COVID-19 Global Trends and Analyses

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Professor Mike Toole AM, Scott Umali, and Dr Suman Majumdar

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SUMMARY

COVID-19 GLOBAL TRENDS AND ANALYSES | 1 – 31 July 2021

- The **global total** number of reported cases is 199 million and 4,249,000 deaths. The cumulative number of cases is equivalent to 25 per 1,000 population. The global seven-day rolling average of daily cases has increased from 381,000 on 2 July to 581,000 on 31 July, a 44 per cent jump. While lagging behind cases, the seven-day average of daily deaths has increased from 7,682 on 2 July to 9,000 on 31 July, a 17 per cent increase. 31 countries have now recorded more than one million cases, the most recent being Pakistan and Malaysia.
- In **India**, the rate of decline in cases has stalled and the country has reported between 38,000 to 42,000 cases daily during July. Cases are spiking in **Pakistan and Bangladesh** with upticks in **Nepal and Sri Lanka**.
- In **SE Asia**, cases continue to surge in all countries except Brunei; **Singapore** is reporting the highest number of daily new cases since August 2020.
- **Indonesia** has recorded more than 3.3 million cases and more than 90,000 deaths. The country is now reporting an average of more than 1,500 daily deaths.
- **Myanmar** is suffering its largest surge since the beginning of the pandemic. The country has reported more than 302,000 cases and 9,700 deaths. At the end of July, the official seven day average of daily cases was 5,800 and 368 deaths. These are almost certainly underestimates as testing rates are low.
- The **Lao PDR** has been largely spared during the pandemic. The country reported only 41 cases during 2020 and had no deaths until early May 2021. There have now been 5,675 cases and six deaths. The seven day rolling average is 222 new daily cases.
- **China** reported 76 new COVID-19 cases on July 25, the highest daily total since January amid a surge of local infections in the eastern city of Nanjing, which started a second round of mass testing and banned taxis from leaving to curb the outbreak.
- In **Asian high-income countries,** Taiwan is coming out of a recent surge, South Korea is reporting more than 1500 cases a day, its highest since the pandemic began, and Japan is experiencing a fifth wave.
- Reported figures in **Papua New Guinea** and **Timor-Leste** have declined to single digit daily cases.
- **Fiji** has reported more COVID-19 cases than any other Pacific Island Country and Territory with a very high cumulative attack rate of 24 per 1000. The seven-day average of new daily cases has remained stubbornly at 1,000.
- The African continent has reported more than 6,650,000 cases (a 23% increase since last month) and 168,500 deaths (19% increase). **South Africa** has reported the highest number of cases at 2.4 million, followed by **Morocco** with 606,000 cases, and **Tunisia** with 583,000 cases.

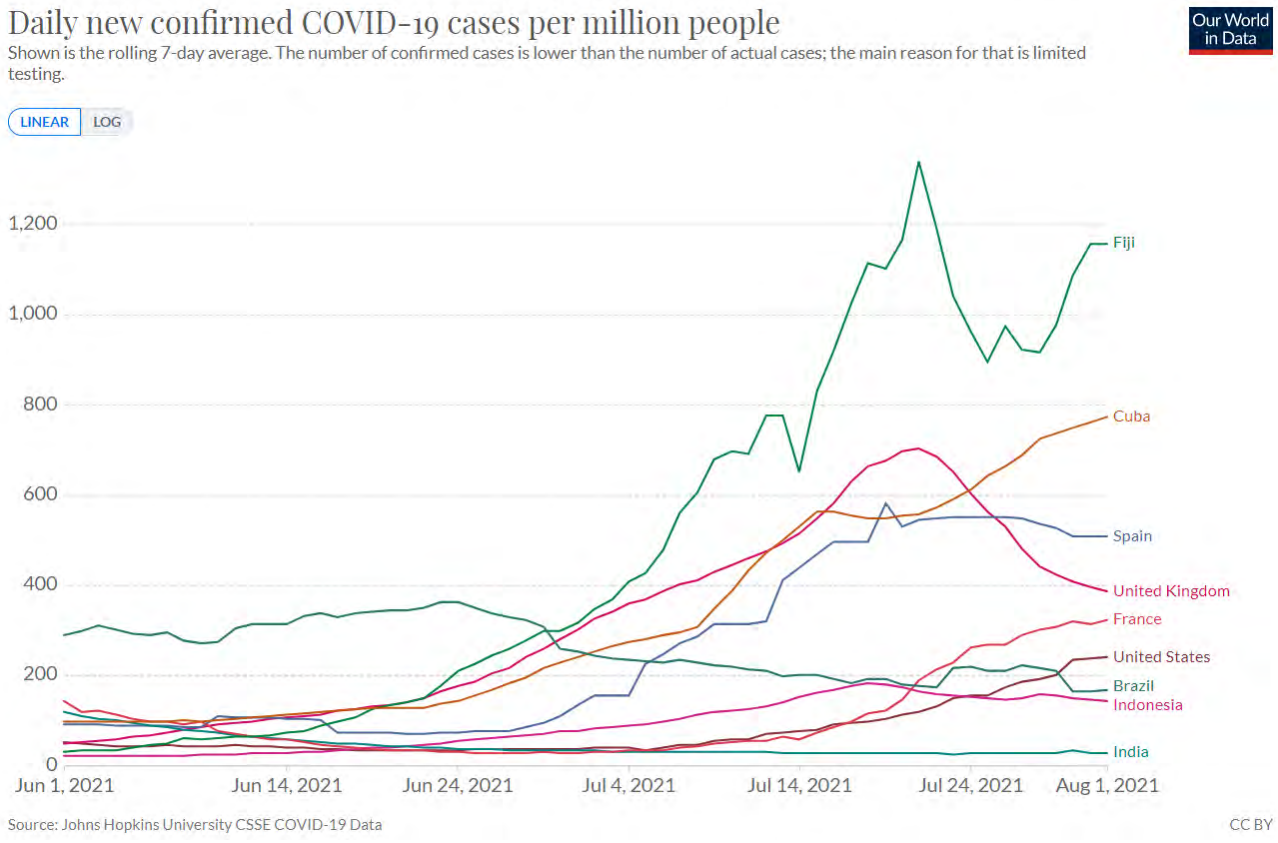
- Over the past month, **Africa** recorded an additional one million cases, the shortest time ever it has taken to add another million cases.
- **Israel** (60% fully vaccinated) is reporting an outbreak of the Delta variant, which began in schools. Its seven-day average has increased from 21 on 28 May to 261 on 2 July to 1,909 on 30 July.
- Europe has so far reported 57,968,614 cases; the five countries reporting most cases are Russia (6,149,780), France (5,993,937), United Kingdom (5,697,912), Turkey (5,587,378) and Spain (4,342,054).There have been 1,195,560 deaths; the five countries reporting most deaths are Russia (154,601), United Kingdom (129,158), Italy (127,949), France (111,644) and Germany (91,527).
- The number of new cases reported in Europe had been declining until mid-June. Since then, however, a number of countries have reported upward trends, especially the UK and Russia but also Netherlands, France, Portugal, Italy, Greece, Ireland and Spain. The seven day average of daily cases has been declining in the **UK** since 21 July but is still more than 27,000.
- The rolling seven day average of new cases in the **United States** was in steep decline until late June but has increased to more than 74,000 daily cases -- an increase of nearly 60,000 in the daily average in less than six weeks. The seven-day average of cases nationwide has risen by about 60 per cent in the past week alone. Daily hospitalisations rose by roughly 40 per cent and deaths rose almost 30 per cent, now averaging more than 300 each day.
- Between 2018 and 2020, **life expectancy** in the US decreased by 1.87 years (to 76.87 years), 8.5 times the average decrease in 16 peer countries (0.22 years), widening the gap to 4.69 years.
- A nationwide commercial laboratory **seroprevalence survey** in all 50 states, Puerto Rico and DC found that the nationwide seroprevalence of SARS-CoV-2 antibodies in June 2021 was 21.6 per cent, which is equivalent to 69,747,000 past infections. This compares to the 35,743,000 infections officially reported. Antibody prevalence was highest in the 0-17 age group (27.8%) and lowest in over 65s (12.4%).
- **Latin America** continues to report high numbers of COVID-19 cases. In North and Central America, **Mexico** is experiencing a severe third wave, reporting more than 15,000 cases per day and **Cuba** continues to have an explosive outbreak. In South America, Brazil, Argentina and Colombia are currently experiencing the most severe waves but there has been improvement. In **Brazil, for example,** the seven day average of daily cases has declined from 77,000 on 24 June to around 35,000 at the end of July.

