



West African Academy of Public Health

THE LANCET **Global Health**

COMMISSION ON MEDICAL OXYGEN SECURITY

Report of the Africa Launch of *The Lancet Global Health* Commission on Medical Oxygen Security

Abridged Version

African Primary Health Care Forum

15 July, 2025 Abuja, Nigeria



Acronyms

APHCF	Africa Public Health Care Forum
ADHN	Africa Digital Health Networks
BME	Biomedical Engineering
CDC	Centre for Disease Control
CHAI,	Clinton Health Access Initiative
CiSPHA	African Civil Society Platform for Health
CSO	Civil Society Organization
DFF	Direct Facility Financing
FHI 360	Family Health International 360
FMoHSW	Federal Ministry of Health and Social Welfare
GAVI	Global Alliance for Vaccines and Immunization
HIFA	Health Information for AI
HIV	Human Immunoglobulin Virus
HRH	Human Resources for Health
HSDF	Health Systems Delivery Foundation
HSRC	Health Systems Reform Coalition
LOX	Liquid Medical Oxygen
NCD	Non-Communicable Diseases
NHIA	National Health Insurance Authority
NPHCDA	National Primary Health Care Development Agency
OOP	Out of Pocket
OSAPH	Office of the Special Adviser to the Nigerian President on Health
PVAC	Presidential Initiative for Unlocking the Healthcare Value Chain
PPPs	Public-Private Partnerships
PHC	Primary Health Care
QoC	Quality of Care
SPHCDA	State Primary Health Care Development Agency
STIs	Sexually Transmitted Infections
SWAp	Sector Wide Approach
UHC	Universal Health Coverage
WAFERs,	West African Institute for Applied Health Research
WAIPH	West African Institute of Public Health
WHO /AFRO	WHO Regional Office for Africa

Executive Summary

The *Lancet Global Health* Commission on Medical Oxygen Security (the Commission) partnered with the West African Institute of Public Health (WAIPH) to launch the Commission's report at the inaugural Africa Primary Health Care Forum (the Forum) in Abuja, Nigeria, with the theme *Reimagining Primary Health Care for Universal Health Coverage and Health Security in Africa*.

The Forum provided an opportunity for stakeholders to reflect, evaluate, innovate, and suggest ways to revitalise primary health care (PHC) systems which are crucial for achieving Universal Health Coverage (UHC) and health security across Africa.

The Commission hosted three high-level engagements at the Forum, including a Ministerial Breakfast, a presentation of the Commission's findings and recommendations, and a plenary session with representatives from key stakeholders. A total of 300 participants were in attendance.

High-ranking government officials included Dr Uju Rochas-Awuka, Senior Special Adviser to the President on Public Health, representing **Senator Kashim Shettima**, Vice President of the Federal Republic of Nigeria, Dr Jimoh Olawale Salaudeen, Director of Hospital Services at the Federal Ministry of Health and Social Welfare (FMoHSW) representing **Professor Muhammad Ali Pate**, Coordinating Minister of Health and Social Welfare; Dr Ahmad Baba representing **Dr Salma Ibrahim Anas**, Special Adviser to the President on Health, Dr Ngozi Nwosu representing **Dr Muyi Aina**, Executive Secretary, National Primary Health Care Development Agency (NPHCDA), **Dr Gilbert Shetak**, National Oxygen Desk Officer at the FMoHSW, and **Dr Suleiman Saidu Bashir**, Chair of the Forum of Executive Secretaries/CEOs of State Primary Health Care Agencies (SPHCDA).

Dr Francis Ohanyido, Director General of the WAIPH, welcomed the audience to the meeting and was followed by **Professor Adegoke Falade** from the University of Ibadan and **Dr Carina King** from the Karolinska Institutet who gave the official presentation of the Commission report. The plenary session was moderated by **Chizoba Fashanu** from the Clinton Health Access Initiative (CHAI) and included **Dr Gilbert Shetak**, **Dr Fatima Cheshi** from UNICEF, **Dr Hadiza Khamufu** from FHI 360, and **Aisha Adenjii** from HealthPort.

The session resulted in 20 government commitments, which are detailed in the Communique (see Annex 5), and include the following:

1. Ensure every tertiary hospital has combined Pressure Swing Adsorption (PSA) and liquid oxygen (LOX) systems by 2026.
2. Make reliable oxygen data available by the end of 2025.
3. Enact policy to require all contractors that are constructing hospitals to include piping of oxygen to bedside as part of the design.
4. Conduct a government review of the import duty (60%) on oxygen cylinders to assess the impact of lifting and/or reducing the import duty.

5. Include medical oxygen on the list of services covered by the National Health Insurance Scheme (NHIS).



Introduction

Oxygen therapy is life-saving for people with acute illness, life-sustaining for people undergoing anaesthesia and surgical care, and life-enhancing for people with chronic respiratory failure.

