

Leveraging community health workers to vaccinate in Malawi

A unique health workforce approach to increase routine immunization coverage

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KEY MESSAGES

- Leveraging community health workers (CHWs) as vaccinators is a promising approach that may help countries maximize their health workforce, increase vaccination coverage and reach more zero-dose children.
- An analysis from Malawi showcases that national CHW cadres can provide routine immunization, when provided sufficient training, support and supplies.
- Other countries considering employing this model should pay close attention to the supportive infrastructure that enables CHWs to vaccinate effectively (CHW supplies, transportation, learning opportunities, pay, etc.).

Global immunization coverage has stalled since 2019, and then decreased from 86% in 2019 to 81% in 2021¹. Many children cannot access routine vaccinations, including an estimated 25 million infants each year². COVID-19 disruptions have impacted routine immunizations, with low- and middle-income countries (LMICs) most affected by these challenges². At the same time, the World Health Organization (WHO) estimates the world will need 18 million more health workers by 2030 to ensure high coverage of health services, like immunizations³. With chronic health worker shortages and stagnating routine immunization rates globally, new strategies are needed to increase vaccination coverage and equity.

As trusted members of the communities they serve, community health workers (CHWs) play an important role in communities' health and reaching vulnerable populations. Leveraging CHWs as vaccinators for routine immunization is a strategy that has potential to increase vaccination coverage and offer relief to other strained cadres of health workers, such as nurses. However, of the 75 countries with a documented CHW program, only 20 countries use CHWs to administer vaccines⁴.

Malawi's use of CHWs to vaccinate offers lessons for other countries

Malawi is one of the 20 countries that allow CHWs to administer vaccines. Malawi leverages its health surveillance assistants (HSAs) – a fully institutionalized, paid, national cadre – to administer an estimated 80% of all vaccines across the country.

Who are Malawi's Health Surveillance Assistants?

HSAs are community health workers who are trained and employed by the Malawi Government to carry out key community health tasks, including routine immunization. In 1998, HSAs were incorporated into Malawi's formal health system and represent about one-third of the health workforce.

1 World Health Organization, UNICEF. Progress and Challenges with Achieving Universal Immunization Coverage: 2021 WHO/UNICEF Estimates of National Immunization Coverage (WUENIC); 2021

2 UNICEF. Immunization coverage: are we losing ground? Published 2020. Accessed January 6, 2022. <https://data.unicef.org/resources/immunization-coverage-are-we-losing-ground/>.

3 World Health Organization. Global Strategy on Human Resources for Health: Workforce 2030.; 2016. Accessed June 15, 2022. World Health Organization. Global Strategy on Human Resources for Health: Workforce 2030.; 2016. Accessed June 15, 2022.

4 Gibson, E. et al. Community Health Workers as Vaccinators: A Rapid Review of the Global Landscape (2000-2021) (in review).



Photo credit: Paul Joseph Brown, Location: Kwitanda, Malawi

VillageReach analyzed Malawi's unique approach to vaccination, capturing key lessons for other countries to model to strengthen immunization services and increase access. To fully understand HSAs' role and the programmatic context in which HSAs administer vaccines in Malawi, VillageReach conducted interviews with HSAs, their supervisors and other national immunization stakeholders to document successes, challenges and risks of using HSAs as vaccinators.

Research objectives and methods

We conducted 36 interviews to enable us to document Malawi's experience, and to identify opportunities for Malawi to further strengthen its own system. We interviewed HSAs, HSA supervisors and community members from across six districts, selected to include urban areas with high and low immunization rates. We also interviewed Ministry of Health (MoH) officials and senior officials from nationally represented immunization organizations. Our specific objectives were to:



Describe **HSAs' programmatic and operational roles** in routine immunization, including their responsibilities, training, vaccine safety procedures, community engagement, vaccine administration and supervision.



Document **HSAs' role in the vaccine supply chain** at the community level and consider facilitating factors and challenges.



Gather stakeholder **perceptions of HSAs' role as vaccinators and their experiences** with the program, including challenges and recommendations for improvement.

FINDINGS

Programmatic overview

Findings from Malawi highlight that national CHW cadres can successfully be trained, supported and consistently supplied with Expanded Program on Immunization (EPI) products to support routine immunization at a national scale.

Overall, Malawi’s HSA program aligns with WHO’s vision for a professionalized community health workforce: HSAs are paid, supervised and offered a standard training. HSAs, their supervisors, community members and MoH officials consistently described HSAs as a high-functioning vaccination cadre that is skilled and dedicated to increasing vaccine access for children. One of the key benefits of Malawi’s model is that HSAs provide “wraparound immunization services” and do not require the presence of nurses or other health workers to support them. Reducing the vaccination burden on nurses helps preserve a more manageable workload for other health workforce cadres.

