Developing and Strengthening Community Health Worker Programs at Scale

A Reference Guide and Case Studies for Program Managers and Policymakers

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The Maternal and Child Health Integrated Program (MCHIP) is the United States Agency for International Development (USAID) Bureau for Global Health's flagship maternal, neonatal and child health program. MCHIP supports programming in maternal, newborn and child health, immunization, family planning, malaria and HIV/AIDS, and strongly encourages opportunities for integration. Cross-cutting technical areas include water, sanitation, hygiene, urban health and health systems strengthening.

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Preface and Guide to the Reader

Welcome to Developing and Strengthening Community Health Worker Programs at Scale: A Reference Guide and Case Studies for Program Managers and Policymakers (the CHW Reference Guide). This guide is a long and detailed volume that is not intended to be read from cover to cover but rather to be used as a document that can be referred to as specific issues or questions arise. In this sense, you will find some repetition. We have also tried to refer the reader to other chapters where appropriate because many topics and issues are covered in various ways in different chapters.

For readers who want a quicker and perhaps easier-to-use reference, we encourage a look at the recently released Decision-Making Tool for CHW Programs (the CHW Decision Tool) developed by the Health Care Improvement Project, Applying Science to Strengthen and Improve Systems Project of the University Research Corporation (URC) , supported by USAID. This tool is designed to support national and local decision-makers through the design, planning, and scale-up of CHW programs.

The CHW Reference Guide is a more in-depth review of issues and questions that should be considered when addressing key issues relevant for large-scale CHW programs. Like the CHW Decision Tool, the CHW Reference Guide is designed for new CHW programs that are beginning the planning process as well as for existing programs that are being strengthened or scaled up. Like the CHW Decision Tool, the CHW Reference Guide is meant for in-country use by national-level policymakers and planners as well as program implementers. It has many practical examples from CHW programs around the world. Unlike the CHW Decision Tool, the CHW Reference Guide is meant to be a stand-alone document that is read essentially like a reference book. It provides an in-depth look at specific questions of central relevance to large-scale CHW programs. It also has appendixes with a summary of in-depth interviews with key informants who have had extensive experience in working with large-scale CHW programs; a series of in-depth and detailed case studies of CHW programs from Afghanistan, Bangladesh, Brazil, Ethiopia, India, Indonesia, Iran, Nepal, Pakistan, Rwanda, Zambia, and Zimbabwe; and a list of important resources for CHW program managers and policymakers.

- Both CHW resources offer guidance and support on issues related to CHW program governance, planning, financing, health system support, community collaboration, recruitment and selection, tasks and roles of the CHW, training, incentives, logistical support, scaling up, and monitoring and evaluation (M&E). The CHW Reference Guide contains a history of CHW programming around the world. The CHW Decision Tool contains links to many other online documents that address issues of CHW programming.
- While the CHW Decision Tool is practical, user-friendly, and a quick-to-use reference source for specific issues, the CHW Reference Guide is a more extended discussion of considerations that pertain to specific aspects of CHW programs. Neither resource provides technical information about how CHWs should deliver specific interventions. Instead, they are focused on more general organizational, management, and operations issues that are relevant to all types of CHW programs.
- The CHW Decision Tool was developed by the USAID ASSIST (Applying Science to Strengthen and Improve Systems) Project under the leadership of Ram Shrestha and Allison Foster of the University Research Corporation. The CHW Reference Guide was developed by a team led by Steve Hodgins of Save the Children, Henry Perry of the Johns Hopkins University, and Lauren Crigler of Crigler Global Consulting in collaboration with a writing team that included Karen LeBan of the CORE Group along with Simon Lewin and Claire Glenton of the Norwegian

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COMPARISON OF THE URC DECISION TOOL AND THE MCHIP REFERENCE GUIDE		
Key Features	**URC Decision Tool**	**MCHIP Reference Guide**
Length	Shorter (40 pages)	Longer (>400 pages)
Accessibility	Quick to use for specific questions with quick links to other sources	Requires more time to digest content, "academic discourse"
	Meant to be used exclusively as a web-based resource	Meant to be used either as a "free-standing" document or as a web-based resource
Linkages	Extensive links to web-based tools and resources	Limited links to web-based tools and resources
	Limited references to the peer-reviewed literature	Numerous references to the peer-reviewed literature
Case studies	Description of case studies very brief, though many examples included	Description of case studies more extensive (including an appendix with detailed case studies of large-scale CHW programs in 12 countries)
Orientation	Gives considerable attention to programs that use volunteer CHWs and also addresses issues of smaller-scale programs and those that rely heavily on external donor support and external technical assistance	Oriented exclusively to large-scale, public sector CHW programs

Summary of Key Messages

CHAPTER 1. INTRODUCTION

- The current enthusiasm for large-scale CHWs needs to be tempered with a sobering reflection on the disappointments that followed a similar wave of enthusiasm in the 1970s and 1980s, noting challenges in scaling up and sustaining large-scale public sector CHW programs.
- Large-scale public sector CHW programs are complex entities that require adapting a systems perspective to the national and local contexts.
- CHWs are a diverse group of community-level workers. This guide distinguishes between two levels of CHWs: (1) full-time, paid, with formal pre-service training and (2) volunteer, part-time workers.
- The guide attempts to avoid categorical recommendations, but rather offers suggested issues and principles to consider and, when possible, brings in relevant program experience.

