Community Health Worker Relationships with Other Parts of the Health System

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28 September 2013

Key Points

- Well-designed, functional support and interaction between CHWs and health systems are essential for effective community health services.
- Large-scale community health services often are delivered by health systems that are inherently weak, posing considerable design challenges. In general, for community health services to function well, adequately strong support systems are needed.
- Community-based health services should be seen as the foundational first tier of the health system.

INTRODUCTION

The stronger the health system, the more likely it is that any existing community health worker (CHW) program is in fact indistinguishable from the rest of the health system. However, when health systems are weak and resources are scarce, CHW programs are often created as add-ons intended to increase coverage or address unmet health needs and are inadequately integrated with the broader health system. In this chapter, we discuss the interface between CHW-delivered services and the broader health system. We offer a set of considerations regarding these linkages for policymakers and program planners as they decide to either launch a national CHW program or, if one currently exists, how to strengthen or scale up services currently offered.

The term "health system" in this chapter refers to both governmental/ministry of health (MOH) services, as well as private and nongovernmental organization (NGO) health programs, unless otherwise noted. The World Health Organization (WHO) defines a health system as "all the activities whose primary purpose is to promote, restore, or maintain health."[1] As the 2000 World Health Report goes on to say:

> This … does not imply any particular degree of integration, nor that anyone is in overall charge of the activities that compose it. In this sense, every country has a health system, however fragmented it may be among different organizations or however unsystematically is may seem to operate. Integration and oversight do not determine the system, but they may greatly influence how well it performs.

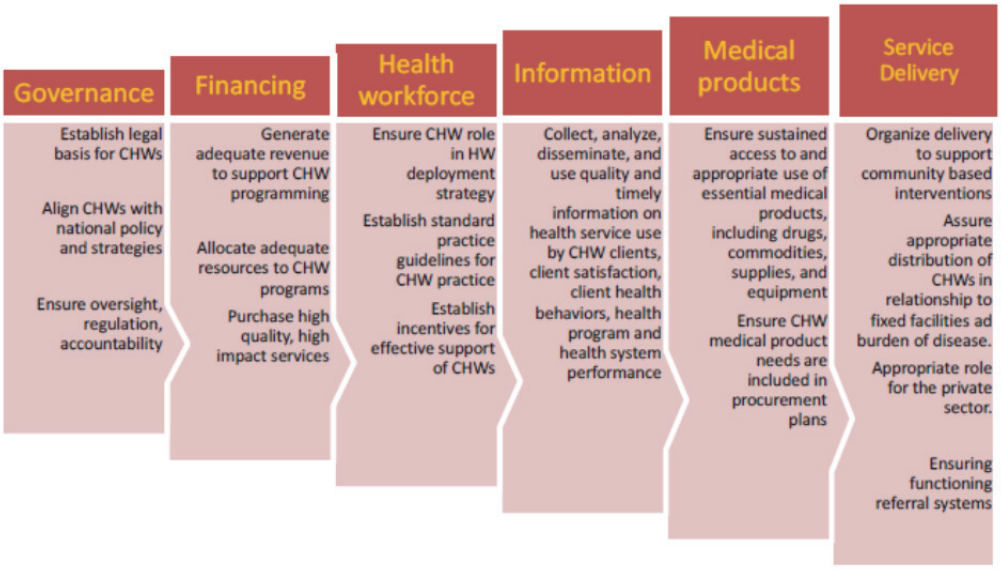
A health system is interconnected, dynamic (i.e., changing over time), self-organizing, and nonlinear. Programs that are to be integrated with this complex system should be designed with the dynamic and adaptive nature of the system in mind. That is, unintended consequences and feedbacks within the system as a result of a CHW program, for example, should be important considerations at the planning stage. "Systems Thinking" can serve as a tool for this kind of exploration.

To facilitate this, the WHO building blocks—although they simplify the health system—can be used to identify how the different interconnected parts of the system will be affected and how they will affect each other. The WHO building blocks[2] are shown in Figure 1, along with their potential points of intersection with CHW programs. In a recent evidence synthesis process, the reviewers concluded, after a deep and wide review of existing evidence, that:

> The need for a clear relationship between the CHW and the formal health system is [a] … consistent theme. In part, this serves to legitimize and give needed status to the CHW within the community to be served. Clearly defined linkages also serve to clarify the responsibilities of the CHW to her community, as well as to other health providers; to establish supervisory and support relationships and define modalities for in-service training; and to create referral mechanisms and establish pathways for supply of essential commodities. There are, however, different visions of this relationship, and programs in different countries may reflect this. On the one hand, CHWs may be generally considered to be part of the formal health system, extending services into the community. On the other hand, CHWs may be generally considered to be primarily community members managing the interface with the formal health system …. [I]n practice, they can be combined to varying degrees. There is no conclusive evidence supporting any specific view, but clarity, in any case, is desirable.[3]

The question of the CHW's role either as the lowest rung in the ladder of a service delivery team or as a community leader advancing social change arises frequently in the CHW literature. It has been described in various terms, such as Werner's and Sander's famous phrase referring to a CHW as a "lackey or liberator."[4] On the one hand, CHWs can mobilize and empower communities to improve their health with little in the way of outside support or resources. On the other hand, CHWs are extension agents of a vast formal health system and provide needed messages and commodities on behalf of the health system. In practice, over the past decade, large-scale public sector CHW programs have seen CHWs first and foremost as peripheral-level service providers/ promoters within government health services.

