

Equitable Delivery of COVID-19 Vaccines

LESSONS FROM SUB-SAHARAN AFRICA



Introduction

Epidemics and disasters are widespread and frequent in Africa, with 87% of countries experiencing an epidemic and 47% experiencing a humanitarian crisis between 2016 and 2018¹. As a result, significant investments have been made into preparedness, which are now being operationalized in response to the COVID-19 pandemic. In Malawi, for example, the first case of COVID-19 was reported in April 2020, but coordinating mechanisms were activated by December 2019. Through these coordinating mechanisms, partners including the WHO, UNICEF, Gavi, the private sector and non-governmental organizations worked with governments to develop national COVID-19 vaccine deployment plans, to use existing digital solutions for COVID-19 advocacy and awareness campaigns, and to distribute personal protective equipment (PPE) to the last mile.

Despite this proactive approach, COVID-19 vaccination rates in sub-Saharan Africa are the lowest in the world, at less than 2%, even though the first vaccine deliveries on the continent occurred in February 2021. According to the Ministry of Health (MoH), in Malawi, 1.4 million doses have been delivered as of September 2021, yet only 2% of the population has been fully vaccinated. Competition with wealthier countries has resulted in limited supply, but even as deliveries have ramped up in recent months, vaccination rates are slow to increase, in part due to fragile transportation systems and limited cold chain availability at the health facility level. To slow the spread of COVID-19, vaccines must be made accessible to the most vulnerable communities. While vaccine delivery challenges remain, some countries are adapting to the evolving needs of the COVID-19 pandemic. For example, in partnership with the government of Mozambique and with funding from USAID, the VillageReach's implemented Last Mile Supply Chain (LMSC) program adapted by integrating the distribution of COVID-19 vaccines into its routine distribution system. Based on consultations with key stakeholders in seven African countries where we operate, VillageReach has compiled lessons learned and recommendations to help governments and partners equitably deliver COVID-19 vaccines, and ultimately, save lives.



Delivery of COVID-19 vaccines from the COVID-19 Vaccines Global Access initiative (COVAX) in Malawi. Photo: Hope Ngwira

¹ Talisuna, A.O., Okiro, E.A., Yahaya, A.A. et al. (2020). Spatial and temporal distribution of infectious disease epidemics, disasters and other potential public health emergencies in the World Health Organisation Africa region, 2016-2018. *Global Health*. 16, 9. <https://doi.org/10.1186/s12992-019-0540-4>

Lessons Learned

INNOVATIVE PARTNERSHIPS ARE NEEDED TO MEET GLOBAL COVID-19 VACCINE DEMAND

National vaccination programs in the countries where we work have had a limited and unpredictable supply of COVID-19 vaccines, slowing vaccination efforts. In Mozambique, for example, only 27% of the total number of doses needed have been delivered as of September 2021. The COVID-19 Vaccines Global Access initiative (COVAX), which aims to accelerate the development and production of COVID-19 vaccines, has been constrained by a limited number and capacity of existing suppliers. The Pfizer-BioNTech vaccine represents a success story, in which BioNTech contributed innovative mRNA technology and Pfizer mobilized mass production capacity. **More innovative global partnerships between vaccine developers and manufacturers are needed to jumpstart production and scale vaccination efforts to reach the last mile.**

EFFECTIVE COORDINATION IS CRITICAL AT GLOBAL, REGIONAL, NATIONAL AND LOCAL LEVELS

Coordination at the global level can be an effective mechanism to exchange technical guidance around global best practices, for example, the Supply and Logistics Working Group coordinated by UNICEF and WHO has been an effective mechanism through which to share training modules on proper and consistent management of newly introduced COVID-19 vaccines. As governments deploy innovative vaccination delivery strategies in their own context, opportunities should be created for local leaders to share lessons with other countries addressing similar challenges.

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The most effective vaccination delivery strategies adapt global best practices to the local context, in collaboration with civil society organizations, local governments, and the private sector, particularly around vaccination demand generation and addressing contextually-specific misinformation.

Global COVID-19 actors should leverage Africa-based initiatives that can more efficiently and effectively deliver on their aims than acting alone. For example, COVAX, which aims to ensure fair and equitable access to COVID-19 vaccines, should coordinate its efforts with the African Union’s Africa Medical Supplies Platform, which enable member states to purchase certified medical equipment.

Coordination between the global and the national level is particularly critical when urgently needed COVID-19 vaccines are shipped to a country. In some cases, COVID-19 vaccines have been shipped without prior knowledge of the national vaccination program, resulting in delays in clearing customs and insufficient storage space. This coordination is particularly important given the limited shelf life of COVID-19 vaccines, where each day’s delay in reaching the target population risks wastage of a limited, valuable resource.

