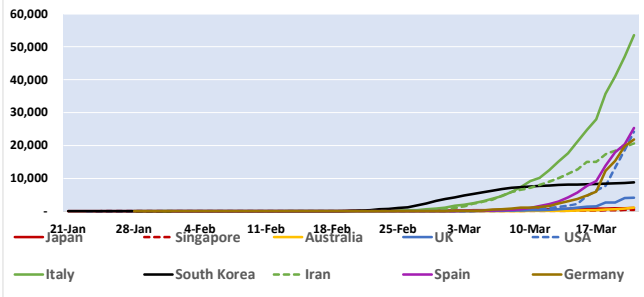
2. Global comparison of growth in case numbers

The figures below are historic data from WHO situation reports, other than for US where we are using John Hopkins figures as WHO/CDC data is out of date. The left hand chart uses a normal axis and the right hand chart shows identical figures on a log axis.

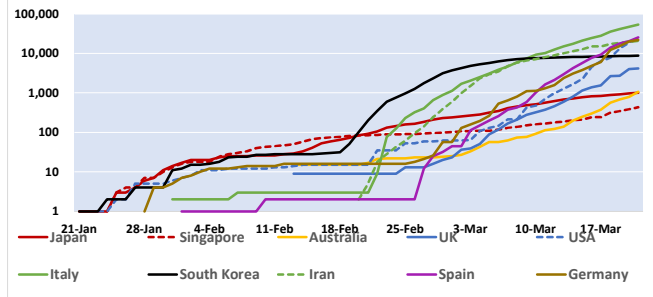
Key points

- 1 Italian outbreak continues to escalate, though growth is slowing very slowly (green line)
- 2 Outbreaks in Spain, Germany and USA catching Italy, - UK remains a concern
- 3 UK growth slightly lower than Italy, Spain and USA, but may reflect low detection

Comparison of case numbers - selected countries



Comparison of case numbers - selected countries



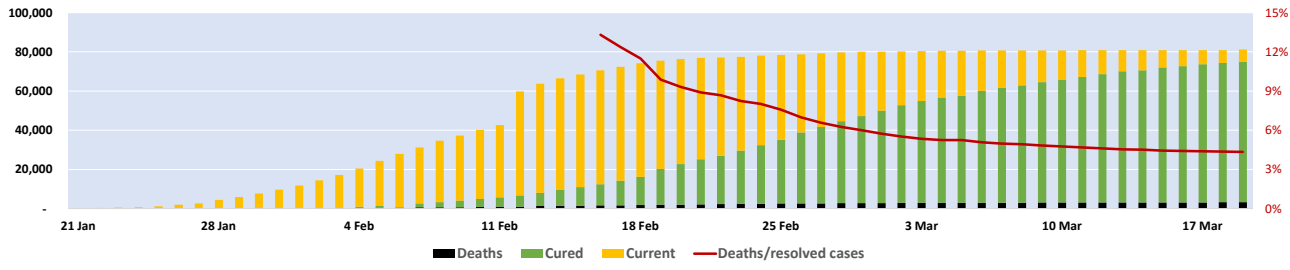
3. China

The figures below are historic figures from WHO (total cases and deaths) and China's CDC (for number of cured cases).

Key points

- 1 Domestic cases now at ZERO - imported cases still running at around 30 per day
- 2 92% of all cases now cured
- 3 Mortality rate on resolved cases now 4.3%

Corona virus outcomes - China



4. Comparison of early stages of outbreaks

The bars below show absolute case numbers, starting from the first day that the country reported approximately 200 cases. This allows comparison of the early stages of the outbreak against China (black line), South Korea (black dotted line) and Japan (grey line)

Key points

- 1 Chart below now illustrates how growth in case numbers began to slow in Korea
- 2 US outbreak expanding rapidly - ahead of China at this stage
- 3 Spain, Germany expanding rapidly (latter in part reflects high testing rates)

Comparison of early growth in case numbers in Europe v China, Korea and Japan