The *Lancet Global Health* Commission on Medical Oxygen Security, was announced in September 2022 in response to the tragic oxygen shortages that occurred in most low- and middle-income countries (LMICs) during the COVID-19 pandemic. The purpose was to understand the root causes of these medical oxygen shortages and to recommend concrete actions to strengthen medical oxygen systems to ensure that no patient dies for lack of access to medical oxygen in health care facilities, including during public health emergencies.

The Commission report provided the first estimates of the need for medical oxygen by region, gaps in access, and the cost of closing those gaps. It exposed wide gaps in access, the largest in Africa. According to the report, in 2021, 72 million people in Africa needed medical oxygen for acute or surgical conditions, and a further 11.3 million needed it to treat COVID-19. However, just 1 in 10 patients who needed medical oxygen for acute care received it. It was estimated that the annual cost of filling the gap for acute medical and surgical needs across Africa is US\$1.7 billion.

In order to engage African health leaders, the Commission partnered with the West African Institute of Public Health (WAIPH) to host several sessions on medical oxygen during the two-day inaugural Africa Primary Health Care Forum Abuja, Nigeria, with the theme *Reimagining Primary Health Care for Universal Health Coverage and Health Security in Africa*.

The oxygen events at the conference employed three key strategies

1. A Ministerial Breakfast with senior Nigerian government officials
2. Presentation of the *Lancet Global Health* Commission on Medical Oxygen Security findings and recommendations for Africa
3. Plenary session with key stakeholders responding to the Commission's recommendations

This report details the highlights of the proceedings from all of the above activities.

Ministerial Breakfast

The goals of the Ministerial Breakfast were to foster strategic government partnerships around the 52 recommendations of the Commission, promote the adoption of tools such as the Access to Medical Oxygen Scorecard (ATMO₂S) and Oxygen Service Coverage Indicators, and encourage integration of lessons from the COVID-19 pandemic into PHC systems and the broader UHC agenda.

Dr Francis Ohanyido (pictured) welcomed the audience and commenced with a one-minute silence in honour of both the departed General Muhammadu Buhari, former President of Nigeria, and the junior brother to the Special Adviser to the President on Health, Dr Salma Ibrahim Anas. He declared how exciting the event was for Africa due to the numerous medical oxygen challenges that the region is facing. Dr Ohanyido shared a personal experience of having lost his daughter due to lack of medical oxygen. He noted that Africa would need NGN 6.8billion to fill the gap in access..



Dr Jimoh Olawale Salaudeen (pictured), representing Professor Muhammad Ali Pate, Coordinating Minister of Health and Social Welfare, described the efforts of the Nigerian Government towards achieving UHC by 2030, prioritizing PHC as a key strategy. He highlighted specific challenges in closing the medical oxygen gap including the non- recognition of oxygen as an essential medicine, the clinical knowledge gap, low patient acceptance, and scarcity of oxygen optimization equipment. (see Annex I).

He recognized government partnerships with NGOs and the significant investments and continuous efforts that are being made to ensure that medical oxygen is available nationwide. He stated that before COVID-19, Nigeria had 39 Pressure Swing Adoption (PSA) oxygen plants but now has over 100, 20 liquid oxygen tanks, numerous pulse oximeters, and other essential oxygen supplies (e.g., oxygen piping systems in more hospitals).

He emphasized that in order to address the challenges and barriers, all partners need to work as a team with government departments and agencies. Key priorities included building the capacity of the biomedical engineering profession, quarterly reports from all health zones on oxygen system functionality, intermittent testing, and digitisation of performance data. He concluded by stating that the country has adopted sustainability as a core strategy to ensure optimal functionality and continuous maintenance of this new equipment.

Professor Adegoke Falade, representing the *Lancet Global Health* Oxygen Commission, (pictured), chronicled Nigeria's journey to increase access to medical oxygen, describing the achievements (e.g., the first national policy on medical oxygen in 2016, strategic plan for scale up 2017-2022 and the second plan for 2023-2027), as well as the challenges (e.g., lack of financing, inadequate infrastructure, equipment and



human resources, and maintenance and technical support deficits. He recommended key priorities for moving forward including implementation of government plans, increased funding, and stronger partnerships with donors and other stakeholders.



Following Professor Falade, **Dr Ahmed Baba** (pictured) representing Dr Salma Ibrahim Anas, Special Adviser to the President on Health, shared his personal experience of losing his child in a hospital in Abuja due to lack of medical oxygen. He acknowledged that progress has been made but much more is needed and pledged his commitment to making it happen. He concluded that there is no way for the country to achieve UHC without equitable access to medical oxygen.

Dr Gilbert Shetak, National Oxygen Desk Officer with the FMOHSW, (pictured) would benefit from more liquid oxygen. He recommended that all Federal Medical Centres be supplied with liquid oxygen tanks in the next three months building on the 12 that the Global Fund supplied and 13 from USAID through FHI 360, and that faith-based hospitals should also be supported with liquid oxygen in the future. He argued that the government should consider including medical oxygen in the 2026 budget, with a budget line to expand provision of liquid oxygen first in tertiary hospitals.



