As of 20.04.2020 there have been 2,418,429 cases of Covid-19 infection reported with 165,739 deaths. The comparable figures in last week’s update (on 14.04.2020) were 1,934,557 and 120,438.

This does continue the global trend in a flattening of the death rates referred to in last week’s update.

There are now reported cases in 210 countries and territories, which is unchanged from last week.

China continues to report low numbers of new cases with just 12 recorded on 19.04.2020. However, officials in Wuhan have admitted that mistakes were made in the original fatality numbers and have now revised this to 3,869 – a rise of 50%. This was attributed to the combination of the failure to record those who died at home and incorrect filing from some hospitals. There has been concern that China has not reported the full and accurate picture of the number of cases and fatalities from Covid-19.
On 18.04.2020 the Spanish Ministry of Health confirmed that the death toll had risen to **20,043** – a total only exceeded in Italy and the USA. However, after a month of national lockdown there will be a slight easing of the current restrictions. On 20.04.2020 those who are unable to work from home will be allowed to return to their jobs including those in the manufacturing and construction sectors. It is thought that about **300,000 non-essential staff returned to work** in the Madrid region and progress will be closely monitored by increased testing.

Russia has experienced a significant rise in new cases rising from 21,102 in last week’s update to 47,121 on 20.04.2020 with 4,268 cases reported on 19.04.2020. It has also ramped up its testing programme rates in stark contrast to the picture seen in India as shown in the table below.

In terms of case numbers, the USA continues to experience the worst global outbreak with a total of **764,265 cases** and **40,587 deaths**. New York continues to be the state worst hit by this with **247,215 cases** and **18,298 deaths**. New York continues to run one of the most intensive testing programmes in the world with a test rate of **31,478 tests per million**. Case numbers are followed by New Jersey where the figures are **85,301** and **4,202 respectively**. Other states with significant outbreaks include Massachusetts (**38,077**), Pennsylvania (**32,734**), California (**31,527**) and Michigan (**31,424**). However some states such as New Hampshire (**1,392**) and West Virginia (**890**) have seen relatively few cases and this may explain the resentment that is being reported in relation to lockdown measures there.

The picture is summarised in the table below – the figures in brackets represent data on 14.04.2020.

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Cases</th>
<th>Total Cases / 1 million population</th>
<th>Deaths / 1 million population</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>764,265 (587,173)</td>
<td>2,309 (1,774)</td>
<td>123 (71)</td>
</tr>
<tr>
<td>Italy</td>
<td>178,972 (159,516)</td>
<td>2,960 (2,638)</td>
<td>391 (338)</td>
</tr>
<tr>
<td>Spain</td>
<td>200,210 (172,541)</td>
<td>4,282 (3,690)</td>
<td>446 (386)</td>
</tr>
<tr>
<td>China</td>
<td>82,747 (82,249)</td>
<td>57 (57)</td>
<td>3 (2)</td>
</tr>
<tr>
<td>Germany</td>
<td>145,743 (130,072)</td>
<td>1,740 (1,552)</td>
<td>55 (38)</td>
</tr>
<tr>
<td>Iran</td>
<td>82,211 (73,303)</td>
<td>979 (873)</td>
<td>61 (55)</td>
</tr>
<tr>
<td>France</td>
<td>152,894 (136,779)</td>
<td>2,342 (2,095)</td>
<td>302 (229)</td>
</tr>
<tr>
<td>UK</td>
<td>120,067 (88, 621)</td>
<td>1,769 (1,305)</td>
<td>237 (167)</td>
</tr>
</tbody>
</table>
Testing rates will be absolutely essential in making informed decisions over the exit strategies and their effectiveness. However, despite improvements this still remains a mixed picture and the comparative rates from 14.04.2020 are shown in brackets below.

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Cases</th>
<th>Total Tests</th>
<th>Tests / 1 million population</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>764,265 (587,173)</td>
<td>3,898,399 (2,943,955)</td>
<td>11,778 (8,894)</td>
</tr>
<tr>
<td>Italy</td>
<td>178,972 (159,516)</td>
<td>1,356,541 (1,046,910)</td>
<td>22,436 (17,315)</td>
</tr>
<tr>
<td>Spain</td>
<td>200,210 (172,541)</td>
<td>930,230 (600,000)</td>
<td>19,896 (12,833)</td>
</tr>
<tr>
<td>South Korea</td>
<td>10,674 (10,564)</td>
<td>563,065 (527,438)</td>
<td>10,982 (10,288)</td>
</tr>
<tr>
<td>Germany</td>
<td>145,743 (130,072)</td>
<td>1,728,357 (1,317,887)</td>
<td>20,629 (15,730)</td>
</tr>
<tr>
<td>Iran</td>
<td>82,211 (73,303)</td>
<td>353,012 (275,427)</td>
<td>4,203 (3,279)</td>
</tr>
<tr>
<td>France</td>
<td>152,894 (136,779)</td>
<td>463,662 (333,807)</td>
<td>7,103 (5,114)</td>
</tr>
<tr>
<td>UK</td>
<td>120,067 (88,621)</td>
<td>482,063 (367,667)</td>
<td>7,101 (5,416)</td>
</tr>
</tbody>
</table>

