ACT-A Tx Partnership

FC pre-briefing

05 May 2021

#UnitedAgainstCoronavirus
#StrongerTogether | #GlobalResponse

Objectives for today

- Deliver an overview of **medical Oxygen as a therapeutics** for COVID-19 (WHO)
- Share an update on the **key priorities for the Oxygen Task Force** during the current crisis (Unitaid/Wellcome)
- Outline most critical **next steps**

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COVID-19 O_2 & CASE MANAGEMENT STRATEGY

ACT ACCELERATOR FACILITATION MEETING
05 MAY 2021

World Health Organization

HEALTH EMERGENCIES programme

COVID -19 Case Management Strategy

Safe Environment

Ensuring trained Health Care Workers

Create a safe space for patient care – with adequate ventilation and IPC measures

Optimized Supportive Care

Build on best clinical practice guidance using evidence base

Provide safe and appropriate clinical tools for patient care (biomed equipment - use, storage maintenance)

Therapeutics

Deliver comprehensive clinical guidance for novel and repurposed therapeutics – Living Guideline

Ensure oxygen access and delivery

Oxygen timeline: identifying technical guidance for LMICs

1770s

Discovery of oxygen as an element and first publications.

1902

First application of an **air separation process** by **fractional distillation**. *Carl Linde.*

1970s

PSA started being used commercially for medicinal use.

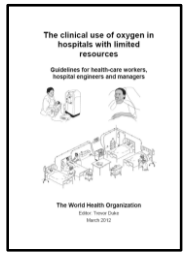
1980

Oxygen included in **European Pharmacopoeia** (2nd ed.).

2006

NHS/DoH "HTM 02-01: Medical Gases".

2012



WHO: "The **Clinical Use of O_2** in Hospitals with Limited Resources".

2015

WHO:

- **Intn'l Pharmacopoeia** (O_2 included).
- "Tech. Guidance & Specs. for **O_2 Concentrators**".

2016

- WHO: "O_2 **Therapy for Children**".
- Ethiopia: first LMIC to publish "**National O_2 Scale-up Roadmap**".

2017

- WHO Model List of **Essential Medicines**: adds O_2.
- Nigeria: **National O_2 Policy and Scale-up Strategy** (published A_2O_2 event).
- Formal EBC launch.

2019

- **WHO-UNICEF: "Tech. Specs & Guidance for O_2 Therapy Devices"**.
- First documented case of SARS-CoV-2.

2020 (con't)

- **Declaration of pandemic.**
- Publication of various interim tech. guidance documents.

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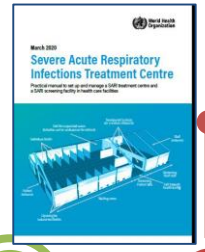
Oxygen timeline: technical and operational guidance

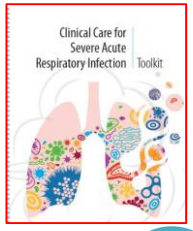
2020:

Declaration of pandemic
11 March 2020

April

SARI treatment centre, SARI TOOLKIT



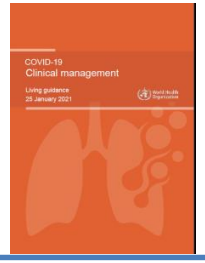


April

Consortium, Global Supply Chain Catalogue v1, ESFT

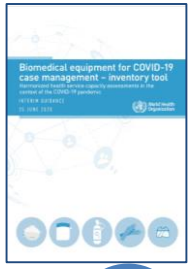
May

Clinical Guidance v2



June

Biomed inventory tool

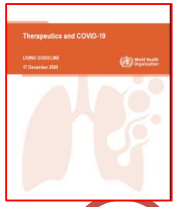


June

WHO PSA technical specifications

Sept

1st Living guideline on Therapeutics: corticosteroids .



October

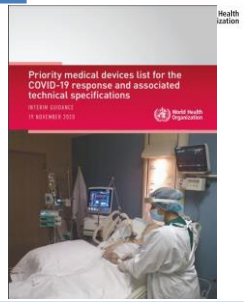
O2 Technical Consultation

Nov

WHO PPE and specifications for COVID-19

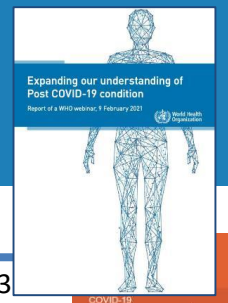
Nov

WHO Priority medical devices and specifications for COVID-19



2021

Clinical guidance v3
Living Guideline updated



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Biomedical Consortium: Coordination with Implementing Partners

Partner mapping, operational and technical alignment:
Minimize duplication, leverage existing efforts.

