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Brazilian ICUs short of drugs and beds amid COVID-19 surge

Doctors are reporting shortages of critical drugs and the need to ration care, pointing to public health failures. Lise Alves reports from São Paulo.

As COVID-19 surges across Brazil and the country's private and public hospitals are filled to capacity, physicians are having to not only deal with the day-to-day pressures of the pandemic, but also a shortage of drugs used to intubate patients and waiting lists for intensive care unit (ICU) beds.

"Here we have ten ICU beds for non-COVID-19 patients and 20 ICU beds for COVID-19 patients. They are all being used at this time", says Ricardo Gargione, intensive care physician and coordinator of the ICUs at the Nossa Senhora dos Prazeres Hospital, in Lages, Santa Catarina. Data from the National Council of Health Establishment show that, in February, 2021, only 741 (13%) of the 5570 Brazilian municipalities had the high-complexity ICU beds needed for COVID-19 patients.

According to Gargione, of the 20 ICU patients on the COVID-19 ward, 17 are intubated. He says that ICU doctors now have to deal with the shortage of essential drugs to keep patients intubated. "Although we have never actually run out of the drugs needed to keep patients intubated, we are always very low on supplies. Today [Saturday], we have supplies until Monday. Hopefully we will get some more supplies by then", Gargione told *The Lancet*.

When the usual sedatives, analgesics, and neuromuscular blockers are not available, says Gargione, doctors use what they have at their disposal. "There are days when we only have one type of sedative, or a drug that is not usually administered in these cases, but that is what we will use", he said.

The substitution, however, is not without risk. "With some of these drugs it is harder to keep the patient

in a state where the machines can do the work efficiently", he explained. "The patient's body begins to fight with the machine and that hinders the patient's health."

Gargione says that hospital administrators are constantly searching for places to purchase the drugs. "It has

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been a daily battle for us. Fortunately, the state of Santa Catarina thought ahead and stocked a supply of some of these drugs and is now distributing them. That is what is saving us right now", he said. Other states, he notes, are not as fortunate.

A survey released last week by Brazil's National Association of Private Hospitals (Anahp) found that most of the association's affiliates have registered a severe shortage of essential supplies such as oxygen, anaesthetics, and intubation drugs for the care of patients with COVID-19.

"Approximately 11% of our affiliates have enough oxygen for 5 days or less and 26% have anaesthetic supplies to last for 5 days or less", stated Antônio Britto, executive director of Anahp. The 88-member entity has as its affiliates some of the largest state-of-the-art hospitals in Brazil. According to Britto, the shortage is expected to last because demand is just too great at the moment. "There is no magical solution to the problem. National drug manufacturers are delivering what they can, but with a surge in demand, there is no way these manufacturers can keep up", he said.

Lara Kretzer works as an intensive care doctor at both the private Baía Sul hospital and state-administered Nereu Ramos hospital in Florianópolis, Santa Catarina. During this second wave of COVID-19 infections, Kretzer has witnessed not only the shortage of medications to treat critically ill patients, but also a lack of ICU beds for these patients. "Things here in Florianópolis are now improving, but in mid-March [2021] we had to make choices [as to who would get an ICU bed]", said Kretzer.

Gargione agrees, noting that while in Santa Catarina SARS-CoV-2 infections are slowly decreasing, in the rest of the country the infection and death tolls are still setting record highs. The waiting period for an ICU bed is usually 3 days and according to Gargione some patients died while waiting to get into the ICU. "In all, 53 people died here in March waiting for a COVID ICU unit bed", said Gargione.

On April 9, 2021, amid consecutive daily records of deaths due to COVID-19, the Brazilian Medical Association re-introduced the recommendations on how to allocate resources in order to save the largest number of lives. The document

For more on Bolsonaro's comments on vaccination see [World Report Lancet 2021; 397: 361](#)

For *The Bulletin of the Fiocruz COVID-19 Observatory data* see https://agencia.fiocruz.br/sites/agencia.fiocruz.br/files/u34/boletim_covid_2021-semanas_10-11-red.pdf



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outlined ethical protocols to guide doctors forced to decide which patient should receive treatment in case of a shortage of ICU beds, supplies, or equipment in hospitals. The guidelines were first released in May, 2020; at the time, however, Brazil's ICU situation was comfortable, and the document not given much attention.