Figure 1. Points of intersection between CHW programs and health systems[3]



One recent review of CHW programs concluded that CHWs are not a "panacea for weak health systems" and they require well-structured support from the formal support systems with which the CHWs are linked.[5] The support needed includes: a clear role definition with defined tasks, adequate incentives/remuneration, appropriate training, and effective supervision. While active involvement of the community is an ideal goal (discussed further in the chapter on community participation, Chapter 12), there are many examples in which CHW programs work effectively even when communities play mostly a passive role. For instance, some CHW programs utilize full-time, paid health extension workers (HEWs) or health auxiliaries who effectively discharge their functions by manning mobile immunization outreach clinics in communities with no health facilities. Even in this case, however, community involvement is needed, at least in the sense that community members need to know when the immunization team is coming, and they need to be aware of the importance of immunizations and have confidence in the quality of services provided by the immunization team.

One of the main considerations for policymakers, program planners, and implementers in planning a new large-scale CHW program or in strengthening an existing program is the establishment of a functional relationship between the new services and the existing system, so that support and gradual improvements in both the facility-based health system and the community health services can be achieved. Large-scale CHW program experiences from the 1980s (described in the introductory chapter, Chapter 1) have demonstrated that, too often, rapid program scale-up without adequately addressing systems requirements (discussed further

in the chapter on planning, Chapter 3) can result in the CHW program collapsing and can further weaken an already weak health system.

A review of various large-scale CHW programs, established in the 1980s, highlighted another important observation:

> ... CHW programs were conceived and developed as "vertical" programs, with little reference to existing health systems. Unlike other vertical programs, however, they had little extra funding. The programs were grafted onto, rather than integrated into, existing health systems. They were largely imposed from the center as a national response to an international emphasis on primary health care.[6]

There are a number of critical questions to answer in this regard: How mature is the health system in general? Is the primary health care (PHC) system a priority? For example, are PHC facilities accessible? Are they staffed with trained and committed health care workers who are equipped to do their jobs? Or are they far away from most of the population, minimally staffed (with frequent staff absences), and poorly equipped? How does the health system vary from one area to another, and what are the implications for CHW program planning? While it is not possible to address each contextual variation and its implications in this document, we will offer some guiding principles that can help in decision-making.

The following questions can help drive sound decisions for CHW programming. Each question should be considered given the country's context, economic reality, and social norms:

1. What is the rationale for establishing, strengthening, or expanding a CHW program?
2. How will the CHW program fit into the health system?
3. How should CHWs relate to and be supported by the rest of the health system to adequately fulfill their tasks and to enable the health system to achieve its goals?
4. What governance and management structures are needed to adequately support CHWs?
5. What challenges do CHWs face in interacting with the rest of the health system?
6. What arrangements for linkages between CHWs and the rest of the health system are likely to be most functional?

WHAT IS THE RATIONALE FOR ESTABLISHING, STRENGTHENING, OR EXPANDING A COMMUNITY HEALTH WORKER PROGRAM?

A current global health challenge is extending a basic package of high-quality essential health services to everyone. This universal health care goal challenges governmental and NGO programs to reach underserved mothers, children, and families. In many settings, it may be appropriate to create new CHW programs, scale up existing programs, expand the responsibilities of currently functioning CHWs, or create a new level of CHW worker to ensure an adequate ratio of households per CHW. Notable examples of CHW cadres that have been established over the past decade include the Accredited Social Health Activist (ASHA) worker in India (established in 2005) and the health extension worker (HEW) in Ethiopia (established in 2003), although there are many others. South Africa is now in the process of establishing a new CHW program. Rwanda is expanding its CHW program, so that there will be six CHWs in every village. Female community health volunteers (FCHVs) in Nepal have been gradually assuming an expanding role over the past two decades, from distribution of vitamin A capsules initially to provision of many aspects of maternal and child health, including diagnosis and treatment of childhood pneumonia and home-based neonatal care. Ethiopia is now in the process of adding a

lower tier of community health volunteers (CHVs) who will each be responsible for 10–20 households and will support the work of the HEW, who is responsible for 500 households.

However, an important first step in considering a CHW program is to review the leading causes of preventable or treatable conditions in a country's population, the extent to which these conditions are being addressed by the current health system, whether there are services that CHWs can effectively provide that meet these needs, and whether CHWs are the most effective and efficient strategy for narrowing this gap. For example, in settings where access to the most peripheral-level health facilities is a problem for a significant proportion of the population, provision of services, such as immunization, on an outreach basis can increase coverage. Likewise, in settings with high under-five mortality and high maternal mortality, CHWs can expand access to antibiotic treatment of pneumonia or distribute an oral medication that women can take after childbirth at home to reduce the risk of postpartum hemorrhage (e.g., misoprostol). CHWs can also help the family prepare for essential newborn care, counsel on recognition of danger signs, and provide chlorhexidine for umbilical cord care where allowed. Further, CHWs can offer a range of key services, such as support for immunization, distribution of vitamin A capsules to children, and the promotion of nutritional practices for children (e.g., exclusive breastfeeding during the first six months of life and appropriate complementary feeding after six months of age). If these services are not reaching the population or the prevalence of optimal behaviors is low, then these may be appropriate elements of the CHW role.

