RESULTS BRIEF

INTEGRATE HPV – Mozambique

Implementation research on community-generated, integrated solutions to increase HPV vaccination coverage in Mozambique

JUNE 2026

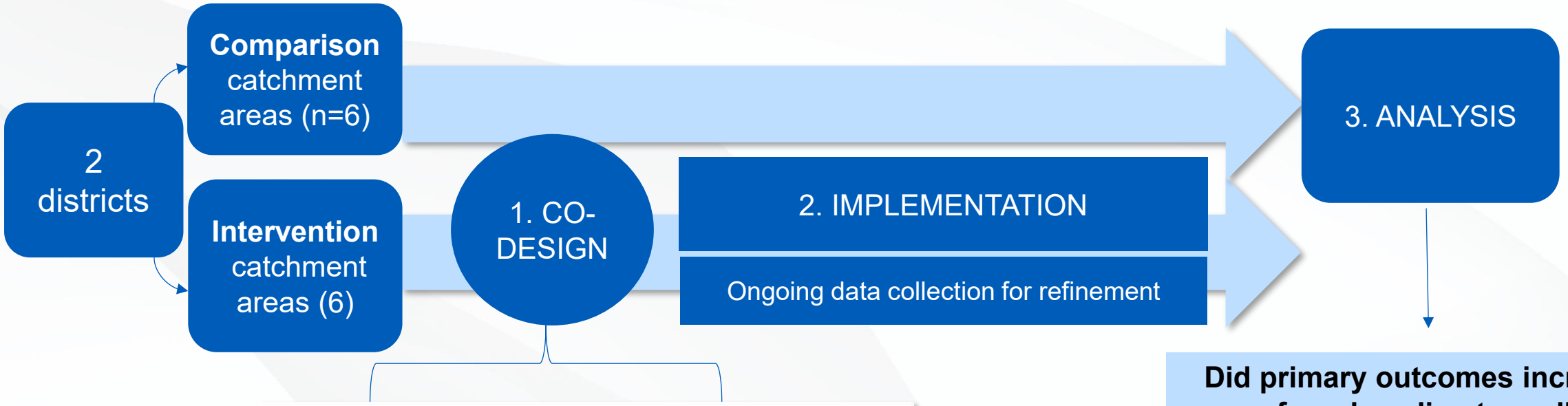
Gavi The Vaccine Alliance

Gates Foundation

SCOPE IMPACT

VILLAGE REACH

Project Overview





Cahora Bassa and Tsangano in Tete province

Community-led Design Methods

Adolescents (9 to 14 years old), caregivers, health workers, provincial and district health authorities, teachers, and community and religious leaders co-developed integrated delivery solutions to increase HPV vaccination uptake through participating in a series of human centered design (HCD) workshops.



Understanding needs



Ideation and prototyping



Solution prioritization

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Did primary outcomes increase more from baseline to endline in intervention sites relative to comparison sites?

- # of girls who receive the HPV vaccine
- # adolescents who receive integrated care alongside their HPV vaccination

Project Intervention

1. *Integrate HPV vaccination* with existing adolescent health service delivery points

Platform	Adolescent Youth Friendly Services (AYFS)		
Description	Consistent, strengthened integration of HPV vaccination into standard AYFS outreach and facility service package		
Point of Service	**1. School**	**2. Facility**	**3. Community**
Pre-Intervention Delivery	AYFS and HPV were included within the School Health Program, however, integration remained weak, with limited joint planning and coordination between teachers and health workers.	HPV vaccination delivered through EPI services, while AYFS operated separately. MCH nurses working in AYFS did not routinely provide vaccination.	Nurses and EPI technicians participated in outreach, but HPV vaccination was not systematically integrated.
Intervention	• Train EPI staff and MCH nurse on planning and criteria for prioritizing schools for vaccination sessions. • Train teachers on the importance of joint planning and prioritization of school vaccination sessions. • Adapt and implement planning tools (Eligible girls lists, prioritization matrix, and content planning) for teachers and health professionals.	• Develop integrated care protocols for adolescent girls in the health facility. • Train maternal and child health (MCH) nurses on communication, administration, and documentation of the HPV vaccine and EPI technicians to support vaccine management. • Train MCH nurses and EPI technicians on referral procedures within the HF.	• Promote the “one space, many services” approach during health fairs, health days and outreach activities

