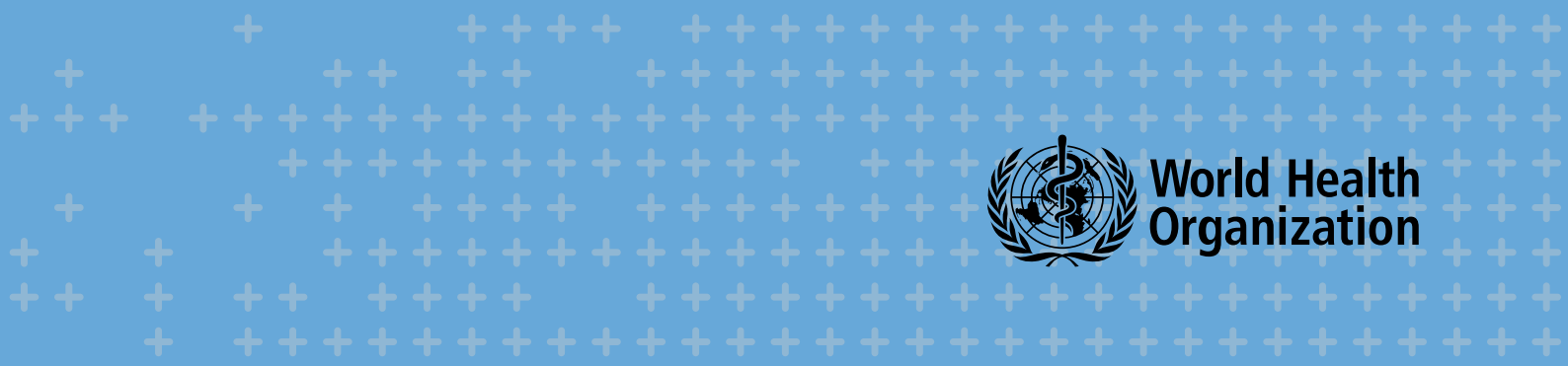




Optimizing community health worker programmes for HIV services: a guide for health policy and system support



**World Health
Organization**

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Abbreviations

ART	antiretroviral therapy
CHW	community health worker
CSO	civil society organization
HBsAg	hepatitis B surface antigen
ISCO	International Standard Classification of Occupations
NGO	nongovernmental organization
TB	tuberculosis
UNAIDS	Joint United Nations Programme on HIV/AIDS
WHO	World Health Organization

Overview

This document synthesizes key elements of the World Health Organization (WHO) normative guidance on health policy and system support for community health worker (CHW) programmes and their application for HIV programmes. Building on relevant elements of HIV guidelines, tools and evidence identified by experts, it provides recommendations on tasks and roles that can be performed by CHWs (including for HIV), identifies the policy and system supports to optimize CHW performance, and gives examples of best practice. Its purpose is to inform the optimal design and delivery of CHW programmes targeting – either specifically or as part of a broader approach – the scale-up and sustainability of HIV services.

Achieving ambitious global objectives to end the AIDS epidemic by 2030 requires renewed political commitment, combined with strategic, collaborative and cost-effective approaches. While significant progress has been made, the burden of HIV/AIDS, especially on key populations¹ and vulnerable groups,² is unacceptably high. Advances in medicine have yielded improved diagnostic and treatment tools, and have enabled a better understanding of preventive measures. The challenge now is applying that knowledge to reach people most vulnerable to and impacted by the disease via targeted prevention services and case finding, linkage to treatment and client retention, and supply of the tests and medicines to detect, treat and manage the disease.

The COVID-19 pandemic has caused disruptions in essential health services, including for HIV, and exacerbated health workforce challenges through overburden of health workers, redeployment, risk of infection and death.

A well-trained, equipped and supported health workforce is required for person-centred HIV services and for sustainably maintaining HIV gains across the globe. This requires consideration of the health worker skills mix necessary to support HIV prevention services, HIV testing and linkage to initiation of antiretroviral therapy, and overall long-term retention and adherence. There is growing global recognition that CHWs³ are effective in delivering HIV-related health services as part of interdisciplinary primary care teams. Community engagement and advocacy have been critical to advancing the fight against HIV and AIDS over the past few decades, including through elevating awareness and stimulating action among political leaders. CHWs play an important role in these functions, and they create important linkages between communities and the health system.

CHWs can contribute to reducing inequities in access to care, supporting client satisfaction and engagement, and advancing person-centred care. Further, a majority of CHWs are women and are

1. Key populations are defined as groups who, due to specific higher-risk behaviours, are at increased risk of HIV irrespective of the epidemic type or local context. Also, they often have legal and social issues related to their behaviours that increase their vulnerability to HIV. This document refers specifically to five key populations: (a) men who have sex with men, (b) people who inject drugs, (c) people in prisons and other closed settings, (d) sex workers and (e) transgender people. People in prisons and other closed settings are included in these guidelines also because of the often high levels of incarceration of the other groups and the increased risk behaviours and frequent lack of HIV services in these settings. The key populations are important to the dynamics of HIV transmission, and their active involvement is also essential in an effective response to the epidemic.
2. Vulnerable groups are those who are at greater risk of infection in certain situations or contexts, such as adolescents (especially girls in sub-Saharan Africa), orphans, street children, people with disabilities and migrant and mobile workers.
3. The International Labour Organization, for the purposes of the International Standard Classification of Occupations version 08 (ISCO-08), defines CHWs (code number 3253) as follows: “Community health workers provide health education and referrals for a wide range of services, and provide support and assistance to communities, families and individuals with preventive health measures and gaining access to appropriate curative health and social services. They create a bridge between providers of health, social and community services and communities that may have difficulty in accessing these services.” In the field of HIV, CHWs may also be referred to as “lay workers” and may also include “lay counsellors” and “community counsellors”.

members of the communities they serve. Employment as a CHW contributes to bridging cultural and gender divides in access to health services; further, providing qualified opportunities for CHWs contributes to job creation, economic growth and gender empowerment (1).

In many countries, CHWs are a key component of strategies and plans to address interventions for HIV and related risk factors and co-morbidities. Substantial evidence demonstrates that CHWs can deliver various preventive, promotive, diagnostic, curative, palliative and supportive services. Investing in the health workforce through deployment of CHWs has been identified as an effective and cost-effective approach (2). Evidence from across a breadth of socioeconomic settings shows a range of CHW activities that improve health outcomes, especially for key populations, and that extend the reach of health systems. Support for expanding and strengthening CHW programmes has gained momentum, and successful delivery of services through CHWs requires evidence-based models for education, deployment and management of these health workers. That momentum has accelerated during the COVID-19 pandemic: CHWs are not only supporting pandemic response activities; in some settings where services were not suspended, they are also taking on additional tasks and roles to maintain essential health service delivery, including for HIV, in communities. Where populations are reluctant to seek services at facilities and health systems are struggling to meet the triple burden of responding to COVID-19, maintaining essential health services and rolling out COVID-19 vaccines, community-based health workers present a valuable opportunity to bring services to community level.

The Global Strategy on Human Resources for Health: Workforce 2030 (1), adopted by the World Health Assembly in 2016, calls for CHWs and other types of community-based health workers to be harnessed as part of a diverse, sustainable health worker skills mix to accelerate progress towards universal health coverage and the United Nations Sustainable Development Goals. The strategy recommends that innovative, community-based models for health care delivery be implemented and expanded to build sustainable health systems and service delivery models.

