

Member State consultation on increasing access to medical oxygen

WHA resolution 76.3:
*Increasing access to
medical oxygen*

27 November 11:00 – 12:00 CEST



Agenda



Item	Time	Speaker
Opening session	5 min	To be announced
Purpose, background, introduction to ATMO₂S • Purpose • WHO progress on WHA resolution 76.3 • ATMO₂S introduction	10 min	Dr Janet DIAZ
Access to Medical Oxygen Scorecard 2.0 • Background • Demonstration: utility, accessibility, outputs and data	10 min	Dr Jamie RYLANCE
Timeline and next steps	3 min	Dr Janet DIAZ
Questions and answers • Targeted questions to member states • Open discussion	27 min	Dr Jamie RYLANCE
Closing statement	5 min	To be announced

Purpose, background and introduction to ATMO₂S

Dr Janet DIAZ

Unit Head, Safe Scalable Care
WHO Health Emergencies Programme



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Purpose



To support Member States in achieving universal access to medical oxygen through the provision of the Access to Medical Oxygen Scorecard to measure progress toward WHA resolution 76.3 *Increasing access to medical oxygen*.

For this consultation, to:

1. Present the draft **Access to Medical Oxygen Scorecard**, which maps to the priority items asked of Member States to monitor progress on achieving universal access to medical oxygen.
2. Seek feedback on the utility, acceptability and accessibility of the **Access to Medical Oxygen Scorecard**.
3. Present an **opportunity for MS to contribute to the WHO report** to the executive board on WHA resolution 76.3 progress.

WHA resolution 76.3

Increasing access to medical oxygen (30 May 2023)



SEVENTY-SIXTH WORLD HEALTH ASSEMBLY
Agenda item 13.1

WHA76.3
30 May 2023

Increasing access to medical oxygen

The Seventy-sixth World Health Assembly,

Having considered the consolidated report by the Director-General;¹

Recognizing the inclusion of medical oxygen as a life-saving essential medicine with no substitute on the 22nd World Health Organization Model List of Essential Medicines² and the 8th World Health Organization Model List of Essential Medicines for Children,³ where it is an indication for the management of hypoxaemia, including for vulnerable groups, and during anaesthesia that is essential for surgery and trauma;

Reaffirming the critical role of medical oxygen in the achievement of the Sustainable Development Goals for health, including reducing maternal mortality (target 3.1), newborn and child mortality (target 3.2) and premature mortality from chronic conditions; recognizing that medical oxygen has a role in the acute treatment of some AIDS-, tuberculous (target 3.3) and road traffic injuries (target 3.6), and accelerating coverage (target 3.8);

Noting that the wide application of medical oxygen is essential across many communicable and noncommunicable diseases and conditions, to which older persons in particular are vulnerable, including disease (COVID-19), pneumonia, tuberculosis and chronic conditions; recognizing the need for medical oxygen in emergency and critical care, and that this is one of the goals and targets of the Global Action Plan for the Prevention and Control of Noncommunicable Diseases, the WHO Package of Essential Noncommunicable Disease Interventions for Primary Health Care⁴ and WHO Guidelines for Safe Surgery 2019;⁵



Urges Member States to take **20 priority actions**, considering their national contexts.

And for **WHO to take 11 priority actions**.

WHO is required to report to the Executive Board on progress of its 11 priority actions in 2026, 2028 and 2030.

Considerations include actions on pandemic preparedness and response, and other public health emergencies, including emerging diseases and natural hazards and humanitarian context.

WHO will report progress on 11 priority actions from WHA 76.3



WHA76.3 Requests to DG	status
1. Advocacy: to continue to highlight the importance of medical oxygen	Ongoing
2. Tools and resources: guidelines, specifications, tools, training and other resources	Achieved & to continue
3. Regulations: convergence & harmonization for safe, effective, quality assured oxygen	Achieved & to continue
4. Financing: support in finding adequate, predictable, sustainable financing	Ongoing
5. Pandemic preparedness and response: inclusion of medical oxygen	Achieved & to continue
6. Innovation: review and promote innovation to increase access to medical oxygen	Achieved & to continue
7. Research: establish and or include of medical oxygen in research agenda	Ongoing
8. Data: collect and analyse data and share best practices	Ongoing
9. Non-state actor consultation: regular consultation, enable Member State partnerships	Ongoing
10. Stakeholder engagement: promote mutual support and assistance	Ongoing
11. Reporting: communicate progress of this resolution in 2026, 2028 and 2030	Ongoing: 2026, 2028, 2030

See Annex B for detailed updates

Member States have 20 priority actions in WHA 76.3 to achieve universal access to medical oxygen



(1) Inclusion of medical oxygen and associated medical devices on national lists of essential medicines and medical devices	(11) Monitor access to safe, affordable, quality assured medical oxygen systems as part of national efforts to achieve universal health coverage.
(2) Develop costed national medical oxygen scale-up plans	(12) Raise public awareness about the life-saving role of medical oxygen and use of pulse oximetry.
(3) Develop national, regional and local health regulations relating to medical oxygen and associated medical devices.	(13) Set up national and subnational medical oxygen systems to ensure uninterrupted provision of medical oxygen at all levels.
(4) Identify the need-gap of medical oxygen, medical devices and diagnostic tools and qualified staff across all levels of care.	(14) Consider stepwise integration of medical oxygen and other medical gas systems in healthcare infrastructure.
(5) Update national pharmacopoeia , informed by provisions of The International Pharmacopoeia.	(15) Establish resilient supply chains: considering domestic financing, international support, transparent procurement, and local manufacturing.
(6) Ensure safe oxygen delivery to newborns: prevent exposure to toxic levels of oxygen and using blenders and pulse oximetry.	(16) Invest in innovations to increase access to medical oxygen and related diagnostic tools, including those suitable for low resource settings.
(7) Ensure rational use of oxygen: conduct regular assessments to avoid under utilization or over/inappropriate use.	(17) Promote good manufacturing practice by strengthening quality control in production, filling and distribution of medical oxygen.
(8) Include medical oxygen in national strategies for pandemic preparedness and response, and health emergencies including infectious disease outbreaks.	(18) Promote research to improve access, quality and safety of medical oxygen in health care settings.
(9) Provide adequate number of clinical staff appropriately trained in oxygen therapy across all clinical use cases.	(19) Promote mutual support, assistance and cooperation to increase access to medical oxygen.
(10) Provide adequate number of qualified engineers and other staff to size, select, set up, operate and maintain medical oxygen systems.	(20) Integrate medical oxygen data into routine health information systems.

Access to medical oxygen scorecard

“ATMO₂S”



- **Why** was ATMO₂S developed?
 - To support Member States to track progress on achieving objectives of WHA resolution 76.3.
 - To support harmonized data contribution for the WHO report to the Executive Board.
- **How** was it developed?
 - First version published by the *[Lancet Global Health Commission on medical oxygen security \(2025\)](#)* and included 21 questions aligned with the WHA resolution 76.3.
 - Adopted and adapted by WHO by engaging global oxygen experts, following WHO policies on conflict of interest and transparency.
 - Seeking MS feedback today....