Both HSAs and supervisors saw regular supervision as critical for HSAs’ success. In addition to supporting HSAs in their day-to-day responsibilities, strong supervision provides HSAs with the training and quality control needed to provide effective vaccination services. Supervisors affirmed their dedication to vaccine safety best practices and aim to directly observe while HSAs are vaccinating to review safety practices. Figure 1 outlines the roles and responsibilities of both supervisors and HSAs required for HSAs to successfully administer vaccinations.

Figure 1: HSA and supervisor roles and responsibilities⁵



Immunization-related HSA responsibilities

- Attend a mandatory 12 week training prior to administering any vaccines
- Submit requisitions for vaccines and supplies
- Maintain vaccine inventory and expiration records
- Compile and submit vaccine reports
- Plan and conduct vaccination sessions
- Inform community members about vaccination
- Report adverse events related to vaccination
- Vaccine demand generation: counsel & educate community members
- Maintain cold chain while transporting vaccines to/from outreach sessions
- Frequently check vaccine expiry dates and VVM status

Immunization-related HSA supervisor responsibilities

Supply Chain:

- Ensure availability of vaccines for HSAs (place vaccine supply orders & manage inventory)
- Organize transport for outreach visits
- Provide oversight to ensure vaccine fridges are working, make alternative plans in event of a power outage, ensure cold chain is maintained from static to outreach clinics
- Consolidate monthly reports from HSAs on services provided and commodities used

Vaccine Safety:

- Observe HSAs vaccinating to make sure vaccines are administered correctly
- Provide oversight on vaccine quality and potency checks, including checking VVMs and expiry dates
- Ensure HSA safety while vaccinating (e.g., practicing injection safety, wearing masks, etc.)

Admin/General Management:

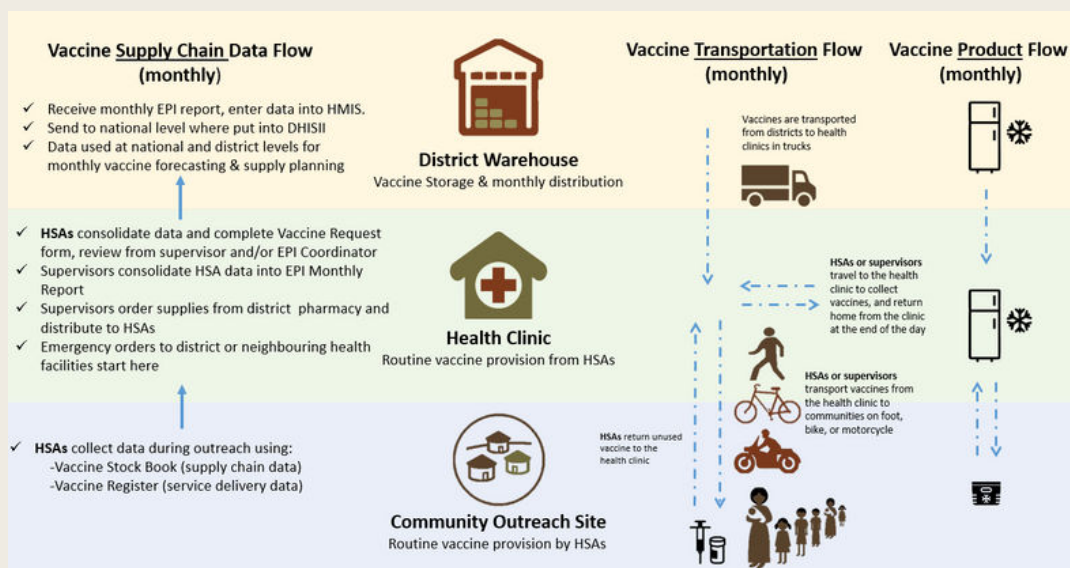
- Provide performance feedback while observing HSAs
- Hold monthly review meetings at the health facility with HSAs
- Organize other supplies (e.g., uniforms, airtime, paper forms, boots, rain coats, etc.)
- Prepare work plans for HSAs
- Maintain regular contact with HSAs and answer questions via phone/WhatsApp

HSAs' role in supply chain

HSAs and their supervisors are actively involved throughout much of Malawi’s immunization supply chain, with responsibilities related to maintaining vaccine potency, transporting vaccines to communities, and collecting and reporting supply chain data. HSAs apply best practices to ensure vaccine potency and quality, including regularly checking expiry dates, inspecting vaccine viral monitors (VVMs), temperature monitoring, using cooler boxes and discarding open vials after the appropriate number of days. Stockouts were reportedly infrequent. Figure 2 below depicts Malawi’s immunization supply chain and HSAs’ responsibilities in each part of the process.