The WHO *Guideline on health policy and system support to optimize community health worker programmes* (CHW guideline) (2) provides policy guidance on how to design, implement and strengthen CHW programmes. The recommendations address selection, certification and training; management, remuneration and supervision; and systems integration and community engagement. CHWs have a key role to play in primary health care; in the context of a maturing HIV epidemic, investment in this workforce offers opportunities to integrate HIV activities within primary care delivery.

The success and sustainability of CHW programmes hinge upon ensuring that they are embedded within national policies and strategies. Ministries should consider the cost implications and requirements for long-term dedicated financing of CHW programmes as part of overall human resources for health planning and budget allocation. In addition, donor and development partners involved in funding HIV programme implementation and support of CHWs should consider these recommendations to inform strategies to optimize the role of CHWs in advancing and sustaining efforts to eliminate HIV.

1. Introduction

According to the latest data available at the end of 2020:

- In 2019, 24% more people were living with HIV; however, there were 23% fewer new HIV infections and 39% fewer deaths annually than in 2010, and 39% fewer new diagnoses and 51% fewer deaths annually than in 2000 (3).
- In addition, 1.7 million people were newly infected with HIV; 690 000 people died from HIV-related causes; and 38 million people were living with HIV. However, of those, 68% of adults and 53% of children were on antiretroviral therapy (ART) (4).

The past two decades have seen unprecedented progress in fighting HIV, although further acceleration is required to achieve national and global goals. Progress has been uneven across regions, population groups and interventions. Achieving the ambitious goals of the 2030 Agenda for Sustainable Development requires leveraging the lessons learned and maintaining scientific progress, including efforts to scale up cost-effective approaches that reach key populations as part of wider primary health care and health system strengthening strategies and ensuring adequate levels of domestic funding, complemented where required by development partner support. Reaching the Joint United Nations Programme on HIV/AIDS (UNAIDS) 95-95-95 targets by 2030 requires changing current models of providing HIV prevention, testing, care and treatment.

This document identifies interventions in prevention, testing, treatment, care, clinical management and support services for the HIV and related co-morbidities for which there is evidence that CHWs can provide safe and effective care in HIV (**section 2**). It also provides policy recommendations on how to design, implement and optimize CHW programmes as part of broader health workforce and service delivery strategies that are acceptable to communities and can be sustained (**section 3**). Finally, it outlines key knowledge gaps that should be addressed through further research (**section 4**).

1.1 Rationale

Large-scale CHW programmes have existed for decades, delivering a range of primary health care strategies and playing a vital role in scaling up the HIV response. The programmes, however, often were implemented as a means of meeting immediate needs to address critical and emergency health issues such as the HIV epidemic and thus were not designed to be formally integrated within the broader health system and health workforce with adequate support structures to enable performance. This fragmented approach has created wide variance in objectives, skills, training, incentives, roles, status and definitions of CHWs; raised questions on equity and quality; and resulted in unclear accountability and financial sustainability. Opportunities remain to streamline and optimize partnerships with the private sector and civil society and to align the contributions of CHW programmes with public policy objectives.

Harnessing the renewed global and national focus on primary health care in the context of a maturing HIV epidemic offers opportunities to integrate HIV activities within primary care delivery; harmonize CHW support across government, donor, and civil society organization (CSO) programmes; and use evidence-based approaches to sustainably expand CHW service delivery for HIV. This requires careful assessment of the evidence on HIV services that can be delivered safely and effectively by CHWs and consideration of how CHWs fit within the quickly changing service delivery landscape prompted by the COVID-19 pandemic. Further, a critical design is needed that ensures CHWs are appropriately selected, trained, deployed,

supervised, incentivized and recognized for their contributions as members of the broader health workforce serving communities and meeting client-centred needs.

In the face of large epidemiological burdens and health worker shortage and maldistribution challenges, optimizing the skills mix is an effective approach that countries can undertake to meet the needs of people living with HIV and to improve access to services. For example, the rational redistribution of tasks among integrated primary care teams, leading to a more diverse and sustainable skills mix, can entail engaging CHWs to provide specific services such as HIV care. This approach has the potential to increase the effectiveness and efficiency of the health workforce, enabling it to serve more people while linking communities, community organizations and the health system.

This document was developed based on an analysis and synthesis of existing WHO guidelines and published systematic reviews, relevant reports, technical documents and other resources identified by a group of experts in health workforce development and HIV care. Specifically, this document summarizes and integrates the evidence selected to inform recommendations in the CHW guideline (2) and on CHW effectiveness in HIV programmes, supported where necessary by complementary evidence from the published literature. Recognizing the need for adaptations to the local context, this document addresses the potential role and support requirements of the full spectrum of CHW profiles that the WHO CHW guideline refers to.

While this guidance document provides a number of detailed recommendations on what roles CHWs can perform safely and effectively in the context of HIV programmes, and on policies that can optimize their integration in health systems, it also identifies evidence gaps that emerged during the reviews of the underlying evidence, providing input into the definition of a future research agenda.

1.2 Service delivery strategies, including for key populations and vulnerable groups

HIV differentiated service delivery. This approach simplifies and adapts services to better serve the needs of people living with and at risk of acquiring HIV and reduce unnecessary burdens on the health system (5). This approach is applicable to HIV services across the cascade in a decentralized, integrated, people-centred manner, bringing services into communities for greater accessibility; easing access, financial and transportation barriers; and enabling skilled health professionals with a longer education pathway to focus on care for people who are severely ill and require intensive clinical follow-up. As countries continue progressing towards the 95-95-95 goals, it is increasingly important to understand HIV as a chronic disease in order to ensure sustainability of services. For people living with HIV who are not sick the majority of care takes place in the home and in the community, where there is a role for CHWs to support long-term retention and adherence.

Decentralization. Consistent with the differentiated care approach, decentralization entails delivering HIV services closer to people living with HIV. This helps address significant access barriers for many people living with HIV, including long waiting times, transportation costs and safety or discretion concerns for key populations. While evidence is strongest for ART services, decentralization across the spectrum of care may be considered according to the local context. Doing so can strengthen community engagement and enhance linkages between the community and health facilities, contributing to increased care-seeking behaviour, access to services and retention in care (6).

Integrating HIV services with a range of other relevant services, including for tuberculosis (TB), viral hepatitis, sexually transmitted infections, reproductive, maternal, newborn, child and adolescent health, and drug dependence, supports provision of comprehensive and consistent care. In this way, people's

health needs can be addressed holistically and simultaneously within the community. Similarly, integrated service delivery creates cross-system linkages for information sharing and referrals across settings.

As part of a comprehensive package for HIV services, comprised of essential health sector interventions and strategies for an enabling environment (**Box 1**), CHW programmes may be particularly effective in reaching vulnerable groups, including key populations⁴. Vulnerable groups are people who are vulnerable to HIV infection in certain situations or contexts – including adolescents (especially girls in sub-Saharan Africa), orphans, street children, people with disabilities and migrant and mobile workers (7). Key populations are defined as groups who, due to specific higher-risk behaviours, are at increased risk of HIV irrespective of the epidemic type or local context (7). Also, there are often legal and social issues related to their behaviours that increase their vulnerability to HIV. In 2018, key populations accounted for 54% of new infections globally (8).

