OFFICE OF INSPECTOR GENERAL
U.S. Agency for International Development

COVID-19: Audit of USAID's Oxygen Ecosystem Program for COVID-19 Relief

Audit Report 4-936-24-006-U
April 3, 2024

Office of Audits, Inspections, and Evaluations

MEMORANDUM

DATE: April 3, 2024

TO: Bureau for Global Health, Assistant Administrator, Dr. Atul Gawande

FROM: Africa Regional Office, Audit Director, Rob Mason

SUBJECT: COVID-19: Audit of USAID's Oxygen Ecosystem Program for COVID-19 Relief (4-936-24-006-U)

Enclosed is the final audit report on USAID's Oxygen Ecosystem Program for COVID-19 Relief using American Rescue Plan Act of 2021 (ARPA) funding for activities notified by Congressional Notification (CN) #16. The Office of Inspector General (OIG) contracted with the independent certified public accounting firm of Williams, Adley & Company-DC LLP (Williams Adley) to conduct a performance audit. The contract required the audit firm to perform the audit in accordance with generally accepted government auditing standards.

In carrying out its oversight responsibilities, OIG reviewed the audit firm's report and related audit documentation and discussed the findings with the firm's representatives. The audit firm is responsible for the enclosed report and conclusions. That said, we found no instances in which Williams Adley failed to comply, in all material respects, with applicable standards.

The audit objectives were to determine whether: (1) the process for selecting countries for the first phase of oxygen support was consistent with that outlined in Congressional Notification (CN) #16; and (2) USAID monitored the implementation of its oxygen ecosystems work in accordance with Agency criteria.

To answer the audit objectives, the audit firm assessed USAID guidance and directives; performed walkthroughs with the Bureau for Global Health and selected mission personnel; and spoke with select USAID-funded organizations (commonly referred to by USAID as implementers), and program beneficiaries. The audit firm also reviewed documentation related to funding allocation and monitoring. During the audit, Williams Adley conducted field work in seven countries that were allocated just over $24 million in ARPA funding for oxygen ecosystem support. Field work took place between September 2022 and August 2023.

The audit firm concluded that the country selection process aligned with the anticipated process that USAID described in CN #16. It also concluded that the agency's monitoring of oxygen ecosystem projects was in accordance with USAID criteria. However, the audit firm found that USAID experienced challenges implementing liquid oxygen projects in the seven countries identified in the audit, which delayed installation of the liquid oxygen systems. The audit firm noted that USAID is currently in the process of selecting qualified vendors to complete installation of such equipment in four countries and has completed pre-installation

site prep at most of the facilities in two other countries. Additionally, all liquid oxygen systems-related infrastructure installations under the workplan have been completed in the seventh country. Consequently, we have no recommendations.

We appreciate the assistance provided to our staff and the audit firm's employees during the engagement.

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US Agency for International Development

Audit of USAID's Oxygen Ecosystem Program For COVID-19 Relief

March 26, 2024

March 26, 2024

Toayoa D. Aldridge
Assistant Inspector General for Audits, Inspections, & Evaluations
Office of Inspector General
U.S. Agency for International Development

Dear Ms. Aldridge:

Williams, Adley & Company-DC, LLP performed an audit of US Agency for International Development's (USAID) oxygen ecosystem program for COVID-19 relief. We performed the audit in accordance with our Task Order No. 72001G22R00006, dated September 13, 2022. Our report presents the results of the audit.

We conducted our audit in accordance with applicable Government Auditing Standards, 2018 revision, technical update April 2021. The audit was a performance audit, as defined by Chapter 8 of the Standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. The objectives of the audit were to determine whether the process for selecting countries for the first phase of oxygen support was consistent with that outlined in Congressional Notification (CN) #16 and whether USAID monitored the implementation of its oxygen ecosystems work in accordance with Agency criteria.

To accomplish our objectives, we interviewed personnel from USAID Global Health personnel as well as Mission personnel, project implementers, and project beneficiaries in seven recipient countries. We also reviewed documentation related to funding allocation and monitoring. We conducted fieldwork from September 2022 through August 2023. Appendix 1 provides a more detailed description of our objectives, scope, and methodology. We appreciate the opportunity to have conducted this audit. Should you have any questions or need further assistance, please contact us at (202) 371-1397.

Leah Southers

Leah Southers, CPA, CISA, CGFM, CFE
Partner

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RESULTS IN BRIEF

We conducted an independent performance audit of USAID's allocation and monitoring of funds used in its COVID-19 oxygen ecosystem program. Our performance audit was conducted both remotely as well as at overseas Mission, implementer, and recipient locations in seven countries: Eswatini, Ghana, Lesotho, Malawi, Mozambique, Tanzania, and Vietnam.

The objectives of the audit were to determine whether the process for selecting countries for the first phase of oxygen support was consistent with that outlined in CN #16 and whether USAID monitored the implementation of its oxygen ecosystems work in accordance with Agency criteria. Overall, we found that the country selection process was consistent with the notification, and that monitoring was conducted in accordance with USAID criteria.