Other possible roles that CHWs can play under certain conditions include selected PHC services, such as treatment for other life-threatening conditions such as malaria and diarrhea, minor illnesses, first aid for injuries, and provision of family planning (FP) services. If coverage of key interventions is low, if currently available facility-based health care resources are limited, or if funds are not available for building, operating, and staffing new peripheral health facilities, then in principle, CHWs could expand the reach of the health system and improve its effectiveness.

However, as we emphasize throughout this guide, the costs of operating an effective CHW program are, in fact, much greater than often anticipated, and normally functional services delivered by CHWs require a functional PHC system. (See Chapter 4 on financing.) Further, the costs associated with introducing a large-scale CHW program may require external donor support, at least initially. In Nepal, with external donor support, FCHVs were established as a government program in the late 1980s, but because of inadequate funding, the program became relatively inactive. This inactive cadre was stirred back to life with the introduction of the vitamin A supplementation program, which was run on a fairly vertical basis with significant external support. As this program achieved high levels of coverage, it was possible to expand the FCHV role and integrate them more closely with the government health system.[7]

Notably, CHWs can provide a link for reaching the population with health-promoting messages (e.g., nutritional practices, hand washing, latrine use, cleanliness, use of clean water, and FP) and with preventive health services (e.g., vitamin A supplementation, growth monitoring, and promoting immunizations). Evidence concerning the effectiveness of CHWs in achieving health gains in low-income countries with a high disease burden has been summarized recently.[8] CHWs can also inform community members on what health services are available, when, and at what cost (such as for an upcoming visit of an outreach team to immunize mothers and children), refer patients to health facilities in the event of a life-threatening emergency, and publicize the existence of a voucher or fee waiver program to which beneficiaries are entitled. Finally, there is a growing recognition that CHWs can perform surveillance and vital events reporting functions.[9, 10]

While there are many roles that a CHW cadre can potentially play, how appropriate these may be and whether or not they can be adequately supported in any given setting will depend on the characteristics of the existing health system. For example, if CHW functions entail dispensing commodities, a functional supply chain is required. CHWs require training and supervision, as well. This supervision is often assigned to current health staff members who may be unfamiliar with the daily tasks of CHWs, who may already be already over-worked, and who may have had no prior training or experience with supervision. All too often, actual provisions for support are inadequate.

HOW WILL THE COMMUNITY HEALTH WORKER FIT INTO THE HEALTH SYSTEM?

In most cases, CHWs receive training authorized and delivered by a national health system or one of its sub-units. Most CHW functions relate, in one way or another, with the rest of the peripheral health system, such as by creating demand for services provided in health facilities, receiving training and supervision by health professionals, and receiving supplies, educational materials, drugs, and equipment. How the relationship between CHWs and the health system is seen can be important for their legitimacy, as perceived by the community and by the CHWs themselves. If CHWs refer patients to a health facility, but those patients find that the health facility cannot provide the service, the effectiveness and credibility of the overall CHW program and of individual CHWs is compromised. And if CHWs are trained to provide an important service, such as community-based case management of childhood pneumonia or malaria, and the logistics system cannot reliably provide commodities required for these services, the program effort will be ineffective and the credibility of the CHW and the health services will be undermined.

Depending on the particular role of CHWs, the health system can provide the following support critical to the functioning of CHWs:

- Motivation and vocational support
- Information about what is going on elsewhere in the health system
- Supplies, medicines, and equipment
- Knowledge about who the higher-level providers are, what services they provide, and how to handle referrals

This interaction between CHWs and the health system provides higher-level health providers with an understanding of who CHWs are and what they are doing.

When CHWs are able to effectively link patients who need help with higher levels in the health system, the community recognizes the CHW as a respected source of information about the referral process, which ultimately provides the community with an important resource for accessing the health system. For example, a CHW could provide information to a patient with symptoms of tuberculosis (TB) on screening services at a health facility. In an increasing number of programs, CHWs collect sputum samples from such patients, have them tested at a government facility, and then provide directly observed therapy (DOTS) to patients testing positive for TB.

In other programs, CHWs assess for danger signs among sick children and pregnant women and facilitate care-seeking at facilities. Even when CHWs are trained to perform a very narrowly defined set of tasks, community members often come to CHWs for advice on other health conditions. Therefore, the CHW's ability and confidence to guide patients appropriately can help

improve effectiveness of the health system and serve as a point of entry to this system. Similarly, when facility-based health workers can confidently refer patients back to the CHW for follow-up, the health system functions better and quality of care can improve. In many programs, HEWs or health auxiliaries divide their time between peripheral health facilities and the community.

