

COVID-19 vaccination integration assessment

Mozambique Case Study
April – May 2024

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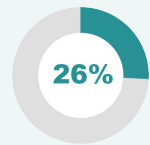
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Background

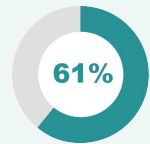


Background and Rationale

- Despite progress in COVID-19 vaccine introduction, **coverage remains suboptimal** globally.
- By April 2023, overall population coverage:



Low-income countries: 26% fully vaccinated¹



Lower middle-income countries (LMICs): 61% fully vaccinated

- WHO declared an end to COVID-19 as a public health emergency on May 5, 2023.
- Countries anticipate **waning financial, technical, and vaccine support** from external partners as the pandemic transitions.
- **Integration*** is identified as a key **strategy for ensuring the long-term sustainability of COVID-19 vaccination.**
- This report will generate evidence concerning **how LMICs have and are planning to integrate COVID-19 vaccination** with health systems.

¹ Source: <https://www.gavi.org/vaccineswork/covid-19-vaccine-coverage-continues-increase-lower-income-countries#:~:text=Gavi's%20latest%20COVAX%20data%20brief.a%20global%20average%20of%2066%25>

**by integration, we mean: the degree to which COVID-19 vaccination has been or will be integrated with other components of the health system in terms of governance, management, service delivery, procurement, supply chain, information systems, financing, and service delivery – including integration with other essential health services (e.g. ANC, HIV, NCDs, RI).*

Multi-country Assessment Methods and Scope



Seven country assessments in:

Benin	India (Tamil Nadu state)
Ethiopia	Mozambique
Ghana	Nigeria
Liberia	

Country selection criteria:

- Innovators in integration.
- Performance on COVID-19 vaccinations and routine immunization (RI).
- USAID target or Pfizer priority countries.
- Geographic contexts.

Data collection:

Key informant interviews with stakeholders involved in implementing integration activities and in broader health system strengthening efforts:

- Ministry of Health (MOH), COVID-19 task force officials.
- Expanded Program on Immunization (EPI), National Immunization Technical Advisory Group (NITAG) members, heads of COVID-19 vaccination units at subnational levels.
- Development partners/agencies.
- Civil Society Organizations (CSOs), implementing partners, public, private providers, academics.

Mozambique Background



Mozambique began COVID-19 vaccinations on March 8, 2021.

- Mass vaccination campaigns were the primary approach for delivering vaccines to priority populations.

According to SISCOVID (a local COVID-19 data reporting platform), COVID-19 primary series vaccination rates by December 2023¹ were:

- **Ages 18 years and older:** 96% coverage.²
- **Ages 12-17 years old:** 83% coverage.
- **Priority groups:** 97%.

According to the COVID-19 data, vaccines were last administered in November 2023. Mozambique has had a vaccine stock-out since December 2023.

¹Coverage rates have been calculated from 2022 INE population data (National Statistic Institute).

²Population calculations may have been underestimated.

Priority Populations

Priority populations based on the COVID-19 Integration Plan (2023):

- Older adults aged 60 and above.
- Adults with multiple comorbidities.
- Adults and adolescents who are immunocompromised.
- Pregnant adults and adolescents.
- Health workers.



