COVID-19 Global Trends & Analyses: June Update 3

Period 6-12 June

Summary

- The **global** total number of reported cases has surpassed 7.5 million. The daily new cases has been >100,000 for 14 consecutive days, with the highest single day of cases recorded 134,705 on June 10.

- The global case-fatality ratio has declined to 5.6% from 7% during most of April and May. This may be due to the relatively low CFRs being reported by Brazil (5.1%), Russia (1.3%), and India (2.8%) while these countries represent a high proportion of the global case denominator.

Growing Epidemics

- **South America**: For the past seven days, **Brazil** has reported the highest number of daily new cases and deaths in the world. Peru, Chile and Mexico also have rapidly growing outbreaks.

- **India** now has the fourth highest number of cumulative reported cases in the world and reported more than 12,000 new cases on 10 June. Outbreaks in Pakistan, Bangladesh and Afghanistan continue to expand.

- The number of reported cases in **Africa** has surpassed 200,000. The highest numbers of cases have been reported in Northern and Southern Africa. South Africa has reported the highest number of cases (55,400) with more than 3,000 new daily cases during the past week.

- In the **United States**, the number of reported cases has surpassed 2 million (28% of the world total). 22 states now have an upward trajectory of new reported cases, up from 17 last week. 14 states and Puerto Rico have recorded their highest-ever 7-day average of new cases.

- **Indonesia** reported its highest single day rise in cases on June 10 (1,241), bringing the total number of infections nationwide to 35,295. Indonesia has reported the second highest number of cases in SE Asia, after Singapore. However, the cumulative testing rate is 170 per 100,000 compared with 8,357 per 100,000 in Singapore.

- **Papua province** has reported 1,156 cases (33 per 100,000 compared with national attack rate of 13 per 100,000), which is the second highest provincial rate in the country. Papua province borders with three provinces in PNG: East and West Sepik and Western, which poses a high risk of continued importation from Indonesia into PNG (noting 3 of PNG's 8 cases have been in people crossing to Indonesia). There is a need for enhanced surveillance and response along the long porous border.

Second Waves

- **Iran** has the first sustained second wave of infections in the world. The peak of the second wave has been higher than the first. The Ministry of Health reports that just 40 per cent of Iranians now believe in obeying physical distancing rules, down from 90 per cent earlier in the outbreak. The number of people who believed in self-isolating stood at 32 per cent, down from 86 per cent.

- **Israel:** After suppressing the epidemic (10-25 cases daily through most of May), the country has reported more than 1,900 cases scattered throughout the country during the past two weeks. Health officials have attributed the resurgence to new cases to schools, which reopened in May after a two-month closure.

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- **South Korea**: After reporting single digit or zero daily cases through April and the first half of May, the country has been reporting around 30 to 50 new cases per day since late May, mostly in the densely populated capital area where about half of South Korea's 51 million people live.

Science and Evidence Update

- The **COVID-19 Systematic Urgent Review Group Effort** (SURGE) study, published in The Lancet on 1 June found convincing evidence that physical distancing of at least 1 metre (a stronger effect at 2 m), the wearing of face masks (by health care workers and the general public), and eye protection significantly reduce the risk of coronavirus transmission. WHO updated its recommendations on face masks on June 5.

  Recommendation: Governments in Australia should consider recommending the wearing of masks (medical or non-medical) in settings where adequate physical distancing is not possible, such as on public transport in Melbourne and Sydney.

- **Mental health**: Two large cross-sectional studies in the US and UK have found major increases in the proportion of the population experiencing symptoms of anxiety and/or depression compared with periods before the pandemic. In the US, around one-third of adults were experiencing anxiety or depression in mid-May 2020 compared with 11% in the first half of 2019. In the UK, almost 50% reported high levels of anxiety in mid-March 2020 compared with 21% in the final three months of 2019.

Global trends[1][2]

- The global total number of reported cases has surpassed 7.5 million. The number of daily new global cases has exceeded 100,000 for 14 consecutive days and reached an all-time high of 134,705 on 10 June.

- Reported new cases continue to be focused in four geographic regions: the Americas, South Asia, the former Soviet Union, and the Middle East.
  - Saudi Arabia continues to report an escalating number of new cases and now ranks #16 in the world for total cases. Outbreaks, mainly among migrant workers, in Qatar, UAE, Kuwait, Bahrain and Oman continue to grow.