Noting the high out-of-pocket costs patients are paying for medical oxygen, Dr Shetak argued that the National Health Insurance Authority (NHIA) should include oxygen services in the National Health Insurance Scheme. Dr Shetak informed the audience that Nigeria now has one PSA oxygen plant per Senatorial district but due to the shortage of cylinders there is a need for more piping to bedsides to reduce the number of cylinders required. In addition, he called for more pulse oximeters to diagnose hypoxemia and for more oxygen analyzers to measure the purity of the oxygen being dispensed.

Dr Shetak recommended government measures to support pharmacists to take responsibility for checking oxygen purity, to stop the roadside procurement of oxygen, and to introduce penalties/sanctions for violation to incentivize hospitals to procure oxygen from recommended vendors only. To address patient fears about oxygen use, he recommended that healthcare workers be trained not only to administer oxygen safely, but to educate patients.

Dr Suleiman Saidu Bashir, Chair of the Adamawa State Primary Health Care Development Agency (SPHCDA) and also the Forum of Executive Secretaries/CEOs of State Primary Health Care Agencies, emphasized that in the Nigerian constitution, health is on the concurrent list, meaning the federal, state, and local governments share responsibility for its provision and

have to work together. All levels of government have to ensure that there are strong links between the PHC sector and referral to higher-level hospitals so patients don't fall through the cracks. Strengthening the capacity of primary healthcare workers to detect hypoxemia early, triage the immediate need, and refer very ill patients to hospitals where clinicians are trained to administer oxygen was the ultimate goal.

Representatives from international organizations shared their views. The **WHO** congratulated the hosts and organizers echoing the statement that without access to medical oxygen, the goal of UHC by 2030 cannot be achieved. WHO is contributing to this by working with the FMoHSW to build the capacity of healthcare workers at different levels of the healthcare system and by supporting the inclusion of medical oxygen in the Essential Drug List. **UNICEF** is working across all 36 Nigeria States and the Federal Capital Territory (FCT) to support State Oxygen Desks, finance nine PSA plants and piping in hospitals, and conduct biomedical engineering (BME) training.

International NGOs, **CHAI**, **FHI 360**, and **Oxygen Access** highlighted the absence of government guidelines, lack of trained clinicians, pharmacist and biomedical engineers, and shortages of equipment and devices to treat hypoxemia, as persistent challenges. All stressed the importance of government leadership, domestic financing, and the critical role of data to measure the progress of oxygen access. FHI 360 experience revealed that as the demand for medical oxygen increased, supply constraints resulted and drove up the price of medical oxygen. Research is needed to better understand these dynamics and how to mitigate price rises. FHI 360 is supporting 12 facilities with piped oxygen.

Local oxygen businesses **HealthPort** and the **Oxygen Hub** are supporting several hospitals with "oxygen-as-a-service" models where they take responsibility for installing on-site oxygen production and maintaining the systems, typically for a monthly service fee. This takes the burden off strained hospital staff who may not have the technical expertise to operate on-site plants. Both organizations noted the significant gaps in on-site oxygen production but argued for local funding sources rather than continuing to rely on fragile external donor support.

In closing, **Dr Francis Ohanyido** commended all speakers and their organizations as well as industry and the Health System Reform Coalition of Nigeria for their efforts to improve access to medical oxygen across the country.

Report Launch

Dr Ngozi Nwosu (pictured) representing **Dr Muyi Aina**, Executive Secretary of the National Primary Health Care Development Agency (NPHCDA), opened by describing primary health care as the bedrock of a functional health system. Reflecting on past efforts, she acknowledged the health gains achieved across the continent and highlighted the impact of the COVID-19 pandemic in exposing systemic health system weaknesses. She emphasized the need for a



renewed focus on expanding access, leveraging digital innovation, and fostering inclusiveness in health care.

Dr Nwosu outlined the Nigerian government's flagship PHC Revitalization Initiative, under President Bola Ahmed Tinubu's Renewed Hope Agenda, with the goal of having at least one fully functional PHC facility per geographic ward by expanding the number of functional centers from just over 8,000 to 17,600 in the next four years. She outlined strategies including increasing health financing, improving staff working and living conditions, empowering community health workers, and enhancing public awareness through education as critical to success. She closed with a powerful reminder that health is a right for all, not just for the privileged few, and that collective action is essential to building the future of healthcare in Africa.



Dr Uju Rochas-Awuka (pictured), Senior Special Adviser to the President on Public Health, representing **Senator Kashim Shettima**, Vice President of Nigeria, applauded the launch of the *Lancet Global Health Oxygen Commission* report and said that the major lesson learned during pandemic is that oxygen is not a luxury. She said that Nigeria paid dearly for unpreparedness and does not intend to learn the same lesson twice. The government will ensure that oxygen is not stored in the warehouses of the wealthy, but in the wards of every village clinic and will be accessible to all irrespective of location or status. (see Annex 2).

Dr Salaudeen Jimoh read an opening speech from **Professor Muhammad Ali Pate**, Coordinating Minister of Health and Social Welfare. The speech noted the significance of the *Lancet Global Health Oxygen Commission* report launch taking place in Abuja as part of the inaugural African Primary Health Care Forum - a convergence that underscores the fundamental connection between accessible healthcare and the basic medicines that sustain life. He noted that oxygen is an essential medicine with no substitute therefore availability alone is insufficient, it must be affordable to all. He described a mother who must choose between paying for her child's oxygen therapy or feeding her family as a failure of the system.

