

COVID-19 Country Analyses: May Update 3

Focus on COVID-19 in Low and middle income countries, including PNG

This update covers the period May 4 to May 6.

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Global trends^{1 2}

- 3,725,803 cases and 258,272 deaths reported globally (5 pm AEST).
- The latest 3-day moving average of daily new cases is 87,843, the second highest ever.
- The increase in global daily new cases is being driven by continued high numbers in the US (last 3-day moving average of new daily cases more than 25,000) and surging numbers in Russia (10,500), Brazil (6,050), the UK, Peru, India, Belarus and the Gulf countries.
- Russia has reported more than 10,000 new cases for three consecutive days.
- The global case-fatality ratio is 6.9% compared with the estimated CFR of 3.4% announced by the WHO on March 3³.
- The UK has now reported the highest number of deaths in Europe and the second highest in the world. The official UK figure is 29,427 while the Office of National Statistics estimates that 32,313 people have died, including deaths in nursing homes⁴. Both figures are higher than Italy. The CFR is 15%, the second highest in the world after Belgium.
- Those US states that have announced the boldest relaxation of social restrictions continued to report high numbers of new cases on May 5 -- Texas (1,211 new cases and 45 new deaths), Florida (542 new cases and 72 new deaths) and Georgia (454 new cases and 49 new deaths).

Australian trends⁵

- After 12 consecutive days reporting 20 or fewer new daily cases, Australia has reported more than 20 new daily cases for three consecutive days. These increases are largely due to expanded testing and the cluster of cases at a Melbourne abattoir.
- Most new cases over the past three days are still under investigation as to the source of transmission.
- Of the 113 new cases reported in Australia in the past 5 days, 76 (67%) have been reported in Victoria.
- Although the national 7-day average of 20,058 tests per day is the highest ever, there has been a steady decline in the daily number of tests conducted, from a peak of 25,227 on May 1 to 14,542 on May 5.
- Australia has so far conducted 664,756 tests with a positivity of 1%.
- This translates to 2,607 tests per 100,000 population, which is ranked #15 in the world.

¹ <https://coronavirus.jhu.edu/data/new-cases>

² <https://www.worldometers.info/coronavirus/#countries>

³ <https://www.worldometers.info/coronavirus/coronavirus-death-rate/#who-03-03-20>

⁴ <https://www.forbes.com/sites/isabeltogoh/2020/05/05/uk-records-highest-coronavirus-death-toll-in-europe-after-weeks-of-warnings/#319456013c29>

⁵ <https://www.covid19data.com.au/>



COVID-19 in low-middle income countries

- Nine of the ten most affected countries in the world based on cumulative numbers of reported cases are high income countries. Brazil, which has reported 114,715 cases and 7,921 deaths, is the only developing country although it is classified by the World Bank as a middle-income country.
- After Brazil, the developing countries with the highest numbers of reported cases are Peru (51,189), India (49,400), Ecuador (31,881), Mexico (24,905), Pakistan (22,049), Chile (22,016), Indonesia (12,071), Bangladesh (10,929), Philippines (9,684), Colombia (8,613) and the Dominican Republic (8,480).
- Among those countries, the highest attack rates per 100,000 are all in Latin America: Ecuador (181), Peru (155), Chile (115) and Dominican Republic (78). Brazil's attack rate is 54 per 100,000.
- The Asian countries in the above list all have large populations and low attack rates per 100,000: Pakistan (10), Philippines (8.8), Bangladesh (6.6), Indonesia (4.4) and India (3.6).
- The Mekong sub-region nations of Vietnam (271 cases and no deaths), Cambodia (122 cases and no deaths), Myanmar (161 cases and 6 deaths) and Laos (19 cases and no deaths) have all reported relatively low case numbers.
- Thailand has reported the highest number of cases (2,988) and deaths (54) in the sub-region but it has a relatively low attack rate (4.3 per 100,000) and a low CFR of 1.8%.
- Pacific Island Countries and Territories (PICT) have among the lowest numbers of cases and attack rates in the world. The highest numbers of cases are in the US and French territories of Guam (145), French Polynesia (58), New Caledonia (18), and Northern Mariana Islands (14).
- Among independent PICTs, cases have been reported in Fiji (18) and Papua New Guinea (8).

