COVID-19 strains remote regions of Peru

The health system in Iquitos is stretched and the true number of COVID-19 cases and deaths is unclear. Barbara Fraser reports from Lima.

The first COVID-19 case in the Peruvian Amazon, detected on March 17, seemed to be a one-off—a tour guide who apparently caught it from foreign visitors. Within weeks, however, Carlos Calampa saw patients overflowing into the corridors of the Loreto Regional Hospital in Iquitos, where he was director.

More than 500 tanks of oxygen a day were needed, but the hospital's poorly maintained oxygen plant could provide only a fraction. Private providers raised prices from about US$150 a tank to nearly $1000, out of reach for most people in Iquitos, a city of 500 000 people and capital of the Loreto region.

Iquitos is not linked to the rest of Peru by road and flights were grounded as part of a nationwide lockdown from March 16, so obtaining supplies was difficult. Calampa's hospital and others in the city lacked sufficient protective equipment. Of the 33 doctors who have died of COVID-19 in Peru, 17 worked in Loreto.

Peru reported its first COVID-19 case on March 6, and officially reported almost 124 000 cases and more than 3600 deaths on May 25. In mid-May, however, Loreto's official death toll was only 83, despite grim reports of the collapse of Iquitos' health system and of people dying at home. Then Calampa—who had just been named regional health director—and Luis Espinoza, an infectious disease specialist at the hospital, released a chart showing that the number of deaths as of May 13 was closer to 800.

That figure included patients with COVID-19 who died in the regional hospital, people who died at home with COVID-19 symptoms, whether or not they were diagnosed, and a partial count of patients who died at other health centres in Iquitos, Espinoza said.

His figure included suspected cases, which the official Health Ministry count does not. With a shortage of test kits, it has been impossible to test everyone who is symptomatic, much less those who died before they could be tested, Calampa said. By May 25, the Health Ministry's official death count for Loreto had risen to 280 confirmed deaths, although the regional health office lists more than 1000, including suspected cases. Both the ministry's official count and the region's figures probably omit some people who died at home from COVID-19 or other diseases, possibly complicated by the coronavirus, Calampa said. Many of those people lived in the city's shanty towns.

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One reason for the lag in the official count was a data-entry backlog at the hospital, where most of the epidemiology staff were off sick. Sharing data is further complicated by Peru's fragmented state health system, which includes public hospitals, a social security system, and hospitals for the police and military, all keeping separate records, some of them manually.

But even the updated case count could be inaccurate, experts say. Peruvian officials point to the more than 840 000 COVID-19 tests administered nationwide, but only about 15% have been PCR tests that detect active infection. The rest have been antibody tests, which indicate that a person has been infected at an unspecified time.

Of the nearly 124 000 confirmed cases reported as of May 25, only 27% had been detected by PCR; the rest were positive results from antibody tests.

"It is very misleading and confusing to combine the results of both of those tests…because they're telling you very different things" said William Moss, executive director of the International Vaccine Access Center at Johns Hopkins University (Baltimore, MD, USA). Eduardo Gotuzzo, a member of the Peruvian Health Ministry COVID-19 advisory committee, said PCR test kits have not been available on the international market. Peru also has little laboratory capacity for processing PCR tests.

Peru's situation could be further complicated in the coming winter months, when influenza and pneumonia cases generally rise, said Gabriel Carrasco, an associate researcher at Cayetano Heredia National University in Lima. If people with COVID-19-like symptoms are automatically referred to hospitals treating patients with COVID-19, "it could further congest a system that is already operating at its limits", he said.

By May 25, COVID-19 cases and deaths had dropped in Iquitos but were rising in remote areas accessible only by river or light plane, Calampa said. He is reinforcing staff and coordinating with the military to deliver medicine, oxygen, and other supplies to health centres on the Marañón, Corrientes, and Tigre rivers, where much of the population is Indigenous. Another target is the shared Peru, Colombia, and Brazil border on the Amazon River. The virus is also spreading in the neighbouring Ucayali region, where as of May 25 there were 3200 cases and 114 confirmed COVID-19 deaths.

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