GLOBAL EPIDEMIOLOGY AND TRENDS

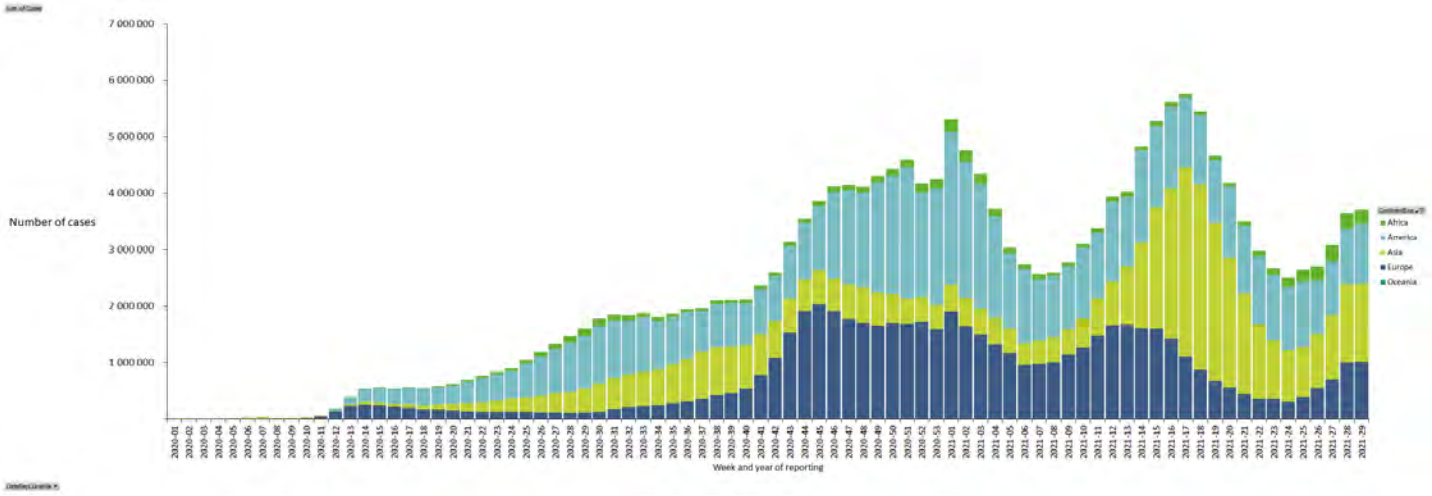
The **global total** number of reported cases is 199 million and 4,249,000 deaths. The cumulative number of cases is equivalent to 25 per 1,000 population. Cases are increasing in a number of European countries, such as the UK, Netherlands, Spain, France and Portugal, where cases caused by the Delta variant are surging. The steady decline of cases in the US has been reversed and cases are once again increasing in states with low vaccination coverage, such as Missouri, Utah, Wyoming and Texas. The national seven-day rolling average of new daily cases has increased from around 12,000 on 21 June to more than 56,000 on 27 July.

Cases continue to surge in a number of African and South American countries. In South Asia, case numbers are flat in India, Sri Lanka and Nepal while increasing in Bangladesh and Pakistan. All but one Southeast Asian country (Brunei) have steadily increasing case numbers. Fiji continues to report more than 1,000 cases a day. The Australian state of New South Wales is reporting a seven day average of 167 new daily cases.

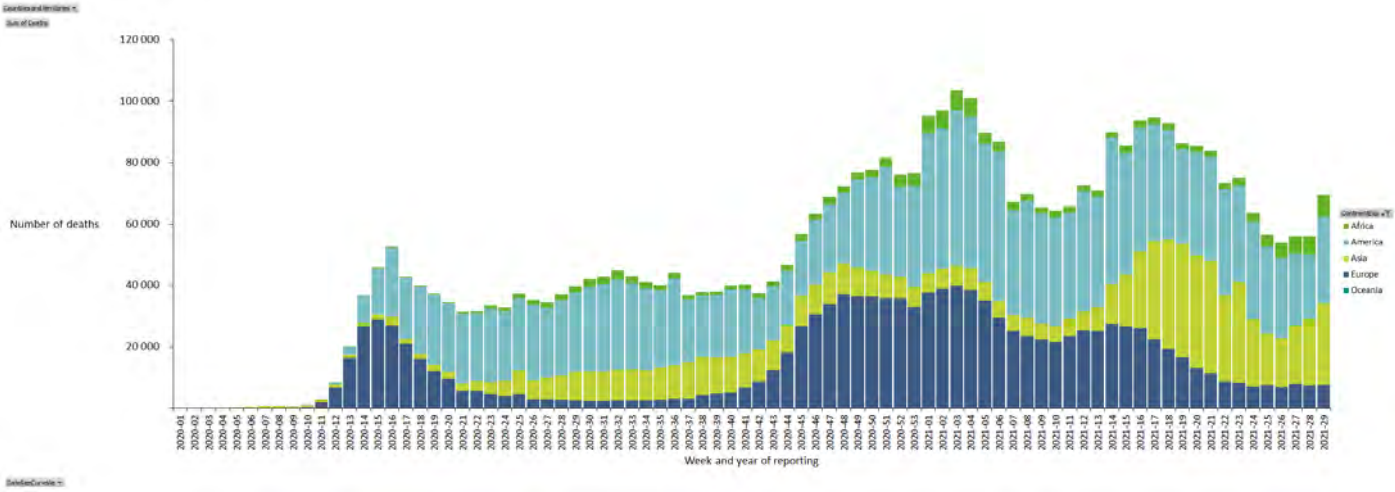
The global seven-day rolling average of daily cases has increased from 381,000 on 2 July to 581,000 on 31 July, a 44 per cent jump. While lagging behind cases, the seven-day average of daily deaths has increased from 7,682 on 2 July to 9,000 on 31 July, a 17 per cent increase. 31 countries have now recorded more than one million cases, the most recent being Pakistan and Malaysia.



Distribution of weekly COVID-19 cases worldwide, as of 29 July 2021 (source European CDC)



Distribution of weekly COVID-19 deaths worldwide, as of 29 July 2021



Asia-Pacific Region

- In **India**, the rate of decline in cases has stalled and the country has reported between 38,000 to 42,000 cases daily during July. Cases are spiking in **Pakistan and Bangladesh** with upticks in **Nepal and Sri Lanka.**
- In **SE Asia**, cases continue to surge in all countries except Brunei; **Singapore** is reporting the highest number of daily new cases since August 2020.
- **China** reported 76 new COVID-19 cases on July 25, the highest daily total since January amid a surge of local infections in the eastern city of Nanjing, which started a second round of mass testing and banned taxis from leaving to curb the outbreak. The Nanjing city government has started a second round of nucleic acid testing of its 9.3 million residents.
- In **Asian high-income countries,** Taiwan is coming out of a recent surge, South Korea is reporting more than 1500 cases a day, its highest since the pandemic began, and Japan is experiencing a fifth wave.
- Reported figures in **Papua New Guinea** and **Timor-Leste** have declined to single digit daily cases.
- New daily cases in **Fiji** show no sign of slowing at around 1000 cases a day.

South Asia | Asia-Pacific Region

India -- COVID-19 mortality

The number of excess deaths in India during the Covid-19 pandemic could be 10 times higher than the official death toll, according to a study that estimates that between **3 million and 4.7 million more people died** than would be expected between January 2020 and June 2021. The study, carried out by the US-based Centre for Global Development, examined three different sources of data to piece together one of the most comprehensive pictures yet of the pandemic in India.

Although more than 220,000 deaths were officially reported during India's second wave between March and June 2021, the researchers concluded that the first wave was also more lethal than is widely believed and that about 2 million people may have died in the first wave alone. The researchers used the following data sources: data from the civil registration system that records births and deaths across seven states, blood tests showing the prevalence of the virus in India alongside global COVID-19 fatality rates, and an economic survey of nearly 900,000 people done three times a year.