Assessment Objectives

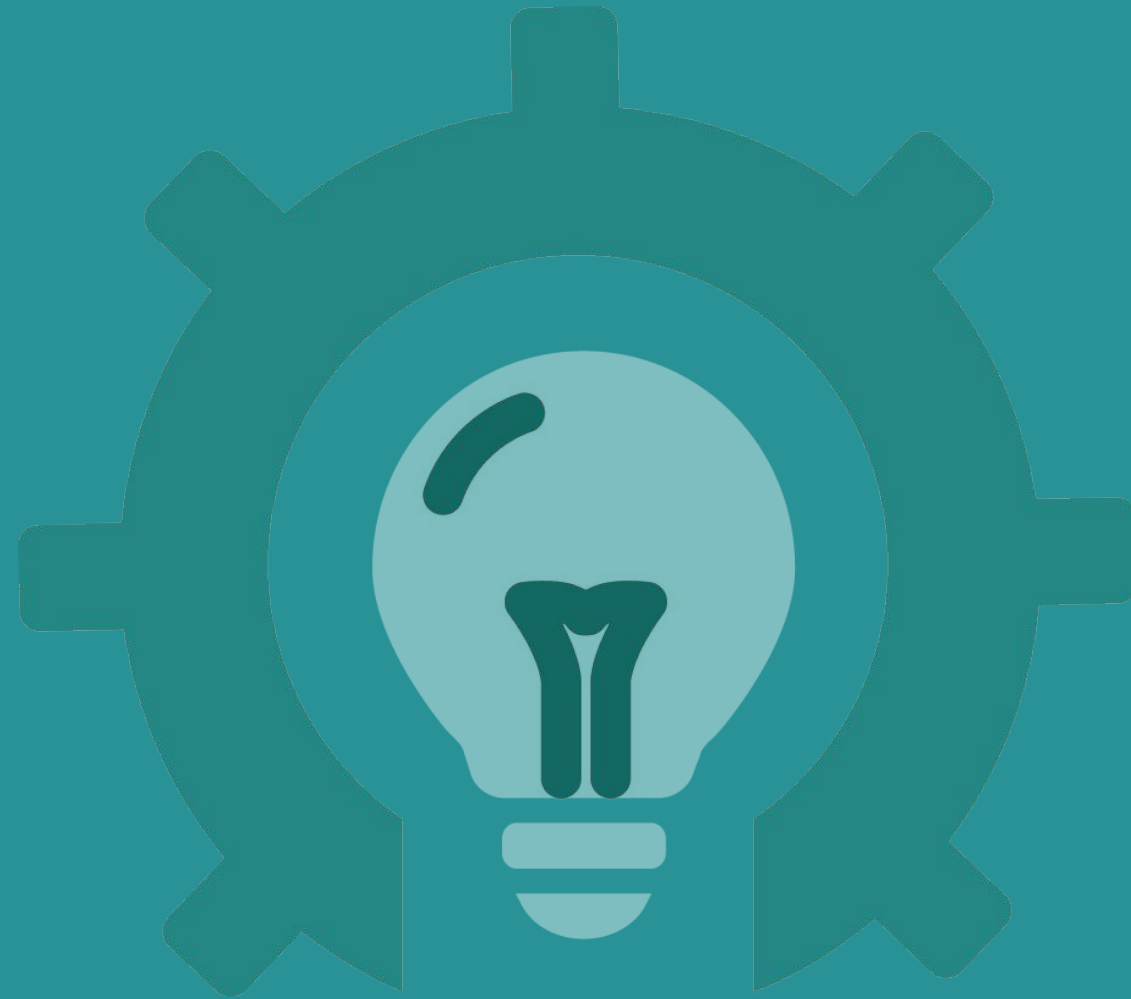


Assess the status and thinking about the future integration of COVID-19 vaccinations targeting priority groups with essential health programs and health system functions.



Compile lessons learned about the integration of COVID-19 vaccinations from the urgent response phase of the pandemic.

Methods



Research Questions

1

What have governments planned for sustaining COVID-19 vaccinations for priority populations?

2

What is the thinking concerning the operational integration of COVID-19 vaccinations with:

- Other essential health services.
- Other health system and vaccination functions.

3

How are COVID-19 vaccinations planned to be (or already are) part of:

- Overall health strategies.
- Immunization strategies.
- Monitoring and evaluation.
- Budgeting.

4

How has integration with other essential services or health system functions helped or hindered equitable access to COVID-19 vaccination?

5

What lessons were learned from integration (or lack thereof) of COVID-19 vaccinations during the urgent pandemic response period?

Methods



Desk review of key documents globally and for each country.



Advisory group input on the approach, facilitation of collaboration, review of findings, and assistance with dissemination.



Qualitative data collection (conducted in April 2024):

Key informant interviews with 11 people: national-level stakeholders from the MOH/EPI, development partners, and the NITAG.

Informants were selected based on their involvement and role in COVID-19 vaccination delivery and/or integration.

Interviews were recorded with participant consent and notes were taken at each interview to inform the findings and analysis included in this report.

Analysis

Notes were produced to summarize each interview and focus group discussion, guided by audio recordings to fill in any gaps in the notes.

Analysis was conducted using Atlas.ti software.

- Both deductive and inductive coding approaches were used.