We found, however, that USAID experienced challenges implementing liquid oxygen systems in seven countries we visited in June and July 2023, which delayed installation. USAID is currently in the process of selecting qualified vendors to complete installation in Lesotho, Malawi, Mozambique and Tanzania. USAID has completed pre-installation site prep at all 10 facilities in Ghana and 6 of the 10 facilities in Vietnam. All LOX systems-related infrastructure installations under the workplan have been completed in Eswatini. Consequently, there are no recommendations.

BACKGROUND

USAID is a U.S. international development and disaster assistance agency that works in over 130 countries to promote global health, support global stability, provide humanitarian assistance, catalyze innovation and partnership, and empower women and girls. Established in 1961, USAID's work advances U.S. foreign policy, demonstrates American generosity, and supports partners to become self-reliant. USAID's mission is to promote democratic values abroad and advance a free, peaceful, and prosperous world. USAID is headed by an Administrator appointed by the President and confirmed by the Senate. USAID manages more than $25 billion in combined annual appropriations. USAID plays a key role in the U.S. government's global response to the COVID-19 pandemic and its secondary impacts.

The U.S. COVID-19 Global Response and Recovery Framework ("Framework"), published in July 2021, outlines the U.S. government's lines of effort with the overarching goal to end the COVID-19 pandemic around the world, mitigate its impacts, support the global recovery, and strengthen international readiness for future biological threats. The Framework contains the following objectives:

1. Accelerate widespread and equitable access to and delivery of safe and effective COVID-19 vaccinations.
2. Reduce morbidity and mortality from COVID-19, mitigate transmission, and strengthen health systems, including to prevent, detect, and respond to pandemic threats.
3. Address acute needs driven by COVID-19, mitigate household shocks, and build resilience.
4. Bolster economies and other critical systems under stress due to COVID-19 to prevent backsliding and enable recovery.

5. Strengthen the international health security architecture to prevent, detect, and respond to pandemic threats.

American Rescue Plan Act Background

USAID received the following amounts under the American Rescue Plan Act of 2021 (hereafter referred to as "ARPA"):

- $905 million to USAID for global health activities to prevent, prepare for, and respond to coronavirus, including a contribution to a multilateral vaccine development partnership to support epidemic preparedness.
- Approximately $3.1 billion to prevent, prepare for, and respond to coronavirus, including support for international disaster relief, rehabilitation, and reconstruction, for health activities, and emergency food security needs.
- $930 million to USAID to prevent, prepare for, and respond to coronavirus, including activities to address economic and stabilization requirements resulting from the coronavirus.

USAID is also programming $800 million in Title II food aid appropriated under ARPA. In addition, the U.S. Department of State was appropriated $3.75 billion to mitigate the effects of coronavirus on PEPFAR programs. $3.5 billion of that amount was for a required contribution to the Global Fund to Fight AIDS, Tuberculosis and Malaria. A majority of these funds remaining were apportioned to USAID (ARPA PEPFAR).

Oxygen Ecosystem Program Background

As COVID-19 primarily affects the respiratory system, it can cause severe breathing difficulties and lead to a condition known as hypoxia, where the body is deprived of adequate oxygen. With many COVID-19 patients needing large amounts of oxygen during the pandemic, the oxygen needs at many hospitals rapidly increased beyond supply. Liquid oxygen can be an efficient and effective way for hospitals to meet their oxygen needs.

When oxygen is stored at very low temperatures (-183 degrees Celsius), it takes a liquid form, allowing large amounts to be stored efficiently. A liquid oxygen system with piping to patient bedsides provides a safer alternative to cylinder-based gaseous oxygen located within hospital wards. In addition to being safer, liquid oxygen is the most cost-effective solution, as high-volume tanks with condensed oxygen reduce transportation costs and waste.[1]

USAID-funded liquid oxygen system, under a separate CN, located at Long Khanh Regional General Hospital in Dong Nai, Vietnam (photo by Williams Adley).

[1] EpiC Blog (2022, June). Liquid oxygen systems breathe new life into health facilities in Vietnam. Retrieved June 8, 2023, from https://epicproject.blog/liquid-oxygen-systems-breathe-new-life-into-health-facilities-in-vietnam/

In COVID-19 treatment, oxygen is needed for any hospitalized patient, and liquid oxygen, once converted to gaseous form, can be delivered to the majority of patients in need via nasal cannula or facemasks. For critical COVID-19 cases, oxygen is typically used in conjunction with various medical devices such as ventilators, and continuous positive airway pressure machines. These devices deliver oxygen directly to the patient's lungs, assisting their breathing and improving oxygen saturation levels. Liquid oxygen is preferred in certain settings over other options for generating oxygen because it has a higher purity of oxygen and takes up less space when stored. One liter of liquid oxygen provides approximately 860 liters of gaseous oxygen. This makes it more efficient and allows medical facilities to accommodate a larger number of patients.[2]

In many low- and low-middle-income countries (LIC/LMIC), limited healthcare infrastructure, inadequate oxygen production capacity, and challenges in oxygen distribution limited hospital systems' ability to provide lifesaving oxygen to COVID-19 patients during the pandemic. Medical oxygen capacity was inadequate in most LIC/LMICs even before 2020: an estimated fifty percent of facilities with inpatient services in LIC/LMICs lacked reliable access to oxygen, and only 20 percent of healthcare workers in these countries were trained in oxygen therapy.[3] To address these issues, in October 2021 USAID notified Congress (CN #16) that $50 million in ARPA funds would support liquid oxygen-related capacity building and expansion in 10-15 countries.

