The U.S. Government Initiative for Global Vaccine Access:

# VACCINATING THE WORLD AGAINST COVID-19

GLOBALVAX

Initiative for Global COVID-19 Vaccine Access


# TABLE OF CONTENTS

# FOREWORD

In 2020, our lives were turned upside down when COVID-19 spread rapidly across the world, becoming the worst pandemic the world has faced in a century.

The development of vaccines to prevent severe illness and death from COVID-19 was a turning point. But COVID-19 vaccine supply for low- and middle-income countries were delayed for months, and then, as supply began to flow, it became clear that there were enormous challenges to overcome to support countries in delivering and administering doses at the speed and scale required to curb the impact of the virus. Many populations around the world were at risk of not being reached at all.

In September 2021, President Biden pledged that the United States would be an "arsenal of vaccines," which proved to be true: by May 2023, the United States had donated over 687 million COVID-19 vaccines—more than any other country in the world—to 117 countries and economies, including over 614 million doses donated through the COVID-19 Vaccines Global Access (COVAX). But in September 2021, it was clear that the United States would also need to work with countries to get those COVID-19 vaccines into arms.

Building upon the U.S. government's already historic pandemic response, in December 2021 USAID Administrator Samantha Power announced a new, whole-of-government effort, the Initiative for Global Vaccine Access (Global VAX), and former CDC director Rochelle Walensky committed to this collaborative effort to accelerate progress toward widespread and equitable access to safe and effective COVID-19 vaccines. Global VAX brought together the capabilities of the United States Agency for International Development, the U.S. Centers for Disease Control and Prevention, the Department of State, including the Office of the Global AIDS Coordinator, the Department of Defense, the Department of Health and Human Services, Peace Corps, the U.S. International Development Finance Corporation, the Department of Treasury, and other interagency partners under one whole-of-government umbrella, allowing us to leverage the full spectrum of the U.S. government's global health capabilities to respond to the evolving COVID-19 crisis.

Using the foundation of decades of U.S. government investments in global health and working in close partnership with local governments and key global and multilateral organizations, Global VAX enabled the rapid acceleration of the global COVID-19 vaccine rollout and stemmed the devastating impacts of the pandemic in some of the world's most vulnerable communities. Through Global VAX, the U.S. government has supported more than 120 countries in scaling up COVID-19 vaccine delivery and administration while strengthening primary health care systems to respond to future health crises. The progress of Global VAX has paved the way for a stronger global recovery and improved global health security.

As we move out of the emergency phase of the COVID-19 pandemic, we have an opportunity to build on the work of Global VAX to more effectively prepare for, detect, and respond to future health crises. Our ultimate goal is clear: help low- and middle-income countries build health systems that can meet the needs of people at any age and any stage of life—in times of crisis and in calm. Only through doing so will we fulfill the U.S. government's commitment to leading the global community toward a safer, healthier, and more equitable future.

**DR. ATUL GAWANDE**
Assistant Administrator for Global Health,
U.S. Agency for International Development

**DR. HOWARD ZUCKER**
Deputy Director for Global Health,
U.S. Centers for Disease Control and Prevention

# GLOBAL VAX

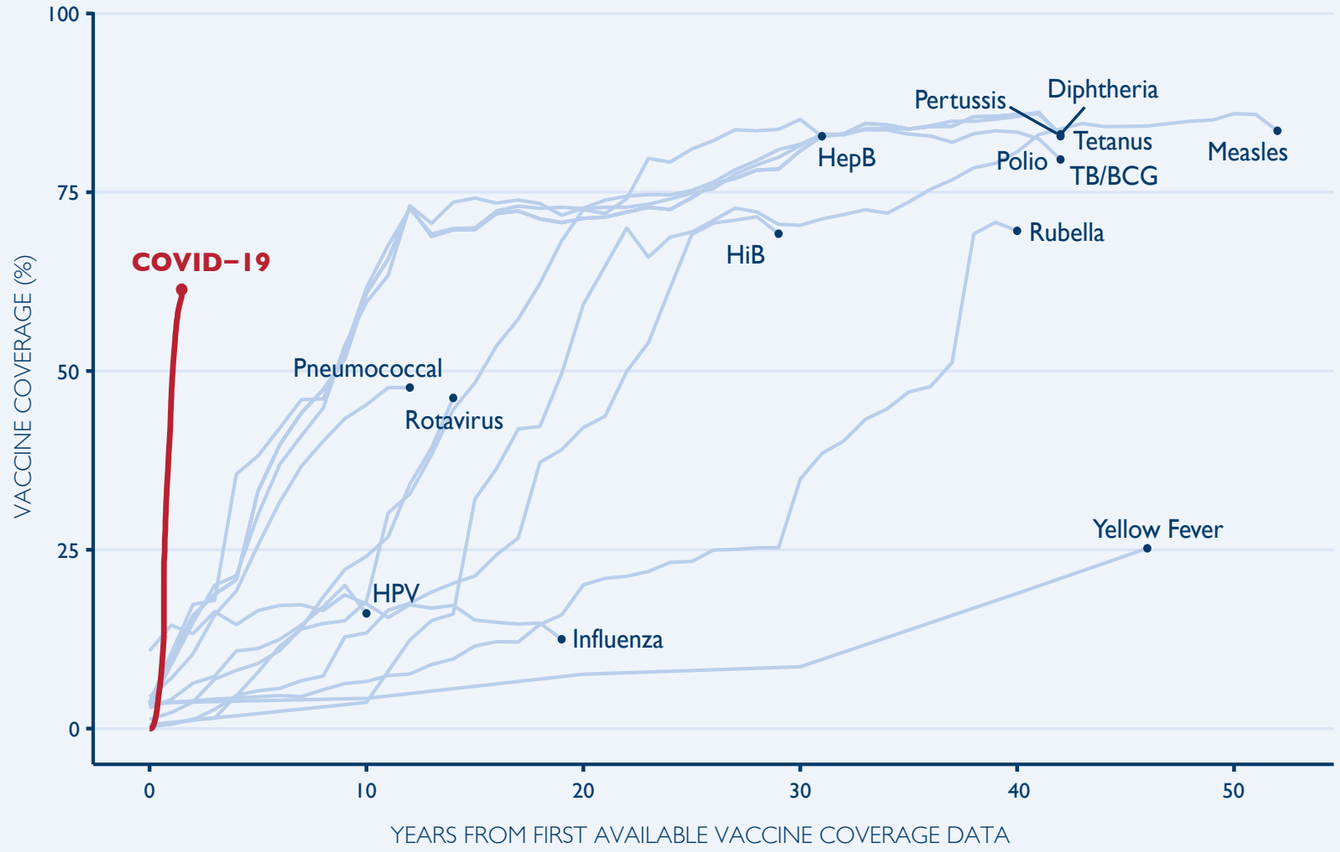
## CONTRIBUTIONS TO A HISTORIC GLOBAL VACCINATION EFFORT

The U.S. government has been a bold leader in the global fight against COVID-19. As global COVID-19 vaccine supply surged in 2021 following historic donations from the United States, the U.S. government ramped up support and expanded its leadership by launching the Initiative for Global Vaccine Access, known as Global VAX. This new initiative made COVID-19 vaccine doses available in countries around the world and supported countries in administering them through dedicated campaigns and routine country health care systems. Through Global VAX, the U.S. government leveraged its decades of investment in global health and diplomatic partnerships to help partner countries deliver lifesaving COVID-19 vaccines to millions of people. Global VAX built upon existing partnerships with key multilateral partners—including the World Health Organization (WHO); Gavi, the Vaccine Alliance; the COVID-19 Vaccines Global Access (COVAX) facility; UNICEF; and others—to harmonize COVID-19 vaccine donations, deliveries, and plans for vaccine rollout and administration.

Global VAX mobilized multiple U.S. government agencies' expertise in a whole-of-government initiative, with more than $1.8 billion in funding committed to COVID-19 vaccination thanks to the generous support and leadership of the U.S. Congress. In close collaboration with partner governments and multilateral partners, Global VAX supported more than 120 countries in driving widespread impact to the hardest-to-reach populations through large-scale COVID-19 vaccine delivery. A set of 11 "surge" countries[1] with significant need, all in sub-Saharan Africa, received intensive financial, technical, and diplomatic engagement through Global VAX that catalyzed and accelerated country COVID-19 vaccination efforts.

Global VAX contributed to an unprecedented acceleration in COVID-19 vaccine delivery, demand, and uptake globally. When Global VAX launched in December 2021, upper-middle-income countries had vaccinated 65 percent of their populations with a complete primary series against COVID-19, while lower-middle-income countries had vaccinated just 27 percent and had reached only three percent of their populations with a complete primary series of a COVID-19 vaccine.[2]

## GLOBAL COVID-19 VACCINE DEVELOPMENT AND ROLLOUT HAS BEEN THE MOST RAPID IN HISTORY[3]



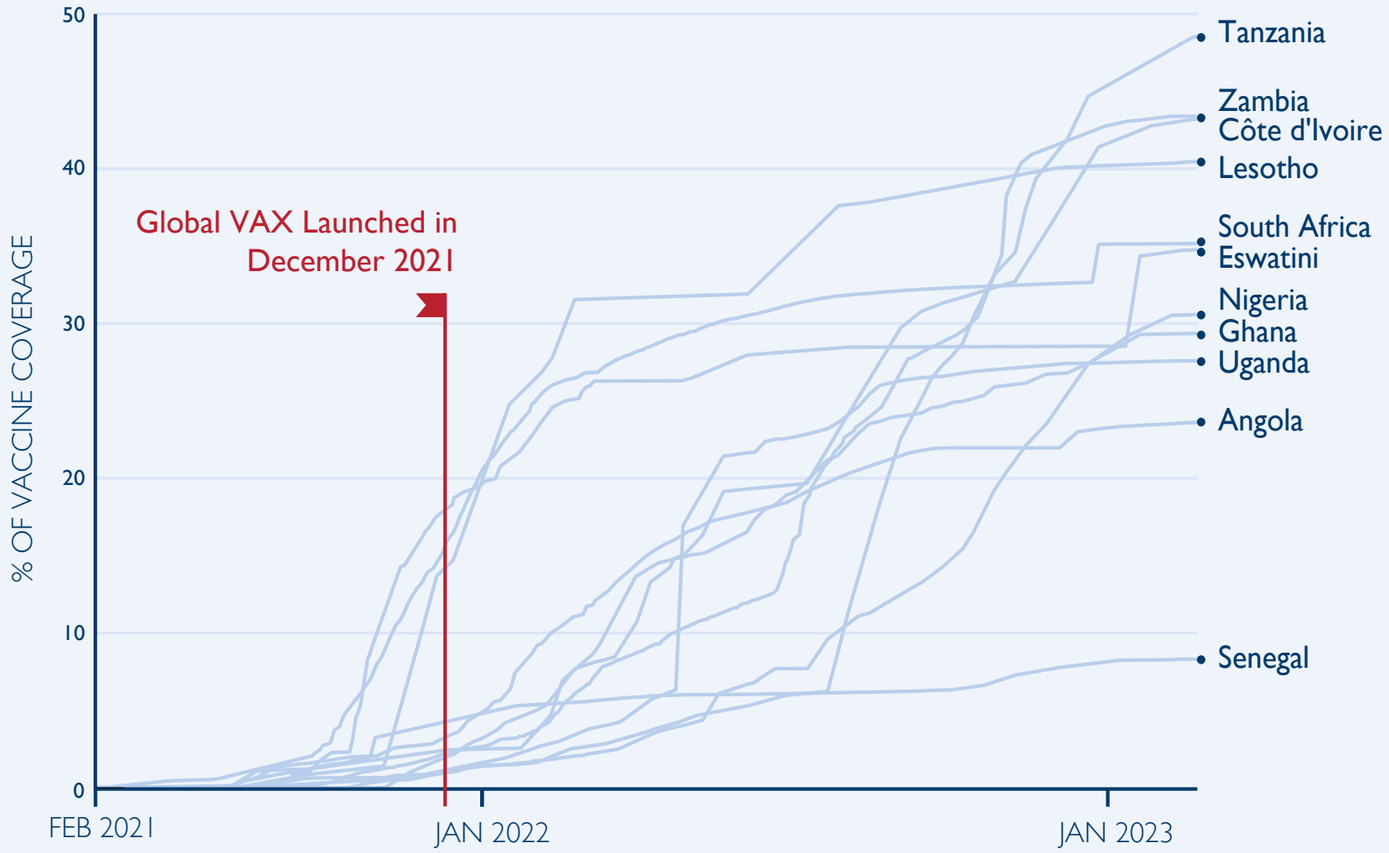

Since then, U.S. government support to accelerate COVID-19 vaccine supply and delivery through Global VAX has helped unlock extraordinary progress in both low-income countries and lower-middle income countries (LMICs). As of June 1, 2023, COVID-19 vaccine complete primary series coverage exceeded 59 percent in lower-middle-income countries and had increased by nearly 25 percentage points in low-income countries since the launch of Global VAX.[4] In Africa, COVID-19 vaccination rates have increased more than sixfold during this time, from 4.5 percent of the population having received a COVID-19 vaccine complete primary series to 30 percent at the time of publication.[5] In the 11 Global VAX surge countries, COVID-19 vaccination rates grew even faster–from 5 percent to 33 percent–in the same period.

