

**COMMUNITY HEALTH WORKER  
PROGRAMMES IN THE WHO  
AFRICAN REGION:  
EVIDENCE AND OPTIONS**

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**POLICY BRIEF**

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**World Health  
Organization**

REGIONAL OFFICE FOR **Africa**



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**Health Systems and Services Cluster**  
WORLD HEALTH ORGANIZATION  
REGIONAL OFFICE FOR AFRICA  
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## ABBREVIATIONS

CHW	community health worker
EVD	Ebola virus disease
HRH	human resources for health
MDG	Millennium Development Goal
PHC	primary health care
UHC	universal health coverage



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## INTRODUCTION

Community health worker (CHW) programmes have seen a renaissance in the last two decades and now many countries in Africa boast of such national or substantial sub-national programmes (1). The 2013 Third Global Forum on Human Resources for Health concluded that CHWs and other frontline primary health care workers “play a unique role and can be essential to accelerating MDGs and achieving UHC”, and called for their integration into national health systems.(2) The Ebola virus disease (EVD) outbreak of 2014–2015 highlighted the imperative of ensuring the functioning of the health systems at the community level for both their day-to-day resilience and disaster preparedness.

The purpose of this policy brief is to inform discussions and decisions in the World Health Organization (WHO) African Region on policies, strategies and programmes to increase access to primary health care (PHC) services and make progress towards universal health coverage (UHC) by expanding the implementation of scaled-up CHW programmes. This brief summarizes the existing evidence on CHW programmes with a focus on sub-Saharan Africa and offers a number of context-linked policy options for countries seeking to scale up and improve the effectiveness of their CHW programmes, particularly with regard to needs such as those of Guinea, Liberia and Sierra Leone, the three countries that were the most affected by the 2014–2015 EVD outbreak.

For the purposes of this policy brief, a broad definition of CHW is used. CHWs are individuals “carrying out the functions related to health care delivery [who are] trained in some way in the context of the intervention [but have] no formal professional or paraprofessional certificated or degreed tertiary education [in a health-related field]” (3)). WHO states that CHWs “should be members of the communities where they work, selected by the communities, answerable to the communities for their activities, and supported by the health system but not necessarily a part of its organization” (4). For the purposes of this brief, a working definition for a scaled-up CHW programme has been developed, where the term refers to a programme that is designed to be more than a pilot or demonstration project and has the intention of covering a substantial population size or geographic area, depending on the country’s context.

## BACKGROUND

Ensuring PHC is available and accessible to all has been a priority for health systems around the world since the Alma-Ata Declaration of 1978. The Bamako Initiative, adopted a decade later by African governments, sought to develop a sustainable financing mechanism for PHC. Delivering on these goals has been elusive for most sub-Saharan African countries, given their substantial health system weaknesses, including the limited human resources for health (HRH). Many African countries rely on lay people, often referred to as CHWs, to assist in delivering PHC services to populations with limited access to the formal health system.

The CHW workforce played an important role in increasing access to health services during 2000–2015, the era of the Millennium Development Goals (MDGs), especially for the health-related goals 4, 5 and 6 on reducing child mortality, improving maternal health, and combating HIV/AIDS, malaria and other diseases, respectively. However, over 2016–2030, the era of the Sustainable Development Goals (SDGs), the emphasis for the health-related Goal 3 is to go beyond specific disease programmes to increase access to and improve quality of care, especially in the context of the UHC target. Goal 3 further calls on governments to “substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in the least developed countries and small island developing states (SDGs target 3c) (5)”. It is, therefore, timely to explore the extent to which lay workers and CHWs with limited training in

health can contribute to increasing both access to and quality of health services, as well as serve as a liaison between the community and the formal health system, as part of an overall HRH strategy.

The recent focus on the role of the community and CHWs in addressing the EVD outbreak in West Africa in 2014–2015 has prompted a need to review their part in health service delivery. There are discussions involving WHO, national governments and development partners in Guinea, Liberia and Sierra Leone, the countries affected by EVD, to formalize the training, deployment and remuneration of CHWs as part of the formal health workforce. This has occurred in various forums, during which guidance has been sought from the WHO Regional Office for Africa, including for some of the countries' investment plans for recovery and building of resilient health systems after Ebola. This policy brief represents advice from the Regional Office for Africa to countries seeking to deploy and/or strengthen their large-scale CHW programmes in order to increase PHC access by their populations.