Nepal -- excess maternal deaths

Since April, Covid-19 cases have risen sharply: as of 30 July, Nepal had recorded 690,642 cases and 9,807 deaths. Nepal's maternal health services were fragile before the pandemic. The country has no practising midwives so women give birth with the help of auxiliary nurses or skilled birth attendants. But since the start of the pandemic, maternal deaths have soared.

According to the department of health, 258 women died as a result of pregnancy or childbirth between March 2020 and June 2021. Thirty-three women had COVID-19. In the year before March 2020, the country recorded 51 maternal deaths. Neonatal deaths have also increased, from 13 deaths per 1,000 live births before lockdown to 40 deaths per 1,000 live births during the first lockdown.

The director of Bayalpata hospital, which serves five rural districts, reported a decrease of 90 per cent of pregnant women attending antenatal care and a drop in women presenting for delivery. Paropakar maternity and women's hospital, the oldest and best maternity hospital in the capital, Kathmandu, recorded a more than 50 per cent decline in antenatal check-ups since the pandemic. These declines have been attributed to fears of acquiring the coronavirus at hospitals and other health facilities.

Southeast Asia | Asia-Pacific Region

In late July, every country in Southeast Asia except Brunei has a major surge of new daily cases.

Indonesia

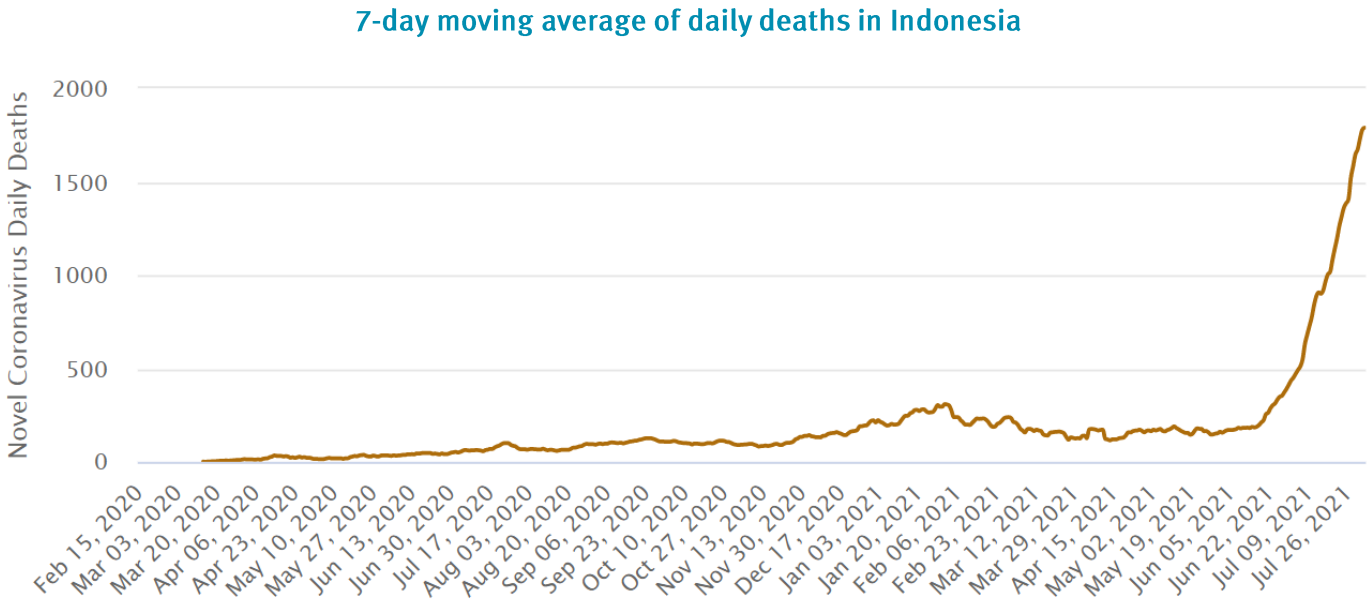
Indonesia has been the most severely affected. The country has recorded more than 3.3 million cases and more than 90,000 deaths. The country is now reporting an average of more than 1,500 daily deaths. The virus has spread to all the country's 34 provinces and the more transmissible virus Delta variant has contributed to the surges in COVID-19 cases in some of the country's regions.

And this is likely to be a huge undercount because too few people are getting tested. The positivity rate — the percentage of people taking COVID tests who return a positive result — currently sits at 26 per cent, according to Our World In Data, which indicates Indonesia is almost certainly missing many more cases. Local research found 44 per cent of Jakarta residents had antibodies against the virus. Only 8 per cent had actually been confirmed cases. Free tests are only available in health-care facilities for people with symptoms or who have been in contact with confirmed cases. The price private laboratories charge for COVID tests can be prohibitive.

On 1 July, the government announced a semi-lockdown for Java and Bali. These restrictions included rules on work, shopping, public transport, and food delivery services. Face masks are mandatory in public areas. Authorities have

instructed security forces to enforce the protocols. On July 7, these restrictions were expanded to all other parts of the country.

Indonesia has vaccinated 17 per cent of the population with one dose and 7 per cent have been fully vaccinated. The country relies mainly on CoronaVac manufactured in China. However, this has been supplemented by recent shipments of Sinopharm and AstraZeneca.



Myanmar

Myanmar is suffering its largest surge since the beginning of the pandemic. The country has reported more than 302,000 cases and 9,700 deaths. At the end of July, the official seven day average of daily cases was 5,800 and 368 deaths. These are almost certainly underestimates as testing rates are low. In an alarming sign of how widespread Myanmar's Covid outbreak has become, more than 37 per cent of those tested were positive in the third week of July. By contrast, the seven-day average positivity rate in Australia in late July was 0.1 per cent.

According to some reports, the military has ordered that lifesaving oxygen be denied to private clinics. The clinics are staffed largely by doctors who oppose the army's takeover and refuse to work in state hospitals. Basic medical care for COVID-19 patients has been turned into an illegal act, said a doctor at a private clinic. The military has also prevented people from buying supplies from oxygen producers, whom it accuses of price-gouging, forcing desperate family members to defy the army in order to save sick relatives. And it has stopped charities from giving oxygen to people who need it, witnesses and charity workers have said.

"An explosion of Covid cases, including the Delta variant, the collapse of Myanmar's health care system, and the deep mistrust of the people of Myanmar of anything connected to the military junta are a perfect storm of factors that could cause a significant loss of life in Myanmar without emergency assistance by the international community," Tom Andrews, the United Nations special rapporteur on human rights in Myanmar, said on 15 July.

Thailand

In **Thailand**, after a dip in mid-June, daily new cases have been soaring again, fuelled by the recently arrived Delta variant, with the 7-day average of new daily cases reaching more than 15,000 on 29 July, a threefold increase since the beginning of July. On that day, the country reported 17,669 new cases, an all-time record and more than the cumulative total of cases reported up until 30 January. Thailand has recorded a total of more than 560,000 cases, all but 7,000 during 2021. Deaths have also been increasing reaching a 7-day average of 124 on 29 July. The country has reported 4,562 deaths, all but 61 during 2021.

Only 18 per cent of the population has received one vaccine dose and just 5 per cent are fully vaccinated. The Thai Government has struggled to secure timely and adequate vaccine supplies, and efforts to obtain more have proceeded slowly. So far, Thailand has only used vaccines from AstraZeneca and China's Sinovac and Sinopharm, although the country has agreements to buy from Pfizer and Johnson & Johnson.

Laos

The **Lao PDR** has been largely spared during the pandemic. The country reported only 41 cases during 2020 and had no deaths until early May 2021. There have now been 5,675 cases and six deaths. The seven day rolling average is 222 new daily cases. Cases are mainly in provinces along the border with Thailand and lockdowns have been introduced in Vientiane and other provinces. Lao PDR is also grappling with the return of thousands of Lao nationals who have lost their jobs during the lockdowns in Thailand. Large quarantine centres have been established in several border provinces. 15 per cent of the Lao population has received at least one dose of vaccine and 12 per cent are fully vaccinated.