Dr Pate highlighted the many uses of medical oxygen - from a newborn struggling with respiratory distress, to patients requiring life-saving surgery, to those battling chronic obstructive pulmonary disease. Without reliable access to oxygen, Africa will struggle to reach many of the Sustainable Development Goals we have collectively committed to achieving.

Early detection of hypoxemia in the health system is key. He called all present, the clinicians saving lives on the front lines, the CEOs driving innovation and efficiency, the technical advisors providing expertise, and the policy makers shaping our health systems - to continue working together with the same spirit of collaboration that has brought moved the country thus far, to achieve the collective goal of closing the oxygen access gap in Nigeria. (See Annex 3).

Professor Adegoke Falade, from the University of Ibadan and representing the Lancet Global Health Oxygen Commission, presented the main findings and recommendations of the report alongside **Dr Carina King** from the Karolinska Institutet and a lead author (pictured). Their presentations underscored that of all regions Africa had the widest gap in access to medical oxygen with only 91% of patients with an acute or surgical need for medical oxygen going without. Dr King highlighted five areas for action across Africa, including:



1. Universal access to pulse oximetry for sick children and adults, including at primary care level
2. Resilient oxygen systems with the capacity to meet surging needs during emergencies and continue to function during electricity blackouts
3. Well-managed national oxygen systems by governments connected at all levels (national, state, local government)
4. Stronger oxygen markets governed by adequate regulations and standards
5. Robust monitoring and evaluation to measure performance

Dr King drew attention to the **MOXY (Medical Oxygen)** Implementation Research and Policy project as an example of best practice oxygen partnership between

Panel Discussion



The panel included **Dr Gilbert Shetak**, FMOHSW, **Dr Suleiman Saidu Bashir** representing State Primary Health Care Agencies, **Dr Hadiza Khamufu** from FHI 360 Nigeria, **Dr Fatima Cheshi** from UNICEF, Dr **Chizoba Fashanu** from CHAI, and **Aishat Adeniji** from HealthPort (pictured left to right). Ms Fashanu moderated the session.

Dr Shetak began by outlining the major successes and challenges implementing Nigeria's second National Oxygen Strategy. He recounted that the first national strategy came into existence because of a childhood pneumonia outbreak in Kano, Kaduna, and Niger States, and the absence of a guideline for the treatment of childhood pneumonia including medical oxygen use. The COVID-19 pandemic began at the end of the first oxygen strategy development and resulted in increased funding for medical oxygen. However, demand for oxygen was low as clinicians were still depending on the use of antibiotics for treatment.

The government establishment of national and state “Oxygen Desk Officers” in Ministries of Health has increased awareness and medical oxygen use and State governments have included funds for oxygen in their budgets and the provision of oxygen plants/liquid oxygen tanks in each of the senatorial districts of the country. This is in addition to the oxygen support which is still coming from the donors and partners. Dr Shetak also raised the issue of Federal government incentives to increase the number of companies producing medical oxygen as currently only one company supplies liquid oxygen in the country and recommended that the Nigerian government remove the import duty cost on oxygen cylinders and distinguish between cooking gas cylinders that are manufactured in the country and medical oxygen cylinders that are imported. He encouraged partners to join the National Oxygen Technical Working Group (U4O).

Dr Bashir highlighted the policy of the Adamawa State Primary Health Care Development Agency (SPHCDA) that at least one pulse oximeter and oxygen should be available in all primary health care facilities and if not, there should be mobile oxygen solutions (e.g., ambulances) to transfer hypoxemic patients to health facilities with oxygen. While Adamawa State has recognised the importance of oxygen therapy for childhood pneumonia, there remains a need to have one health sector operational plan capturing all oxygen. Ultimately, sustainability will be achieved by actively integrating oxygen into the strengthening of the PHC revitalization efforts.



Dr Khamufu detailed the extensive FHI 360 collaboration with the Nigerian government which culminated in the first “Oxygen Stakeholders Dialogue” in 2023, bringing together different levels of government, industry, academic institutions, and NGOs. FHI 360 is also supporting the development of competency-based standards for biomedical engineers with the Nigerian Society for Biomedical and Clinical Engineering (NSBCE), the integration of oxygen indicators into the NHMIS2, the development of a policy guideline to guide the oxygen installation and maintenance, and a Protocol to close the gap in hypoxemia assessment.

Dr Cheshi outlined UNICEF support to the Nigerian government to increase oxygen supplies in hospitals, especially mobile concentrators and PSA plants on-site. UNICEF also hosted an “Innovation Challenge” which resulted in the first fully solar-powered oxygen plant installed in Oyo State at the Jerico Specialist Hospital, Ibadan. Dr Cheshi also highlighted the integration of pulse oximeters into the Integrated Management of Childhood Illnesses (IMCI) guidelines.