## KEY MESSAGES

There is unanimity in the literature that CHW cadres and programmes have enormous potential in strengthening health and community systems at the interface that is now increasingly identified as community health systems. The key foundational elements of successful CHW large scale programmes are:

- (a) Embeddedness, connectivity and integration with the larger system of health care service delivery, the health workforce and community governance, as opposed to functioning as stand-alone or short-term interventions (6,7,8,9);
- (b) Cadre differentiation and role clarity in order for the scope of work and accountability responsibilities to be clear, to minimize confusion, and to manage the expectations of the formal health system and community members (10,11,12,);
- (c) Sound design, based on local contextual factors and effective people management (11, 12). Specifically, evidence confirms that CHW programmes will fail unless CHWs are provided (8,9,12, 13,14,15,16, 17):
  - initial and continuing training commensurate with their roles;
  - regular, skilled and supportive supervision;
  - adequate and appropriate incentives and compensation, whether monetary or other types;
  - prospects for career development and progression.
- (d) Ongoing monitoring, learning and adapting, based on accurate and timely local data to ensure their optimal fit to the local context, since one size does not fit all (,4, 9).

The figure below summarises the key messages on what to take into account when scaling up CHW programmes.

**Figure 1: Key elements for successful CHW programmes**



## SUMMARY OF THE EVIDENCE AND THE IMPLICATIONS FOR CHW PROGRAMMES

### Effectiveness and cost-effectiveness

- There is strong evidence that if appropriately and adequately trained and supported, CHWs can be effective in providing preventive, promotive and limited curative PHC services, e.g. for uncomplicated malaria, and improving health outcomes in low- and middle-income countries, including in sub-Saharan Africa (3, 10,18,19). Most of this evidence comes from research trials and small-scale projects. This means that the potential effectiveness of large-scale national CHW programmes remains an empirical question that needs to be researched.
- Most CHW effectiveness studies compare CHW impact with the status quo situation where health service delivery is limited or non-existent rather than with the impact of formally trained health professionals (3). While CHWs cannot replace professional health staff, they occupy a unique role at the community level. They therefore represent enormous potential in increasing service delivery uptake and strengthening patient referral in communities with limited access to health care due to various constraints. Large-scale CHW programmes could fulfil clearly defined additional roles in countries with limited numbers of skilled health workers. But countries should concurrently increase their investments in producing and deploying professional HRH for PHC needs. Most low-income countries in the African Region will need CHWs as a core part of

their workforce, although their scope of work and geographic spread may change as the country develops and deploys more skilled HRH to areas of need.

- (c) Evidence on the cost-effectiveness of CHW programmes and their sustainable financing mechanisms is limited (10, 18, 19). Therefore, large-scale CHW programmes are advised to carefully monitor and evaluate their activities to generate evidence on those aspects.

### Importance of context

- (a) The types of CHWs and the scope of the work they are tasked to perform vary widely even within the same country and depend on a country's political history, geography, socioeconomic status, societal values and evolution of the health system in recent decades. There is variation also with regard to recruitment, development, distribution and retention of skilled HRH and the distribution and type of health care facilities in the deprived regions of the countries (19, 20). Thus, comparison of CHW programmes across the African continent and the reasons for their success or failure requires complex analytical techniques that are beyond the scope of this brief. Each country therefore must analyse its needs based on its unique context.
- (b) The performance of CHWs is influenced by a host of context-specific factors that require attention in order to optimize CHW effectiveness (7, 9, 14, 18,19, 21, 22, 23, 24, 25, 26, 27, ). Individual and family-level factors such as age, marital status, spousal support and altruism could potentially be controlled for through improved selection criteria. Organizational factors such as training, supervision, supplies and remuneration typically are within the control of the institutions managing the CHWs and thus can be optimized for improved performance. However, community-level factors such as community participation, ownership and support of CHW programmes are much more challenging for CHW programme managers to control, yet, as available evidence suggests, they are the most critical aspects for programme success (7,18,19,26). The success of the EVD outbreak control activities in Guinea, Liberia and Sierra Leone in 2014–2015 brought about by the communities' response to the outbreak clearly demonstrates this (27). The communities with functioning community health systems where CHWs were an essential component did not only allow better access for skilled health workers to manage the EVD crisis but also recovered more quickly.

### Programme design

- (a) The evidence is largely inconclusive in regard to what factors should be taken into consideration in CHW programme design, and most studies are not structured to answer this question. The available evidence points to the need for ongoing training programmes for CHWs in addition to the training provided at their recruitment, given their lack of formal training in the health profession (10,12,20). A wide range of strategies, curricula, modalities and locations for training CHWs are described in the literature (3, 10, 20), but evidence is inconclusive on the most effective types of training. Thus, it is important to apply context-specific knowledge and experience to design and undertake training for CHWs, emphasizing longitudinal, practice-based learning in context.
- (b) The evidence is inconclusive also on whether CHWs are more effective if they receive or do not receive financial compensation (12, 19, 26, ). In-kind compensation, for example visual identification items such as t-shirts and badges, training in valued skills, and recognition, respect and support from the community were found to be enabling factors in some settings (12, 18,19) while in other settings they were insufficient to ensure good performance (6, 12). In the latter case, some financial compensation was needed to motivate CHWs to do their work and to reduce the risk of their unexpected attrition. It is critical for policy-makers to consider both financial and non-financial incentives for CHWs.