The intensive support provided through Global VAX contributed to even more dramatic progress in many of the surge countries. In Tanzania, for example, strong governmental leadership combined with Global VAX support to accelerate significant progress in the country. Prior to the launch of Global VAX, one U.S. government partner organization was vaccinating an average of only 300 to 400 people per day against COVID-19. As a result of campaign drives and door-to-door outreach made possible by the infusion of technical and financial support from Global VAX, this increased to vaccinating over 6,000 people per day. The cumulative effect of Global VAX's strong partnership with the government of Tanzania was an extraordinary increase of COVID-19 vaccination coverage by 50 percentage points; from less than three percent of the total population in December 2021 to 53 percent as of March 2023, including over 95 percent of adults over the age of 18.

Increases in COVID-19 vaccination coverage through U.S. government support for Global VAX, COVAX, and similar efforts helped to mitigate the devastating impact of the pandemic and save lives. In the countries that received vaccines through COVAX, it is estimated that COVID-19 vaccines saved 7.5 million lives in the first year COVID-19 vaccines were available.[6] The United States contributed to a concerted effort to increase COVID-19 vaccination rates in countries and economies with below-target vaccination coverage, including by coordinating with partner governments and organizations under the auspices of the COVID-19 Vaccine Delivery Partnership (CoVDP). In February 2022, Secretary Blinken launched the COVID-19 Global Action Plan, a multilateral mechanism to drive action and coordination to end the acute phase of the COVID-19 pandemic, through which the United States coordinated with partners regarding assistance to governments. These efforts, coupled with $4 billion in U.S. funding for COVAX, supported increased COVID-19 vaccination rates globally; they involved interagency coordination among the White House, State Department, USAID, and HHS to enable the donation of over 687 million vaccines to 117 countries and economies.

Global VAX translated historic commitments from the U.S. government to the COVID-19 response into shots in arms. Expanding on existing health investments by partner governments, Global VAX efforts to rapidly build out the supporting infrastructure for COVID-19 vaccine delivery have laid the foundation for stronger, more robust health systems with increased capacity to prevent, detect, and respond to infectious disease outbreaks. With a focus on activities and successes in the 11 surge countries, this report captures the achievements of the landmark Global VAX initiative. It highlights the initiative's launch and strategic approach, the results achieved in partner countries, and the legacy the U.S. government's leadership leaves for the global COVID-19 response, country health systems, and pandemic preparedness around the world.

## PRIMARY DOSE DELIVERY IN SURGE COUNTRIES[1]




# GLOBAL VAX:

## A UNIFIED U.S. GOVERNMENT RESPONSE TO ACCELERATE COVID-19 VACCINATIONS AROUND THE WORLD

The unprecedented magnitude of the COVID-19 pandemic required an unprecedented response. Achieving enormous scale and rapid impact demanded significant leadership, collaboration, and funding. Although global partnerships had marshaled hundreds of millions of COVID-19 vaccine donations, making supply more plentiful and predictable, many countries were struggling to manage the influx and administer the doses in a timely manner. Despite high demand for COVID-19 vaccines amidst rising COVID-19 cases, many LMICs receiving donated COVID-19 vaccines faced complex access, delivery, vaccine acceptance, and uptake challenges due to the complexities of managing multiple types and sources of COVID-19 vaccines and a lack of financial and human resources, limiting their ability to benefit from the growing COVID-19 vaccine supply.

It was clear that in addition to donating COVID-19 vaccine doses and delivering them to countries in need, global leaders, including the United States, needed to pair donations with the technical support to deliver and administer COVID-19 vaccinations. In response to this emerging challenge, the U.S. government launched Global VAX to provide technical and financial support to partner countries, above and beyond ongoing programs, to overcome barriers to equitable COVID-19 vaccine access and rapidly scale up COVID-19 vaccination delivery and administration.

### U.S. COVID-19 GLOBAL RESPONSE AND RECOVERY FRAMEWORK

The U.S. government's commitment to battling COVID-19 is outlined in the Global Response and Recovery Framework, first published in 2021 and revised in 2022. The framework presents the government's three objectives in the global COVID-19 response: vaccinate those at highest risk and those who are hardest to reach; scale and integrate testing and treatment; and prepare for future COVID-19 variants and pandemic threats. Global VAX supported objective 1: accelerate widespread, sustained, and equitable access to and delivery of safe and effective COVID-19 vaccinations, and integrate COVID-19 vaccination into health systems while minimizing disruptions to other routine immunizations and health services.

## COVAX: THE COVID-19 VACCINES GLOBAL ACCESS FACILITY

The U.S. is the largest single donor to COVAX, which launched in April 2020 and pooled funding and purchasing to help LMICs access COVID-19 vaccines. Thanks to bipartisan congressional support, the U.S. provided $4 billion to COVAX to support the purchase and delivery of COVID-19 vaccines to 92 low- and middle-income countries. Of this, $3.5 billion supported the procurement of COVID-19 vaccines and $500 million supported COVID-19 vaccine readiness and delivery. Global VAX, launched in December 2021, built upon these efforts. As of May 15, 2023, COVAX had delivered over 1.95 billion vaccines to 146 countries.

> Global VAX contributed to major gains in national vaccination coverage, allowing Côte d'Ivoire to increase their national COVID-19 vaccination coverage of those fully vaccinated from 14% of the target population at the end of 2021 to 63% of the target population as of March 2023.
>
> - ***Thierry Nyatanyi,*** *MD, MPH, MMSc-GHD, Senior Team Lead, Global Health Security Agenda, USAID/Côte d'Ivoire*

## COUPLING COVID-19 DOSE DONATIONS WITH COVID-19 VACCINE DELIVERY SUPPORT THROUGH GLOBAL VAX

In the summer of 2021, LMICs faced a severe shortage of safe and effective COVID-19 vaccines, while COVAX had limited COVID-19 vaccine supply to share with them. With the Delta variant of SARS-CoV-2 spreading rapidly around the world, the United States made a critical investment to provide COVID-19 vaccines to those countries that could not afford to purchase them themselves—with no strings attached. With equity at the core of the U.S. government strategy to get shots into arms, the U.S. worked with COVAX to distribute U.S.-donated COVID-19 vaccines to countries in need. These doses began shipping to countries around the world in August 2021.

At the White House COVID-19 Summit in September 2021, President Biden challenged the world to join the United States in providing safe and effective COVID-19 vaccines to meet global demand. The world responded, and the United States and its allies succeeded in achieving the ambitious goal of dramatically increasing COVID-19 vaccine supply across the country and the world. Thanks to the Biden-Harris administration's historic commitment and leadership, global COVID-19 vaccine supply finally began to meet demand in the fall of 2021. As of March 2023, the U.S. government had donated more than 687 million COVID-19 vaccines to 117 countries around the world, including over 614 million doses donated through COVAX.

Global VAX complemented and expanded the U.S. government's historic COVID-19 vaccine dose donation program by ensuring that countries that received COVID-19 vaccine doses also received the necessary support to deliver and administer COVID-19 vaccines rapidly and equitably.

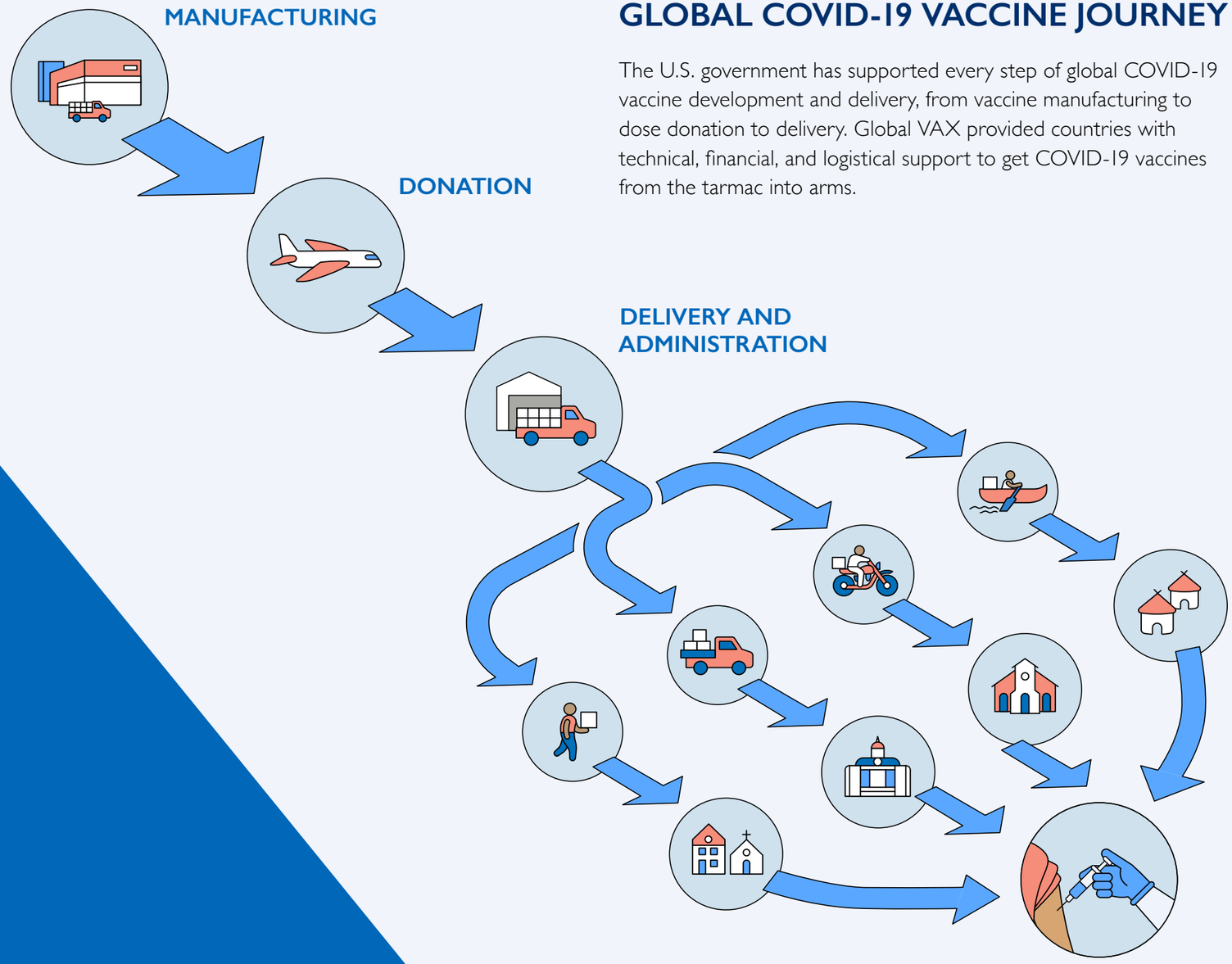
Upon Global VAX's launch in December 2021, the White House designated the United States Agency for International Development (USAID) as the lead federal agency for the initiative, in close partnership with the U.S. Centers for Disease Control and Prevention (CDC). Global VAX brought together the capabilities of USAID, CDC, the Department of State, including the Office of the Global AIDS Coordinator (OGAC), the Department of Defense (DOD), the Department of Health and Human Services (HHS), Peace Corps, the U.S. International Development Finance Corporation, the Department of the Treasury, and other interagency partners under a landmark whole-of-government effort.

Since its launch, Global VAX has worked in close coordination with the COVAX facility, a global platform that supports the development and distribution of COVID-19 vaccines. COVAX was established when the primary constraint to vaccinating populations was a lack of supply of COVID-19 vaccines. As the pandemic progressed and COVAX facilitated the donation of millions of COVID-19 vaccine doses to countries, the primary constraint became moving those doses through country health systems and ensuring that they were administered to the most vulnerable. Global VAX also closely coordinated with Africa CDC leadership to ensure strategic alignment on COVID-19 vaccine supply-planning given existing global commitments, progress toward country vaccination goals, and strategies to drive vaccine uptake, particularly among priority populations.

> **Global VAX helped us to conduct monthly vaccination campaigns that enabled us to reach more pregnant women in the Ahafo region. The intensive communication campaigns helped to reduce COVID-19 vaccine hesitancy in the communities.**
>
> - ***Catherine Dwamena,*** *Ahafo Regional Health Promotion Officer, Ghana*

## U.S. GOVERNMENT SUPPORT FOR THE GLOBAL COVID-19 VACCINE JOURNEY

The U.S. government has supported every step of global COVID-19 vaccine development and delivery, from vaccine manufacturing to dose donation to delivery. Global VAX provided countries with technical, financial, and logistical support to get COVID-19 vaccines from the tarmac into arms.