Ms Adeniji described HealthPort as a small and medium sized company working under contract to install, operate, and maintain oxygen equipment relieving responsibility from hospitals and Health Ministries. She said HealthPort is a business that is bridging the “missing

middle” by ensuring that medical oxygen is on site and actually reaches patients. HealthPort not only supplies the oxygen, but trains clinicians, supplies cylinders, and reduces the bureaucratic burden on the hospital of managing oxygen admins

Recommendations and Communique

The discussions culminated in several recommendations to rapidly close medical oxygen access gaps in Nigeria and Africa, summarised in an official Communique that was released after the event (see Annex 5).

Key recommendations include:

1. Strengthen partnerships across public, private, and donor sectors to ensure coordinated action on oxygen security.
2. Reduce donor dependency through sustainable domestic financing.
3. Expand Public-Private Partnerships (PPPs) for oxygen infrastructure and supply.
4. Ensure every tertiary hospital has combined PSA/LOX systems by 2026.
5. Establish a hub-and-spoke oxygen delivery model for national coverage.
6. Make reliable oxygen data available by the end of 2025.
7. Enact policy to require all contractors that are constructing hospitals to include piping of oxygen to bedside as part of the design.
8. Emphasize policy enforcement, system resilience, and political will.
9. Recognize that medical oxygen is not a temporary need, but a permanent pillar of healthcare.
10. Encourage partners to join the National Oxygen Technical Working Group (U4O).
11. Implement government policies that standardize oxygen procurement.
12. Conduct a government review of the import duty on oxygen cylinders (60%) with Dr Shetak and Dr Salaudeen to work collaboratively to explore impact of lifting and/or reducing import duties
13. Include medical oxygen on the list of services covered by National Health Insurance Authority (NHIA).

Annex 1

Opening Address, Professor Muhammad Ali Pate, Coordinating Minister, Health and Social Welfare, Federal Republic of Nigeria

Delivered by Dr Jimoh Olawale Salaudeen, Director of Hospital Services, Federal Ministry of Health and Social Welfare (FMoHSW)

It's an honour and privilege to welcome you to this medical oxygen breakfast meeting of the Africa Primary Healthcare Forum 2025. This gathering brings together brilliant, forward-thinking individuals dedicated to improving the world. We achieve this by forging partnerships that mobilize resources, share knowledge, and implement innovative solutions to ensure medical oxygen reaches even the most remote areas.

The Nigerian government is currently prioritizing Primary Health Care (PHC) as a key strategy to achieve Universal Health Coverage (UHC) by 2030. This is a significant undertaking with many facets. Crucially, it involves upgrading, revamping, and equipping our PHC system to a functional capacity that can deliver quality services, especially to grassroots communities.

Equally important is improving our skilled workforce through training, strengthening data collection, and enhancing monitoring and evaluation. Other critical areas include community engagement, financial sustainability, addressing social determinants of health, and building strong partnerships.

Before the COVID-19 pandemic, medical-grade oxygen was rarely used in Nigeria. This was due to a knowledge gap, low patient acceptance, significant accessibility challenges, scarcity of oxygen optimization equipment, and minimal regulation of this essential drug. The pandemic, however, exposed these gaps and provided valuable lessons, leading to pivotal decisions that have transformed Nigeria's oxygen ecosystem.

Leveraging our partnerships with non-governmental organizations and government efforts, significant investments and continuous improvements are being made to ensure medical oxygen is available nationwide. For instance, before COVID-19, Nigeria had only about 39 Pressure Swing Adsorption (PSA) plants. Today, we have well over 100 PSA machines, in addition to 20 liquid oxygen tanks, numerous pulse oximeters, and a host of other oxygen delivery equipment.

At every level of progress, we've encountered challenges. That's why we've adopted sustainability as a core strategy, ensuring the optimal functionality and continuous maintenance of these investments. We deeply understand the critical importance of oxygen as an indispensable, life-saving drug with no substitute. This understanding drives our teams to remain vigilant, emphasizing that no shortcuts can be taken in providing oxygen and oxygen optimization equipment. It's also why we highly value and never take your partnerships for granted.

Ladies and gentlemen, this breakfast meeting is timely and avails us the opportunity to take stock, assess our efforts, identify issues, and attendant challenges and chart realistic ways moving forward. On this note, I welcome you, I thank you, and wish us all a fruitful breakfast meeting.

Annex 2

“The First Step to Healing Africa,” Senator Kashim Shettima, Vice President, Federal Republic of Nigeria

Delivered by Dr Uju Rochas-Awuka, Senior Special Adviser on Public Health, Office of the President of Nigeria

Let me begin by expressing my profound gratitude to the conveners of this timely Forum: the West African Institute of Public Health, the African Data for Health Network, the Africa CDC, the United Nations SDGs Group, and all our invaluable development partners. What brings us together is a collective concern for the pulse of our people, the condition of our clinics, the future of our children, and I am honoured to share with you the promise of this day.

