THE *LANCET GLOBAL HEALTH* COMMISSION
MEDICAL OXYGEN SECURITY

HISTORIC OPPORTUNITY TO DRIVE PROGRESS ON ACCESS TO MEDICAL OXYGEN AT 78th UN GENERAL ASSEMBLY

15 September 2023

The Lancet Global Health Commission on Medical Oxygen Security encourages the 194 Member States of the United Nations gathered at the 78th General Assembly to ensure that access to medical oxygen is adequately addressed at the three high-level health meetings on Pandemic Prevention, Preparedness, and Response (PPPR), Universal Health Coverage (UHC), and Tuberculosis (TB) from 20 to 22 September 2023.

Oxygen is a life-saving **essential medicine** with no substitute. Healthcare professionals use oxygen to treat both acute and chronic respiratory illnesses like **COVID-19**, **pneumonia**, COPD and many more, and for **surgery** and trauma care. Vulnerable groups like **pregnant women**, **newborns and children**, and **older people** need oxygen therapy regularly.

When Member States met at the World Health Assembly (WHA) on 26 May 2023, they unanimously adopted the first-ever resolution dedicated to **Increasing Access to Medical Oxygen**, underscoring its central role in the PPPR, UHC, and TB agendas. The resolution not only affirms that increasing access to medical oxygen will accelerate progress towards the Sustainable Development Goal (SDG) for UHC (target 3.8) and in the treatment of AIDS-, tuberculosis- and malaria-related conditions (target 3.3), but it also urges its inclusion in global and national pandemic preparedness and response efforts and other health emergencies, including infectious disease outbreaks.

This recognition by the WHA reflects the massive burden of death and disability caused by a basic lack of access to medical oxygen. The **Global Burden of Disease** estimates that conditions requiring oxygen cause almost 25 million deaths each year, including nine million from heart disease, four million from injuries, four million from lower respiratory infections and tuberculosis, three million from COPD, two million from lung cancer, and two million from neonatal disorders. There are more than **seven million children** with pneumonia alone who enter low- and middle-income health facilities with a need for medical oxygen each year, but **studies** suggest just one in five will actually receive it.

But it was during the COVID-19 pandemic that the world woke up to the horror of a basic lack of access to medical oxygen. Just how many of the estimated **seven million official COVID-19 deaths** could have been prevented with adequate supplies of medical oxygen we do not know, but studies have revealed that many COVID-19 patients died without ever receiving it. For example, a **study** of COVID-19 deaths in 64 intensive care units across ten African countries found that one in two patients died without medical oxygen. In early 2021, the daily need for medical oxygen to treat COVID-19 patients across low- and middle-income countries peaked at 30 million cubic meters; rising tenfold in some countries in in the space of weeks.

And how can we ever forget the experiences of so many patients and families during the height of the pandemic; **standing in line for hours** waiting to fill oxygen cylinders; **paying exorbitant prices** to buy oxygen on the private market; **lying on gurneys in hospital parking** lots unable to be admitted because there was no oxygen; of **desperate doctors taking to social media** to beg for oxygen for their patients and of **vulnerable newborns being airlifted** to hospitals where the NICUs had oxygen.

Despite the considerable support that has been provided to many countries to help them meet the surging needs for medical oxygen in the last three years - much of it from the **ACT-A Accelerator Oxygen Emergency Taskforce** - lack of access to quality medical oxygen services still plagues most health systems in low- and middle-income countries as well as appropriate selection, procurement, maintenance, and use of related medical devices**.** This is elevating mortality and undermining quality of life, at the same time increasing the risk of mass fatalities in the face of another COVID-like pandemic, which **disease forecasters** say is almost 30% likely to happen in the next decade.

Accordingly, we appeal to the governments charged with the responsibility of co-facilitating each of the high-level UN General Assembly High-level health meetings - Morocco and Israel (PPPR), Thailand and Guyana (UHC), and Poland and Uzbekistan (TB) - to ensure that medical oxygen is included in their deliberations and reflected in the Political Declarations that will be released. Lack of oxygen access directly impacts each of the three global health issues – pandemics and universal health coverage and TB.

The pandemic demonstrated the role of oxygen in preventing mortality and oxygen will remain essential in future pandemics that will likely be driven by respiratory pathogens. Universal health coverage should include the right to oxygen therapy for a wide spectrum of acute and chronic illnesses, especially for children pneumonia remains a major cause of mortality in part due to lack of access to effective oxygen therapy. And oxygen is an essential component for managing TB lung disease, both for acute pulmonary disease as well as for post-TB chronic lung disease which is increasingly recognised to be common.

