



Mozambique: A Highly-Effective COVID-19 Vaccine Campaign

The power of multistakeholder planning to drive outcomes

Mozambique has COVID-19 vaccine coverage that has reached more than 96.6 percent of eligible adults over 18 years of age by September 2022. Its COVID-19 vaccination rate ranks among the top 10 in Africa and far surpasses its neighbors. This success was achieved through careful planning, ensuring equitable access to vaccines and political will. Here is an exploration reflection of what led to Mozambique's success.

The COVID-19 Landscape in Mozambique

The health care system in Mozambique strained under the weight of a COVID-19 spike in January 2021. The dramatic increase in hospitalizations and pneumonia-related deaths created a widespread sense amongst health care workers that a vaccine was needed urgently. Nearly 87 percent of health care workers wanted to receive the vaccine, according to a study conducted over 10 days in March 2021, compared with nearly 65 percent of the general population.¹ While the latter was promising, it was far short of the Ministry of Health's threshold for mitigating COVID-19.



Mozambique ranks among the top 10 countries in Africa for COVID-19 vaccination rates.

¹ Dula, Janeth et al. "COVID-19 Vaccine Acceptability and Its Determinants in Mozambique: An Online Survey." *Vaccines* vol. 9, 828. 27 Jul. 2021, doi:10.3390/vaccines9080828



Mozambique's Ministry of Health (MoH) designed a multi-modal approach to improve vaccine acceptance through a publicity campaign, well-planned vaccine distribution and immense political will to achieve the lofty goal of vaccinating 100 percent of the eligible population by the end of 2022.² The MoH brought together technical partners, experts and donors to create an agile National Deployment and Vaccine Plan (NDVP) for COVID-19 vaccines that featured multiple phases that prioritized vulnerable and disadvantaged populations.²

By following a plan that started with health workers and the elderly, and then prioritized the sick, vulnerable socio-economic groups and key workers outside the health sector, before making the vaccine broadly available, Mozambique was able to curtail deaths from COVID-19 and have more than 93 percent of adults over 18 years of age vaccinated by the end of May 2022.

The publicity campaign to promote receiving the vaccine was so impactful that the number of doses administered in March 2022 was 341 percent higher than the previous month, according to the World Health Organization.³ By August of 2022, more than 31 million COVID-19 vaccine doses had been administered in Mozambique.⁴

A comprehensive and successful immunization drive relies on buy-in from the public; a dedicated, responsive and trained health workforce; consistent public health messaging; and an agile supply chain. This is only possible with thorough preparation that leads to coordination and cooperation amongst partners and stakeholders while ensuring operational capital to execute plans.

VillageReach: Experience and Expertise in Supply Chains and Logistics

VillageReach, which has worked with African ministries for 20 years to improve health care supply chains to deliver products and services to people at the last mile, lent its expertise to the logistics team on the National Coordination Committee for COVID-19 vaccines.

2 Mozambique National Deployment and Vaccination Plan for COVID-19 Vaccines. COVAX Application. February 2021.

3 Mozambique vaccinates nearly all adults against COVID-19. World Health Organization. June 29, 2022.

<https://www.afro.who.int/countries/mozambique/news/mozambique-vaccinates-nearly-all-adults-against-covid-19>

4 Mozambique Ministry of Health. <https://covid19.ins.gov.mz/>

VillageReach has been working with the national MoH and the provincial directorates to redesign and improve vaccine supply chains in Mozambique for the past 20 years. The redesigned vaccine supply chain resulted in significantly increased access to health products and decreased costs.⁵ At the outset of the pandemic, VillageReach used its findings and its logistics management information system to ensure that personal protective equipment and health products made it to health workers at the last mile. Those successes laid the foundation for the COVID-19 vaccine supply chain.