Three overarching strategies can improve service delivery, both in the context of generalized epidemic settings and with specific reference to key populations and vulnerable groups: integration, decentralization and optimizing the skills mix. Separately or in combination, these strategies can improve the accessibility of care. Integral to these strategies are approaches that are simultaneously based in and led by communities. Key populations, service providers and related organizations should be engaged in situational assessment and planning (7).

BOX 1. COMPREHENSIVE PACKAGE FOR HIV SERVICES

The recommended comprehensive package, including for key populations and vulnerable groups, has two parts (9):

a) Essential health sector interventions:

- HIV prevention (condoms, lubricants, pre- and post-exposure prophylaxis);
- harm reduction interventions for substance use (needle and syringe programmes, opioid substitution therapy and naloxone for overdose prevention);
- HIV testing and counselling;
- HIV treatment and care;
- prevention and management of co-infections and co-morbidities;
- sexual and reproductive health.

b) Essential strategies for an enabling environment:

- review and revision of laws, policies and practices;
- antidiscrimination and protective laws to address stigma and discrimination;
- available, accessible and acceptable health services for key populations;
- enhanced community empowerment;
- addressing violence against people from key populations.

CHWs are an important potential conduit, in particular for vulnerable populations, for increasing access, acceptability and affordability. To achieve the greatest health gains, planners should use evidence and best practices to design programmes that ensure CHWs are trained, supported and resourced to deliver quality services.

4. This document refers specifically to five key populations: (a) men who have sex with men, (b) people who inject drugs, (c) people in prisons and other closed settings, (d) sex workers and (e) transgender people. People in prisons and other closed settings are included in these guidelines because of the often high levels of incarceration of the other groups and the increased risk behaviours and frequent lack of HIV services in these settings. The key populations are important to the dynamics of HIV transmission and their active involvement is also essential in an effective response to the epidemic (7).

2. HIV services that CHWs can deliver safely and effectively

Roles that CHWs can perform safely and effectively – with the requisite education, competencies, supervision and support – span preventive, diagnostic, treatment and care services, as well as linkages with the health system. When national policy permits, CHWs can provide education and testing services, counselling and referral, and can distribute condoms, lubricants, needle and syringes, and naloxone for opioid overdose prevention. In health facility and community settings, approaches to optimize the skills mix can entail delegating client visits and clinical review, screening and support for related opportunistic infections, and testing for specific co-infections such as TB and sexually transmitted infections. CHWs can safely deliver such services as follow-up HIV treatment with ART; adherence support and clinical monitoring; contributing to the identification and management of treatment failure; patient record and data management; addressing cross-cutting community issues; and integrating activities with other community health services.

National policy makers, planners and managers should examine the policy options in this guide for feasibility and acceptability based on the national context, national or subnational CHW profiles, and the roles of other members of interdisciplinary primary care teams. Section 3 of this document identifies the selection, education, management and system supports necessary to undergird safety and effectiveness.

The following HIV interventions were identified from evidence drawn from existing WHO normative products, country experiences, and literature reviews, complemented by assessments of experts in the WHO subject matter and experts for areas with limited published evidence.

Table 1, at the end of this chapter, summarizes the HIV interventions presented in this document that CHWs may deliver safely and effectively, when adequately supported and if allowed by the national regulatory system.

2.1 Prevention

CHWs can carry out a variety of preventive activities, including informing and educating communities on HIV and safer sex practices and injection practices, carrying out demonstrations on condom use, and distributing preventive commodities such as oral pre-exposure prophylaxis (10), condoms, lubricants, needles and syringes (9). The CHW role in risk reduction includes counselling, including among discordant couples; active support for partner disclosure and testing; education about the possibility of HIV transmission while on ART; and supporting positive prevention by people living with HIV. CHWs can provide general education and counselling on sexual and reproductive health, including on sexually transmitted infections (11).

CHWs also often play a role in providing integrated services and targeted interventions for key populations and vulnerable groups, including:

- comprehensive programmes on HIV and sexually transmitted infections for sex workers (12), men who have sex with men (13) and transgender people (14);
- HIV and hepatitis C virus programmes for people who inject drugs (15);
- programmes for people in prison and in other closed settings (16).

Effective promotion of condom utilization is particularly important for key populations. Unprotected sex and other high-risk behaviours such as substance use often coincide in key populations, in particular adolescents from key populations (17). As part of combination prevention approaches, pre-exposure prophylaxis – the use of antiretroviral medication to prevent the acquisition of HIV infection by uninfected persons – should be offered as an additional preventive choice for people at substantial risk of HIV infection. **Box 2** provides information on potential cost-effectiveness. Community educators, one role of CHWs, can reach populations in an acceptable and effective way to increase awareness of pre-exposure prophylaxis, generate demand and improve access (10).

BOX 2. POTENTIAL COST SAVINGS THROUGH THE USE OF PRE-EXPOSURE PROPHYLAXIS

In general, pre-exposure prophylaxis is expected to cost approximately 40% of the cost of HIV treatment, although this can vary depending on the relative costs of medical services, medicines and laboratory tests in different settings. Delivery models in which there are fewer facility visits for adherent pre-exposure prophylaxis users and shorter duration of pre-exposure prophylaxis use, and that optimize the skills mix through cost-effective role distribution, may reduce costs (10).

CHWs can support delivery of specific information and educational activities targeting young people through the use of adolescent-friendly services, including access to reproductive health services that include family planning and condom provision (11).

For pregnant women, CHWs also can promote HIV testing during pregnancy (18). They can counsel mothers on infant feeding options and interventions to reduce transmission risks, and can offer advice and counselling on family planning, safe sex and partner and child testing. They should promote antenatal care and provide active follow-up of mothers and exposed infants (6, 11).

CHWs should be trained in the use of pre- and post-exposure prophylaxis (10). CHW should be able to assess the type of exposure for risk of HIV infection and be able to recognize people at high risk of continuous or frequent exposure to HIV. They can play a role in managing the self-limiting side-effects of antiretroviral drugs, providing counselling and support. CHWs should have the ability to refer clients to formal psychological counselling as needed, and to services related to gender-based violence and post-exposure prophylaxis.

Educating and advising on safer sexual practices and injection practices and harm reduction in specific population groups (such as men who have sex with men and sex workers) is also a vital role for CHWs (12, 13). This should include encouraging and supporting minimizing risk of infection, alongside encouraging enrolment in specific HIV programmes. CHWs also have a role in discussing disclosure and encouraging partner testing.

2.2 Testing

There is evidence showing the effectiveness of CHWs in increasing uptake of HIV testing using rapid diagnostic tests (19). In non-laboratory settings, CHWs can perform sample collection, including blood, oral fluid, finger- or heel-stick, and simple point-of-care testing (11, 18). Evidence now supports appropriately trained and supported CHWs performing point-of-care CD4 cell count, cryptococcal antigen testing, and urine LF-LAM testing at peripheral sites. Subsequently, relevant samples are shipped or delivered to laboratories, and CHWs can collect results from the laboratory, communicate those test results and perform intensified post-test and follow-up counselling (19).

Counselling may include encouraging HIV testing for sexual partners, drug-injecting partners and social networks, children, and other family members through partner services, index testing and social network

testing, and discussing voluntary disclosure. CHWs can deliver tests, demonstrate how to use them and help clients with post-test support by linking clients to prevention, care and treatment services. They should offer appropriate repeat testing to those who receive negative results and promote self-testing.