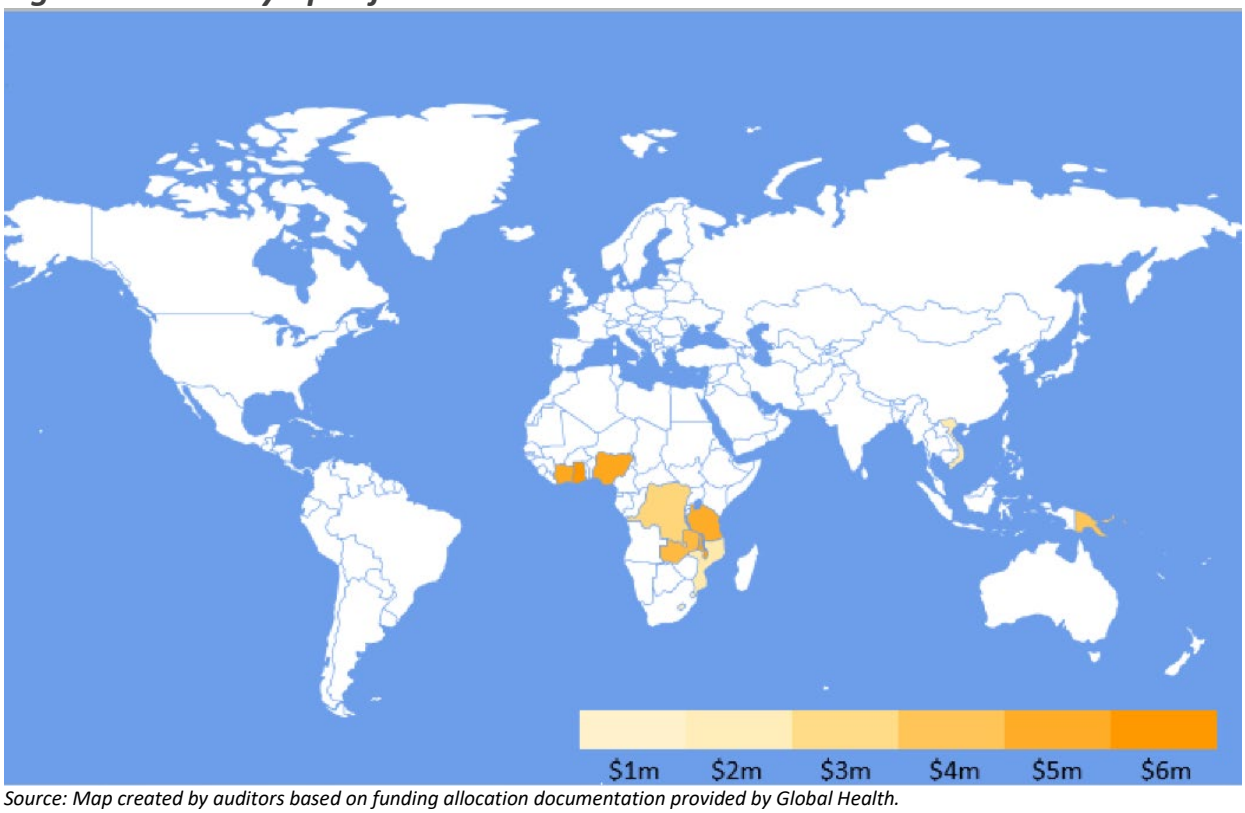
USAID's Bureau for Global Health (Global Health) used several metrics such as COVID-19 cases per 100,000, child pneumonia rate, and lower respiratory infection death rate to develop a list of 26 countries for rapid assessment. USAID then obligated funds to FHI 360 to conduct the assessments. The assessments considered factors such as government interest in developing or expanding the use of liquid oxygen in its medical facilities as well as private sector engagement potential and oxygen support from other donors.

Using these factors, USAID selected 13 countries to provide liquid oxygen support as shown below.

[2] National Institutes of Health (2022, February). Oxygen Supply in Hospitals: Requisites in the Current Pandemic (NIH Publication No. PMC8936862), U.S. Department of Health and Human Services, National Institutes of Health. Retrieved June 8, 2023, from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8936862/

[3] CN #16, page 3

Figure 1 - Country-Specific Allocations Under CN #16



Source: Map created by auditors based on funding allocation documentation provided by Global Health.

