

COVID-19

outlook 28 April 2020



As many countries in Europe start to ease lockdown measures, close attention is being paid to how infection rates respond. This briefing sets out developments over the past week and looks at how the UK is likely to proceed.

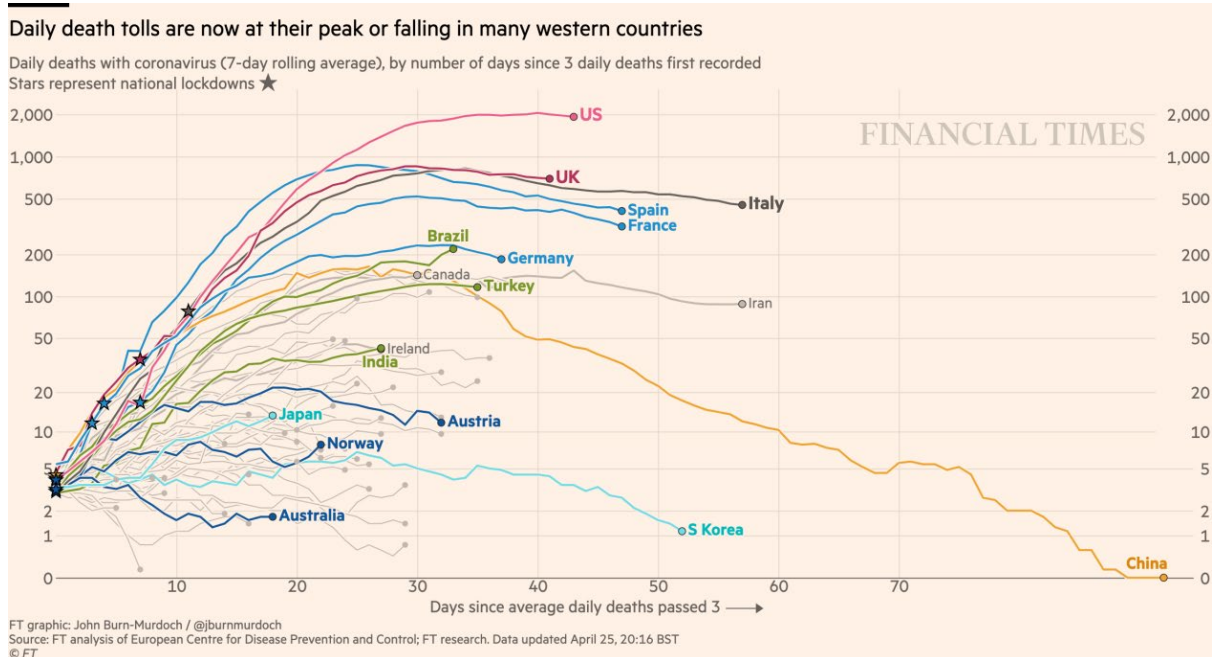
Overview

The gradual relaxing of lockdown measures has started across Europe and all governments are watching closely to see how the virus responds.

The infection curve looks very similar in most countries: all show a gradual decline in cases, compared to a much quicker rise, and imply the economic damage will be prolonged. However, the death rates have varied widely between countries. Germany has so far had only 71 deaths per million of its population, whereas in Belgium, which is the worst hit of any country in the world, has had 622 per million (or 0.06% of the entire population).

The UK is now beyond its peak death rate and the Government is looking to ease some lockdown measures. Those steps are likely to be small and the release of restrictions will be phased over an extended period. It is also clear that some restrictions will stay in place until a vaccine is deployed.

The Government will place a return to tracking and tracing suspected contacts of Covid-19 sufferers at the heart of its strategy for the release of lockdown measures. This requires a focussing of the testing effort once it reaches the required scale and a combination with big data approaches to understanding the spread of the disease.



Current UK situation

The Government has now officially decided the death rate in the UK has peaked, estimating this occurred on 8 April. At that time, around 900-950 people were dying every day and over two weeks later this figure has reduced to 750-800. This rate of decline is expected to be typical, so it is likely to be two to three weeks before the average rate is below 500 per day. Until this is achieved, the Government will find it difficult to release controls because a small miscalculation could easily see a second peak in death rates which is larger than the first.

Some progress has been made with PPE supplies and the situation in healthcare has markedly improved. Most health trusts now have a few days' supply rather than a few hours. Social care providers are receiving more PPE, though many are still unable to source adequate quantities. It is also likely that supplies will run short again, although the reduction of the number of people in hospital will help slow the rate of usage.