WHO guidelines highlight the important role of trained providers in promoting HIV self-testing and HIV partner notification (18). HIV partner notification is a voluntary process whereby trained health workers, including CHWs, ask people diagnosed with HIV about their sexual partners or drug-injecting partners, and with the consent of the HIV-positive client, offer these partners voluntary HIV testing. WHO recommends that voluntary assisted partner notification services should be offered as part of a comprehensive package of testing and care offered to people living with HIV (18). With respect to early infant diagnosis and sexual and reproductive health services, WHO guidelines highlight the vital role of community networks and CHWs (20SRH). Services for adolescent girls of childbearing potential should be delivered using an adolescent-friendly approach (7).

2.3 Treatment

The WHO recommendation to “test and start” or “test and treat” means that everyone diagnosed with HIV who is eligible and ready should have the option for same-day initiation of treatment whenever possible, with the target of rapid initiation within seven days of diagnosis for all HIV-positive individuals. Challenges can include multiple clinic visits before medication is dispensed, little guidance on how to initiate treatment and how to determine if an HIV-positive person is eligible and ready, and difficulties providing specific services required for ART initiation within a single clinic visit. Though retention in care and viral suppression increase with test and start, those results can be contingent on people’s readiness to start, particularly among people who did not expect to receive positive HIV test results. Community awareness of ART and of people experiencing positive ART treatment results can enhance motivation to initiate and adhere to treatment.

Clinical trials cited in WHO guidelines in 2017 found that offering treatment to individuals at the first clinical encounter can increase relative 90-day uptake of ART by 30%; observational studies have shown an overall relative increase of 53% (6).

Strategies that include using CHWs to conduct community information sharing and awareness raising, as well as selecting CHWs from among people living with HIV, can increase linkage to care, as well as treatment acceptability and initiation. These approaches can increase retention of clients in HIV care and ensure proper medication use through the role of CHWs in health education, counselling and outreach activities. Potential effectiveness of these strategies are attributed to strong interpersonal relationships between CHW and clients and strong social and emotional support (21, 22). CHW programmes have had positive outcomes by addressing gaps in the HIV testing and treatment cascade through their role in providing counselling and adherence support at both the facility and community levels (23). CHWs have been shown to provide behaviour change counselling with good outcomes, including improved ART adherence (24), when provided with a clear role definition and scope of practice.

WHO recommends that trained and supervised CHWs can dispense ART between regular clinical visits, and trained and supervised lay providers can distribute ART to adults, adolescents and children living with HIV (19). These recommendations are supportive of differentiated service delivery that aims to delink clinical assessment from medication dispensing, whereby people established on ART can receive treatment through less frequent contact with health facilities. In a systematic review, virological outcomes were similar comparing people who received care from a community-based team and those who received care from health professionals at a health facility (25), with fewer people lost to follow-up in the community-based care group and both groups demonstrating similarly high levels of self-reported medication adherence.

Quality of care can be ensured by providing training, mentoring and supervision for CHWs, clear referral pathways, and effective monitoring and evaluation systems (19).

The provision of treatment by CHWs is acceptable to people living with HIV because it strengthens the relationship in the *community, can improve their psychosocial well-being, and empowers them to achieve better adherence* (7, 21).

2.4 Care and clinical management

CHWs can enhance the accessibility, uptake and quality of HIV services, as well as the dignity, quality of life and retention in care of people living with HIV (22). The support of CHWs in HIV clinics may reduce waiting times, ensure more streamlined client flow, and reduce the workload of other health workers (23). Quality of care and client outcomes are maintained when allocating responsibility for specific tasks to adequately trained CHWs (23), for example when CHWs provide ART counselling and testing. The CHW guideline (2) references evidence that optimizing the distribution of roles among health care teams, including rationalizing the tasks of skilled health professionals and those assigned to CHWs, can improve acceptability to individuals living with HIV. This may enhance dignity and quality of life and increase retention in care without decreasing the quality of care or patient outcomes (such as virological failure and mortality).

CHWs can provide intensified post-test counselling combined with follow-up counselling for individuals who test positive for HIV (5). Among key populations, CHWs can contribute to efforts that ensure that people who inject drugs are linked and referred to harm reduction, including opioid substitution therapy and needle and syringe programmes, where appropriate and allowed according to the national legislation and policy environment. Some individuals from key populations may lack social networks or supportive family to help them deal with their diagnosis, and additional counselling and peer support may be needed. CHWs also have a role in supporting screening for mental health issues (6).

Adolescents and young people living with HIV face significant barriers to accessing HIV services. Lay and peer-led interventions to support adherence to treatment, retention in care and viral suppression have shown significant promise in improving HIV outcomes. In 2021, WHO recommended that psychosocial interventions should be provided to all adolescents and young adults living with HIV; this recommendation recognized the particular value of peer-led interventions (19). Further, to improve engagement in care and health outcomes, WHO recommends the provision of adolescent-friendly health services. CHWs need to be engaged and their capacities further strengthened to provide quality adolescent-friendly services and to reach adolescents and youths, including those out of school, with health education and services.

With strong support, training, and supervision, CHWs have also been shown to be effective in managing patients with advanced HIV disease (6). Appropriate patient care and referral pathways need to be in place for those patients needing further investigation or management, including adequate equipment such as cell phones to access clients more easily and establish linkages with the health care system (25).

2.5 Cross-cutting issues: education and counselling

Community-based outreach involving CHWs effectively links people living with HIV to care, including through increasing HIV knowledge in the community. CHW programmes that comprise community engagement strategies need to be planned as part of a comprehensive and participative health system strengthening approach at community level (26).

CHWs can provide group counselling sessions, in addition to providing community-based education. Within households, they can support knowledge exchange and prevention skills, including reflecting on their

own experience (26). When clients are comfortable with the approach, CHWs can deliver education and health promotion messages in open spaces, where others from the community can overhear advice. An additional channel for preventive messaging can be within the activities of distributing commodities such as condoms and lubricants and conducting needle exchange (19).

CHW activities can create enabling environments for disclosure. Offering individual and group counselling must, in addition to leveraging the trusted positions of CHWs as community members, incorporate interpersonal communication skills. The ability to listen, empathize and deliver authoritative advice requires learning that addresses these skills as part of competency-based education, as addressed in section 3.

Community-based outreach involving CHWs effectively links people living with HIV to care, including through increasing HIV knowledge in the community, reducing HIV-related stigma and improving family support (26). HIV-positive individuals, and key populations and young people in particular, often prefer receiving health services from peers because of their experience of stigma and discrimination from other non-peer health workers. Employing CHWs who are also peers can encourage key populations to access services.

CHWs can provide group counselling sessions (19). HIV is a highly stigmatizing disease, and any community engagement strategies will need to be adapted to ensure non-discrimination of the target group resulting from awareness-raising activities. CHW programmes that comprise community engagement strategies need to be planned as part of a comprehensive and participative health system strengthening approach at community level.

In 2021, WHO recommends that HIV programmes should implement interventions to trace people who have disengaged from care and provide support for re-engagement. This recommendation recognizes the value of peer or health-care provider outreach and navigation back to care (19).

2.6 Cross-cutting issues: stigma and discrimination

HIV is a disease often accompanied by high levels of stigma. Any community engagement strategies will need to be adapted to ensure non-discrimination that may result from awareness-raising activities. People with HIV may be reluctant to disclose their status. The trusted position of CHWs, as members of both the geographical and the disease-affected community, can encourage people living with HIV to disclose their status.