Project Intervention

2. *Improve surrounding ecosystem* to encourage uptake

Community	Schools
Community talks and household visits to increase awareness of HPV vaccines among adolescent girls and their caregivers	**Host school talks** to raise awareness of HPV vaccines among adolescent girls and educators
Establish referral pathways in which model mothers can refer girls to the health facility	**Establish referral pathways** in which educators can refer eligible girls to the health facility
Radio programming featuring model mothers, teachers, girls, community leaders, and CHWs on the importance of HPV vaccination and AYFS	



School health talk
A schoolteacher delivers an HPV vaccination awareness session to students at a school in Tsangano District



Radio dialogue
Girls, caregivers, model mothers, teachers, and health workers gather to discuss HPV vaccination live on-air in Cahora Bassa

1. Effects of integrated approach on uptake of HPV vaccination

Intervention sites had larger overall increase in HPV vaccination

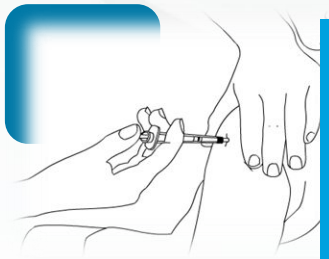
	Delivery point	Baseline	Endline	Pre-post change
Intervention	**Facility**	598	621	+3.8%
	Outreach	213	303	+42.3%
	School	105	1,046	+896.2%
Comparison	**Facility**	545	622	+14.1%
	Outreach	54	310	+474.1%
	School	133	447	+236.1%

School-based **vaccinations largely drove this positive, non-significant trend** (p=0.114)

Ancova Difference-in-Difference with total vaccination counts

	IRR	Percent change in rate	p-value
Facility	1.245	+24.5%	0.643
Mobile Brigade	1.249	+24.9%	0.686
School	2.139	+113.9%	0.114
TOTAL	1.2	+20%	0.607

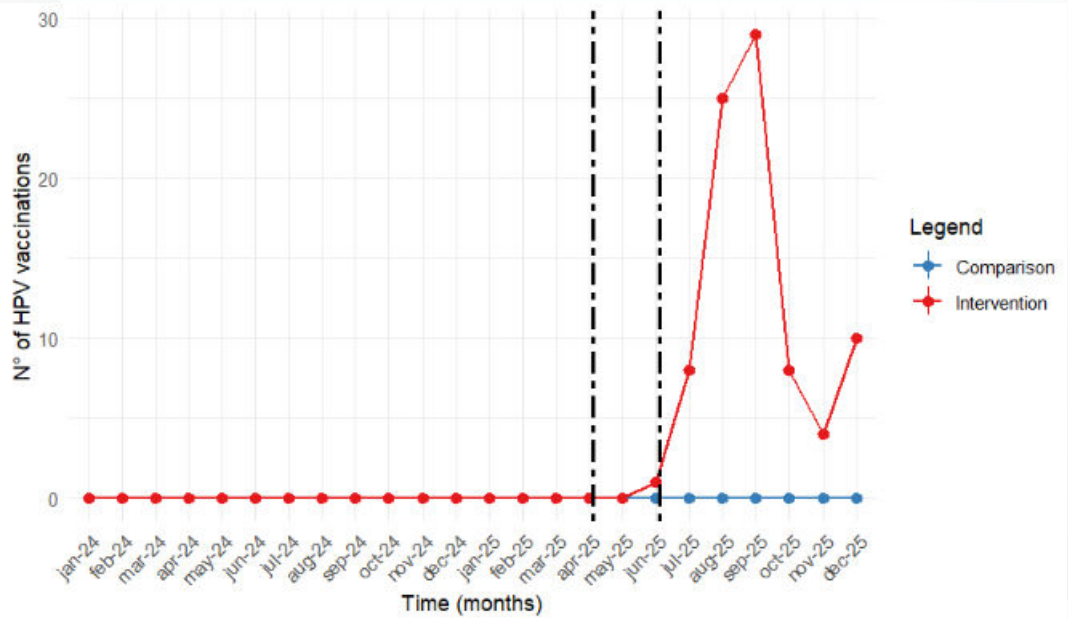
1. Effects of integrated approach on uptake of HPV vaccination