Key supports provided to the 13 selected countries include:

- Partnership with Ministries of Health to purchase liquid oxygen from major industrial gas manufacturers for time-limited, demand-driven volumes of liquid oxygen for COVID-19 surge needs;
- Procurement or rental of key products such as storage tanks, vaporizers (to convert liquid oxygen to oxygen gas) and cylinders/filling stations (filled with oxygen gas from liquid oxygen source for distribution to facilities);
- Logistics/engineering support (e.g., facility modifications, repairs, adaptations, etc.), among other related activities;
- Clinical technical assistance (TA) to ensure healthcare workers are trained on safe delivery of oxygen to patients, which includes, but is not limited to, training on liquid oxygen, including the safe and appropriate use of oxygen; the use of drugs, commodities, and equipment; and the care of ill patients with COVID-19 infection;
- Other oxygen-related support (e.g., durables, consumables, and other engineering/logistics support identified); and
- Exploring non-USAID financing (e.g., through the mobilization of domestic resources) to ensure the sustainability of the liquid oxygen system.

AUDIT RESULTS

Overall, we found that the funds for oxygen ecosystem support were allocated consistently with the process notified to Congress and monitored in accordance with Agency and Federal

standards. However, we found some challenges in installing LOX systems that have delayed implementation.

Audit Objective 1: Selection of Countries for Oxygen Support

To effectively implement programming to prevent, prepare for, and respond to the COVID-19 pandemic, USAID used ARPA funds to provide its Missions with the technical assistance and other support required, building on previous COVID-19 related investments to address the most urgent needs in low- and-middle income countries to accelerate progress towards achieving the goals of objective 2 of the Framework.

Increasing access to liquid oxygen (LOX) was an important element of the COVID-19 response since 75 percent[4] of severe COVID-19 patients can survive if they have access to oxygen therapy alone. Access to oxygen was limited, resulting in countries often not being able to provide oxygen needed to patients during surges in COVID-19.

Prior to mounting a program to increase access to LOX in LICs/LMICs, USAID conducted a landscape analysis of 46 countries listed in CN #16 to determine which countries had the need and optimal conditions for such activities. The 26 countries recommended by Global Health for Phase 1a - rapid assessment and identification of 10-15 countries for LOX support - were selected based on the USAID Oxygen Team's examination of statistics on child pneumonia rates and lower respiratory infection death rates published by the Institute for Health Metrics and Evaluation (IHME). USAID looked for countries that were not using LOX despite the presence of an accessible LOX source as well as countries where there may have already been some use of LOX, but the investment could be catalytic to expand use of LOX both for ongoing routine oxygen needs and for large but temporary surges.

To determine which countries were best suited for implementation, USAID obligated funds to FHI 360 under its Meeting Targets and Maintaining HIV Epidemic Control (EpiC) project to conduct an initial rapid assessment of LOX feasibility in the 26 countries selected by USAID's landscape assessment. FHI 360 used data on COVID-19 burden and evaluated the following factors when conducting the rapid assessments:

1. Availability of LOX infrastructure (tanks, piping, etc.) and oxygen supply gaps at the country level,
2. National Government commitment for investments in LOX,
3. Availability of LOX suppliers in-country or in the region, and
4. Complementarity to other LOX assistance activities.

Phase 1a began on December 16, 2021, after an initial obligation of $300,000, and was completed by February 17, 2022, which was within the anticipated 6 to 8 week timeline stated in the CN. Based on these rapid assessments, USAID recommended that 13 countries proceed to Phase 1b for development of costed workplans. FHI 360 then developed costed workplans which provided up to three archetypes for implementation: an archetype for capacitating the maximum number of facilities in the assessed area, an archetype for capacitating all priority facilities in the assessed area, and an archetype for the minimum number of facilities that

[4] World Health Organization (WHO) Technical Consultation on Oxygen Access Scale-Up for COVID-19 (2021)

would need to be capacitated to make a limited LOX investment worthwhile in the assessed area. To complete Phase 1b, an additional $1,500,000 was obligated on March 11, 2022. Development of costed work plans for the 13 countries was completed in April 2022. During the time between the obligation of funds and the commencement of Phase 1b, the Oxygen Team provided its input to Global Health regarding country selection.

In addition to the process described above, Global Health held conversations with relevant USAID Bureaus for Africa, Asia, and Latin America and the Caribbean to finalize the recommendations of countries to proceed to implementation in Phase 2 and the funding levels needed for CN #16 activities. See Table 1 below.

Table 1 - Country and Global Allocations Under CN #16

Country/Global	Implementing Partner(s)	Total Obligation
Global	FHI 360	$1,800,000
Cote d'Ivoire	FHI 360	$5,175,000
Democratic Republic of the Congo	FHI 360	$3,265,000
Eswatini	FHI 360	$1,650,000
Jamaica	FHI 360	$2,000,000
Malawi	FHI 360	$5,370,000
Mozambique	FHI 360	$2,250,000
Nigeria	FHI 360	$5,210,000
Papua New Guinea	FHI 360	$4,000,000
Tanzania	FHI 360	$5,000,000
Vietnam	FHI 360	$2,200,000
Zambia	Right to Care, ASCO Zambia	$4,430,000[5]
Ghana	JHPIEGO	$5,830,000
Lesotho	Right to Care	$1,820,000[6]
Total Assistance Under CN #16:		**$50,000,000**

Source: Allocation information provided by Global Health

[5] A portion of these funds remain in a Development Objective Agreement (DOAG) with the Government of Zambia awaiting sub-obligation to the implementing partner(s) upon evaluation of pipeline and activity progress.