CHWs can contribute to reducing HIV-related stigma and improving family support. Initially, as CHWs are known as messengers of health education, they can conduct visits – especially in households and communities where stigma and discrimination are high – as part of (broader) health promotion. Within this guise, they can identify safe places and times to conduct confidential HIV testing and treatment delivery.

People living with HIV, including young people, key populations and vulnerable groups, often prefer receiving health services from peers because of their experience of stigma and discrimination from non-peer health workers. Employing CHWs who are also peers can encourage key populations to access services.

In turn, this can lead not only to improved treatment outcomes and reduced transmission, but also to the creation of “HIV/AIDS-competent environments” (24), where people living with HIV are supported by HIV/AIDS-knowledgeable people in their households or social environments. This context reduces the quantity and duration of regular CHW visits, since treatment can be handed over to a household member who then encourages healthy behaviours.

HIV/AIDS-competent environments are further demonstrated to result in people with HIV choosing healthy habits such as testing, safer sex practices and treatment adherence. The impact is amplified when people

living with HIV become change agents within their households and subsequently within their communities. Progress against the disease over the past decades is attributed also to the grass-roots public advocacy of community-led groups, in terms of both demands for political engagement and efforts to destigmatize HIV.

2.7 Integration of activities with other closely related services

To advance client-centred care and integrated service delivery, consideration should be given to widening the role of CHWs to support other closely related services, such as screening for sexually transmitted infections, referring to care for sexually transmitted infections (7), and addressing TB in HIV programmes.

TB is the most common opportunistic infection for people living with HIV and causes one in four of HIV-related deaths: hence, taking advantage of opportunities to better use CHWs to strengthen approaches across both disease areas is of critical importance. The Engage-TB approach highlights key areas where CHWs working within HIV programmes can play a role in strengthening approaches to identification, diagnosis and referral of patients with symptoms of TB (27). These roles include:

- TB awareness-raising in HIV care settings
- community TB/HIV awareness-raising and stigma reduction →
- TB detection in HIV care
- referral between community HIV and TB services
- TB treatment adherence support in HIV settings
- TB advocacy in HIV settings. →

Viral hepatitis B and C are additional and frequent co-infections for people with HIV. CHWs can use rapid diagnostic tests for hepatitis B and hepatitis C infections and can also recognize signs and symptoms of liver disease and refer to health facilities for further disease assessment. For example, there is some evidence (28, 29) that offering hepatitis B surface antigen (HBsAg) testing in community settings may increase the acceptance and uptake of testing and rates of early diagnosis.

Similar to the evidence for HIV, peer-led interventions have been effective in increasing access to care and treatment and in increasing adherence to and retention in treatment of viral hepatitis, particularly for marginalized population groups such as people who inject drugs (29).

The differentiated service delivery approach aims to adapt service delivery to meet population needs and to reduce health system burdens. Providing integrated services through appropriately trained and supported CHWs takes into account the gradual shift to non-facility-based HIV service models, community networks and strengthened CHW roles (25).

CHWs can also provide a range of other preventive, treatment and care services across a range of service delivery areas and interventions, including family planning, reproductive, maternal, newborn and child health, and communicable and noncommunicable diseases. Opportunities should be explored to optimize relevant synergies with these other interventions.

Table 1. HIV services that CHWs can provide safely and effectively

Category	Services
HIV prevention (7)	Basic <ul style="list-style-type: none"> ■ provide information materials and educate on HIV and safe sex or injection practices ■ distribute prevention commodities (pre-exposure prophylaxis (10), condoms, lubricant, needles, syringes) ■ educate and counsel on sexual and reproductive health, including on sexually transmitted infections
	Pregnant women (7) <ul style="list-style-type: none"> ■ counsel mothers on infant feeding options and interventions to reduce transmission risks ■ advise and counsel on family planning, safe sex and partner and child testing ■ promote antenatal care ■ provide active follow-up of mothers and infants ■ provide support for ART for prevention of mother-to-child transmission
	Use of pre-exposure prophylaxis (PrEP) (6, 10) <ul style="list-style-type: none"> ■ provide information about pre-exposure prophylaxis and where to access it ■ assess type of exposure for risk of HIV infection ■ identify special considerations in cases of sexual violence, including referral to post-rape services
	Use of post-exposure prophylaxis (6) <ul style="list-style-type: none"> ■ provide information about post-exposure prophylaxis, including discussing risks and benefits ■ recognize people at high risk of continuous or frequent exposure to HIV ■ manage self-limiting side-effects of antiretroviral drugs ■ support adherence ■ provide counselling and support, and refer to formal psychological counselling as needed ■ refer for gender-based violence, rape or post-exposure prophylaxis services
	Tailored prevention activities for key population groups (6) <ul style="list-style-type: none"> ■ provide targeted education and advice on HIV prevention, including sexual prevention (condoms and lubricants), pre-exposure prophylaxis, management of sexually transmitted infection, prevention of mother-to-child transmission ■ support harm reduction for people who inject drugs (needle and syringe programmes, opioid substitution therapy and naloxone distribution) ■ encourage enrolment in specific HIV programmes, services and support groups ■ discuss voluntary disclosure and encourage partner, index case, social network or family testing ■ recognize needs for referral and support engagement in other services, such as mental health and family planning or contraception

Category	Services
HIV testing	<p>HIV testing and follow-up</p> <ul style="list-style-type: none"> ■ provide health education and information, create demand for HIV testing services and recommend or offer HIV testing, including via peer outreach to key populations ■ collect samples: blood, oral fluid, finger- or heel-stick ■ conduct and interpret HIV test (rapid test) ■ ship relevant samples to laboratory and collect results from laboratory ■ communicate HIV test results and undertake post-test counselling ■ encourage and offer HIV testing for sexual partners, drug-injecting partners and social networks, children, and other family members (through partner services, index testing, and social network testing) ■ discuss voluntary disclosure ■ demonstrate use of tests, deliver tests and help clients with post-test support for linkage to prevention, care and treatment services ■ offer appropriate repeat testing to people who test negative ■ promote self-testing (18, 19) <p>Country examples can be found in Annex 3 of the WHO <i>Consolidated guidelines on HIV testing services</i> (11).</p>
Clinical management of HIV (6)	<p>Client visit and clinical review</p> <ul style="list-style-type: none"> ■ register clients and triage health worker consultations ■ take vital signs ■ assess clinical signs and symptoms ■ assess pregnancy status, family planning and HIV status of partners and children ■ register results and fill in laboratory result forms ■ provide psychological support and counselling <p>Support management of specific opportunistic infections and other co-morbidities</p> <ul style="list-style-type: none"> ■ screen for and provide health education on chronic disease co-morbidities (hypertension, diabetes, chronic obstructive pulmonary disease) <p>Specific co-infections</p> <ul style="list-style-type: none"> ■ for TB, conduct TB screening, including cough and other signs and symptoms of TB, and refer people with TB symptoms for diagnosis ■ for viral hepatitis, perform rapid test for hepatitis B virus infection and hepatitis C virus infection ■ recognize signs and symptoms of liver disease and advise that relevant diagnostic tests are undertaken ■ recognize common side-effects of drugs for treating HIV and common co-infections ■ monitor effectiveness of treatment response

