

FREO2 Foundation

Impact Report

(July - December)

Q1 & Q2 FY 2022/2023



EVERY BREATH IS

A CHANCE AT LIFE

FREO2
FOUNDATION



About FREO2 Foundation

FREO2 Foundation (FREO2) is a global not-for-profit organisation that aims to reduce the number of deaths of babies and children suffering from pneumonia in low-resource settings.

We envision a world where every child can breathe, live and thrive. Our mission is to improve access to oxygen to save lives.

The FREO2 team is committed to saving lives by developing and deploying our novel medical oxygen technologies to improve access to oxygen at the periphery of the health system.

How we work

The key differentiator of our approach is our absolute focus on the availability of oxygen and the delivery of oxygen as a service, not just the provision of technology.

Product

We develop fit-for-purpose oxygen systems and innovations. Our Oxylink system provides a continuous flow of oxygen to children, even during a power outage.

Clinical Training

We train local healthcare workers in pulse oximetry and medical oxygen delivery to improve clinical outcomes.

Installation and Maintenance

We install FREO2 oxygen systems in remote health facilities and up-skill local car mechanics, plumbers and electricians to install and maintain FREO2 technology.

Catalyse

We constantly look for opportunities to catalyse economic benefits within local communities.

Outreach and Advocacy

We work closely with community health workers and families to influence care seeking behaviour, diagnosis and referral to higher levels of care.





A note from our Chief Executive Officer



Dear supporter,

This half-yearly report marks a significant milestone for FREQ2 as we enter into partnerships with the Ministries of Health in Tanzania, Uganda and the Solomon Islands. Engaging local partnerships has always been critical to our work and will enable us to scale our services on a national level.

As we share our new impact targets for the coming year, we are also proud to share that just short of 6,000 children have now been treated with FREQ2 enabled oxygen. This impact would not have been possible without the incredible guidance and support from our donors and partners. Our sincere thanks go out to you for making this possible.

There has been a great deal of progress this quarter as we prepare for the launch of new installation sites in Tanzania and the Solomon Islands. We have seen tremendous growth in our ability scale our oxygen programs and improve health outcomes for children suffering with respiratory diseases.

In the coming quarter, we look forward to embarking on our new 3-year Strategy which focuses on scaling our efforts across Tanzania, Uganda and the Pacific to build a capacity to treat 267,000 children annually by June 2026.

On behalf of the board and our entire global team, we extend our gratitude for your generous support of FREQ2 Foundation.

With thanks,





Achieved to date

Our Milestones



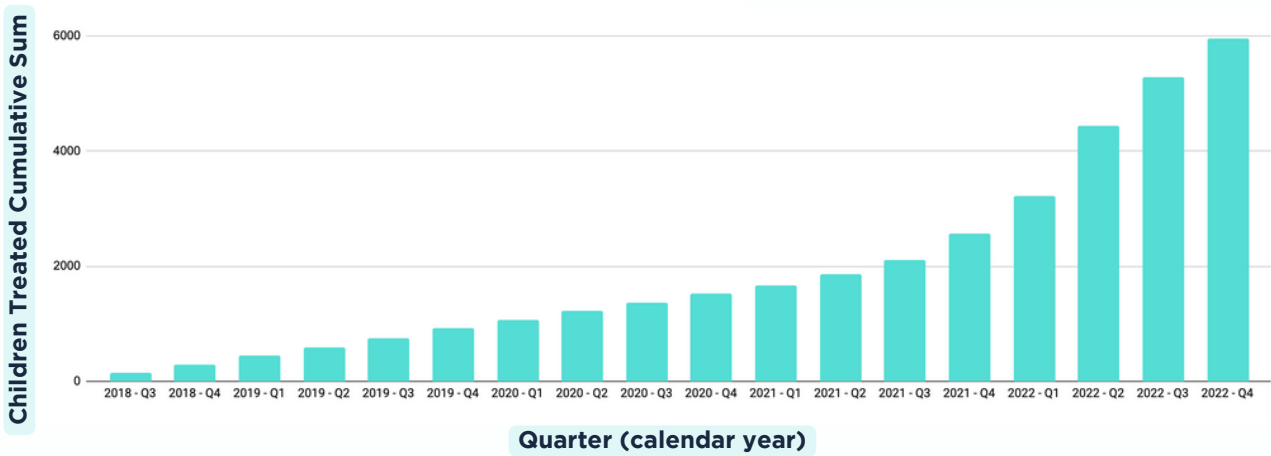
Children treated with FREO2 enabled oxygen