The first vaccine trials have begun in the UK, with Oxford University starting its trial process last week. So far only six volunteers have been vaccinated (half with the trial vaccine and half with a meningitis vaccine as a control). This phase is part of an initial safety check. The trial will expand from today and another 800 volunteers will join over the next month. It also plans to expand the trial to Kenya in collaboration with the Government there.

Boris Johnson has been easing back into work over the last week and is now back in Downing Street. He has officially resumed his duties as Prime Minister and has chaired his first meeting of the Covid-19 cabinet.

Testing progress

There has been steady progress on increasing the testing capacity and the Government is confident it will reach its target of making at least 100,000 tests available per day by the end of April. This is despite there being only another three days left to increase capacity by 50,000 per day – which would be a doubling of the current capacity.

The problem remains that there may not be enough key workers coming forward to use the tests, leaving the rate of those administered static while the capacity increases. The Government thus decided at the end of last week to widen the eligibility criteria to include all key workers and their families, increasing the potential pool of those able to be tested to 10 million. This has created somewhat of a public relations problem for the Government as it has created a level of demand it cannot meet and the booking website has crashed several times. However, Kreab understands that Ministers and their advisors have decided that making the testing target is the overriding priority even if it creates a difficulty of unmet demand.

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What will concern the Government is that, after several days of expanding eligibility, around 20,000 available tests are not being taken up each day. Kreab understands this is caused by people booking tests but not turning up, so the Government is looking to add more slots to account for those which have been missed.

Transport impacts

As part of the lockdown, reducing the use of all forms of transport has been an important policy lever and this has had a major effect on providers. This was seen immediately in the aviation sector, but now publicly run transport is facing serious financial issues as ticket revenues plummet. Greater Manchester is reaching a point where it may have to cease its tram service and Transport for London is looking at further cuts to tube, train and bus services in the capital, although national rail franchises have been underwritten by the Government. The situation in London is particularly problematic for the Government as reduced services will make social distancing much more difficult when lockdown measures ease.

Outlook and future government action

The Government is approaching the coming months with a strategy which combines social and technical management of the outbreak. This is because the Government needs to keep the support of society for the measures being imposed as mass flouting of the rules would damage the overall objective of countering the disease. As previously reported, the aim is to open up the economy and society gradually to reach a steady state which can be maintained until a vaccine or treatment is available.

The determination to have a steady easing of restrictions is part of the social management strategy, as both behavioural expert advisors and ministers' own political instincts tell them a second lockdown will be extremely difficult to enforce. This is despite warnings from their epidemiological advisors that a renewed tightening of restrictions will be required at times.

To achieve their twin objectives of a progressive re-opening that will maintain the support of the public, the Government want to try to return to an effective track and trace system as set out below.

Testing

The current antigen testing regime, which tests for people who currently have the disease, will continue to build capacity to reach a target of performing 100,000 tests per day, though it may be a few days late.

However, once this target has been met, there will be a dual priority for the Government to ensure that frontline health and social care staff can be tested on demand and to identify and repress hotspots. Testing will also be used to confirm the presence, or not, of the disease in known contacts of Covid-19 positive people.

Some of the testing capacity will therefore be designated to support the track and trace operation, addressed in more detail below. This is likely to be delivered via home testing as it will be used to check the infection status of people who have been told to isolate by the track and trace operation.

The WHO has warned against the automatic assumption that someone who has Covid-19 is immune.

The World Health Organisation (WHO) has warned against the automatic assumption that someone who has had Covid-19 is immune from contracting it in future. However, the Government's epidemiological advisers have said they are certain there is an immune response, but it is not clear how long it lasts as it has only been in circulation for five months. It is also unclear if those who have experienced only mild symptoms have any level of immunity. However, it is reasonable to assume that for the next year, the spread of the virus will be slowed due

to those who have previously had it. Therefore, the Government is pressing ahead with commissioning Public Health England's (PHE) population testing using a representative cohort of 20,000 people to assess the spread of the disease.

For its part, PHE is modifying this scope of work to include antigen testing as well as antibody testing. This change has been made because, although there have been further improvements over the last week, antibody testing is still not sufficiently accurate to provide a reliable estimate as to the percentage of people who have been infected. In using the two tests together, PHE hopes a more reliable estimation can be achieved.