Facility-based vaccinations delivered by AYFS nurses went from 0 at baseline to 85 at endline

Intervention and comparison sites started with 0 HPV vaccinations within AYFS. At endline comparison sites stayed at 0 while intervention sites recorded 85 vaccinations delivered through the AYFS platform

Visualisation of trends of the total HPV vaccinations delivered directly through the AYFS platform per study arm

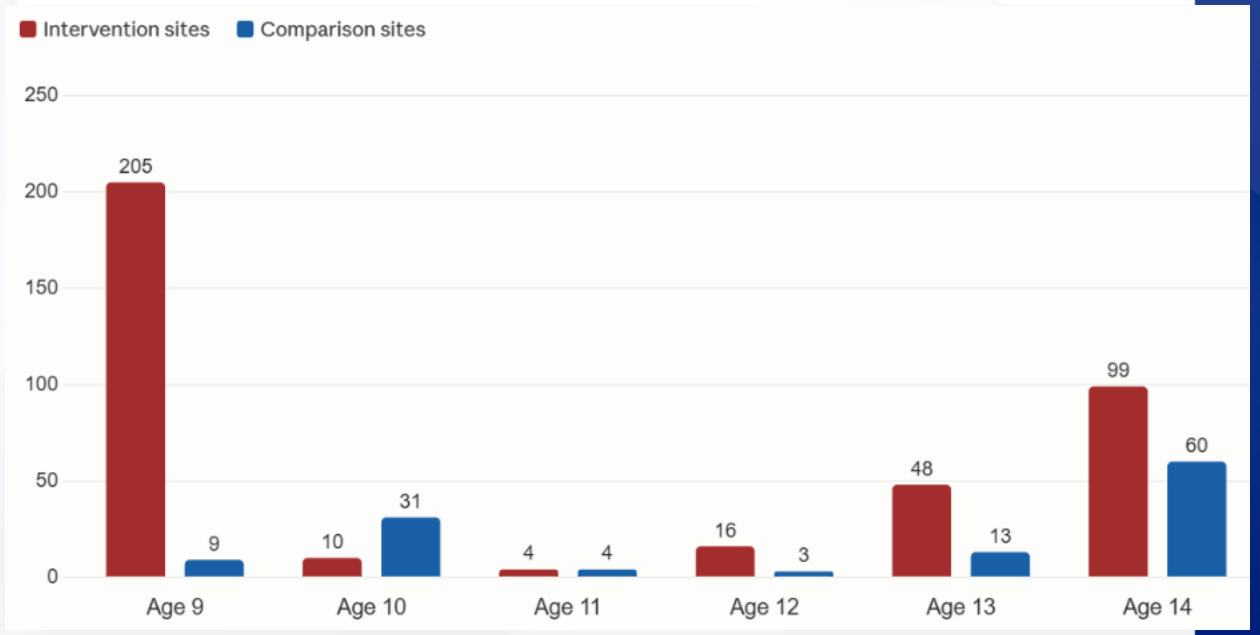


2. Effects of integrated approach on uptake of other health services

Intervention sites had a significant increase in overall adolescent service utilization
relative to comparison sites

- Intervention: ***Increased*** from baseline to endline (+595.2%)
- Comparison: ***Decreased*** from baseline to endline (-57.4%)
- DiD revealed a 643% rise in intervention relative to comparison sites (p<0.001)

Age distribution for AYFS users in intervention and comparison sites over the endline period



"We receive many adolescent girls coming from the school seeking our [AYFS] services"
– Health care worker, Cahora Bassa

3. Effects of integrated approach on secondary outcomes (e.g., knowledge, attitudes, practices)

Intervention sites demonstrated ***significantly higher HPV knowledge*** among both health workers and educators relative to comparison sites

Health workers: Higher knowledge (+0.94 mean difference, p=0.048)

Educators: Higher knowledge (+2.5, p=0.0017)



Key informant interview with a nurse at an AYFS service point, Cahora Bassa District

4. Acceptability of implementing integrated approach

The integrated approach was widely accepted by stakeholders, who perceived it as improving convenience, service completeness, and efficiency.