- For the past seven days, Brazil has reported the highest number of daily new cases and deaths in the world. Peru, Chile and Mexico also have rapidly growing outbreaks.

- India now has the fourth highest number of cumulative reported cases in the world and reported more than 12,000 new cases on 10 June. Outbreaks in Pakistan, Bangladesh and Afghanistan continue to expand.

- The number of reported cases in Africa has surpassed 200,000[3]. The highest numbers of cases have been reported in Northern and Southern Africa. South Africa has reported the highest number of cases (55,400) with more than 3,000 new daily cases during the past week. The countries with the next highest number of cases are Egypt (38,300), Nigeria (13,900), Algeria (10,500), Ghana (10,400), Cameroon (8,700), Morocco (8,500), and Sudan (6,600).

- In the United States, the number of reported cases has surpassed 2 million (28% of the world total). 22 states now have an upward trajectory of new reported cases, up from 17 last week. 14 states and Puerto Rico have recorded their highest-ever seven-day average of new coronavirus cases since the pandemic began**.** They include several states that relaxed restrictions early, such as Arizona, Florida, South Carolina and Texas. The test positivity rate in South Carolina has increased to 15%.

- Sweden reported 1,427 new cases on 10 June, its highest ever number of daily new cases.

- A **serosurvey** in the heavily impacted Bergamo/Lombardy region of Italy of more than 20,000 people between April 23 and June 3 revealed that **57 percent had COVID-19 antibodies**[4]. Among medical staff, it was 30 percent. This is the highest proportion of antibody-positive people reported so far anywhere in the world.

- The global **case-fatality ratio** has declined to 5.6% from 7% during most of April and May. This may be due to the relatively low CFRs being reported by Brazil (5.1%), Russia (1.3%), and India (2.8%) while these countries represent a high proportion of the global case denominator.

- The New York Times, with inputs by several epidemiologists, has compared the all-cause mortality rates reported during peak periods of coronavirus infections in various cities with historical data for the same

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[1] https://coronavirus.jhu.edu/data/new-cases

[2] https://www.worldometers.info/coronavirus/#countries

[3] https://africacdc.org/covid-19/

[4] https://www.theage.com.au/world/europe/bergamo-italy-is-near-herd-immunity-level-20200610-p551b2.html?utm_content

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times of year[5]. The authors report excess mortality and compare it with previous crises. Some select findings Include:

- o **New York City**: 5.83x, compared with 1.61x in **September 2001** and 3.97x during the **Spanish flu**, October 1918.
- o **Spanish flu in Philadelphia**, October 1918: 7.27x
- o **London:** 3.02x
- o **Stockholm:** 2.18x
- o **Jakarta**, **Indonesia**: 1.54x

This is what a second wave looks like[6]:
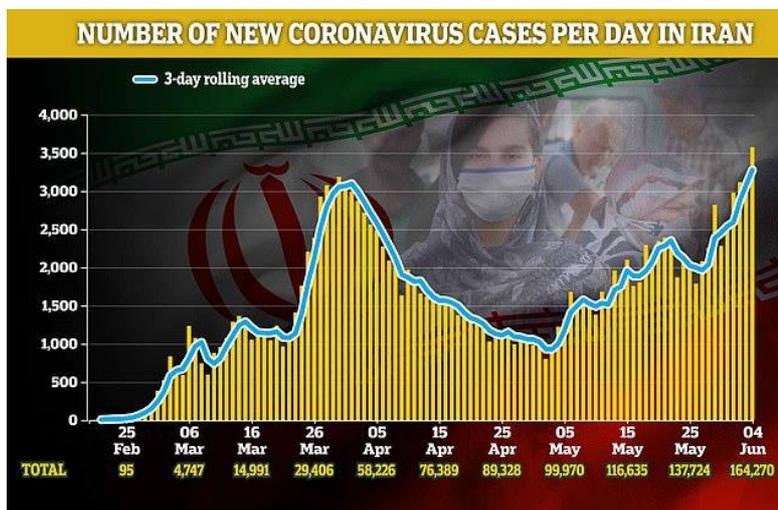
Iran has become the first country in the world to report a sustained second wave of coronavirus infections after easing its lockdown. In early May, it decided to open up the country from a brief three-week lockdown in an attempt to salvage its economy, which was already suffering under international sanctions and huge budget deficits. Now, a month later, a second surge has arrived. On June 4, Iran reported 3,574 new infections in one day, the highest number of new cases since the pandemic began.