HOW SHOULD COMMUNITY HEALTH WORKERS RELATE TO AND BE SUPPORTED BY THE REST OF THE HEALTH SYSTEM TO ADEQUATELY FULFILL THEIR TASKS AND TO ENABLE THE HEALTH SYSTEM TO ACHIEVE ITS GOALS?

A CHW might begin her work each day at a PHC center and check in briefly with other members of the health staff before heading out into the community. In this scenario, the CHW is part of a PHC team that includes higher-level staff, all of whom are responsible for a defined population of people. She can replenish the supplies she needs while at the health center. Additionally, she is in close regular contact with her supervisor when any issues or problems arise since her supervisor is a member of her PHC team. She is also in close and frequent contact with other CHWs who work on her team. Notably, she and other CHWs have monthly meetings of the PHC team and regular opportunities to continue their education. In such an instance, she can submit a monthly report, and her health care team knows she is working effectively or not. An example from Brazil is presented in Box 1. In a more resource-constrained or rural setting where the beneficiary population is dispersed and transport between the community and the peripheral health facility is limited, CHWs may have much less contact with the peripheral health facility, coming in only once or twice a month for supervision, training, and replenishment of supplies. A relevant example from Nepal is presented in Box 2.

Box 1. The Brazilian CHW Program—points of contact with the health system

There are now approximately 240,000 community health agents (CHAs) who provide services to almost 100 million people in 85% of Brazil's municipalities.[11] They receive eight weeks of initial training and four weeks of field supervision. They are salaried by the government's *Programa Saúde da Família* (PSF, or Family Health Program), and they spend most of their time visiting households, focusing on maternal and child health, as well as on hypertension, diabetes, the health needs of bed-restricted persons, and other local community health priorities. They work as part of a local health team (called an *Equipe da Estratégia Saúde da Família*, or Family Health Care Team), comprising a doctor, a nurse, an auxiliary (assistant) nurse, and a minimum of four CHAs.[11-13] More recently, many teams now also include a dentist, a dental hygienist, and a dental hygiene technician.[14, 15] These teams are based at PSF clinics and provide services to 600–1,000 families or a maximum of 4,500 people. With 4–6 CHAs on each team, each is responsible for 150 families.[11] They operate primarily outside of the health facility, providing health education and health promotion.[12] There are no structured opportunities for career advancement for CHAs.[15] They are hired through special contracts which give no job security or benefits.[16] Their salaries are minimum wage (about US$500 per month), but they are paid regularly and on time in most cases.

The Family Health Care Team provides comprehensive care through promotive, preventive, recuperative, and rehabilitative services. CHAs provide such services as the promotion of breastfeeding; the provision of prenatal, neonatal and child care; the provision of immunizations; and depending on the context, the clinical management of infectious diseases, including screening for and providing treatment for HIV/AIDs and TB.[17, 18] CHAs also register the households in the areas where they work [15] and are expected to empower their communities and link them to the formal health system. Although CHAs were trained to provide community case

management of childhood pneumonia and give injections, these practices have more recently been stopped because of pressure from medical and nursing associations.[16]
CHAs are overseen by nurses who spend 50% of their time in this supervisory role and the rest of the time in a clinical role. This supervisory support has been identified as critical to the program's success.[19, 20] These CHAs are closely integrated with formal health services.[21] They have strong referral systems in which they report any ill person within their catchment area to a nurse. The CHA may, at times, escort the person to the local health facility. Upon discharge, the CHA is expected to follow up with the patient.[22]

Normally, CHAs spend four to six hours a day visiting homes. The other two to three hours each day are spent at the health facility, working on family registers, discussing issues with the supervisor, and participating in training activities. The Family Health Care Team meets weekly for two hours or so.[23]

Note: See further details in the Case Study on Brazil CHWs. Camila Giugliani provided additional information.

Box 2. The Nepal CHW experience—points of contact with the health system

Nepal has three cadres of CHWs: FCHVs, and two paid cadres of HEW, namely, maternal and child health workers (MCHWs) and village health workers (VHWs). The most peripheral health facility is called a sub-health post, which serves a population of 5,000–10,000 people. It is headed by an auxiliary health worker (AHW). The MCHW, who is female, and the VHW, who is usually male, are also based out of the sub-health post, although VHWs and MCHWs spend a significant proportion of their time seeing patients at outreach sites. The AHW supervises the MCHW and the VHW. These three workers are all paid by the government.

FCHVs are by far the most numerous group. Nationwide there are 49,000 FCHVs (compared to 2,500 MCHWs and 3,000 VHWs). Each sub-health post typically has one AHW, one VHW, one MCHW (although in recent years some additional staff members have been added, in at least some sub-health posts) and at least nine FCHVs.[19] These cadres work closely together, supporting one another's work. For example, FCHVs mobilize communities for immunization provided by VHWs while FCHVs distribute vitamin A and provide other services to groups of women and to households with logistical support from the other cadres.[19]

FCHVs work an average of five to eight hours a week providing services either at their own homes or elsewhere in the community. They receive some financial compensation for certain functions (e.g., for attending training or supporting certain program activities, such as polio or measles campaigns), but most of their work is uncompensated.[24] MCHWs and VHWs are paid, full-time government employees; although, similar to FCHVs, they are recruited from and resident in the communities they serve, and they work under non-transferable contracts.

