

Community health workers who vaccinate: Improving equity in immunization

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OVERVIEW

- Community health workers (CHWs) administer vaccines in 20 countries, supporting more equitable immunization access for zero-dose and under-immunized communities.
- CHWs who administer vaccines experience the following barriers: 1) insufficient supply chain training, 2) insufficient cold chain equipment, 3) insufficient transportation for supplies and to communities, 4) excess workload, 5) insufficient or irregular remuneration, and 6) insufficient or irregular supervision.
- Countries considering using CHWs as vaccinators to alleviate health workforce shortages must ensure CHWs receive adequate supply chain support and management, remuneration, supervision, and formal integration within the health system.

Increasing vaccine access with Community Health Workers

Although global routine vaccination coverage has increased by over 80% over the last 40 years¹, it has recently lost momentum, with global coverage decreasing from 86% in 2019 to 81% in 2021². Many individuals still do not have access to routine immunizations, including an estimated 25 million infants each year². The COVID-19 pandemic disrupted routine immunization services, exacerbating inequities especially in low- and middle-income countries (LMICs)³. A large shortage of health workers, who are needed to administer immunizations, has further hindered routine immunizations in LMICs.

The World Health Organization estimates that 18 million more health workers are needed by 2030 to address the health worker shortage⁴. Community Health Workers (CHWs) play a critical role in the health system in many countries, and their responsibilities often include educating caregivers about health topics and encouraging people to engage in routine immunization services.

Who are Community Health Workers?

Although their role differs by country, they are generally defined as lay health workers who receive some job training (between several weeks to several years) and offer health services based on cultural norms. They often live in and are trusted by under-reached communities.

¹ Peck M, Gacic-Dobo M, Diallo MS, Nedelec Y, Sodha SS, Wallace AS. Global Routine Vaccination Coverage, 2018. *MMWR Morbidity and Mortality Weekly Report*. 2019;68(42):937-942. doi:10.15585/mmwr.mm6842a1.

² World Health Organization, UNICEF. *Progress and Challenges with Achieving Universal Immunization Coverage: 2021 WHO/UNICEF Estimates of National Immunization Coverage (WUENIC)*.; 2021

³ UNICEF. Immunization coverage: are we losing ground? Published 2020. Accessed January 6, 2022. <https://data.unicef.org/resources/immunization-coverage-are-we-losing-ground/>.

⁴ World Health Organization. *Global Strategy on Human Resources for Health: Workforce2030*.; 2016. Accessed June 15, 2022. World Health Organization. *Global Strategy on Human Resources for Health: Workforce2030*.; 2016. Accessed June 15, 2022.

CHWs can improve immunization coverage and equity by linking people to immunizations, however most CHWs cannot actually administer vaccines themselves.

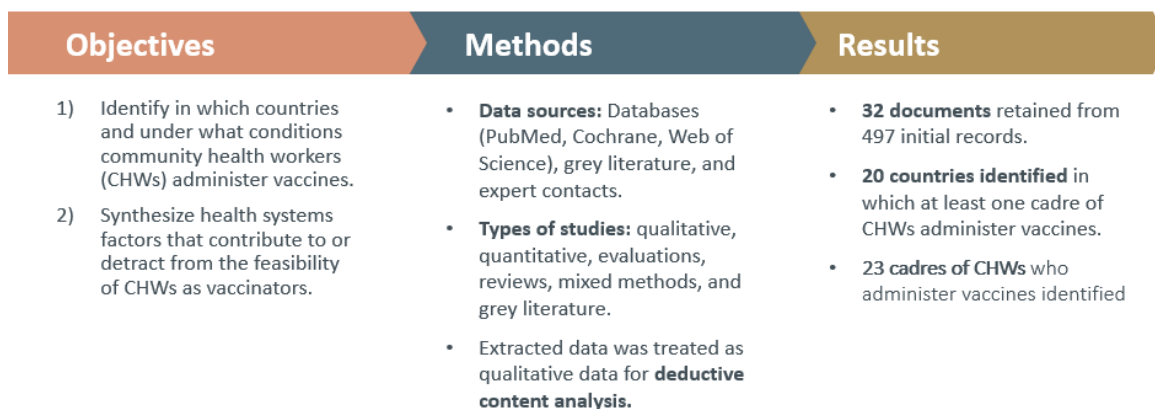
The Immunization Agenda 2030 recognizes universal access to immunization services as a key part of primary health care⁵. Zero-dose children are children who have not received a single dose of diphtheria, tetanus and pertussis (DTP). They often live in missed communities, such as remote rural areas, low-income urban communities or areas in conflict, have limited interactions with the public health system and lack access to vaccination services. In countries like Pakistan and Malawi, CHWs who administer vaccines have been critical in reaching these communities.

To understand community health workers’ roles in countries where they administer vaccines, VillageReach conducted a rapid review to identify where and how CHWs are vaccinating, along with potential barriers and considerations for countries when employing CHWs as vaccinators.

Rapid review: Community Health Workers who vaccinate

VillageReach’s rapid review looked at peer-reviewed literature from three databases, grey literature identified through web searches and by CHW subject matter experts. We included documents published between January 1, 2000 and July 30, 2021. Our objectives, methods and results are outlines in Figure 1.