Health officials in Iran have blamed the spike on people not observing social distancing, not wearing masks and the government opening up too soon[7]. A health ministry poll showed just 40 per cent of Iranians now believe in obeying social distancing rules, down from 90 per cent earlier in the outbreak. The number of people who believed in self-isolating stood at 32 per cent, down from 86 per cent.

Indonesia

Indonesia reported 1,241 new coronavirus infections on 10 June, the highest single-day rise since the country's first cases were detected in early March. The Health Ministry announced 979 new confirmed COVID-19 cases on 11 June, bringing the total number of infections nationwide to 35,295[8].

- Indonesia has reported the second highest number of cases in SE Asia, after Singapore.

- However, the cumulative testing rate is 170 per 100,000 compared with 8,357 per 100,000 in Singapore.

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[5] https://www.nytimes.com/interactive/2020/06/10/world/coronavirus-history.html

[6] https://www.dailymail.co.uk/news/article-8391325/Iran-country-report-second-wave-coronavirus.html

[7] https://www.nytimes.com/2020/06/10/world/asia/reopening-before-coronavirus-ends.html

[8] https://www.thejakartapost.com/news/2020/03/23/indonesias-latest-covid-19-figures.html

- Papua province has reported 1,156 cases (33 per 100,000 compared with national attack rate of 13 per 100,000), which is the second highest provincial rate in the country. Papua province borders with three provinces in PNG: East and West Sepik and Western, which poses a high risk of importation from Indonesia into PNG. There is a need for enhanced surveillance along the long porous border.

Observations with policy implications for Australia

Update on Israel

After reporting between 10-25 cases daily through most of May, Israel has reported more than 1,900 cases during the past two weeks. It reported 214 new cases on 11 June, the highest number since 25 April. Health officials have attributed much of the recent rise in new cases to schools, which reopened in May after a two-month closure.

Daily new coronavirus cases, Israel, April 5 – June 4, 2020
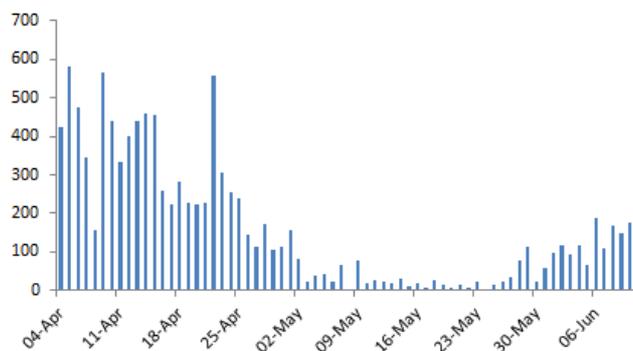
Source: Israeli Ministry of Health

The Education Ministry said on 10 June that 442 students and staff members have been diagnosed with COVID-19 since the renewed outbreak began[9]. It said 144 schools and kindergartens have been closed. Nearly 24,000 people are in quarantine following the discovery of virus cases. Officials have bemoaned a slackening of public observance of virus rules.

One of the major challenges for Israel is the wide geographic dispersal of new cases across the country. This map shows only cases reported since 28 May.

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[9] https://www.timesofisrael.com/israels-coronavirus-death-toll-hits-300-as-new-infections-spike-overnight/

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Update on South Korea

After reporting single digit or zero daily cases through April and the first half of May, the country has been reporting around 30 to 50 new cases per day since late May, mostly in the densely populated capital area where about half of South Korea's 51 million people live. The country has reported 740 new cases in the past two weeks. Within Seoul, there have been a number of clusters in an e-commerce warehouse, a health products retailer, several churches, a sports facility and a defence security facility. Tougher quarantine measures have already been implemented in the capital area, which will remain in place until June 14.

Despite expressing concern over the steady rise in infections, government officials are resisting calls to re-impose stronger social distancing measures that were relaxed in April, citing concerns over hurting a fragile economy. Their stance seems in contrast with the urgency conveyed by KCDC director Jung Eun-kyeong, who says health workers are struggling more and more to track transmissions that are spreading quickly and unpredictably as people increase their activities and practice less social distancing.

