

COVID-19 Country Response Analysis – April No. 2

Global Situation¹

2,001,231 cases (downward revision by Johns Hopkins University (JHU) – as of 4pm AEST)
126,757 deaths

Trends

The global number of new daily reported infections continues to decline since 10 April when there were 94,629 to 71,572 on 13 April. The global number of daily deaths has also declined from a peak of 7,385 on 7 April to 5,421 on 13 April. Almost one-half of yesterday's deaths were in the U.S.

The global case-fatality ratio (CFR) based on reported cases and deaths is 6.3%. The highest CFRs are in Belgium (13.4%), Italy (13%), the UK (12.9%), the Netherlands (10.9%), and Indonesia (9.5%). Countries with relatively low CFRs include Germany (2.6%), Luxembourg (2%), Thailand (1.6%), Australia (1%), Iceland (0.5%), Singapore (0.3%), and Qatar (0.2%).

The five-day moving average of new reported cases is declining in all ten of the most affected countries. This is most significant in Italy, France, Spain, Iran and Germany. This trend is less pronounced in the US, UK, Belgium and the Netherlands. There have been major daily spikes in deaths in the US, UK, and France.

In the US, a total of 3,120,318 people have been tested, of whom 614,216 have tested positive (19.7%). The number of deaths in New York City has surpassed 10,000.

Australia

6,440 cases (as of 15 April at 11 am AEST)²
63 deaths

Trends

The number of new daily cases has remained below 50 for the past four days despite the spike in Tasmanian cases.

Issues related to COVID-19

According to Burnet's 'COVID-19 Suppress, Release, Restore' strategy, there are two current problems to address:

1. The need to release restrictions on the community;
2. The concern around the current extent of community transmission of COVID-19 and how this will change upon release of restrictions.

¹ <https://coronavirus.jhu.edu/>

² www.health.gov.au 14 April 2020

This section of the Update will review evidence from around the world that might guide the proposed strategy and Key Actions, are as follows:

1. Evidence for Action - community-based surveillance & monitoring
 - Utilise community-based surveillance systems to monitor disease transmission - impact of outbreak response.
 - Determine the extent of community transmission through expanding testing strategies and contact tracing - including secondary contacts and to asymptomatic people.
 - Define priority groups and hot spots and implement modelling of interventions.
 - Pilot new social, behavioural and biomedical interventions to reduce transmission.
 - Monitor broad health, social and economic consequences of outbreak response.
2. Outbreak Response - detect, isolate & prevent
 - Optimise models for testing, self-isolation and quarantine of people with suspected or confirmed COVID-19.
 - Maximise case detection through enhanced contact screening.
 - Minimise transmission through community-based models of care and support to improve social isolation compliance.
 - Prevent peaks in community transmission through social distancing compliance.
3. Whole-of-society response – engage communities, businesses and non-government organisations
 - Enhance community engagement by providing updated information on progress and next steps.
 - Promote access to support services through communities, businesses and non-government organisations.
 - Develop strategies to engage at-risk groups – provide social and material support for the vulnerable populations through community organisations.
 - Engage media outlets (traditional & social media) to disseminate accurate information - address knowledge gaps, misinformation and disinformation.
 - Utilise community organisations and trusted media sources as informal source of surveillance information.
4. Enable supportive systems
 - Establish a national coordinated mechanism for governance and information sharing.
 - Create knowledge translation and learning systems including epidemiological modelling and support.
 - Prepare hospitals and complete other preparedness planning to minimise health system impacts with disease resurgence.
 - Support sustainable strategies and models of care - ensure workforce and essential supplies.
 - Support health system to maintaining quality care for those most in need - including non-COVID services.

The Update will share information from selected countries or regions of countries that have announced that they will gradually ease restrictions. These are Italy, Spain, Austria, Denmark, the Czech Republic, Norway and three western states of the US.

Italy has reopened some bookshops and children's clothing stores. Spain has allowed workers to return to factories and construction sites. Austria has allowed thousands of hardware and home improvement stores to reopen, as long as workers and customers wear masks.

In Denmark, elementary school teachers readied classrooms so young children could return to school on Wednesday, while in the Czech Republic, sports centres and some shops reopened. There, restaurants may re-open on 20 April. In Norway, kindergartens will open on 20 April and primary schools (Years 1-4) will open on 27 April.



The three western US states of California, Washington and Oregon will coordinate a phased reduction in restrictions that have successfully flattened the curve of new cases. A joint statement by the three state governors outlined their strategy, which will focus on the following four goals:

- *Protecting vulnerable populations at risk for severe disease if infected. This includes a concerted effort to prevent and fight outbreaks in nursing homes and other long-term care facilities.*
- *Ensuring an ability to care for those who may become sick with COVID-19 and other conditions. This will require adequate hospital surge capacity and supplies of personal protective equipment.*
- *Mitigating the non-direct COVID-19 health impacts, particularly on disadvantaged communities.*
- *Protecting the general public by ensuring any successful lifting of interventions includes the development of a system for testing, tracking and isolating. The states will work together to share best practices.*

Update on community surveillance and asymptomatic cases of COVID-19

Estimating the asymptomatic proportion of coronavirus disease 2019 (COVID-19) cases on board the Diamond Princess cruise ship, Yokohama, Japan, 2020. Eurosurveillance. Volume 25, Issue 10, 12/Mar/2020

A total of 634 people tested positive among 3,063 tests as of 20 February 2020, 15 days into quarantine. Of the 634 confirmed cases, a total of 306 and 328 were reported to be symptomatic and asymptomatic, respectively. The cumulative proportion of asymptomatic individuals increased from 16.1% (35/218) before 13 February to 50.5% (320/634) on 20 February.

