Working with caregivers, communities and health system actors to identify barriers and explore local solutions to reach zero-dose and under-vaccinated children in Mozambique

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MOMENTUM Routine Immunization Transformation and Equity / JSI

Theme A: Integrated Behavioral Science and Local Knowledge

BACKGROUND

Situation in Mozambique:

- Largest decline of routine immunization in 30 years, Penta 3 coverage dropped by 31% from 2019 to 2021 (WUENIC)
- Close to one out of every four children are unvaccinated in 2021 (22% or 305,831 children)
- Provinces of Nampula and Zambézia are most affected

MOMENTUM Routine Immunization Transformation and Equity:

The USAID-funded MOMENTUM Routine Immunization Transformation and Equity project aims to improve equity for immunization by overcoming key obstacles to accessing and using vaccination services, particularly among underserved, marginalized, and vulnerable populations.

In Mozambique, the project works with partners in Nampula and Zambézia to strengthen the routine immunization system and design solutions to reach zero-dose and under-immunized children with life saving vaccines. To do this, the project supports replicable planning models that take into account the needs of families to access health services and mobilize resources outside of health. The project also supports the introduction of COVID-19 vaccines.

Human-Centered Design (HCD):

HCD is a collaborative problem-solving approach that uses creative methods to understand human behaviors and develop new ideas and solutions directly with people most affected. the project uses HCD to identify:

- Household, community, and health services-level **root causes** of non-vaccination and vaccination drop-out in the selected districts.
- **Barriers** to vaccination (at health facilities or in communities) for families of children 0–23 months.
- Stakeholder **priorities, motivations, and opportunities** to reduce the number of zero-dose and under-immunized children.
- **Strategies** adopted by health systems actors to mitigate the effects of COVID-19 on vaccination uptake.

METHODS

Data Collection and Workshop Process

In-depth interviews, quantitative surveys, mapping

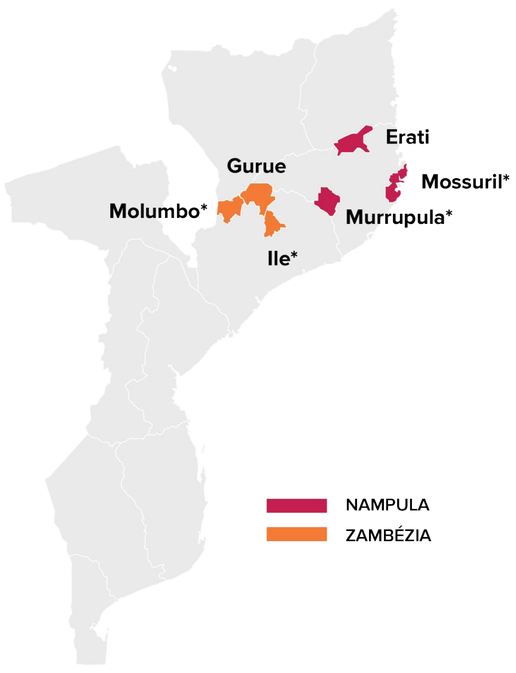
- **Provincial level** in-depth interviews
- **District level** in-depth interviews
- **Heath facility** in-depth interviews
- Community mapping + in-depth interviews with **leaders, mothers of zero-dose/under-immunized infants**

Creation of **personas to build empathy**

4 District co-creation workshops with district, health facility, and community stakeholders.

2 Provincial co-creation workshops with provincial, district, and civil society stakeholders.

Study Sites



Study Participants

Health System Actors (N=27)	Community Actors (N=45)
• National (EPI) • Provincial EPI • District health managers • District EPI • Facility managers • Facility HCWs • EPI technician • CHWs	• Community focal points • Community leaders • Caregivers • Mothers


Ile District co-creation workshop

KEY FINDINGS

Interviews revealed that mothers wanted to get their children vaccinated, but faced challenges outside of their direct control.

Main Barriers

Mothers of zero- dose and under-immunized children

Scheduled vaccination outreach in communities are cancelled without notice : Data from six health facilities indicated that less than half of planned mobile brigade sessions were conducted.

Fear of side effects from receiving multiple vaccines: Mothers feared side effects of vaccines, especially when several vaccines were given at the same time. Some made their own schedule to minimize the pain from multiple vaccines.

Knowledge and misinformation about vaccines: Mothers were generally aware that vaccines help keep children healthy, but many thought vaccines both prevent and cure common diseases, mentioning diarrhea, measles and malaria in particular.