[6] A portion of these funds remain in a DOAG with the Government of Lesotho awaiting sub-obligation to the implementing partner(s) upon evaluation of pipeline and activity progress.

Once final countries were selected for implementation, Missions determined the best suited implementers to perform the work. Most Missions selected FHI 360, however Ghana, Lesotho, and Zambia selected other implementers to complete the LOX support activities.

Based on the testing conducted, we determined:

- Landscape analysis was conducted for 46 countries and rapid assessments were conducted of 26 countries within 8 weeks using the process outlined in CN #16; and
- Measurable factors used by USAID in determining which countries would receive LOX support were consistent with those notified to Congress.[7]

Overall, Global Health's country selection process aligned with the anticipated process that USAID described in CN #16. However, challenges in implementing Phase 2 activities were noted in the seven countries we visited either in person or virtually.

Finding 1: USAID Experienced Challenges Implementing LOX Systems

We sampled seven of the 13 countries that received support from funds notified in CN #16. For these seven countries, implementer workplans called for the installation of functioning LOX systems by September 2023. During our fieldwork in July 2023, we observed that none of the seven countries (Ghana, Lesotho, Malawi, Mozambique, Eswatini, Tanzania, Vietnam[8]) had LOX systems installed. As of the date of this report, USAID is currently in the process of selecting qualified vendors to complete installation in Lesotho, Malawi, Mozambique and Tanzania. USAID has completed pre-installation site prep at all 10 facilities in Ghana and 6 of the 10 facilities in Vietnam. All LOX systems-related installations under the workplan have been completed in Eswatini.

Liquid oxygen piping for LOX system in Vietnam, funded under a separate CN (photo by Williams Adley).

At the time of our in-person and virtual visits and interviews with Missions, implementers, and hospital personnel, we noted that many necessary preparatory activities had taken place in those six countries. These included site selection, commencement of medical gas piping installation, soil testing, environmental and safety certifications, hospital renovations, and hiring and training of biomedical engineers and technical advisors.

In Vietnam, we found that liquid oxygen systems were installed in 13 sites using funds notified in CN #164 and CN #165. With funds notified in CN #16, USAID/Vietnam established a one-year work plan to install 10 LOX systems

[7] Country selection criteria per CN #16: 1) The need for medical oxygen as determined by three key variables: COVID burden (cases per 100,000); child pneumonia rate; and lower respiratory infection death rate. 2) National Government interest in developing or expanding LOX use in medical facilities. 3) LOX Private Sector Engagement Potential. 4) Other oxygen support: The assessments will review existing funding through ARPA, the Global Fund, the international donor community, and other sources for oxygen investment.

[8] Vietnam had several LOX systems installed that were notified under a separate CN, however none of the LOX systems supported by funds notified in CN #16 had been installed at the time of our fieldwork.

in 6 provinces. With the approval of the Ministry of Health and USAID, FHI 360 selected a vendor to deliver, install, and inspect tanks on all sites by September 2023. In June 2023, FHI 360 reopened the procurement process due to issues noted with the selected vendor. As such, the period of performance was extended to January 2024. Based on our conversation, the impact on the new LOX installation timeline would be minimal.

The main challenges in installing LOX systems in the other six countries included health systems not ready for LOX implementation, delays in site selection and approval, and problems encountered with the selection of qualified vendors.

The FHI 360 rapid assessment noted the following concerns related to implementing LOX in the six countries:

- *Tanzania:* unreliable LOX supply due to only one local manufacturer; poor transportation infrastructure to deliver LOX; limited experience and poor or no infrastructure, such as bulk storage tanks, bedside piping outlets, ambient vaporizers, and backup cylinder supply; insufficient clinical and biomedical training; and only moderate interest in LOX by the Tanzanian government as an alternative source of medical oxygen.
- *Eswatini, Lesotho, Mozambique:* no local LOX manufacturer, inadequate distribution of LOX supply to hospitals, safety concerns due to risk of gas leakage from piping system, lack of clinical and biomedical training, and poor transportation system.
- *Ghana:* limited LOX infrastructure, no local LOX manufacturing capability, unsustainable supply and high costs to facilities due to the monopoly on supply and transport across long distances, poor delivery transportation infrastructure, and high cost to patients.
- *Malawi:* no local LOX manufacturing capability, poor transportation infrastructure, limited supplies of bulk storage tanks, bedside piping outlets, ambient air vaporizers, and backup cylinders, lack of clinical and biomedical training, and no long-term service contract with a competent supplier to guarantee stable supply and maintenance.