⁵ Alban, R., & Chihana, T. (2022). *HSAs as vaccinators in Malawi*. ms, VillageReach.

Figure 2: How HSAs support the last mile vaccine supply chain



Perceptions and experiences

HSAs and supervisors described their relationships with and access to community members as a key advantage. Most respondents viewed HSAs as trusted vaccinators and service providers, which research shows is an important factor in increasing vaccine uptake and reducing vaccine hesitancy. Respondents described that overall vaccine hesitancy is low for routine immunization in Malawi, and community members are very comfortable with HSAs as immunization providers. Several respondents commented that the use of HSAs as vaccinators was critical to Malawi’s relatively high levels of immunization coverage, with 92% of children in Malawi aged 12-23 months receiving the diphtheria, pertussis, and tetanus (DPT) vaccine⁶.

An HSA worker described their role in vaccine safety:

“On vaccine safety, firstly, we make sure that all vaccines are kept safely. How safely? They're always in the refrigerator at the recommended temperature. And also, we make sure that we frequently check the expiry date... And make sure that when we are carrying these vaccines to the outreach; we are carrying them using the vaccine carrier with enough cold packs.”

Challenges

Despite the many benefits and strengths of Malawi’s program, there are still a number of challenges in day-to-day work that need improvement. Gaps in supportive infrastructure present major challenges for HSAs and their supervisors:

- HSAs and supervisors often lack transportation to collect vaccines, travel to communities for outreach sessions or conduct supervision visits.
- Many supplies are inadequate, particularly water-resistant clothing for use during the rainy season.
- HSAs rely on emergency or non-routine orders to avoid stockouts due to challenges accurately estimating the target population for outreach sessions.
- Pay is considered low and does not account for their increasing workload or inflation.
- Refresher trainings are infrequent, which can create a risk for inconsistent quality in vaccine administration.

Recommendations

CHWs require many forms of support, recognition, feedback and resources to enable successful vaccine administration. Other countries considering involving community health workers in vaccination or transferring vaccination responsibilities entirely to CHWs should pay close attention to the supportive infrastructure that enables HSAs to vaccinate effectively in Malawi. Specific recommendations include:

- **Budget for transport and supplies:** Plan to dedicate resources to ensure CHWs routinely have access to the infrastructure and supplies they require to administer vaccines outside of a hospital or clinic setting. This notably includes transportation to and from communities, fuel and maintenance for vehicles, and cooler boxes for last mile vaccine transport. Likewise, supervisors require transportation to routinely conduct supervision visits. CHWs and supervisors may need additional equipment to travel for vaccination activities, like raincoats.
- **Ensure a reasonable workload for CHWs:** Routine vaccination is a core responsibility of HSAs in Malawi, which may be important to the program's success. Other countries, with CHW workforces that currently do not vaccinate, will need to find strategies to incorporate this new responsibility into CHWs' existing workplans and job descriptions. Possible strategies include: 1) CHW specialization (dedicating certain CHWs to focus on vaccination while others maintain current roles), 2) further task shifting of current CHW responsibilities to other cadres such as volunteers and 3) expanding the current CHW cadre (retaining a higher number of CHWs). Consider these strategies to ensure CHWs can dedicate adequate time to conduct vaccination activities responsibly.
- **Provide extensive introductory and routine training:** In addition to ensuring a solid foundational training, countries should plan to provide CHWs with regular refresher trainings, conducted in-person or virtually, to help CHWs maintain their confidence and competence with vaccine administration, information and skills.
- **Provide CHWs with fair pay:** Ensure pay is aligned to their workloads (as recommended by the WHO⁷) in recognition of CHWs' valuable skills and contributions to national routine immunization coverage.
- **Coach and mentor CHWs using dedicated supervisors:** Supervision is essential to ensure safe and successful vaccine administration, particularly when CHWs are new on the job. Supervisors should make time to directly observe CHWs administering vaccines, as well as CHW interactions with caregivers. As mentioned above, supervisors should be supported with adequate transportation resources to be able to conduct supervision visits.

7 World Health Organization. Guideline on health policy and system support to optimize community health worker programmes. Geneva: World Health Organization; 2018.

For more information on VillageReach research and advocacy initiatives related to leveraging CHWs as vaccinators, please contact:

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