ATMO₂S: Access to medical oxygen scorecard

Dr Jamie RYLANCE



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ATMO₂S contents



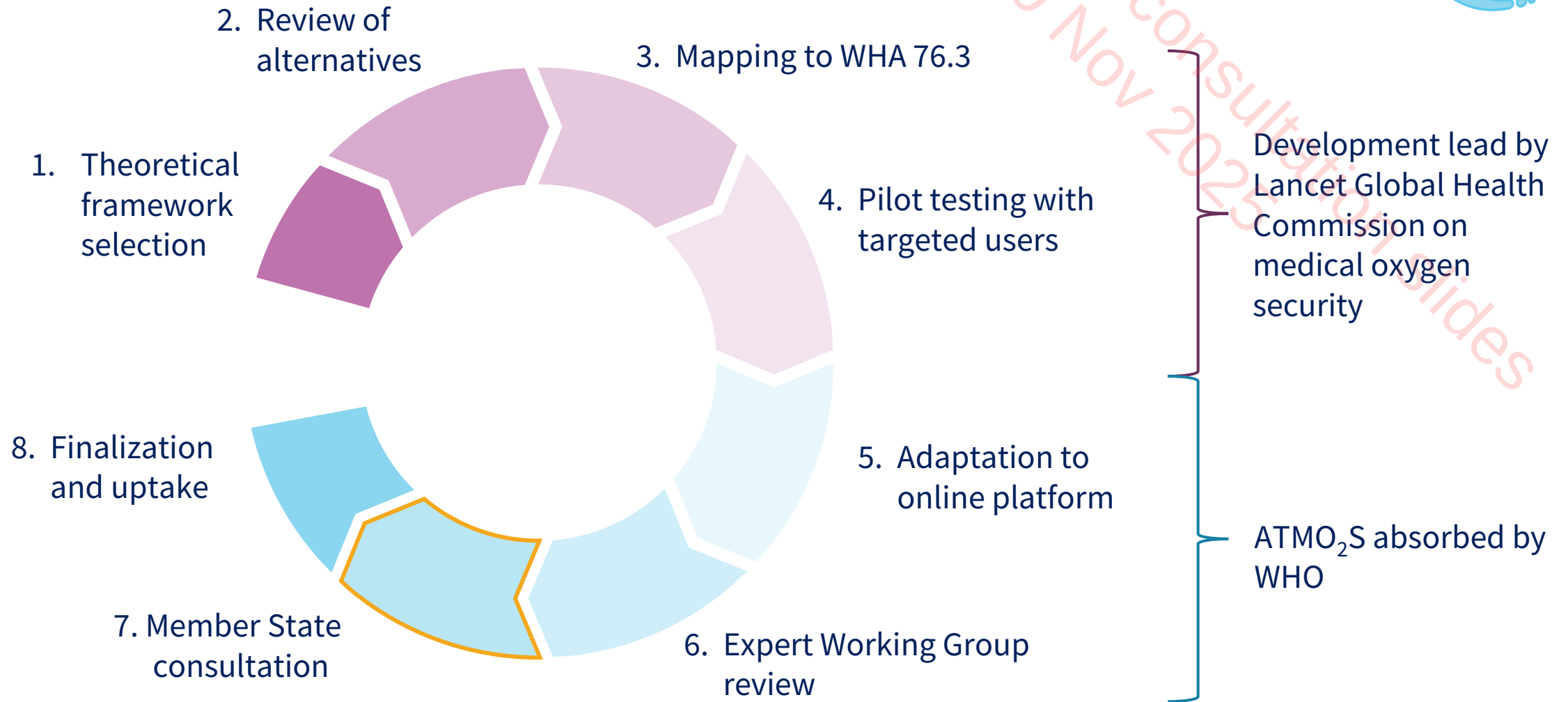
21 questions in 4 categories, mapped to WHA resolution 76.3

	WHA resolution 76.3 items addressed																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Architecture: Enabling policy enforcements, policies and plans (5 questions)	Yellow	Yellow			Yellow			Yellow										Yellow	Yellow	
Availability: Sufficient production with safe mechanisms for distribution (6 questions)			Pink	Pink		Pink		Pink			Pink	Pink	Pink	Pink	Pink		Pink			
Affordability: Ensuring that oxygen is financed and affordable to patients and providers (4 questions)				Light Blue							Light Blue		Light Blue		Light Blue					
Adoption: Building workforce capacity and monitoring for quality oxygen services (6 questions)				Green		Green	Green		Green	Green	Green	Green				Green		Green		Green

See Annex C for ATMO₂S questions or access the scorecard directly at the link here:

<https://extranet.who.int/dataformv6/index.php/829964>

Detailed steps of development of ATMO₂S



Seeking Member State feedback to ATMO₂S



In relation to the proposed scorecard, the following slides describe:

- *Information collected*
- *Data use*
- *Presentation of a sample item*
- *Graded answers*
- *Format*
- *Output*

20 Nov 2025
Pre-consultation slides

Design of ATMO₂S: Information collected



- **Respondent details:**

- Indicate member state or territory
- Details of respondent / enumerator
- Preference for data use

☐ **Opt-in** to share the scorecard data
as part of the WHO report to the Executive Board

- **21 scorecard items:**

- Each item has 3 possible options
- Each item allows for qualifying comments which are for user convenience e.g. for record keeping or tracking between reporting periods:
 - ☐ Current strengths and accomplishments
 - ☐ Challenges and plans to address them

A screenshot of a survey question: "Do you wish the results of the survey for your country / territory to be openly published by WHO?". Below the question is a dropdown menu with the text "Please choose..." and a downward arrow. The dropdown is open, showing two options: "No, data are not to be shared nor published in any form" and "Yes, data may be included in report to the Executive Board". To the right of the dropdown, there is a small text box containing the text: "ed to the World Health Assembly. Comments will not be published, and remain for the the WHO technical team." At the bottom left of the form is a "Previous" button, and at the bottom right is a "Next" button. A large red watermark "Pre-consultation slides" is overlaid diagonally across the image.