LOX installation was also affected by delays in selecting sites and qualified vendors. For instance, in all 6 countries there was a lengthy process to select hospitals for LOX installation since the requirements to install liquid oxygen systems are stringent. In Malawi, Tanzania, Lesotho, Mozambique, Ghana, and Eswatini, sites initially proposed had to be changed due to: changing health ministry requirements, piping and oxygen transportation issues, changing regional needs within each of the six countries during the pandemic, the desire to reduce duplication of efforts, and the unavailability of biomedical engineers in some countries. During our visits and virtual meetings, we learned that the six countries had difficulty identifying local qualified and experienced vendors that met national as well as international technical standards. As of January 16, 2024, Ghana and Vietnam have found qualified vendors to manufacture and supply LOX to the selected hospitals. In Ghana, Eswatini, Vietnam, Malawi, and Mozambique, qualified vendors have been identified for site preparation and medical gas piping at the selected facilities, while the rest remain in the procurement process.

These challenges resulted in delays providing LOX systems as called for in the oxygen ecosystem work plans. However, since the process to find qualified vendors and complete installation is underway or completed, we are not making a recommendation on this matter.

Audit Objective 2: Monitoring Implementer Performance

Performance monitoring is critical to USAID's ability to track progress and determine whether the funding is accomplishing what it was intended to achieve. However, the COVID-19 pandemic created challenges to performance monitoring efforts, including movement restrictions and technology challenges faced by both Mission and implementing partner staff.[9] To assist Missions in performance monitoring during the pandemic, Global Health provided monitoring policy flexibilities related to remote monitoring and site visits, as well as guidance designed to help Missions. Key guidance issued during the audit period related to performance monitoring included:

- COVID-19 Monitoring, Evaluation, and Learning Plan (first issued on July 2, 2021, updated on October 25, 2021): This guidance outlined the indicators and data to be collected for the activities implemented using the ARPA funding.
- Global Health COVID-19 Indicators (published in August 2020, last updated on October 4, 2021): This guidance provided standard indicator definitions and was updated throughout the pandemic to reflect changing circumstances.

A detailed monitoring, evaluation, and learning (MEL) plan was created for each sampled activity. Although each MEL plan was unique and tailored to the specific activities, they all contained standard performance monitoring requirements per ADS 201 as well as the applicable COVID-19 indicators.

Per review of the activity-specific MEL plans and the results of the interviews conducted (see Appendix 3), the primary way in which the Missions adapted their monitoring process was by significantly increasing the frequency of their communication with stakeholders such as implementing partners, local government and ministry of health officials, and other donors. For example, on a bi-weekly basis, representatives of FHI 360, the USAID Oxygen Team, and the Agreement Officer's Representative met to review activities, address issues, respond to changing needs, and develop solutions and update on the progress for each program. Jhpiego, which was selected to implement LOX in Ghana under its Reaching Impact, Saturation and Epidemic Control (RISE) program, included LOX activities in their weekly Agreement Officer's Representative team management meetings that the Oxygen Team also attended. The same monitoring process was used by implementers and USAID personnel in Zambia and Lesotho. These discussions were in addition to various other weekly, monthly, and quarterly meetings conducted.

Another change in the monitoring process was the addition of the voluntary reporting of various COVID-19 indicators. Given the evolving nature of the pandemic, Global Health sought to obtain real-time tracking of results and the ability to make course corrections based on available data. As such, Global Health collected, processed, and analyzed data from various Missions and implementing partners on a more frequent basis to strategically direct its resources and interventions.[10] Beginning in September 2021, Global Health requested that implementing partners voluntarily submit data, including both quantitative and narrative

[9] USAID OIG Audit report (May 21, 2021). USAID Adapted to Continue Monitoring During COVID-19, But the Effectiveness of These Efforts Is Still To Be Determined (9-000-21-007-P)

[10] USAID American Rescue Plan Health Funding Vaccine Implementation Guidance (first issued December 20, 2021; last updated, February 28, 2022).

results, on the activities supported by ARPA funding. The guidance issued by Global Health identified and defined the indicators and frequency of reporting. In response to the evolving nature of the pandemic, Global Health revised the indicators at least twice throughout the pandemic. The results of our audit indicated that the frequency of voluntary reporting on indicator data such as information on commodities, and other key metrics varied by implementer; however, Global Health had other mechanisms in place to monitor the use of the funds.

Due to the nature of the pandemic, funding was being obligated and changes were occurring at a rapid pace and the Missions felt the increased communication was the best way to ensure challenges were resolved timely. As the funding related to CN #16 was not available for obligation until December 2021, most movement restrictions had been lifted prior to activity implementation. As such, there were no identified instances in which either the Mission and/or partner personnel were unable to conduct in-person site visits.

Based on the results of our testing, we determined that the performance monitoring performed by Global Health and at the Mission/Regional Bureau level was in accordance with Agency requirements.

APPENDIX 1: OBJECTIVES, SCOPE AND METHODOLOGY

Our audit objectives were to determine whether the process for selecting countries for the first phase of oxygen support was consistent with that outlined in Congressional Notification (CN) #16 and whether USAID monitored the implementation of its oxygen ecosystems work in accordance with Agency criteria.

