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## Disrupted care in Papua New Guinea: the harms of COVID-19

The COVID-19 pandemic in Papua New Guinea shows no sign of ending, and its worst legacy might be its effect on other diseases, such as tuberculosis, HIV/AIDS, and malaria. Chris McCall reports.

Among wooden huts overlooking a broad, muddy river, volunteer Arnolio Palima detects and treats four to five cases of malaria a month in his village of Mipan, Papua New Guinea, using rapid tests and boxes of Mala-One, a combination of the anti-malaria drugs artemether and lumefantrine. His pay is low, but his work is essential, and has become a lot harder during the COVID-19 pandemic. "Even though it is something like charity work, it doesn't matter. It is good that we save a life," he said.

Mosquitos are everywhere, there is no telephone, and no doctor. Papua New Guinea adopts ground-level approaches to tackle malaria, tuberculosis, and HIV/AIDS, which together cause huge amounts of disease and death in the country. But these efforts have been severely affected by the pandemic. Transport on the Fly River, Mipan's lifeline to the outside world, has been badly disrupted by the pandemic. At times, in a bid to stop COVID-19, the military patrolled the river and, according to one witness, sometimes pulled guns on people they suspected of crossing the border into Indonesian territory. Amid the restrictions, medical supplies have not always arrived and outreach teams have not come.

Meanwhile, Papua New Guinea's COVID-19 epidemic has worsened. As of Jan 10, officially just over 36 000 cases have been reported, with 591 deaths, but these figures represent only confirmed cases, and ample anecdotal evidence suggests that the true number of cases and deaths is probably higher. Many areas have no testing facilities for COVID-19. Vaccination levels are dismally low (on Dec 16, the Government reported that 283 915 people had received at least one dose; the country's total population

is around 9 million). And knock-on effects of the prolonged disruption on other health services are being seen.

These problems are not unique to Papua New Guinea. In its 2021 Results Report, The Global Fund to Fight AIDS, Tuberculosis and Malaria pointed out that COVID-19 threatened to undo

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much progress it had made worldwide over the past 20 years in the fight against tuberculosis, HIV/AIDS, and malaria, still three major global killers. Peter Sands, executive director of The Global Fund, said key results of its programmes went backwards for the first time in 2020. "COVID-19 has been the most significant setback in the fights against HIV, tuberculosis, and malaria, that we have encountered in the two decades since the Global Fund was established, exacerbating existing inequalities, diverting critical resources, stopping or slowing access to treatment and prevention activities, and putting vulnerable people further at risk," explained Sands.

The 2021 Results Report from The Global Fund showed that globally 18% fewer people were treated for tuberculosis in 2020, the number of HIV tests taken declined by 22%, and the number of suspected malaria cases tested declined by 4.3% compared with the previous year. The Global Fund vice-chair Roslyn Morauta is a former first lady of Papua New Guinea. Morauta told *The*

*Lancet* money was redistributed to tackle COVID-19, leading ultimately to shortages in other areas. This should not have happened, she said, as money from international donors had been set aside to tackle COVID-19. It had bad effects on a weak health system, in a country with an increasing population, many of whom are poor. "You are seeing that now with closure of services," she said. "You cannot underestimate how badly broken and dysfunctional the health system is. The waste in the system is extraordinary. Workers may work for months and not get paid." Government officials did not respond to requests for comment.

In Rabaul, on the offshore island of New Britain, Papua New Guinea, Al Maha, deputy chief physician for the New Guinea islands, said deaths at home have soared. Many might be undetected COVID-19 deaths, but there could be other causes. Locally around half of the COVID-19 cases have been in health workers which has put patients off presenting to hospital, explained Maha. At one time, he said, villagers were putting up barricades and even throwing their own relatives out of home due to fear of COVID-19. In such conditions it has been impossible to adequately run routine clinics, including a once very active home visiting service for tuberculosis.