Having to care for other children and other domestic chores: Mothers and families prioritized domestic responsibilities over vaccinating children. They struggled to find the needed support to free up time from domestic duties to take their children to be vaccinated. This was tied to their culturally prescribed role as homebound caretakers and housewives.

Negative experiences at the health facility and perceived requirements to use health services: Some caregivers had negative experiences that made them reluctant to return to health facilities. Mothers who gave birth at home thought they could not access child health services without a vaccination card.

Community leaders & CHWs

Leaders lack knowledge about vaccines: Leaders had positive appreciation for vaccines, but little knowledge about the vaccination calendar, vaccines offered and their purpose, or how the national program works. This limited their ability to communicate effectively with community members.

Political affiliations cause tension between leaders: Community, especially traditional, leaders disclosed that tensions with other leaders due to their different political ideologies sometimes affected information sharing within the community, and could prevent certain segments from receiving information on vaccination outreach.

Low trust in community health workers: In some communities, communities did not trust community health workers, either because they were unable to reach all households or because they could not solve the household's health issues (due to lack of medications in their kits).

Referral mechanisms for children born at home: Many leaders were not familiar with the procedure for referring babies who were born outside the health facility.

Community meetings postponed due to COVID-19: With the COVID-19 pandemic, leaders changed their mobilization strategy from community meetings to door-to-door visits. This was perceived to be both demanding and inefficient for reaching large segments of the population in a short period of time.

Health care providers

Decrease in care-seeking behaviors during COVID-19: Participants at all levels (provincial, district, health facility, and community) discussed how COVID-19 raised new challenges to health service delivery, at various levels: rumors about COVID-19 reduced care-seeking and vaccination coverage; it also halted quarterly trainings indefinitely.

High turnover in health leadership: Due to high turnover of health staff, many EPI managers and health providers were new to the system or a facility, and few received training on the processes and tools required to lead, manage and monitor effectively. As a result, the lack of clarity in some facilities about quantifying and forecasting needed vaccine stock, contributed to stockouts.

Insufficient collaboration: Provincial respondents reported that, despite efforts to discuss challenges and find solutions with colleagues from various levels, for instance through the creation of Whatsapp groups, health facility counterparts and implementation partners did not participate.

Insufficient human resources: Most facilities surveyed had one or two health staff, and occasionally no immunization-specific staff, which resulted in high workloads among the few existing personnel (particularly nurses). Health care providers also evoked the disruption caused by community health workers who abandoned the program due to lack of incentive.

Vaccine stockouts: Participants reported stockouts of vaccine and consumables as an important challenge in both provinces.

Conceived by	Solutions Being Implemented
Community actors	**Strengthen capacity of community structure:** Provide CHWs with knowledge, supplies, and skills
	Transport: Call on community resources for mothers' transport to facility for health visits, including vaccination
	Families support mothers: Involve male family members (fathers, uncles, grandfathers) to provide means for transportation; Involve female family members (grandmothers, neighbors, aunts) to help with domestic responsibilities while mother is at the health facility
Both groups	**Organize vaccination outreach**: There is a need for vaccination outreach to be scheduled, integrated, stationed according to vaccination needs
	Strengthen health system-community relations: Expand the involvement of community leaders, for example in information sharing, outreach, advocacy, identification of home births.
	Improve mothers' health care experience: Through vaccine availability and supportive treatment from EPI technicians, HCWs should motivate mothers with positive messages
Health system actors	**Transport**: Ensure community transportation to vaccination sites
	Staffing: Ensure technical human resource needs are met for vaccination
	Strengthen health system-community relations: Strengthen health committees activities and depoliticize vaccination in communities (political party affiliation should not defer access to services)
	Planning: Joint planning activities need to include district health services and partners
	Best practices for reaching unvaccinated children: Reduce missed vaccine opportunities at facility, e.g.: checking vaccination cards at every appointment and involving community leaders and members to identify mothers of zero-dose and under-immunized children
	Mobilizing EPI activities: Identify and involve technicians in community and community health workers for EPI mobilization efforts

CONCLUSIONS

Working with immunization program staff, the project used the findings to plan and prioritize interventions to remove barriers in priority districts. The project's HCD model can be replicated to design effective interventions that center on affected people, improve support to caregivers and health workers, and strengthen the immunization system.

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