Our audit scope is USAID Global Health's implementation and monitoring of activities supported with funds notified in CN #16, submitted October 19, 2021.

To accomplish the objectives of the audit, Williams Adley identified the applicable criteria against which to assess USAID's allocation and monitoring. In addition, we (1) met with USAID Global Health management and the USAID Office of Inspector General to conduct an entrance conference, 2) inquired about investigations or legal proceedings involving the audit objectives, and (3) reviewed the applicable internal policies and procedures.

We reviewed agency directives, such as the USAID Operational Policy (ADS) and Mission guidance. We performed walkthroughs with Global Health and select Mission personnel. We also spoke with select implementers, beneficiaries, host government officials and other stakeholders to determine the impact of USAID's oxygen ecosystem efforts.

We reviewed rapid assessments and scoring sheets for countries selected for Phase 2 under CN #16 to determine whether all key metrics identified in Phase 1 of the CN were considered.

We also selected five countries that received support from funds notified under CN #16 for on-site visits; Ghana, Malawi, Mozambique, Lesotho, and Vietnam. Due to Mission unavailability, we conducted testing at two additional sites virtually; Eswatini and Tanzania. See our Country Selection Methodology in Appendix 2. The total amount obligated for activities in these seven countries was $24.1 million which represents 48.2% of the $50 million allocated.

Table 3 - List of Missions Selected and Amount Obligated

Mission/Country Office	Region	Obligated Funding	Interviews Conducted In Person or Virtually
Ghana	Africa	$ 5,830,000	In Person
Malawi	Africa	$ 5,370,000	In Person
Mozambique	Africa	$ 2,250,000	In Person
Eswatini[11]	Africa	$ 1,650,000	Virtual
Lesotho[12]	Africa	$ 1,820,000	In Person
Vietnam	Asia	$ 2,200,000	In Person

[11] Eswatini is a non-presence country. Personnel for this USAID Country Office are located in Eswatini and supported by the Southern Africa Regional Mission.

[12] Lesotho is a non-presence country. Personnel for this USAID Country Office are located in Lesotho and supported by the Southern Africa Regional Mission. We visited project recipients in Lesotho and spoke with implementers in South Africa and USAID personnel in the Southern Africa Regional Mission.

Tanzania	Africa	$ 5,000,000	Virtual
Total:		**$ 24,120,000**	

Source: Auditor generated list. Obligated funding totals are based on allocation tables provided by Global Health.

For each country selected, we conducted interviews with Mission personnel, implementer personnel, beneficiaries (such as hospitals), host government officials (such as Ministries of Health), and other stakeholders. The purpose of these interviews was to identify the successes and challenges of the oxygen ecosystem projects and to gain a better understanding of USAID's allocation and oversight.

In addition to the interviews above, we reviewed supporting documentation for the oxygen ecosystem award in each country such as the award justification form, award document and/or modifications, and workplan. We also reviewed select monitoring documentation and progress reports.

We assessed the reliability of the data provided by (1) performing testing of certain data elements, (2) reviewing existing information about the data, and (3) interviewing agency and implementer officials knowledgeable about the data. In addition, we traced a sample of data to source documents. We determined the data was sufficiently reliable for the purposes of this report.

We assessed the significance of internal controls by (1) reviewing USAID's standard operating procedures; and (2) performing walkthroughs with Global Health personnel to get an understanding of controls over the process.

We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

APPENDIX 2: COUNTRY SELECTION METHODOLOGY

We visited five overseas Missions to conduct our audit of the oxygen ecosystem program. In addition to the five Missions visited in-person, we also held interviews with two Missions virtually due to Mission availability and other issues that made in-person visits impractical.

Our contract with U.S. Agency for International Development (USAID) Office of Inspector General required us to conduct six separate audits of American Rescue Plan Act of 2021 funding notified in various Congressional Notifications (CN) and U.S. President's Emergency Plan for AIDS Relief (PEPFAR) (herein referred to as "funding streams"):

- CN #16 – Oxygen Ecosystem
- CN #18 – Vaccine Readiness
- CN #41 – Rapid Response (2)
- CN #164 – Global Health Security
- CN #165 – Rapid Response (1)
- ARPA PEPFAR

For efficiency, we utilized a holistic approach to country selection, taking into consideration which countries would allow us to perform testing for multiple audits in one visit. Therefore, countries where activities were notified under numerous funding streams were more likely to be selected than those that had activities with small amounts of funding notified under one funding stream.