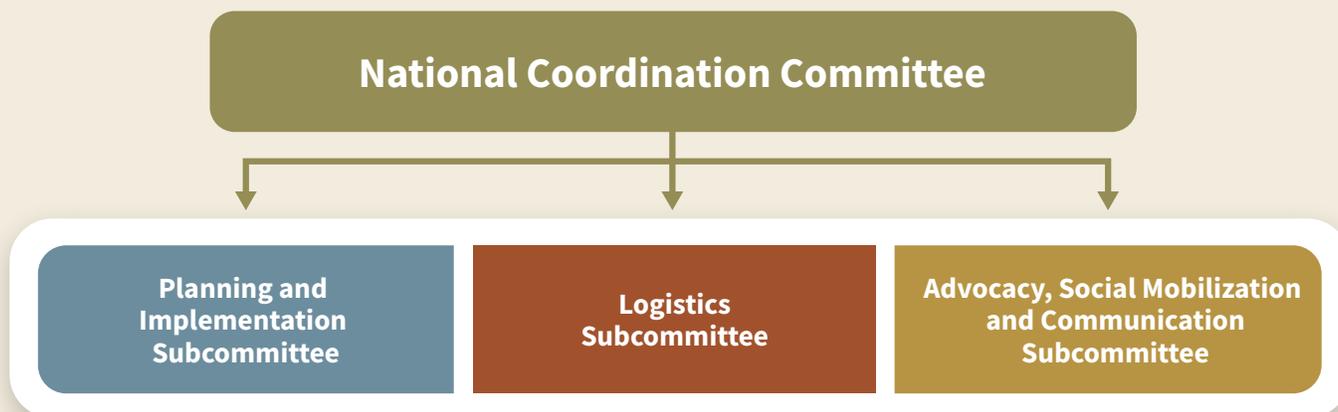
How Success Happened in Mozambique

This case study looks at three elements of the COVID-19 vaccine distribution that not only contributed to the resounding success seen in Mozambique, but could also be replicated in other countries.

- Planning: Coordination and preparation with partners and donors
- Agility: Data-driven responsiveness
- Communication: Consistent messaging touting vaccine benefits to the individual and society

Planning: Leveraging Partnerships and Cooperation To Create A Framework for Effective Vaccine Distribution

Government officials and partners with experience in implementation, logistics, and communication engaged in the initial planning for the vaccine rollout. A National Coordination Committee was set up, as a collaborative effort between government, donors and partners, which oversaw three subcommittees.



⁵ Lee, Bruce Y et al. "Re-designing the Mozambique vaccine supply chain to improve access to vaccines." *Vaccine* vol. 34,41 (2016): 4998-5004. doi:10.1016/j.vaccine.2016.08.036

The subcommittees coordinated with partners and donors, including the World Health Organization (WHO), Gavi, UNICEF, the United States Agency for International Development (USAID), World Bank and the European Commission’s Directorate-General for European Civil Protection and Humanitarian Aid Operations (ECHO), and other technical partners, including VillageReach—which sat on the logistics subcommittee—Bollore Logistics, USAID Commodities for Health: Ensuring Guaranteed Access and Reliability (USAID CHEGAR), JSI, amongst others.

Planning To Procure and Distribute Vaccines

Throughout the world, while many low- and middle-income countries competed for a limited supply of COVID-19 vaccine, high-income countries would likely hoard the lion’s share by directly buying from manufacturers. So, how could Mozambique equitably distribute the limited vaccines they received and how could it increase its COVID-19 vaccine supply beyond the small amount provided by COVAX?

Knowing that demand for the vaccine would be significantly higher than the supply, the sub-committees created a streamlined plan after the difficult issues of prioritization and a clearly articulated message to the public. The planning sub-committee landed on a phased rollout, prioritizing the first phase for the populations most likely to contract COVID-19—health care workers and the military—and those most susceptible to its progression, including the elderly and people with comorbidities. They also had to figure out how to mobilize health care workers to conserve, transport, store, and administer the vaccine at health care centers around the country.

While planning the first phase, the government did not simply wait for the leftover vaccine doses from high-income countries, but actively pursued vaccine doses beyond what COVAX provided, resulting in a bilateral cooperation with the government of China to secure a wave of Sinovac’s COVID-19 vaccine. This was followed by COVAX delivering vaccines from Johnson & Johnson and Oxford/AstraZeneca.

At the beginning of the pandemic, VillageReach and other partners that specialize in logistics put in place supply chain systems that facilitated vaccine distribution.

Mobilizing Health Workers

Implementing the NDVP required human resources to mobilize people with the technical training to administer the vaccine. Nurses, retired technicians and technician assistants were brought on board to ensure vaccine administration was possible. And yet, the human resource element posed a challenge.

“We had many donors, cold chain support, looking after the vaccine, all the other components and we forgot that for this to be executed you have to have someone who is motivated in the health unit, in the vaccination station,” said Amelia Dipuve, served as the COVID-19 Coordinator at the MoH.

Dr. Dipuve added that the technicians who were recruited worked long hours and over the weekends, often without breaks or meals, to make sure people received the vaccine.

“We continue to have technicians doing mobile brigades, technicians from the big vaccination centers, without subsidies. And we have a debt with the technicians to this day, which has not been paid,” she said.