COVID-19 VACCINE DONATIONS MUST ADHERE TO MINIMUM QUALITY REQUIREMENTS

PPE donations were sourced from vetted suppliers that met WHO and country-specific quality standards, but COVID-19 vaccines have not been subjected to the same requirements. In Malawi, for example, 102,000 doses were received with only 18 days until expiration, forcing local distribution teams to rapidly mobilize and deploy strategies to mitigate any losses. The government was able to successfully re-distribute vaccines from low volume to high volume sites based on logistics data, and used 90% of the doses before expiration. However, had the shipment adhered to higher standards, valuable human and financial resources would have been saved. **Governments should set, and suppliers should adhere to, minimum requirements for acceptable shelf life and other quality considerations for COVID-19 vaccines to enable equitable, efficient vaccine delivery.**

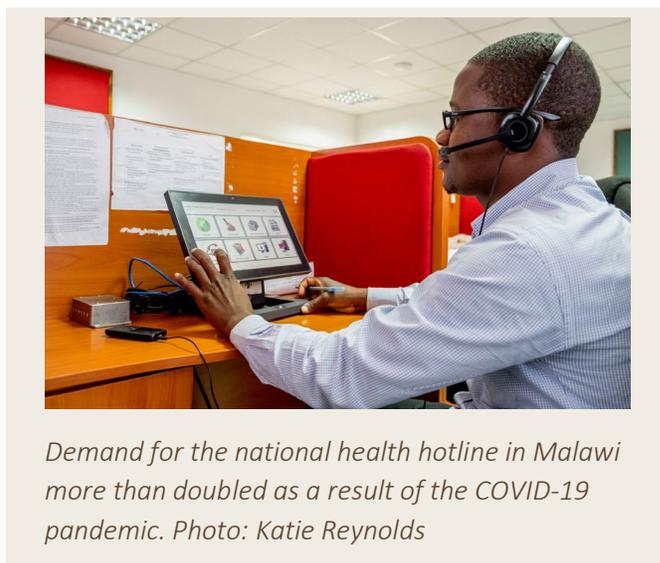
GOVERNMENTS SHOULD INTEGRATE COMMUNITY HEALTH WORKERS INTO VACCINATION PLANNING

Pandemics have been shown to precipitate declines in healthcare utilization, due to both supply-side factors including an overstretched health workforce and strained supply chains and demand-side factors including mobility restrictions and fear of crowded health facilities. Community health workers (CHWs), when adequately supported with supplies including PPE, financial compensation, and ongoing training and supervision, have the potential to strengthen primary healthcare during a pandemic by helping to alleviate the burden on facility-based healthcare workers and by reaching people where they live. In the early days of the pandemic, CHWs were not included in PPE allocations, limiting their ability to carry out essential services. **To avoid further disruption to healthcare, CHWs should be considered frontline healthcare workers and prioritized for vaccination.**

VACCINATION DELIVERY SHOULD LEVERAGE EXISTING TECHNOLOGY AND INFRASTRUCTURE

Setting up a new system or deploying new technology is particularly challenging during a pandemic, and **governments and partners should identify opportunities to leverage existing technology and infrastructure for COVID-19 vaccination demand generation and delivery.**

In Malawi, the government responded to a dramatic increase in demand for COVID-19 information by training its existing national health hotline operators on key COVID-19 messages and COVID-19-specific referrals, increasing the number of operators available, and pre-recording messages with COVID-19 information. In comparison to before the COVID-19 pandemic, the health hotline responded to more than double the calls and the number of callers who heard a health message increased by more than seven-fold. In Malawi and in the Democratic Republic of Congo, VillageReach, Swoop Aero, and the Ministries of Health introduced drone transport to reach remote communities with medicines, vaccines and laboratory services, and have been able to integrate distribution of COVID-19 PPE, tests, and vaccines, where available.



MORE FUNDING IS NEEDED TO REACH THE LAST MILE, THROUGH ACCESSIBLE MECHANISMS

As countries prepare to ramp up COVID-19 vaccination delivery to reach everyone, further investment is required to support scale-up to reach the last mile with potent vaccines. In Malawi, funding was sufficient to deliver COVID-19 vaccines only to the district level in the first phase of roll-out, limiting access for more remote populations. COVAX is offering funding for ultra-low temperature cold chain equipment (CCE), but the 8-stage application process has limited access to only 2 of the 74 countries who have applied as of September 2021. **In addition to providing increased funding as vaccination roll-out scales up, global funders should streamline processes and implementers should provide technical assistance to national vaccination programs to reduce barriers to applying for critical funding sources.**

Recommendations

With very low COVID-19 vaccination rates in sub-Saharan Africa, ensuring everybody has access is critical to curbing the spread of COVID-19. To achieve this, we recommend:

- Vaccine developers and manufacturers partner to jumpstart production and scale vaccination efforts in order to meet significant demand.
- Global, regional, national and local actors coordinate strategically, enabling rapid sharing of best practices between countries and leveraging regional resources.
- Governments should set, and suppliers should adhere to, minimum quality requirements for COVID-19 vaccines to enable equitable, efficient vaccine delivery.
- Governments should include CHWs as frontline health workers in priority target groups for vaccination to help avoid disruption to primary healthcare services.
- Governments and their partners should identify opportunities to leverage existing technology and infrastructure for COVID-19 vaccination demand generation and delivery.
- Global funders should increase funding for vaccination roll-out and streamline processes.
- Implementers should provide technical assistance to national vaccination programs to reduce barriers to applying for critical funding sources.

Working together, global, regional, national and local stakeholders have the potential to rapidly scale up COVID-19 vaccination delivery while at the same time strengthening existing supply chains, ultimately saving lives now and in the future.

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