Vietnam

Vietnam, a country of 97 million people, has reported more than 130,000 cases and more than 1,000 deaths. Last year, the country reported only 1,465 cases and 35 deaths. The majority of cases have been the Delta variant. On 29 July, the seven day average of daily cases was 7,720 and an average of 67 daily deaths. The latest community transmission cases have been reported from Ho Chi Minh City, Binh Duong, Tien Giang, Dong Nai, and Dong Thap among others.

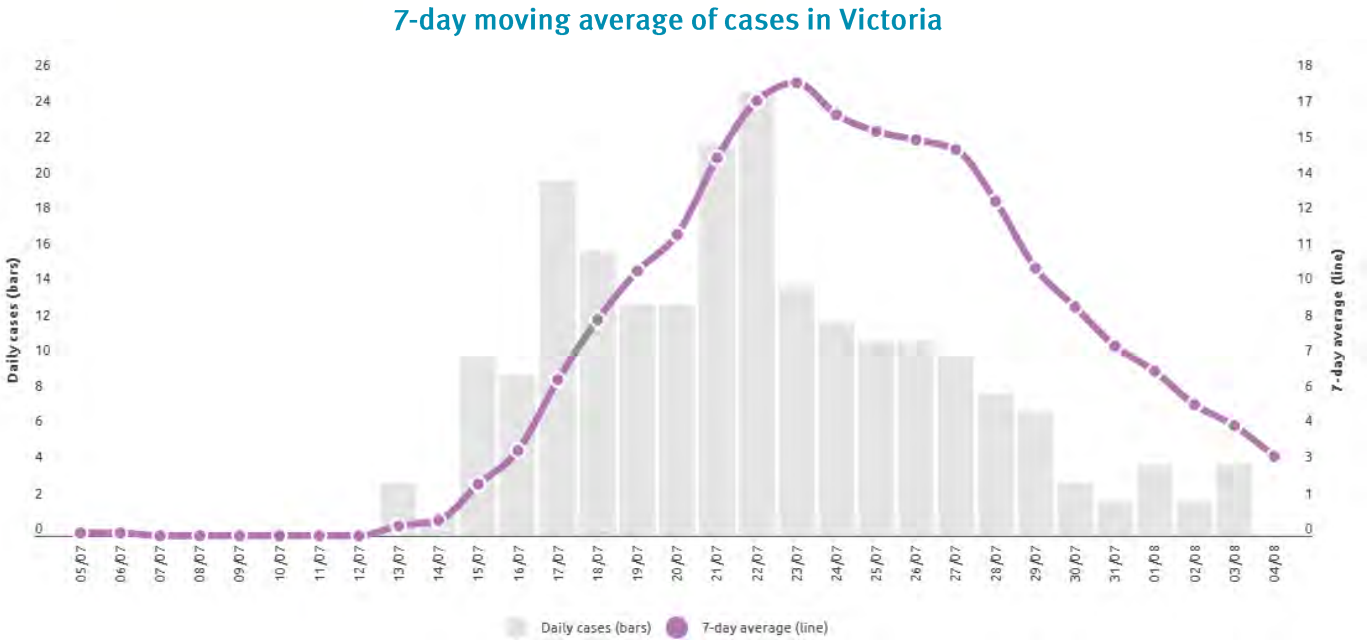
Vietnam has provided one dose of vaccine to 4.7 per cent of the population and just 0.5 per cent is fully vaccinated. The government plans to vaccinate 70 to 75 per cent of the population by the end of this year or early next year. Sinopharm is the third to be endorsed in Vietnam, alongside the AstraZeneca vaccine and Russia's Gamaleya/Sputnik V. The government has not announced any purchases of the vaccine, but unofficial reports indicate that China has pledged to provide Vietnam with 500,000 doses of the Sinopharm vaccine.

Australia | Asia-Pacific Region

State governments across Australia have imposed lockdown restrictions on their respective jurisdictions to prevent the spread of delta in the community.

Victoria

During the month of July, Victoria faced another wave of delta that was quashed through lockdown measures. On 10 July the state reported 9 new locally acquired infections, leading to the announcement of lockdown measures on 15 July. The short sharp lockdown featured the same restrictions as previous "snap" lockdowns such as the 5 reasons to leave home. Cases peaked at 28 cases on 22 July and gradually decreased to under double digits six days later. Restrictions were eased on 27 July, however density limits and a limit of no visitors the home remain in place.

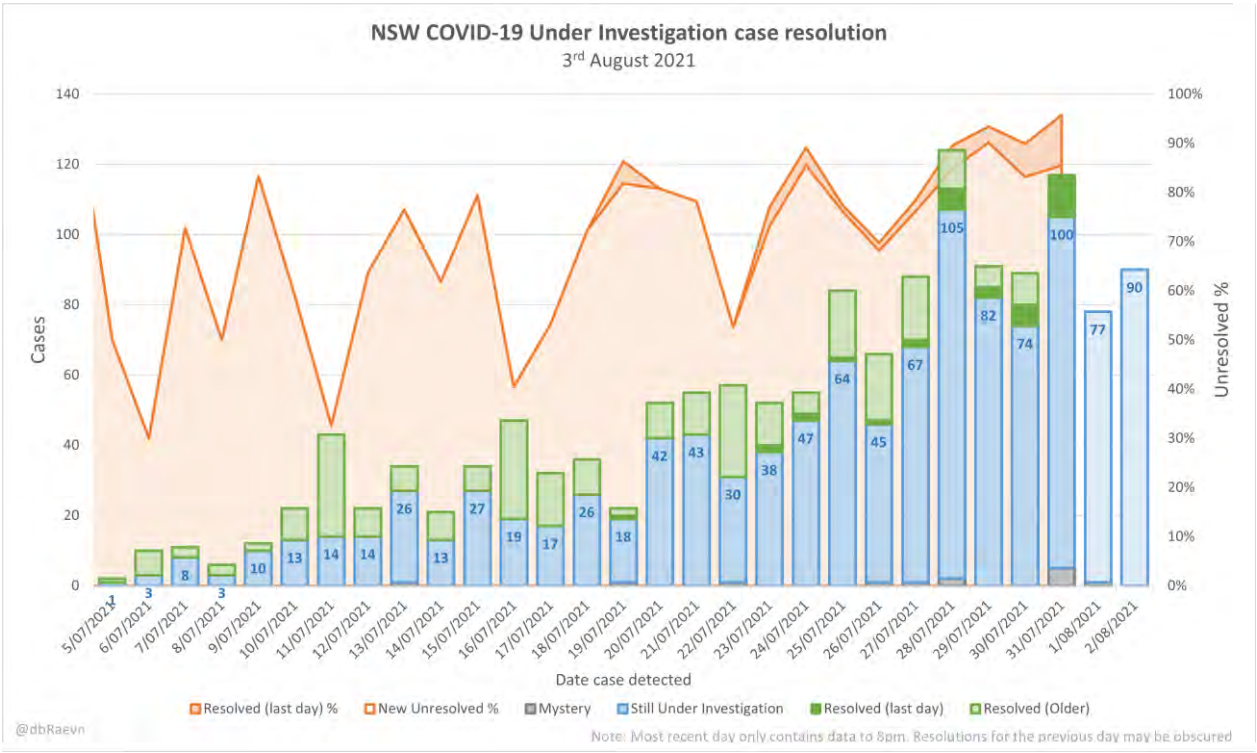


Source

New South Wales

New South Wales has faced a significant challenge in containing the delta variant in July, with daily cases increasing across the whole month despite the introduction of stay-at-home orders at the end of June. The state has been able to prevent exponential growth in daily cases thanks to restrictions, but the numbers continue to steadily rise. To combat the increase in daily cases, further restrictions were introduced on 9, 18 and 29 July. Since 9 July, authorities have focused restrictions on areas of south-west and west Sydney, where large amounts of transmission are occurring.

The sheer volume of cases has led to a strain on contact tracing, with cases under investigation steadily increasing.



A concerning trend that has emerged during this outbreak have been the low percentages of individuals who were fully isolated during their infectious period. It is unclear where exactly transmission is occurring, with "workplaces and households" highlighted as the main areas. Under current restriction rules, people across Greater Sydney are directed to work from home. Essential workers in eight local government areas of concern must be on a strict list of permitted business and industry.