Although the UK continues to lag behind testing rates in some countries, this does at least show a significant increase in testing rates since my last update and this will continue to be tracked. However, at the current time the stated target of performing **100,000 tests a day in 9 days** time does seem very challenging. Spain, Italy and Germany continue to test at three times the UK level and this does enable them to make more agile and informed decisions over the progress of relaxing lockdown measures.

In comparison to the South Korean testing rates seen above, Japan does seem less prepared and their current test rate is only **892 per 1 million of the population**. The comparable figure for Russia is **14,047**. Brazil has one of the lowest global test rates and is currently only **testing 296 per million**.
GLOBAL TRAVEL ADVICE

The UK continues to be a member of the EU civil protection mechanism which helps cover the cost of repatriation after natural disasters – this scheme has been in force since 2001. However, it appears to have availed itself of this scheme to a much lesser extent than other EU nations and has organised fewer flights than any other country apart from Italy as of 16th April. The UK has chartered 6 flights and brought 1,000 people home – compared with Germany which has organised 101 flights to repatriate 21,815 citizens. This is a disappointing picture especially as 4 in 10 of the 165,000 Europeans stranded abroad are UK nationals.

The UK continues to operate a relatively open border policy compared to other countries such as the USA, which barred entry from European countries including the UK. A further 130 countries have imposed travel restrictions. Approximately 15,000 people a day – or 105,000 a week – are entering the UK often from countries with extensive Covid-19 outbreaks. Charter flights have arrived from Romania to bring in seasonal agricultural workers who normally comprise 99% of the 80,000 people needed to pick fruit and vegetable harvests.

At the other end of the travel spectrum, 545 private jets have landed at UK airports since the imposition of lockdown in March. During this time there have been 767 departures from UK airports.
UK Specific Advice

As of 0900 on 20.04.2020 a total of 501,379 people have been tested in the UK, of which 124,743 were positive. The comparable figures from last week’s update were 302,599 tested with 93,873 positive. 19,316 tests were carried out on 19.04.2020. There have now been 16,509 deaths in the UK compared to 12,107 on 14.04.2020.

The testing is now broken down into 3 pillars as follows:

Pillar 1: swab testing in PHE labs and NHS hospitals for those with a medical need and the most critical workers and their families.

Pillar 2: swab testing for key workers and their households.

Pillar 4: serology testing: a national surveillance programme for population blood testing, using a high-accuracy antibody test operated by Public Health England (PHE) to find out what proportion of the population have had the virus.

To date, 4,287 tests have been carried out under pillar 4 and these tests are essential in understanding community levels of Covid-19 infection.

The current lockdown has been extended for a further 3 weeks and the progress of relaxation measures in Spain, Italy, Germany and elsewhere will be closely monitored.

The furlough support scheme has now been extended until the end of June.

Learning Lessons

In previous updates I have looked at countries that have been successful in minimizing both cases and fatalities. This can be synthesised into 12 key learning lessons.

1. Be Prepared

Taiwan was severely hit by the SARS epidemic in 2003. As a result of this they established a dedicated Central Epidemic Command Centre ready to be activated at short notice. They did so on 20th January – a day before the island had its first confirmed case. This allowed them to put in place extensive control measures without having to go through lengthy political processes as the necessary authorities were already in place.
2. Act Quickly
Taiwan put travel restrictions in place at an early stage especially limiting travel from Wuhan. A week after their first case they began electronic monitoring of quarantined individuals via government issued mobile phones. Up until the end of February, the government continued to deploy new measures on a virtually daily basis.

3. Test, Trace and Quarantine
Countries that undertook these actions aggressively reaped the rewards. The use of mobile technology enabled more effective outreach and also helped to ensure rigid compliance when quarantine was indicated.

4. Use Big Data
Countries that were able to merge national health insurance data with customs and immigration databases were able to build a much better real time picture of the disease transmission and patterns of outbreak.
This allowed large-scale quarantine measures which were then strictly enforced – though not without concerns over infringement of civil liberties.

5. Be Aggressive in Your Approach
Iceland’s approach has not been particularly innovative but it has been fast and meticulous. Their aggressive approach meant that police worked with healthcare officials to allow rapid contact tracing and isolation of suspected cases. This also let them be less restrictive in their containment measures with the result that schools and nurseries were allowed to remain open and their parents to attend work. This was reflected in the finding that 60% of their new cases were in people who were already in quarantine showing that the measures worked.