| To date |
|--|
| 5,960 (2,176 this half-year) |



| FY 22/23 target |
|-----------------|
| 7,000 |

Progression on children treated



| | To date | FY 22/23 target |
|--|---------|-----------------|
| Health workers trained in pulse oximetry and oxygen therapy delivery. | 917 | 1,000 |
| Remote health facilities with FREO2 systems installed. | 41 | 53 |

| | |
|--|-----|
| Beds serviced with FREO2 oxygen | 185 |
|--|-----|

| | |
|-----------------------------------|----|
| Local FREO2 staff employed | 22 |
|-----------------------------------|----|



Half-yearly Update

Highlights

- In August, CEO Roger Rassool visited the Solomon Islands team to help facilitate the initiation of our pilot in the Pacific at three new facilities. [Learn more on Page 7.](#)
- The FREO2 Uganda team hosted the Breath of Life conference in Mbarara. The event was a huge success with the Ministry of Health pledging to partner with us across Uganda! [Learn more on Page 8-10.](#)
- As part of our first collaboration with the Ministry of Health Tanzania and the Doris Mollel Foundation, FREO2 installed our oxygen systems in the paediatric and neonatal wards at Mafia District Hospital.
- This quarter FREO2 welcomed our new Finance Manager Aye and a new Tanzania Programs Manager, Msira.
- Our Solar innovation pilot is now up and running in Uganda. [Learn more on Page 11.](#)
- FREO2 Australia team members Máire Ruane, Bryn Sobott and Nico Snellen visited Uganda and Tanzania. The visit has supported the design of our 3-year Strategy and a new Outreach and Advocacy global program.
- We conducted our first clinical training on Mafia Island in November with Dr. Chrispin Gaare, FREO2's Clinical Lead. The program supported 20 local health workers with training in pulse oximetry diagnosis and oxygen therapy delivery. [Learn more on Page 6.](#)
- Our Oxygen as a Service model was showcased at the Global Child Health Conference hosted by the Department of Global Health in Dublin, Ireland.
- We launched our World Pneumonia Day campaign this November in collaboration with the Every Breath Counts Coalition and Pneumolight. [Learn more on Page 12.](#)
- FREO2, the Doris Mollel Foundation and the Ministry of Health visited the Kawaala Health Centre to launch its first NICU ward on World Prematurity Day.
- FREO2 Uganda was excited to exhibit FREO2 oxygen systems at the UPMB Annual symposium at Silver Springs hotel in Kampala.



Half-yearly Update

Key Learnings

- During our meetings with the MOH Uganda and research conducted on the ground, we learnt that fuel costs have increased by 46% in the last year and transportation remains a significant barrier for families seeking healthcare in Uganda and Tanzania. Our new Outreach and Global Advocacy strategy aims to address some of these obstacles.
- Uganda is currently grappling with another wave of Ebola virus which has claimed the lives of 34 people. FREO2 is prepared for potential lockdowns as experienced during the COVID-19 pandemic.
- Foreign exchange rates continue to fluctuate daily, as we transition to larger scale operations our finance team has introduced new processes to mitigate these obstacles.



News From Uganda

With Sheillah Bagayana

In partnership with the Ministry of Health and Babies and Mothers Alive, FREO2 Uganda hosted the 'Breath of Life' conference in September. The conference was a huge success with the MOH inviting FREO2 to be involved in the Uganda National Oxygen Scale Up Plan.

The team has also completed focus group discussions in three more health facilities to better understand the usability of the FREO2 systems from health worker perspectives. The team has also now installed LPOS systems at Kakuuto HC IV and Kyazanga HC IV, supported by Grand Challenges Canada and the Planet Wheeler Foundation and have kick started the testing of our Solar system at the FREO2 Uganda office in Mbarara.

FREO2 Uganda has recently received new Oxylink concentrators to replenish our in-country storage and support our Swap-and-Go model. In collaboration with the Adara Group, the team also conducted a clinical training at Nakaseke Hospital in oxygen therapy delivery and hypoxemia diagnosis. Additionally, we had the opportunity to host UNICEF at our offices in Mbarara to discuss partnership opportunities for scaling, where they visited two health facilities supported with FREO2 enabled oxygen.