I welcome all delegates and participants from across our vast continent and beyond. You have travelled here as torchbearers in a journey that must lead us from broken systems to systems that heal, systems that serve. Each of you is a silent warrior, for you have laboured without fanfare, steadying the ship when storms rage.

Distinguished ladies and gentlemen, we cannot speak of health security if we do not begin at the beginning. And the beginning is primary health care. This is the foundation. This is the frontline. It is where lives are either saved or lost. If we fail here, we fail everywhere. This is where a pregnant mother is either welcomed with dignity or turned away by absence. This is where a child receives a life-saving vaccine or succumbs to a preventable disease. This is not just a matter of policy. It is a matter of life.

In Nigeria, we have learned this truth not through textbooks but through experience. This is why His Excellency, President Bola Ahmed Tinubu, has acted with urgency in strengthening the foundation of our health care system. Through the Basic Health Care Provision Fund, we are channeling resources directly to the grassroots, to the places where they are most needed and where accountability is easiest to enforce. With initiatives like Nutrition 774, we are recognising that development must begin at the stomach because an undernourished child is an underdeveloped nation-in-waiting.

We believe that nutrition is a health emergency. We believe that a child too frail to run, too tired to learn, too stunted to dream is a tragedy in motion. With Nutrition 774, we are placing nutrition where it belongs, at the heart of our primary health care strategy. We are linking it to immunisation, to maternal care, to water and sanitation. Because health is never achieved in isolation. We must work together to achieve enduring health.

I also wish to commend the launch of the Lancet Global Health Oxygen Commission's Africa report. What we learned during the COVID-19 pandemic is that oxygen is not a luxury. We paid dearly for our unpreparedness. We do not intend to learn the same lesson twice. We must ensure that oxygen is not stored in the warehouses of the wealthy but in the wards of every village clinic.

Africa must define its own path. We cannot continue to copy and paste models that do not reflect our realities. We must innovate, we must collaborate, and we must act with the understanding that health security is a responsibility upon each of us.

There is no doubt that a forum such as this is an awakening to stop treating primary health care as a department. It is not a sector. To neglect it is to amputate the body of our development ambitions. This is why we must commit to training and equipping our frontline workers, to harmonising our plans, to reducing duplication, to aligning our resources with our realities.

As stakeholders in Africa's health security and future, we must act beyond this forum. We must take the conversation from the halls of our cities to the clinics in our villages. We must move from commitment to delivery. Let this be the moment we chose action over applause. Let it be the turning point we created together.

On this note, it is my honour and privilege to declare the Africa Primary Health Care Forum open. May our deliberations be fruitful, and may our actions speak louder than our words.

Annex 3

Keynote Address, Professor Muhammad Ali Pate, Coordinating Minister, Health and Social Welfare, Federal Republic of Nigeria

Delivered by Dr Jimoh Olawale Salaudeen, Director of Hospital Services, Federal Ministry of Health and Social Welfare (FMoHSW)

It is truly wonderful to have the Africa Regional Launch of the *Lancet Global Health* Commission for Medical Oxygen Security take place here in Abuja. The significance of this moment is amplified by the fact that we are gathered at the Inaugural of African Primary Health Care Forum - a convergence that underscores the fundamental connection between accessible healthcare and the basic medicines that sustain life.

Oxygen is not merely a medical gas - it is an essential medicine without substitute that must be available for any patient who needs it. From a newborn struggling with respiratory distress, to patients requiring life-saving surgery, to those battling chronic obstructive pulmonary disease in our communities. Without reliable access to oxygen, Africa will struggle to reach many of the Sustainable Development Goals we have collectively committed to achieving.

However, availability alone is insufficient. We must also commit to addressing the complex challenge of ensuring it is affordable. Oxygen is a critical component of Universal Health Coverage, and we cannot accept the common narrative of families across our continent being unable to afford medical oxygen. When a mother must choose between paying for her child's oxygen therapy or feeding her family, we have failed.

In order to close these oxygen access gaps; primary healthcare will play a crucial role. Nigeria has taken a significant step forward by adopting blood oxygen saturation as a vital sign, and I encourage other African nations to follow this example. This simple but powerful intervention shows our commitment to scaling of pulse oximetry across our healthcare system. Early detection of hypoxaemia in primary care settings is essential to reduce preventable deaths.

Nevertheless, this must also be met with effective referral systems, and hospitals capacitated to administer oxygen. We should not strengthen one without the other. Oxygen requires the whole system, from production to patient to function - equipment without biomedical engineers will break, oxygen plants without an energy plan will be hard to keep turned on, clinicians with access to oxygen but no pulse oximeters will end up treating the wrong patients.

The Commission's work represents a roadmap for how we tackle the gaps in access to medical oxygen in Africa, with roles for all sectors in the system. As this initiative is launched, we must commit to three fundamental principles in alignment with Nigeria's oxygen sustainability plan: ensuring oxygen is available in every healthcare facility, making it affordable for every patient who needs it, and integrating oxygen security into our primary healthcare systems.