Design of ATMO₂S

Sample item

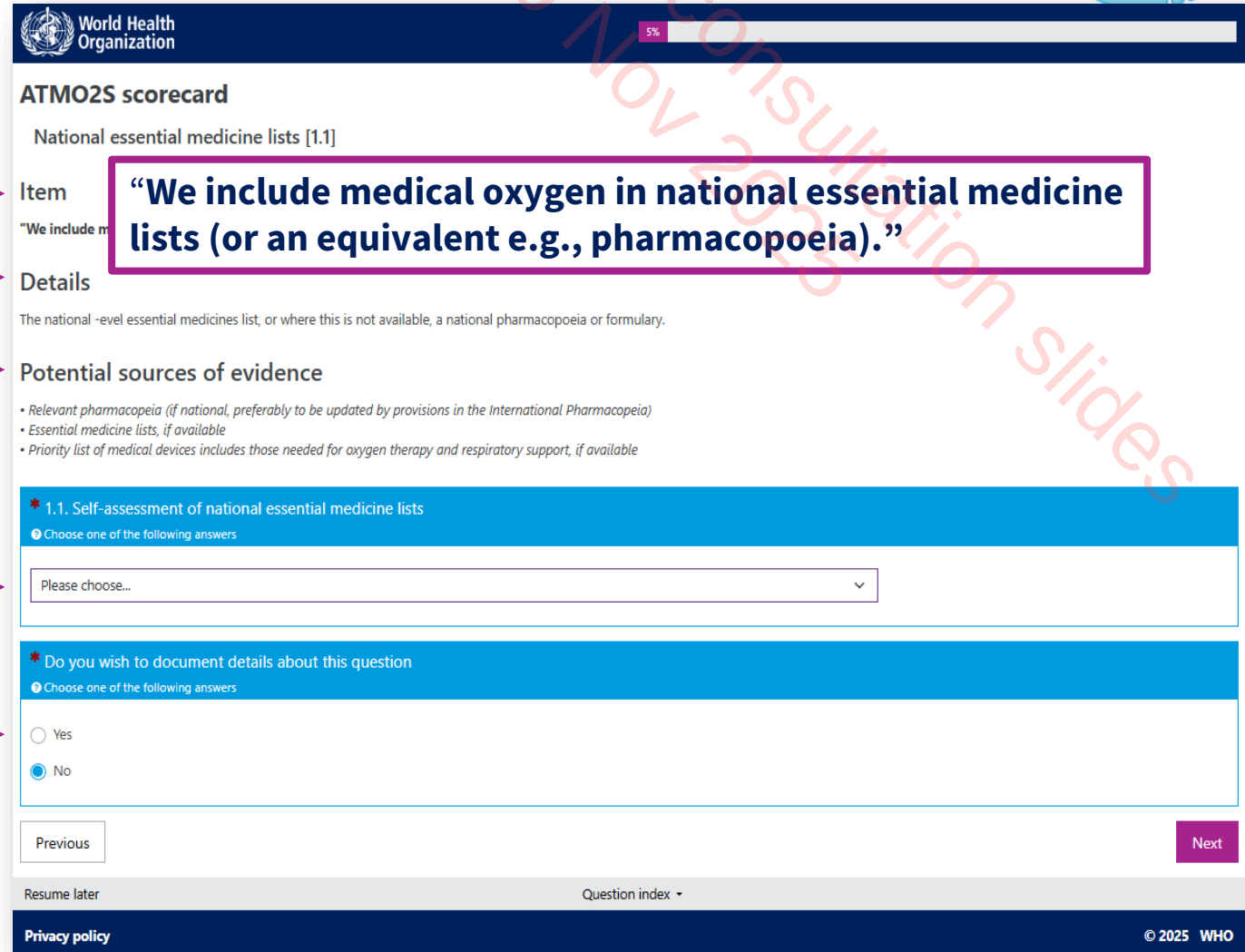
Each item is presented as a statement

Further details for each item

Suggestions of sources of evidence or data

Each question has three potential responses

Qualitative details may accompany the answer for user convenience



The screenshot displays the ATMO₂S scorecard interface. At the top, the World Health Organization logo and a progress bar (5%) are visible. The main heading is "ATMO₂S scorecard". Below it, the section "National essential medicine lists [1.1]" is shown. The "Item" section contains the statement: "We include medical oxygen in national essential medicine lists (or an equivalent e.g., pharmacopoeia).". The "Details" section provides context: "The national -level essential medicines list, or where this is not available, a national pharmacopoeia or formulary." The "Potential sources of evidence" section lists three bullet points: "Relevant pharmacopoeia (if national, preferably to be updated by provisions in the International Pharmacopoeia)", "Essential medicine lists, if available", and "Priority list of medical devices includes those needed for oxygen therapy and respiratory support, if available". The question "1.1. Self-assessment of national essential medicine lists" is followed by a dropdown menu with the text "Please choose...". Below this, a section asks "Do you wish to document details about this question" with radio button options for "Yes" and "No". Navigation buttons "Previous" and "Next" are at the bottom, along with "Resume later" and "Question index" links. A "Privacy policy" link is in the footer. A large, semi-transparent watermark "Pre-consultation slides" is overlaid diagonally across the page.

World Health Organization

5%

ATMO₂S scorecard

National essential medicine lists [1.1]

Item

"We include medical oxygen in national essential medicine lists (or an equivalent e.g., pharmacopoeia)."

Details

The national -level essential medicines list, or where this is not available, a national pharmacopoeia or formulary.

Potential sources of evidence

- Relevant pharmacopoeia (if national, preferably to be updated by provisions in the International Pharmacopoeia)
- Essential medicine lists, if available
- Priority list of medical devices includes those needed for oxygen therapy and respiratory support, if available

1.1. Self-assessment of national essential medicine lists

Choose one of the following answers

Please choose...

Do you wish to document details about this question

Choose one of the following answers

☐ Yes

☒ No

Previous

Next

Resume later

Question index

Privacy policy

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Item grading approach



Each item has 3 options available for a response:

“1” is associated with no or low completion of the item.

“2” is associated with partial completion of the item.

“3” is associated with completion of the item.

E.g. Item 1: **“We include medical oxygen in national essential medicine lists (or an equivalent e.g., pharmacopoeia).”**

1. Medical oxygen is not included in any essential medicine list.
2. Medical oxygen is included within an essential medicine list, but is not considered essential, or is not aligned with international standards.
3. Medical oxygen is included within a national essential medicine list, or equivalent.

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Available formats for data collection



• Online format

What: Online survey tool.

Why:

- Convenience of an online tool.
- Option to contribute to WHO reporting efforts using a systematic, structured approach.

Where:

- Accessible online
- Data housed centrally on WHO HQ server; data not publicly available (see details on 'data use' slide) .

• Paper format

What: an editable Microsoft Word file

Why:

- Allows full flexibility for the end-user.
- Can customize to suit contextual needs.
- If Member State does not want to share progress on WHA 76.3.

Where:

- Downloadable from WHO document repository
- Data and information stay with end-user

Output of structured data



Report of any responses submitted online (held on secure WHO server) can be generated and shared according to the requirements of the Member State, either:



as verbatim transcript; or



a summary report, available as structured CSV or alternative format

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Collating data to assess progress using ATMO₂S

Anticipated resource needs



The following might facilitate completion of ATMO₂S :

- Stakeholder meetings to:
 - Introduce scorecard and identify data sources [estimated 1-2 hours].
 - Review findings and finalize responses [estimated 2 hours].
- Human resources to:
 - Gather supporting evidence [depends on current data].
 - Complete the scorecard [30 minutes for mandatory elements, up to 2 hours if entering qualifying data].

If national medical oxygen scale-up plan (a 'Roadmap') efforts are under way, most of the supporting evidence will be readily available to answer ATMO₂S.

**Note: all time frames are estimates and will vary from one context to the next.*

Proposed data use

If online ATMO₂S is used



ATMO₂S results:

- Member States can demonstrate transparency regarding the maturity of their oxygen ecosystems and contribute to WHO reporting to the Executive Board.
- Member States can, as a collective, track performance from one reporting period to the next.
- Having transparent reporting allows Member States to effectively lead national oxygen scale up efforts, inform donors and steer global partners to better prioritize their support.

Can be

- aggregated with other Member States and used to report to the Executive Board

Will not

- Be shared, analyzed or displayed at the individual Member State level unless the MS chooses to make those data public (an option given on the scorecard).