Health Facilities Supported: 22

Children Treated: 3,262

Health Workers Trained: 771

Beds Serviced: 110



News From Tanzania

With Br George Massay

We are delighted to report that FREO2's Oxygen as a Service is now up and running on Mafia Island and has already treated ten children! This program is in partnership with Doris Mollel Foundation and Tanzania's Ministry of Health.

We welcomed Maire Ruane, Bryn Sobott and Nico Snellen. Their visit was a great opportunity to work together to expand our partnerships for scaling our systems across the country and gather insights to inform our strategy.

Six health facilities have received pulse oximetry diagnosis and oxygen therapy delivery training from Tanzania's clinical team. The clearance of ten pulse oximeters and twenty oxygen concentrators has been completed and they are ready to be installed in four new facilities this year. We also launched our Outreach Strategy in Tanzania this quarter, conducting pneumonia education sessions in twenty churches and handing out over four hundred brochures and flyers throughout health facilities and communities. The technical team also conducted routine maintenance and support in fifteen FREO2 supported health facilities in addition to technical and baseline assessments at two new facilities in preparation for installation. We participated in the Segal Family Foundation end of year networking event and the Oxygen CoLab's Data Collection Learning Session; we are extremely grateful for these opportunities to collaborate with our supporters.

Health Facilities Supported: 15

Children Treated: 2,698

Health Workers Trained: 146

Beds Serviced: 75



News From The Pacific

With Dr Divi Ogaoga

Following the completion of baseline assessments at all of our pilot sites, the FREO2 Solomon Islands team welcomed Roger Rassool to Honiara. Alongside our in-country technician John Donga, Roger supported the first installation of FREO2 oxygen systems in the Solomon Islands, at the National Referral Hospital (NRH) in Honiara. We had meetings with the Ministry of Health, UNICEF and the NRH. The visit also allowed FREO2 to donate in person pulse oximeters for the children's ward and special care nursery at the National Referral Hospital, which was well received by the Head of Paediatrics from the Ministry of Health.

The team has been working hard this quarter to prepare for the arrival of Mathew James (FREO2 Product Manager) and Paul Giansiracusa (FREO2 Innovation) in February. As part of FREO2's oxygen installation at our three pilot sites in the Pacific, Mathew and Paul will assist with the final requirements. FREO2 has also hired John Donga as a local technician. John will receive FREO2 technical training in February and will perform routine maintenance checks and future oxygen installation work. To ensure the sustainability of our Oxygen as a Service model, we have also begun negotiating MOUs with new pilot sites. Paediatricians and clinical educators within the Solomon Islands' Ministry of Health are currently reviewing our Clinical Training Module for the Pacific, which will be implemented next quarter.



Breath of Life Conference

On the 29th of September, FREO2 hosted the 'Breath of Life: sustainably scaling oxygen access in Uganda' conference in Mbarara. The event brought oxygen partners, funders, clinicians, innovators, and the Uganda's Ministry of Health together to address the need for increased access to reliable oxygen in Uganda. Here are some of our favourite moments from the day...

[Watch a highlights reel of the conference here.](#)

Uganda's MOH pledged to partner with us to improve access to oxygen across the nation!



"I have seen, touched and felt FREO2...I understand what FREO2 is about"

Dr. Mugahi Richard,
Commissioner of Reproductive Health at the MOH.



"Around 9 million infants will need oxygen and respiratory support each year...most will not receive it."

Grace Nalumu from Adara Group



"FREO2 is one of those mechanisms we hope to work with to achieve our mandate"

Dr. Rony Reginald Bahatungire, Commissioner Clinical Services at the MOH

"We increased access to antibiotics (for pneumonia) yet we were still seeing a lot of mortality...we came to realise that oxygen was not being given as a lifesaving treatment for children."

Yewande Kamatu from CHAI





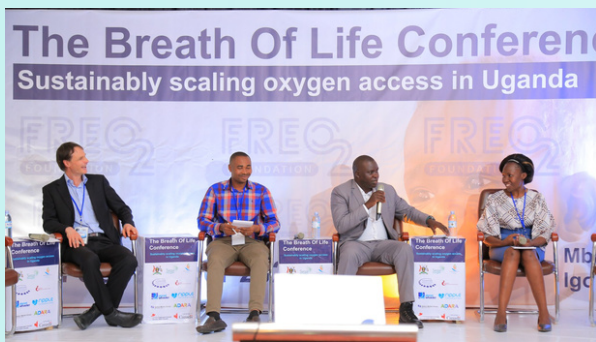
"46% of all global deaths in children under five are in babies before their first month of life...these are mostly preterm...and all these babies need oxygen."