- (c) The opportunity costs associated with a CHW's activities and the direct and indirect subsidization of their work by their families and the community are substantial. These need to be taken into consideration by policy-makers and programme implementers since CHW programmes usually operate in the poorest communities with high unemployment rates (19). Although CHW salaries or stipends and other implementation costs will likely substantially increase health budgets for most sub-Saharan African countries, not providing health care in the poorest and historically deprived communities would be disastrous. Thus, policy trade-offs that are context-appropriate must be made on aspects such as compensation and types of incentives, among others, as no given solution will work for all the countries alike.

### Typology of CHWs

- (a) Given the enormous diversity of the cadres, roles, tasks, locations and identities of CHWs across countries and continents, taxonomies that distinguish their different categories and provide typologies for selecting appropriate community health agent strategies have been identified as a prerequisite for planning programmes that are relevant and appropriate for the local needs and contexts. Several taxonomies or typologies have been proposed in the literature. Based on the evidence reviewed, for the purposes of this policy brief we propose a typology that focuses on the “when” and “what” of the work that is assigned to CHWs and how that influences the selection of “who” become CHWs and “how” they are trained, supervised, compensated and otherwise supported within a context-specific environment (see Table 1).
- (b) Within the “who” and the “how” factors, minimum and optimum requirements are differentiated in order to present a spectrum from which policy-makers and programme planners can choose based on their context-specific realities of health financing and availability of HRH. The expectation is that this typology will serve as a guide for policy-makers and programme planners as they seek to scale up and improve the effectiveness of their CHW programmes, as well as a reminder of the limitations of this cadre of the health workforce, especially when the optimum requirements are not met. This typology is not expected to be prescriptive, given the large variability in contexts and policy objectives of CHW programmes within and across countries. Context-specific knowledge within and across the countries must be applied in using this typology.

**Table 1: CHW typology**

What (Illustrative examples)	Who and how		When
	Minimum requirements	Optimum requirements	
Distribution of preventive chemotherapy drugs for parasitic disease control to the general population	<ul style="list-style-type: none"> <li>• Low literacy</li> <li>• Minimal orientation per episode of intervention</li> <li>• Minimal supervision</li> <li>• Minimal reporting requirements</li> <li>• Volunteer</li> </ul>	<ul style="list-style-type: none"> <li>• Moderate literacy</li> <li>• Initial training</li> <li>• Training per episode of intervention</li> <li>• Moderate supervision</li> <li>• Minimal reporting requirements</li> <li>• Volunteer or token stipend</li> </ul>	Episodic, 1–2 times a year, typically full-time
Distribution of long-lasting, insecticide-treated bed nets for malaria vector control to the general population			
Administration of oral polio vaccine towards the eradication of polio to children less than five years old			Episodic, 3–6 times a year, typically full-time
Community mobilization for health promotion and environmental sanitation activities			
Community-based surveillance and reporting of births and deaths	<ul style="list-style-type: none"> <li>• Low literacy</li> <li>• Initial training and episodic refresher training required</li> <li>• Moderate level of supervision</li> <li>• Minimum reporting requirements</li> <li>• Minimum logistics for commodities and other supplies</li> <li>• Volunteer, regular stipend or performance-based incentive</li> </ul>	<ul style="list-style-type: none"> <li>• Moderate literacy</li> <li>• In-depth initial and continuous training required</li> <li>• High level of supervision</li> <li>• Detailed reporting requirements</li> <li>• Regular logistics for commodities and other supplies</li> <li>• Transport allowance may be needed for home visits and report submission</li> <li>• Regular stipend or performance-based incentive</li> </ul>	Monthly, typically part-time
Home visits to pregnant women to encourage them to seek skilled antenatal and delivery care			Weekly, typically part-time
Home visits to postpartum women and newborns for health education and screening for illnesses			
Integrated management of common childhood illnesses such as pneumonia and diarrhoea			Daily, may be part-time or full-time depending on need
Directly observed therapy for tuberculosis			
Contact tracing for confirmed and suspected cases of EVD, assistance with outbreak investigation, health promotion etc.			

