Why the costs of medical oxygen must be included in Universal Health Coverage

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—–“I feel helpless, angry and furious, I feel like my hands are tied. My father is sick and we can’t afford something that is so essential for him to survive.” Peru.

This is Marcela Puicón. She was taking turns with her six siblings to care for their 60-year-old father struggling to survive pneumonia after becoming infected with COVID-19. Due to the strict lockdown measures in Peru, the siblings were unable to work and it became a daily struggle to fund the oxygen and medicines needed to keep their father alive.

Sadly, this family is not alone in their struggle to pay for oxygen during the pandemic. Since June 2020, there have been reports of desperate families from every region of the world who cannot afford the oxygen needed to keep loved ones alive. Families have had to sell household assets and borrow from neighbors to pay for oxygen, plunging many further into poverty.

According to the United Nations, Universal Health Coverage (UHC) will be achieved when every individual receives the quality health services they need without suffering financial hardship. As countries decide what services to cover in their national health insurance schemes priority must be given to the products and services with the greatest potential to prevent early deaths.

Oxygen has been described by the WHO’s Chief Scientist, Dr Soumya Swaminathan, as the essential commodity to treat COVID-19. If very sick COVID-19 patients don’t have oxygen, their chances of surviving COVID-19 are dramatically reduced. There are no estimates yet of how many of the 4.6 million official COVID-19 deaths could have been prevented with oxygen, but reports suggest the number could be high.

And as oxygen and all the associated diagnostic tools (e.g., pulse oximetry) and therapies (e.g., invasive and non-invasive ventilation) are not only critical to prevent deaths from respiratory infections like COVID-19, but also from chronic diseases, injuries and childbirth, lack of access to oxygen can elevate mortality among all of these patient groups.

—–“When the oxygen was removed, we moved her to the house until she breathed her last. It was a terrible experience. The family is poor. We don’t have money. That was the reason we lost the woman,” Nigeria.

High out-of-pocket oxygen costs are not a new problem. Prior to the pandemic the high cost of oxygen was already contributing to mortality, especially among children with pneumonia, which is the leading cause of child death in most low-resource settings. A study in Nigeria found that, “oxygen-related patient fees are substantial, typically around ₦3,900 per day ($US9.50), and that these costs fall most heavily on those who are sickest and require longer hospitalization.” Average daily income in Nigeria is $US5 per day. They concluded that high costs can result in treatment refusal or discharge against medical advice.1

The COVID-19 pandemic has amplified these high out-of-pocket costs for oxygen in every region of the world, exposing the tragic results when patients cannot afford to pay. A study by The Bureau of Investigative Journalism in August 2020

documented high and varied prices for oxygen across Africa and found small rural hospitals in Kenya and Nigeria paying five to 10 times more for a cylinder of oxygen than a London hospital.\(^2\)

High oxygen prices during the pandemic are adding to the out-of-pocket healthcare costs that were already pushing 100 million people into extreme poverty each year, according to the World Bank. Exorbitant oxygen prices have been reported in several countries where 20% of health expenditure was already coming out of the pockets of the public, including in India (63%), Mexico (42%), Russia (38%), Indonesia (35%), Peru (29%), and Brazil (28%).

— "The price of oxygen cylinders has gone up. My mother has a huge debt because I need oxygen and she tries her best to get it for me. The bills just keep on piling up," Kenya

The pandemic has revealed why national governments must include access to pulse oximetry and oxygen free at the point of use at all levels of the health system. It is critical for the patients most at risk of death from hypoxemia - newborns, children and adults with respiratory conditions from infectious (e.g., pneumonia, COVID-19) and non-infectious (e.g, COPD, heart disease) causes, patients needing surgery, and women in childbirth. All these populations should be fully protected from the costs of oxygen at the point-of-care whether they are being treated in the health system or at home.

Every Breath Counts calls on all national governments to ensure that:

I. Pulse oximetry and oxygen are free at the point-of-care, especially for patients most at risk of death from hypoxemia.

II. Pulse oximetry and oxygen are available in primary health facilities and to transport hypoxemic patients to higher-level health facilities. No patient should die of hypoxemia because their primary health facility did not have oxygen nor could provide any en route to a hospital.