Inter-coder reliability was ensured through discussions, group coding exercises, and quality checks conducted by the principal investigators.

To summarize the extent of integration into other health services and health system functions, the research team used a maturity scale¹, assigning values based on analysis of the data and reflecting maturity at the current stage:

- 1 **limited/no** integrated activities.
- 2 **opportunistic** integration without planning.
- 3 strategic **plans exist/beginning** deployment.
- 4 integration **implementation underway** with some gaps.
- 5 **highly integrated** and sustainable.

¹Adapted from: [WHO/UNICEF. 2023. Operational framework for demand promotion: Integration of COVID-19 vaccination into routine immunization and primary health care](#))

Research Findings

Mozambique



Research Question 1:

What have governments planned for sustaining COVID-19 vaccinations for priority populations?

Plans for sustaining COVID-19 vaccinations for priority populations

- An integration plan for COVID-19 vaccination was developed by the MoH in 2023 with the assistance of multiple partners, including WHO, Gavi, UNICEF, Government of Canada, and JSI.
 - Approval of the integration plan is pending since WHO declared COVID-19 to no longer be a public health emergency of international concern in May 2023.
 - EPI will be responsible for coordinating, implementing, and monitoring implementation once the plan is approved.
- The MoH plans to use RI services to administer COVID-19 vaccines moving forward. To do this:
 - Other primary healthcare services will refer patients to RI services for vaccination.
 - Resume training for primary health care providers on how to provide COVID-19 vaccine referrals once vaccines are available.
 - Use new vaccine registers with expanded cohorts to capture priority groups.

Research Question 2:

What is the thinking/decisions concerning the integration of COVID-19 vaccinations with:

- Other essential health services (e.g., antenatal care [ANC], non-communicable diseases [NCDs], HIV, TB, primary health care [PHC])
- Other health system and vaccination functions (e.g., service delivery, human resources, training, procurement, cold chain, supply/distribution systems, information systems, demand generation, supervision, and community engagement)?

Status of the Operational Integration of COVID-19 Vaccinations with Other Health Programs

Health program at the PHC level	Maturity scale of 1 (low)-5 (high)	Brief explanation
RI	3	Urgent phase: School-based integration of COVID-19 vaccines proved to be successful during a campaign conducted in 2022 to reach 12-17 year olds with the Pfizer vaccine. These same outreach services were used to administer the HPV vaccine to nine year old girls in school. Planned: COVID-19 vaccination will be administered by EPI technicians during fixed services for RI and mobile brigades in the post-emergency phase once the integration plan is approved and vaccines become available.
ANC	3	Urgent phase: During the emergency phase, MNCH nurses were trained to administer COVID-19 vaccinations. Planned: According to the MoH, there are no plans for the operational integration of COVID-19 vaccines with MNCH services in the post-emergency phase. However, MNCH personnel are expected to refer patients to RI for COVID-19 vaccination once the integration plan is approved and vaccines become available.
Programs for immunocompromised (e.g., HIV, TB)	3	Planned: According to the MoH, in the post-emergency phase, patients with chronic illnesses at PHC services will be referred to RI for COVID-19 vaccination once the integration plan is approved and vaccines become available.
Programs for older adults (e.g., NCDs)	3	Planned: According to the MoH, in the post-emergency phase, older adults with chronic illnesses at PHC services will be referred to RI for COVID-19 vaccination once the integration plan is approved and vaccines become available.

*Values assigned based on research team's analysis of data, reflecting maturity at current stage. Scale: **1=limited/no** integrated activities; **2=opportunistic** integration without planning; **3=strategic plans exist/beginning** deployment; **4=integration implementation underway** with some gaps; **5=highly integrated** and sustainable.