Of the 320 cases asymptomatic on the day of testing, 113 (35%) did not develop any symptoms, the others were pre-symptomatic on the day of testing. Overall, 17% of the 634 infected passengers were true asymptomatic cases.

Rapid assessment of regional SARS-CoV-2 community transmission through a convenience sample of healthcare workers, the Netherlands, March 2020. Eurosurveillance. Volume 25, Issue 12, 26/Mar/2020.

When the number of reported cases in the Netherlands was 128, the source of infection could not be established for seven of the 35 cases in the province of Noord-Brabant. Some cases elsewhere in the Netherlands were also linked to Noord-Brabant. The Outbreak Management Team decided to approach the assessment of possible community transmission in Noord-Brabant through sampling of health care workers (HCW) in hospitals in the province.

In the period 6–8 March 2020, a total of 1,097 HCWs with mild respiratory symptoms in nine hospitals were tested for SARS-CoV-2, of whom 45 (4.1%) were found positive. Six hospitals had positive HCWs of which two accounted for 38 of the 45 positive HCWs.

Rapid Sentinel Surveillance for COVID-19 — Santa Clara County, California, March 2020. MMWR/ 10/Apr/2020, 69(14);419–421.

County residents evaluated for respiratory symptoms (e.g., fever, cough, or shortness of breath) who had no known risk for COVID-19 were identified at participating urgent care centres. A convenience sample of specimens that tested negative for influenza virus was tested for SARS-CoV-2 RNA. Among 226 patients who met the inclusion criteria, 23% had positive test results for influenza. Among patients who had negative test results for influenza, 79 specimens were tested for SARS-CoV-2, and 11% had evidence of infection.



This sentinel surveillance system helped confirm community transmission of SARS-CoV-2 in Santa Clara County. As a result of these data and an increasing number of cases with no known source of transmission, the county initiated a series of community mitigation strategies.

South Korea's Response to COVID-19

The United States and South Korea confirmed their first cases of COVID-19 within a day of each other, but since then, the United States has registered case numbers in six digits, whereas South Korea has just over 10,000 and has witnessed a dramatic slowdown in the rate of infection without a major lockdown. South Korea's COVID-19 case-fatality rate is one-third that of the United States. And per capita, South Korea has tested three times as many citizens as the United States has—thanks in part to South Korean companies, which produce more than 350,000 test kits per day and plan to increase their output to one million³.

But South Korea's surveillance is only one small aspect of what has become the gold standard for flattening the curve. The South Korean response—a blend of quick action and policy innovations coordinated by the national government—has proven enormously effective in containing the COVID-19 outbreak and can provide lessons for other countries. The country has benefited from its experience with MERS.

The country wasted little time. Less than a week after South Korea detected its first case of COVID-19 on January 20, health officials met with 20 medical and pharmaceutical companies to jump-start the production and approval of test kits. After some initial hesitation, the government declared a national emergency on February 23.

Strong national coordination has been critical. Nowhere is the effect of national coordination more apparent than in the case of facemasks. South Korea initially suffered a mask shortage and this led to hoarding and price gouging. On March 5, the government purchased 80% of the masks produced domestically. It prioritised hospitals for distribution and then created a price control and ration system. To prevent hoarding, citizens were allowed to purchase masks only on designated days based on the last digits of their birth years.

South Korea's constructive response to the new epidemic owes a great deal to innovation. Much attention has already been given to South Korea's use of high-tech apps and CCTV to geolocate and tag infected people. But South Korea's most elegant innovations have been common sense ones that have saved lives and slowed the spread of the virus. About one month after South Korea's first positive case, for example, health officials came up with the idea of a drive- drive-through testing facility. The first one was set up in the parking lot of a university on February 23. There are now more than 70 drive-through facilities and more than 600 testing facilities nationwide.

Another simple but pragmatic idea was the "designated site" system, in which the government assigned some medical facilities to handle COVID-19 cases exclusively and others to handle other ailments. Designated sites were listed on the government app and identified with large signs on their premises. People in HAZMAT suits stood at hospital entrances to direct walk-in patients to the designated and non-designated sites. This system helped keep virus-afflicted patients away from other patients, thus reducing the spread of the disease.

³ Foreign Affairs, May/June 2020 issue. <https://www.foreignaffairs.com/articles/united-states/2020-04-10/south-korea-offers-lesson-best-practices>