FCHVs provide a range of services. They mobilize the community for immunization campaigns. They provide DOTS for patients with TB. In addition, they promote healthy behaviors through motivation and health education.[25] They also provide basic health services, such as detection and treatment of common childhood illnesses, including the diagnosis and treatment of childhood pneumonia and the treatment of diarrhea with oral rehydration fluid and zinc.[25-28] They are now beginning to provide home-based neonatal care. They also dispense medications, such as misoprostol (for prevention of postpartum hemorrhage to women who deliver at home), chlorhexidine for newborn umbilical cord care, and FP supplies.[29]

MCHWs are full-time workers whose services include the provision of antenatal care, FP, and

clinical case management for childhood illnesses at outreach sites, some health education/promotion, and participation in immunization and vitamin A campaigns. They also facilitate referrals and are responsible for the supervision of FCHVs.[29]

VHWs are also full-time workers whose services are similar to those offered by MCHWs.[19] Their functions include a special focus on provision of immunizations and supervision of FCHVs.[29] FCHVs are supposed to meet every month at the sub-health post. Usually, the FCHVs collect their supplies during this monthly meeting. FCHVs also generally have contact monthly with the VHW, when he is doing immunization outreach activities in her area. This provides an opportunity for submitting reports and restocking supplies. The sub-health post gets its supplies from the district headquarters.

Note: See further details in the Case Study on Nepal CHWs. Ram Shrestha provided additional information for this.

Boxes 3 and 4 describe points of contact for two large-scale CHW programs, one in Peru and the other in Bangladesh. Box 5 describes how two volunteer CHW programs guided by organizations that are not part of the government's regular PHC program interface with the government's PHC program. One of the volunteer CHW programs is led by NGOs and the other one is led by vertical disease programs in the MOH.

Box 3. The Peru CHW Program—points of contact with the health system

In Peru, the most common type of peripheral rural health facility in the national MOH system is the health post, where a nurse or midwife is based along with 1–3 health technicians, although some posts have a physician. The responsibility for supervision of the community health work is shared among all the members of the health staff, who are each given responsibility for certain communities in the health post catchment area and for the CHWs working there. In addition to their primary responsibilities for patient care in the health post, the health staff members visit these communities once or twice a month and support the work of the CHWs while they are there. The supervisory staff members often visit villages as part of a team that provides curative care in one-day community clinics. One of the duties of CHWs is to advise the community of the day the health team is coming. CHWs also come to the health center every month or so for meetings, supervision, and continued training. Unfortunately, it is not uncommon for the health staff to make their community visits on an irregular basis, thereby undermining the effectiveness of the program.

Note: Laura Altobelli provided information for this.

Box 4. The Building Resources across Communities (BRAC) CHW Program—points of contact of an NGO CHW program with the health system

BRAC now has approximately 100,000 CHWs called Shasthya Shebikas who work several hours a day visiting homes to provide a broad array of promotive and curative services. As CHWs reporting to an NGO program, they have their own system of supervision within BRAC (described in Chapter 9 on supervision). But they also link into the formal MOH system in important ways. They mobilize women and children in the catchment areas to attend satellite clinic sessions when a mobile government team comes to give immunizations and provide FP services, usually once a month. They also mobilize their clientele to participate in national government health campaigns and usually serve as outreach workers for special campaigns, such as vitamin A distribution and deworming. In addition, Shasthya Shebikas identify patients with symptoms suggestive of TB and, on selected days, collect sputum specimens from them. A second-level supervisor (i.e., the

Program Organizer) takes these specimens to the government district health facility, where they are tested. Then, those who tested positive are given DOTS by the Shasthya Shebika under authorization from the MOH.

Note: Akram Islam provided information for this. Other sources of information: [30, 31]

Box 5. Two examples of linkages between community health volunteer programs and the health system—care group volunteers and community health volunteers working with the community-directed intervention programs

Here, we provide two examples of community health volunteer (CHV) programs where the interaction between the volunteer CHW and the government health program is quite limited. One example, called the Care Group Model, is an approach that is increasingly being used by NGOs to improve maternal and child health in high-mortality settings. The other example, the Community-Directed Intervention (CDI) Model, involves vertical disease control programs that have developed an approach to engaging CHVs.