So why have low-middle income countries been relatively less affected than high-income countries?

A number of reasons have been suggested:

1. **Low rates of testing**
Many low- and middle-income countries lack the capacity to test and identify infected people. The disease may well be spreading undetected. In Asia, testing rates have indeed been very low, including Indonesia (41 per 100,000), Bangladesh (49), India (76), Pakistan (100), and the Philippines (194).
2. **Fewer people at risk of symptomatic infection and severe disease**
Developing countries may be at a slight advantage because of their demographics. The elderly are hardest hit by COVID-19, and demographics skew much younger in the developing world. More than 60% of Africa's population is under 25 years old, according to the World Bank. Just over 5% is 60 years and over; in Asia, that figure is about 12%. In Europe, by contrast, about 24% of the population is 60 and older, and in North America it's 21%.
3. **Low connectivity**
The places where the coronavirus reached first are the places with the most connections to its country of origin, China, followed by Europe and North America. In developing countries a small proportion of the population is able to travel internationally and, other than migrant workers, is mainly confined to the middle and upper classes. In South Africa, the first cases were identified among a group of people who had been skiing in Italy. The virus was probably introduced to South America through close contacts with Spain, Italy and Portugal.
4. **Population density**
The developing world is home to some densely populated megacities that may be highly vulnerable to viral transmission. This has happened in Sao Paulo. But there are also large rural areas where social distancing is a way of life. That might be slowing down the epidemic in some developing countries.



On the other hand, individual households may have more people in them and a wider range of ages than in industrialised countries. That could exacerbate the impacts if and when the disease does arrive.

5. Climate? Probably not

While the virus may spread more easily in the cold, dry air of temperate-zone winters, heat and humidity have not stopped it from spreading in places like Singapore, South Africa and Hong Kong. It has also spread rapidly in hot and dry countries like Saudi Arabia, Qatar, UAE and Kuwait.

Most of the articles in peer-reviewed journals on COVID-19 in developing countries have been commentaries and editorials warning of their vulnerability due to unprepared health systems and barriers to practising physical distancing and hand-washing. There are few if any analyses of the reasons behind low attack rates in most developing countries outside of Latin America.

Economic impact

There is broad agreement that the economic impact of the pandemic will be especially harsh in developing countries. Companies in the USA and Europe will step away from the long supply chains and just-in-time deliveries that helped drive down costs. All countries will attempt to build up production of “essential goods” including medical supplies and possibly even food items.

All this will impact trade, especially from developing countries. At the same time credit and investment flows will be largely focused on helping domestic enterprises in developed countries with little left for flows to developing countries that will rely largely on the IMF and the World Bank. Overseas aid budgets may be cut as wealthy countries struggle to pay back the debts they have incurred during the pandemic.

This reversal of globalised production chains is bad news for developing countries, coming at a time when the medical emergency responses to COVID-19 are drawing heavily on public and private resources, and lockdowns are hitting output and employment, both in the formal and informal sectors.

While globalisation has many faults, it did allow both developed and developing countries to substantially raise living standards. But much was built on the backs of workers in developing countries. Many workers, often women, worked for long hours in unhygienic and unsafe factories producing clothing and manufactured components; in Africa, thousands toiled in mines to extract minerals needed for production of laptops and smartphones. But now, to make it even worse, lockdown measures in high income countries have led to a dramatic decline in demand for these products.

Developing countries that rely on tourism will be especially hard hit. Many such countries are in the Asia Pacific region, such as Thailand, Vietnam, Cambodia, Indonesia, Vanuatu, Fiji, and New Caledonia.

Hundreds of millions of people, many of who work in the small scale services sector will suddenly find themselves without jobs. Traditionally, many of these people relied on informal networks in time of stress and hardship. However, safety nets that work through family and friends are unlikely to be sufficient: many relatives that could otherwise provide support will also have lost their job.

Developing countries that rely on remittances from their nationals working abroad, especially in the oil-rich Gulf States, will see a significant decline in these transfers as hundreds of thousands lose their jobs, especially in the service sector. For example, Hamad Airport in Doha has laid off 40% of the staff, most of who come from the Philippines, India, and Sri Lanka⁶.