## COVID-19 VACCINE DELIVERY PARTNERSHIP: STRENGTHENING GLOBAL COORDINATION

Recognizing the need for greater coordination among global partners around COVID-19 vaccine delivery, in early 2022, WHO, UNICEF, and Gavi launched the COVID-19 Vaccine Delivery Partnership (CoVDP) with support from the U.S. government. CoVDP brought together a broad network of global partners, including the Africa Centres for Disease Control and Prevention, the World Bank, the International Monetary Fund, United Nations organizations, the European Union, the G20, and many others. Through USAID and U.S. embassies, the U.S. government provided significant support to CoVDP for global coordination and country readiness and COVID-19 vaccine delivery.

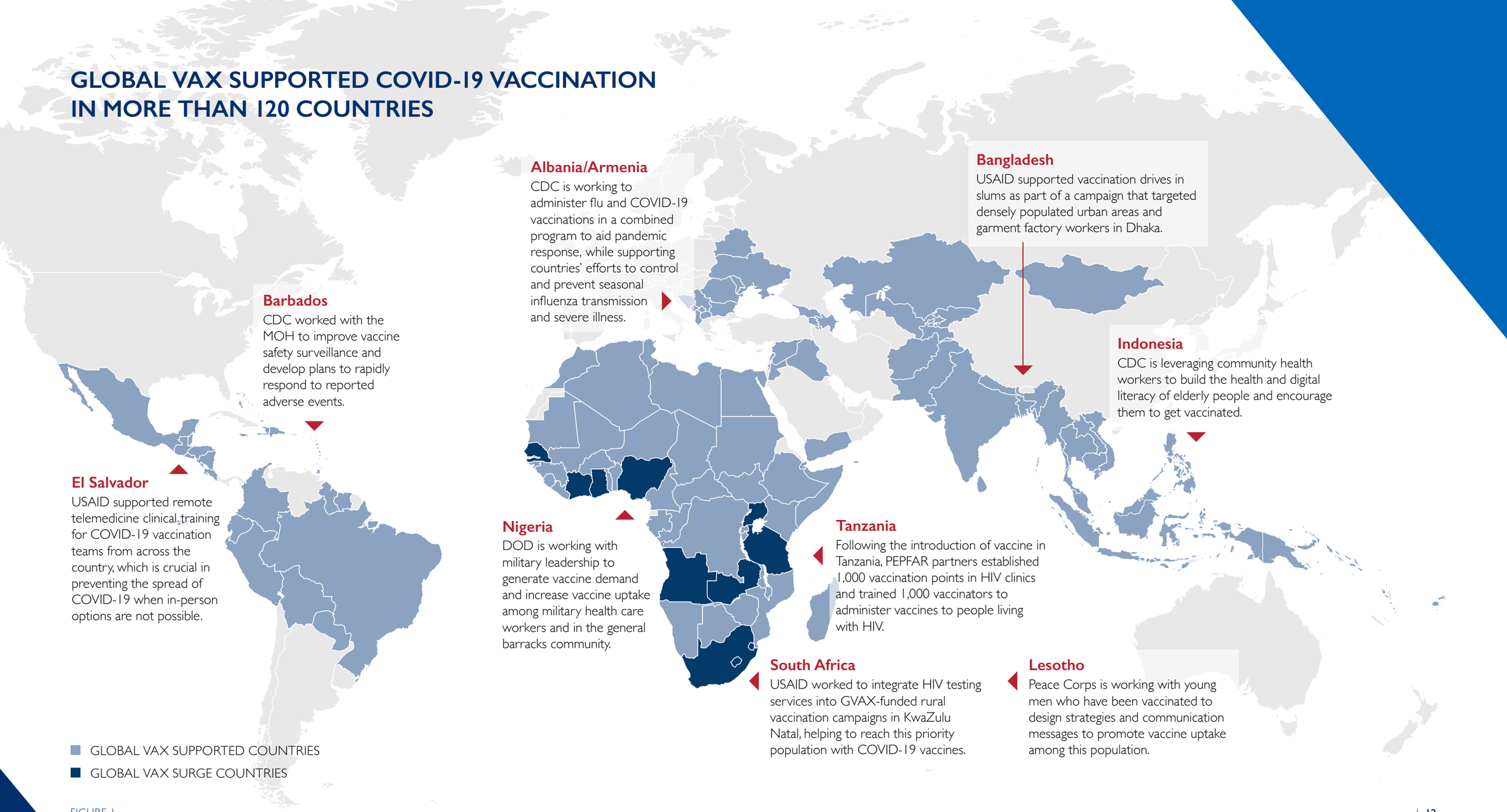
CoVDP worked to enhance coordination, reduce transaction costs, and leverage the combined expertise and resources of national and international partners through a "One Team, One Plan, One Budget" approach in each country in which it was active. One Team, led by the host government, was at the center of the approach, using a joint operational plan (One Plan) and a joint assessment of funding needs and availability (One Budget). Coordinating with CoVDP and the One Team in each country allowed Global VAX to align resources and activities in support of country goals and reduce duplication of effort.

The CoVDP partnership, which sunsetted in June 2023:

- Disbursed $178 million in quick-impact delivery funding, supporting 32 campaigns targeting 160 million people.
- Engaged 22 countries on "One Plan"—country-specific joint operational plans, prioritizing areas for support to address COVID-19 vaccine implementation bottlenecks.
- Helped to resolve policy and political engagement bottlenecks in 16 countries.
- Conducted 32 high-level and technical country missions to address challenges and mobilize and align partner support for COVID-19 vaccine administration.

These efforts, made possible in part by U.S. government support, contributed to narrowing the COVID-19 vaccine equity gap, as populations in LMICs were vaccinated against COVID-19 at a faster rate than the global average. In the 34 CoVDP countries of concerted support, population coverage increased ninefold—from three percent to 28 percent—between January 2022 and April 2023. During the same period, the number of countries at or below 10 percent COVID-19 vaccination coverage decreased from 34 to six.

# GLOBAL VAX SUPPORTED COVID-19 VACCINATION IN MORE THAN 120 COUNTRIES



### Albania/Armenia
CDC is working to administer flu and COVID-19 vaccinations in a combined program to aid pandemic response, while supporting countries' efforts to control and prevent seasonal influenza transmission and severe illness.

### Bangladesh
USAID supported vaccination drives in slums as part of a campaign that targeted densely populated urban areas and garment factory workers in Dhaka.

### Barbados
CDC worked with the MOH to improve vaccine safety surveillance and develop plans to rapidly respond to reported adverse events.

### Indonesia
CDC is leveraging community health workers to build the health and digital literacy of elderly people and encourage them to get vaccinated.

### El Salvador
USAID supported remote telemedicine clinical training for COVID-19 vaccination teams from across the country, which is crucial in preventing the spread of COVID-19 when in-person options are not possible.

### Nigeria
DOD is working with military leadership to generate vaccine demand and increase vaccine uptake among military health care workers and in the general barracks community.

### Tanzania
Following the introduction of vaccine in Tanzania, PEPFAR partners established 1,000 vaccination points in HIV clinics and trained 1,000 vaccinators to administer vaccines to people living with HIV.

### South Africa
USAID worked to integrate HIV testing services into GVAX-funded rural vaccination campaigns in KwaZulu Natal, helping to reach this priority population with COVID-19 vaccines.

### Lesotho
Peace Corps is working with young men who have been vaccinated to design strategies and communication messages to promote vaccine uptake among this population.

GLOBAL VAX SUPPORTED COUNTRIES

GLOBAL VAX SURGE COUNTRIES

FIGURE 1

Global VAX was driven by the primary objective of accelerating equitable COVID-19 vaccine uptake toward WHO and country-specific COVID-19 vaccination targets.[7] Through Global VAX, the U.S. government also sought to significantly enhance international coordination for COVID-19 vaccination assistance and overcome barriers to COVID-19 vaccine access and demand as they are experienced by communities around the world. To rapidly accelerate COVID-19 vaccine uptake in countries and save lives, Global VAX provided leadership, coordination, and financial and technical support across the continuum from COVID-19 vaccine dose delivery and allocation to shots into arms. This included support for COVID-19 vaccine delivery and administration that U.S. government agencies carried out in over 120 countries (Figure 1). In each country, Global VAX implementing agencies worked closely with host country governments, other multilateral and donor partners, and local experts to prioritize the support and approaches that would best enhance country-led programs and work toward country goals for vaccinating those at highest risk of COVID-19.

> **The COVID-19 pandemic posed a challenge for HIV and tuberculosis programs in Zambia, highlighting the urgent need to strengthen global health security and stop infectious disease threats at their source. Global VAX provided essential funding to support Zambia's COVID-19 prevention, detection, and response efforts, which included establishing laboratory capacity for COVID-19 and vaccine rollout.**
>
> - ***Andrew Auld,*** *Country Director, CDC/Zambia*

Global VAX marshaled more than $1.8 billion in committed funding and built on the full breadth of U.S. government global health programming, experience, and platforms, including the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), the U.S. President's Malaria Initiative (PMI), the Global Health Security Agenda (GHSA), and other immunization and infectious disease response programs, such as the Global Polio Eradication Initiative. The COVID-19 Global Action Plan's line of effort to increase vaccinations helped provide coordination and political support across foreign ministries in support of Global VAX. Leveraging the longstanding partnerships U.S. agencies have developed over decades of U.S. government global health engagement, Global VAX helped to align COVID-19 vaccination efforts at the global, national, and subnational levels. This included facilitating partnerships between partner countries, other donor countries, and multilateral organizations to strengthen COVID-19 vaccine delivery and administration.

Through Global VAX, the U.S. government's unified response helped to move the needle on COVID-19 vaccinations around the world. This rapid and coordinated response would not have been possible without the support of Global VAX and the U.S. government's decades of investment in global health and development, which built the expertise, trusted relationships, and programs on which Global VAX rests.

## GLOBAL VAX BY THE NUMBERS

**$1.8 BILLION**
in U.S. funding

**688 MILLION**
donated COVID-19 vaccine doses

**120**
Partner countries

**11**
Surge countries

**8**
U.S. government agencies

**ONE**
Purpose


## GLOBAL VAX REPORTING PLATFORM ENABLED TAILORED TECHNICAL ASSISTANCE

To enable program monitoring and evaluation and identify needs for additional support to reach country COVID-19 vaccination targets, Global VAX interagency partners designed and implemented an expansive reporting platform. The platform included regular updates to an internal dashboard monitoring key national indicators, as well as quarterly reports from the 11 Global VAX surge countries that captured challenges and successes across each technical area.

Collectively, these monitoring mechanisms consistently provided access to high-quality information to enable course correction and allow U.S. government teams of subject matter experts to provide direct guidance in areas of greatest need, both within and across countries. In Nigeria, feedback derived from the quarterly reporting process enabled a team of technical experts at USAID and CDC to provide tailored support to the SCALES (Service Delivery, Communication, Accountability, Logistics, Electronic Reporting, and Supportive Supervision) 3.0 effort focused on risk communication strategies, supply chain support, and technical assistance to strengthen data systems. In Ghana, Global VAX monitoring revealed gaps in data on subpopulation coverage, and USAID responded by providing direct technical assistance to bolster reporting processes after the country's digital "e-tracker" system had crashed. In South Africa, the quarterly report review process identified opportunities to expand school-based vaccination campaigns not only to reach adolescents, but also to reach high-risk populations in certain communities, such as the elderly.

As the United States continues our efforts to get every eligible American vaccinated and fight COVID-19 here at home, we also recognize that ending this pandemic means ending it everywhere… the United States is committed to bringing the same urgency to international vaccination efforts that we have demonstrated at home.

- ***President Joe Biden***
*June 3, 2021*

# FROM THE TARMAC INTO ARMS:

## GLOBAL VAX SUCCESSES ACROSS THE VACCINE DELIVERY PATHWAY

Global VAX supported partner countries to provide comprehensive support across the COVID-19 vaccine delivery pathway (Figure 2). In coordination with U.S. embassies, Global VAX collaborated closely with partner governments in each country, at both the national and subnational levels, to align efforts and accelerate COVID-19 vaccination coverage. This close collaboration prioritized country-identified goals for vaccinating priority populations and context-specific responses to the pandemic in each country.

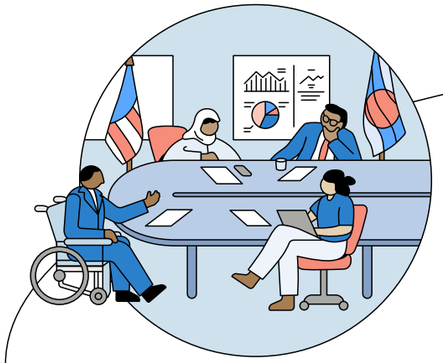
To achieve the primary goal of accelerating COVID-19 vaccinations, Global VAX and country governments determined how best to invest in seven technical areas to strengthen each country's COVID-19 vaccine delivery pathway, yielding results in each area: policy, planning, and coordination; supply chain and logistics; human resources for health; community engagement, advocacy, and demand generation; vaccine service delivery; monitoring, evaluation, and health information systems; and pharmacovigilance.