Annex 4

Response of the Coordinating Minister of Health and Social Welfare to the update on Nigeria oxygen landscape by Professor Adegoke Falade, Lancet Global Health Oxygen Commissioner, University of Ibadan

Thank you Professor Falade for setting out the landscape of medical oxygen in Nigeria. I take pride in what Nigeria has accomplished to date in this field, and am here today committed to the critical work that lies ahead to ensure that all patients in need of medical oxygen in Nigeria will have access to quality, affordable, medical oxygen services.

Over the past decade, Nigeria has been a regional leader in addressing this fundamental challenge of ensuring access to medical oxygen for all. This leadership has not happened by accident. It is the result of innovative thinking, collaborative effort, and the commitment and hard work of many, including those in the room today.

We have seen innovative efforts across the entire oxygen ecosystem in Nigeria. The governance structures have evolved with the establishment of Federal and State oxygen desks, creating systems for coordination and accountability. In technology, we have

seen the Nigerian Oxygen for Life Initiative working in tandem with Ethiopian and Malawian teams, Karolinska Institutet, University of Uppsala, and University of Cape Town to trial innovations like the locally produced bubble CPAP device by Dr Chisti of Bangladesh.

Novel service delivery models have evolved as well, such as the service package delivery model pioneered by HealthPort. We have also been at the forefront of sustainable oxygen systems, implementing solar-powered concentrators and more recently PSA plants that ensure reliable oxygen supply, even in challenging environments. And let us not forget the world-class research into medical oxygen systems being conducted here in Nigeria, contributing valuable knowledge to the global healthcare community. These achievements represent more than technical progress - they represent lives saved.

However, the work is far from complete. Today, we still face the sobering reality that not everyone who needs medical oxygen has access to safe, affordable, and quality oxygen services. Whether it is a newborn in respiratory distress, a child battling pneumonia, an adolescent injured in a road accident, or an adult managing chronic obstructive pulmonary disease, access to oxygen should never depend on which facility they present to, where they live or the money they have.

With the launch of Nigeria's National Strategy for the Scale-up of Medical Oxygen in health facilities, the Federal Ministry of Health has demonstrated its commitment to making systematic and coordinated improvements in providing this life-saving commodity to every patient who needs it. Central to this strategy is our adoption of blood oxygen saturation as a vital sign. When we measure oxygen saturation as routinely as we measure blood pressure, we can fundamentally change how we approach patient care.

However, we know that we are facing challenges, with the uncertain global health funding landscape. Resources are constrained, and competition for funding is intense. But these challenges make our collective action even more critical. We cannot allow the investments Nigeria has made and the progress we have achieved in strengthening our medical oxygen system to be lost.

This is why I call upon each of you today - whether you are a clinician saving lives on the front lines, a CEO driving innovation and efficiency, a technical advisor providing expertise, or a policy maker shaping our health systems - to continue working together with the same spirit of collaboration that has brought us this far. Our collective goal is clear: to close the oxygen access gap in Nigeria and together we can achieve it.

Annex 5

Communiqué: Increasing Access to Medical Oxygen in Nigeria

July 15, 2025, Abuja, Nigeria

Preamble

The COVID-19 pandemic exposed critical global inequities in access to medical oxygen, a lifesaving therapy essential across all levels of care. In response, the *Lancet Global Health* Commission on Medical Oxygen Security was inaugurated in 2022 to consolidate evidence and generate actionable recommendations for governments, global health institutions, donors, and industry stakeholders. In February 2022, the Commission published the first global estimates of medical oxygen coverage gaps and the cost of addressing them by region.

Building on this momentum, the Commission, in partnership with the Africa Primary Health Care Forum (APHCF), *Reimagining Primary Health Care for Universal Health Coverage and Health Security in Africa*, hosted a series of high-level engagements in Abuja, Nigeria from July 14–15, 2025. Activities included a Ministerial Breakfast, the official launch of the Commission report in Africa, and a plenary session on reducing inequities in medical oxygen access.

The engagements witnessed robust attendance with 300 guests including high-ranking officials across federal and state health ministries and agencies, development partners, academic institutions, and industry. Key dignitaries included:

- **Senator Kashim Shettima**, Vice President of the Federal Republic of Nigeria, represented by Dr Uju Rochas-Awuka, Senior Special Adviser to the President on Public Health
- **Professor Muhammad Ali Pate**, Coordinating Minister of Health and Social Welfare, represented by Dr Jimoh Olawale Salaudeen, Director of Hospital Services, Federal Ministry of Health and Social Welfare (FMoHSW)
- **Dr Salma Ibrahim Anas**, Special Adviser to the President on Health, represented by Dr Ahmed Baba
- **Dr Muvi Aina**, Executive Secretary, National Primary Health Care Development Agency (NPHCDA), represented by Dr Ngozi Nwosu, Director, Primary Health Care Systems Development, NPHCDA
- **Dr Francis Ohayido**, Director-General, West African Institute of Public Health
- **Dr Gilbert Shetak**, National Oxygen Desk Officer, FMoHSW
- **Dr Bashir Saidu Suleiman**, Chair of the Adamawa State Primary Health Care Development Agency (SPHCDA) and the Forum of Executive Secretaries/CEOs of State Primary Health Care Agencies
- **Professor Adegoke Falade**, Professor of Paediatric Respiratory Medicine, University of Ibadan and Commissioner, *Lancet Global Health* Oxygen Commission