NSW WILD CASES

Daily new cases infectious in the community

DATE	FULL	PART	UNKN	TOTAL	ISO
04 Aug	47	21	73	141	39%
03 Aug	50	32	47	129	35%
02 Aug	51	21	46	118	43%
01 Aug	26	35	98	159	33%
31 Jul	21	11	120	152	28%
30 Jul	42	10	53	105	38%
29 Jul	66	22	70	158	34%
Week	**303**	**152**	**507**	**962**	**36%**

NSW partial is <1 day infectious in the community

Source

Pacific Islands | Asia-Pacific Region

Papua New Guinea has reported a total of 17,673 cases and 192 deaths. Daily new cases continue to decline steadily with the 7-day rolling average falling from a high of 297 on 14 May to just 13 on 29 July. PNG's vaccine rollout has been very slow with 0.9 per cent vaccinated at least once and 0.1 per cent fully vaccinated. This is partly explained by supply and logistics constraints, but there is also a high level of vaccine hesitancy in large part due to misinformation on social media.

Other Pacific Island Countries and Territories (PICT)

As of 26 July, 11 countries (Commonwealth of the Northern Marianas (CNMI), Fiji, French Polynesia, Guam, New Caledonia, Papua New Guinea (PNG), Republic of the Marshall Islands (RMI), Samoa, Solomon Islands, Vanuatu and Wallis and Futuna) in the PICTs have reported cases and deaths. Among these countries, a total of 70,764 confirmed cases have been reported including 685 deaths. Among all cumulative cases, 34.5 per cent were in Fiji, 27.4 per cent in French Polynesia, 24.9 per cent in PNG and 12 per cent in Guam; however, over the previous six weeks, 93.6 per cent of all newly reported cases in PICTs have been reported in Fiji. The following table lists cases and deaths in those PICTs that have reported at least one case.

Pacific Island Countries and Territories	Population	Total Cases	Deaths
Fiji	889,953	24,424	195
French Polynesia	279,287	19,392	146
Guam	167,294	8,506	143
Marshall Islands	58,791	4	0
New Caledonia	287,800	133	0
Northern Mariana Islands (Commonwealth of the)	57,216	190	2
Samoa	197,097	1	0
Solomon Islands	669,823	20	0
Vanuatu	299,882	3	0
Wallis and Futuna	11,239	454	7
Total	**3,372,437**	**70,764**	**685**

Fiji – Concerning outbreak

Fiji has reported more COVID-19 cases than any other PICT with a very high cumulative attack rate of 24 per 1000. Virtually all suburbs are affected in the Suva-Nausori-Lami area with some obviously more seriously than others, and there is a trend of the disease spreading to other parts of Viti Levu. It may have reached Vanua Levu.

The Delta variant arrived in Fiji at Nadi International Airport carried by one of two travellers who came from India where this strain of the virus was at its devastating peak. Unfortunately, breached protocols by one or two frontline persons resulted in the spread of the virus in the west of the country.

Unlike in March 2020, the authorities responsible failed to take adequate preventive containment measures, and the virus was carried to Suva by persons who attended a funeral and one or two military personnel. While the initial actions of the Ministry of Health proved effective in confining the epidemic in certain locations, further indiscipline by close to 100 navy officers who attended a funeral in Nausori in groups of 20 significantly increased infections.

Another significant but less direct contributor to the spread of the virus has been the influence of anti-vaxxers who have used social media to share fake news and conspiracy theories and generate fear and distrust among people who rely on social media for information and news.

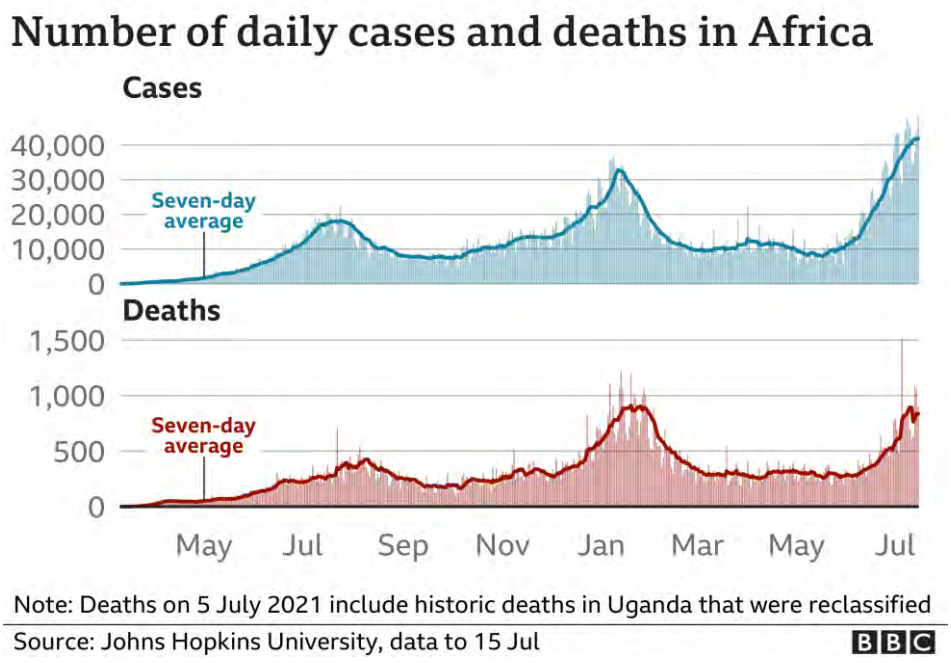
The majority of infections have occurred in crowded low-income housing locations, urban and peri-urban villages, and informal settlements. The people living in these localities desperately need to work, and many are frontline workers (for instance as employees of supermarkets) who use public transport. Some live in homes without separate bedrooms making social distancing and self-isolation near impossible.

The seven-day average of new daily cases has remained stubbornly at 1,000.

There is some hope of relief from Fiji's rapid rollout of AstraZeneca vaccine. Fifty per cent of the population has received at least one dose of vaccine and 11 per cent are fully vaccinated.

African Region

- The African continent has reported more than 6,650,000 cases (a 23% increase since last month) and 168,500 deaths (19% increase). **South Africa** has reported the highest number of cases at 2.4 million, followed by **Morocco** with 606,000 cases, and **Tunisia** with 583,000 cases.
- Over the past month, Africa recorded an additional one million cases, the shortest time ever it has taken to add another million cases.
- During the second wave daily cases peaked at 28 cases per million population while during the ongoing third wave the rate stands at about 33 cases per million population, according to the Africa CDC.
- **South Africa** is experiencing a major third wave. The seven-day average of daily cases reached an all-time peak of 19,492 on 6 July but has since declined to 11,200 on 30 July.
- Every **Southern African** nation has experienced surges in cases of the Delta variant during July. Cases have been declining in recent weeks in South Africa, Zambia, Namibia and Botswana but they continue to increase in Mozambique, Zimbabwe, Malawi and Eswatini (Swaziland).
- In Central and East Africa, **Uganda and Rwanda** are also having second waves linked to the Delta variant.
- Some countries in **West Africa** have recently experienced surges, including Senegal, Togo and Ghana.
- In highly vaccinated **Seychelles,** cases have been steadily declining to a seven day average of 63 on 30 July.
- Hospital admissions in around 10 countries have increased rapidly and at least six countries are facing shortages of intensive care unit beds.
- Demand for medical oxygen is estimated to be 50 percent higher than at the same time in 2020, yet supply has not kept up.



Middle East Region

- The worst affected countries continue to be **Iran and Iraq** with rapidly growing fourth waves.
- **Israel** (60% fully vaccinated) is reporting an outbreak of the Delta variant, which began in schools. Its seven-day average has increased from 21 on 28 May to 261 on 2 July to 1,909 on 30 July.
- Cases are declining sharply in **Palestine and Jordan.**
- In the **Gulf countries,** UAE (71% fully vaccinated) continues to report around 1,500 cases a day; however, cases have dropped to low levels in Bahrain (64% fully vaccinated).