Dr. Elias Kumbakumba from Mbarara University



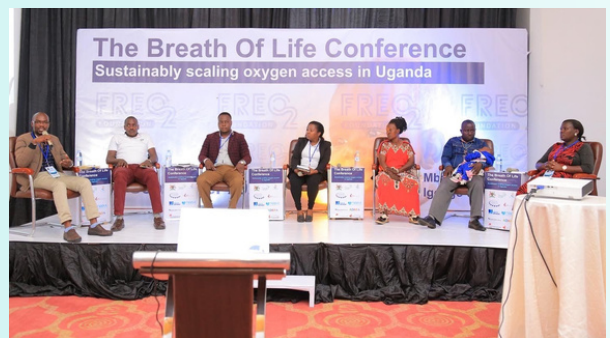
"One day a baby will be born too soon, premature babies can survive but you are responsible for that care."

Doris Mollel from the Doris Mollel Foundation



Regulation, policy, academia and industry: a way forward for increasing uptake for oxygen innovations in Uganda.

Moderated by Dr. Johnes Obungolouch. Featuring: Grace Nalumu of Adara Group, Eng John Willy of Joint Medical Stores and Dr. Bryn Sobbot of FREO2



Stories of lived experience with FREO2's O2aaS: sharing stories from the frontline.

Moderated by Dr. Eleanor Nakintu of Babies and Mothers Alive. Featuring: Tushabe of Itojo Hospital, Dr. Albert Kaganzi, North Kigezi HCIV, Patrick Ssekidde, Rakai Hospital and Mary Nakintu (mother of baby Brighton who received FREO2 oxygen)



“

Personally I had never touched a pulse oximeter... I've now become more confident in administering oxygen to my patients”.

Sister Tushabe
Itojo Hospital

“

I gave birth to a healthy baby [but] in the morning, the baby started gasping for breath. We rushed to Rakaii hospital and the baby was put on [FREO2] oxygen. We were so scared and thought he is going to die, but after four days the baby got better and we were discharged”.

Mary Nakintu

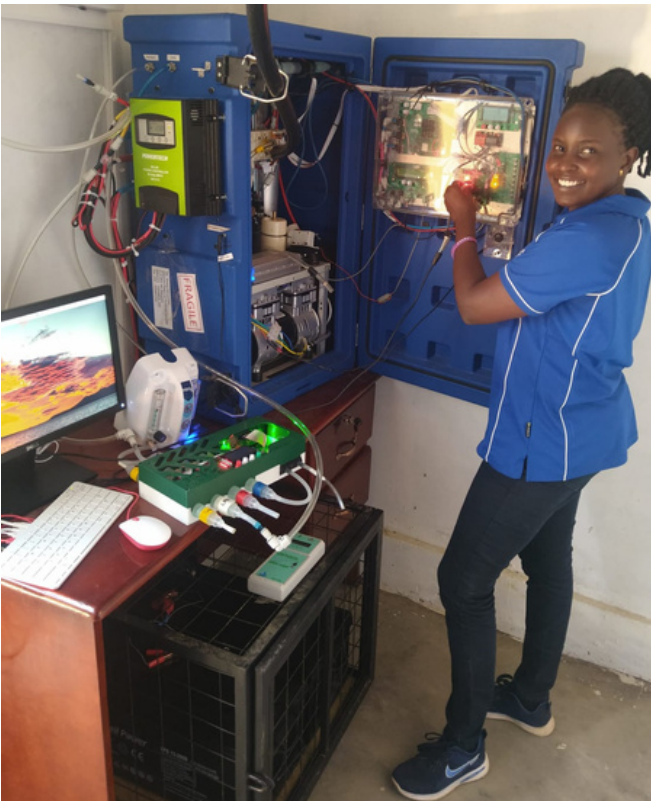
Mother of baby Brighton who received FREO2 oxygen





FREO2 Innovation at the University of Melbourne

FREO2's Solar prototype has reached Uganda!