Track and trace

The Government sees 'tracking and tracing' as key to reopening the economy. This involves using mobile technology to identify those who have been in contact with people with suspected or confirmed Covid-19 and notify them to isolate as a precaution.

It will not be possible to introduce the system until the number of cases is closer to 100,000, however cases are expected to drop below this within weeks. To that end, the Government is recruiting 18,000 people to help run the system, as to be effective it will be necessary to ensure people have self-isolated when notified to do so and to ensure they are subsequently tested.

The system will operate on two pillars: a smartphone app and hotspot identification. The first is based on an NHS smart phone app which when a user notifies it that they have Covid-19 will automatically notify any other users that they have come into contact with someone with suspected Covid-19. The track and trace teams will then follow up with the contacts to ensure they have self-isolated and advise them to notify PHE of any symptoms that develop. The teams will then ensure people are subsequently tested.

To be effective the Government needs to encourage more than 50% of the population to download and install the app. They also need to ensure people understand they need to keep their phone with them at all times, as it works by detecting the close proximity of other phones running the app.

The app continues to be in testing and modifications are being considered to ensure it can work across a wider variety of handsets and therefore can cover a larger proportion of the population.

The second pillar is based on identifying hotspots and rolling out general testing for the public in those areas, with a view to isolating contagious cases as rapidly as possible and stemming the spread of the virus.

Identifying hotspots in the absence of random nationwide testing is not straightforward.

Identifying hotspots in the absence of random nationwide testing is not straightforward. Positive tests returned by keyworkers may go some way towards identifying higher prevalence areas, but this approach is not especially sensitive. Therefore, the Government is in discussions with Kings College about using data from its self-declaration symptom tracker app to help identify hotspots.

The app already has nearly three million users and has shown that taking a big data approach can support robust approximations, both with regards to the absolute number of infections and the geographical spread. The Kings College app has received regional government support in Wales and Scotland, but in discussions between them NHS England has expressed concerns about possible confusion between it and its own track and trace app. As such, they have been reluctant to promote its use, but this may change if the NHS is using the Kings app for hotspot identification.

A further possibility is that those reporting symptoms through the Kings app could be asked to link to the NHS tracing app so their contacts can be traced. There are considerable data privacy issues here which need to be sorted out before this can progress.

Moving forward

Assuming death and transmission rates continue to fall, and once the testing and track and trace arrangements described above are in place, the Government will look to start easing some lockdown restrictions.

While the media like to speculate, that the Government has a predefined step by step process it intends to follow to open up the economy. The reality is that while there is a broad strategy, as set out above, the details are not known even to Government. This is due to the fact that the consequences of actions in easing restrictions are not known to the scientists, because the virus is so new and therefore the data is not yet there.

There are also priority decisions to be made, for example, if the effect of opening the construction sector or opening schools is similar, but the epidemiologists advise that only one can be done at a particular stage, then the Government has to balance the needs of the economy, short and long term, and public opinion.

For the Government, managing the public's expectations and keeping people onside will be key to determining the process and timing of announcements. Therefore, the first announcements on easing of restrictions will be early

next month to counter lockdown fatigue. However, it is likely to be only very minor easing, followed by a series of minor steps rather than a large, staged, lifting of restrictions. It is also likely that these measures will be spaced out two weeks apart, as that allows time for monitoring the response of the infection rate before the next step is taken.

There is no definitive list of measures the Government will take and decisions are likely to be made as needed. Although there is an understanding that this approach makes business planning difficult, it is motivated by the belief that any decision announced more than a week or so in advance could end up having to be reversed as the data changes. U-turns such as this would damage public confidence, which the Government is naturally seeking to avoid.

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Early lifting of restrictions is likely to enable people to visit family as well as possibly allow some professional sport to resume, although without spectators. The retail sector looks set to re-open, providing businesses can ensure social distancing measures similar to those in supermarkets. Construction is another sector that will be relaunched in an early wave of the easing programme.

It remains likely that schools will start to re-open in June, although Scotland, which has an earlier summer holiday to England and Wales, is more likely to start re-opening at the start of the new school year in August.

The re-opening of businesses which encourage social gatherings, such as sporting or music events in stadia, as well as pubs, may occur in a later phase of lockdown easing. However, it is very likely they will not be able to open again until a vaccine is available. Companies are also likely to be required to keep office staff working from home until there is a vaccine.

