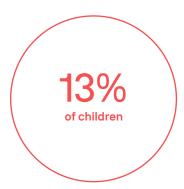


Making medical oxygen availability a national health priority

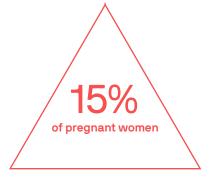
In Uganda, illnesses easily treatable with oxygen therapy take the lives of thousands of newborns, children, and adults each year. Oxygen therapy is required to treat a dangerous condition called hypoxemia—a severe shortage of oxygen in the blood—which can occur as a result of childhood pneumonia, newborn conditions, and obstetric emergencies. To achieve the Ministry of Health's priority of reduced hypoxemia-related morbidity and mortality, all stakeholders—political, technical,

donor, and partner—must commit to implement requirements for oxygen availability and utilization as called out in the National Scale-Up of Medical Oxygen Implementation Plan.

To treat hypoxemia and save lives, oxygen delivery systems must be strengthened to ensure oxygen therapy, paired with pulse oximetry, is available in all health facility wards.



in Uganda admitted for severe pneumonia have hypoxemia



in Uganda develop lifethreatening complications, many of whom could be treated with oxygen therapy 14,600 children under five

died of acute respiratory infection in Uganda in 2016



Plan for national scale-up

Scaling up access to oxygen is a multifaceted challenge that cuts across health areas and requires technical, financial, and political solutions. The National Scale-Up of Medical Oxygen Implementation Plan is the first policy of its kind to coordinate oxygen stakeholders and provide long-term guidance for scaling oxygen access in Uganda.

Plan objectives include:

- 1. Providing a national strategic framework to guide scale-up of oxygen supply and utilisation.
- Securing maintenance and replacement of oxygen storage and diagnostic equipment through the National Medical Store for the public sector and the Joint Medical Store for private not-for-profit NGOs.
- 3. Providing a framework for training of staff in health facilities on rational use of oxygen and basic maintenance of equipment.
- Providing an instrument for resource mobilization to support implementation of oxygen scale-up interventions.

The national scale-up plan is a critical first step to increasing access to oxygen throughout Uganda. In order to make oxygen accessible, the government of Uganda must:

Prioritize funding for implementation of oxygen delivery systems.

Improving oxygen delivery in every health facility is cost-effective as it can help manage hypoxemia across various medical conditions in many different population groups, reducing related morbidity and mortality. Establishing and maintaining the system described in the scale-up plan is estimated to cost 20.5 billion UGX in the initial year and 5.9 billion UGX annually thereafter. The initial costs of modern oxygen technologies and supplies are quickly offset by the resulting health returns. A clear resource mobilization strategy needs to be put in place to guarantee sustainable financing is integrated in implementation of the scale-up plan.

Evidence from just two countries reveals the kind of health impacts possible from expanding access to medical oxygen. In Papua New Guinea, pneumonia mortality decreased by 35% after the introduction of an improved oxygen system. In Malawi, case fatality rates for patients admitted with pneumonia fell from nearly 19% to just over 8% after introduction of oxygen concentrators in all district hospitals.

Strengthen health worker training and capacity for proper use and maintenance of oxygen technologies and supplies.

In order to ensure appropriate use of oxygen therapy and longevity of available equipment, it is essential to train health workers in the clinical use of oxygen and

Oxygen delivery systems demonstrate a return of 50 USD (180,000 UGX) per disability-adjusted life year averted.



Photo: PATH/Deogratias Agaba

pulse oximetry and the day-to-day maintenance and care of oxygen equipment. The scale-up plan calls for training on the use of oxygen and pulse oximetry to be conducted at each health center IV and hospital as part of continuing medical education (CME). Prioritizing these trainings will ensure health workers have the clinical capacity to treat hypoxemia and will safeguard investments into oxygen equipment.

Ensure adequate quantification for oxygen technologies and supplies.

Uganda has approximately 330 health facilities with 24,000 beds—and all should have functioning oxygen supply. Maintaining this supply is very complex due to the nature of oxygen gas production, storage, and delivery. Understanding oxygen needs across the country, improving access to diagnostic tools, predicting changes in demand as health workers gain clinical expertise, and meeting that demand with the right resources will be essential to ensuring the long-term success of the scale-up plan—ultimately reducing morbidity and mortality from hypoxemia. Capturing patient and facility data, expanding production of oxygen gas, improving oxygen transport logistics, and building Ministry of Health technical expertise on procurement will be essential to achieving an optimal oxygen supply model.

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Mailing Address PO Box 7404 Kampala Uganda Date Published November 2019