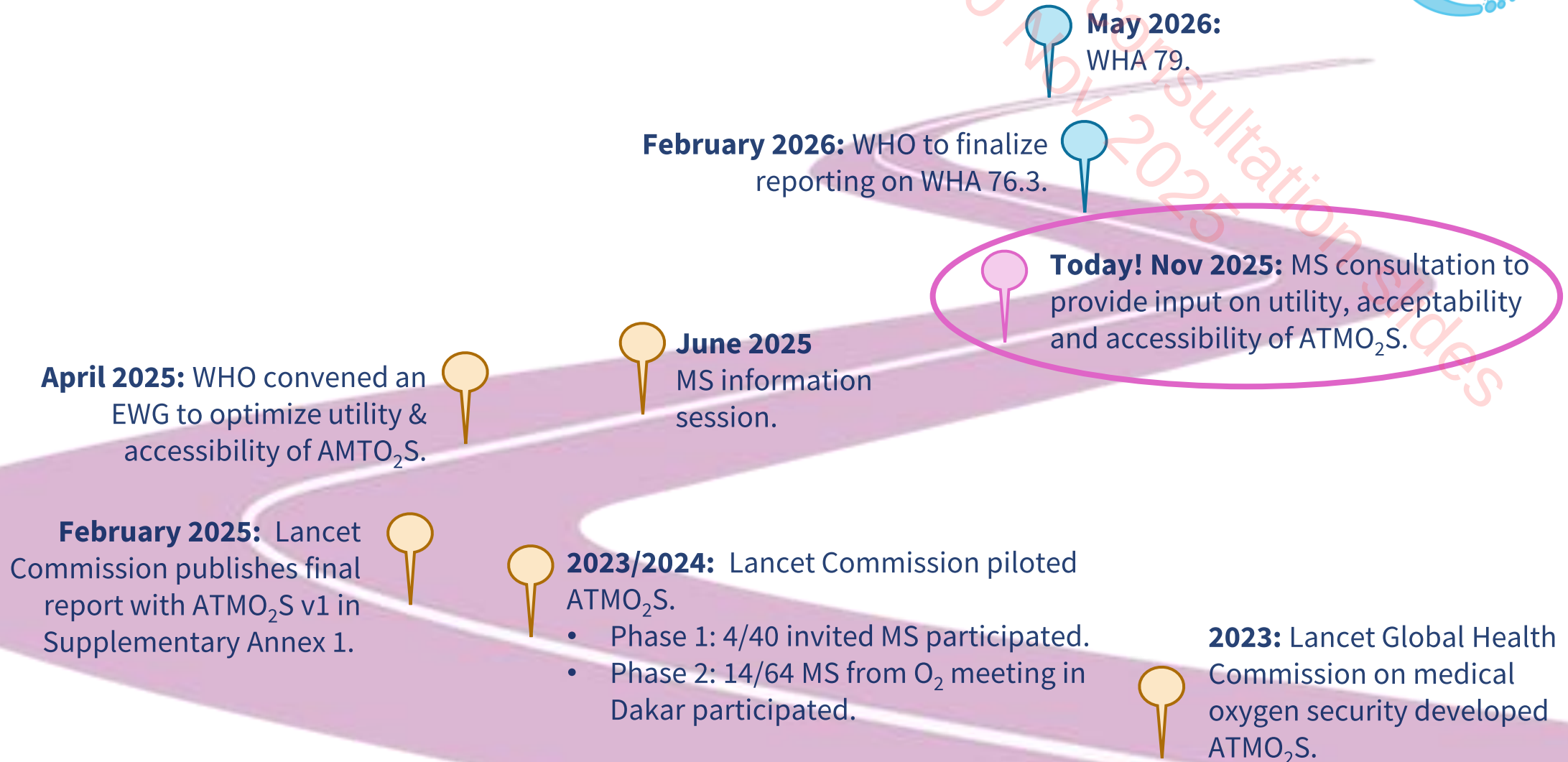
Timeline and next steps

Dr Janet DIAZ



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ATMO₂S development timeline



Next steps



Q1 2026

- WHO to finalize reporting on WHA resolution 76.3 for WHA 79.
- Opportunity for Member States to contribute to WHO reporting using ATMC DJ0.

Q2 2026

- WHO Secretariat delivers **1st progress report** to WHA79 on the implementation of the oxygen resolution.

Q2 2028

- WHO Secretariat delivers **2nd progress report** to WHA81 on the implementation of the oxygen resolution.

Q2 2030

- WHO Secretariat delivers **3rd progress report** to WHA83 on the implementation of the oxygen resolution.

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Questions



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Targeted questions to member states

- **Utility:** Do member states feel that ATMOS would be useful in tracking progress toward commitments made in WHA 76.3?
- **Accessibility:** is there a preference for an online survey, a digital file (which can also be printed) or both?
- **Feasibility:** Is its current structure and data use options clear and easy to understand?



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20 Nov 2025



Thank you

2

Annex A

Oxygen-related webpages & resources



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WHO oxygen websites



Health topic

The screenshot shows the WHO website's 'Oxygen' health topic page. The header includes the WHO logo, a 'Donate' button, and navigation links for Health Topics, Countries, Newsroom, Emergencies, Data, and About WHO. The main content area features a large image of a healthcare worker in a white coat and blue gloves attending to a patient. Below the image is a white box with the title 'Oxygen' and a 'Credits' link. A horizontal menu below the title has three tabs: 'Overview' (selected), 'Impact', and 'WHO Response'. The 'Overview' tab contains text about oxygen as a life-saving essential medicine, its use in treating respiratory illnesses like COVID-19 and pneumonia, and its essential role in surgery and trauma. It also mentions that vulnerable groups like older people, pregnant women, young infants, and newborns need oxygen therapy regularly. The text further explains that despite being an essential medicine, oxygen is a complex product produced in an industrial process or generated on-site using oxygen concentrators, which are regulated as medical devices. It notes that access to medical oxygen meets many challenges on availability, quality, affordability, management, supply, human resources capacity, and safety, and that WHO continuously develops resources and tools to overcome them. On the right side of the page, there is a vertical list of links: Fact sheet, Questions, Databases, Initiatives, Resolution, Training, and Technical. A large QR code is positioned to the right of this list.

World Health Organization

Home / Health topics / Oxygen

Oxygen

Credits +

- Overview
- Impact
- WHO Response

Oxygen is a life-saving essential medicine with no substitution. Healthcare professionals use oxygen to treat respiratory illnesses like COVID-19 and pneumonia. Oxygen is also essential for surgery and trauma. Vulnerable groups like older people, pregnant women, young infants and newborns need oxygen therapy regularly.

Despite being an essential medicine, oxygen is a complex product. Medicinal oxygen is produced in an industrial process applying good manufacturing practices (GMP) or is generated on-site using oxygen concentrators, which are in many legislations regulated as medical devices. Oxygen also requires a whole system to safely reach patients.

Due to their complexity, access to medical oxygen meets many challenges on availability, quality, affordability, management, supply, human resources capacity and safety. In face of these challenges, WHO continuously develops resources and tools to overcome them.

- Fact sheet
- Questions
- Databases
- Initiatives
- Resolution
- Training
- Technical v

Initiative

The screenshot shows the WHO website's 'Access to Oxygen Initiative' page. The header is identical to the health topic page, featuring the WHO logo, a 'Donate' button, and navigation links. The main content area has a dark blue background with a stylized illustration of oxygen tubing and a mask. The title 'Access to Oxygen Initiative' is prominently displayed in white text. A large QR code is located on the right side of the page. The background of the slide also features a large, faint, red watermark that reads 'Pre-consultation slide 20 Nov 2023'.

World Health Organization

Home / Initiatives / Oxygen Access Scale Up

Access to Oxygen Initiative

External links: GO₂AL & Lancet



**Global Oxygen Alliance**

Ensuring affordable and equitable access to medical oxygen for those in need

[FIND OUT MORE](#)



The **Global Oxygen Alliance (GO₂AL)** is a multistakeholder collaborative consisting of 20 organizations and delegations that volunteered to join the Alliance to work towards a collective vision to increase oxygen access in LMICs. It is co-chaired by Unitaïd and The Global Fund and vice-chaired by PAHO/WHO and the Africa Centres for Disease Control and Prevention and managed by Unitaïd, WHO and UNICEF (the Coordination Group). It is not a legal entity or funding mechanism.





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COMMISSIONS | GLOBAL HEALTH

Reducing global inequities in medical oxygen access: the *Lancet* Global Health Commission on medical oxygen security

Published: February 17, 2025

Executive summary

Oxygen therapy is lifesaving for people with acute illness, life-sustaining for people undergoing anaesthesia and surgical care, and life-enhancing for people with chronic respiratory failure. The COVID-19 pandemic shone a spotlight on the long-standing inequities in access to medical oxygen globally. This Commission situates medical oxygen as a multifaceted system, a vital service, and an essential medicine, and presents new estimates of global medical oxygen need, the coverage gap, and the cost of closing it. Going further, it sets out strategies for building resilient medical oxygen production, storage, distribution, and delivery systems, and introduces a new national policy scorecard and oxygen coverage indicators. Centring oxygen investments around national plans and health-systems strengthening will ensure that oxygen is integrated into all health services, benefiting all patients, everywhere.