The examples that follow offer snapshots of the activities and achievements Global VAX assistance generated, from policies and planning to vaccine delivery, and beyond to monitoring and evaluation, and pharmacovigilance.[8]

# GLOBAL VAX PROVIDED COMPREHENSIVE SUPPORT ACROSS THE COVID-19 VACCINE DELIVERY PATHWAY

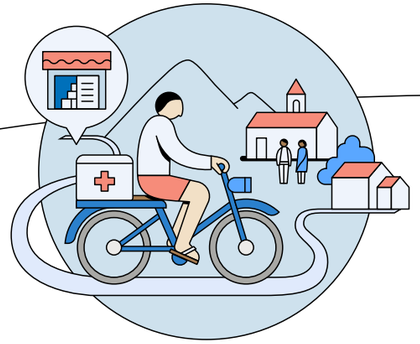
**1 POLICY, PLANNING, AND COORDINATION**

Develop, disseminate, and utilize plans, policies, and operational guidelines for COVID-19 vaccination.



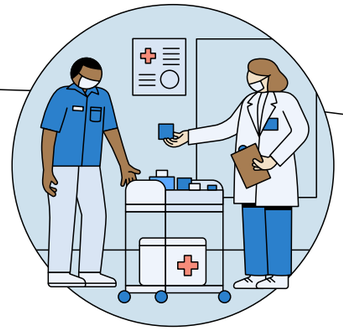
**2 SUPPLY CHAIN AND LOGISTICS**

Ensure COVID-19 vaccine–specific supply planning, storage, and distribution requirements are blended into existing supply chains, and that COVID-19 vaccine stock movements are captured.



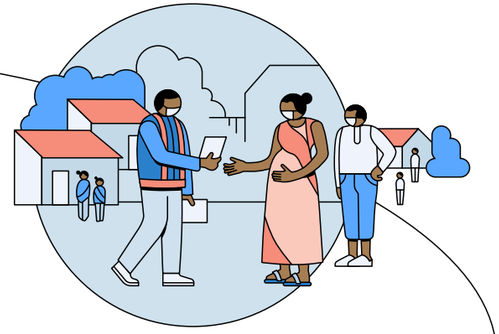
**3 HUMAN RESOURCES FOR HEALTH, INCLUDING TRAINING, SUPERVISION, AND SUPPORT**

Identify and train staff to carry out COVID-19 vaccination efforts.



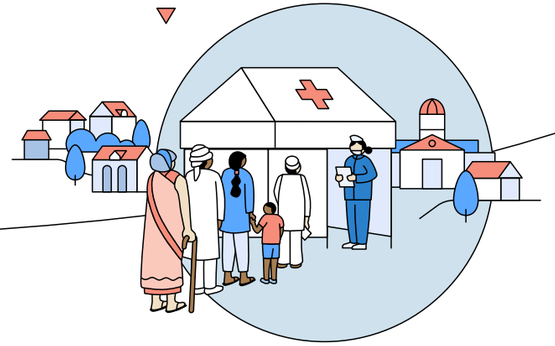
**4 COMMUNITY ENGAGEMENT, ADVOCACY, AND DEMAND GENERATION**

Design and carry out population-specific activities that encourage demand for COVID-19 vaccination and address barriers to uptake of COVID-19 vaccines, including engaging community leaders and decision-makers to promote understanding of and support for equitable distribution of COVID-19 vaccines.



**5 VACCINE SERVICE DELIVERY**

Identify, design, and expand ways to support delivery of COVID-19 vaccines in urban and rural areas, including through the use of health centers, mass campaigns, mobile sites, and delivery platforms that reach priority populations.



**6 MONITORING, EVALUATION, AND HEALTH INFORMATION SYSTEMS**

Design and develop data collection tools and processes to inform decision making around vaccine delivery and to ensure effective oversight of COVID-19 vaccination activities.

**7 PHARMACOVIGILANCE AND MONITORING ADVERSE EVENTS FOLLOWING IMMUNIZATION (AEFI)**

Develop and apply guidelines, processes, and tools for detecting, reporting, and investigating adverse events following immunization (AEFI).

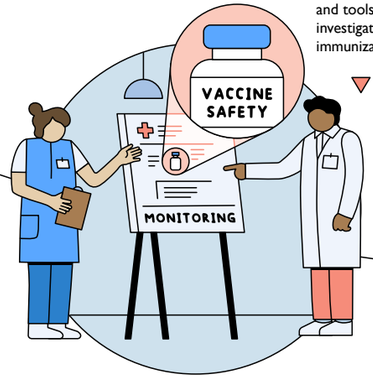



FIGURE 2

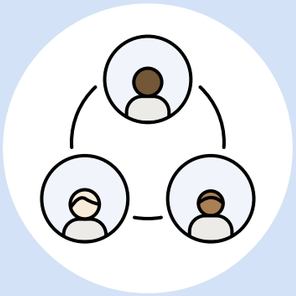
# POLICY, PLANNING, AND COORDINATION

As the supply of COVID-19 vaccines increased, so did the need for planned and coordinated responses in-country to facilitate rapid COVID-19 vaccine delivery. In coordination with U.S. embassies, Global VAX facilitated information sharing between partner country governments, other donor and multilateral partners, and delivery partners to align strategy and technical requirements at the national and sub-national levels. By partnering with governments in support of their COVID-19 vaccination targets and goals, Global VAX supported countries in strengthening local planning and leadership, helping to streamline coordination and to create effective programs that not only reached people with COVID-19 vaccines but would also bolster national health systems over the long term.

**Planning and coordination from national government to local levels.** At the national level, Global VAX, in collaboration with COVAX and CoVDP, supported ministries of health in maintaining national deployment and COVID-19 vaccination plans and in developing and adapting strategies to boost COVID-19 vaccination rates. At subnational levels, Global VAX supported engagement with authorities and country partners to accelerate and scale up COVID-19 vaccinations. In Nigeria, Global VAX facilitated engagement with national, state, and local government authorities to bolster coordination of COVID-19 vaccinations.

**Micro-planning to maximize impact.** Global VAX provided technical assistance to develop micro-plans, detailed roadmaps for COVID-19 vaccination efforts that account for available resources—including time, human, financial, and logistical—as well as the context and demographics of the populations being served. Robust micro-planning is required to equitably introduce, distribute, and build demand for COVID-19 vaccines. In Zambia, USAID facilitated micro-planning sessions that allowed over 17,000 health care workers (HCWs), community health workers (CHWs), and community and government leaders to engage in COVID-19 vaccination–related activities in the Copperbelt, North-Western, and Central Provinces.

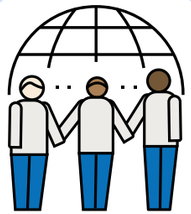
## NATIONAL IMMUNIZATION TECHNICAL ADVISORY GROUPS: COLLABORATION FOR POLICYMAKING



National Immunization Technical Advisory Groups (NITAGs) support the policy-making process for national immunization programs. CDC has worked closely with NITAGs for decades to strengthen immunization services, and it built upon these strong partnerships to support COVID-19 vaccination efforts from the outset of the pandemic. In the early stages of the pandemic, NITAGs faced significant challenges to their routine processes given the rapid evolution of the COVID-19 virus, the unprecedented pace of COVID-19 vaccine development, and the growing yet limited evidence base. CDC supported information sharing about COVID-19 vaccines and facilitated NITAG trainings to strengthen capacity within their existing structures. In Côte d'Ivoire, CDC conducted multiple workshops to help the NITAG provide policy recommendations. Similarly in Nigeria, CDC provided guidance and technical support to the NITAG to review COVID-19 vaccination age targets and provide recommendations to the government.

# GLOBAL COVID:
# ENGAGING THE PRIVATE SECTOR IN COVID-19 RESPONSE

The Global COVID Corps (GCC) was created to leverage the unique skills offered by the private sector in a comprehensive pandemic response. The GCC was a coalition of private sector companies focused on accelerating global COVID-19 vaccination efforts through targeted, time-bound, pro bono support to complement existing public sector efforts in selected partner countries. The private sector counterparts included some of the largest U.S. and multinational corporations spanning technology, logistics, retail, and health care. These companies channeled their expertise in data and analytics, supply chain logistics, vaccine site readiness, and vaccine education to assist countries across the COVID-19 vaccine delivery pathway.



In Ghana, for example, the GCC brought together several private sector companies to support a USAID-funded digital campaign to overcome COVID-19 vaccine disinformation and increase uptake among young people ages 18 to 25. The private-sector partners leveraged their technical expertise to provide customer segmentation analysis and technical monitoring, search data, and social media data to support the campaign.

The successful campaign generated additional financial and in-kind donations from the private sector, such as a donation of 1,829 tablets that supported the Ghana Health Service's five-day national COVID-19 immunization campaign in December 2022. USAID mass media and social media activities also benefited from additional private sector donations which helped procure additional broadcast airtime, purchase the services of a Kenya-based design and public relations firm to develop radio and TV jingles and spots, and commission an audience survey to measure audience recall and market penetration of COVID-19 messages. In the period from December 2022 to May 1, 2023, USAID supported the broadcast of over 2,540 radio, television, and social media posts in support of COVID-19 vaccination efforts.


# AN EVOLVING NATIONAL STRATEGY LEADS TO IMPRESSIVE COVID-19 VACCINATION GAINS IN NIGERIA

In August 2022, the federal government of Nigeria launched a revised COVID-19 vaccination strategy known as SCALES (Service Delivery, Communication, Accountability, Logistics, Electronic Reporting, and Supportive Supervision) 3.0. Designed to meet the needs of an evolving pandemic, SCALES 3.0 has focused on campaigns combined with performance-based incentives for teams of health workers. The strategy has also decentralized demand generation, supported intensified interpersonal communication to address low COVID-19 risk perception and high COVID-19 vaccine hesitancy among providers and community members, and accelerated integration of COVID-19 vaccination into primary health care systems, including routine immunization. Throughout the SCALES 3.0 planning process, USAID and CDC contributed technical assistance and capacity strengthening to help the government of Nigeria develop a successful policy and to deliver and distribute COVID-19 vaccines at the state and national levels. USAID and CDC also supported a range of national studies and periodic telephone polls that provided insight into the drivers, trends, and shifts in COVID-19 vaccine hesitancy and helped government leaders at the national and subnational levels to develop evidence-based strategies to build COVID-19 vaccine confidence.

Working in 35 states across Nigeria and the Federal Capital Territory to support the rollout of SCALES 3.0, USAID and CDC supported Nigeria's National Primary Health Care Development Agency and state primary health care development agencies to increase COVID-19 vaccine demand, develop and deliver tailored risk communication messages, and coordinate supply chain logistics and distribution of COVID-19 vaccine doses from national to state-level stores and from state stores to local government–area stores. USAID and CDC also supported fixed-site and mobile vaccination teams to administer COVID-19 vaccines to target populations through facility-based and community campaigns. This was combined with support for monitoring and integrated supportive supervision for health care workers to strengthen data management, analysis, and use for program planning and implementation. U.S. government agencies leveraged a robust bilateral health assistance platform, including PEPFAR, polio and immunization, tuberculosis, integrated behavior change, supply chain, and service delivery programs to achieve broad reach across Nigeria.

These efforts were highly effective in increasing the uptake of COVID-19 vaccines across the country. From September to December 2021, Nigeria administered an average of 2.7 million COVID-19 doses per month. With the revised SCALES 3.0 strategy, Nigeria increased monthly COVID-19 vaccinations throughout 2022, administering approximately 10 million COVID-19 vaccine doses per month from September to December 2022. As of May 11, 2023, approximately 74 percent of Nigeria's eligible population had received at least one dose, while 64 percent of the eligible population of nearly 116 million was fully vaccinated against COVID-19. Nigeria's goal of 70 percent COVID-19 vaccine coverage has been achieved in 14 of 36 states and the Federal Capital Territory.

# SUPPLY CHAIN AND LOGISTICS

To translate influxes of COVID-19 vaccine supply into shots in arms, vaccines need to be in the right place at the right time, and maintained at the right temperature. Global VAX supported COVID-19 vaccine allocation, inventory management, cold chain strengthening, and last-mile delivery, helping countries to transport COVID-19 vaccines from the tarmac to national and regional storage and health facilities and on to dense urban centers and hard-to-reach remote and rural communities. The logistics support that Global VAX provided reduced COVID-19 vaccine stock outs and strengthened processes for reallocating expiring doses.

**Expanding ultra cold chain capacity.** Ultra cold chain (UCC) capacity and management is essential in transporting and storing COVID-19 vaccinations. In August 2021, most countries did not yet have the infrastructure to receive and store the mRNA COVID-19 vaccines, particularly the Pfizer-BioNTech COVID-19 vaccine, which must be stored between -60 and -80 degrees Celsius. Global VAX supported efforts by UNICEF to procure and ship UCC freezers to COVID-19 vaccine recipient countries. Global VAX was pivotal in monitoring installation of the new UCC freezers, in close coordination with UNICEF and recipient countries. Globally, 984 UCC freezers have been installed in 72 countries since May 31, 2023, providing storage capacity for 199 million Pfizer-BioNTech COVID-19 vaccine doses.

> During the COVID-19 pandemic, a lot of myths and misinformation surrounded our communities. The training helped break barriers and created awareness on COVID-19 and the need to get vaccinated.