## POLICY OPTIONS

In light of the current evidence and of the need for context-specific planning and implementation of programmes, we propose several policy options for countries in the WHO African Region that are seeking to scale up or improve the effectiveness of their CHW programmes. The policy options are based on our CHW typology.

### Countries with weakened health systems

These countries are affected by health emergencies or political or social conflict, or are dealing with an influx of refugees or displaced populations. They typically have very low densities of nurses and midwives of less than 5 per 10 000 population and very low densities of health centres of less than 5 per 100 000 population, and even fewer health posts or dispensaries owing to the many years of destruction and underdevelopment of health resources as well as the brain drain they have suffered associated with conflict or fragile situations. Their health systems are usually weak from the perspective of all the six building blocks described by WHO (29). Guinea, Liberia and Sierra Leone, the three countries affected most by the 2014–2015 EVD outbreak, and South Sudan, where political stability is currently an issue, fall in this category. In such contexts the following strategies are recommended:



### *Human resources for health*

- (a) For CHWs with sufficient training for their defined role, deploy large-scale CHW programmes in the deprived regions of the country focusing on promotive, preventive and explicitly defined curative health care services consistent with the local regulations. Given the broad scope and heavy frequency of the work expected from CHWs in this context, ranging from daily to weekly occurrences, the CHWs will need in-depth initial and ongoing training and supervision to ensure the quality of the interventions. Those expected to provide curative care require functional procurement and supply systems for the needed diagnostic equipment, treatment algorithms and medicines to enable them to do the work for which they have been trained and to meet the expectations of their communities. Reporting requirements for this group also are substantial, especially for time-sensitive work such as outbreak investigation and contact tracing for EVD. Since the demands on the CHWs' time are usually high in such contexts, it is unlikely that they will undertake the work as volunteers. Consideration must be given to providing them with some financial compensation for their time and covering their transportation costs.
- (b) For professional health staff, medium to long-term investments will be required for the development, recruitment and equitable deployment of nurses and midwives who can work close to the communities in the deprived regions of the country to improve access to skilled HRH for the entire population, and for continuing to develop CHWs as an integral part of the strategy for health human resources. The transition of certain CHW cadres to more formally-trained professional health staff with broader scope of work such as the health extension workers in Ethiopia should also be considered as a strategy to accelerate access to skilled HRH throughout the country. Particular attention must be paid to human resource retention policies and career progression for all cadres of staff including CHWs in order to achieve the long-term policy goals of universal access to PHC.

### *Health infrastructure*

Whenever possible, in countries in the post-conflict or development phase, increase the number and expand the distribution of health centres and invest in building and equipping health posts close to the communities in the deprived regions of the country to decrease physical barriers to accessing health care.

### *Referral system*

Strengthen the patient referral system for community and PHC levels and all the way to the tertiary care level to ensure access to the appropriate skills and health technologies for the entire population. An effective, large-scale CHW programme would be crucial to the smooth and effective functioning of the referral system.

## **Countries making progress in strengthening their health systems**

The countries in this category are working to improve their PHC through developing their health workforce. These countries typically have low densities of nurses and midwives ranging from 5 to 9.9 per 10 000 population, low densities of health centres ranging from 5 to 9.9 per 100 000 population, and a growing number of health posts or dispensaries in the deprived regions. They are also likely to be both economically and politically stable. In this context, the following strategies are proposed:

### *Human resources for health*

- (a) For CHWs with the prescribed training for their defined roles, deploy large-scale CHW programmes in the deprived regions to provide primarily promotive and preventive care and patient referral services to the formal health system for curative care. With the regular nature of their work, e.g. weekly or monthly, these CHWs will need in-depth initial and ongoing

training and supervision to ensure the quality of their interventions. Given the frequency and duration of their work, they will also likely need a reasonable level of financial compensation for their time, depending on their context-specific factors such as community norms and the unemployment rate.

- (b) For professional health staff, improve the motivation and incentives to increase the number and expand the distribution of nurses, midwives and other cadres such as assistant medical officers and clinical officers who can work close to the communities in the deprived regions of the country in order to improve access to skilled HRH for the entire population. The transition of certain CHW cadres to more formally-trained professional health staff with broader scope of work such as health extension workers in Ethiopia should also be considered as a strategy to accelerate access to skilled HRH throughout the country. Particular attention must be paid to human resource retention policies and career progression for all cadres of staff in order to achieve the long-term policy goals of universal access to PHC.