Identify priority areas and technical needs:
Template for solutions and proposals that are **end to end**

WHO TA available
Multiple departmental approach: IMST case management, OSL and health technology focal points

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Emergency oxygen procurement: template for country oxygen access scale-up proposals

Background

In October 2020, during a COVID-19 press conference, Dr Tedros Adhanom Ghebreyesus, Director-General of the World Health Organization (WHO), lauded efforts to increase oxygen access as a response to the pandemic, saying that "a better world means ensuring oxygen is available for all. Where they need it, and when they need it."

COVID-19 has dramatically increased hypoxaemia prevalence and the need for medical oxygen. According to WHO treatment guidelines, COVID-19 patients require two to six times more oxygen than the average non-COVID-19 intensive care unit patient. As hospitalizations increase and the need for medical oxygen skyrockets, it has become apparent that underdeveloped oxygen supply systems prevent patients from receiving sufficient and reliable respiratory care. As a result, many lives are being lost. Without immediate investment in oxygen systems, equipment and supplies, more lives will be lost as countries face new waves and new variants that ratchet up the pressure on health systems that are already severely strained.

Oxygen need-gap

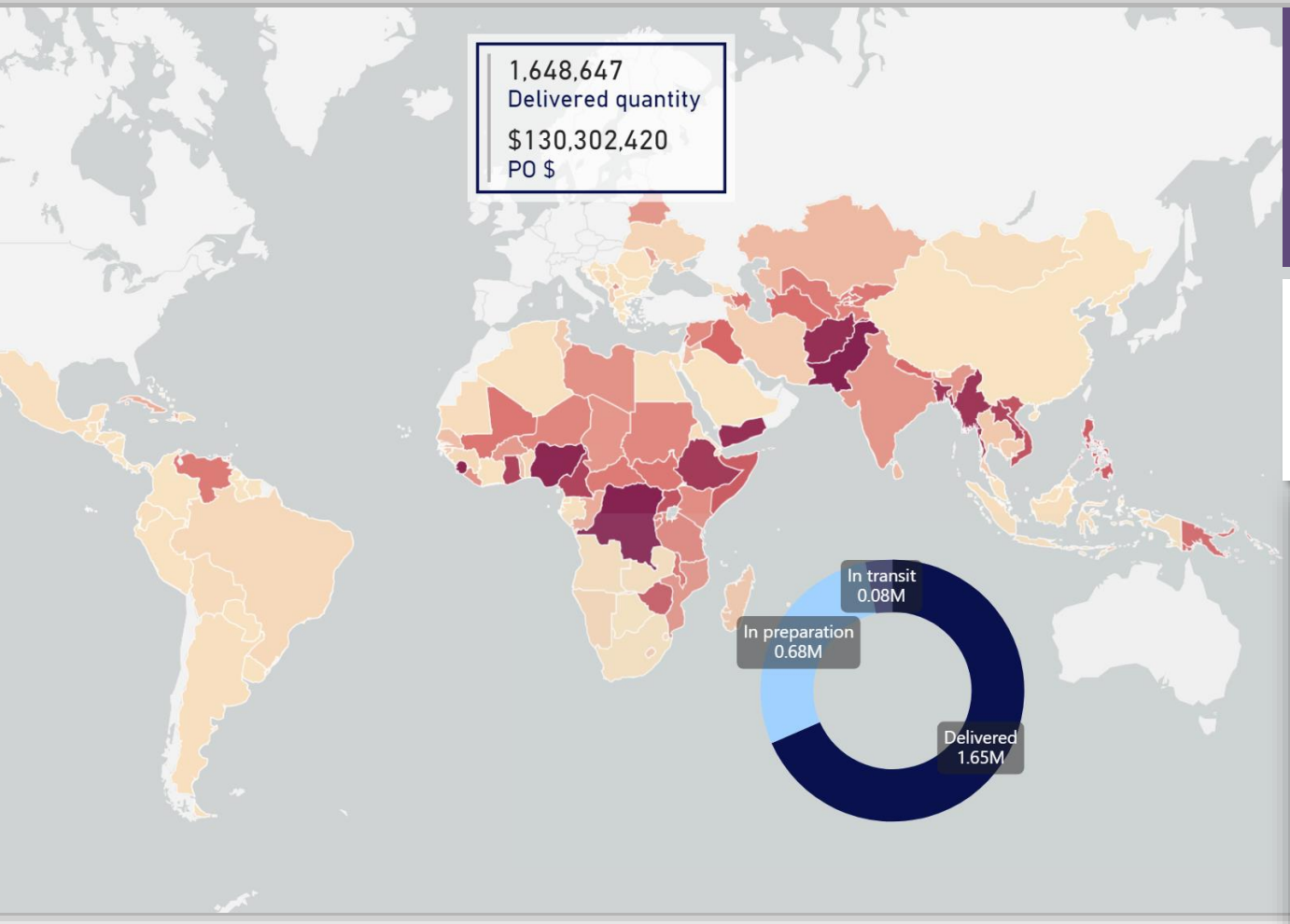
International donor agencies and country governments have worked to strengthen critical care capacities in response to an influx of COVID-19 patients. Early funding and attention have been given to short-term increases in oxygen provision, largely by supplying bedside oxygen concentrators and ventilators (which require an oxygen supply). Despite these efforts, as the current [mid-April 2021) wave of COVID-19 escalates, there is pressure on already stretched oxygen services, and a stream of shortages has highlighted the continued gap in oxygen needs. Oxygen supply systems must be enhanced to save lives today.