Category	Services
Treatment	<p>Treatment</p> <ul style="list-style-type: none"> ■ improve linkage to treatment ■ support treatment initiation ■ provide peer support ■ maintain client outcomes, including treatment adherence
	<p>Antiretroviral therapy (6)</p> <ul style="list-style-type: none"> ■ counsel clients on benefits and risks of ART and importance of adherence ■ explain food and other diet restrictions where needed ■ recognize the potential for drug interactions with other medications or substances, including food supplements and traditional medicine products ■ manage registration and file maintenance ■ complete paper and electronic medical records ■ distribute prescribed antiretroviral routine refills at community or facility level, including pre-packs
	<p>Adherence support (6, 19)</p> <ul style="list-style-type: none"> ■ conduct self-reported adherence checks and organize and convene facility ART clubs ■ provide health talks, education and support ■ support transition into differentiated care models, including providing multi-month refills ■ provide enhanced adherence counselling and support ■ undertake active and passive tracing of clients who are lost to care
	<p>Clinical monitoring (19)</p> <ul style="list-style-type: none"> ■ take vital signs ■ collect finger- or heel-stick blood samples for viral load testing or CD4 cell count ■ order viral load tests or CD4 cell count where viral load is not available ■ prepare and ship dried blood spot specimens ■ conduct simple point-of-care testing ■ collect results from laboratory ■ communicate viral load results to clients ■ ask clients to present to facility for detectable viral load results
	<p>Management of treatment failure (6, 24)</p> <ul style="list-style-type: none"> ■ recognize self-limiting antiretroviral drug side-effects and encourage clinic visits where necessary ■ recognize treatment failure from clinical symptoms ■ refer for – and at times provide – enhanced adherence support ■ order additional tests for treatment failure suspects ■ collect blood samples or dry blood spots for drug sensitivity testing

Category	Services
Integration of activities with other services	<p>Other services, including sexually transmitted infection, TB, hepatitis, sexual and reproductive health, mental health, alcohol and drug dependence services</p> <ul style="list-style-type: none"> ■ educate clients about TB when they attend HIV care services ■ facilitate community TB/HIV awareness-raising and stigma reduction ■ perform diagnostic tests for hepatitis B and C viruses ■ facilitate community referrals ■ facilitate referrals to sexually transmitted infection services
TB services provided within HIV programmes	<p>TB services within HIV programmes</p> <ul style="list-style-type: none"> ■ initiate isoniazid preventative therapy ■ identify TB-related symptoms, such as chronic fever or weight loss ■ request additional examinations, for example X-rays and ultrasounds, to establish diagnosis of TB in people with TB symptoms ■ provide TB/ART co-treatment to patients with sputum-positive pulmonary TB ■ monitor TB treatment response (clinical and laboratory) ■ recognize side-effects of TB or HIV medications and encourage and assist consultation or clinic visit when necessary ■ educate clients on TB when they attend HIV care services ■ use tailored TB/HIV community engagement strategies to address TB/HIV stigma, promote cough hygiene, TB-preventive treatment and HIV prevention, and ensure testing and treatment service availability ■ use TB screening protocols during HIV care to detect and refer symptomatic clients ■ facilitate HIV/TB client referrals, including access to transport between ART site and TB centres, to health clinics that have the capacity and resources to accept and treat clients ■ provide TB treatment adherence support in HIV settings, including home-based care ■ address stigma, encourage care seeking and identify other relevant support mechanisms ■ monitor availability of TB supplies, equipment and services in HIV settings and share data with health facilities
Cross-cutting issues	<p>Cross-cutting issues, including education and counselling, stigma, discrimination</p> <ul style="list-style-type: none"> ■ increase HIV knowledge in the community, thereby reducing HIV-related stigma ■ improve family support ■ Support tracing of people who have disengaged from care and provide support for re-engagement
Patient record and data management	

3. Policy and system support to optimize CHW programmes

3.1 Overall policy

The WHO CHW guideline recommends institutionalizing CHWs through national policies and defining at national level their roles, education requirements, and the services they can provide (**Box 2**). CHW programmes should be aligned with and be part of broader national health and health workforce policies and funding mechanisms. Ministries of health should clearly identify the roles that CHWs play and ensure their appropriate alignment within broader health system structures and programmes. Depending on context, the institutional location of a CHW programme may be within community health and primary health care, in human resources for health, or as components of disease-specific services and programmes such as HIV. As relevant, they should also be linked with national education, labour, finance and community development sectoral or subsectoral policies and frameworks. National policies should include CHWs as part of the health workforce, including addressing the labour rights of this occupational group.

Box 2. Selected policy interventions for integration of CHW programmes in health systems

- Align CHW programmes with and embed them in broader national health and health workforce policies and funding mechanisms.
- Institutionalize CHWs through national policies and define at national level their roles, education requirements, the services they can provide and incentive and remuneration packages.
- Ensure that HIV elements are adequately reflected, as relevant and appropriate to the role identified, in the selection criteria, pre-service education contents, training modalities and certification requirements of CHWs.
- Include among selection criteria, as relevant to context and health system needs, membership of the disease community – for example, people living with HIV to be selected and trained to become CHWs providing HIV services to the community.
- Provide CHWs, including those working on the delivery of HIV services, with contracts specifying roles and responsibilities, a remuneration commensurate with the role performed, qualifications and level of effort, and opportunities for career advancement.
- Ensure that supportive supervision systems are adequately resourced and implemented, and that they factor in requirements that are highly specific to HIV programmes, such as monitoring for stigma and discrimination and professional burnout.
- Promote integration of HIV services with other closely related and broader health services delivered by CHW programmes.
- Engage communities in identifying priority challenges and selecting, monitoring and supporting CHWs, and mobilize community resources for the delivery of community activities with regard to the control of HIV programmes.
- Harness CHW programmes for the collation, analysis and use of data feeding into national HIV monitoring and planning.
- Integrate procurement and distribution of HIV commodities and medicines in the overall health supply chain.

Source: Adapted from WHO *Guideline on health policy and system support to optimize community health worker programmes* (2).

In tailoring strategies to the country context, ministries of health should consider the prioritized interventions and associated roles of CHWs in relation to the broader health workforce, including their role as part of integrated primary care teams. Similarly, development partners involved in funding programme implementation should ensure that CHW guideline recommendations are incorporated into their grant agreements, planning, discussions with ministries of health and implementation.

The long-term effectiveness of CHWs requires dedicated financing. Countries at all levels of socioeconomic development have demonstrated the feasibility of prioritizing investment in large-scale CHW initiatives (2). CHW programmes should be viewed not as costs but as investments in health outcomes, employment, equity and economic development.

Human resources for health policies, plans and strategies should include adequate resources and use of evidence-based models to train, supervise, monitor and evaluate CHWs, enabling them to provide promotive, preventive and curative services across multiple diseases and interventions.

3.2 Selection, certification and training

The performance of CHW programmes can be optimized by adopting evidence-based policies on selection, training – including duration, competencies required, pedagogic approaches and delivery modalities – and certification of CHWs. These elements can contribute to strengthening the quality and skills of CHWs and can enhance their motivation and employability. For CHW programmes including an explicit focus on HIV services, along with related interventions, the recommendations can be tailored to include additional facets, for instance ensuring the inclusion of relevant HIV-related competencies in pre-service education curricula, in-service training activities and licensing requirements.