Review of efficacy of face masks and physical distancing

Researchers from ten countries, members of the COVID-19 Systematic Urgent Review Group Effort (SURGE) study, funded by WHO published their findings on physical distancing, face masks and eye protection in The Lancet on 1 June[10]. They did a systematic review and meta-analysis to investigate the optimum distance for avoiding person-to-person virus transmission and to assess the use of face masks and eye protection to prevent transmission of viruses. They obtained data for SARS-CoV-2 and the beta-coronaviruses that cause SARS and MERS from 21 standard WHO-specific and COVID-19-specific sources.

Their search identified 172 observational studies across 16 countries and six continents, with no randomised controlled trials and 44 relevant comparative studies in health-care and non-health-care settings (n=25,697 patients). Transmission of viruses was lower with physical distancing of 1 m or more, compared with a distance of less than 1 m (n=10,736, pooled adjusted odds ratio [aOR] 0·18, 95% CI 0·09 to 0·38). Protection was increased as distance was lengthened.

Face mask use could result in a large reduction in risk of infection (n=2,647; aOR 0·15, 95% CI 0·07 to 0·34), with stronger associations with N95 or similar respirators compared with disposable surgical masks or similar (eg, reusable 12–16-layer cotton masks). Eye protection also was associated with less infection (n=3,713; aOR 0·22, 95% CI 0·12 to 0·39.

The findings of this systematic review and meta-analysis support physical distancing of 1 m or more and provide quantitative estimates for models and contact tracing to inform policy. Optimum use of face masks, respirators,

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[10] https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31142-9/fulltext#%20

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and eye protection in public and health-care settings should be informed by these findings and contextual factors. Robust randomised trials are needed to better inform the evidence for these interventions, but this systematic appraisal of currently best available evidence might inform interim guidance.

WHO revises recommendations on wearing face masks

On 5 June, WHO updated its guidance on the use of face masks by the general public and provides this advice to policy decision-makers[11]:

At the present time, the widespread use of masks by healthy people in the community setting is not yet supported by high quality or direct scientific evidence. However, taking into account the available studies evaluating pre- and asymptomatic transmission, a growing compendium of observational evidence on the use of masks by the general public in several countries, individual values and preferences, as well as the difficulty of physical distancing in many contexts, WHO has updated its guidance to advise that <u>to prevent COVID-19 transmission effectively in areas of community transmission, governments should encourage the general public to wear masks in specific situations and settings</u> as part of a comprehensive approach to suppress SARS-CoV-2 transmission.

WHO advises decision makers to apply a risk-based approach focusing on the following criteria when considering or encouraging the use of masks for the general public:

1. **Purpose of mask use**: if the intention is preventing the infected wearer transmitting the virus to others (that is, source control) and/or to offer protection to the healthy wearer against infection (that is, prevention).
2. **Risk of exposure to the COVID-19 virus due to epidemiology and intensity of transmission in the population**: (i) if there is community transmission and there is limited or no capacity to implement other containment measures such as contact tracing, ability to carry out testing and isolate and care for suspected and confirmed cases. (ii) depending on occupation: e.g., individuals working in close contact with the public (e.g., social workers, personal support workers, cashiers).
3. **Vulnerability of the mask wearer/population**: for example, medical masks could be used by older people, immunocompromised patients and people with comorbidities, such as cardiovascular disease or diabetes mellitus, chronic lung disease, cancer and cerebrovascular disease.
4. **Setting in which the population lives**: settings with high population density (e.g. refugee camps, camp-like settings, those living in cramped conditions) and settings where individuals are unable to keep a physical distance of at least 1 metre (e.g. public transportation).
5. **Feasibility**: availability and costs of masks, access to clean water to wash non-medical masks, and ability of mask wearers to tolerate adverse effects of wearing a mask.
6. **Type of mask**: medical mask versus non-medical mask.