Emergency procurement needs

This template provides a rapid yet holistic framework to request funds for oxygen scale-up projects at country level. It lists the following domains to consider:

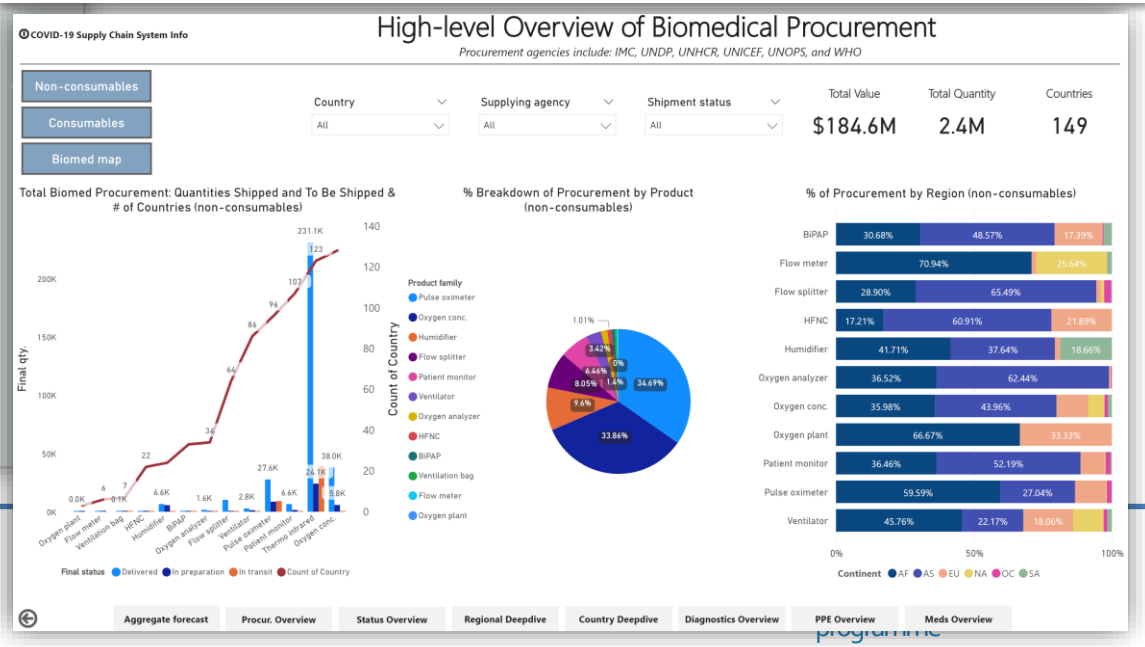
- Country description: geographies, coverage, security concerns, road's access.
- Need-gap assessment: using rapid tools to assess gaps and needs to inform solutions.
- Technical assistance: three phases of technical support.
- Contextualized solutions:
  - Oxygen sources
  - Oxygen distribution
  - Delivery and monitoring equipment and devices
  - Training (clinical and technical)
  - Maintenance and service agreements
  - Operational costs (power, fuel, etc.)
  - Human resources