6. Involve the Private Sector
Partnerships between national health bodies and private sector businesses have proved very effective in Iceland and Germany both in developing tests but undertaking the testing as well. Germany’s devolved approach meant that over 400 accredited laboratories were able to support rapid roll out of national testing.

7. Take Preventative Action
Countries that imposed travel and border restrictions at an early stage have benefitted from this measure. On March 19th all returning travellers to Iceland were required to enter 14 days of quarantine irrespective of where their travel had originated. Limitations on the size of social gatherings were imposed but groups of up to 20 were allowed as long as they practiced social distancing. This helped to promote compliance with these measures.
8. Use Technology Judiciously

Again countries such as Taiwan and Iceland rapidly developed an app to help chart disease spread. Users did not have to share the data with the authorities but many did so as they felt it helped the national effort. China was more authoritarian in its approach. The UK has yet to release an app and there continue to be data security concerns which hinder progress.

9. Innovate in Testing

South Korea rapidly opened 500 test centres throughout the country offering drive through capability. Unlike the UK, no pre registration was required and people could be tested at will rather than having to belong to select key worker employment groups. All tests were free and results were available soon after the test. This then facilitated quarantine and contact tracing procedures.

10. Learn from the Past

In part this consists of developing the political will to act quickly. South Korea was relatively unaffected by SARS but experienced the worst MER CoV outbreak outside of the Middle East with 186 cases and 38 deaths. Their contact tracing app was ready quickly and there was the will to deploy this rapidly overcoming privacy concerns.

The UK has let national stores of PPE dwindle and did not put in place either the purchasing or manufacturing provision to address this – we are now paying the price of this inaction.

11. Increase Testing when Restrictions are Eased

The UK capacity remains deficient in this respect and experience has shown the need to increase test rates to assess the safety in easing lockdown measures. Germany plans to raise test rates as they begin to relax containment measures. They are already testing at three times the UK’s current capability.

12. Invest in Hospital Capacity

Germany has built huge healthcare capacity into its infrastructure. Germany has more spare beds in their intensive care units than Italy has in total. This has allowed Germany to treat patients from Italy, Spain and France.
Africa

Whilst we have just looked at global models of excellence, other countries are not so fortunate.

Covid-19 was relatively late to arrive in Africa but cases are now growing exponentially. Although case numbers are still fairly low in absolute terms the prevalence of chronic diseases such as tuberculosis, malaria, diabetes and HIV are likely to lead to a higher complication rate from Covid-19 infection. This is further compounded by malnutrition in the first place. Diagnostic testing capacity, healthcare staff and specialised treatment facilities are all in short supply.

There are fewer than 2,000 working ventilators in 41 African countries according to the WHO and there are less than 5,000 intensive care beds in 43 countries. This gives a bed to population rate of 5 beds per million people compared to an average of 4,000 beds per million in Europe. For example, South Sudan has just 4 ventilators and 24 ICU beds for a population of 12 million people. Similar critical shortages are also seen in Burkina Faso, Sierra Leone and Central African Republic.

On a marginally brighter note, large supplies of PPE have been received from the Chinese billionaire’s Jack Ma Foundation.
Can I Catch Covid-19 Again?

This question shows how much remains unknown about the behavior of this virus.

More than 160 South Koreans have tested positive for a second time despite all needing to have two negative tests before leaving medical care. This represents about 2% of all positive cases to date and they have gone back in isolation. South Korean health authorities supported by the WHO are investigating this phenomenon. A number of different scenarios are being assessed but it is likely that there may be several causes for this which include:

- Reactivation of remaining patient viral load – this would happen if the patient had not developed sufficient immunity and viral rebound occurred.
- Tests are picking up dead viral particles that are no longer infectious – evidence for this has come from 6 cases where the virus could not be cultivated in isolation.
- No secondary transmission from relapsed cases has been reported.
- Viral mutation means that the test itself may be inaccurate in failing to detect slightly differing forms of the virus.
- The test itself may be inaccurate or was poorly performed in terms of sample collection.

The situation is being investigated to assess immunity levels in 400 specimens where infection has been confirmed. The results will not be available for several weeks but may have a significant effect on the value and accuracy of widespread antibody testing.

The Queen’s Speech

On Sunday, 5th April the Queen made only the 5th televised address of her 68-year reign. A UK television audience of over 24 million people watched her powerful yet simple address of 525 words. Even in Republican France, her speech was watched by 9% of the viewing public – 2.35 million watchers. Despite politicians receiving varying amounts of public approval of their actions it was good to see that her speech rightly gained worldwide praise.

If you have any specific or business related concerns, or simply want to talk to one of our clinicians please do not hesitate to contact the Health Management Occupational Health and Support line on 01273 555666. Our clinical team will be pleased to assist.