### *Health infrastructure*

- (a) Invest in the building and equipping health posts close to the communities in the deprived regions of the country to decrease the physical barriers to accessing health care.
- (b) Recognizing that building and equipping health care facilities at a large scale is often a lengthy and expensive process, we recommend the development or strengthening of outreach programmes at the health centres and clinics for the deprived communities in order to improve physical access of the populations to skilled HRH. In that setting CHWs can play critical liaison, supportive and referral roles between the formal health system and the community. Outreach services can also make the work of supervising, managing and supporting CHWs more regular, effective and efficient.

### *Referral system*

Strengthen the referral system for community and PHC levels and all the way to the tertiary care level to ensure access to the appropriate skills and health technologies for the entire population. An effective, large-scale CHW programme is crucial to the smooth and effective functioning of the referral system.

## **Economically stable countries making good progress towards UHC**

These countries typically have moderate densities of nurses and midwives ranging from 10 to 19.9 per 10 000 population, moderate densities of health centres ranging from 10 to 19.9 per 100 000 population, and an established network of health posts or dispensaries in the deprived regions such that a moderate proportion of the population lives less than a 5-kilometre walking distance from the nearest health care facility. These countries are likely to have had consistent economic and political stability with growing rates of formal education and literacy. In this context, the following strategies are recommended:

### *Human resources for health*

- (a) For CHWs with sufficient training for their defined roles, deploy large-scale CHW programmes in the deprived regions of the country as needed to provide primarily promotive care, social mobilization and community engagement. These CHWs will need specified training and supervision since their scope of work will also be episodic, i.e. with the frequency of a month or less. Consequently, they may likely provide their services on a voluntary basis or for a token stipend, depending on the local norms.
- (b) For professional health staff, continue to increase the number and distribution of nurses and midwives and other cadres such as assistant medical officers and clinical officers who can work

close to the communities in the deprived regions of the country in order to improve access to skilled HRH for the entire population. Particular attention must be paid to human resource retention policies and career progression for all cadres of staff in order to achieve the long-term policy goals of universal access to PHC.

### *Health infrastructure*

Continue to increase the number of health centres, health posts and dispensaries in the deprived regions of the country so that almost all the population is within a 5-kilometre walking distance of a functioning health care facility. This would indicate significantly that progress has been made towards universal PHC.

### *Referral system*

Strengthen the referral system for community and PHC levels and all the way to the tertiary care level in order to ensure access to the appropriate skills and health technologies for the entire population. In that setting also CHWs will be well positioned to play a critical role in referral of patients from the community level to the PHC level.

## **CONCLUSION**

There is unanimity in literature reviews, empirical case studies, reference guides and large reports that CHW cadres and CHW programmes present enormous potential to strengthen health and community systems at the interface that is now increasingly identified as community health systems (30). History has shown that CHW programmes are complex to design and implement, needing a careful balance of central level support and guidance and an ability to adapt to local contexts and realities. CHW programmes are unsustainable if they are considered as a cheap or short-term solution to shore up broken health systems. The 2014–2015 Ebola epidemic showed that communities with functioning community health systems, of which CHWs are an essential part, were not only better at allowing access to health workers managing the crisis but also were quicker to recover.

While the evidence base on CHWs' work is uneven and mixed, it is exceptionally rich, providing enough insight and knowledge to use to strengthen, scale up and sustain CHW programmes throughout Africa. CHWs are the world's most promising and immediately available health workforce resource for enabling health systems in resource-constrained settings to function and reduce the burden of disease from serious, readily preventable or treatable conditions. The supply of potential recruits is abundant, the recruits can be trained in a relatively short period, CHW effectiveness has been mostly demonstrated, and CHW services are highly cost-effective relative to similar services provided by higher-level staff based in health facilities.

The exact roles and responsibilities of CHWs will vary from country to country, and within the countries from programme to programme and area to area. It is not likely at the moment or in the foreseeable future that an international standard type of CHW will emerge. However, establishing clear national guidelines and regulations that describe the approved training and certification for CHWs will clearly be needed (27).

Additional context-specific research is needed to define the most effective strategies for CHW training and supervision, since the current evidence is sparse, yet these two categories of activities constitute substantial portions of CHW programme budgets. CHW programme cost-effectiveness and financial sustainability must also be studied rigorously and urgently to close the big evidence gaps, a critical requirement for informed policy-making. WHO collaborating centres have the potential to contribute to the emerging and expanding evidence base on CHWs and cross-cutting

themes, and such information could be disseminated to the countries in the Region to inform the planning and implementation of health policies and strategies.

Monitoring and evaluation of large-scale CHW programmes should be part and parcel of the overall health workforce plans and strategies, and statistics regarding CHW deployment, costs, mapping etc. should be collected in the countries, using the usual monitoring tools that WHO and partners already use such as service availability and readiness assessments.

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