While selection should include criteria related to basic level of education, personal capacities and skills, and membership of the geographical community targeted, the understanding of community membership could include identifying candidates from within the disease community. People living with HIV know what it is like to be infected, undergo treatment, live with the challenges and communicate the benefits of seeking health services (20, 30). Selecting these individuals from people living with HIV for training as treatment adherence supporters may increase equity and acceptability (30). Similarly, people who use drugs may prefer to be counselled by people who have drug-using experience. Beyond providing services, peers can act as role models and offer non-judgemental and respectful support that may contribute to reducing stigma, facilitate access to services and improve their acceptability (12).

Evidence shows that CHW pre-service training that includes behaviour change communication, community engagement strategies and competencies, stigma reduction, and counselling skills can increase case detection and enhance trust between CHWs and communities (27). Through training modalities such as role play, CHWs can demonstrate skills acquisition and understand important linkages with other members of the primary health care team. Training must balance, however, the logic and efficacy of integrated service delivery with the capacities, skills and learning abilities of individuals selected from and by the communities to perform various roles. Using a blend of training on theoretical knowledge and practical skills, training should aim to develop technical competencies to advise on preventive measures, conduct screening, use diagnostic tools, treat clients, and refer them to higher levels of care. Activities and knowledge taught through classroom learning and clinical practice must be fully supported and reinforced when CHWs are deployed.

3.3 Management systems

Standard management functions, such as having contracts, job descriptions, proper remuneration, a system of supportive supervision, and pathways for career advancement, are accepted norms for other

occupational groups, but remain very incomplete and fragmented for CHWs. These core management elements are essential not only for delivering quality health interventions and improving HIV outcomes, but also for ensuring decent work. Countries should model human resource management functions for CHWs on those used for other health workers and on international benchmarks and good practices. Streamlining these approaches supports quality work and reinforces links between CHWs, key populations, communities and health systems. Acute challenges in this area include inadequate resources and supervisor time allocation for supportive supervision; inadequate, irregular or non-existent remuneration of CHWs; and low motivation and retention.

Planning

Planning for CHWs in adequate numbers, of appropriate types and with the requisite HIV competencies is critical for design of CHW programmes that can best support service provision to adequately meet population needs. Planners and managers of CHW programmes should calculate time requirements based on the health services to be delivered, target population, disease burden and population accessibility in order to identify CHW requirements. The success of HIV treatment and other related health and social services relies on collaboration between programmes and various layers of the health system.

In communities where HIV is prevalent, individuals often have concurrent health conditions that could be addressed through polyvalent CHWs. While integrated service delivery for HIV and related conditions should be the starting point in most settings and circumstances, more specialized CHW learning pathways and scopes of practice may be considered in some contexts to address specific disease needs, including for HIV. CHW knowledge, capacity and skills must be considered, however, with critical attention to the risk of overtasking and overburdening.

Public-private partnerships

Public-private partnerships should be optimized for alignment with public policy objectives. In some contexts, national governments may contract out HIV-related services to nongovernmental organizations (NGOs), and numerous donor-funded and CSO-implemented CHW programmes may emerge independently or may already exist. These initiatives have often led to innovation and a greater focus on equity in expanding access to services (in particular for key populations and vulnerable groups). Some level of operational independence has been a key factor in driving the success of several of these programmes. At the same time, it is important that public authorities maintain an appropriate level of oversight of CSO-managed CHW programmes. Government authorities should maintain the role of defining and monitoring standards, including on CHW roles, training, incentives and services. Finally, it is critical for the long-term sustainability of CHW programmes that the public sector progressively provides adequate resources for CHW programmes delivering HIV services to enable, when macroeconomic conditions allow, their transition to the public sector payroll and budget.

Supportive supervision

Supportive supervision reinforces skills through timely and regular performance feedback. National policies should set supportive supervision expectations and provide standard tools such as supervision checklists and job aids for CHW programmes, and should ensure that supervisors have the knowledge, skills and abilities to deliver structured and constructive feedback that improves CHW service delivery, motivation and retention. Further, supervision plays a critical role in ensuring delivery of quality care in a culturally acceptable way to people living with HIV.

CHW programmes should identify how appropriate supervisor-CHW ratios will be resourced, including making provisions for supervisor training, time allocation to perform duties and physical or financial resources for travel. Supervisors should receive training on psychosocial support. CHWs providing HIV services not only are witnesses to human suffering, as well as to stigma and discrimination, but they

also may be experiencing these challenges themselves, if they are people living with HIV. Supervision is essential to detecting and responding to signs of stress that can lead to burnout.

For CHWs working with people who inject drugs, supervision should be compulsory and weekly, and should address both the functions of the job and its impact on the worker, including maintaining good boundaries, processing and learning from experiences, and receiving support and assurance that they are not working in isolation. Burnout is an occupational hazard in the harm reduction field. It is crucial to provide continual training for improving technical and communication skills for health care workers and other staff who interact with people who inject drugs (15). Peer support can provide an important means of complementing and reinforcing traditional supervisory systems (16).

Fair remuneration

Fair remuneration is a standard labour right as well as a key factor driving motivation and retention. CHWs, including those working on the delivery of HIV services, should have contracts specifying roles and responsibilities, and receive a financial remuneration package commensurate with job demands, complexity, hours worked, training and roles undertaken. Financial packages or incentives should be harmonized across all national CHW programmes, including those managed by NGOs and CSOs, and should converge towards a common approach aligned with national salary scales and mechanisms to avoid skewing efforts towards higher-remunerated tasks or disease programmes and away from equitable service distribution.

3.4 Integration with facility services and community engagement

Supervision and the regular provision and replenishment of consumable supplies are two ways that CHW programmes link with the health system, both when the CHW programmes are directly part of the public sector and when they are operated by CSOs. While regular contact with supervisors can facilitate health facility readiness to accept referrals, emphasis must also be placed on including consistent and adequate medicines and other consumables needed by CHWs to perform their work within national supply chains. Evidence shows that access to diagnostic tests, medicines and commodities is critical to effective CHW delivery; stock-outs can negatively affect credibility and community confidence.

Community engagement

CHWs can also be a valuable resource for community engagement activities to enhance service delivery and acceptability of services to the population. Community engagement and advocacy have played a significant role for decades in raising the profile of HIV/AIDS on primary health care and political agendas. Creating resilient and sustainable health systems requires robust partnership, collaboration and consultation, and hearing the voices of civil organizations and people from key populations. Identifying population health needs, developing appropriate outreach strategies, creating demand, reducing stigma and discrimination and increasing uptake rely on representatives from geographical and key population communities. CHWs can also enhance holistic services by linking people with HIV to other community resources, such as food security interventions, government grants and social welfare support, income generation activities and succession planning (26).

Data collection and use

Data collection and use must be appropriately conceptualized and consider potential sensitivities. People living with HIV include high-risk populations that may have concerns about data collection and confidentiality, such as men who have sex with men, sex workers, migrants, and alcohol and substance users. Specific training and guidance should be designed for CHWs and communicated to

target populations. Aggregated data that preserve individual confidentiality must also be shared with communities to initiate discussions on service quality and delivery.

Access to tests and medication

Consistent access to HIV diagnostic tests and quality medications, subject to national regulations, is essential for CHWs delivering HIV diagnostic and curative services. Commodities and consumables for CHWs should be included within national supply chain planning. The activities related to supply provision offer opportunities for data collection and skills supervision, which reinforce links between CHWs and their adjacent health facilities. Including CHW commodities in national and subnational supply chain planning also supports planning by enabling programme managers to quantify and measure requirements.