Israel | Middle East Region

Israel has reported 874,000 cases in a population of 8.8 million. The cumulative incidence of 93 per 1000 is one of the highest in the world. The recent surge in Delta cases has mainly affected younger, unvaccinated age groups. New restrictions on public life came into effect on 21 July, limiting access to large indoor events and instating a raft of new fines for those violating health rules.

Under the new orders, the so-called Green Pass system, first used earlier this year, will be reinstated for indoor events attended by more than 100 people. Access to such gatherings is now limited to those who are vaccinated or have recovered, or who present a negative COVID-19 PCR test taken within 72 hours of the event. A rapid virus test can also be used if taken within the previous 24 hours. While gatherings aren't limited in size, face masks are mandatory indoors, except when eating or drinking.

Israel will begin administering a third dose of the Pfizer-BioNTech coronavirus vaccine to those 60 and older citing the rising risk of a virus surge fuelled by the Delta variant. The health ministry has instructed the country's four main health care providers to begin giving a booster shot of the Pfizer vaccine to Israelis in that age group who received a second dose more than five months ago.

European Region

- Europe has so far reported 57,968,614 cases; the five countries reporting most cases are Russia (6,149,780), France (5,993,937), United Kingdom (5,697,912), Turkey (5,587,378) and Spain (4,342,054).There have been 1,195,560 deaths; the five countries reporting most deaths are Russia (154,601), United Kingdom (129,158), Italy (127,949), France (111,644) and Germany (91,527).
- The number of new cases reported in Europe had been declining until mid-June. Since then, however, a number of countries have reported upward trends, especially the UK and Russia but also Netherlands, France, Portugal, Italy, Greece, Ireland and Spain. The seven day average of daily cases has been declining in the **UK** since 21 July but is still more than 27,000.
- Several countries have fully vaccinated more than 50 per cent of their populations – Malta (74%), Iceland (70%), UK, Belgium and Spain (56%), Hungary (55%), Ireland and Portugal (54%), and Denmark (53%) – but most have fully vaccinated around 40 to 45 per cent. These levels of coverage are not yet sufficient to provide herd immunity.

Netherlands | European Region

The Dutch celebrated their "Freedom Day" on the 27 June only to find COVID-19 cases soaring to unprecedented levels. The seven day average of daily cases increased from 612 that day to more than 10,000 just 22 days later. The spike in cases led the Dutch prime minister to concede that coronavirus restrictions had been lifted too soon. The Dutch government blamed "nightlife settings and parties" for the increase. Data show that more than half of all new cases are people in the 20 to 29-year-old age group. The following chart shows trends of cases and when each of four steps was taken to ease restrictions.

Steps in easing restrictions	
Step 1	Shops and restaurants with outdoor seating reopen
Step 2	Gyms, cultural and artistic centres reopen. No audiences allowed. Groups of two can meet indoors.
Step 3	Indoor hospitality and cinemas reopen. Groups of four at maximum, both indoors and outdoors.
Step 4	Almost everything allowed with 1.5-metre social distancing rule, including nightclubs.

As a result of the surge in cases, the Netherlands government reintroduced density limits in restaurants and bars, closed nightclubs, and put caps on attendance at cultural and sporting events. The seven day average of daily cases has declined from its peak pf 10,000 on 19 July to 3,800 on 31 July.

The United States and Canada

- The rolling seven day average of new cases in the **United States** was in steep decline until late June but has increased to more than 74,000 daily cases -- an increase of nearly 60,000 in the daily average in less than six weeks. Cases, measured as that rolling average, have risen to levels last seen in February. The country has now reported **35.7 million cases** and more than 629,000 deaths. The seven-day average of cases nationwide has risen by about 60 per cent in the past week alone. Daily hospitalisations rose by roughly 40 per cent and deaths rose almost 30 per cent, now averaging more than 300 each day.
- Modellers at the University of Washington's Institute for Health Metrics and Evaluation predict a rise through mid-August, levelling off at about 300,000 cases daily. In that scenario, deaths would rise to a September high of 1,500 daily. But if everyone were to wear a mask the caseload could be about 10 times lower.
- **Canada** has reported 1.43 million cases and more than 26,500 deaths. Cases declined since mid-April when the peak 7-day average was 8,767 cases to 377 on 17 July. However, the average has almost doubled since then to 692 on 31 July. Canada has provided at least one dose of vaccine to 72 per cent of the population and 58 per cent are fully vaccinated.

United States | North America

Reduced life expectancy in 2020

Average life expectancy in the United States plummeted in 2020, widening the life expectancy gap between the U.S. and other high-income countries. The decline was particularly sharp among Hispanic and Black Americans, a new study found. Data for the US and for 16 other high income countries were sourced from the National Centre for Health Statistics and the Human Mortality Database, respectively. Life expectancy in 2020 was estimated by simulating life tables from estimated age specific mortality rates in 2020 and allowing for 10% random error. Estimates for 2020 are reported as medians with fifth and 95th centiles.

Between 2010 and 2018, the gap in life expectancy between the US and the peer country average increased from 1.88 years (78.66 *v* 80.54 years, respectively) to 3.05 years (78.74 *v* 81.78 years). Between 2018 and 2020, life expectancy in the US decreased by 1.87 years (to 76.87 years), 8.5 times the average decrease in peer countries (0.22 years), widening the gap to 4.69 years. Life expectancy in the US decreased disproportionately among racial and ethnic minority groups between 2018 and 2020, declining by 3.88, 3.25, and 1.36 years in Hispanic, non-Hispanic Black, and non-Hispanic White populations, respectively.

Nationwide SARS-CoV-2 Seroprevalence Survey

A nationwide commercial laboratory seroprevalence survey in all 50 states, Puerto Rico and DC found that the nationwide seroprevalence of SARS-CoV-2 antibodies in June 2021 was 21.6 per cent, which is equivalent to 69,747,000 past infections. This compares to the 35,743,000 infections officially reported. Antibody prevalence was highest in the 0-17 age group (27.8%) and lowest in over 65s (12.4%); there was no significant difference between sexes. The highest

seroprevalence was in Puerto Rico (74.8%), followed by Ohio (37.3%) and Illinois (35.4%). The lowest were in Vermont (1.8%), Hawaii (1.9%) and Oregon (4.3%).

COVID-19 Vaccine Breakthrough Cases

As of May 1, 2021, the US CDC transitioned from monitoring all reported vaccine breakthrough cases to focus on identifying and investigating only hospitalised or fatal cases due to any cause. This shift is to maximise the quality of the data collected on cases of greatest clinical and public health importance. Previous data on all vaccine breakthrough cases reported to CDC from January–April 2021 are available here.

As of July 26, 2021, more than 163 million people in the United States had been fully vaccinated against COVID-19. During the same time, CDC received reports from 49 US states and territories of 6,587 patients with COVID-19 vaccine breakthrough infection who were hospitalised or died.

Hospitalized or fatal vaccine breakthrough cases reported to CDC	6,587	
Female	3,193	(48%)
People aged ≥65 years	4,868	(74%)
Asymptomatic infections	1,219	(19%)
Hospitalizations*	6,239	(95%)
Deaths†	1,263	(19%)

*1,598 (26%) of 6,239 hospitalizations reported as asymptomatic or not related to COVID-19.
†309 (24%) of 1,263 fatal cases reported as asymptomatic or not related to COVID-19.

The number of COVID-19 vaccine breakthrough infections reported to CDC is likely an undercount of all SARS-CoV-2 infections among fully vaccinated persons. National surveillance relies on passive and voluntary reporting, and data might not be complete or representative.