The ILO is warning that 1.6 billion workers in the informal economy—nearly half of the global workforce—stand in immediate danger of having their livelihoods destroyed. And remittances to developing countries have already

⁶ <https://www.airport-technology.com/news/covid-19-qatar-airways-hamad-airport/>



fallen by 20 per cent⁷. All of this will feed into higher rates of poverty. In fact, the World Bank has estimated that some 49 million people could fall back into extreme poverty.

Case study: Vietnam

With a population of 97 million, Vietnam has only recorded 271 cases and no deaths, despite having a large land border with China. Vietnam's government tightened border controls and put hospitals and local health departments on high alert for the new pneumonia cases on 3 January—before the first fatality in China and only three days after confirmation of the outbreak there⁸.

According to an article in *The Conversation*, the reason why Vietnam has so effectively responded is down to a three-pronged government strategy⁹.

1. Temperature screening and testing

Starting in February, anyone arriving at an airport in a major Vietnamese city had to go through compulsory body temperature screening and fill in a health self-declaration, stating their contact details and travel and health history.

Anyone with a body temperature of over 38C was taken to the nearest medical facility for more thorough testing. Businesses including banks, restaurants and apartment complexes also implemented their own screening procedures.

There has also been intensive testing across the country. Testing stations have been set up across cities, which all citizens can attend. Communities who live near confirmed cases – sometimes an entire street or village – were swiftly tested and placed in lockdown. By March 5, Vietnam had validated three different test kits, each costing less than US\$25 and producing results within 90 minutes. These are all being manufactured in Vietnam.

2. Targeted lockdowns

The second prong of Vietnam's approach was quarantine and lockdowns. Since mid-February, Vietnamese returning home from abroad have been quarantined for 14 days on arrival and tested for COVID-19. The same quarantine policy has been applied to foreigners coming to Vietnam.

In March, Vietnam started to lock down whole cities and specific areas in a city. Travelling between cities was highly restricted. In Danang in central Vietnam, anyone who is not a registered resident of the city but wishes to enter has to submit to a 14-day quarantine at a government-approved facility which they must finance themselves.

Villages of 10,000 people have been fenced off on account of single cases. Bach Mai, a famous hospital in Hanoi which is also a leading COVID-19 treatment centre, was even locked down in late March after one externally contracted staff member tested positive. Businesses, both state and private, were closed down, and the tourism and airline industries were essentially frozen.

3. Constant communication

⁷ <https://news.un.org/en/story/2020/05/1063022>

⁸ <https://www.aspistrategist.org.au/vietnams-low-cost-covid-19-strategy/>

⁹ <https://theconversation.com/vietnam-has-reported-no-coronavirus-deaths-how-136646>, April 21, 2020.

From early January, the Vietnamese government has communicated widely to citizens about the seriousness of the coronavirus. Communications have been clear: COVID-19 is not just a bad flu, but something to be taken extremely seriously, so people are advised not to put themselves or others at risk.

The government has been creative in its communications methods. Each day, different parts of the Vietnamese government – from the prime minister, to the Ministry of Health, Ministry of Information and Communications and provincial governments – text citizens with information. Details on symptoms and protection measures are communicated via text to mobile phones all over the country. The government has also partnered with messaging platforms, such as Zalo, to distribute updates.

With 65% of Vietnam's 97 million people online, official news outlets and social media channels (60% are on Facebook) successfully shared information about the new coronavirus. In an age when it is difficult to track and stop the spread of misinformation and disinformation, understanding the threat, particularly its contagion rate, has been the key to citizens' willingness to cooperate, whether through social distancing or self-isolation.

Combined, these measures mean Vietnam has not yet experienced any large scale community outbreak, which would devastate a city like Ho Chi Minh City with a population of 11 million and overwhelm the country's public healthcare system. The healthcare system has had the time to treat each patient, and in so doing, keep the number of COVID-19 deaths at zero.