*- **Bob Owiny,** Community Health Worker, Uganda - Recipient of Peace Corps COVID-19 Training*

**Tracking doses throughout supply chains.** Global VAX provided necessary equipment for countries to store and track COVID-19 vaccine doses, a critical component of the rapid scale-up of COVID-19 vaccine delivery. In Nigeria, Global VAX enabled the procurement of serialization equipment used to assign government of Nigeria–approved tracking information to doses, and supported training to track the doses throughout the national supply chain distribution process. This oversight helped prioritize which doses to administer first, limiting the number of expired doses and allowing health workers to perform quality control before administration.

**Managing COVID-19 vaccine supplies to avert stockouts.** In Tanzania, Global VAX leveraged existing PEPFAR investments and incorporated COVID-19 vaccination data into the electronic logistics management information system, allowing the Ministry of Health to predict and avert stockouts. Global VAX also worked with partners in Tanzania to transition from a "push" model of COVID-19 vaccine supply, prone to overstocking and expirations, to a data-driven model that uses the electronic system for reporting, requesting, and resupplying COVID-19 vaccines. Alongside this, DOD coordinated the distribution of COVID-19 vaccines from regional central storage units to all 21 councils and to more than 780 facilities and 79 temporary COVID-19 vaccination points.

**Increasing COVID-19 vaccine storage capacity.** In Nigeria, USAID provided critical support to increase storage capacity for COVID-19 vaccines by procuring private warehouse space to store 5 million COVID-19 vaccine doses. Global VAX support for COVID-19 vaccine logistics enabled distribution from the national level to states and local government areas, as well as effective redistribution of COVID-19 vaccines to avoid dose expiration and stockouts at service delivery points.

## MAINTAINING COVID-19 VACCINE DELIVERY THROUGHOUT THE CONFLICT IN UKRAINE

Since COVID-19 vaccination started in Ukraine in February 2021, Global VAX has managed the receipt, storage, and distribution of COVAX-supplied vaccines through a contract with a local logistics company with UCC capacity. Global VAX supported the receipt and distribution of nearly 6.5 million doses, including 3.3 million doses throughout Russia's war against Ukraine. Global VAX also supported routine stock data analysis to support the Ministry of Health of Ukraine in identifying and resolving gaps in COVID-19 vaccine availability.


# HUMAN RESOURCES FOR HEALTH

Mass COVID-19 vaccination rollout requires a workforce that is able to plan, administer, and track COVID-19 vaccine delivery at the same scale. At the onset of the pandemic, many countries already suffered from limited and overstretched human resources for health. The COVID-19 Global Action Plan coordinated diplomatic support for health workers, while Global VAX supported countries in bolstering their health workforce, leveraging existing training programs (such as redeploying and expanding the skill sets of existing U.S. government–supported human resources for health, including through PEPFAR), networks, and relationships.

**Training for health care workers.** Global VAX provided technical expertise and resources to strengthen the capacity of the global immunization workforce to deliver COVID-19 vaccines. In Uganda, CDC trained thousands of HCWs in handling, administering, and documenting six different COVID-19 vaccines through virtual and in-person training. USAID trained HCWs to reach parents accompanying their children to childhood routine immunizations with COVID-19 vaccination education and services. In Angola, a digital training system (the Kassai e-learning platform, developed by USAID in partnership with the Angolan Ministry of Health) was leveraged and expanded to deliver a COVID-19 vaccination course to HCWs.

**Driving quality through supportive supervision.** Global VAX supported ongoing capacity development and training for HCWs, including through the supervision of immunization activities to maintain quality service delivery. In Côte d'Ivoire, Global VAX supported the national immunization program to provide supportive supervision to HCWs across COVID-19 vaccination programs in the 33 health regions during COVID-19 vaccination campaigns.

**Recruiting and deploying staff.** Global VAX helped countries recruit and deploy staff to accelerate COVID-19 vaccination efforts and provide surge capacity, particularly during event-based COVID-19 vaccine campaigns. In South Africa, USAID supported rapid workforce assessments to determine needs for scale-up efforts, including redistribution and recruitment of additional HCWs. Through this effort, USAID supported the rapid hiring and onboarding of staff, including hiring additional trained HCWs to scale up COVID-19 vaccination efforts and staffing for setting up COVID-19 vaccination sites across the country. In Zambia, USAID-supported HCWs were redeployed to deliver COVID-19 vaccinations alongside CHWs. In the Philippines, Peace Corps staff were redeployed to support COVID-19 vaccination activities, including vaccine administration, data entry, and demand creation activities. In Côte d'Ivoire, USAID supported training teams in private clinics and chronic disease management units to also serve as COVID-19 vaccination sites.

# COMMUNITY ENGAGEMENT, ADVOCACY, AND DEMAND GENERATION

To build community demand for COVID-19 vaccines, Global VAX leveraged existing platforms and trusted partnerships developed through decades of U.S. government investment in global health. Global VAX has been integral to supporting countries in monitoring, analyzing, and responding to hesitancy around COVID-19 vaccines, with the goal of promoting COVID-19 vaccine acceptance and generating demand while communicating factual information and the benefits of COVID-19 vaccines. Through mass media campaigns and tailored communication strategies, Global VAX activities increased awareness of COVID-19 vaccines and their availability to the general public and responded to concerns about COVID-19 vaccines.
In supporting local advocacy, Global VAX worked with decision makers to expand equitable distribution of COVID-19 vaccine doses, including ensuring access for priority populations.

> **With support from Global VAX, we mobilized female sex workers (FSW) to generate demand for COVID-19 vaccines, provided transportation support to Ghana Health Service vaccinators to target FSW sites, and vaccinated over 700 FSWs in the Sekondi-Takoradi and Ahanta West districts of Ghana.**
>
> - ***Seyram Kugblenu,*** *Project Coordinator, Life Relief Foundation (PEPFAR Supported)*

# GLOBAL VAX PARTNERED WITH GOVERNMENT AND COMMUNITY LEADERS TO BUILD DEMAND FOR COVID-19 VACCINES

Global VAX worked closely with partner countries to design and implement a wide range of evidence-based activities to increase awareness and build community confidence and demand for COVID-19 vaccines. Global VAX also supported efforts to monitor, analyze, and respond to COVID-19 vaccine hesitancy.

**Building awareness and addressing information gaps in communities.** Traditional mass media campaigns and information sharing, such as handing out flyers and informational leaflets, were used successfully across Global VAX countries to communicate about COVID-19 vaccines. In South Africa, USAID supported media campaigns in local languages on television and radio, as well as on billboards, in-taxi televisions, and township murals to promote COVID-19 vaccine acceptance. These campaigns have reached close to 30 million people with targeted messaging, providing the public with accurate information about the safety and efficacy of COVID-19 vaccines and information about local COVID-19 vaccination sites.

**Working with decision makers to reach vulnerable populations.** In Zambia, USAID worked closely with the Ministry of Health to develop guidelines for vaccinating vulnerable populations against COVID-19, including pregnant women, breastfeeding mothers, and the elderly, ensuring that these populations were prioritized. USAID also assisted in developing key messaging and integrating COVID-19 messaging into community engagement activities targeting these priority populations.

## TACKLING DISINFORMATION AND INCREASING VACCINE DEMAND IN PAPUA NEW GUINEA

Through existing PEPFAR and USAID implementing partners, Global VAX partnered with the Madang Provincial Health Authority in Papua New Guinea to address COVID-19 vaccine rumors and disinformation and increase uptake of COVID-19 vaccines through community engagement.

Global VAX activities trained local leaders to advocate within their communities, allowing people the opportunity to hear from trusted community members and empowering them to get vaccinated against COVID-19. HCWs who could administer COVID-19 vaccines were deployed alongside community vaccine advocates, who offered information and counseling about COVID-19 vaccines. Global VAX set up pop-up COVID-19 vaccination sites in markets, churches, and village meeting places in the most remote corners of Madang. On Karkar Island, USAID support trained 326 new community mobilizers, enabling access to remote villages and reaching over 17,000 Papuans with information about COVID-19 vaccinations. These efforts helped spur a seven percent increase in the COVID-19 fully vaccinated eligible population in Madang Province throughout the spring of 2022.


**Increasing COVID-19 vaccine acceptance through counseling.** In Zambia, USAID paired COVID-19 vaccine providers with local, trusted CHWs, community leaders, and teachers to target priority populations with information and access to COVID-19 vaccines. Going door to door, CHWs offered one-on-one COVID-19 vaccine counseling to address myths and misconceptions, while providers were able to administer the COVID-19 vaccine at a central community location if clients agreed.

**Responding to community concerns.** Hearing and understanding the concerns of individuals is an important step in being able to address them. In Côte d'Ivoire, USAID helped to design and implement a rumor management system to identify rumors about COVID-19 vaccines circulating within communities and on social media and plan intensive public communication efforts to address them. USAID then trained journalists to counter specific rumors and misinformation through their reporting on national TV and through radio and print media. This data-driven communication effort contributed to a 14 percent increase in the eligible population that had received at least one dose of the COVID-19 vaccine.

**Tailoring communication to reach priority populations.** In Lesotho, youth ambassadors from PEPFAR's Determined, Resilient, Empowered, AIDS-Free, Mentored, and Safe (DREAMS) program connected directly with peers, engaging an average of 30 adolescent girls and young women per month in dialogues about COVID-19 vaccinations. In Angola, USAID provided tailored information about the safety and efficacy of COVID-19 vaccines to pregnant and lactating women and women of reproductive age to address their unique safety concerns about the COVID-19 vaccine.


**Engaging trusted leaders to boost demand.** When trusted leaders get publicly vaccinated against COVID-19, it sends a powerful message to the community. Beyond highlighting the safety and efficacy of COVID-19 vaccines, it also drives collective behavior to get vaccinated. In Tanzania, DOD collaborated with religious leaders and places of worship to educate and motivate followers to accept COVID-19 vaccinations. DOD supported training for more than 30 senior religious leaders from different churches and mosques to encourage their followers to get vaccinated against COVID-19.

**Holding large-scale events.** USAID provided technical and coordination support to the Tanzanian government for implementing a series of music events in five regions in July and August 2022. These events led to more than 40,000 COVID-19 vaccinations in just five weeks, with popular Tanzanian musicians promoting the COVID-19 vaccine, which was offered on site. Intensive use of national media, social media, and influencer support for event promotion helped normalize COVID-19 vaccination in selected regions and increased uptake across the country.

In Senegal, Peace Corps supported a successful COVID-19 Community Education Campaign Day. This event included health care providers, CHWs, administrative authorities, and other influential figures within the community addressing COVID-19 prevention and vaccine safety. The day's events used a range of techniques for audience engagement and learning, including games that allowed leaders to gauge participants' knowledge and then address misunderstandings, debunk myths, and curtail disinformation. Skits and musical acts helped to spread messages and to further challenge disinformation. Health providers focused on the scientific and clinical aspects of care, while influential figures addressed the importance of seeking accurate information from one's own health care provider.

**Dispelling misinformation.** To boost COVID-19 vaccine confidence, USAID and its partners engaged communities by meeting with faith networks, savings groups, and local populations in Kenya to share factual information about COVID-19 vaccines. USAID collaborated with the Inter-Religious Council of Kenya and the Ministry of Health to create COVID-19 vaccine information, education, and communication materials with information geared toward multiple religious denominations, and encouraged faith leaders to disseminate the material. USAID and its partners have also worked with local celebrities and religious leaders to create TV, radio, and social media content that aims to dispel misinformation and encourage people to get vaccinated against COVID-19. These messages, which address country- and culture-specific concerns and contexts, have reached over 22 million people.

## PARTNERING WITH INDIGENOUS LEADERS TO REACH REMOTE COMMUNITIES IN PERU

In Peru, Global VAX helped to address low COVID-19 vaccination coverage among Amazonian Indigenous communities. USAID worked with local community leaders and partners to reactivate the COVID-19 Indigenous Task Force, an organization of regional and local Amazonian Indigenous governments, communities, and entities, with the goal of increasing COVID-19 vaccination coverage in Amazonian Indigenous communities.

USAID facilitated dialogue and coordination with leaders of the main Amazonian organizations, respecting their cultural identity and traditional health practices and opening the possibility of complementing these practices with modern medicine.

This engagement significantly increased receptivity toward COVID-19 vaccines among Amazonian Indigenous communities, allowing health workers to begin tailored outreach to these communities. Health personnel moved through the river basin by boat, the only method of transportation to reach many Amazonian indigenous communities, to reach the areas with the lowest coverage.

In the communities of the province of La Convención, where the Indigenous Task Force supported the government's COVID-19 vaccination campaign, the number of people receiving the primary series of the COVID-19 vaccine more than doubled, rising from 29 percent to 62 percent among those over 12 years of age.

# VACCINE SERVICE DELIVERY

Recognizing that health facilities are not the only points of access for vaccine delivery, Global VAX focused on supporting COVID-19 vaccine delivery wherever people gathered (Figure 3). Global VAX supported programs that delivered COVID-19 vaccinations where people live, learn, play, pray, and work (LLPPW), and met hard-to-reach populations in their own communities. This person-centered approach helped to overcome inequity in accessing health facilities, whether due to distance, time, knowledge, or any other reason.