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[11] https://www.who.int/publications/i/item/advice-on-the-use-of-masks-in-the-community-during-home-care-and-in-healthcare-settings-in-the-context-of-the-novel-coronavirus-(2019-ncov)-outbreak

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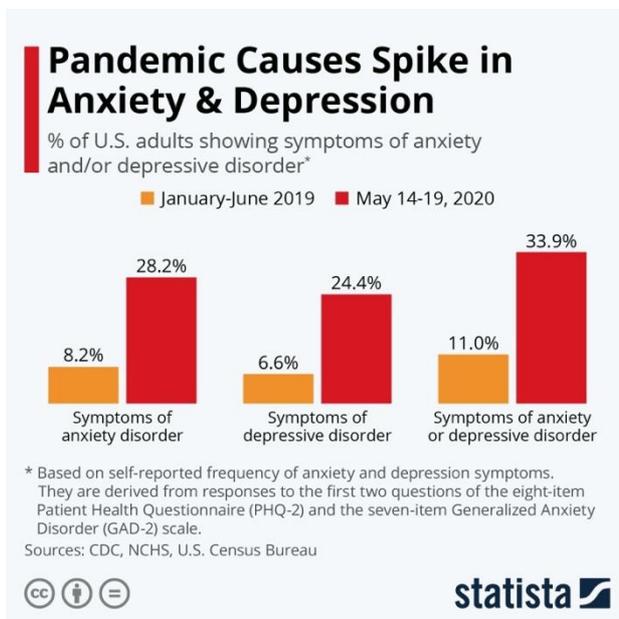Medical Research. Practical Action.

COVID-19 and mental health

While a number of longitudinal studies of the effects on mental health of the coronavirus pandemic are ongoing, including at least eight in Australia[12], several large cross-sectional studies in the US and UK have revealed a significant negative impact.

According to new data compiled by the U.S. Census Bureau and the National Centre for Health Statistics, one third of U.S. adults have symptoms of depression or anxiety, a sharp increase over the results of a comparable survey conducted in the first half of 2019.

The latest findings are derived from the Household Pulse Survey, which was launched to produce data on the social and economic impacts of COVID-19 on American households. A total of 119,897 Americans were surveyed about their mental health between May 14 and 19, asked to report how often they have felt down, depressed, hopeless or anxious in the last week, how often they have been unable to stop worrying or shown little interest or pleasure in doing things – all symptoms that have been shown to be associated with diagnoses of generalized anxiety disorder or major depressive disorder[13].

Pandemic Causes Spike in Anxiety & Depression

% of U.S. adults showing symptoms of anxiety and/or depressive disorder*

■ January-June 2019 ■ May 14-19, 2020

- Symptoms of anxiety disorder: 8.2% / 28.2%
- Symptoms of depressive disorder: 6.6% / 24.4%
- Symptoms of anxiety or depressive disorder: 11.0% / 33.9%

* Based on self-reported frequency of anxiety and depression symptoms. They are derived from responses to the first two questions of the eight-item Patient Health Questionnaire (PHQ-2) and the seven-item Generalized Anxiety Disorder (GAD-2) scale.
Sources: CDC, NCHS, U.S. Census Bureau

statista

The weekly Opinions and Lifestyle Survey (OPN) has been recently established by the Office for National Statistics (ONS) to understand the impact of the coronavirus (COVID-19) pandemic on Great Britain[14]. Between 20 and 30 March 2020, following the closure of cafes, pubs, bars and restaurants, 49.6% people in Great Britain aged 16 years and over reported "high" anxiety (rating 6 to 10). This equates to over 25 million people.

Average anxiety ratings in this period were 5.18 and remained elevated over the periods between 27 March and 6 April, and between 3 and 13 April 2020. As a point of reference, 21.0% people in the UK reported high anxiety in Quarter 4 (Oct to Dec) 2019, and the average anxiety rating was 2.97.

People's most common concerns related to their well-being, their work, and their finances; those who think they will not be able to save money in the next year reported anxiety 33% higher on average compared with those who think they will.

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[12] https://www.dhi.health.nsw.gov.au/transcultural-mental-health-centre-tmhc/news-and-events/research-on-the-impact-of-covid-19-on-mental-health-and-wellbeing

[13] https://www.statista.com/chart/21878/impact-of-coronavirus-pandemic-on-mental-health/

[14] https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/bulletins/personalandeconomicwellbeingintheuk/may2020#understanding-the-impact-on-personal-and-economic-well-being

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