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Commission

[Open Access](#)
[Reducing global inequities in medical oxygen access: the *Lancet* Global Health Commission on medical oxygen security](#)
Hamish R Graham, Carina King, Ahmed Ehsanur Rahman, Freddy Eric Kitutu, Leith Greenslade, Masooma Aqeel, et al.
The Lancet Global Health, Vol. 13, No. 3, e528-e584

Comments

[Open Access](#)
[Realising the benefits of oxygen through essential emergency and critical care](#)
Tim Baker, Karima Khalid, Alhasan Dattil Mohammed, Alexa Wharton-Smith, Ganbold Lundeg, Rob Mitchell, et al.
The Lancet Global Health, Vol. 13, No. 3, e387-e388

[Open Access](#)
[The crucial role of industry in increasing access to medical oxygen](#)
Jayasree K Iyer, Emma Cahuzac, Zachary Katz, Kaodili Udeh, Noha El-Ghobashy, David Lowrance, et al.
The Lancet Global Health, Vol. 13, No. 3, e389-e391

[Open Access](#)
[Medical oxygen: a necessity or a luxury in humanitarian settings?](#)
Aurélien Godard, Revati Phalkey, Susan Shepherd, Sara Rossi, Mesfin Teklu Tessema, James S Lee
The Lancet Global Health, Vol. 13, No. 3, e392-e393

[Open Access](#)
[Global access to medical oxygen: embedding nursing involvement](#)
Di Brown, Dines Birhane, Michael Lawi, Ousse Lobo, Patrick Kimutai Too, Keshini Naidu, et al.
The Lancet Global Health, Vol. 13, No. 3, e394-e395

[Open Access](#)
[Investing in local capacity and grassroots innovation to bridge gaps in medical oxygen access and security](#)
Millicent Alooh, Gerald Paul Douglas, Tadesse Waktoza Gemesse, Phoebe Nelima Khagame, June Kazira Madete, Varun Manhas, et al.
The Lancet Global Health, Vol. 13, No. 3, e399-e400

Podcast

In conversation with... Carina King and Ahmed Ehsanur Rahman

Carina King and Ahmed Ehsanur Rahman outline the purpose and main findings of the new *Lancet* Global Health Commission on medical oxygen security and their hopes for its impact.

0:00 / 0:00

Case studies

[Bangladesh Country Case Study](#)
[India Country Case Study](#)



Annex B

WHO progress on WHA resolution 76.3



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Advocacy



(1) to continue to highlight medical oxygen as an essential medicine and to highlight the related priority medical devices and infrastructure that must be available to all patients who need them as part of quality health systems contributing to universal health coverage;



- WHO continues to promote medical oxygen as an essential medicine and the criticality of scale up for pandemic preparedness at high profile global health events e.g. World Health Assembly, World Health Summit.

- WHO has hosted global oxygen events:
 - National medical oxygen scale-up framework – Road to oxygen access
 - Virtual series for developing national medical oxygen scale-up plans
- WHO co-hosts the Global Oxygen Alliance (GO₂AL).

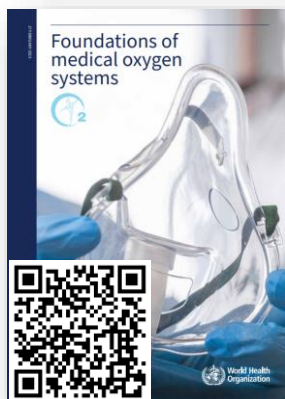


Tools and resources (1 of 2)



(2) to support Member States to improve access to medical oxygen by developing guidelines, technical specifications, forecasting tools, training materials and other resources, and by providing technical support especially designed to meet the needs of health systems in developing countries;

New products:



Under development:

Self-assessment checklist for oxygen generation systems installed in health facilities (estimated publication Q3)

PART I: General information for oxygen generation systems installed in health facilities

PART I: General information for oxygen generation systems installed in health facilities									
Facility									
1	Name of facility	Country	Province	City/ town	District	Street	Section	Allotment	Building and floor level
2	Address of facility								Postal code
3	Quality management responsible								
Equipment: Oxygen generation system components, high-pressure cylinders and MGPS									
4	Equipment	Manufacturer (name & country)	Brand/ make	Model	Serial number	Rated output capacity (indicate units)	Vendor (responsible for sale and/or installation) (name & country)	Contractor (responsible for installation and/or maintenance) (name & country)	Donor (if applicable)
5	Air compressor								
6	Air dryer								
7	Oxygen generator (PSA, VSA, VPSA)								
Equipment: cylinder filling station and high pressure cylinders									
8	Booster compressor								
9	High-pressure cylinders								
Equipment: MGPS									
10	MGPS - full coverage (i.e. all medical wards)								
11	MGPS - partial coverage. If so, indicate medical wards that are absent.								
Scope of manufacturing, storage and distribution activities									
12	On-site distribution (only this health facility)								
13	Off-site distribution (other facilities)								
14	List any outsourcing operational activities								
15	Name of supplier(s) for all outsourced operational activities								
16	Site master file (SMF)								

Tools and resources (2 of 2)



(2) to support Member States to improve access to medical oxygen by developing guidelines, technical specifications, forecasting tools, training materials and other resources, and by providing technical support especially designed to meet the needs of health systems in developing countries;

OpenWHO oxygen-related courses:



Oxygen ecosystem & oxygen systems

Clinical management of C-19 respiratory equipment



Opportunity for easy-access learning: OpenWHO is free, self-paced, and requires no registration.

International Pharmacopoeia:

Updated monograph with

- Oxygen 93%
- Oxygen 98%
- Oxygen 99.5%



Will be published in the upcoming 13th edition of Ph.Int.

Regulations (1 of 2)



(3) to promote the convergence and harmonization of regulations governing the provision of medical oxygen and access to safe, effective and quality assured medical oxygen sources and devices that meet standards set by WHO and competent authorities;

Existing:

WHO has extensive GMP guidelines, with **GMP for medicinal gases** directly applicable to medical oxygen (see [TRS 1044 - Annex 5](#)).

Annex 5

WHO good manufacturing practices for medicinal gases

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17. Storage and distribution	
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Regulations (2 of 2): Regulatory Considerations in the Life Cycle of Medical Oxygen

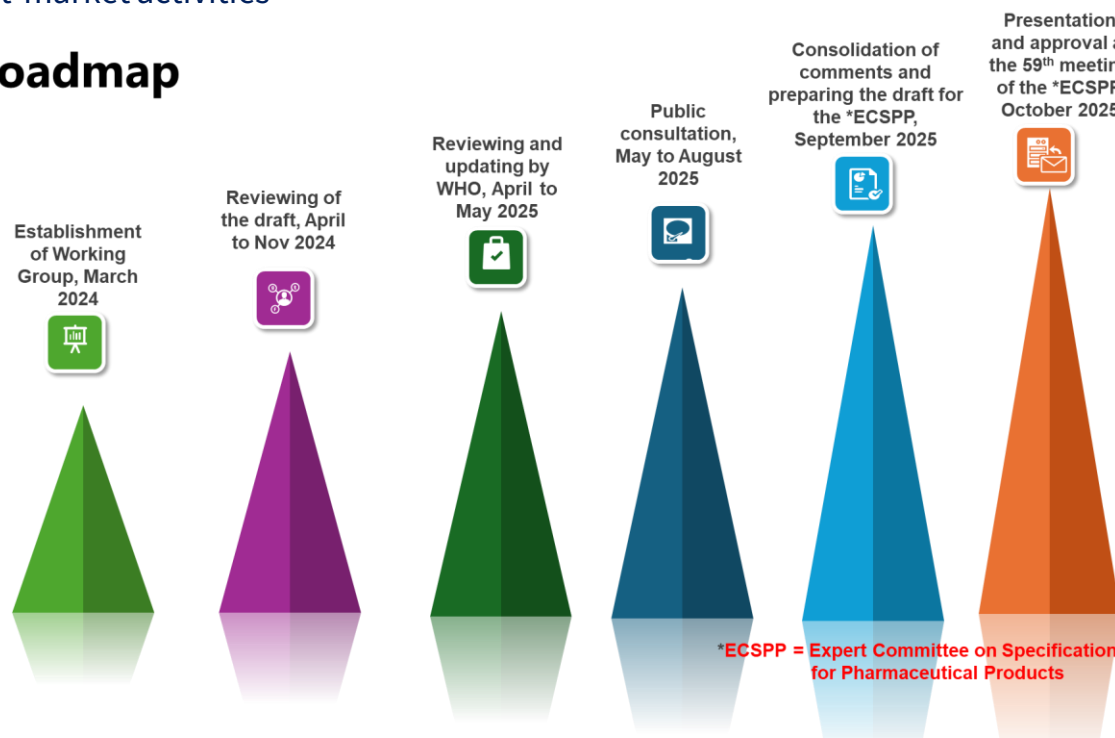
Purpose: provides recommendations for NRAs on the regulation of medical oxygen throughout its life cycle.

