The European Union must co-invest in medical oxygen infrastructure across Africa to increase access to quality, affordable medical oxygen in health facilities and the personnel needed to install, operate, and maintain the equipment, contributing to Africa’s economic growth and strengthening health security.

COVID-19 has put access to medical oxygen in the international spotlight. Political leaders in the world’s wealthiest countries have had their lives saved by access to oxygen therapy, while millions of patients in low- and middle-income countries have struggled to get access. This has contributed to higher COVID-19 case fatality rates, including in Africa. A recent South African study of 64 hospitals across 10 countries found that 50% of critical COVID-19 patients died within 30 days of hospital admission. Lack of access to critical care resources including oxygen was a major reason, with one in two patients dying without receiving oxygen.¹

African governments leading the way on medical oxygen

Despite these challenges, African governments are leading the way in increasing access to medical oxygen. Several have national plans to scale-up access to oxygen including Ethiopia, Nigeria, Uganda, the Democratic Republic of Congo, and Malawi. Others are developing these plans including Zambia, Ghana, Cameroon, Liberia, Senegal, Tanzania, Eswatini, and Lesotho.

During the pandemic, African leaders have repeatedly called for greater investments in medical oxygen. The President of South Africa, Cyril Ramaphosa, who heads the African Union Commission on the COVID-19 Response, is intensifying efforts to close the oxygen capacity gap by targeting areas of need while engaging oxygen manufacturers. Just last week, President Ramaphosa stated that lack of oxygen is still costing lives by the day as countries grapple with fresh waves of infection driven by the Omicron variant.

Further, the African Medical Supplies Platform has prioritized respiratory care among its product offerings and many innovative oxygen access initiatives have emerged across the continent, tapping local expertise and entrepreneurial talent, including OpenO2, Hewatele, the Oxygen Hub, HealthPort Africa, GLOMED Technologies, OxyMed Global Solution, LifeBank, MGPS Acuitas, the Oxygen Alliance, and more.
To support this continental effort, international agencies, including the members of the ACT-Accelerator Oxygen Emergency Taskforce, which is chaired by Unitaid, have provided grants and loans to help many governments buy the oxygen equipment urgently needed to treat COVID-19 patients, including oxygen plants and cylinders, mobile concentrators, pulse oximeters, ventilators, patient monitors, and more.

**Medical oxygen access gaps persist**

But despite all of this, major gaps remain that put many health systems at risk of further oxygen shortages.

Oxygen equipment is arriving without the trained staff to operate it and the technicians to maintain it. Most countries have oxygen equipment lying idle waiting for a spare part and/or trained technicians to repair it. Despite the availability of liquid oxygen for industrial purposes in many nations, access by public hospitals is limited by lack of critical infrastructure (e.g., piping and storage), and transportation. Governments with national oxygen plans do not have the financing needed to implement them.

**Medical oxygen a high impact health investment**

The case for investing in medical oxygen across Africa is strong. Oxygen is an essential medicine used to treat most of the top ten causes of death across Africa (see chart below). Greater access could therefore prevent hundreds of thousands of deaths each year among newborns, children with pneumonia, adults with infectious and chronic diseases, patients requiring surgery, and more.

For example, a recent study using data from several Nigerian hospitals found that oxygen could reduce child pneumonia deaths in hospitals by 50% and all-cause child deaths by 25%. Africa loses an estimated 372,000 children under five to pneumonia each year.

**Medical oxygen essential to Africa’s economic development and health security**

Investments in oxygen will not only save lives but will also contribute to economic growth, especially with increased local production of medical oxygen infrastructure and related devices strengthening the domestic health sector and creating jobs.

The UN Economic Commission for Africa (UNECA) has prioritized local medical oxygen production as part of the Pharmaceutical Initiative anchored by the African Continental Free Trade Area, and health leaders, including Dr John Nkengasong, have described local production of critical health commodities as key to Africa’s capacity to take charge of its own health security.

By investing in medical oxygen infrastructure, greater local production and skill-building, international donors like the European Union can make a major contribution to better health, economic growth, and greater health security across Africa.