Biomedical Dashboard – Supply Procurement to date



Known procurement by Biomedical Consortium partners, including:
IMC, UNDP, UNHCR, UNICEF, UNOPS, and WHO

- *Total cost: $184.6M*
- *Total units: 2.45M*
- *Total Countries: 149*



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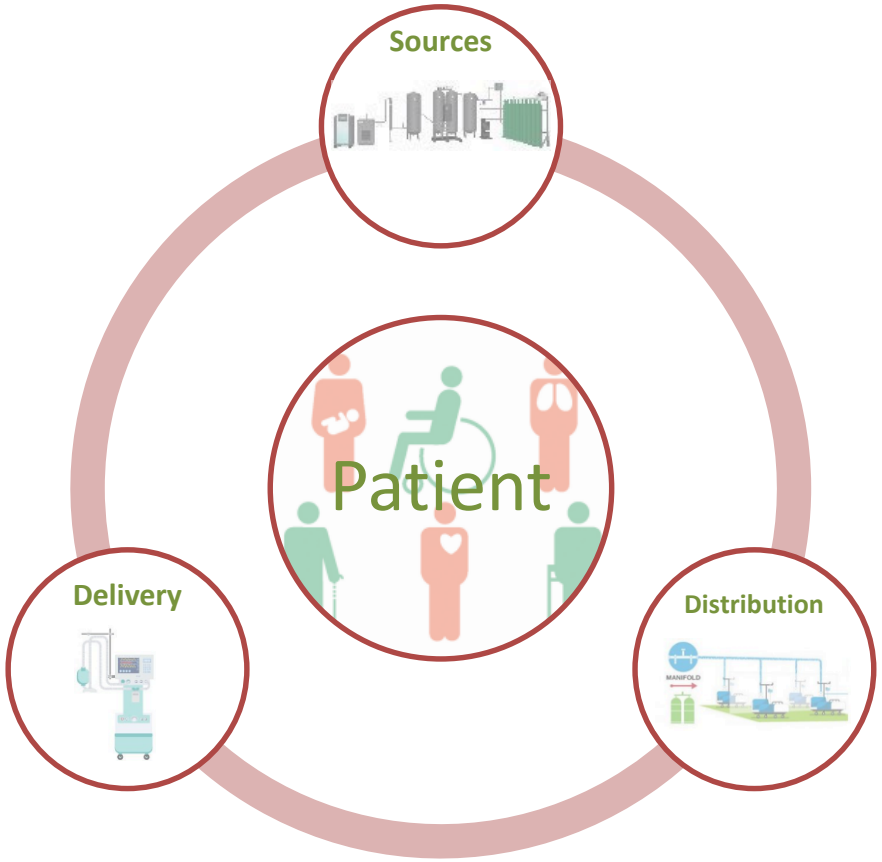
The Oxygen Ecosystem



- ✓ **Equitable scale-up** means quality oxygen reaching more patients, at the right time and in a more sustainable way.
- ✓ **Sustainable action** requires implementation programmes, resource allocation, local capacity building and, in some situations, cultural change.
- ✓ **Multidisciplinary stakeholder** action is needed to develop strategic planning, tools, advocacy and technical support.

Scaling-up access to Medical Oxygen

Multidisciplinary effort

Ultimate goal: quality O_2 reaches the patient safely

Continuous and evolving cycle

Longer term sustainability will require a holistic approach and an ecosystem of resources.

