



Global Oxygen  
Alliance



# Medical Oxygen: Essential for saving lives today and tomorrow

In September 2023, the United Nations will hold three high-level meetings with world leaders on universal health coverage (UHC); pandemic prevention, preparedness and response (PPPR); and the health crisis caused by tuberculosis (TB).

Access to safe and appropriate use of affordable, high-quality medical oxygen is essential to progress on all three issues. A partnership of the world's leading health and development agencies and civil society representatives, the Global Oxygen Alliance (GO<sub>2</sub>AL), calls for world leaders to ensure the 2023 World Health Assembly Resolution on Increasing Access to Medical Oxygen,<sup>1</sup> adopted by all 194 WHO Member States, is reflected in the UHC, PPPR and TB agendas.



## Call to action for governments and health systems:

- Prioritize access to medical oxygen in health strategies, policies, and financing in support of universal health coverage and pandemic prevention, preparedness and response
- Ensure that people (especially children and newborns) with pneumonia or other respiratory and critical illnesses, pregnant women and surgical patients, have reliable access to medical oxygen therapy
- Develop comprehensive guidance for the use of medical oxygen for tuberculosis patients to support holistic care

# Oxygen, a lifesaving medicine

Medical oxygen is a lifesaving essential medicine with no substitute. It is used to treat both acute and chronic respiratory illnesses, including COVID-19 and pneumonia. It is also essential for surgery, trauma, emergency, critical care, and for treating older people, pregnant women with obstetric complications and newborns (especially those born prematurely) in respiratory distress. Additionally, access to medical oxygen can support the management of opportunistic infections due to advanced HIV infection and severe forms of tuberculosis and malaria, as well as non-communicable diseases such as chronic obstructive pulmonary disease and cardiovascular disease, making it a key component of a health systems strengthening and a critical element of pandemic preparedness and response.

Severe shortages of medical oxygen have been a problem for decades in many low- and middle- income countries (LMICs) and less than 50 percent of health facilities have uninterrupted access to medical oxygen.<sup>2</sup> This has deadly consequences for the most vulnerable; for example, of the 7.2 million children with pneumonia in critical need of medical oxygen each year in LMICs, only one in five children will receive it.<sup>3</sup> The COVID-19 pandemic, which left many patients gasping for air, exacerbated these chronic shortages, leading to many preventable deaths and straining already fragile health systems.



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## Oxygen and universal health coverage

Access to health is a human right. Universal health coverage (UHC) ensures everyone has access to quality health services when and where they need them. Integrating sustainable oxygen systems into all levels of health care is essential to strengthening health systems. One of the biggest benefits UHC brings is saving the lives of mothers, newborns and young children. Screening for hypoxia in primary care settings with rapid and effective referral is important to reducing mortality. Oxygen is a critical treatment for many of the 30 million small and sick babies born every year and for children with pneumonia and other conditions. In fact, oxygen is so essential to the survival of children that strengthening oxygen systems worldwide can cut hospital deaths of children under five by a quarter and hospital-based pneumonia deaths among children by half.<sup>4</sup> Prioritizing sustainable oxygen access (i.e., reflected in country plans and insurance schemes) for those in need will accelerate achievements of UHC and the Sustainable Development Goals in every country.

**Integrating sustainable oxygen systems into all levels of health care is essential to strengthening health systems.**



## Oxygen and pandemic prevention, preparedness and response

Strengthening access to medical oxygen is a critical component of pandemic prevention, preparedness and response (PPPR). By ensuring a reliable supply of oxygen, lives will be saved, and health systems will be strengthened and better prepared for future pandemics. In February 2021, at the height of the COVID-19 pandemic, more than half a million COVID-19 patients in LMICs were estimated to need oxygen treatment every day.<sup>5</sup> This lack of oxygen exposed widespread inequalities within and across countries. Continuing investment in oxygen systems will be fundamental to the implementation of the International Health Regulations, strengthening global health security and helping countries prevent, prepare for, and respond to future pandemics.

Moving forward, it is essential to take a holistic approach to building oxygen ecosystems adapted to different contexts, including low-resource settings with poor infrastructure. Strong coordination mechanisms, especially country-based planning and decision-making, along with sustainable financing for oxygen and respiratory care and a trained multidisciplinary health work force, including biomedical engineers, is foundational for building more resilient health systems that can withstand future pandemics. Disease forecasters state that another COVID-like pandemic is almost 30 percent likely to occur in the next decade;<sup>6</sup> reaffirming the importance of strengthening access to oxygen is a critical component of PPPR.