Due acknowledgement of the role of medical oxygen by the PPPR, UHC, and TB meetings will support the new efforts underway to help countries increase access to oxygen to serve patients now and prepare for the next pandemic. This includes the new **Global Oxygen Alliance** (GO_2AL), led by Unitaid, the Global Fund, the Africa CDC, and the Pan American Health Organization (PAHO), and supported by WHO, UNICEF and many other global health agencies and donors, and the **World Bank Pandemic Fund**.

We include suggestions for how to include oxygen in the declarations from the three high-level meetings that are aligned with the WHA Oxygen Resolution, the **WHO Convention, agreement or other international instrument on pandemic prevention, preparedness and response**, and the body of work published by the **Independent Panel for Pandemic Prevention, Preparedness, and Response**.

We also hope that the *Lancet Global Health* Oxygen Commission's report in 2024 will make a major contribution to ensuring that health systems everywhere can supply every patient with the medical oxygen they need to survive and thrive.

The world has already been blindsided once by not focusing on medical oxygen access, with tragic results. It is our collective duty to ensure that we do not make the same mistake again.

What is the Lancet Global Health Commission on Medical Oxygen Security?

To inform and accelerate the development of health systems that can provide medical oxygen to every patient who needs it now, and in the likely event of another respiratory pandemic, The Lancet Global Health Oxygen Commission was ***announced*** *in September 2022.*

The Commission plans to report in 2024 on four major issues, (1) how to define and measure the need for medical oxygen, (2) how to define and measure oxygen access, (3) how to plan the right mix of oxygen solutions and personnel for different national health systems, and (4) how to secure the financing and political support to deliver transformational change. These themes will be applied across four cross-cutting pillars addressing all levels of health care, patient populations, relevant indications for oxygen therapy, and various health systems issues.

The Commission looks forward to collaborating closely with Member States and the GO_2AL to inform and strengthen the implementation of the 31 actions outlined in the WHO resolution and appeals to all stakeholders to play a role in the historic effort to ensure that no patient ever again dies for lack of access to medical oxygen.

The Lancet Global Health Commission on Medical Oxygen Security is led by 20 Commissioners and guided by a team of 40 Advisors and an Executive Committee including co-hosting organizations — Makerere University in Uganda, icddr,b in Bangladesh, and the University of Melbourne and the Murdoch Children's Research Institute in Australia — with support from the Every Breath Counts Coalition. To ensure wide input to the work of the Commission, a global network of Oxygen Access Collaborators - open to all - meets monthly.

For a list of Oxygen Commissioners and Advisors, click ***here****.*

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THE *LANCET GLOBAL HEALTH* COMMISSION
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Political Declaration of the United Nations General Assembly High-level Meeting on Pandemic Prevention, Preparedness and Response

Co-facilitated by the Governments of Morocco and Israel

20 September, 2023

The **WHO Convention, agreement or other international instrument on pandemic prevention, preparedness and response** (WHO CA+), the **Independent Panel for Pandemic Prevention, Preparedness, and Response** (IPPPR), and the World Health Assembly **Increasing Access to Medical Oxygen Resolution** have all affirmed the vital role of medical oxygen during pandemics of respiratory infection and have recommended including medical oxygen as part of pandemic preparedness and response efforts.

Specifically, the WHO CA+ includes medical oxygen in the definition of "pandemic-related products" that may be needed for pandemic prevention, preparedness, response and/or recovery, the IPPPR concludes that inadequate supplies of medical oxygen and respiratory therapies, and the workforce needed to install, operate, and maintain the lifesaving equipment, were a "defining inequity" of the COVID-19 pandemic and a "marked failure" of the pandemic response, and the WHO Oxygen Resolution calls on Member States to specifically include access to medical oxygen, related diagnostics and therapies, and all medical oxygen systems and personnel in their national strategies for pandemic preparedness and response efforts.

In order to ensure that the 2023 **Zero draft of the Political Declaration of the United Nations General Assembly High-level Meeting on Pandemic Prevention, Preparedness and Response** is well aligned with the WHO CA+, the IPPPR, and the WHO oxygen resolution, we suggest the following additions (in red):