# THE CLINIC AND BEYOND: MEETING PEOPLE WHERE THEY LIVE, LEARN, AND PLAY

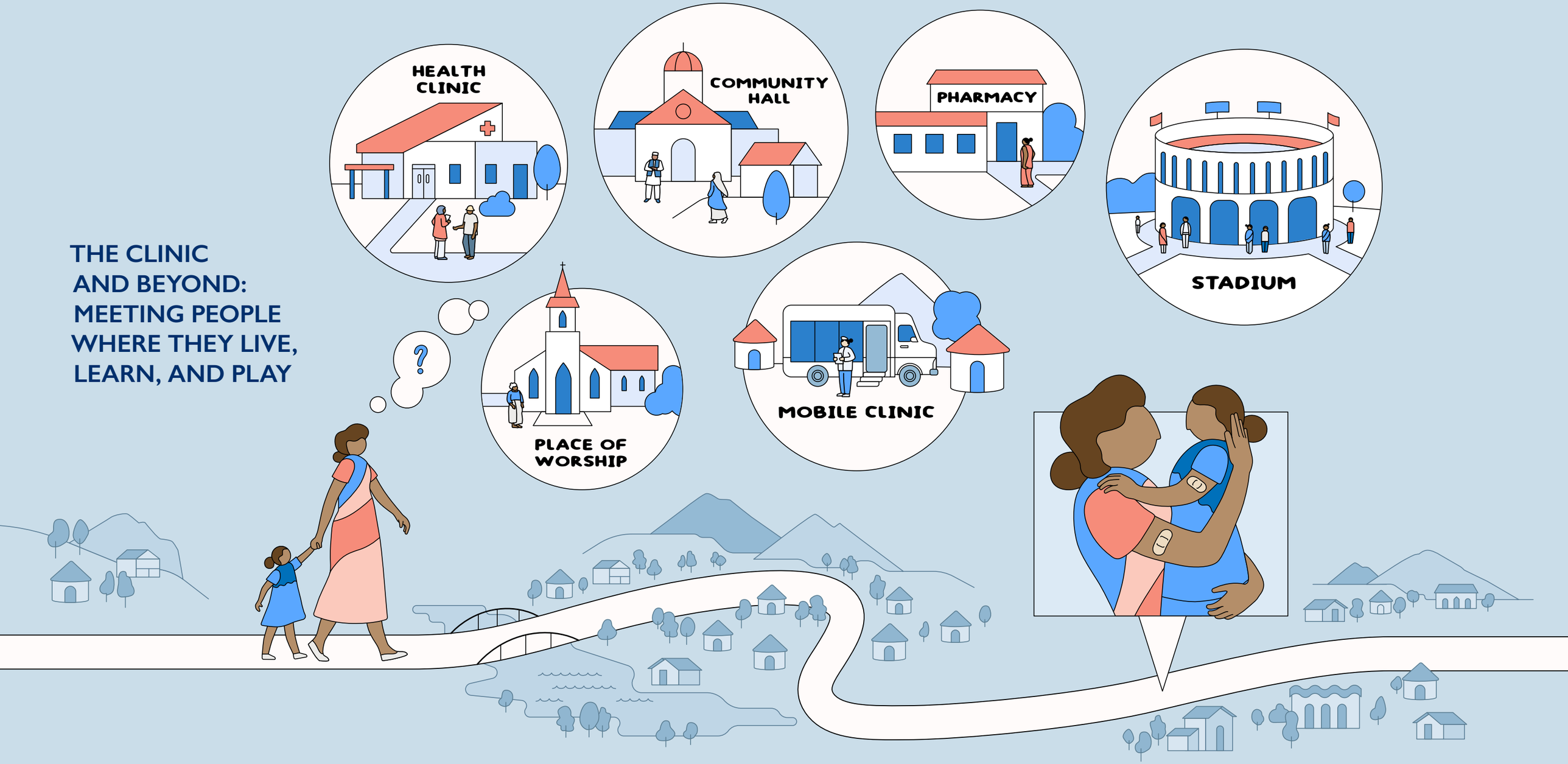



FIGURE 3

**Administering COVID-19 vaccines in health facilities.** While health facilities are not the only points of access for COVID-19 vaccine delivery, they are important ones. USAID worked with countries to establish and sustain COVID-19 vaccine delivery points within both public and private health facilities. In Haiti, USAID worked with the Ministry of Public Health and Population to increase the number of COVID-19 vaccinating facilities from 83 sites in 2020 to 185 sites by the end of 2022—including at HIV treatment sites supported by PEPFAR.

**Supporting mass COVID-19 vaccination campaigns.** Global VAX supported countries in organizing large-scale COVID-19 vaccination campaigns, a critical approach for rapidly accelerating and scaling up COVID-19 vaccine delivery and administration. In Uganda, Global VAX supported mass campaigns that contributed to an increase in national COVID-19 vaccination complete primary series coverage from 14 percent to 47 percent in just six weeks. In Côte d'Ivoire, USAID provided funding and support for three intensive COVID-19 vaccination campaigns, with over four million COVID-19 vaccine doses administered between October and December 2022. Through these campaigns and other routine COVID-19 vaccination activities, the government of Cote d'Ivoire increased national COVID-19 vaccination coverage by 13 percent in a single quarter. In Tanzania, DOD supported the government in vaccinating people against COVID-19 at major events, including the national torch ceremony in Njombe and Mastala Cup matches (local soccer league), reaching thousands of people quickly. In Mozambique, 9.7 million U.S.-donated Pfizer-BioNTech COVID-19 vaccines used in September and November 2022 school and community-based immunization campaigns resulted in an astounding 98 percent coverage of Mozambican adolescents ages 12 to 17.

**Reaching people where they work.** CDC employed the LLPPW approach with great success in South Africa, where it targeted companies with more than 50 workers, focusing on people at work who might not otherwise take time off to get vaccinated against COVID-19. Ghana's current COVID-19 vaccination strategy also embraced LLPPW, with teams offering COVID-19 vaccines to people at workplaces, markets, bus stops, sports stadiums, schools, and homes, minimizing barriers to accessing COVID-19 vaccines. In close partnership with regional and district governments in Ghana, USAID also rented boats, provided life jackets to HCWs, and supported them in camping out in remote communities to provide access to COVID-19 vaccines in the hardest-to-reach areas.

**Reaching people where they learn.** In February 2023, the government of Liberia began administering pediatric COVID-19 vaccine doses at schools. USAID conducted community engagement activities with school staff, parents, and students to understand reasons for COVID-19 vaccine hesitancy and address misinformation, helped obtain parental consent for vaccinating children under 18 against COVID-19, and supported local-level coordination for school-based COVID-19 vaccinations. In Rwanda, using a similar school-based approach, USAID worked with the government to support COVID-19 vaccination for children starting in October 2022. By the end of March 2023, Rwanda had fully vaccinated 57 percent of children ages five to 11.

**Supporting mobile sites to reach vulnerable populations.** In India, USAID worked with local government and community leaders to deploy 15 mobile vans for COVID-19 vaccination in hard-to-reach areas and trained local community-based organizations to raise awareness of COVID-19 vaccines among vulnerable populations, particularly the elderly. This effort contributed to reaching more than 6.2 million people with COVID-19 vaccines across 18 Indian states. In South Africa, USAID supported local partners in reaching the elderly by setting up mobile COVID-19 vaccination sites at pay centers for the South African Social Security Agency. The approach made COVID-19 vaccines easily available to elderly populations collecting their benefits at post offices, social security offices, large retailers, and community halls. In Egypt, USAID supported the government in expanding access to vaccinations across the country through temporary and mobile vaccination clinics to reach families in hard-to-reach geographic areas, including those in Hayah Karima villages. In the DRC, mobile teams of CHWs, nurses, and a data clerk deployed for two-week periods to spread information about COVID-19 vaccines, vaccinate people against COVID-19, and enter the data immediately into the national health information system. Mobile vaccination sites included police stations, mosques, churches, marketplaces, and other public spaces where communities gathered.

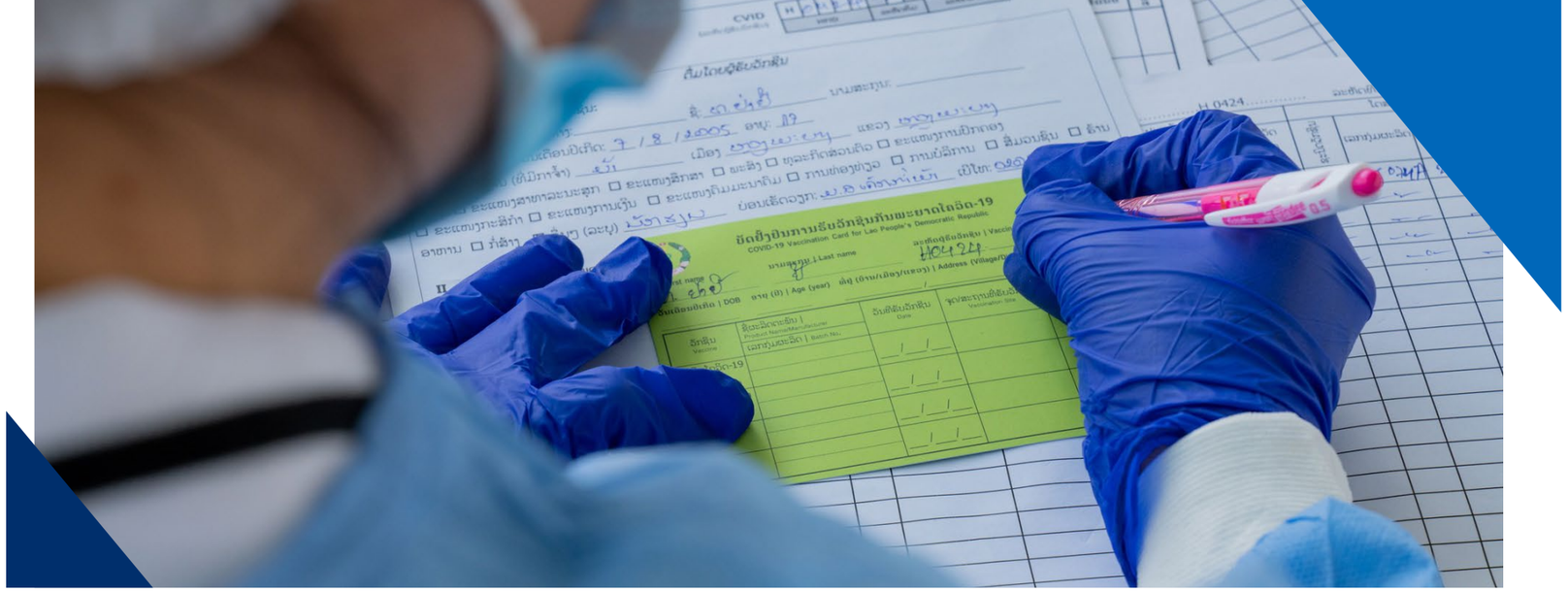
## COMBINING COVID-19 AND HIV/AIDS EFFORTS TO REACH PRIORITY POPULATIONS IN ZAMBIA

Following the third wave of COVID-19 in Zambia, PEPFAR partnered with the government to leverage World AIDS Day as an opportunity to launch a COVID-19 vaccination campaign. Combining efforts and resources allowed the programs to reach communities across the country with messages about HIV/AIDS and COVID-19 vaccines. The campaign used local media and national and community radio programs to deliver key messages to wide audiences. Through the campaign, PEPFAR worked with local leaders to deliver COVID-19 vaccines in places where people gather.

The 2021 World AIDS Day campaign yielded exceptional results. As a result of the campaign, the number of COVID-19 vaccines administered doubled, from one million prior to the campaign to two million following the campaign.

Through Global VAX, PEPFAR also supported over 500 health facilities providing antiretroviral therapy in the Central, Copperbelt, and North-Western Provinces to deliver COVID-19 vaccinations to people living with HIV.

# MONITORING, EVALUATION, AND HEALTH INFORMATION SYSTEMS




Tracking indicators spanning the entire COVID-19 vaccine delivery pathway is critical to ensuring that COVID-19 vaccines reach the communities that need them most when they need them most. When Global VAX launched, many countries did not have sufficient systems in place to track growing national COVID-19 vaccination programs and therefore faced challenges in collecting and analyzing COVID-19 vaccination data. Global VAX supported partner governments in strengthening their monitoring and evaluation systems to meet the urgent needs of the COVID-19 vaccination effort, and to use the data generated by these systems to inform planning and decision making.

**Capturing COVID-19 vaccination data through national data systems.** Global VAX helped countries adapt existing national health information systems, such as the DHIS2, to incorporate COVID-19 vaccination data. The DHIS2 system is an open-source platform that governments can use to create their own national health information management systems. CDC and USAID data teams provided technical assistance to governments in designing, developing, and using new DHIS2 modules that track COVID-19 indicators. These data systems were essential to inform decision making at all levels of government to prioritize vulnerable populations and allow for real-time adjustments.