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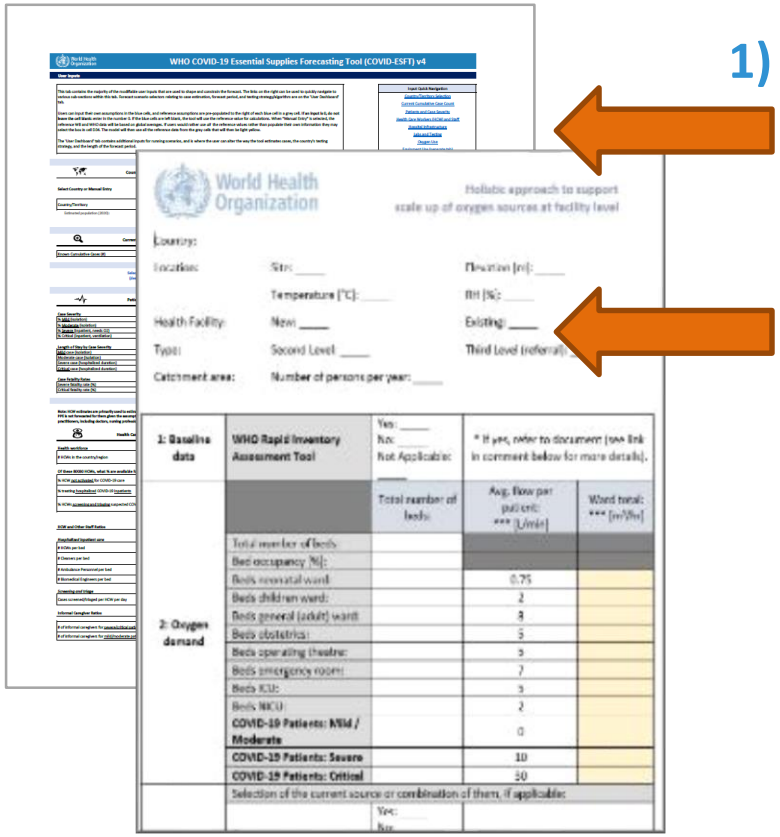
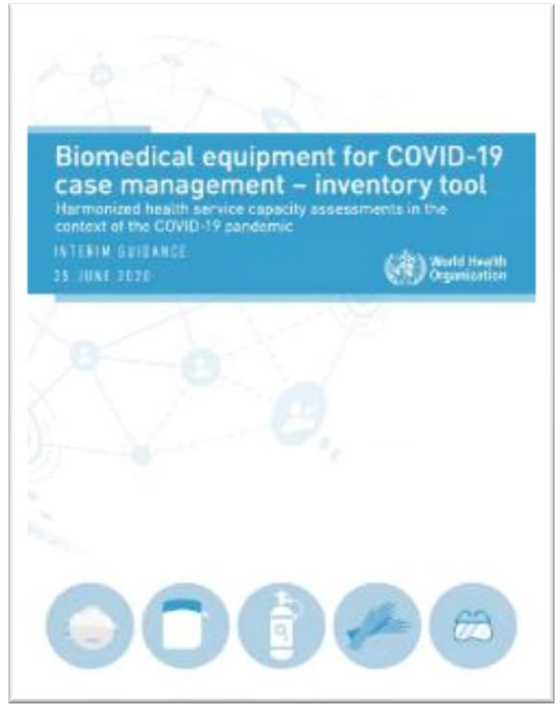
Country-level planning, Step 1: Determine existing capacity & estimate need

A rapid or baseline assessment to be conducted to determine:



1) **Need**:
   a. O_2 demand calculator facility level, based on # beds, bed occupancy, and hypoxemia rates;
   b. Essential Supplies Forecasting Tool (ESFT) to quantify & project for all oxygen therapy commodities

2) **Capacity**:
   Biomedical Equipment Inventory Tool
   What is available and functional



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- Overview/Technical Guidance: https://www.who.int/publications/i/item/WHO-2019-nCoV-Tools-Essential_forecasting-Overview-2020.1
- Essential Supplies Forecasting Tool, version 4: https://www.who.int/publications/i/item/WHO-2019-nCoV-Tools-Essential-forecasting-2021-1
- Biomedical Equipment Inventory Tool: https://www.who.int/publications/i/item/WHO-2019-nCov-biomedical-equipment-inventory-2020.1

Country-level planning, Step 2: Identify the need-gap

THE **NEED-GAP** IS UNDERSTOOD AS THE FORECASTED NEED MINUS THE BASELINE SUPPLY CAPACITY

What are the outstanding need-gaps?