Key Takeaways

The sessions highlighted the ambition of the Federal Government and agencies to close the wide gaps in access to medical oxygen, highlighting the following five key takeaways:

Increase oxygen supply especially by enabling more hospitals to use liquid oxygen (LOX), fixing idle PSA oxygen plants and mobile oxygen concentrators, and increasing the manufacturing of oxygen cylinders and storage tanks, and equipping more hospitals with piping to bedside. Noting the significant investments in oxygen supply during the COVID-19 pandemic, ensuring that investments do not go to waste but are optimized and sustained. Cross-sectoral collaboration on medical oxygen must remain a health systems priority, not just a pandemic response.

Manage oxygen demand by ensuring universal access to pulse oximetry, starting at the PHC level. Pulse oximetry into IMCI. Optimizing pulse oximetry at PHC level is critical to ensuring early detection and management of hypoxemia.

Invest in human resources by increasing technical support for oxygen plants and equipment and biomedical engineering manpower for maintenance and repairs.

Measure progress by developing targets and building data systems that can measure progress. Medical oxygen indicators should be integrated into HMIS reporting tools. No central data repository on hypoxemia or oxygen availability.

Increase domestic financing by developing sustainable financing mechanisms from domestic revenues, removing/reducing the high import duty tax ([60%](#)) on oxygen cylinders, and streamlining bureaucratic processes for awarding contracts which lead to costly delays in medical oxygen service delivery. Reduce donor dependency through sustainable domestic financing.

Strengthen partnerships across the public, private, and donor sectors to ensure coordinated action on oxygen security, expand Public-Private Partnerships (PPPs) for oxygen infrastructure and supply, and encourage partners to join the National Oxygen Technical Working Group (U4O).

Government Commitments

The events culminated in 20 government commitments with the power to transform medical oxygen access in Nigeria, outlined below.

The Federal Coordinating Ministry of Health and Social Welfare (FMoHSW) will improve the affordability, accessibility, and quality of medical oxygen for patients across Nigeria, through the National Oxygen Desk, has been mandated to undertake the following strategic actions:

1. Enhance the maintenance of medical oxygen equipment.
2. Leverage available biomedical institutions in the zones for capacity building of biomedical engineers.
3. Institute quarterly evaluation of the oxygen ecosystem via zonal reports.
4. Expand oxygen infrastructure in tertiary and faith-based hospitals. Ensure all tertiary hospitals are equipped with functional LOX or PSA systems.
5. Operationalize a telemetry-enabled LOX system tied to a specific producer/supplier.
6. Bridge critical gaps in equipment: cylinders, humidifiers, nasal prongs, analysers.
7. Promote pharmacist and biomedical engineering oversight in oxygen purity testing using oxygen analysers.
8. Prepare and submit formal requests to the National Primary Health Care Development Agency (NPHCDA) and the National Health Insurance Authority (NHIA) for the inclusion of medical oxygen services in the National Health Insurance Scheme (NHIS), ensuring coverage and reducing out-of-pocket payments for patients.
9. Collaborate with the Department of Hospital Services (DHS) to advocate for duty-free importation of medical oxygen cylinders, thereby reducing costs associated with medical oxygen infrastructure.
10. Submit a policy brief recommending government incentives—such as energy cost subsidies—to encourage local manufacturers to scale up oxygen production. Request for the incentivisation of oxygen production for manufacturers (e.g., reduce energy cost).
11. Ensure adequate budgetary allocations to equip every tertiary health facility with at least one fully functional oxygen plant.
12. Mandate that piping for medical oxygen delivery systems be integrated into the architectural design of all new hospital wards, enhancing efficient distribution and use.
13. Publicize a vetted list of approved medical oxygen vendors and implement a national policy to prohibit roadside procurement of medical oxygen to safeguard patient safety and ensure quality control. Enforce standards to discourage informal oxygen procurement.
14. Institutionalize periodic data collection aimed at monitoring the quality and safety of oxygen delivered to patients across health facilities, with the Director of Hospital Services and the Committee of Chief Medical Directors (CMDs).

In addition, the National Primary Health Care Development Agency (NPHCDA) will:

1. Prioritize oxygen in PHC revitalization.
2. Scale up early detection of hypoxemia and referral systems by ensuring that every PHC has at least one functional pulse oximeter.
3. Build triage capacity at the PHC level.
4. Promote community engagement and health worker training on pulse oximetry.
5. Enhance communication to ensure efficient referral systems for hypoxemic patients..
6. Ensure collaboration across the tiers of government on pulse oximetry and medical oxygen access.

The Forum underscored a central truth: If we fail at the primary healthcare level, we fail everywhere. Access to medical oxygen is not merely a policy issue, it is a matter of life and death. All stakeholders are therefore called upon to act decisively and collectively to ensure that no man, woman, or child dies due to lack of medical oxygen in Nigeria or across Africa.

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