III. Pulse oximetry and oxygen are available at all secondary and tertiary hospitals.

IV. Health facilities at all levels have adequately trained and remunerated health staff to accurately operate pulse oximeters and oxygen therapies (from all sources), and have expertise in administering invasive and non-invasive ventilation, and all the associated respiratory care technologies.

V. Health facilities at all levels have adequately trained and remunerated biomedical engineering staff to maintain pulse oximeters and oxygen therapies (from all sources) and have expertise in maintaining invasive and non-invasive ventilation, and all the associated respiratory care technologies.

Now is the time to act. With hundreds of millions of new oxygen supplies (e.g., liquid, PSA/VSA plants, concentrators, ventilators, etc.) entering low- and middle-income countries with financial support from the ACT-Accelerator Oxygen Emergency Taskforce (including the Global Fund, World Bank, WHO, UNICEF, Unitaid, Wellcome Trust etc.), governments are better placed than ever before to include oxygen as part of UHC so that patients are not charged for the use of these new services.

While these changes will not provide relief to the tens of millions of COVID-19 patients and their families who have already suffered from high prices for oxygen, it will ensure that families do not face these same high costs when the next respiratory pandemic hits. Significantly, ensuring the oxygen services are part of UHC as countries emerge from the pandemic will strengthen health systems and improve treatment outcomes for many patient populations, from the tiniest preterm baby to the elderly patient with a chronic disease.

Oxygen and pulse oximetry are vital tools to help countries achieve most of the health-related Sustainable Development Goals, especially reducing maternal, newborn and child mortality (SDGs 3.1 and 3.2), the HIV/AIDS, tuberculosis, and malaria epidemics (SDG 3.3.), chronic disease deaths (SDG 3.4), and road traffic accident deaths (SDG 3.6). As an essential medicine, oxygen is also included in SDG 3.8 which requires countries to, "achieve universal health coverage, including financial risk

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\(^2\) "Lack of oxygen leaves patients in Africa gasping for air." Available at: https://www.thebureauinvestigates.com/stories/2020-08-09/lack-of-oxygen-leaves-covid-19-patients-in-africa-gasping-for-air
Evidence of high oxygen costs leading to deaths and poverty in every region of the world

Papua New Guinea ($US7 daily income per capita)³
“When we went to the oxygen bottle supplier, BOC, we were confronted with the reality of the high cost of … 1. the oxygen bottle ($US193), 2. flowmeter ($US110), and 3. regulator ($US12),” Asia Pacific Report, November 2021.

Brazil ($US21 daily income per capita)
“At the height of the shortage crisis in Brazil’s Manaus region in January [2021], the price of a 50-liter oxygen container went up 6.5 times, to almost $US1,200,” AFP, March 2021.

Peru ($US16 daily income per capita)
“Cylinders that used to sell for 1,200 soles ($US353) now change hands for 5,000 soles ($US1,470) each. It’s outrageous because severe or critical coronavirus patients can use one cylinder of oxygen every 6-8 hours, or four per day,” CNN, June 2020.

India ($US5 daily income per capita)
“One man in India told AFP that he paid 45,000 rupees, about $US600, for a cylinder of oxygen. That is about nine times its normal price,” AFP, April 2021.

Indonesia ($US9 daily income per capita)
“The price for a tank of oxygen had jumped to $US140 from the usual $US50,” Reuters, June 2021.

Mexico ($US21 daily income per capita)
“At the height of the oxygen shortage in Mexico, a cylinder of oxygen cost more than $US800, up to 10 times the cost paid by a US hospital,” Reuters, January 2021.

Nigeria ($US5 daily income per capita)
“Checks across public hospitals in the Federal Capital Territory (FCT) revealed that the cost of oxygen ranges from N18,000 ($US40) to N25,000 ($US60) per day for adults while half of the amount goes for children.” Daily Trust, June 2021.

Kenya ($US4 daily income per capita)
“We used to refill the oxygen at around 2,000 Kenyan shillings ($US20). Now the price has soared, and the demand is high due to the COVID-19 pandemic. Now a refill costs us two or three times the amount because there’s a shortage,” Anadolu Agency, April 2021.

Egypt ($US7 daily income per capita)

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