

Ethiopia races to bolster ventilator stockpile for coronavirus fight

April 3 2020

In four years as a doctor in Ethiopia, Rediet Libanos has used a mechanical ventilator just once: on a patient who suffered a haemorrhagic stroke a few months ago.

But as the country braces for a potential surge in coronavirus, the 28-year-old and many of her colleagues are scrambling to master the workings of the breathing machines, which buy time for critically-ill patients.

During a training this week in Addis Ababa, Rediet and six other doctors got a refresher on how to optimise oxygen volume and pressure for patients whose lungs are failing, practicing first on a green rubber dummy organ before visiting clinics to see ventilators in action.

Though Ethiopia has reported only 29 cases of COVID-19, two of them critical, Rediet expects the country will soon see an onslaught of patients for whom ventilation could mean the difference between life and death.

"I will be on the front lines of that, so I need to be skilled in how to use this machine," she told AFP.

Yet even as doctors study up on ventilation techniques, Ethiopia's government—like others in Africa—is confronting a stark ventilator shortage that could hobble its COVID-19 response.

In a country of more than 100 million people, just 54 ventilators—out of

around 450 total—had been set aside for COVID-19 patients as of this week, said Yakob Seman, director general of medical services at the [health ministry](#).

By comparison, the US state of New York, the current centre of the pandemic, has said it could need tens of thousands of ventilators for a population of around 20 million.

The Ethiopian health ministry's own "[worst-case scenario](#)" modelling predicts the country will require around 1,500 ventilators for COVID-19 patients by the end of April, Yakob said.

With producers overwhelmed by orders from around the globe, it's not at all clear how this gap will be bridged, he said.

"I'm really worried about a shortage," Yakob said. "This is not because of the commitment of the government or lack of will, but because of lack of resources."

Global supplies scarce

Ventilator shortages have been well-documented in Italy and New York, and health officials at the African Union stress that the problem is not unique to the continent.

But African shortfalls could be especially acute—Europe and the United States are already scouring the world market for the precious machines.

The Norwegian Refugee Council reported this week there were just three ventilators in Central African Republic, a country of five million people.

The WHO is advising African countries to "start thinking about

mobilising" additional ventilators, said Dr Mary Stephen, a technical officer for emergencies at the WHO's regional office in Republic of Congo.

"We do not produce them in Africa, so countries need to start collaborating. Can we start talking with the private sector? Can we start talking to China?" Stephen said.

"These are actions that need to start happening before we get to that stage where we have a large number of cases."

Ethiopia's experience shows that sourcing more ventilators is easier said than done.

The government has requested 1,000 ventilators from producers in China but has been told it won't be able to get them all at once and may have to settle for 250 per month, Yakob said.

One procurement agent contracted by the government to find 200 ventilators, who spoke to AFP on condition of anonymity, said the process of fulfilling orders had been complicated by [coronavirus](#)-related flight restrictions and recent price hikes.

Ventilators once available for around \$9,000 (8,300 euros) are going these days for more than \$20,000, the agent said.

- 'We're definitely worried' -

As Ethiopia's COVID-19 case count slowly increases, officials are assessing how to make do with what they have.

In addition to 450 or so functional ventilators, the health ministry has tallied 197 non-functional ones, and it hopes to bring at least some of

those back online, Yakob said.

Yet many ventilators in Ethiopia were donated, meaning health facilities do not have a direct line to manufacturers and struggle to find spare parts to maintain them.

"When you get something by donation, it will not have the right manual, you don't have the right connection with the company, and skill transfer has not been done very well," Yakob said.

The [ventilator](#) training held this week in Addis Ababa—organised by the American Medical Centre, a private clinic—is an attempt to make sure that whatever machines are available will be used properly, said Dr Nebiyou Asnake, the centre's medical director.

The centre hopes to train 100 doctors on ventilation by the end of the month, Asnake said.

Since reporting its first COVID-19 case on March 13, Ethiopia has closed land borders and schools, freed thousands of prisoners to ease overcrowding, sprayed main streets in the capital with disinfectant, and discouraged large gatherings.

However Prime Minister Abiy Ahmed lamented this week that "social distancing" guidelines "aren't being adhered to satisfactorily".

"We're definitely worried, but we're trying our best," said Dr Tihitina Negesse, who also took part in the training.

"We're already seeing that in other countries, in Italy for example, they're being overwhelmed with patients, severely ill patients. They're having shortages of mechanical ventilators and they're having to decide who to prioritise. If things continue like this, if people don't take it

seriously, then we'll probably be overwhelmed."

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Citation: Ethiopia races to bolster ventilator stockpile for coronavirus fight (2020, April 3)

retrieved 5 May 2024 from

<https://medicalxpress.com/news/2020-04-ethiopia-bolster-ventilator-stockpile-coronavirus.html>

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