It also serves to help manufacturers, importers, and distributors understand the regulatory requirements needed to ensure that medical oxygen meets established quality and safety standards, ensuring its effective delivery to patients.

Scope: covers the entire life cycle of medical oxygen, from pre-market to post-market activities

Final document

Roadmap



After public consultation, ECSP has approved the final document. It will be published in Q2 2026.

Regulatory considerations for the life cycle of medical oxygen	
For any further information or request, please send an email to the Norms and Standards for Pharmaceuticals (NSP) Team at WHO, at email nsq@who.int .	
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Sustainable financing



(4) to support Member States' efforts to provide adequate, predictable and sustainable financing for affordable medical oxygen and for the trained workforce required to install, operate and maintain medical oxygen systems safely;

Costing and financing was covered in two parts across the WHO virtual workshop series for developing national medical oxygen scale-up plans.

Part 1: Costing national medical oxygen scale-up



Part 2: Sustainable financing



Topics included:

- Using S.M.A.R.T. metrics.
- Taking a 'whole of system' approach.
- Leveraging, adapting and applying existing tools.
- Optimizing capital investment projects.
- Considerations to sustain systems.
- Looking for potential existing sources of funding.

Pandemic preparedness & response



(5) to include medical oxygen supply in WHO-related pandemic, preparedness and response efforts;



On 20 May 2025, the pandemic agreement was adopted. WHO encourages Member States to incorporate oxygen in all efforts related to pandemic prevention, preparedness and response per Chapter II articles.

Oxygen access is part of WHO's Health Emergency Preparedness, Response and Resilience (HEPR) strategy and the core capability of Safe and Scalable Care.

Additional tools and resources to leverage for inclusion of oxygen are the National Action Plan for Health Security (NAPHS), Joint External Evaluation (JEE); the State Party Self-Assessment Annual Reporting (SPAR) tool.

Innovation (1 of 2)



(6) to review medical oxygen innovations and to promote sharing of the innovations among Member States on voluntary and mutually agreed terms to increase access to quality, affordable and reliable supplies of medical oxygen and related diagnostic tools and therapies in low-resource settings;



Access to appropriate, affordable, effective, and safe health technologies is paramount, especially in low-resource settings.

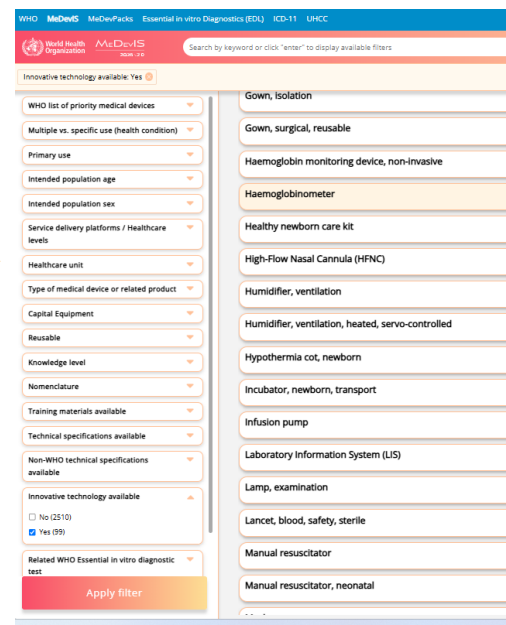
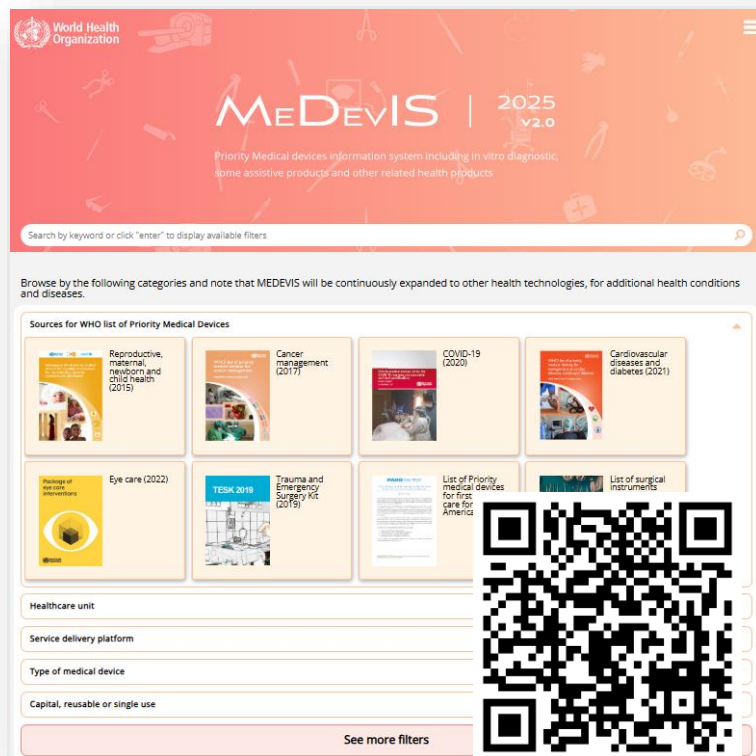
In 2024, WHO published the 7th edition of the **WHO compendium of innovative health technologies for low-resource settings**.

- Most editions include products related to oxygen.
- Includes both commercially available solutions and prototypes.
- Serves as a catalyst for increased interaction among stakeholders: MOH, procurement officers, donors, developers, biomedical engineers, clinicians and users.
- Aims to drive use of innovative health technology and expand global access, particularly for low-resource settings for populations in need.

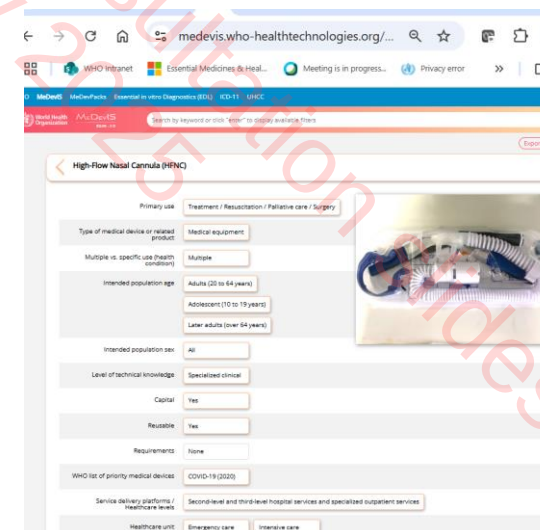
Opportunity: Member States should encourage innovation at a national-level.

Innovation (2 of 2): MeDevIS

MeDevIS digital platform – WHO's priority medical devices information system, includes innovative technologies for oxygen.



Search for devices by healthcare unit, delivery platform, or type. MeDevIS maps out device-specific information including all WHO-related resources.



Medical oxygen ecosystem devices are included in MeDevIS.