(Source: [WHO/UNICEF, 2023. Operational framework for demand promotion: Integration of COVID-19 vaccination into routine immunization and primary health care](#))

Status of the Operational Integration of COVID-19 Vaccinations with Other Health System Functions (1/2)

Health system building block	Specific functions relevant to vaccination	Maturity scale of 1 (low)-5 (high)	Brief explanation
Leadership and governance		3	<p>The MoH has relied on WHO guidelines to shape its decision-making process regarding the operational integration of COVID-19 vaccines. The steps for implementing integration efforts are outlined in the draft integration plan, but it has not yet officially been approved by the MOH.</p> <p>COVID-19 vaccines have been governed by the EPI program since the emergency phase. All coordination structures created to manage COVID-19 vaccines during the emergency phase have been dismantled.</p>
Service delivery		3	<p>According to integration plan, COVID-19 vaccination should be provided at the service delivery point with RI. However, since the integration plan has not been approved and no vaccines are available, the full operationalization of this process has not yet taken place.</p>
Health system financing		1	<p>COVID-19 vaccines have not been incorporated into the National Health Strategy, and it remains uncertain whether the government will co-finance the vaccine in the post-emergency phase, as they do with other routine vaccines.</p>
Health workforce	Training	3	<p>Development partner supported training for EPI technicians and other PHC providers has stopped due to the unavailability of COVID-19 vaccines. Development partners are optimistic that training will resume once vaccines become available.</p>
	Supervision	5	<p>Supervision teams trained by the MoH supervised vaccinations at service delivery points during vaccination campaigns. The already existing WHO supported national open data kit platform was also used for supervision for COVID-19 vaccination.</p> <p>In the post-emergency phase, COVID-19 will be part of the MoH integrated supervision mechanism.</p>

Status of the Operational Integration of COVID-19 Vaccinations with Other Health System Functions (2/2)

Health system building block	Specific functions relevant to vaccination	Maturity scale of 1 (low)-5 (high)	Brief explanation
Medical products, vaccines, and technologies	Procurement	1	There are currently no COVID-19 vaccine doses being procured through RI procurement mechanisms or funding support for future procurements. Support for additional COVID-19 vaccine doses through Gavi was made available in early 2024. However, Mozambique opted not to apply for these doses because of its short shelf life.
	Cold chain	5	Since the post-emergency phase, the COVID-19 cold chain has been integrated into RI. To respond to the large number of vaccines arriving in the country during the emergency phase, additional cold chain facilities were bought and rented by the government at the central level from the private sector. Following the end of the vaccination campaigns, these additional cold chain facilities have been repurposed for RI.
	Supply chain	5	The COVID-19 supply chain was integrated into EPI during the emergency-phase.
Information systems		3	COVID-19 vaccine data has not yet been included in routine EPI registers. Digitally, it is part of the National Health Information System, but is not programmed within SISMA where other RI data is entered, viewed, analyzed, and summarized. COVID-19 data is uploaded to SISCOVID, the platform created during the emergency phase.
Demand and community engagement	Community radios; Health communities, Community health workers	5	Starting from the emergency phase, COVID-19 communications have been integrated into other service communication strategies (RI, MNCH, mental health, HIV, and nutrition). COVID-19 messaging has also been integrated into communication dissemination platforms, including community radio, community committees, and community agents to reach priority groups. The integration plan outlines similar strategies to be used and adapted from the emergency phase once vaccines become available, however there are currently no running communication campaigns for COVID-19.

Research Question 3:

How are COVID-19 vaccinations planned to be (or already are) part of overall health strategies, immunization strategies, monitoring and evaluation, and budgeting?

Current Situation: COVID-19 Vaccination

COVID-19 vaccines are currently not being administered in Mozambique due to:

Low demand & availability of vaccines

“COVID-19 vaccine integration hasn’t started yet because there are no vaccines in-country.”

- Development partner respondent

“Integration has been challenged by epidemiologic data” ... “With a decrease in mortality rates and the declaration of the non-emergency phase, the population demand for vaccines has decreased significantly and available vaccines have expired.”

- Development partner respondent

Lack of financing

“Given that COVID-19 is no longer a priority, it remains uncertain whether the government will co-finance the vaccine.”

- MoH respondent

How are COVID-19 vaccinations planned to be (or already are) part of country strategies and planning?

Health system processes	Maturity scale of 1 (low)-5 (high)	Brief explanation
Overall health strategies	1	COVID-19 integration is not part of the National Health Strategy and is not foreseen to be included.
Immunization strategies	2	The National Immunisation Policy is planned to be developed soon. Developing partners believe this policy will change the RI target age group from 0-23 months to encompass life-course vaccination. According to them, it presents a new opportunity to discuss the prospect of incorporating COVID-19 and other life course vaccines within the framework of national health strategies.
Monitoring and evaluation	3	Monitoring and management of COVID-19 vaccination data will be done through the “SISMA COVID-19 Vaccination” module. According to the integration plan, the EPI and its partners have created a system for monitoring COVID-19 vaccination registers in order to measure coverage over time by region, provide data and reports for disease surveillance and vaccine safety, and to keep track of individuals who have been vaccinated. The platform will also be used to track booster doses.
Budgeting	1	The MoH referred to the fact that COVID-19 vaccination is no longer a priority for health donors in-country and procuring COVID-19 vaccines with domestic resources or co-financing is not feasible. There is no provision for COVID-19 vaccines with state budget funding.