- ☐ Oxygen sources
- ☐ Distribution systems
- ☐ Delivery equipment
- ☐ Consumables
- ☐ Spare parts
- ☐ Training
- ☐ Maintenance, service agreements
- ☐ Power generation
- ☐ Funding

Combining information from need and capacity assessment:

Need Gap = Estimated need (ESFT) **minus**
Existing Capacity (Inventory)

With **need gap** identified, plans for appropriate and achievable scale-up for oxygen access can be made, including phasing the approach:

Emergency "Fast-track" → Near-term 6-12 mo. → Sustained use

Implementation and Sustaining Operations **'End to End'**

Phase 2:

- Site readiness
- Installation – transport, technicians
- Power & fuel
- Right consumables
- Staff training (clinical and non clinical)

Phase 3:

- Ongoing procurement of relevant consumables
- Availability of spare parts, maintenance plans
- Power and Fuel
- Staff training investments – long term
- Health System Support – tracking, inventory

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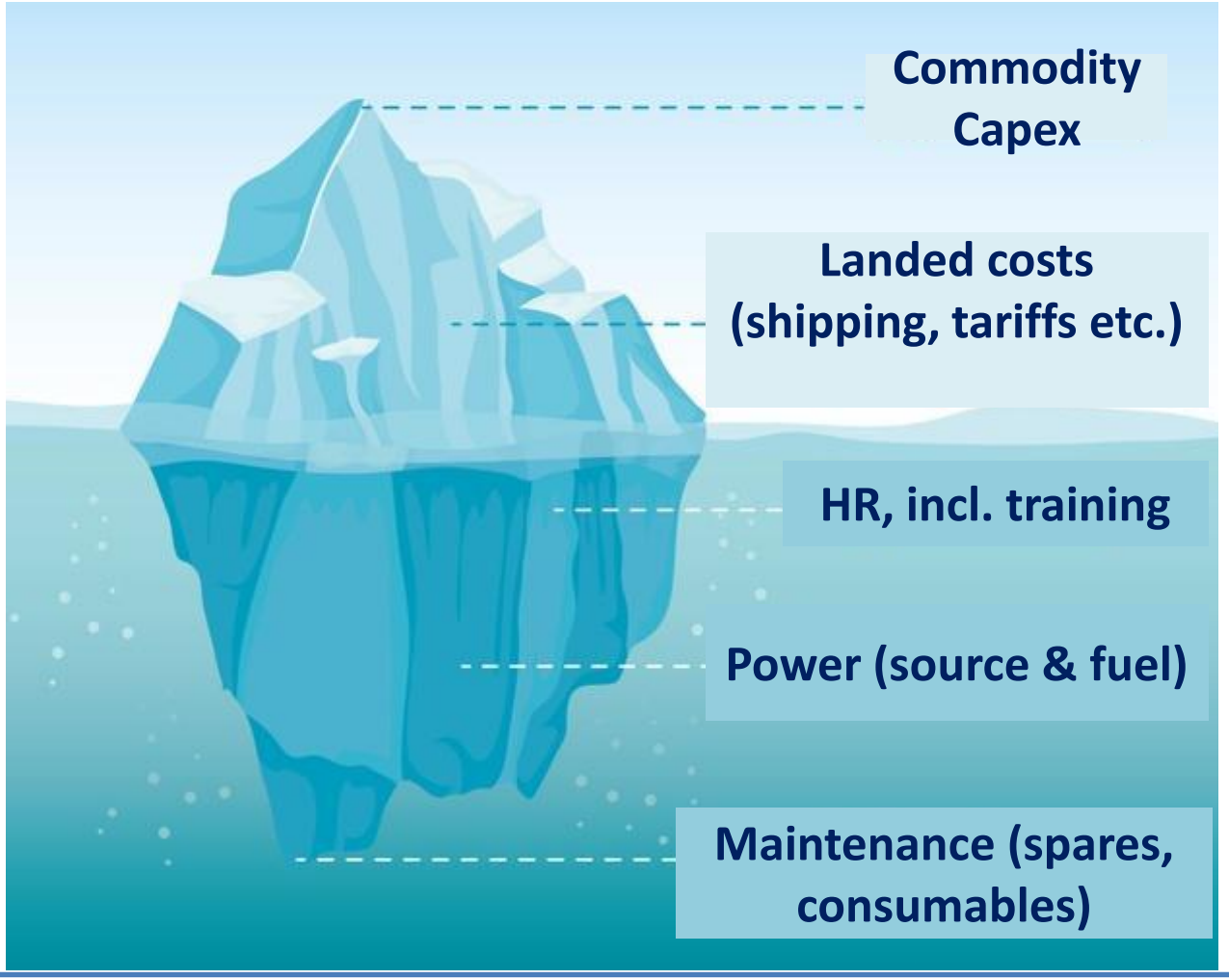
Investing in oxygen



Initial investment

Historically, the most realized aspect of oxygen systems implementation.