4. Evidence gaps and research agenda

While the contents of the preceding sections can inform policy, planning and management of CHW programmes focusing on or including HIV interventions, further research can strengthen the evidence base on what works to improve the effectiveness of CHW programmes with a focus on HIV, including reliability of diagnostic testing, drug refill approaches and effectiveness of different counselling strategies.

Research is also needed to define the contextual factors and enablers (how, for whom, under what circumstances) and the broader health system requirements for and implications of supporting the implementation of several interventions simultaneously. For example, although evidence exists that broad strategies such as competency-based certification, supportive supervision and payment are effective, this evidence is not sufficiently granular to recommend specific interventions such as which education approaches, which supervision strategies, or which bundles of financial and non-financial incentives are most effective or more effective than others – and in which contexts.

Similarly, while there is evidence that CHWs can deliver a range of interventions, which implies consideration of polyvalent CHWs as a starting point, insufficient evidence is available to determine the ideal span of training and role attribution to support quality service delivery and skills retention. Additional research and evaluation is needed to determine which tools can be used in various settings, as well as optimal ratios for distribution of CHWs in different populations. To accelerate progress against HIV, a keener understanding and greater body of evidence are needed to provide guidance on the most equitable and cost-effective ways to reach target populations.

In light of “treat all” policy goals, additional evidence is needed to evaluate implementation of treat all for pregnant women, including whether participation in community adherence clubs is more effective than referral to primary health care clinics (31). Similarly, service delivery models across the life course are necessary, and additional studies may yield greater understanding of which models work at various points during the treatment lifetime. More research is needed regarding optimal approaches to the design and implementation of CHW-provided services for specific client groups (pregnant women, vulnerable groups and key populations, children, adolescents and young people, men and other marginalized populations) and the impact of employing differentiated care approaches to engage and retain those populations.

There are feasibility and ethical issues related to CHWs delivering some of the more specialized interventions related to adolescent sexual and reproductive health, including HIV, for which further research is needed (20). Research on the service delivery needs of adolescents living with HIV should examine models of delivery at different service levels, including for key populations and pregnant adolescents living with HIV; the integration of sexual and reproductive health in ART services for adolescents; interventions to support safe disclosure; treatment literacy; interventions to address mental health; and the impact of provider training and peer interventions.

Programme managers and implementers are encouraged to share research, evidence and data and to seek relevant partnerships with academia and other organizations to address these research priorities.

Despite the knowledge gaps presented in this section, the evidence underpinning the contents of sections 2 and 3 provides an adequate basis for identifying both a broad range of interventions spanning the HIV prevention, diagnostic, treatment and care continuum, and the cross-cutting health system enablers and policies that are required to optimize design and operationalization of CHW programmes addressing HIV needs.

5. Integrating HIV elements within the health system agenda and CHWs in the broader health workforce

Achieving the 95–95–95 goals for HIV relies on health systems that address barriers to access and can balance the delivery of integrated, people-centred health services with providing differentiated care services to key populations. Programme design should identify approaches that integrate relevant HIV requirements and interventions across disease programmes at all levels of the health system, including the community level, and in relation to governance, financing, systems management and service delivery aspects. The starting point should be the identification of health needs, resource gaps and system constraints.

Among the actions to strengthen CHW programmes and ensure their integration in broader health system mechanisms are conducting health labour market analyses, understanding resource requirements, and engaging relevant stakeholders in consultation and policy dialogue. A health labour market analysis should include assessing CHW programme feasibility and resource implications as part of a broader health workforce consideration of their acceptability and relevance. Stakeholders to be consulted as part of this process include members of key populations living with the disease, community organizations and leaders, NGOs and CSOs, the private sector, human resources for health and disease programmes, and government ministries, including health, finance, labour and education.

Partners for CHW programmes to address HIV include the following:

- **government:** national, subnational ministries of health, labour, education, finance;
- **United Nations:** WHO, UNAIDS and United Nations Children’s Fund country and regional offices and context-relevant agencies (for example, the International Labour Organization);
- **resource partners:** bilateral donors, international financing institutions, global health initiatives;
- **civil society:** NGOs, faith-based organizations, Red Cross or Red Crescent National Societies, professional associations, patient advocacy groups, civil rights organizations, medical specialty and medical student groups;
- **academia:** universities, colleges, training institutions;
- **communities:** key population groups, community and faith leaders, CHWs.

Embedding CHW programmes in health systems and aligning them with broader national health and health workforce policies and disease programmes is essential for institutional and financial sustainability. As relevant, CHW programmes should also be linked with national education, labour, finance and community development sectoral or subsectoral policies and frameworks. National programme managers should use a combination of CHW policies and related interventions based on the objectives, context and architecture of each health system. Similarly, development partners involved in funding programme implementation should ensure that the support they offer to CHW programmes is aligned with the national policy frameworks and mechanisms and is in coordination with other donor efforts.

Where the national context presents challenges to ministry of health or government implementation and operation of programmes to provide HIV and related services, NGOs, CSOs and key population or community-based organizations may be contracted to provide the services. In other settings, a niche or alternative service delivery strategy may emerge for private sector or civil society programmes to provide

HIV services through CHW programmes. The nature, origins and financing sources of CHW programmes run by NGOs, CSOs and community organizations may vary. Most typically, such CHW programmes may begin with programmes financed or operated by development partners and the implementing partners they support. Care should be taken to harmonize programme elements nationally and subnationally, particularly with regard to use of standardized training, supportive supervision, and supply and remuneration of CHWs, while preserving elements of flexibility that may enable these programmes or the institutions implementing them to realize their comparative advantage and unique value added. For sustainability, programme design should envision future possible ownership by government of the functions or components that the public sector intends to absorb, including taking over contracting of or directly managing and remunerating CHWs as part of government-led integrated service delivery teams. Where external resources are required to address short- and medium-term public funding shortfalls, sustainable planning should envision the eventual transition to domestic funding, including the inclusion of the CHW recurrent costs in the national wage bill or health budget, as applicable to the circumstances.

6. Conclusions

Accelerating progress towards the 95-95-95 targets requires the adoption of innovative strategies, including a more efficient and rational skills mix. Substantial evidence has accumulated over the last decades of the proven effectiveness of various types of CHWs in expanding (equitable) access to prevention, diagnosis, treatment and care, and supporting service delivery for HIV treatment.

This guidance document consolidates evidence on the effectiveness of CHWs across a range of interventions, drawing from published WHO guidance and, where relevant, other sources of evidence. Further, it adapts to and contextualizes within HIV programmes the recommendations on policy levers and health system enablers to optimize CHW programmes and their integration in health systems. As such, it provides a one-stop resource for planners and managers of CHW programmes targeting HIV services. By considering and adopting the policy options above, CHW programme managers and planners can better define and optimize CHW programmes supporting HIV-related services, and create the conditions for their future integration into the health system and long-term institutional and financial sustainability.

This document was developed using the best possible evidence from the CHW guideline and HIV-specific tools, as well as advice by thematic experts. As countries and the global community renew and refocus their efforts to achieve the ambitious targets to end the AIDS epidemic, new approaches and innovations may supersede existing strategies. Updating this document, therefore, will benefit from the contributions of practitioners who test these interventions and programme recommendations in the field.

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