Equitable access to oxygen: Sustaining COVID-19 investments to protect newborns and children fighting for breath

On May 5, 2022, Save the Children, PATH, and UNICEF co-hosted a roundtable at the Geneva Health Forum to discuss the critical role of oxygen as an essential medicine and a vital part of strong health systems. More than 30 participants representing multilateral agencies, nonprofit organizations, implementers, clinicians, advocates, and donors joined the discussion, moderated by the Clinton Health Access Initiative (CHAI), and opened by the Every Breath Counts Coalition.

Speakers from CHAI, Save the Children, the Malawi Ministry of Health, UNICEF, and Global Fund shared examples of current initiatives to close the oxygen gap in low- and middle-income countries and discussed needed steps to ensure that COVID-19 oxygen investments deliver long-term health benefits, including for newborns and children.

Adamu Isah, Save the Children, Nigeria, summarized significant efforts across service delivery, capacity-building, policy and advocacy, and needs assessments in the country. He emphasized the need for health care worker training on oxygen technologies, including pulse oximetry. He stressed the importance of coordination between the national, state, and local levels; the need to continuously measure and evaluate existing programs for their sustainability; the role of good documentation of oxygen being administered to ensure proper use and anticipate future demands; the importance of engaging local community leaders to promote the use of oxygen therapy; as well as the need to adopt country-specific business models in terms of oxygen supply.

Rahel Belete, CHAI, Ethiopia, emphasized the role of preparedness in terms of having the right policies and guidelines, procuring oxygen equipment, and training health workers to diagnose and treat hypoxemia. The pandemic propelled CHAI to consider a next phase of its oxygen roadmap, focused on boosting the capacity of existing oxygen plants, tracking and using data, training health care workers, enabling oxygen equipment maintenance, and looking toward financial sustainability.
Norman Lufesi, Ministry of Health, Malawi, discussed challenges presented by COVID-19, including logistics, supply, and capacity. The government saw the real need in developing a harmonized framework and worked with PATH to conduct needs assessments to inform the first costed national oxygen roadmap, which was launched in December 2021. The roadmap is inclusive of all health care systems, making sure oxygen is available everywhere. Partnerships are key—existing and planned oxygen plants are supported by several global partners like Partners In Health, the World Bank, UNICEF, and Global Fund. It is critical to ensure that oxygen does not exist in a vacuum—that it is supported by training, equipment maintenance, and continued advocacy.

Habtamu Tolla, UNICEF, gave examples of the agency’s work across Bangladesh, Nepal, Kenya, Liberia, Senegal, and Ghana to implement structured interventions for improved oxygen access, with a focus on newborn and pediatric quality of care. Interventions included extension of oxygen equipment to newborn and pediatric care units in hospitals and decentralizing oxygen access to primary health care facilities, coupled with the development of training curricula (e.g., integration of trainings for sick newborn and pediatric care into the integrated management of childhood illness).

Nick Furtado, Global Fund, stressed the need to support end-to-end oxygen systems for critical care, inclusive of neonatal and pediatric care, and investments for capacity-building for biomedical and delivery aspects. Oxygen availability alone is not enough—it is also about having the right guidelines and protocols in place, as well as training for health care professionals to ensure quality of care. He stressed the current work to prepare for the post-emergency phase and establish a baseline from which to move forward.

The presentations were followed by a discussion. Below is a summary of key takeaways.

**What have we learned from COVID-19 response efforts?**

- **The last two years** saw substantial investment in oxygen services and an unprecedented amount of partner coordination. This massive investment in oxygen should benefit all patients in need, especially newborns and children, providing oxygen equipment is available in pediatric wards and neonatal intensive care units and pediatric staff are trained to operate and maintain it.

- **Roadmap development and implementation is a critical step:** it allows us to learn from what was done at a local level and apply those learnings to regional- and national-level strategies. Malawi, Nigeria, and Liberia all provide examples of national oxygen roadmaps with a central framework and a national vision for oxygen access.

- **Early investment in capacity-building and biomedical education** is key to strengthening the future workforce.

- **Implementing partners have played a key role during the pandemic response** in terms of advising, piloting brokering partnerships, and advocating for issue salience among stakeholders.

- **The role of advocacy—at global and national levels**—will continue to be critical.
• Partnering with national governments to establish evidence that can then inform decision-making and strengthen integration of oxygen delivery across national policies, plans, and guidelines is key to expanding reach and establishing accountability. This is being done with the Tools for Integrated Management of Childhood Illness project in Tanzania (as well as in Kenya, India’s Uttar Pradesh, and Senegal), where work is underway to integrate pulse oximetry into national Integrated Management of Childhood Illness guidelines.

• The notion of redeployment is that we have so much accumulated equipment that it can be redistributed. In reality, **we do not have enough and need to be agile and smart about equipment and resource agreements**. During COVID-19, we saw great investment in bulk liquid oxygen, managing to secure agreements that are part of the broader health system. We need to continue on this trajectory.

Moving forward: We need to shift from reactive pandemic response to strategic long-term planning.

• **Now is the time to move from pandemic response to building a sustainable oxygen ecosystem.** We need to create a sustainable system that encompasses all patients, both children and adults, who need oxygen at different health care levels, including emergency, critical care, acute care, and others.

• **Redeployment efforts should be a part of broader systems strengthening**, with governments taking the lead and empowered to strengthen national capacity.

• It is not only about redeployment, but also about reprogramming on the ground. This step requires action and **investment from governments as well as the private sector, development banks, and donor community**. Governments should be directly involved in setting up the infrastructure (land, electricity, etc.), as well as have clear understanding of the available financing opportunities. The **private sector has a role to play**, especially in ensuring maintenance, as well redeployment efforts and financing.

• **We need to take stock of innovations during COVID-19** and ensure that they are scaled up, as well as to reappropriate resources.

• **Oxygen stewardship is important.** Up-to-date, evidence-based global standard treatment guidelines and provider training materials for the clinical diagnosis, monitoring, and safe administration of oxygen therapy across different populations is a critical step toward improving reliable and safe access.

• **You are only as good as your best metric.** We need to harness momentum for oxygen as a system. A disproportionate amount of work has focused on procurement, and what we need is better visibility into the overall performance of the entire oxygen delivery system. We also need to understand at what levels and how much of secured financing for pandemic response has been mobilized domestically. We risk losing opportunities to learn and improve. We owe the community of practice to learn from this moment.

The recording of the meeting can be accessed [here](#).