**Tracking coverage gaps in real time.** In Uganda, officials integrated a data capture tool, EPIVAC, into the existing national health information system to track COVID-19 vaccine rollouts, with support from CDC and WHO. This innovative system, paired with technical assistance from CDC on data analysis and use, helped the Ugandan government to track and respond to COVID-19 vaccination coverage gaps in real time.

**Adopting innovative data collection tools.** In Tanzania, USAID equipped regional and community health management teams with the technical skills to use the ChanjoCOVID app, a digital tool used to track COVID-19 vaccination data. In a three-month period, USAID trained 593 staff across five regions to adopt the innovative ChanjoCOVID app to strengthen data collection.

**Reducing data backlogs.** Global VAX provided intensive support to reduce reporting backlogs of COVID-19 data while providing training and technical support for rolling out strengthened data systems. After accounts of reporting backlogs began surfacing across multiple countries in early 2022, USAID led an effort to identify the breadth and depth of the issue, including a survey across 42 countries and a deeper root-cause analysis to identify the greatest bottlenecks and drivers of the backlogs. USAID deployed technical assistance and resources to countries facing the biggest challenges, focusing on both clearing the immediate backlogs of data and addressing the underlying causes, such as offline functionality gaps in digital systems and workforce training. Countries receiving this intensive support included Ghana, Tanzania, the Democratic Republic of the Congo, Burkina Faso, and others. In Lesotho, PEPFAR-supported records assistants and temporary data personnel were leveraged to address COVID-19 vaccination data backlogs, prioritizing facilities and community sites that lacked data clerks.

**Assisting governments in making data-based decisions.** Global VAX worked with partner countries to effectively use data in decision making and strategic planning. In eight Nigerian states, USAID supported data analysis for evidence-based decision making through regular data review meetings and support for the state emergency operation centers. In Côte d'Ivoire, Global VAX support was leveraged to integrate COVID-19 data collection and reporting into the national DHIS2 system. This allowed for timely use of data to inform decision making and orient COVID-19 programming at the national, regional, and district levels.

# A STATE-OF-THE-ART DATA SYSTEM IN ESWATINI FOR REAL-TIME PROGRAM MANAGEMENT

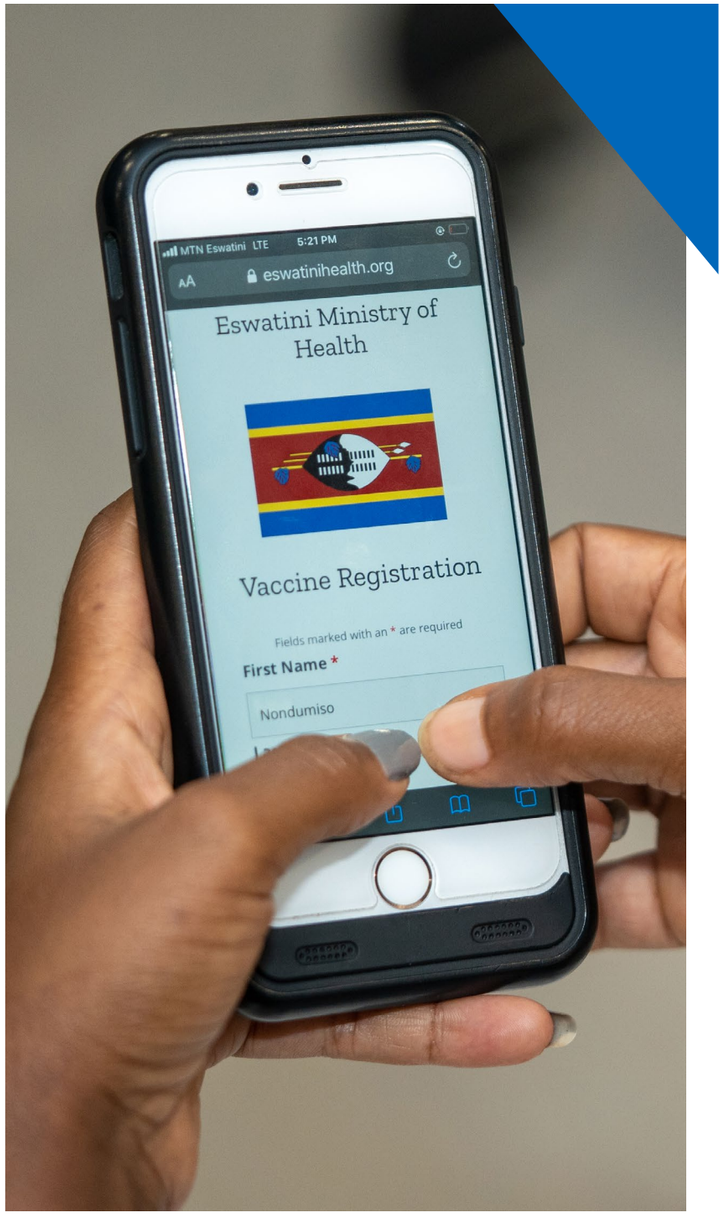
To ensure people and communities can get the COVID-19 vaccines they need, countries require timely, high-quality, and comprehensive data. In early 2021, the Eswatini Ministry of Health, with support from Global VAX, developed and launched ESWAVAX, a national electronic COVID-19 vaccine registry and data collection system. ESWAVAX is an innovative health information system that captures not only data about COVID-19 vaccination but also data about COVID-19 vaccine supply, cold chain systems, and adverse events following immunization (AEFI).

Thanks to ESWAVAX, Ministry of Health officials have access to high-quality and timely data on COVID-19 vaccine coverage down to the facility level and can communicate with vaccination teams in the field in real time to identify and address COVID-19 vaccine stockouts and move COVID-19 vaccines where they are needed. CDC-supported technical advisors worked closely with the Ministry of Health to strengthen use of the system for data analysis and microplanning, including working with the national immunization program to strengthen adverse events following immunization (AEFI) reporting and surveillance by standardizing definitions, reporting forms, and standard operating procedures across the multiple data platforms for the national program. Support for the national COVID-19 Control Room helped implement the plans to target COVID-19 vaccine services to the areas of greatest need on a day-to-day basis.

Training and capacity building provided to the Ministry of Health and other government organizations supported ESWAVAX in digitizing COVID-19 vaccination data, collection, tracking, and reporting. In addition, support was provided for procuring, developing, and configuring electronic devices and providing internet connectivity for real-time data collection and reporting. These efforts to digitize health data not only help to improve COVID-19 response programs through data-based policy and decision making, as well as through increased efficiency, but also strengthen routine immunization efforts and pandemic preparedness.

ESWAVAX also features an improved patient interface. To mitigate drop-out after patients have received the first COVID-19 dose in a two-dose series, the platform sends automated text messages to patients to remind them to return for their follow-up doses, as well as weekly booster reminders. The system also enables patients to easily access their digital COVID-19 vaccine certificates, which were necessary for domestic and international travel in 2021.

As the government of Eswatini integrates COVID-19 services into the broader health system, the U.S. government and its partners are working with the Ministry of Health to integrate ESWAVAX into the country's client management information system, a PEPFAR-supported health information system used in more than 70 percent of health facilities across the country. Integration of these systems will allow healthcare providers to determine a patient's COVID-19 vaccination status when they present for any health issue, providing an additional opportunity to offer COVID-19 vaccination.

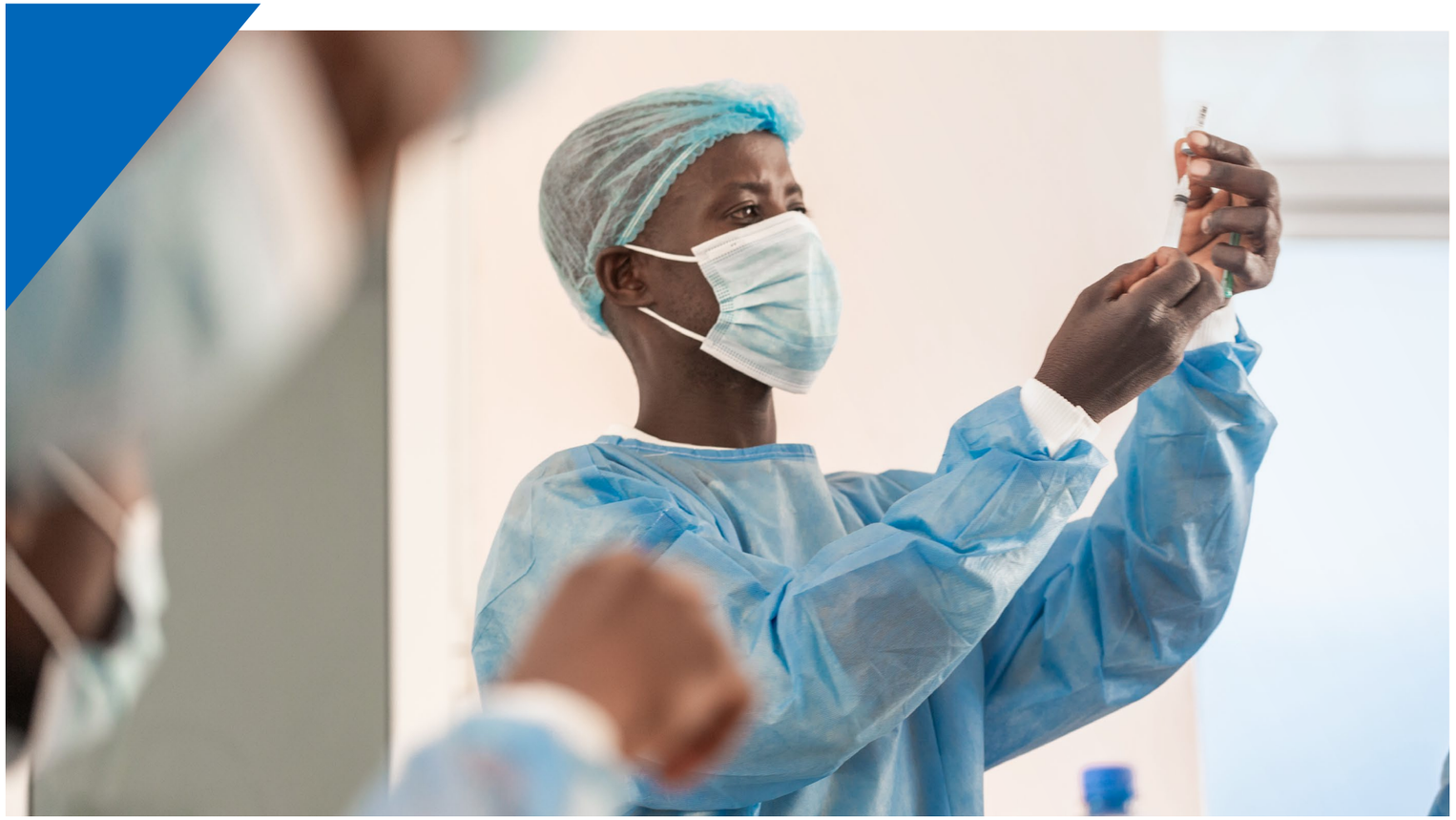


# PHARMACOVIGILANCE

Robust health systems not only administer COVID-19 vaccines but also track and report adverse events following immunization (AEFI) should they occur—in other words, they must practice pharmacovigilance. Global VAX support across the vaccine delivery pathway includes pharmacovigilance system strengthening, support that is crucial to building trust and confidence in COVID-19 vaccines, and combating misinformation.

**Strengthening pharmacovigilance surveillance systems.** Global VAX supported establishing AEFI monitoring systems and aligning them with national health information systems to track AEFIs and expand pharmacovigilance efforts. In Nigeria, CDC assistance supported integrating AEFI monitoring into existing data monitoring structures. With Global VAX support, Nigeria now has a national dashboard to monitor and track AEFIs.

**Training the health workforce in pharmacovigilance.** Global VAX provided pharmacovigilance and AEFI-related training to health care workers to identify, respond to, and report on AEFIs, including how to conduct cohort event monitoring studies. In Nigeria, CDC trained more than 4,000 HCWs and immunization program managers on how to manage and respond to AEFIs. This was bolstered by CDC-supported supervisory activities for COVID-19 vaccination staff, such as the provision of over 140 national supervisors—including 37 data management experts—to oversee AEFI activities.



# PARTNERSHIP-DRIVEN LEADERSHIP LEADS TO COVID-19 VACCINATION PROGRESS IN TANZANIA

Sworn into office in March 2021, Tanzania's President Samia Suluhu Hassan brought with her a dramatic and welcome shift in COVID-19 vaccination policy. While her predecessor cast doubt on the safety of COVID-19 vaccines and prohibited them from entering the country, President Hassan swiftly established a COVID-19 advisory committee and, with support from the U.S. government and other development partners, created an updated COVID-19 response plan for Tanzania.