<table>
<thead>
<tr>
<th>Top ten causes of death across Africa and COVID-19</th>
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<tbody>
<tr>
<td>Neonatal Disorders</td>
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<tr>
<td>Pneumonia</td>
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<tr>
<td>HIV/AIDS</td>
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<tr>
<td>Malaria</td>
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<td>Diarrhea</td>
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<td>Heart Disease</td>
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<td>Stroke</td>
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<td>TB</td>
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<td>Congenital Defects</td>
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<tr>
<td>Cirrhosis</td>
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<tr>
<td>COVID-19</td>
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</tbody>
</table>

Source: Global Burden of Disease 2019, WHO COVID-19 Dashboard 2022
Dr Mike Ryan, Executive Director, WHO Health Emergencies Programme

“Our focus must be on resilient and responsive health systems: any investment in medical oxygen for COVID-19 today will bear fruit tomorrow when we save the life of a road accident victim, a pneumonia patient, a mother who is giving birth or her premature baby. WHO supports the call from Africa CDC and the Every Breath Counts Coalition to scale up investment in medical oxygen infrastructure in Africa and asks the global community to respond in solidarity. No one today, no matter where they live, should have to die from a lack of oxygen, the most basic and essential of medicines we have.”

Dr Aboubacar Kampo, Director Programme Group, Health, UNICEF

“Oxygen is essential for life. Investments aimed at addressing the urgent COVID-19 oxygen needs are also a critical opportunity to strengthen integrated primary health care, health infrastructure and oxygen systems. This will enable countries to save lives, today, tomorrow, and for years to come.”

Dr Philippe Duneton, Executive Director, Unitaid

“We must ensure equitable and affordable access to lifesaving oxygen for everyone, everywhere. Unitaid and partners are addressing access gaps such as lack of medical oxygen capacity and high pricing, securing around 15% price reductions for bulk liquid oxygen and between 10 to 50% reductions in filled cylinder pricing. But more needs to happen. Additional funding in the oxygen response is needed to save more lives from COVID-19 now and beyond the pandemic, and strengthen health systems for future threats.”

Robert Matiru, Director of Programmes, Unitaid, on behalf of the ACT-Accelerator Oxygen Emergency Taskforce chaired by Unitaid

“The ACT-Accelerator Oxygen Taskforce has led global efforts to widen sustainable access to quality medical oxygen, a hallmark of functional health systems. But if we are to meet the essential medical oxygen needs of 6 to 8 million severe and critical COVID-19 patients by September 2022, world leaders should step in and invest an additional $US 1.4 billion for further oxygen procurement and delivery and to support the repair, maintenance and scale up of local medical oxygen production in low- and middle-income countries. Investing in medical oxygen now will help countries to build a healthier and safer future.”

Contacts
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All organizations are members of the ACT-Accelerator Oxygen Emergency Taskforce

The **Africa CDC** is a specialized technical institution of the African Union established to support public health initiatives of Member States and strengthen the capacity of their public health institutions to detect, prevent, control and respond quickly and effectively to disease threats.

**UNICEF** is a United Nations agency working with partners around the world to promote policies and expand access to services that protect all children. Working with ACT-A partners, national governments and communities, UNICEF is working to address the stark inequalities that exist in access to COVID-19 vaccines, personal protective equipment (PPE), tests, and treatments, including medical oxygen.

**Unitaid** is a global health agency hosted by WHO and engaged in finding innovative solutions to prevent, diagnose, and treat diseases more quickly, cheaply and effectively, in low- and middle-income countries. Unitaid is now applying its expertise to address challenges in advancing new therapies and diagnostics for the COVID-19 pandemic, serving as a key member of the **Access to COVID Tools Accelerator**.

**The Global Fund** is a partnership designed to accelerate the end of AIDS, tuberculosis and malaria as epidemics. Through the COVID-19 Response Mechanism (C19RM), the Global Fund is now the primary channel for providing grant support to low- and middle-income countries for COVID-19 tests, treatments (including medical oxygen), personal protective equipment (PPE) and critical elements of health system strengthening.

**Every Breath Counts** is a coalition of more than 70 UN and global health and development agencies, companies, NGOs, academic institutions working together to support low- and middle-income country government to reduce deaths from pneumonia, including from COVID-19. The Coalition co-chairs the ACT-A Oxygen Emergency Response Taskforce's Advocacy and Communications arm with Unitaid.

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3. The Government of Malawi released their National Oxygen Ecosystem Roadmap for 2021-2026 in December 2021 and called for $US75 million to implement it over five years.