Continued, longer-term investment

- Continuity of funds
- Commitment to investment
- Supplier and supply-chain stability
- Integrated into CME framework

Conclusions

CM strategy is comprehensive set of interventions: COVID-19 care pathway

- Safe space-design, ventilation, IPC
- Supportive care (basic emergency care/critical care) - monitor and biomedical devices (clinical + non-clinical/technical)
- Therapeutic - corticosteroids + oxygen for severe/critical patients
- Quality improvement-Global Clinical Data Platform (https://www.who.int/teams/health-care-readiness-clinical-unit/covid-19/data-platform/)

Oxygen scale up response

- Rapid/Baseline assessments
- Contextualized solutions: source/supply, distribution, delivery/monitoring devices, maintenance/service agreement, operational costs, HR, power, sustainability
- Include technical assistance along the entire way – **end to end**

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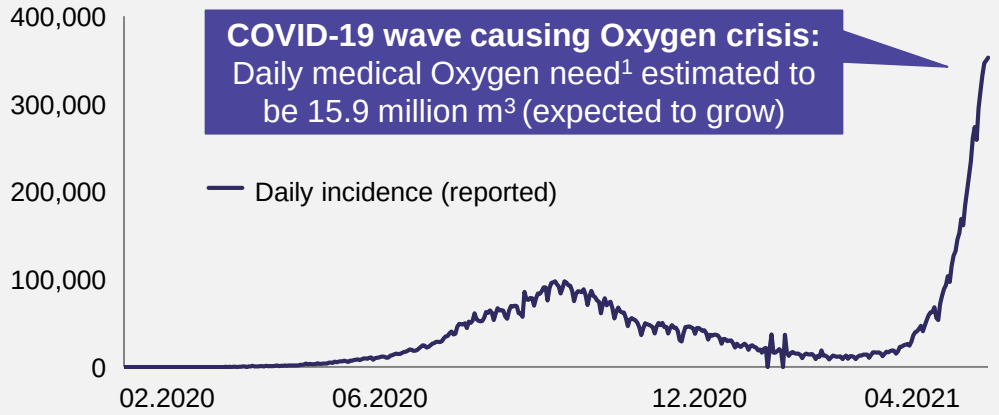
Improving access to Oxygen therapy has been a global health priority since before COVID-19

- Oxygen has been considered a lifesaving medicine for many decades and was officially added to the list of essential medicines in 2017
- Availability of Oxygen therapy against hypoxemia in LICs/LMICs has proven positive impact on maternal, newborn, and child health
- Yet, shortages in access to medical Oxygen have long existed even before COVID-19, e.g.:
  - Nearly half of hospitals in LMICs have inconsistent or no oxygen supply
  - When resources are limited, there can be competition for access to oxygen among the various wards of a health facility

Sources: PATH "Oxygen is Essential: A Policy and Advocacy Primer"; WHO "Model List of Essential Medicines (EML)"

Surge demand for Oxygen as therapeutics for COVID-19 leads to local emergencies, e.g., in India



THE TIMES OF INDIA

"The second wave of Covid-19 has hit India like a "storm".

Hindustan Times

"By air, by train and by road, India is scrambling to move large quantities of medical Oxygen.

BBC

"A nightmare on repeat - India is running out of Oxygen again.