Political Imperative

There has been a strong political motive to effectively respond to COVID-19. Prior to the pandemic, the Communist Party of Vietnam (CPV) had been under intense pressure from dissidents at home and abroad. The Party has deployed the state apparatus at all levels to mobilise security forces and healthcare workers to quickly quarantine and trace tens of thousands of people. At the same time, Vietnam sought to show off a low cost but effective model, and has compared its small number of infections and zero deaths with those of Western countries on social media to illustrate just how determined the Party was to fight the virus.



Case study: Papua New Guinea (PNG)

With a population of 9 million people, PNG has reported eight cases and no deaths. Six cases were mild and have fully recovered. Two were moderate cases, admitted to hospital and recovered, out of which one case was repatriated. The testing rate has been very low at 27 per 100,000, even lower than neighbouring Indonesia. The eight cases have been widely dispersed over five provinces: Western (3), East New Britain (ENB) (2), and Morobe, NCD and Eastern (one each). The source of seven of these cases is unknown. It raises the possibility that there are other, possibly asymptomatic, unidentified infected persons.

The PNG Department of Health activated the National Emergency Operations Centre on January 27, three days before the WHO declared a public health emergency of international importance. The Government banned all travellers from Asian countries and closed its border with Indonesia, taking effect from 30 January. The first confirmed case in PNG was reported on March 20. This case was an Australian fly-in-fly-out (FIFO) worker who flew into the country from Spain via Turkey and Singapore. Since then, all FIFO operations have been shut down. On March 22, the prime minister declared a state of emergency limiting the movement of people. Inter-provincial travel was banned both by road and air.

The UPNG Medical School laboratory began to conduct tests on April 1. On April 6, a lockdown was announced in ENB province and further restrictions were introduced later in Western Province and NCD.

All PNG citizens and permanent residents and non-PNG residents must quarantine in designated hotels at their own cost for 14 days. As of April 29, domestic flights could take place except to Western and Sandaun provinces. Lockdowns in Western and ENB provinces have been lifted but there are night-time curfews.

As of May 1, 2,402 persons have been investigated by the Rapid Response Team: eight tested positive for COVID-19, 2102 tested negative while 292 samples are still pending result.

Based on the PNG Health Service Profile, there are 741 health facilities with 5,400 hospital beds, more than 50 Intensive Care Unit (ICU) beds and 9147 health workers (medical doctors, Health Extension Officers, nurses and CHWs). Most provinces do not have quarantine facilities or isolation wards. The number of functional ICU facilities is inadequate and there are ongoing problems providing adequate PPE materials.

Awareness and community engagement activities continue using multiple platforms (radio, TV, newspapers, social media and community activities with distancing measures), both at the national, provincial and district levels¹⁰. Key messages developed by NDOH-WHO continue to focus on prevention practices, physical distancing, dealing with fear, stigma and discrimination, and protection of health workers.

The health minister Jelta Wong has admitted that PNG was "behind the eight-ball" in preparing for this pandemic, in particular failing to ensure the availability of PPE equipment¹¹. He told The Guardian: "I am from a rural area myself, and I've seen aid posts and other health centres deteriorate over time because of lack of funding; because of lack of leadership. But this was a big eye opener for me." He described the 24 hour coronavirus call centre as one of the most effective interventions. "The call centre has been key, because we are getting the calls and people are reporting their symptoms to us over the phone, which helps us investigate areas of concern when they arise. After we receive a call we send a response team out to the area, they take a swab and then we send it off to the labs and that's how we caught the [cases] in Western Province and Sandaun."

Summary

- So far, PNG seems to have responded effectively through early activation of the national EOC, prompt border restrictions, quarantining of returned travelers, and selective lockdowns.
- Potential barriers to the response include a very low rate of testing and the lack of PPE in hospitals.

¹⁰ <https://www.abc.net.au/radionational/programs/saturdayextra/png-and-coronavirus/12203764>

¹¹ <https://www.theguardian.com/world/2020/apr/30/papua-new-guinea-png-health-minister-covid-19-coronavirus-ppe>



- The intense focus on COVID-19 may have diverted resources away from other pressing health issues, such as TB, malaria, HIV and maternal and child health.
- The risk of transmission of coronavirus across the border from Indonesia to PNG has not yet been fully explored. In Papua province, bordering PNG, there have been 205 reported cases and 6 deaths, which may be an under-estimate.

