FREO₂ Uganda

Affordable oxygen for children with respiratory illness.

Many health facilities face challenges when it comes to ensuring an adequate supply of oxygen. We would like to introduce you to a new concept in the affordable delivery of oxygen. The FREO2 OxyLink provides a reliable continuous supply of oxygen to paediatric beds backed up with regular service and maintenance. Our aim is to provide you with a constant reliable supply of oxygen to treat children in your facility so that you can focus on their treatment with confidence.

Who is FREO₂ Uganda?
FREO₂ Uganda is a local social enterprise headquartered in Mbarara and supported by ‘FREO₂ Foundation Australia’ and ‘Babies and Mothers Alive’. Our mission is to sustainably increase patient access to reliable oxygen. This will be achieved by combining technology designed for Ugandan conditions with local maintenance and support from Mbarara.

What is the technology?
Our technology – the Oxylink System – has been designed to enable health care workers to focus on patients, not oxygen concentrators and cylinders. Briefly, the system comprises an oxygen concentrator designed to meet local needs, connected to patient beds with low pressure piping and combined with temporary storage to maintain oxygen to patients during power cuts. Importantly, the technology in this system is monitored continuously to ensure high performance. Our team can remotely diagnose any problems and come to service the system within one day.

This diagram shows a typical installation. For Health Facilities with good backup power supplies there may not be a need for oxygen storage. The cylinder is only used as a last resort. The stack-lamp is to reassure the staff that the system is operational.

(a) The oxygen concentrator
(b) PROTECT
(c) Prioritizer
(d) backup cylinder
(e) low-pressure local storage
(f) volumetric flow meter
(g) stack lamp

Image created by Isabella Anderson, inspired by a similar illustration created by David Woodroffe.

FREO₂ Uganda. Oxygen on demand for toto wards. www.freo2.org
FREO₂ Uganda

Where has the technology been tested, and how do you know it works?
FREO₂ Australia designed the system for Uganda and has had it working at the Mbarara Regional Referral Hospital since early 2018. We have also tested a system in Mozambique for 6 months and have begun testing systems in Nigeria. Our operations are overseen by and answerable to the MUST Research Ethics Committee.

How much will it cost?
Our aim is to save children year after year and we realise that this can only be achieved if FREO₂ Uganda is financially sustainable and charges Health Facilities for reliable oxygen. It is anticipated that charges will be based on the amount of oxygen used (Yakka for Oxygen), which will be monitored by FREO₂ Uganda and the hospital. Be reassured that the cost will be substantially lower than using oxygen cylinders alone. Because we will survive by selling availability of oxygen, we have an incentive to ensure the equipment works. During the introductory period we will discount our charges and work with Health Facilities to measure how much can be saved by switching to FREO2 Oxygen and learn what is a sustainable business model for both parties.

What is required of participating Health Facilities?
Facilities will need to facilitate the installation by providing at most 4 m² inside and up to 16 m² outside, near to the paediatric ward. A standard power outlet is required for the concentrator. Staff will be required to undertake a short training session in using the equipment and may require a short training to update clinical skills for oxygen use.

How will Health Facilities be selected?
Health facilities will be prioritised according to a number of selection criteria, including:
- Enthusiasm: Is reliable oxygen a priority for Health Care Workers and Administrators?
- Location: Is the Health Facility readily accessible to FREO2 Uganda staff in Mbarara, 3G phone coverage and a standard electricity supply?
- Impact: Is the introduction of reliable oxygen likely to substantially improve health outcomes?

What next?
If you want to participate in the initial roll-out of 20 systems, or just want more information contact Sheillah Bagayana Mutetire by email at sheillah@freo2.org or WhatsApp on +256-784717001