Research



(7) to establish, as needed, a research agenda regarding the use of medical oxygen;

WHO is establishing a respiratory support collaborative

Global Regions

World Health Organization

Health Topics Countries Newsroom Emergencies

Home / Newsroom / Article / Call for expression of interest: Global O2ptimization of respiratory support collaboration

Call for expression of interest: Global O2ptimization of respiratory support collaboration

28 June 2024 | Expression of interest

Oxygen is a basic human need. Supplemental oxygen is the mainstay of care for patients with COVID-19 and of other severe acute respiratory tract infections (SARI). In many countries, SARIs are a major cause of mortality and morbidity. The experience from the COVID-19 pandemic has revealed two uncomfortable truths:

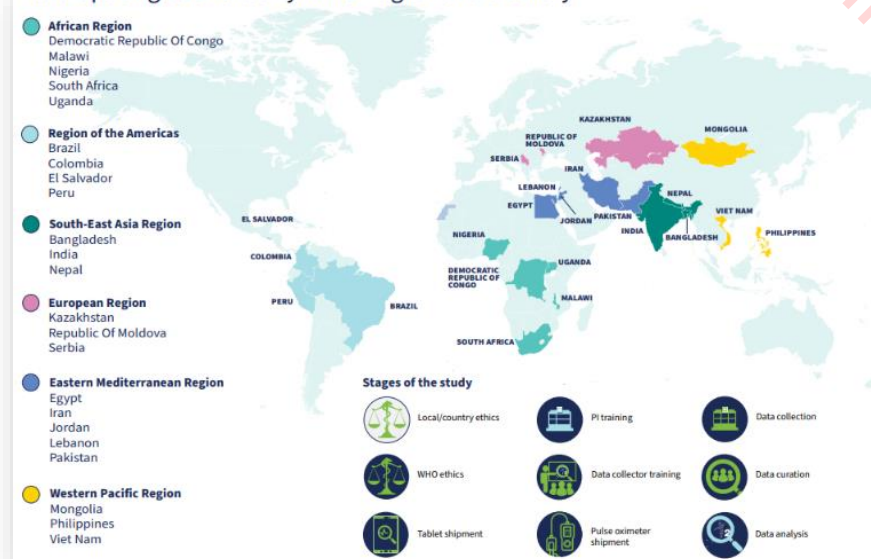
- Medical oxygen is a scarce resource, particularly in times of extraordinary demand.

Opportunity for Member States collaboration.

Completed (in publication)

WHO O₂CoV₂: Oxygen requirements and approaches to respiratory support in patients with COVID-19 in low- and middle-income countries – a WHO observational study

Participating countries by WHO Region and country



Data



(8) to collect and analyse data and to share best practices in closing gaps to medical oxygen access in health systems;

Quality data is needed for research, and for evidence-informed policy and health care. **The Lancet Global Health Commission** on medical oxygen security hosts the most comprehensive and current oxygen data and statistics.



While much data has been collected by Member States, partners and academics, gaps remain.

WHO data-related products / activities:

- Developing KPIs for the medical oxygen ecosystem
- WHO co-leads GO₂AL's recently launched M&E Working Group



Non-state actor consultation



(9) to consult with relevant non-State actors regularly on all aspects of access to medical oxygen and to enable partnerships between non-State actors and Member States in the design and delivery of medical oxygen solutions;

- In development of oxygen-related products, WHO invites non-State actors to contribute. Examples include:
 - Technical specifications.
 - Self-inspection checklist (forthcoming product).
- WHO co-hosts the Global Oxygen Alliance (GO₂AL).
 - GO₂AL vision of making safe, quality medical oxygen available, affordable and accessible for all.
 - GO₂AL promotes collective efforts among 19 health and development agencies, funding mechanisms, industry, civil society and communities and links them to Member States.



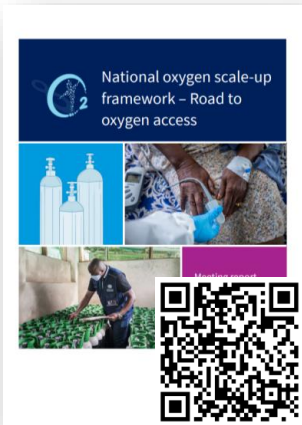
Stakeholder engagement



(10) to promote mutual support, assistance and cooperation among all stakeholders to increase access to medical oxygen;

WHO has hosted significant global oxygen events:

- National medical oxygen scale-up framework – Road to oxygen access, 14-16 May 2024, Dakar, Senegal.
- Virtual workshop series for developing national medical oxygen scale-up plans (See event page for recordings).



WHO is actively engaged:

- Monthly world oxygen collective meetings (formerly EBC) hosted by the COPD foundation.

Member States are welcome to join in the monthly world oxygen collective meetings.
Great opportunity to connect, learn and share.

Reporting



(11) to report on progress in the implementation of this resolution to the Health Assembly in 2026, 2028 and 2030.

- WHO will continue to track progress on actions and activities related to the Secretariat actions.
- WHO proposes to host the Access to medical oxygen scorecard (ATMO₂S) to support reporting on Member State progress on WHA resolution 76.3 in 2026, 2028, and 2030

Opportunity for Member States to provide input
on relevance, utility and accessibility of ATMO₂S.

Annex C

ATMO₂S Questions



Pre-consultation slides
20 Nov 2025



Item 1.1: National essential medicine list

"We include medical oxygen in national essential medicine lists (or an equivalent, e.g. pharmacopoeia)."

Choose one of the following answers:

1. Medical oxygen is not included in any essential medicine list.
2. Medical oxygen is included within an essential medicine list, but is not considered essential, or is not aligned with international standards.
3. Medical oxygen is included within a national essential medicine list, or equivalent.

Item 1.2: National strategic and operational health plans



"We have included medical oxygen in national strategic and operational health plans (e.g. as a national oxygen strategy), which includes realistic costings and a financing plan."

Choose one of the following answers:

1. Medical oxygen is not currently covered by any national health strategy or plan.
2. A strategy document exists, but it lacks core elements, such as costing or distribution planning.
3. A fully costed national oxygen strategy for the current time period is available.

Item 1.3: Emergency and disaster preparedness and response plans



"We include medical oxygen in our approved national emergency and disaster preparedness and response plans and drills."

Choose one of the following answers:

1. A pandemic preparedness plan is not in place, or if it is, medical oxygen is not included in the planning and response.
2. A pandemic preparedness plan exists, but medical oxygen is insufficiently addressed (e.g. lack of surge planning).
3. A pandemic preparedness plan exists, and medical oxygen is adequately considered across multiple scenarios.

Item 1.4: Coordination mechanisms



"We have coordination mechanisms in place across state and non-state actors to support effective partnerships, evidence use, advocacy and leveraged capabilities to increase and sustain oxygen access."

Choose one of the following answers:

1. No clear mechanisms to support effective coordination of oxygen at a national level.
2. Some coordination mechanisms in place, but their ability to impact oxygen access is limited (e.g. lack reach, partially active, lack leadership).
3. Several currently active mechanisms exist to support coordination, with a person(s)/agency responsible for national oxygen coordination.

Item 1.5: National health care infrastructure policy and oxygen integration



"We have a national policy or planning document that considers the stepwise integration of medical oxygen and other medical gas systems into the construction of health care infrastructure."

Choose one of the following answers:

1. Health infrastructure policy does not exist, or if it does, it makes no allowance for medical oxygen or other medical gas systems.
2. Health infrastructure policy exists, but there are unaddressed issues of integration of medical oxygen and other medical gas systems.
3. Comprehensive health infrastructure policy with integration of medical oxygen and other medical gas systems.

Item 2.1: Sufficient capacity in routine conditions



"We can produce or acquire sufficient medical oxygen supply to meet need during routine conditions."