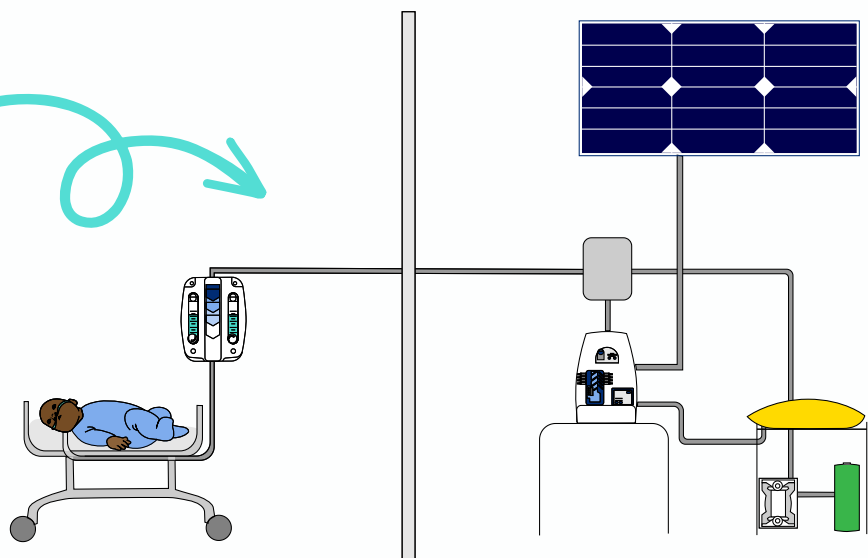
In October, the Uganda team received the first prototype of the FREO2 Solar oxygen concentrator. The initial results have been encouraging, with the system continuously providing 2 litres per minute of over 85% oxygen purity.

Biomedical Engineer and Technician Hilda has been working closely with Bryn Sobott and Sheillah Bagayana to provide feedback and data to inform the next iteration of FREO2 Solar.

Late October is traditionally the rainiest time of year in Mbarara and current data indicates that the system may require another solar panel for increased storage to perform through this rainy season. This will be a key consideration in the next iteration.

You can learn more about FREO2's Solar innovation [here](#).

[Watch our SOLAR animation video here](#)





World Pneumonia Day Highlights



This year to commemorate World Pneumonia Day, FREO2 illuminated the University of Melbourne in blue as part of the PneumoLight campaign to increase awareness of pneumonia and its role as the largest infectious killer of children under five.







FREO2 published an awareness piece about three young babies who were battling pneumonia at Dongobesh Hospital in Tanzania, when a power outage cut-off their oxygen supply. The story does not have a happy ending and is a call to action to ensure that no more babies die because they don't have access to medical oxygen in Tanzania, and across Africa. [Read more here.](#)


PNEUMONIA

Know the signs

If your child is exhibiting any of the symptoms of pneumonia, take them to a hospital immediately.



- Fever/cold
- Coughing
- Flaring nostrils
- Blue lips
- Vomiting
- Sweating
- Baby bobbing their head when breathing
- Rapid heartbeat
- Fast/difficult breathing
- Wheezing or grunting sounds
- Loss of appetite/poor feeding
- Belly pain
- In-drawing of skin between the ribs
- In-drawn chest or neck
- Trouble breathing when lying flat



We launched our 'Pneumonia Signs and Awareness' campaign in Tanzania, supporting fourteen health facilities with education and awareness on the signs of pneumonia in babies and children.



Across Uganda, Tanzania and Australia, FREO2 commemorated the day by wearing blue



A big thank you to our supporters!





Coming up next quarter...

- We will launch our 3 year FREO2 strategy. With a new focus on maximising the oxygen miles, we are eager to collaborate with our supporters on our new strategy.
- As we complete our clinical training program in the Solomon Islands, we look forward to treating children with FREO2 enabled oxygen next quarter.
- Launching our Outreach Strategy across Uganda and the Solomon Islands, taking key learnings from our work in Tanzania.
- Our CEO Roger will be visiting Dubai to attend a workshop with Kröber. We look forward to working together towards advancing oxygen innovations that are fit-for-purpose in low resource settings.
- Next quarter, 50 FREO2 Snorkel devices will be assembled in collaboration with Bollé Safety AU. We look forward to sharing more about Snorkel in our next Impact Report!
- We are preparing to install FREO2 oxygen systems across four new facilities in Tanzania this year. Next quarter, we will be engaging in MOU agreements with new facilities and installing at two new sites, the Siha and Monduli District Hospitals.
- Caroline our storyteller based in Nairobi will be taking a journey to FREO2 supported sites across Tanzania to gather insights and key learnings from communities. We look forward to sharing what we learn with Caroline next quarter.
- As part of our new Outreach Strategy we will be conducting pneumonia signs and awareness radio campaigns across Tanzania and Uganda to help families recognise the symptoms of pneumonia so they are empowered to take their children to a health facility.

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