The technical working groups played an integral role in ensuring the rollout of the vaccines was successful. They established a system to send text messages to health care workers around the country to help stop the spread of

The **technical working groups** established a system to send text messages to health care workers around the country to help **stop the spread of COVID-19.**

COVID-19; bolstered the national health hotline with newer equipment, more staff and longer hours; leveraged the logistics of the Last Mile Supply Chain implemented by VillageReach and USAID to ensure vaccines distribution from a provincial warehouse to the districts and then to a health facility or mobile brigade.

“One of the greatest learnings that we can carry forward to future vaccine campaigns is that planning is the foundation of success,” said Dr. Benigna Matsinhe, Deputy National Director of Public Health at the Ministry of Health. “I think the most important thing is to have a well-made plan of how to vaccinate and the communication around it. The flow of information around COVID-19 and how it reached people formed the basis of our success.”



Agility: Leveraging Real-time Data To Drive Decision-making

As vaccines trickled in, the distribution needed to be thoughtful, equitable, and responsive to health data. The MoH and its Extended Programme on Immunization (EPI) tapped into national health statistics to distribute vaccines equitably by pinpointing the elderly, people with comorbidities, and other vulnerable segments of the population to implement the first phase of the NDVP.

A ministerial order decreed that all data should be entered into the Mozambique Health Information System for Monitoring and Evaluation (SISMA). This comprehensive system produced daily reports and data visualization that allowed decision-makers to track vaccine distribution, health product stocks, and demand for the vaccine. The SISMA tools allowed for increased visibility, accountability and specificity compared to other databases, which allowed the MoH to pivot when necessary.

Dr. Dipuve noted that decisions based on the data were discussed daily in the various subcommittees and the national coordination committee, as well as within the larger MoH. When adherence amongst the elderly seemed to lag, “we improved the strategy of reaching these people, thinking that probably these people are not able to go to the health unit. So we go to where people are. We were going to their homes; we were going to town centers to meet people.” Mobile brigades disseminated throughout the provinces and set up at churches, soccer pitches and town centers to make the vaccine readily available as soon as access was available.

Dr. Graça Matsinhe who served as Programs Director at the MoH from 2014 to 2021 noted that the NDVP was dynamic by design. So, when the team noticed that there were enough vaccine doses to start immunizing people in the private sector, the MoH did not withhold doses until all public service workers were vaccinated. Instead, it continued its prioritization of the public sector, while starting to branch out into the second phase of the plan.

Dr. Matsinhe also pointed out that shifting strategies and making quick decisions requires strong central leadership. Data visualizations enabled the agile response by the central command that facilitated ministerial coordination, technical coordination, and responsible delegation.

Communication: Bolstering the Message Around COVID-19 Vaccination

Communicating the data to the public helped drive up vaccination rates with people. Amelia Dipuve highlighted that digestible bits of data influenced adherence as people saw hospitalizations and deaths from COVID-19 drop as



the vaccination numbers ticked up. She said it even changed the mind of people who were hesitant to receive the vaccination.

UNICEF also funded an advertising blitz that featured famous actors, athletes, the President and the first lady, as well as other notable figures.

“In the beginning, we had a feeling that there was some hesitation,” said Dr. Carlos Funzamo, National Professional Officer for EPI at World Health Organization in Mozambique.

“So, what was done was a more in-depth work in the area of communication, to make people understand the importance of raising awareness by bringing in well-known figures from Mozambican society. Also talking about the importance of vaccination, setting an example. I think that the various mechanisms, means or communication tools and strategies were fundamental for the successful adherence to vaccination in Mozambique.”

The campaign also had two key components. First, communicating by SMS with community health workers helped reinforce vaccine information within urban and rural communities. Second, the increased staffing and extended hours of the national health hotline made reliable information about COVID-19 and the vaccines readily available.

Room For Improvement

While Mozambique has been a success story, there were hiccups that could be improved upon as the Pfizer-BioNtech COVID-19 vaccine becomes available in late September 2022 for the 4.8 million 12-17-year olds in the country.

Both Dr. Funzamo and Ms. Dipuve acknowledged that the planning lacked an adequate strategy for sustaining the workforce. That oversight took a toll on the vaccine administrators who were underpaid, overextended, and physically exhausted by the end. Also, while the mobile brigades were wildly successful in urban areas, they were less successful in distant villages where the operation was time-consuming, incurred great costs, and fatigued the staff implementing the process.

To learn more about vaccine distribution, supply chain improvements, or logistics management information systems in Mozambique, contact Aida Coelho

aida.coelho@villagereach.org

VILLAGE REACH[®]