Choose one of the following answers:

1. Lack of systems in place to determine if oxygen supply has been sufficient, or multiple instances of oxygen being unavailable to meet needs in the prior calendar year.
2. Systems in place to track and report medical oxygen production, distribution and need but supply has inconsistently met need over the prior calendar year.
3. Systems are in place to track and report medical oxygen production, distribution and need, and that supply has met need over the prior calendar year.

Item 2.2: Capacity for surge demand



"We can promptly increase medical oxygen supply to meet surges in demand in national and subnational-level demands (e.g. outbreaks and disasters)."

Choose one of the following answers:

1. Guidelines and policies to support surge capacity are not available or multiple instances of oxygen being unavailable to meet needs in the prior calendar year.
2. Medical oxygen is included in plans and guidelines, but for limited scenarios or with insufficient coverage for surge capacity, or supply has inconsistently met need over the prior calendar year.
3. Medical oxygen is included in plans and guidelines for various different scenarios that would require surge capacity, and supply has met need over the prior calendar year.

Item 2.3: Quantification of need



"We have an up-to-date quantification of national medical oxygen need and this is linked to production and procurement."

Choose one of the following answers:

1. Quantification of medical oxygen need is not conducted.
2. Quantification of medical oxygen need is conducted, but is out of date or does not link to production and procurement capacity.
3. Quantification of medical oxygen need is up to date, and includes subnational variation.

Item 2.4: Guidance and contracts



"We have guidance documents and contracts to connect production (e.g. gas companies, distributors) and end-user organizations (e.g. hospitals, district health boards) at national and subnational levels."

Choose one of the following answers:

1. Guidelines for negotiating contracts do not exist at the national level.
2. Guidelines for negotiating contracts exist, but they do not consider different health system level needs.
3. Guidelines for negotiating contracts exist at the national level, and all levels of the health system are covered by this.

Item 2.5: Regulatory processes



"We have regulatory processes for ensuring medical oxygen, respiratory care medical devices and associated equipment meet quality and safety standards and accountability mechanisms for those responsible for supply."

Choose one of the following answers:

1. Regulatory standards for medical oxygen, respiratory care medical devices and associated equipment are not present.
2. Regulatory instruments and standards for medical oxygen, respiratory care medical devices and associated equipment exist but they are insufficient or lack oversight.
3. Regulatory instruments and standards for medical oxygen, respiratory care medical devices and associated equipment exist and there is active oversight in the supply chain.

Item 2.6: Safe distribution



"We have mechanisms for safe distribution of medical oxygen that cover all facilities, to ensure minimal gaps in availability at the point of care for all patients in need of medical oxygen."

Choose one of the following answers:

1. Medical oxygen distribution mechanisms are not established, or are not covered by environmental and occupational safety standards.
2. Occupational and environmental health cover medical oxygen distribution but there are gaps in distribution systems.
3. Occupational and environmental health cover medical oxygen distribution and distribution systems cover all facilities.

Item 3.1: Budget allocations



"We have budget allocations for the key priorities within national medical oxygen plans and are able to access and release funds in a timely way."

Choose one of the following answers:

1. Medical oxygen systems were not included in the annual health budget, or funds allocated for oxygen were not realized.
2. Medical oxygen systems were only partially included in the annual health budget (i.e. key components of the oxygen plan were missing), and funds were not fully realized.
3. Medical oxygen systems were fully covered in the annual health budget, and funds were largely realized.

Item 3.2: Procurement and tendering processes



"Our procurement and tendering processes for medical oxygen supplies, services and devices are transparent and reflect a competitive market price."

Choose one of the following answers:

1. National policies on public tenders do not exist or are insufficient [inadequate?].
2. National policies on public tenders exist, but supportive mechanisms to ensure a competitive market are not available or functional.
3. National policies on public tenders exist, and mechanisms to ensure they are applied in a transparent and competitive way are functional.



Item 3.3: Affordability to providers

"We have mechanisms in place that ensure the provision of medical oxygen services at the point of care is affordable to providers and uses appropriate technologies (devices, spare parts, consumables, servicing)."

Choose one of the following answers:

1. National formulary does not exist for either drugs or medical devices.
2. National formulary exists for either drugs or medical devices, but not for both.
3. National formulary exists for both drugs and medical devices.

Item 3.4: Mechanisms for affordability



"We have mechanisms in place that ensure oxygen is affordable to all patients who need it (e.g. insurance, financial assistance, subsidies)."

Choose one of the following answers:

1. Oxygen services are not covered by national insurance or financial protection policies, and can result in catastrophic health expenditure.
2. Oxygen services can incur out-of-pocket costs to patients, which are only partially covered or only for parts of the population.
3. National health system is free at the point of care, or comprehensive financial protections are in place and include oxygen services.

Item 4.1: Trained health care workers



"We have sufficient trained and equipped health care workers to provide medical oxygen services safely and effectively to patients."

Choose one of the following answers:

1. Below 5 health care workers per 1000 AND training in oxygen and oximetry is not routinely, or ever, conducted, or data on health care worker density are not available.
2. Below 5 health care workers per 1000 population OR training in oxygen and oximetry is not routinely conducted.
3. A minimum of 5 health care workers per 1000 population, and these are distributed effectively at subnational and health system levels, with training on oxygen and pulse oximetry.

Item 4.2: Trained engineers and technicians



"We have sufficient competent biomedical engineers/technicians, with access to appropriate equipment and supplies, to manage medical oxygen technology safely and effectively."

Choose one of the following answers:

1. Data on biomedical engineer density are not available AND there is considerable subnational variation and inadequate coverage in biomedical engineer workforce. No strategic plan for increasing workforce capacity.
2. Data are available on biomedical engineers nationally but there remains considerable subnational variation and inadequate coverage in the biomedical engineer workforce. Presence of a strategic plan for increasing workforce capacity.
3. Data are available on biomedical engineers nationally and subnationally, and these are distributed effectively at subnational and health system level. A strategic plan for increasing workforce capacity exists.

Item 4.3: Monitoring and evaluation



"We have indicators for monitoring and evaluating medical oxygen systems, including financing, supply, need, patient access and quality of care (safety and appropriateness) at national, subnational and health facility levels."

Choose one of the following answers:

1. Medical oxygen systems are not currently included in a national health monitoring and evaluation framework.
2. Monitoring and evaluation framework exists, but it does not cover all elements of the medical oxygen system, or has not been translated into implementation.
3. Monitoring and evaluation framework exists, which covers all aspects of the medical oxygen system, and has been adopted into routine data systems and is used in annual evaluation reports.

Item 4.4: Public health information



"We have reliable public health information being communicated to the population about medical oxygen services available."

Choose one of the following answers:

1. Public health materials on medical oxygen are not available through the Ministry of Health or public health agency.
2. Public health materials are available, but are out of date, not tailored to the specific needs of the country, or are inaccessible to part of the population.
3. Up-to-date public health materials available (in multiple languages where appropriate) and tailored to the different needs of communities, patients and providers.

Item 4.5: Appropriate use



"We have systems in place to ensure appropriate use of oxygen among those who need it."

Choose one of the following answers:

1. No formal systems or data available to demonstrate appropriate use of oxygen.
2. Guidelines exist for the clinical use of medical oxygen, but systems/data for ensuring they are safely and effectively used are lacking.
3. Guidelines exist for clinical use of medical oxygen, and systems for ensuring these are applied safely and effectively are in place.

Item 4.6: Research and innovation



"We promote research and innovation, including translational research, to improve access, quality and safety of affordable medical oxygen and related respiratory care devices and diagnostics."

Choose one of the following answers:

1. Minimal or no oxygen research is undertaken, and oxygen is not included in relevant research agendas.
2. Some oxygen research is undertaken, but there is limited engagement of researchers/innovators, or a lack of research prioritization.
3. Oxygen is included in relevant research agendas, with active engagement of researchers/innovators.