The shortage of drugs and ICU beds for critically ill patients could have been avoided, say health specialists, if only the federal government had taken the necessary steps. "It is unconceivable [to have waiting lists]. No one who is critically ill can wait for a bed", said Margareth Pretti Dalcolmo, pulmonologist and researcher at the Oswaldo Cruz Foundation (Rio de Janeiro).

"Brazil made a lot of mistakes this past year. The SUS [Brazil's Public Unified Health System] entered into the pandemic weaker than it should have due to the dismantling of the public health system, with lack of funding and depletion of human resources", Dalcolmo said. By mid-2020, when numbers of infections started to rise during the first nationwide peak of the pandemic, Dalcolmo said that it was already "clear that vaccines were the answer", but the Brazilian diplomacy faltered.

The government was "very wrong" in refusing Pfizer's early purchasing offer for the COVID-19 vaccine, she says, and it was wrong again when it only negotiated doses for 10% of the Brazilian population in the COVAX Facility mechanism. "We could have negotiated 20% or even 30% but we did not", she noted.

Although Dalcolmo has strong opinions about the federal government's role in the pandemic, she praises the country's public health system. "SUS is the largest health system in the world. Nearly 80% of the Brazilian population depends solely on the SUS and it works", she said.

According to Dalcolmo, Brazil's public health system is able to vaccinate over 80 million people against influenza every year within a period of just 6 weeks. "We have the know-how. We have the structure and the logistics, and the National Immunization Program can vaccinate up to 2 million people per day, but to do that we need vaccines, and we do not have vaccines at the present moment", she said.

The SUS today is vaccinating against COVID-19, Dalcolmo says, but at a lower rate than required to bring the pandemic under control. To date, just over 20 million Brazilians, approximately 10% of the population, have received the first dose of one of the vaccines available in the country (CoronaVac and Oxford–AstraZeneca). President Jair Bolsonaro has repeatedly undermined the vaccination programme. "We will not have sufficient vaccines in the short term", said Dalcolmo, predicting a "tragic" April in Brazil.

Pedro Hallal, epidemiologist and professor at the Federal University of Pelotas, Rio Grande do Sul, agrees. "We had time to get prepared but we did not because our government denies every recommendation coming from the scientific community", he said. "We are 2.7% of the world's population but have registered 11.8% of [COVID-19] cases since the pandemic began. Last week [March 28 to April 3, 2021], 30% of all active COVID-19 cases were in Brazil", he added.

Hallal says the government has opted to treat patients with the disease instead of trying to prevent it from spreading. "[Government officials] are taking a clinical approach and increasing ICU beds, purchasing medicine, etc, instead of taking a populational approach, which would be to focus on how to prevent people from getting sick and spreading the virus by purchasing vaccines and conducting massive

testing and contact tracing", he said, adding, "from a clinical approach point of view you won't stop the pandemic".

In addition to undermining the vaccination programme, Bolsonaro committed another three "cardinal sins", adds Hallal. "He also refused to wear a mask when out in public, insisted his government promote drugs such as hydrochloroquine and ivermectin, with no proven efficacy towards preventing COVID-19, and created a narrative against social isolation, making the population believe it would ruin the economy."

Dalcolmo points out that the new variants registered in Brazil have changed the COVID-19 pandemic in the country significantly. "We now have younger people needing medical assistance and those in hospitals staying longer in medical treatments", she said.

Data presented in the The Bulletin of the Fiocruz COVID-19 Observatory, comparing the first epidemiological week of 2021 (Jan 3–9) with the tenth (March 7–13), reveal an absolute increase in cases by 317%. However, when the age groups 30–39 years, 40–49 years, and 50–59 years are analysed, researchers observed an increase of 565%, 626%, and 526%, respectively, suggesting a shift to younger age groups.

"The slow roll-out of the vaccination campaign is contributing to making the pandemic last longer, resulting in the intermittent adoption of containment and mitigation measures", said Observatory researchers in charge of the Bulletin.

Both Dalcolmo and Hallal agree that to stop the rapid spread of the virus, the federal government should issue a nationwide lockdown and substantially increase the daily number of COVID-19 vaccines administered. "If we achieve these targets, we may see a light at the end of the tunnel", said Hallal.

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