Care Group Volunteers

The Care Group approach employs a paid promoter to travel from village to village to meet with Care Groups, which consist of 10 Care Group Volunteers (CGVs), each of whom is responsible for approximately 10 households. The Care Groups meet once or twice a month for two hours or so. At each meeting, they learn a new message to convey to their 10 households. The messages are usually related to key maternal and child health practices or when to seek care at a facility. This approach has been used by more than 10 NGOs in 30 different projects around the world and is now being applied within an MOH program in one country (Burundi). Generally speaking, the CGVs do not have any formal direct interaction with the government health system except when they accompany patients to a health facility for treatment or when they mobilize community members to participate in government-sponsored outreach services (e.g., immunization sessions) or campaigns (e.g., child health days or vitamin A distribution). The NGO project itself maintains an ongoing relationship with the government health system. In that, the NGO informs the formal health system about what the CGVs are doing and also about the health problems the CGVs are encountering. In most Care Group projects, the CGVs also collect information about births and deaths, which is shared with the government health program, usually at the district level.[9, 32-34]

Although there are not yet examples of large-scale public sector CHW programs built around the Care Group model, in principle, such a program could be developed—either directly by the MOH or through MOH contracts with NGOs. An early experience with direct application of the Care Group model is currently underway in Burundi. This experience should yield helpful learning on what conditions need to be created and sustained for effectiveness at scale, and how that can be achieved.[35]

CHVs Providing Targeted Vertical Interventions

In programs using the CDI approach, communities are given important responsibilities for the planning and implementation of highly targeted interventions, typically aimed at high-priority infectious diseases.[36] CDI was first adopted by the African Program for Onchocerciasis Control (APOC) in the mid-1990s to help ensure and sustain the provision of ivermectin treatment for more than 75 million Africans, many of whom live in remote locations. APOC has worked with communities to take ownership of the process of distribution and the responsibility for defining by whom, when, and where the intervention will be implemented. The community also decides on how implementation will be monitored, and what financial incentives or other support will be provided to the implementers. The community then selects implementers to be trained by APOC, and directs the implementation process.[37]

This approach has been adopted for several other vertical disease control programs and has been used in programs focusing on distributing vitamin A supplementation and insecticide-treated bed nets, as well as on providing home management of malaria and short-course directly-observed treatment of TB. By guiding communities in the process and providing training, supplies, and medications to CHVs, high coverage of key interventions can be achieved at scale—and at low cost.[38]

Note: William Brieger contributed to the description of the CDI program.

WHAT GOVERNANCE AND MANAGEMENT STRUCTURES ARE NEEDED TO ADEQUATELY SUPPORT COMMUNITY HEALTH WORKERS?

Programs making use of CHWs differ considerably in their provisions for oversight from the health system itself and from the community. Where support and accountability are in effect absent, performance will tend to be poor. In many settings, formal structures exist that, in principle, have the potential to provide this function. For example, there may be village health committees or development committees. Or there may be formal committees or boards overseeing the work of the local peripheral health facility. Or health and other social services may fall under the responsibility of local municipal government. But how active such bodies are and how effectively engaged they are with regard to community health services can vary greatly across settings. There is no one answer on how best to ensure support and accountability, but those involved in developing community health services need to give serious attention to ensuring that this function is operating effectively. (Other requirements for a functional supervision system are discussed in Chapter 9.)

WHAT CHALLENGES DO COMMUNITY HEALTH WORKERS FACE IN INTERACTING WITH THE REST OF THE HEALTH SYSTEM?

There is a notable lack of published studies and reports on how CHWs in large-scale programs function. Nevertheless, a review of published literature and discussions with informed individuals who are knowledgeable about these large-scale CHW programs reveal, as described below, common challenges CHWs face.

Lack of Respect of CHWs at the Interpersonal Level

Many CHWs have reported feeling a lack of respect in their interactions with health professionals and in the way these health workers talk about CHWs to patients. Health professionals, and physicians in particular, have a long history of a lack of respect for lower-level health staff, but this problem also results from a lack of understanding of the role CHWs play in the health system. There may be minimal interaction between CHWs and higher-level staff beyond the CHW's immediate supervisor. Higher-level staff may be in disagreement with decisions on task-shifting, as CHWs take on functions that in the past were performed only by them. New roles for CHWs and the rationale for such changes need to be made clear to other cadres of health workers in the system.

CHWs may also experience disrespect from health professionals due to gender, socio-economic, and educational differences, which arise from paternalistic and hierarchical attitudes. Some health professionals at peripheral health facilities have resisted the integration of independently functioning CHWs with the health system and instead have sought to co-opt them to become assistants for their own work within the facility. These types of challenges should be anticipated and addressed proactively.[5, 39]

Lack of Respect for CHWs by Health Professionals Who Provide Curative Care

Health systems have tended to prioritize facility-based provision of care of patients with acute illnesses. Health professionals, particularly physicians providing curative care at higher levels in the health system, are often unaware or worse, dismissive, of the potential of CHWs to promote care-seeking for preventive services and improved health practices in the community.

There may be other indications of a lack of support in the health system for the CHW program at higher levels in the system, for example, funding cutbacks or actual cessation of the program. To reduce this likelihood, CHW programs need champions in high levels—both high in the leadership and administration of health systems and high in the political system more broadly—who can advocate for CHWs and their importance to effective health system functioning, and to improvement of population health.

