RESULTS BRIEF

INTEGRATE HPV – Malawi

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

June 2026

Gavi The Vaccine Alliance

Gates Foundation

VILLAGEREACH

UNITY AND FREEDOM

SCOPE IMPACT

Project Overview

2 districts

Comparison catchment areas (n=6)

Intervention catchment areas (6)

1. CO-DESIGN

2. IMPLEMENTATION

Ongoing data collection for refinement

3. ANALYSIS



Mchinji (central) and Machinga(southern)

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?

- # and % of eligible 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

Service delivery point	School Health & Nutrition Days (Schools)	HIV Prevention / ART Teen Clubs (Facility)	YFHS (Facility & Community)	Routine Immunization (Facility & Community)
Pre-Intervention Delivery	HPV vaccination through ad hoc school campaigns (1–2x/year)	ART teen clubs provided HIV services to HIV+ teens aged 10-19	HPV vaccination included in YFHS guidelines but inconsistently implemented	HPV vaccination available at EPI clinics and outreach, but ad hoc and not proactively offered
	School health activities not linked to HPV vaccination	HPV vaccination not integrated into services	Services included SRH, HIV, FP, counseling	Primarily focused on <5 immunization
	Limited coordination between teachers and health workers		HPV vaccination offered irregularly across facilities	Limited integration with adolescent services
Intervention Delivery	**Joint planning** between teachers and health workers led to structured school vaccination schedules	**Training ART health providers** on HPV vaccination and service integration	**Training YFHS focal persons on HPV and service integration** (routine screening, education, and vaccination during facility and outreach)	**Trained HSAs** on HPV vaccine, storage and administration; outreach services integration, ensuring HSAs are ready to provide on demand HPV vaccinations at facilities and outreach clinics
	Trained SHN teachers and health workers on HPV vaccine messaging and adolescent-friendly services, and teachers' roles in supporting vaccination sessions	**Supportive supervision** provided	**Supportive supervision** services to ensure HPV is consistently offered	
	Data collection tools provided	**Data collection tools** provided		Supported **vaccine transport logistics**

Project Intervention

2. *Improve surrounding ecosystem* to encourage uptake

1. Communications resources	2. Coordination between HCWs and teachers	3. HCW capacity to offer adolescent-friendly services	4. Involve boys/men in information sharing
Create/promote resources/platforms to help adolescents, caregivers, community leaders, HCWs discuss HPV vaccination	Facilitate regular joint meetings to improve planning, messaging consistency, and referral systems	Conduct (refresher) trainings for HCWs focused on adolescent-friendly service delivery and provide supportive supervision	Orient youth network leaders as male champions to advocate for HPV vaccines uptake



Youth-led awareness session during YFHS at Mchinji
A youth club leader uses role play to deliver HPV vaccine awareness message during a YFHS session



Training session in Machinga district
A district coordinator conducts HPV training for HCWs, teacher and community leaders in Machinga



Joint planning session
A SHN teacher leads the group in developing a joint vaccine schedule for schools

1. Effects of integrated approach on uptake of HPV vaccination

HPV vaccination uptake increases across all service delivery points in intervention sites, while decreasing across all delivery points in comparison sites

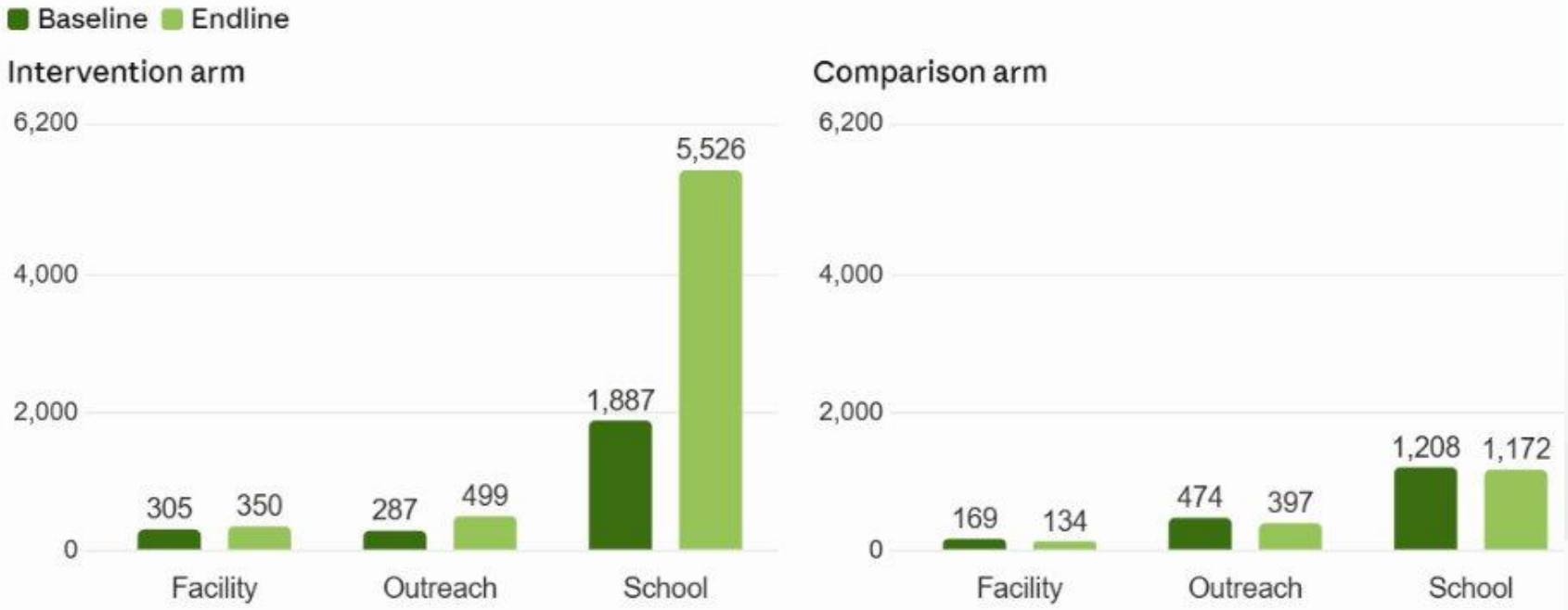
Total HPV vaccinations by delivery point and study arm, baseline versus endline. Malawi, June–December 2024 and June–December 2025