Caregivers and Adolescents

- ✓ Easier access & service availability
- ✓ Reduced travel, in-direct costs, and waiting time
- ✓ Improved convenience through co-delivery of services (e.g., vaccination, family planning, nutrition support)
- ✓ Integrated outreach perceived as practical and accessible

Health Workers

- ✓ Useful, acceptable, & operationally advantageous
- ✓ Increased demand & reduced waiting times
- ✓ More productive adolescent visits
- ✓ A one-stop model that reduces missed opportunities and led to service completion

"There is no disadvantage, only advantages, because with integration the adolescent goes directly to [AYFS] and there all the services needed are offered, which reduces waiting time." -Health Worker

5. Feasibility of implementing integrated approach

Integrated model is operationally feasible within existing service platforms, though sustained implementation requires strengthened supply systems

Operational perspectives on feasibility

- Integration of HPV vaccination within school outreach, mobile brigades, and AYFS was implemented successfully
- Health workers reported that integration fits within existing service delivery routines
- Community response suggests the model can function effectively in rural settings
- Sustained implementation requires sufficient vaccine and recording cards to meet high demand

"From our district experience, integration was positive and feasible. While challenges and constraints exist, they can be overcome. The experience shows it is possible to integrate and scale the approach to improve results." **District Coordinator, KII**

6. Implementation cost

- **Methodology**: Ingredients costing to arrive at total program costs
  - Costs collected through surveys with health workers, educators, program team
  - Both comparison and intervention sites
- **Results**: Incremental cost per additional vaccination was **$206.43**
  - Reflects the short implementation period and the high proportion of one-off costs (64% of total)
  - Total costs were **$228,414**, comprising HCD costs of $96,998 and delivery costs of $131,416
  - Incremental costs would be expected to fall substantially with longer implementation

Costs per vaccination:

- **$66.71/vaccination (excluding HCD design costs)**
- **$77.46/vaccination (including HCD design costs)**

7. Preliminary considerations for scale up and lessons learned

Sustained engagement across all system levels is key	Early and continuous engagement across national, provincial, district, and health facility levels, aligned with national directives, secured strong institutional buy-in and facilitated effective project implementation
Enhanced multisectoral coordination and community linkages is critical for service delivery	Strengthened coordination between the health and education sectors has proven instrumental in improving vaccine quantification, aligning service delivery with school and community platforms, expanding coverage among eligible girls, and reducing missed opportunities for vaccination.
Strengthened microplanning, resource optimization, and reduction of missed opportunities is crucial	Successful scale-up will require addressing critical system level considerations, including the functional organization of health facilities to systematically capture all vaccination opportunities, integrated microplanning across programs or services, and the strategic alignment and pooling of funding streams



Training of Trainers for provincial coordinators, led in partnership with the Head of the Public Health Department

Key Challenges

Key Challenges	Mitigation Strategies
Timing of the HPV MAC campaign: Conducted in late September, resulting in reduced target group afterward as many eligible girls had already been vaccinated	Align research activities with national campaign calendars through early engagement with national and provincial EPI authorities & ensured data systems could distinguish MAC vs. Non-MAC
Competing campaign schedules: Overlaps with nationwide campaigns (e.g., polio) and provincial initiatives affected coordination and reach	Strengthen joint planning and coordination with Ministry and provincial authorities to harmonize schedules and minimize overlap
Short implementation period: Limited timeframe (June–December) constrained full rollout and follow-up	Prioritize early stakeholder engagement and phased implementation to maximize efficiency within the available timeline
Data systems limitations: Difficulties introducing or modifying facility registers; adapted tools still did not allow for effective monitoring of integrated service flow	Work with facility and district teams to adapt existing registers pragmatically and explore incremental improvements to better capture referral and service integration data