Management of Acute Illnesses and Referral

In many settings where access to health services is limited, especially in isolated rural areas, patients and their families seek advice or care from CHWs when an illness arises (both minor and serious), regardless of what training the CHW may or may not have had. To ensure that community members receive the care needed, CHWs, community members, and other members of the health system need orientation on health system referral. In many programs, health systems provide special incentives and rewards for both patients and CHWs when CHWs help and support the referral process. When CHWs have received training about what kinds of conditions require referral (such as mothers and children with danger signs of serious illness) and which ones do not (such as cough and cold in children without signs of rapid/difficulty breathing or chest in-drawing), then better outcomes can result. Having formal referral provisions can help make this work more effectively. Widespread use of mobile phones opens up new opportunities for linking patients with higher-level care.

Inability to Obtain Needed Medicines and Supplies

A common problem encountered by CHWs in large-scale programs has been the inability to resupply medicines and other commodities when they are needed. It is counterproductive to mobilize CHWs if medicines and supplies are not going to be available.[40] Some supplies are absolutely critical, such as the proper drug for management of childhood pneumonia or malaria, or condoms for HIV prevention programs, or TB medicines for CHWs who treat TB patients. To cite but one of many examples, lady health workers (LHWs) in Pakistan who were lacking drugs and contraceptives were accused by the local population of selling them even though they had in fact never received them.[41] When CHWs have to travel some distance to replenish their supplies, the cost of transport incurred by the CHW can be a barrier. If this money is not reimbursed, CHWs may find it too much of a financial burden for them to obtain supplies, even if they are available at a distant depot. In addition, it is not uncommon for facility staff to hold on to supplies that are intended for use by CHWs when they are concerned about running out of basic supplies themselves; or, if medicines and supplies are a source of income generation, they prefer to sell them for a slight profit rather than give them to the CHWs.

A poorly functioning supply system creates many serious problems, not the least of which is the CHW's inability to carry out the tasks expected of her. But the message this conveys to the community is equally important—that the CHW is not important enough to obtain the supplies she needs to serve her community. Her inability to meet the community's expectations leads to discouragement and a loss of confidence in the program. Frankel concluded in 1990 that, "A strong case could therefore be made for precedence being given to the design and support of the

supply system as one component of relations between the centre and the periphery, before the wide deployment of CHWs is contemplated."[42]

The problem of supply systems may be endemic throughout the whole health system, and higher-level staff members at peripheral health facilities may face similar problems resulting from some combination of lack of adequate financing, "leakage," and poor management. Appropriate supply chain management requires a strong commitment from the health system at all levels, and addressing supply chain problems often requires a variety of system changes. Issues to address early on are the following:

- Should CHWs carry out tasks requiring resupply of medicines and other commodities?
- Which medicines and supplies can feasibly be provided?
- Should CHWs be provisioned through the existing supply system or should a separate supply system be developed for the medicines and supplies dispensed by CHWs?

There is no one correct answer to such questions. Answers will depend on the setting and on the particular role assumed by the CHW. An example of a CHW program that encountered various challenges, including drug stock-outs, as its CHWs took on expanded duties, is detailed in Box 6.

Box 6. Health system support issues for CHWs whose role was expanded to include community case management of childhood illness: an example from Malawi

In Malawi, health surveillance assistants (HSAs) were first established in the 1950s to give immunizations. In the 1960s and 1970s, they participated in smallpox eradication. Later, their role expanded to include health education, promotion of sanitation, distribution and administration of contraception, treatment of TB, voluntary counseling and testing for HIV (VCT), and home visitation.[43] More recently, the size of the cadre was doubled to 10,000 HSAs, each serving approximately 1,000 people, and their role was expanded to include integrated community case management (iCCM) of pneumonia, malaria, and diarrhea. HSAs also restock medicines and supplies at health centers.

Prior to iCCM being added to the HSA role, district managers gave orientation in many communities explaining the new HSA responsibilities. A qualitative study found that HSAs were generally happy to be taking on the role of treating sick young children, but they were often pressured by community members to treat older children and adults, for which they had no training. This led to anger from some community members, though in general there was a strong appreciation from the community for this new service. The HSAs complained about the quality of supervision they received for their new duties, about their increased workload, and about the need to pay out-of-pocket for transport to collect drugs and for lamp oils and candles required to attend to sick children at night.[44] They also reported occasional resistance from the medical assistants who staff the peripheral health facilities, sometimes refusing to provide HSAs with drugs even when they were in stock. In addition, stock-outs of drugs were a problem. Normally, HSAs spend one week each month at the health center to which they are attached. These HSAs are an example of a CHW cadre in which the CHW is not necessarily a long-term resident of the community that he or she serves.

WHAT ARRANGEMENTS FOR LINKAGES BETWEEN COMMUNITY HEALTH WORKERS AND THE REST OF THE HEALTH SYSTEM ARE LIKELY TO BE MOST FUNCTIONAL?

Here, we offer some guidelines and suggestions for how a CHW program can develop functional linkages with the health system. We also provide guidance on early steps that can be made in the planning of CHW program implementation or expansion that can foster good working relationships between CHWs and the rest of the health system.