> *Express concern also that the inequities in access to COVID-19 vaccines, tests and treatments are stark, with 22% of the population fully vaccinated in lower-income economies compared to 75% in high-income economies, as of 19 December 2022 and 50% of health systems are still without reliable access to medical oxygen exposing them to a repeat of the COVID-19 oxygen shortages (Source: **WHO Surveys**).*
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> *Recognize further the need to invest in training, developing, recruiting and retaining a skilled health workforce, including doctors, nurses, midwives, community health workers, and biomedical engineers and technicians as fundamental to strong and resilient health systems to prevent, prepare and respond to pandemics and health emergencies, and improve working conditions and management of the health workforce to ensure the safety of health workers.*
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> *Welcome the adoption of the World Health Assembly Resolution **Increasing Access to Medical Oxygen Resolution** of 26 May 2023 and the agreement of Member States to include access to medical oxygen, related diagnostics and therapies, and all medical oxygen systems and personnel, in strategies for pandemic preparedness and response and other health emergencies.*

THE *LANCET GLOBAL HEALTH* COMMISSION
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Political Declaration of the second United Nations General Assembly High-level Meeting on Universal Health Coverage

Co-facilitated by the Governments of Thailand and Guyana

21 September, 2023

The World Health Assembly **Increasing Access to Medical Oxygen Resolution** affirms the critical role of medical oxygen in accelerating progress towards the universal health coverage (UHC) Sustainable Development Goal target 3.8, and calls on Member States to to develop costed national plans to increase access to safe, quality-assured, affordable medical oxygen systems and personnel to meet the identified needs of all patients in the context of UHC.

With less than 50% of health facilities in low- and middle-income countries enjoying a reliable medical oxygen supply and the high prices and questionable quality of the medical oxygen that is available in the other 50% of facilities, governments must ensure that medical oxygen is included in the essential package of health services covered by UHC, as outlined clearly in a recent **WHO and World Bank study**. Oxygen therapy is too often the **largest component of a hospital bill**, even in high-income hospitals, and the high costs are a **barrier to seeking and completing care** in low- and middle-income countries, where in many cases they are passed on directly to patients. Oxygen is lifesaving. A recent **review** estimated that it has the power to reduce deaths among hospitalized children by 25% and is as cost-effective as childhood vaccination.

As neither medical oxygen or pulse oximetry were mentioned in the 2019 Political Declaration of the High-level Meeting on Universal Health Coverage "**Universal health coverage: moving together to build a healthier world**" and are not yet reflected in the 2023 **Zero draft of the Political Declaration of the United Nations General Assembly High-level Meeting on Universal Health Coverage**, we suggest the following additions:

> *Recall World Health Assembly Resolution Increasing Access to Medical Oxygen Resolution (26 May 2023) and affirm the critical role of medical oxygen and pulse oximetry in accelerating progress towards universal health coverage (SDG target 3.8) by increasing access to safe, affordable, quality medical oxygen systems and personnel to meet the needs of all patients, and by monitoring progress.*
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> *Less than 50% of health facilities in low- and middle-income countries have a reliable source of medical oxygen compromising care for pregnant women, newborns, children, and adults with a wide range of acute and chronic conditions and contributing to the 25 million annual deaths from causes where oxygen is an essential medicine, including nine million from heart disease, four million from injuries, four million from lower respiratory infections and tuberculosis, three million from COPD, two million from lung cancer, and two million from neonatal disorders. (Sources: **WHO Surveys** and Global Burden of Disease 2019).*

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Political Declaration of the second United Nations High-level Meeting on the Fight to End Tuberculosis

Co-facilitated by the Governments of Poland and Uzbekistan

22 September, 2023

Medical oxygen is a lifesaving treatment for tuberculosis patients at risk of, or with, acute respiratory failure, which is more common and often fatal in severe forms of disseminated tuberculosis (e.g., patients with HIV, MDR or XDR-TB). In this population, **studies** have shown that the contribution of respiratory failure to mortality is high, indicating the vital role of oxygen therapy. However, the absence of routine mortality audits may be hiding the true magnitude of respiratory failure as the main cause of death for tuberculosis patients. Further, a proportion of patients recovering from tuberculosis continue to need supplemental oxygen therapy throughout their lives to maintain quality of life.

Although the 2018 **Political Declaration of the UN High Level Meeting on Fight Against Tuberculosis** did not specifically mention medical oxygen, it stated clearly that "millions of people ill with tuberculosis are missing out on quality care each year, including on access to affordable diagnostic tests and treatment, especially in developing countries." The 2023 meeting is an opportunity to correct this oversight.

As the main objective of this meeting is to develop a "comprehensive and analytical report on progress achieved and challenges remaining in realizing tuberculosis goals within the context of achieving the 2030 Agenda for Sustainable Development," we suggest that the meeting affirms the need of Members States and global health agencies and donors to:

> *Ensure access to safe, quality, affordable medical oxygen for tuberculosis patients who need it to improve treatment outcomes and quality of life, in accordance with the Increasing Access to Medical Oxygen Resolution that all Member States adopted at the World Health Assembly in 2023.*