Research Question 4:

How has integration with other essential services or health system functions helped or hindered equitable access to COVID-19 vaccination?



- Although little integration was done during the emergency response phase, efforts were made to address equity. These efforts were somewhat hampered by a lack of resources.
- Equity in vaccination distribution was challenging particularly to ensure equity for rural areas. Disparities between the supply of vaccines for urban and rural areas were apparent due to financial constraints.

“[There were] challenges in achieving equity in vaccination distribution, particularly in rural areas, due to a lack of funding.”

- Development partner respondent

- Mobile units were deployed to vaccinate hard-to-reach populations and disseminate information to encourage adherence to vaccination campaigns. Community radios, community agents, and traditional doctors were used to increase demand for vaccination in rural and hard-to-reach areas.

Research Question 5:

What lessons were learned from integration (or lack thereof) of COVID-19 vaccinations during the urgent pandemic response period?

Key Lessons from the Urgent Pandemic Response Phase



School-based delivery for COVID-19 vaccination for adolescents demonstrated how integration with other life-course vaccination programs such as HPV could be built upon to reach specific priority age groups in the future.



Effective communication and awareness creation about the importance of COVID-19 vaccination and where services are being offered can help **increase uptake**.



Fostering strong public-private partnerships were instrumental during the emergency phase of the pandemic and should be leveraged and maintained moving forward.



Integrating COVID-19 data with the existing National Health Information System allowed for daily reporting and monitoring, which could be helpful for planning purposes in the future.



Integrating COVID-19 communication with other health programs such as RI, nutrition, HIV, malaria, and mental health helped with demand creation and could be replicated for other similar situations.



Mobilizing community structures, radios, and mobile units was essential in **generating demand and building trust** during the emergency response period.

Key Lessons from the Urgent Pandemic Response Phase

Factors to consider for successful continuation and/or integration of COVID-19 vaccination include:

Strong community engagement and communication efforts

“The community structure, including co-management committees alongside community health agents, traditional doctors, and nurses, played a critical role in providing information and demand creation for vaccination at the community level.”

- MoH respondent from the Health Promotion Department

“Messages were disseminated to communities via community radios, community health agents, and traditional doctors. These channels proved to be instrumental in reaching remote and hard-to-reach populations.”

- MoH respondent from the Health Promotion Department

“We worked with influential leaders in the communities to promote vaccination and get communities to adhere to vaccination. These leaders advocated for the population to adhere to our messages.”

- MoH respondent

Established and functioning vaccine supply chain and cold chain infrastructure

“The success story of COVID-19 vaccination in Mozambique was attributed to using the existing routine immunization program logistics system for vaccine distribution. The country's well-structured cold chain played a vital role in this process.”

- MoH respondent

Conclusions

- An integration plan for COVID-19 was developed in 2023 with the help of various partners who support the RI program, and is currently awaiting approval from the MoH.
- The plan involves integrating COVID-19 vaccination with RI services using fixed units and mobile clinics. The integration plan aligns with WHO recommendations; priority groups in Mozambique are adults aged 60 and above, and those with comorbidities. Special consideration will also be given to other priority groups, such as pregnant adolescents and adults, people with comorbidities, immunocompromised individuals, and health workers.
- The administration and delivery of COVID-19 vaccines will be handled by the RI system. Other programs such as HIV/AIDS, MNCH, nutrition, and other programs are expected to continue their role in screening vaccination status and referring eligible clients to RI for vaccination depending on the patient volume of the facility.
- Training PHC providers on COVID-19 vaccination in the context of integration has been halted due to the lack of vaccine stock in-country.
- There are concerns from stakeholders regarding the ability to implement the integration plan due to a lack of funding, as COVID-19 is no longer considered a priority program in the country.

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