Latin America

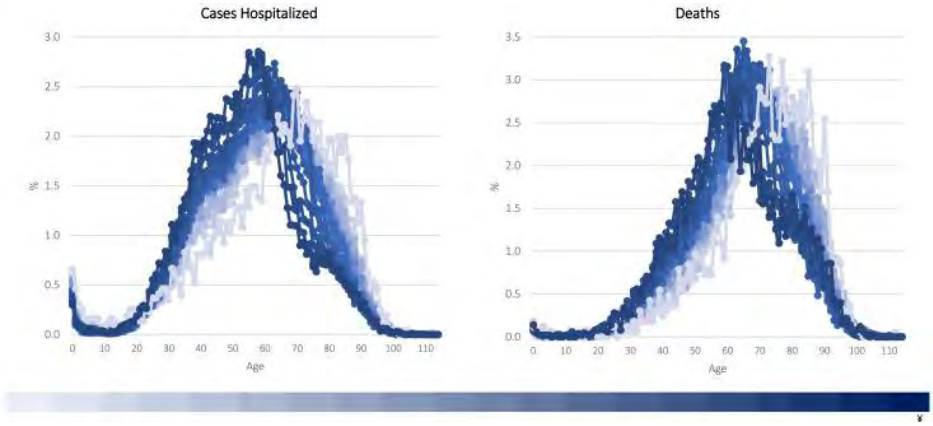
- **Latin America** continues to report high numbers of COVID-19 cases. In North and Central America, **Mexico** is experiencing a severe third wave, reporting more than 15,000 cases per day and **Cuba** continues to have an explosive outbreak. In South America, Brazil, Argentina and Colombia are currently experiencing the most severe waves but there has been improvement. In **Brazil, for example,** the seven day average of daily cases has declined from 77,000 on 24 June to around 35,000 at the end of July.
- **Argentina's** 7-day average has also declined from more than 33,000 in early June to just over 13,000 on 31 July. **Colombia's** average has declined from an all-time high of 30,000 per day in late June to around 10,000 per day.
- **Chile**, which has fully vaccinated 64 per cent of the population, has passed the peak of its third wave but continues to report more than 1,000 cases a day.

Brazil | Latin America

Since the beginning of 2021, there has been a significant acceleration in COVID-19 incidence and mortality in Brazil. By the first week of June, Brazil had reached almost 17 million cases and a little more than 472,000 deaths. A notable demographic change has been observed within this period, in which young and middle-aged adults representing an increasing share of patients in wards and intensive care units (ICU).

In a report published in The Lancet Regional Americas, the authors report that since 2021's first epidemiological week (EW), the mean age of hospitalised patients and patients who died has gradually decreased. Since EW18 (2-8 May), the median age of patients admitted to a hospital or ICU has been **lower than 60 years**. Among patients who died, median age is still slightly higher than 60 years, after having dropped 13 years throughout 2021.

Proportional distribution of hospitalised cases and deaths due to COVID-19 in hospitalisations according to epidemiological week. Brazil, 2021. Source: SIVEP-Gripe, 2021



The authors underline two main factors that have contributed to the change in the pandemic's dynamics. First, the entry and increased circulation of new variants of concern (VOC), including Gamma, Delta and Lambda. Second, the end of Emergency Aid for the poorest led to less mobility reduction, since more people had to go to the streets, for work, income, and food. Also, COVID-19 vaccination has already covered some priority groups – health workers, institutionalised people over 60 years of age or with disabilities, the indigenous population – and, in part, the elderly. By the end of May, vaccination in the densely populated Brazilian cities had already reached most groups over 60 years of age, at least with the first dose.

SNAPSHOTS | DIAGNOSIS, EPIDEMIOLOGY AND OUTCOMES

The health impacts of lockdowns during COVID-19

During the pandemic, there has been ongoing and contentious debate around the impact of restrictive government measures to contain SARS-CoV-2 outbreaks, often termed 'lockdowns'. In a commentary in the BMJ, the authors consider the claims by some that lockdowns cause more health harms than COVID-19 by examining their impacts on mortality, routine health services, global health programs and suicide and mental health. They examine the evidence regarding whether government interventions are to blame for negative health consequences, or whether the lethality and infectiousness of SARS-CoV-2 is as much or more of a driver behind adverse health impacts.

Using data from the World Mortality Dataset, a project that has accumulated excess mortality data from 94 nations since the onset of the pandemic, authors found there were no locations in the dataset that experienced both excess mortality *and* lockdowns concurrently with low numbers of COVID-19 cases, which is what would be expected if lockdowns were independently causing large numbers of short-term deaths. They point to Australia, New Zealand, South Korea, Taiwan and Thailand as having no excess mortality up until mid-2021. Conversely, places with few COVID-19 restrictions such as Brazil, Sweden, Russia and at times certain parts of the USA have had large numbers of excess deaths throughout the pandemic. Interestingly, the data appears to show that countries with concerted COVID-19 restrictions have had fewer deaths than in previous years, with the authors estimating that lockdowns may reduce annual mortality by 3–6 per cent from eliminating influenza transmission alone. The data provides strong evidence that lockdowns themselves are not sufficient to cause such surges in deaths.

Despite reporting lags, the authors found that there is consistent and robust evidence from many countries that government interventions to control COVID-19 have not been associated with increased deaths from suicide. Indeed, some evidence suggests that the number of deaths from suicide may have dropped in some age groups, particularly children, during the pandemic. However, there is abundant evidence that mental health has declined in the population since the onset of the pandemic, which may provide evidence that lockdowns cause mental health problems. However, research into this area is fraught with known limitations and confounders, meaning that it is extremely challenging to ascertain whether government intervention causes or is simply associated with mental health declines, perhaps both driven by the underlying confounder of the pandemic itself.

Link to article

Post-Acute Sequelae SARS-COV-2 Infection (PASC; Long COVID-19)

Persistent symptoms in adult patients in Germany one year after COVID-19

Long COVID is defined as the persistence of symptoms beyond 3 months after SARS-CoV-2 infection. To better understand the long-term course and aetiology of symptoms the authors of this paper in *Clinical Infectious Diseases* analysed a cohort of COVID-19 patients prospectively. Patients were included at 5 months after acute COVID-19.

At month 12, only **22.9 per cent** of patients were completely free of symptoms and the most frequent symptoms were reduced exercise capacity (56.3%), fatigue (53.1%), dyspnoea (37.5%), concentration problems (39.6%), problems finding words (32.3%), and sleeping problems (26.0%). Females showed significantly more neurocognitive symptoms

than males. Compared to patients without symptoms, patients with at least one long COVID symptom at 12 months did not differ significantly with respect to their SARS-CoV-2-antibody levels but had a significantly reduced physical and mental life quality compared to patients without symptoms.

Prevalence of Symptoms More Than Seven Months after Diagnosis of Symptomatic COVID-19 in an Outpatient Setting in Geneva

Published in the *Annals of Internal Medicine*, the authors describe a prospective study of post-acute COVID-19 patients. From 18 March to 15 May 2020, symptomatic persons who tested positive for SARS-CoV-2 at the Geneva University Hospitals were followed by CoviCare, a virtual, clinical, outpatient follow-up program. Persons were contacted again at 30 to 45 days and 7 to 9 months from diagnosis.

Of the 629 participants in the study who completed the baseline interviews, 410 completed follow-up at 7 to 9 months after COVID-19 diagnosis; **39.0 per cent** reported residual symptoms. Fatigue (20.7%) was the most common symptom reported followed by loss of taste or smell (16.8%), dyspnoea (11.7%), and headache (10.0%).

Risk factors for long COVID-19 in previously hospitalised children in Moscow

The authors of this paper, published in the *European Respiratory Journal*, describe a prospective cohort study of children (≤18 years old) admitted with confirmed COVID-19. Children admitted to the hospital between 2 April and 26 August, 2020, were included. Telephone interviews used the International Severe Acute Respiratory and emerging Infection Consortium (ISARIC) Covid-19 Health and Wellbeing paediatric follow-up survey.

518 of 853 (61%) of eligible children were available for the follow-up assessment and included in the study. Median age was 10.4 years and 270 (52.1%) were girls; median follow-up since hospital discharge was 256 days. At the time of the follow-up interview 126 **(24.3%) participants reported persistent symptoms** among which fatigue (10.7%), sleep disturbance (6.9%,) and sensory problems (5.6%) were the most common. Multiple symptoms were experienced by 44 (8.4%) participants. Risk factors for persistent symptoms were: older age "6–11 years" and "12–18 years"; and a history of allergic diseases.

In England one-third of infected people have long term symptoms

Around a third of people in England who developed COVID-19 went on to experience long term symptoms a UK study has found. Findings from the React-2 (Real-time Assessment of Community Transmission) study from Imperial College London used self-reported data from 508,707 adults aged 18 or older who took part in three rounds of surveys that were carried out between September 2020 and February 2021.