## Oxygen and tuberculosis

More than 10.6 million people fell ill with tuberculosis (TB) in 2021; 1.6 million of them died.<sup>7</sup> Pulmonary TB, affecting the respiratory system, is the most common form of the disease. Oxygen can play a vital role in the management of TB, especially in critically ill patients, those with severe drug-resistant forms, or those left with permanent lung damage following a TB infection.<sup>8</sup> Oxygen is sometimes used for the treatment of TB patients with complications like respiratory distress, or those experiencing shortness of breath. Providing oxygen to severely ill people with TB when needed is an important part of care, including palliative care, and helps ensure that patients receive holistic care.

**By ensuring a reliable supply of oxygen, lives will be saved and better prepared for future pandemics.**

## About GO<sub>2</sub>AL

During the COVID-19 pandemic in February 2021, amidst widespread global oxygen shortages, the world's leading health agencies created the Oxygen Emergency Taskforce as part of the Access to COVID-19 Tools Accelerator (ACT-Accelerator). The taskforce raised more than US\$1 billion to boost access to medical oxygen, expand production, negotiate for better pricing, and provide technical advice to governments.

As the world transitioned from the acute phase of the COVID-19 pandemic and prepares for future health threats, the ACT-Accelerator Oxygen Emergency Taskforce evolved in May 2023 into the Global Oxygen Alliance (GO<sub>2</sub>AL), a broader partnership of about 20 health agencies and representatives from civil society and affected communities. With this transition, GO<sub>2</sub>AL will continue to support countries in their efforts to convert the investments made during the pandemic into lives saved and to expand the work started by the taskforce. GO<sub>2</sub>AL will collaborate across members and other partnerships to strongly position and advocate for sustainable oxygen systems as a building block for universal health coverage and pandemic prevention, preparedness, and response, and to support the implementation of the World Health Assembly resolution to increase access to medical oxygen.

GO<sub>2</sub>AL members include the Access to Medicine Foundation; Africa Centres for Disease Control and Prevention; the Bill & Melinda Gates Foundation; Build Health International; the Clinton Health Access Initiative; the Every Breath Counts Coalition; Pan American Health Organization, Partners In Health; PATH; Save the Children; the Global Fund to Fight AIDS, Tuberculosis and Malaria; UNICEF; Unitaid; UNOPS; the United States Agency for International Development; the World Health Organization; the World Bank; and representatives from civil society and affected communities. New members, including representation from LMICs, are being invited as GO<sub>2</sub>AL strives to build a stronger, more diverse, and inclusive membership.

- 1 WHO. 76 World Health Assembly Resolution on Increasing Access to Medical Oxygen, 2003. [Accessed on 18 August 2023]
- 2 WHO. Oxygen, 2023. Online. [Accessed on 18 August 2023]
- 3 Rahman A, Hossain A, Nair H, Chisti M, Dockrell D, et. Al. Prevalence of hypoxaemia in children with pneumonia in low-income and middle-income countries: a systematic review and meta-analysis. *Lancet Glob Health*. 2022 Mar;10(3): e348-e359.
- 4 Lam, F, Stegmuller, A, Chou, V, Graham, H. Oxygen systems strengthening as an intervention to prevent childhood deaths due to pneumonia in low-resource settings: systematic review, meta-analysis and cost-effectiveness. 2021 Nov; 6(12).
- 5 WHO. COVID-19 oxygen emergency impacting more than half a million people in low- and middle-income countries every day, as demand surges. 2021. Online. [Accessed on 18 August 2023]
- 6 Airfinity. A strong pandemic defence system could reduce the chance of another COVID like pandemic in the next ten years from 27.5% to 8%. 2023. Online [Accessed on 18 August 2023]
- 7 WHO. Tuberculosis. 2023. Online. [Accessed on 18 August 2023]
- 8 Driscoll, B, Howard, L, Earis, J, Mak, V. BTS guideline for oxygen use in adults in healthcare and emergency settings. *BMJ Thorax*. 2017 June; 72(1).