To determine which countries would be selected for in-person or virtual visits, we obtained a universe of the countries receiving support from funds notified in CNs #16, 18, 41 164, 165, as well as ARPA PEPFAR. We then utilized the following data points to determine which locations to visit:

- **Travel Advisories.** Countries that received a State Department Travel Advisory rating of *3-Reconsider Travel* or *4-Do Not Travel* were excluded from our sample selection.
- **Received Funding Under At Least One Allocation.** To be eligible the country must have received support from funds notified in CNs 164, 165, 41, 18, 16, or ARPA PEPFAR.
- **Total Dollar Amount Allocated.** We obtained a listing of allocations by country for each CN and ARPA PEPFAR. Countries that received support from the highest amount of total funding were more likely to be selected.
- **Total Number of CNs and ARPA PEPFAR Allocations.** To ensure our sample of countries is sufficient to achieve our audit objectives for all six audits under our contract, we gave greater weight to countries that received support from funding under multiple CNs and ARPA PEPFAR.
- **Whether the Mission Oversaw a Non-Presence Country.** We received a listing of non-presence countries from Global Health and the Mission that was responsible for their oversight. Missions that oversaw activities in non-presence countries had a higher probability of being selected.

Our country selection yielded 16 countries, of which seven received support from funding notified in CN #16 for oxygen ecosystem projects, as shown in Table 3 on page 14.

APPENDIX 3: STAKEHOLDER INTERVIEWS

As described in the Objectives, Scope, and Methodology section in Appendix 1, we conducted various interviews with Mission personnel, project implementers, project beneficiaries, and other stakeholders. These interviews are listed below.

Table 4 - List of Interviews Conducted

Country	City or Province	Organization(s) Interviewed/Visited	In-Person/ Virtual	Type
Eswatini	Mbabane	FHI 360 (EpiC)	Virtual	Implementer
Eswatini	Mbabane	USAID Country Office	Virtual	USAID Country Office
Ghana	Accra	USAID Mission	In-Person	Mission
Ghana	Accra	Jhpiego (RISE Project)	In-Person	Implementer
Ghana	Accra	Tema General Hospital	In-Person	Healthcare Facility
Ghana	Accra	Ghana Health Service (GHS)/Institutional Care Division	In-Person	Host Country Government
Ghana	Accra	GHS/Health Administrative and Support Services Division	In-Person	Host Country Government
Lesotho	Maseru	USAID Country Office (ADAPT Project)	Virtual	USAID Country Office
Lesotho	Maseru	USAID Country Office (RISE Project)	Virtual	USAID Country Office
Lesotho	Maseru	Right to Care (ADAPT Project)	Virtual	Implementer
Malawi	Lilongwe	USAID Mission	In-Person	Mission
Malawi	Lilongwe	FHI 360 (EpiC)	In-Person	Implementer
Malawi	Lilongwe	Malawi Ministry of Health	In-Person	Host Country Government
Mozambique	Maputo	USAID Mission	Virtual	Mission
Mozambique	Maputo	FHI 360 (EpiC)	Virtual	Implementer
Tanzania	Dar es Salaam	USAID Mission	Virtual	Mission
Tanzania	Dar es Salaam	FHI 360 (EpiC)	Virtual	Implementer
Vietnam	Hanoi	USAID Mission	In-Person	Mission

Vietnam	Hanoi	FHI 360 (EpiC)	In-Person	Implementer
Vietnam	Hanoi	Ministry of Health	In-Person	Host Country Government

Source: Auditor generated based on interviews performed.

APPENDIX 4: MANAGEMENT RESPONSE

TO: Rob Mason, Audit Director, USAID OIG Africa Regional Office

FROM: Dr. Atul Gawande, Assistant Administrator, Bureau for Global Health /s/

DATE: March 4, 2024

SUBJECT: Management Comment(s) to Respond to the Final Audit Report Produced by the Office of the Inspector General (OIG) titled, Audit of USAID's Oxygen Ecosystem Program for COVID-19 Relief (4-936-24-006-U)

The U.S. Agency for International Development (USAID) would like to thank the Office of the Inspector General (OIG) for the opportunity to respond to this final report that contains no recommendations for the Agency. We appreciate the extensive work of the OIG's engagement team, and the specific findings that will help USAID capitalize on lessons learned during the COVID-19 pandemic and achieve greater effectiveness during future pandemics.

For more than half a century, the United States has been the largest contributor to global health security and humanitarian assistance. Investments by USAID and other U.S. Government Departments and Agencies in global health substantially advance U.S. foreign-policy and national-security interests by protecting Americans at home and abroad, promoting social and economic progress, and supporting the rise of capable partners better able to solve regional and global problems. USAID supported liquid oxygen infrastructure activities with funds notified in Congressional Notification (CN) #16, advancing U.S. foreign policy and national security interests.

The U.S. government recognized early on in the pandemic how gaps in oxygen access were being exacerbated by the COVID-19 crisis and the urgent need to ensure this lifeline was accessible to those who need it. The United States is a global leader in building oxygen capacity, and we have seen significant improvements for COVID-19 treatment and outcomes in the countries where the U.S. has supported increased access to oxygen.

CN #16-funded activities help provide oxygen needed for day-to-day treatment of COVID-19 patients and strengthen health systems' capacity to respond to future surges, outbreaks, and pandemics. USAID implementing partners are also working with ministries of health to ensure that plans are in place for sustaining these investments to protect U.S. investments and save lives.