Figure 1: Rapid Review overview



COMMUNITY HEALTH WORKER RESPONSIBILITIES

The rapid review identified 20 countries in which CHWs vaccinate, as shown in Figure 2. Three countries (Ghana, Indonesia, and Kenya) have 2 cadres of CHWs that vaccinate, for a total of 23 CHW cadres that administer vaccines.

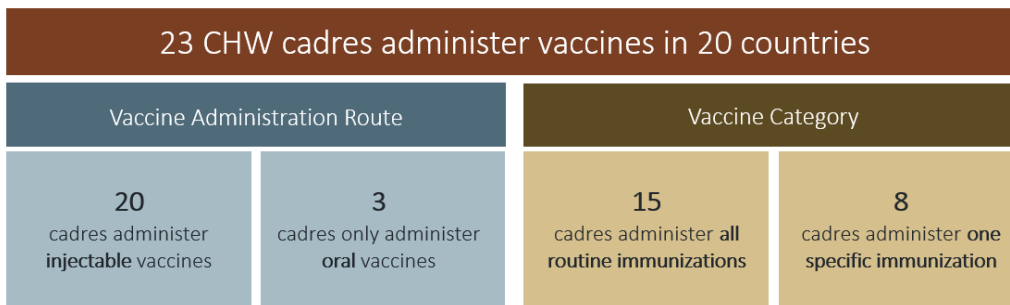
⁵ World Health Assembly. Immunization Agenda 2030.; 2020. Accessed June 15, 2022. https://cdn.who.int/media/docs/default-source/immunization/strategy/ia2030/ia2030-draft-4-wha_b8850379-1fce-4847-bfd1-5d2c9d9e32f8.pdf?sfvrsn=5389656e_69&download=true

Figure 2: Countries where community health workers vaccinate



Vaccine responsibilities differ between the cadres. As shown in Figure 3, the majority (20 out of 23 cadres) administer injectable vaccines and three out of 23 groups administer oral vaccines. Within the 23 cadres, 15 administered all routine immunizations and 8 administered one specific immunization.

Figure 3: Community Health Worker vaccine administration responsibilities



All the CHWs that vaccinate work in rural geographic contexts and administer vaccines at both fixed sites and in the community. Most of them also provide other health services and participate in community engagement and health promotion activities. Some CHWs also administer injectable contraceptives.

CHALLENGES FACED BY COMMUNITY HEALTH WORKERS WHO ADMINISTER VACCINES

Community health workers who administer vaccines face several challenges, as outlined in Figure 4.

Figure 4: Occupational and supply chain challenges for community health workers

Occupational conditions		Supply chain	
Job satisfaction and workload	Due to workforce shortages and the number of existing tasks that need to be managed, many CHWs feel burnout. Some CHWs have to work across multiple settings, including fixed community visits.	Vaccine storage	Often, CHWs are responsible for securing vaccines and storing them. With many CHWs living in remote communities, far from vaccine storage and with low population density, getting vaccines can be time consuming and managing open vial wastage can be a challenge.
Remuneration	Primarily, CHWs who vaccinate are paid by the government. Despite this arrangement, some CHWs experience delayed or no payments.	Cold chain	CHWs often have limited cold chain training and insufficient equipment. They may be required to transport vaccines in vaccine carriers or cold boxes before and after immunization sessions. In some cases, CHWs are not provided with vaccine carriers.
Supervision	Although the majority of CHWs are managed through a supervisory process, irregular or inadequate supervision occurs in some cases.	Transportation	Many CHWs travel to storage facilities to collect and transport vaccines to health facilities. In some cases, this is a long and challenging journey, with many CHWs travelling by foot, bicycle, motorcycle, canoe and public transportation. They may not be reimbursed for travel costs or provided with transportation.
Personal safety	For some CHWs, the environments where they work can be unsafe. This is especially true for CHWs who are women.	Stock management	CHWs regularly face equipment and medical supply shortages, including a lack of vaccines, medications and gloves.

Expanding access: Design programs to support Community Health Workers

Of the 75 countries with documented CHW programs, CHWs vaccinate in 20 countries. In the 55 countries where CHWs do not currently vaccinate, there are 3.3 million CHWs who could support the healthcare workforce shortage and address immunization equity among under-reached communities.

Countries should consider using CHWs for routine vaccinations to alleviate health workforce shortages, but they must design and implement their program to provide sufficient support for CHWs and address known challenges.

PROGRAM RECOMMENDATIONS:

1. **Provide adequate, reliable remuneration for CHWs.** Existing research indicates that paying CHWs appropriate compensation bolsters job satisfaction and professional wellbeing.
2. **CHWs should be included in supply chain planning, including adequate training and access to adequate cold chain equipment.** Adequate supply chain management avoids vaccine wastage and is critical to administering potent vaccines.
3. **CHWs should have reliable access to supervision.** Consistent supportive supervision can increase CHW motivation and improve immunization program quality.
4. **CHWs should be included in national health systems.** Integrating CHWs into national health systems expands access to certification, standardized pay, training, and professional development opportunities.
5. **Keep accurate national records of CHW demographic data.** Collecting and monitoring accurate CHW demographic data will allow the government to track CHWs training and pay and provide professional support for CHWs to be successful as vaccinators.

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