

Identifying strategies to reach out-of-school girls and those in hard-to-reach areas for HPV vaccination in Malawi



Key takeaways from multistakeholder consultation workshops

Background

Malawi introduced the human papillomavirus (HPV) vaccine into its national immunization program in January 2019 to help lower the risk of HPV-associated cancers. The program gave nine-year-old girls access to this crucial immunization. In 2025, an estimated 91 percent of the eligible girls received the HPV vaccine¹. However, as most HPV vaccine delivery in Malawi takes place in school-based settings, out-of-school (OOS) girls or those who reside in hard-to-reach (HTR) areas are less likely to be vaccinated.

PATH partnered with Malawi's Ministry of Health (MOH) Essential Programme on Immunization (EPI) team to conduct three multistakeholder consultation workshops in different regions to examine current strategies and propose innovative solutions for identifying and enumerating OOS/HTR girls eligible for HPV vaccination. Each two-day workshop brought together participants from across a variety of sectors, including government, health, education, faith-based, and civil society organizations.



Participants engaged in discussion during a workshop in Malawi. Photo: PATH.

Malawi workshops:

- South region in Blantyre: March 10–11, 2025
- North region in Mzuzu: March 13–14, 2025
- National level in Mponela: March 24–25, 2025

Characterizing OOS and HTR girls and barriers to identification and enumeration

Identification and enumeration challenges occur among vaccine-eligible girls who:

- Live in remote or rural areas.
- Work in informal businesses.
- Live in a household with limited or no literacy.
- Left school or does not attend school regularly.
- Commonly migrate.

Stakeholders discussed improving access by having health workers go door-to-door and identify these girls using a community health register or a mapping tool. However, this approach is labor-intensive, and lack of close oversight can lead to faulty data.

They also considered strategies such as conducting desk analyses using geographic information system data, National Statistical Office census projections, and National Registration Bureau data. However, many stakeholders felt that these estimates could not be relied upon for accurate data about OOS girls or those who lived in HTR locations. Another complicating factor is that there is often difficulty in verifying the ages of eligible girls due to the high rate of stunting in Malawi, leading them to look younger than they are. Another challenge is the lack of birth certificates among many girls in these populations.

Existing resources

Stakeholders identified human capital as the main resource required for reaching OOS/HTR vaccine-eligible girls. Extension workers and health workers are mainly needed to conduct these efforts. Teachers, agriculture extension workers, community development officers, environmental health officers, village development committee members, and religious leaders can also contribute at the community level.

In addition, technical systems, such as the integrated Community Health Information System (iCHIS), community or village health registers, or mapping registers, could be used to identify the number of vaccine-eligible OOS/HTR girls. However, none of these systems are currently set up to capture this type of information. They would need to be revised to include specific elements for tracking OOS/HTR girls. Even if these revisions were made, health workers would need increased access to the devices/tablets on which the tools are run, as well as the required software and appropriate training, to successfully use the tools to identify OOS/HTR girls. This would require additional financial resources.

Existing sources of information include geographic information system data; census records; National Registration Bureau data; community health registers; National Statistical Office estimates; the iCHIS; other survey data; and information from peers, parents, and other community members. All these sources have gaps and cannot independently isolate data on OOS/HTR girls. For example, the iCHIS does not include any aspects specific to this population, and the NRB system currently only captures data about newborns and not older children.

Enumeration strategies

Across the workshops, stakeholders recommended solutions that could optimize available resources by creating a system where HPV vaccine-eligible OOS/HTR girls are reflected in routine procedures. These measures would involve:

- Ensuring existing data reporting systems include fields for designating individuals as “out of school” and/or living in a HTR area to establish appropriate outreach mechanisms. This would make door-to-door visits to register these girls a more efficient and effective use of the human resources required for conducting and supervising the work.
- Updating reporting systems and using existing mapping tools.
- Holding community meetings and gathering information about vaccine-eligible OOS/HTR girls from attendees.

- Conducting household surveys or using school registers to trace girls who have discontinued their education.
- Coordinating with youth clubs or other community health structures, such as village development committees or mother care groups, to identify vaccine-eligible OOS/HTR girls.
- Using census or National Statistical Office projections to identify vaccine-eligible OOS/HTR girls, if the technology is easy to implement and workers are well-trained.

Some of these potential solutions, such as using existing local structures and holding community meetings, were noted as highly feasible because they are inexpensive to implement and locally designed (see Table 1).

Workshop participants further discussed the viability of various approaches to improve vaccine access.

Table 1. Innovative or practical solutions.

Recommendations	Feasibility	Cost	Advantages	Ranking (based on cost and feasibility)
Update data reporting systems	Highest; utilizes existing trained staff and mapping tools	Low; builds on existing infrastructure	Enables efficient door-to-door visits; ensures status such as “out of school” as a permanent field in routine health data	1
Leverage local structures	High; uses established community health frameworks	Inexpensive; locally designed and managed	Promotes strong community buy-in; utilizes groups that already have local trust and knowledge	2
Organize community meetings	High; simple to organize at the village level	Inexpensive; requires minimal logistical overhead	Gathers direct information from residents; promotes local awareness of HPV vaccination	3
Use household surveys and school register tracing	Moderate; requires active field tracking and coordination with schools	Moderate; requires more dedicated labor hours for tracing	Provides precise data on girls who recently left the formal school system	4
Leverage census and National Statistical Office projections	Moderate; dependent on technology ease of use and staff training levels	Variable; depends on digital tool access	Provides high-level population estimates to verify if the local system is missing large cohorts	5

Additional strategies discussed included:

- **Register-based mapping.** Using community health register and National Registration Bureau data.
- **Local leadership.** Engaging village heads to conduct local censuses or household surveys.
- **Integrated systems.** Transitioning to an iCHIS and electronic immunization registries.
- **Community groups.** Utilizing village health committees and mother care groups for local identification.

Developing an action plan

The stakeholders identified components that could culminate into an action plan, including key activities, resources needed, responsible stakeholders, and monitoring plans. The most frequently cited activities were:

- Revising or creating enumeration mapping tools that include an element for identifying OOS/HTR girls for use with door-to-door visits by health workers and volunteers.
- Training health workers and volunteers in mapping vaccine-eligible OOS/HTR girls, potentially using the new tools.
- Conducting intensified, supportive supervision of workers/volunteers during mapping.

Since revising existing mapping tools would involve engaging other ministers and high-level policymakers beyond the MOH and would entail financial outlays, this may not be an immediately implementable solution.

Conclusion and next steps

The workshops successfully brought together stakeholders from a range of sectors who noted that this was one of the first formal discussions about OOS/HTR girls in Malawi who may have been missed by previous vaccine outreach. Stakeholders recorded the need for an effective system to identify and enumerate OOS/HTR girls in Malawi. The recommended solutions will help guide the MOH and the EPI as they plan for HPV vaccination campaigns and routine HPV vaccination.

Reference

1. WHO Africa. From Mountains to Islands: Malawi's Historic HPV Vaccination Campaign. 18 December 2025. Accessed: April 30, 2026. <https://www.afro.who.int/photo-story/mountains-islands-malawis-historic-hpv-vaccination-campaign>