The study, published as a preprint and not yet peer reviewed, found that around a fifth (19.2%) of those surveyed reported having contracted COVID-19 previously, with more than a third **(37.7%)** reporting at least one persistent symptom and **14.8 per cent** experiencing three or more symptoms lasting at least 12 weeks. Almost a third of people (30.5%) with at least one symptom lasting 12 weeks or more reported having had severe COVID-19 symptoms that had a "significant effect on my daily life" at the time of their illness.

Overall, 5.8 per cent of the study population had one or more persistent symptoms for 12 weeks or more, a proportion that could translate to more than two million people in England. The most common persistent symptoms included tiredness, shortness of breath, muscle aches, and difficulty sleeping. In addition, the researchers found that long COVID-19 was more common among women than men (1.5 times as likely) and in people who were overweight or obese, who smoked, lived in deprived areas, or had been admitted to hospital. In contrast, persistent COVID-19 symptoms were lower in people of Asian ethnicity.

Risk Factors for Illness Severity among Pregnant Women with Confirmed COVID-19

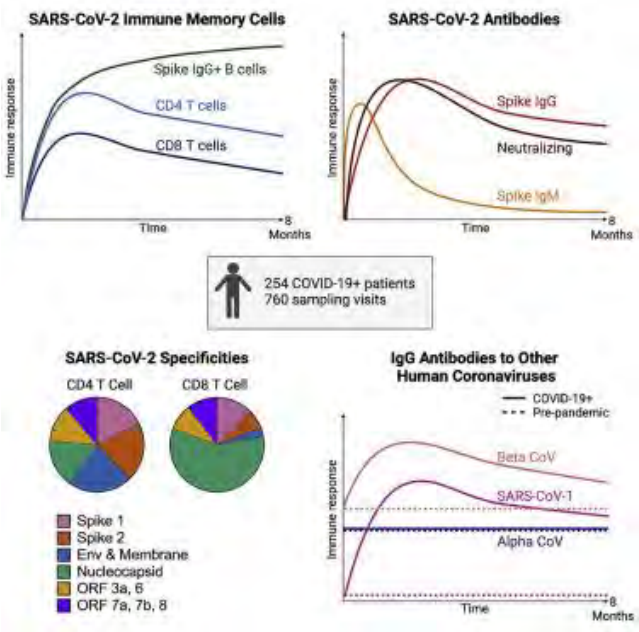
This study, published in *Clinical Infectious Diseases*, aimed to determine risk factors associated with COVID-19 illness severity among pregnant women with SARS-CoV-2 infection. Pregnant women with SARS-CoV-2 infection confirmed by

molecular testing in 22 US jurisdictions were reported between 29 March 2020–5 March 2021 through the Surveillance for Emerging Threats to Mothers and Babies Network (SET-NET). Criteria for illness severity (asymptomatic, mild, moderate-to-severe, or critical) were adapted from National Institutes of Health and WHO criteria.

Among 7,950 pregnant women with SARS-CoV-2 infection, moderate-to-severe or critical COVID-19 illness was associated with age 25 years and older, healthcare occupation, pre-pregnancy obesity, chronic lung disease, chronic hypertension, and pre-gestational diabetes mellitus. Risk of moderate-to-severe or critical illness increased with the number of underlying medical or pregnancy-related conditions.

Immunity induced by natural infection

Ending the COVID-19 pandemic will require long-lived immunity to SARS-CoV-2. Researchers evaluated 254 COVID-19 patients longitudinally up to 8 months and found durable broad-based immune responses. Here is their graphical abstract, published in *Cell Reports: Medicine*.



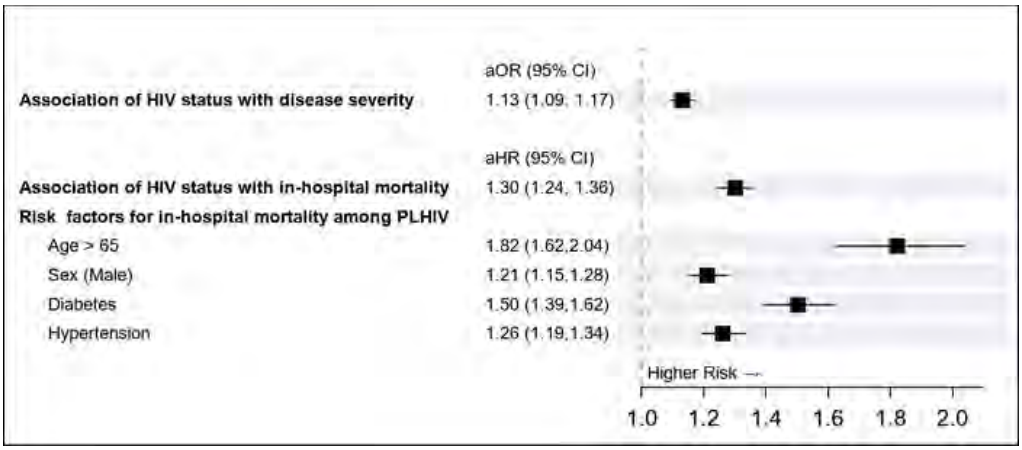
Taken together, these results suggest that broad and effective immunity may persist long-term in recovered COVID-19 patients.

Clinical characteristics and prognostic factors in people living with HIV hospitalised with COVID-19

Published literature on clinical outcomes and prognostic factors in SARS-CoV-2 infection in people living with HIV (PLHIV) remains inconclusive. The WHO has established a Global Clinical Platform aimed to assess clinical features, outcomes and risk factors among individuals hospitalised with suspected/confirmed COVID-19 around the globe. A major review of the dataset was presented at the International AIDS Society conference 2021 (18-21 July 2021).

Between January 2020 and April 2021 anonymised individual-level clinical data from 268,412 hospitalised patients were reported to the WHO Platform from a mix of sentinel health facilities and national health registries worldwide. Reported variables included demographics, clinical features, HIV status, medications, comorbidities and outcomes. Bivariate and regression analyses were conducted to determine whether HIV status was a risk factor for severity at admission and in-hospital mortality.

Data from 15,522 PLHIV out of 168,649 hospitalised individuals were reported from 24 countries. Among PLHIV, 37.1 per cent were male, mean age was 45.5 years, 91.8 per cent received ART and 36.2 percent had severe/critical illness. The following figure summarises the findings.



CONCLUSIONS: Individual clinical data from 24 countries reported to the WHO Global Clinical Platform for COVID-19 indicate that HIV infection is a significant independent risk factor for both severe illness at hospital admission and in-hospital mortality.

COVID-19 disruption to routine child immunisation

The authors of this paper in *The Lancet* used a modelling approach to estimate global and regional disruptions to routine immunisation using administrative data and reports from electronic immunisation systems, with mobility data as a model input. Paired with estimates of vaccine coverage expected in the absence of COVID-19, which were derived from the Global Burden of Disease (GBD) 2020, they estimated the number of children who missed routinely delivered doses of the third-dose diphtheria-tetanus-pertussis (DTP3) vaccine and first-dose measles-containing vaccine (MCV1) in 2020.

Globally, in 2020, estimated vaccine coverage was 76·7 per cent for DTP3 and 78·9 per cent for MCV1, representing relative reductions of 7·7 per cent for DTP3 and 7·9 per cent for MCV1, compared to expected doses delivered in the absence of the COVID-19 pandemic. From January to December, 2020, they estimated that 30·0 million children missed doses of DTP3 and 27·2 million children missed MCV1 doses.

Compared to expected gaps in coverage for eligible children in 2020, these estimates represented an additional 8·5 million children not routinely vaccinated with DTP3 and an additional 8·9 million children not routinely vaccinated with MCV1 attributable to the COVID-19 pandemic. Globally, monthly disruptions were highest in April, 2020, across all GBD regions, with 4·6 million children missing doses of DTP3 and 4·4 million children missing doses of MCV1.

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85 Commercial Road
Melbourne, Australia, 3004

t +61 3 9282 2111
e knowc19@burnet.edu.au

burnet.edu.au
@BurnetInstitute
@KnowC19_Burnet

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