In July 2021—relatively late compared to most of the world—Tanzania joined the COVAX partnership, receiving a first tranche of over one million U.S. government–donated Johnson & Johnson COVID-19 vaccines. To kick off the country's first COVID-19 vaccination campaign, generate demand, and build trust among citizens, President Hassan received a COVID-19 vaccination on live TV. This moment was crucial to Tanzania's COVID-19 vaccination success, as it signified to the Tanzanian people that the vaccine is safe and effective. Ultimately, Tanzania's success was a direct result of President Hassan's public commitment to effectively respond to the pandemic, sustained U.S. government interagency diplomatic engagement, and substantial U.S. government financial and technical support. U.S. government support through CDC, USAID, DOD, and Peace Corps mobilized staff and partners by leveraging existing platforms, including PEPFAR, to strengthen the government of Tanzania's vaccination efforts, helping ensure widespread COVID-19 vaccination coverage.

Once launched, Global VAX provided crucial support to accelerate COVID-19 vaccination administration. Activities included COVID-19 vaccination outreach via temporary fixed vaccination points and door-to-door vaccination drives by CHWs to bring the vaccines closer to the people, especially those in remote areas living many miles from clinics. Prior to Global VAX's support, one U.S. government partner organization was vaccinating an average of only 300 to 400 people per day against COVID-19. As a result of campaign drives and door-to-door outreach made possible by the infusion of support from Global VAX, the partner was able to reach over 6,000 people per day. Trained CHWs and communication in many different local languages helped address COVID-19 vaccine hesitancy and misconceptions head on. Community members seeing their neighbors get vaccinated spurred others to overcome their initial distrust.

Global VAX was able to seamlessly tap into the close relationships between the government of Tanzania and U.S. government teams built through years of collaboration through PEPFAR. PEPFAR also provided a springboard for

Continue reading »

the Global Health Security Agenda infrastructure, which began in 2015, and those resources were heavily leveraged during the COVID-19 response in Tanzania. Beyond the relationship with the Tanzanian government, the PEPFAR program engages with stakeholders across a broad array of technical areas in Tanzania, which fostered cross-collaboration with existing forums such as the Development Partners Groups for Health, to support a cohesive response to encourage COVID-19 vaccination.

Peace Corps leveraged its grassroots networks of local counterparts in Tanzania, including secondary school teachers, to influence, advocate, and address COVID-19 vaccine hesitancy and to connect individuals who wanted to get a COVID-19 vaccine to vaccination sites. Peace Corps staff, local counterparts, and health care workers from the Ministry of Health and districts, wards, and villages carried out communication activities and advocacy to enhance awareness, address myths and misinformation, and build COVID-19 vaccine confidence. These efforts resulted in reaching 179,827 people with key information, which led to 45,028 individuals getting vaccinated against COVID-19.

Since the launch of Global VAX, the U.S. embassy, led by the Ambassador and supported by the interagency health team, engaged Tanzanian government leadership at all levels, local leaders and faith leaders, local media, and civil society organizations in all regions to promote COVID-19 vaccine uptake through toolkits, workshops, community events, door-to-door outreach, and media engagement. This targeted outreach to influential leaders and media messaging laid the foundation for successful COVID-19 vaccination campaigns.

Event-based COVID-19 vaccination drives have been particularly successful for Tanzania. In partnership with the government, Global VAX and its implementing partners rolled out a successful series of music events in five regions from late July through August 2022 that drove demand for more than 40,000 vaccinations in just five weeks. With the close involvement of the Minister of Health, Ummy Mwalimu, the national radio station provided "edutainment" on COVID-19, and mobile COVID-19 vaccination stations allowed people to get their shot at the events.

Despite the initial delays and slow uptake in vaccinating its population against COVID-19, Tanzania has since made extraordinary progress in expanding COVID-19 vaccination coverage among its eligible population. After languishing at approximately 15 percent coverage from June 2021 to June 2022, Tanzania refocused and recommitted to the response effort and coverage soared to over 95 percent of the eligible population (for those 18 years and above) by March 2023.

By the end of December 2022, Global VAX had supported the administration of 31 million COVID-19 vaccine doses, helping to reach 100 percent COVID-19 vaccination coverage in the refugee camps of Nyarugusu and Nduta in Kigoma Region and 97 percent of the eligible population in the 11 PEPFAR-supported regions of Tanzania. Tanzania is a strong example of how transformative leadership and strong partnership can lead to progress in protecting populations against COVID-19.


# THE FUTURE OF THE GLOBAL COVID-19 VACCINATION EFFORT:

## INTEGRATING COVID-19 RESPONSE INTO PRIMARY HEALTH CARE

As the world emerges from the emergency response phase of the pandemic, countries must be prepared to handle COVID-19 as a manageable respiratory illness. This means that the COVID-19 response needs to be integrated into primary health care (PHC), most people's first point of contact with the health system. This transition offers a transformative window of opportunity to strengthen health system resiliency through thoughtful and coordinated integration of intensive COVID-19 programming into PHC and essential health services.

As part of this transition, Global VAX is increasingly focused on supporting countries in integrating COVID-19 vaccination efforts into health systems and service delivery infrastructure in a way that can also advance local public health priorities. Global VAX's focus on integration directly supports global efforts to regain the ground lost due to pandemic-related service disruptions, especially for childhood immunizations, which have had the greatest declines in coverage the world has seen in three decades.[9] In addition to strengthening childhood immunization efforts, integrating COVID-19 vaccination into PHC and delivery of other essential health services enables people-centered health systems that can respond to a patient's changing needs across their lifespan. Many countries have limited experience vaccinating individuals across their lifespans and do not have systems in place to reach adolescents and adults with routine immunizations needed after childhood. Consistent with countries' own integration priorities, Global VAX's integration efforts will help countries to equitably reach vulnerable communities with COVID-19 vaccines while applying the lessons learned and strategic investments from the COVID-19 response to help strengthen PHC and health systems.

In Lesotho, for example, with Global VAX support, clinics and hospitals offer COVID-19 vaccination services in combination with other health interventions such as vitamin A supplements, tapeworm treatments, tetanus shots, and measles and rubella vaccinations. This integrated approach expands access to measles and rubella vaccinations while increasing the number of locations providing COVID-19 vaccinations to high-risk populations that are seeking additional health services.

> **Global VAX support in South Africa enabled a pivot from an emergency response, to a response focused on strengthening health and information systems to improve equitable access to COVID-19 vaccines and respond to and prepare for current and future emerging infectious disease threats.**
>
> - ***Heena Brahmbhatt,*** *Global Health Security Team Lead, USAID/South Africa*

Integrating COVID-19 vaccination into PHC and essential health service provisions also strengthens the resiliency of country health systems and health workers' capacity to prevent, detect, and respond to future waves of COVID-19 and other infectious disease outbreaks. Global VAX is working with partner countries to ensure that emergency response capacities—including microplanning, organizing mass vaccination campaigns, and establishing and utilizing health information systems—are strengthened through the COVID-19 vaccination effort. In addition, Global VAX is designing and implementing social monitoring systems to track and counter mis- and dis-information–systems that can be maintained and repurposed to respond to ongoing and future biological threats.

# CONCLUSION:
## THE GLOBAL VAX LEGACY

Global VAX epitomized U.S. government leadership in global health and development at its best. Recognizing the need for decisive leadership and coordination at a global level to administer surging donations of COVID-19 vaccines to people in need, the U.S. government stepped forward. Global VAX activities in surge countries demonstrated that a concerted push of technical support, diplomatic engagement, and funding can support countries in rapidly increasing access to and confidence in COVID-19 vaccines in the midst of an evolving health emergency. This success leveraged the partnerships and programs built up through decades of U.S. government investment in global health, development, and security through USAID, CDC, the Department of State, OGAC, Peace Corps, HHS, DOD, and more. Even as the emergency phase of the COVID-19 pandemic recedes, these U.S. government agencies sustain partnerships around the world to save lives, strengthen health security and pandemic preparedness, promote social and economic progress, and support countries in achieving their goals for health and development.

Yet the success of Global VAX is attributable to a much larger group of actors. Global cooperation across donor and partner countries, multilateral partners, civil society, and the private sector, and especially the hard work of country ministries, together unlocked extraordinary progress in COVID-19 vaccination in low-income and lower-middle-income countries. Working together, in close coordination and cooperation, enabled this level of impact.

The foundational health system capacities that Global VAX helped to strengthen are increasingly in demand amidst a relentless rise in emerging infectious disease threats. Global VAX's historic investments have enabled countries to better respond to new variants of COVID-19, and have helped improve systems that will be needed to quickly scale up and deliver new vaccines developed to combat future infectious disease threats. Still, the work needed to strengthen systems so they can rapidly mobilize to address future pandemics is far from over, and will require sustained investments and global cooperation in the years to come.

The U.S. government is committed to continuing to work with its multilateral and bilateral partners to ensure that the investments in and lessons learned from Global VAX lay the foundation for stronger and more resilient health systems that can meet the routine health needs of people at every stage of life and can adapt quickly to the demands of future health emergencies.

# CITATIONS


1. Global VAX surge countries were Angola, Côte d'Ivoire, Eswatini, Ghana, Lesotho, Nigeria, Senegal, South Africa, Tanzania, Uganda, and Zambia. Throughout this report, the term "surge countries" refers to this set of 11 countries.
2. Our World in Data, accessed July 3, 2023. Share of people who received a complete primary series of COVID-19 vaccine, low income and upper-middle income. Date range: December 1, 2021 – June 28, 2023. Population estimates from UN Population Division, World Population Prospects.
3. COVID-19 Vaccine Development and Rollout in Historical Perspective, Center for Global Development - Amanda Glassman, Charles Kenny, and George Yang.
4. Our World in Data, accessed July 3, 2023. Share of people who received a complete primary series of COVID-19 vaccine, low income: 3.0% on Dec 1, 2021, to 27.5% on May 31, 2023. Lower-middle income: 27.2% on Dec 1, 2021, to 59.2% on June 1, 2023. Population estimates from UN Population Division, World Population Prospects.
5. Our World in Data, accessed July 3, 2023. Share of people who received a complete primary series of COVID-19 vaccine, Africa, cumulative. Date range: December 1, 2021 – June 1, 2023. Population estimates from UN Population Division, World Population Prospects.
6. Oliver J. Watson, Gregory Barnsley, et al. "Global impact of the first year of COVID-19 vaccination: a mathematical modeling study," Lancet Infectious Disease, 2022, 22: 1293-302.
7. In October 2021, WHO published a "Strategy to Achieve Global COVID-19 Vaccination by mid-2022" that set a target of 70% coverage in all countries by the end of June 2022. In July 2022, WHO issued an update to the strategy to provide future direction for achieving strategy targets. https://www.who.int/publications/m/item/strategy-to-achieve-global-covid-19-vaccination-by-mid-2022.
8. The Global VAX activities and accomplishments in this section were carried out across the Global VAX U.S. government agency partners. In many cases, the agency is named. Where multiple agencies contributed to the activity or accomplishment, the term "Global VAX" is used. All Global VAX U.S. government agencies worked in close partnership with partner country governments and in support of partner country priorities for COVID-19 programming.
9. UNICEF, "COVID-19 pandemic fuels largest continued backslide in childhood vaccinations in three decades," July 14, 2022, https://www.who.int/news/item/15-07-2022-covid-19-pandemic-fuels-largest-continued-backslide-in-vaccinations-in-three-decades.

# PHOTO CREDITS

**Cover**
Alfredo Mandlate for CDC

**Page 2**
Peace Corps

**Page 3**
Peace Corps

**Page 4**
Kelley Lynch for USAID

**Page 7**
Bobby Neptune for USAID

**Page 8**
USAID

**Page 9**
USAID

**Page 11**
Kelley Lynch for USAID

**Page 13**
USAID

**Page 15**
Bobby Neptune for USAID

**Page 17**
Emmanuel Gyimah Attramah for USAID

**Page 19**
USAID

**Page 20**
Victoria Stoffberg for USAID

**Page 21**
USAID, Bobby Neptune for USAID

**Page 22**
USAID

**Page 23**
USAID

**Page 24**
UNICEF for Nepal

**Page 25**
Kelley Lynch for USAID

**Page 27**
Peace Corps

**Page 28**
USAID

**Page 29**
USAID

**Page 30**
The Luke Commission for CDC

**Page 32**
Malaika Media for JSI

**Page 33**
USAID

**Page 34**
USAID

**Page 35**
USAID

**Page 36**
The Luke Commission for CDC

**Page 37**
Population Services International, Mahmoud ALfilastini for UNICEF

**Page 38**
Stefano Bianco for USAID

**Page 39**
Stefano Bianco for USAID

**Page 40**
USAID

**Page 41**
UNICEF for CDC ©UNICEFU.S.CDCUN0723275Ngakhusi

**Page 42**
The Luke Commission for CDC

# GLOBALVAX

Initiative for Global COVID-19 Vaccine Access

CDC
Centers for Disease Control and Prevention

DFC U.S. International Development Finance Corporation

Department of Defense

Department of Health & Human Services

Peace Corps

Department of State

The Department of the Treasury

USAID
From the American People