"We had several facilities all shut down at the same time. We have had big gaps in clinic attendance," said Maha, adding that he had seen cases of treatment failure in people with HIV/AIDS related to not obtaining or taking their antiretroviral medications.

In Port Moresby General Hospital, recently over-run with COVID-19 cases, Josephine Telenge, infection prevention and control coordinator,

described a similar picture. Many clinics had been shut and patients who needed to collect regular medications for tuberculosis and HIV/AIDS could not get them: "Our patients did not know where to go. All of the other clinics were also closed," said Telenge. Common diseases like malaria were only being diagnosed as emergencies, and follow-up of infectious diseases was not really happening, Telenge explained. With the hospital now admitting as many as 150 patients with COVID-19 a day, the problem is not going away, although the tuberculosis clinic at least has now reopened.

Medical microbiologist Gabriella Ak said testing for HIV/AIDS in Port Moresby General Hospital had decreased by 15% in 2020 and 2021 compared with previous years, while malaria testing had dropped by 32%, reflecting the current thinking of clinicians as much as failure of patients to present. "Numbers have gone really down. They have just put everything on the shelf and are just concentrating on COVID. Clinicians have just gone COVID crazy and are leaving everything else." Besides the three diseases that The Global Fund focuses on, Ak said the hospital had also recently had some nasty cases of sepsis and badly infected scabies.

Health officials dealing with each of tuberculosis, HIV/AIDS, and malaria also said they had seen the effects of the pandemic on routine care. Reporting of tuberculosis cases stood at 30 411 in 2020, a drop of 6.7% on 2019, according to National Department of Health figures. Narantuya Jadambaa, a medical officer with WHO, said there had also been an increase in cases of drug-resistant tuberculosis, particularly in the first half of 2021. Papua New Guinea's main laboratory for tuberculosis culture and susceptibility testing is currently closed and tests are being sent to Australia for processing. Reporting of tuberculosis statistics has stalled in many areas, often due to staff being reassigned to COVID-19 related activities. "Many [members] of the tuberculosis staff are doing other



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clinical jobs as well," Jadambaa said. Loss to follow-up was around 13% in 2020, Jadambaa said, compared to a WHO recommendation of less than 5%. Community-level initiatives are now being tried to address these problems.

Papua New Guinea has the Pacific's highest rate of HIV/AIDS and the numbers have been steadily increasing in recent years. Resistance to antiretroviral treatment has been a

**"...Clinicians have just gone COVID crazy and are leaving everything else."**

problem and in recent years prompted changes in recommended medications. Figures from the National Department of Health showed a total of 35 840 people on antiretroviral treatment in 2020, up nearly 12% from 2019, including 1696 children. However, many people with HIV in Papua New Guinea do not know their status and UNAIDS estimates have put the actual number of people with HIV infection as high as 55 000.

Documented problems include failure to receive antiretroviral medications regularly, often due to clinic closures or transport problems (eg, patients being stranded away from home by transport disruptions). The number of tests decreased in 2021 and one HIV/AIDS clinic

reported in April, 2021, that it saw less than half the number of patients daily that it normally would.

Ross Hutton, a public health consultant to the Papua New Guinea National Malaria Control Program, said the pull-out of many foreign health advisers had an effect, as did reassignment of resources to COVID-19. "You are getting a malaria vehicle being used to go out and do COVID activities. Then you have a malaria team that do not have transport to go out," he said.

On paper, Papua New Guinea's response to COVID-19 looks impressive. There is a National Control Centre. Borders are technically mostly closed. A National Pandemic Act was enacted in 2020. There is an emergency response plan and clear vaccination targets. But hopes that 20% of the population would be vaccinated in 2021 were not met. Few Papua New Guineans want to be tested for, diagnosed with, or vaccinated against COVID-19, often citing scare stories about vaccines gleaned from the internet. In such an environment, the knock-on effects on tuberculosis, HIV/AIDS, malaria, and many other diseases look set to persist, and many other low-income countries around the world might be in much the same position.

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