	Delivery point	Baseline	Endline	Pre-post change
Intervention	**Facility**	305	350	+14.8 %
	Outreach	287	499	+73.9 %
	School	1887	5526	+192.8 %
Comparison	**Facility**	169	134	-20.7 %
	Outreach	474	397	-16.2 %
	School	1208	1172	-3.0 %

1. Effects of integrated approach on uptake of HPV vaccination

Visualization of the positive, significant effect in intervention relative to comparison sites

Total HPV vaccinations by delivery point and study arm, baseline versus endline. Malawi, June–December 2024 and June–December 2025

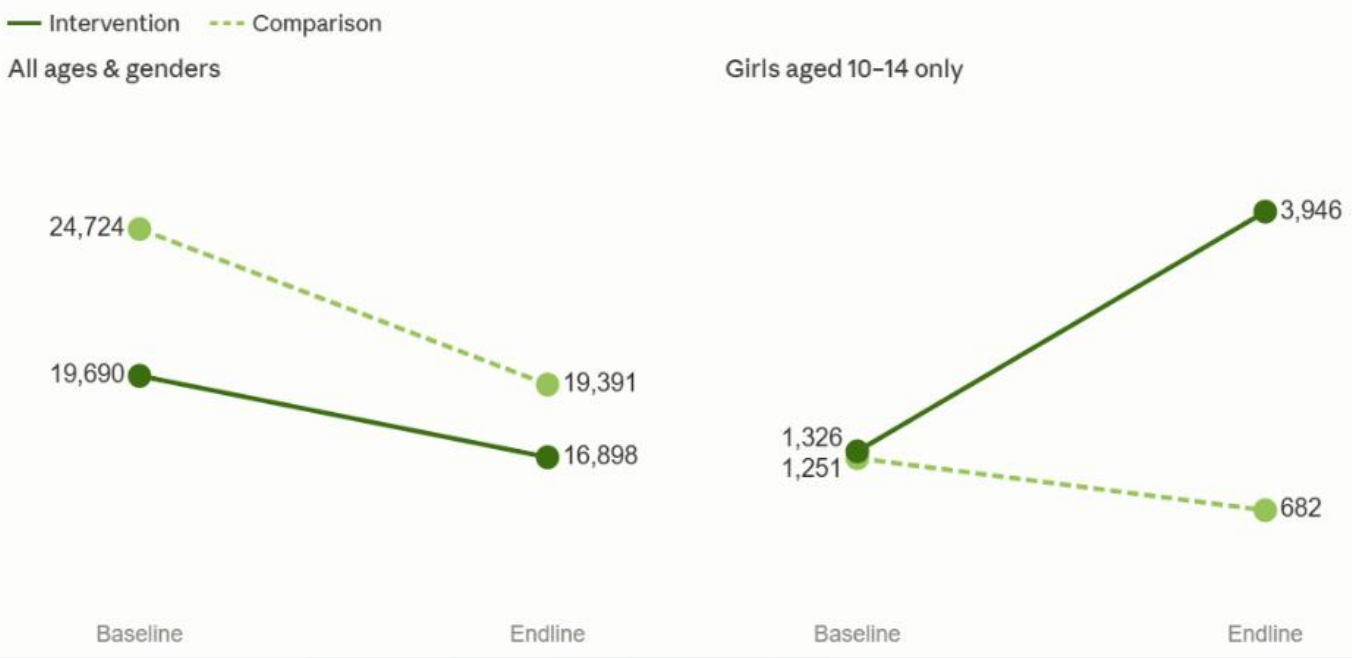


- **Significant increase in total HPV vaccinations** in intervention relative to comparison areas (DiD with IRR 3.689, p=0.035)
- Mainly attributable to increase in **school-based vaccinations** (DiD IRR 5.036, p=0.046)