Source: WHO COVID-19 dashboard, PATH COVID-19 Oxygen Needs Tracker

Oxygen Task Force set up in Feb '21 around four primary workstreams to accelerate support

Paused to ensure full focus on maximizing impact of C19RM

Oxygen needs assessment

Assessment of country-level Oxygen situations and quantification of unmet needs

World Health Organization · Clinton Health Access Initiative · PATH · Every Breath Counts

Funding

Allocation of funds to finance interventions that address identified Oxygen needs

Wellcome · Unitaid · Bill & Melinda Gates Foundation

Market-shaping / Supply

Market-shaping interventions for Oxygen products and delivery of supplies to countries

unicef · Unitaid · Wellcome

Advocacy

Communications push to ensure prioritization of Oxygen as urgent and lasting priority

Every Breath Counts · unicef · Unitaid · Save the Children

Note: List of ACT-A partners supporting Oxygen Task Force not exhaustive

Key achievements over past weeks and months

- **>$80m Oxygen needs assessed** and vetted by Biomedical Consortium (20 countries)
- **$20m Unitaid/Wellcome funding unlocked** for Oxygen interventions
- **Quick TF pivot towards** supporting the fastest access to Oxygen funds through **GF C19RM 2.0 process**
- **TC partners identified and funded[1] for 42 countries** to ensure submission and implementation of Oxygen proposals as part of C19RM process

1. Funding for final 8 countries to be finalized this week

3 key priorities for Oxygen Task Force right now:

Technical Cooperation

Secure and leverage TC partners to support countries utilize C19RM funds for Oxygen needs

Oxygen supplies

Unlock short- and medium-term supply bottlenecks to deliver requested products

Coordinated response

Ensure a coordinated response to acute Oxygen emergencies (e.g., in India)

Oxygen supplies: Surge demand for Oxygen products intensifies supply situation

Modality	Expected supply situation
Oxygen monitoring systems	Product volumes available in UNICEF warehouses; additional quantities available directly from suppliers
Consumables/durables	10 LTAs in place and no major gap identified to date as per availability via established channel
Concentrators[1]	4 LTAs available globally, but question on available supply capacity due to surge demand levels
Cylinders	Dependent on local situation, requires geographic focus due to high transport cost
PSA plants[2]	Limited LTAs available and strong market constraints (i.e., 6+ months lead times)
Bulk liquid Oxygen (LOX)[3]	Bulk liquid Oxygen purchases possible, but limited local contracts with private gas suppliers in place

Expected service time : 1. Concentrator = 5 years; 2. PSA plant = 10 years; 3. Cryogenic LOX plant = 30 years
Note: Invasive and non-invasive ventilation devices excluded from this list as not currently supported by UNICEF
Source: UNICEF & discussion with GF Supply team

Short-term priority:

Maximize current assets deployed and available supplies (e.g., 162 PSA plants via CHAI/PATH)

Mid-term priority[1]:

Identify targeted market-shaping interventions via lean task group of TF-internal and external experts

Next steps on next page

1. Approx. 1-3 months

Oxygen supplies: Lean O2 market shaping EAG[1] of TF-internal & industry experts set up to quickly drive progress

Key tasks include:

O2 supply chain mapping

Map out global picture on Oxygen products' supply chains, identify bottlenecks by core Oxygen product class, and frame ask to private sector

Discussions with gas suppliers

Pose concrete ask to private gas suppliers and engage with their leadership leveraging convening power of relevant governments and global health leaders where required

O2 market interventions

Activate targeted and costed market-shaping interventions for all relevant product classes and ensure financing, e.g., via creation of an emergency O2 fund

Insights and recommendations to be delivered to the Oxygen TF by 14th of May

1. External Advisory Group

Coordinated response:
Partners are providing individual emergency support, e.g., in India

- ACT-A partners have mobilized emergency support (e.g., WHO sending 4,000 concentrators to India)
- Given the urgency, partners leverage their individual networks and resources available for quick mobilization
- To maximize impact, the Oxygen TF could develop a mechanism for coordinated emergency support in future 'hot spots'

  I.e., by funding and implementing an emergency virtual stockpile enabling immediate mobilization of resources

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Next steps

- **Ensure availability of and funding for technical cooperation** partners supporting C19RM proposal development and implementation, especially in countries at high COVID-19 risk
- **Continue Oxygen advocacy** push to ensure countries submit comprehensive Oxygen requests as part of C19RM proposals
- **Mobilize current assets deployed and available supplies** to meet immediate demand for Oxygen products
- Convene market-shaping EAG and **develop market-shaping interventions** to unlock short- and mid-term Oxygen supplies
- Develop a mechanism (e.g., virtual emergency stockpile) to **ensure a coordinated partner response** to future acute crises