Strategies for Integration with an Already Weak Health System

What can be considered optimal linkages between CHWs and the broader system will depend on the complexity of the tasks being carried out by the CHW and the degree to which the CHW needs supplies, equipment, and remuneration. In Madagascar, CHVs were trained solely for health promotion and required virtually no supervision; a high rate of attrition was built into the program design. In this case, the only linkage required with the health system was the initial training. But for CHWs with more comprehensive functions, the recent global review of CHW programs (sponsored by WHO and the Global Health Workforce Alliance) concluded that generally there is a need for strong integration of the CHW program within the wider health system.[45] How, then, can policymakers, program planners, and implementers increase engagement between community health services and other aspects of the local health system, promoting a sense of ownership and responsibility for these services?

If we revisit our examples from full integration to much more limited integration, a CHW program in which paid CHWs are teaching CHVs to provide health education through home visits does not really need interaction with the health system beyond the supervision and training given to these CHVs. But CHWs with broader functions, for example, involving dispensing of commodities, will have heavier requirements with regard to linkages with support systems. If the system is weak in infrastructure support, supervision, supplies, and referral capacity, then the CHW program will be unable to draw adequate supervision and supplies from the system unless the CHW program operates relatively independently from the health system. In some countries, the supply chain has been improved by linking CHWs to supplies available in local shops and drug vendors operating independently from the formal health system.

It is possible for CHWs to reduce the demands on peripheral PHC facilities. One recent report from Malawi, where HSAs were trained in integrated community case management (iCCM) to treat serious childhood illness (e.g., pneumonia, malaria, diarrhea) in addition to their other traditional roles, indicates that introduction of community case management led to lower case loads at peripheral health facilities.

The engagement of the private sector to support CHW programs is another strategy that countries are using. This can take a variety of forms. There are an increasing number of examples of countries with weak health systems that outsource the management of district health systems to private contractors, most notably NGOs. Cambodia is a case in point. With a stronger district management system and a more favorable attitude toward the contributions that CHWs can make, a more effective approach for incorporating CHWs can be established. In Afghanistan, the government has contracted NGOs to recruit, train, and support CHWs, lessening the burdens on an already weak health system.

Strategies to Define and Clearly Communicate CHW Role

Clear perceptions about roles of CHWs and the needed competence to perform the duties of that role are critical for CHW program effectiveness. If higher-level health care staff do not have a clear understanding of the CHW's role, and if they believe CHWs to be inadequately selected,

trained, and supervised (and therefore not suitably competent or motivated to carry out their tasks), they are likely to be unsupportive.

Each CHW program should make explicit how they expect community health services to contribute national health goals. This requires that program managers understand why mothers and children die (or about the causes of other major disease burdens that can be addressed by CHWs), which behaviors—if changed—would yield the greatest impact, what major interventions can avert death and morbidities, and which of these can be delivered as close to the community as possible, especially in locations with limited access to health facilities. Starting with a clear understanding that is effectively communicated to the health system and ensuring that CHWs receive proper selection, training, and support/supervision ultimately lays the groundwork for an effective program. As the program is implemented, managers then need to modify the approach over time on the basis of weaknesses identified to ensure continued effectiveness, as we emphasize in Chapter 14 on measurement and data use).

Strategies for Promoting Aligned and Harmonized Support

In certain settings, multi-stakeholder coordination at the national level that includes the government, NGOs, faith-based organizations, and other actors in the private sector providing health services can be important for developing and implementing effective community health services. Holding regular meetings through a national coordination mechanism and establishing clear guidelines for community health services can facilitate program learning and sharing. Incipient management problems can be discussed while plans are harmonized that provide space for decisions appropriate to the current context.

Strategies for Clarifying Long-Term Vision, Including CHW Role in the Health System

Policymakers and program planners need to be thinking decades into the future as they consider plans for CHW programs. How might demographic, epidemiologic, and economic trends affect such programs in the long-term? Thinking about the longer-term dynamics of health system strengthening and how a program might fit into this are essential. For instance, with changing demographics and disease burden, looking ahead, one might envision CHWs as a key resource for disease surveillance, chronic disease screening and management, care for the elderly, and/or provision of medications to patients with HIV infection.

Strategies for Nurturing Champions

Community health services need to be a valued part of the health system, and they need continued strong support from political leaders, government leaders, MOH leaders, external development partners, and community leaders. There are examples of very strong programs that have been fundamentally undermined as a new generation of health sector leaders came and withdrew their support because of a belief that only services involving physicians and other higher-level professionals working at health facilities are worth supporting. Effective champions are needed who can advocate for and secure the continued support needed for community-based health services and CHW programs. With high rates of turnover in government positions, continued vigilance is required; current champions need always to be on the lookout to recruit and mentor those who will be future champions.

CONCLUSIONS

A recent review of global experience of CHW programs led by WHO and the Global Health Workforce Alliance concluded that CHW programs need to be a part of the overall strategic

planning for human resources for health for that country and that they should be coherently located in the wider health system.[45] Planning for appropriate recruitment and training of CHWs and ensuring that supervisory systems and supply systems are appropriate are critical for the long-term success of large-scale CHW programs. Learning from the experiences of large-scale CHW programs, anticipating common challenges faced by these programs, and applying these lessons within the appropriate national and sub-national context will be essential if the failures of large-scale CHW programs in the 1980s are not to be repeated.

Key Resources

- See the Case Studies in the Appendix.
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