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

- Number of total **YFHS users decreased in both intervention and comparison sites** (went down by 14.2% and 21.6%, respectively, from baseline)
  - DiD analysis yielded a positive estimate, corresponding to a 24.6% smaller decrease in intervention areas, but not reaching statistical significance (p = 0.129).
- However, for **girls aged 10 to 14, use increased in intervention sites** and **decreased** in comparison sites
  - DiD estimate was 342.1% corresponding to a significant increase (p = 0.002). Likely due to demand generation component of the solution package and integrated delivery at schools

Pre-post change in YFHS users by study arm: all ages (left) versus girls aged 10–14 (right). Malawi, 2024–2025



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

- **Health workers' knowledge was slightly higher** in intervention areas (0.17 mean difference between intervention and comparison on a 1-8 scale, not statistically significant; n=188)
- **Educators' knowledge was statistically significantly higher** in intervention areas (0.66 mean difference on a 1-11 scale, statistically significant at p=0.018; n=146)



Health worker interview at Mposa, Machinga
A health care worker responds to a KAP survey at Mposa, Machinga

4. Acceptability of implementing integrated approach

- Strong consensus that **integration is acceptable and desirable**, but for caregivers this is **conditional on excluding or carefully managing SRH components** for younger girls
- **School-based delivery preferred** by most stakeholders

> "I wouldn't have had time to return to the health facility to receive the vaccine, so it was a good thing that they also gave us the vaccine which helped me have time to go and do chores at home."
> - Adolescent from Machinga

	Insights by Stakeholder Group
Health Workers	Mixed opinions around integration; many appreciated links to efficiency, while others noted an increased workload
Caregivers	Generally found it acceptable and mentioned reduced transport burden and improved convenience. Others worried about integration overwhelming children with information/services, or about exposing them to SRH content
Educators	Preferred HPV vaccination integrated with health days to minimize academic disruption
Adolescents	Expressed general support for the idea of integrated services; some specifically cited an appreciation for the convenience and time savings of integrated services

5. Feasibility of implementing integrated approach

- **Integration is widely viewed as feasible**, particularly in schools, YFHS, and integrated outreach settings that target various age groups (e.g., village clinics)
- **However, feasibility depends on proper coordination, transport, staffing, and training**

Critical enablers to successful integration

- ✓ Strong cross-departmental coordination at facilities, and between health and education sectors
- ✓ Adequate transport and cold chain supplies
- ✓ Proper scheduling to avoid academic disruption
- ✓ Community awareness as prerequisite; low awareness about integration among community members limits service demand
- ✓ Human resource constraints at some sites; shortage of trained staff, workload, and time burden were major feasibility challenges shared by a few of the sites

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 **$4.75**
  - Total costs were **$73,318 from the health systems perspective**, comprising HCD costs of $48,302 and delivery costs of $25,016
  - Incremental costs would be expected to fall substantially with longer implementation

Cost per vaccination:

- **$3.92/vaccination (excluding HCD design costs)**
- **$6.00/vaccination (including HCD design costs annualized over 5 years)**

7. Preliminary considerations for scale up and lessons learned

Scale-up is strongly supported, but success depends on training, coordination, reliable supply chains, and strong community engagement, with clear system-level integration beyond campaigns

Category	Recommendation
Knowledge and training gaps	Organize refresher training for HCWs, educators, and community leaders on HPV vaccine in general as well as on the integrated approach
Community sensitization	Conduct early and intensive IEC to address misconceptions and rumors and bring awareness to availability of integrated services
Coordination and systems integration	Improve coordination between different departments within the facility and district management team e.g. EPI, ART, YFHS, and between education and health sectors to avoid undermining integration
Supply chain reliability	Ensure consistent HPV vaccine availability to create opportunities for integration and reduce reliance on campaigns
Standardized reference materials	Establish HPV guidelines and accompanying modules for health care workers to ensure consistent messaging on integration
Human resource and incentives	Implement ways to motivate health care workers to adopt integrated service models
Equity considerations	Provide transportation and establish additional outreach sites to reach out-of-school adolescents

Key Challenges

1

Health worker knowledge

Limited understanding of dosing, eligibility, and other important aspects of HPV vaccine delivery impedes effective delivery

2

Routinization gap in practice

HPV vaccination is routine in policy, but many HCWs focus on messaging rather than consistent vaccine delivery, limiting true integration

3

Logistical constraints

National stockouts and transport delays disrupt routine delivery and signal weak routinization to staff, caregivers, and adolescents

4

Data systems constraints

Lack of integrated data systems limit monitoring progress on integration and real-time refinement of the delivery model