CHAPTER 2. CHW HISTORY

- The first CHWs were "farmer scholars" who were trained in China in the 1930s and were the forerunners of the Barefoot Doctors, of whom there were more than one million from the 1950s to the 1970s.
- In the 1960s and 1970s, small CHW programs began to emerge in various countries, particularly in Latin America.
- The experience from CHW programs predating the 1970s provided the inspiration for much larger CHW programs in many low-income countries in the 1980s.
- Following the failure of many of the programs in the 1980s and 1990s, new highly successful programs have emerged. As a result of research findings demonstrating the effectiveness of community-based programs in improving child health in particular, there is now a resurgence of interest and growth of CHW programs around the world.

CHAPTER 3. NATIONAL PLANNING FOR CHW PROGRAMS

- The planning process defines many of the other topics in this manual (e.g., supervision, training, roles and responsibilities of CHWs) using an informed and methodical process.
- The most effective planning mechanism is a feedback loop, where community-level information is fed through the multiple sublevels (e.g., district, regional) to the national level, where policy, funding, and evaluation can be continually revised.
- Careful planning during the design and implementation of a national CHW program results in a context-appropriate program that successfully trains, supervises, and retains CHWs, while simultaneously improving health service delivery on the community level.

CHAPTER 4. GOVERNING LARGE-SCALE CHW PROGRAMS

- Improving how CHW programs, and health systems more broadly, are governed is increasingly recognized as important in achieving universal access to health care and other health-related goals. Governing comprises the processes and structures through which individuals and groups exercise rights, resolve differences, and express interests.

- The process of governing involves ongoing interactions among **actors**, such as health care decision-makers, community representatives, and agencies, and **structures**, with regard to the laws, resources, and beliefs within which these actors operate.
- Because CHW programs are located between the formal health system and communities and involve a wide range of stakeholders at local, national, and international levels, their governance is complex and relational.
- In addition, CHW programs frequently fall outside of the governance structures of the formal health system or are poorly integrated with it—making governing these programs more challenging.
- In the past, poor governance has undermined the planning and management of programs and the delivery of services.

CHAPTER 5. FINANCING LARGE-SCALE CHW PROGRAMS

- Proper costing of a CHW program and assurance that those costs can be paid for on a sustainable basis are essential for an effective large-scale CHW program. Failure to carry out those processes led to the demise of large-scale CHW programs in the 1980s.
- Direct and indirect costs of CHW programs need to be estimated along with investment and recurring costs in order to adequately plan for the sustainable financing of a CHW program.
- CHW program costs vary widely from country to country as a result of contextual factors, such as local labor costs, whether CHWs are paid or voluntary, and the degree to which the program is well-supervised with a strong logistics system.
- Governments, local communities, and external donors are the main sources of financing for CHW programs.

CHAPTER 6. COORDINATION AND PARTNERSHIPS FOR CHW INITIATIVES

- CHWs, unlike other formal human resources for health (HRH) cadres, have diverse links with the formal health system in many countries. They are also positioned within a complex array of relationships in the social setting of the communities where they work.
- The complex and diverse challenges of CHW initiatives that emerge in a number of countries are invariably beyond the power of a single actor to address and require coordination and collaboration among different players and actors at all levels.
- The multisectoral coordination of HRH, including CHWs, is not an objective in its own right; it is a means to an end, while the end objective is universal health coverage (UHC), achievement of Millennium Development Goals (MDGs), and elimination of health disparities within the country.
- The multisectoral dimensions of CHW initiatives demand a multisectoral policy process and a coordination mechanism that can provide an environment and a platform where the related sectors can work together to harmonize and synchronize their efforts.
- There are several national multipartner coordination mechanisms for health; however, the coordination process for CHW initiatives, as well as for other aspects of HRH, should be able to meet the country's needs, and should be aligned with other coordination mechanisms as a part of the overall health agenda.

- Synergy and harmonization of financial and technical support from international actors in response to the national needs is vital for CHW initiatives to contribute to UHC and ensure equitable access to the essential health services within that country. A framework for harmonized actions and a joint commitment on CHWs provide appropriate opportunities to synchronize partners' actions in support of CHW initiatives.

CHAPTER 7. CHW ROLES AND TASKS

- A number of health care services exist that can make a significant difference to mother and child health in poor settings. Because CHWs are close to communities, both geographically and socially, they could potentially be responsible for a number of these services.
- When planning new CHW roles or expanding the roles of existing CHWs, program planners need to analyze current research evidence and evidence-based guidelines on the effectiveness and safety of relevant tasks performed by CHWs. Planners need to assess whether the recommended CHW roles and tasks are considered acceptable and appropriate by their target population, by the CHWs themselves, and by those who support them. Finally, planners need to think about the practical and organizational implications of each task for their particular setting regarding training requirements, health systems support, work location, workload, and program costs.
- This chapter provides a list of questions that may help program planners think about important issues when determining CHW roles and tasks.

CHAPTER 8. RECRUITMENT OF CHWS

- Developing appropriate recruitment policies and processes is a critical feature of an effective large-scale CHW program.
- Community engagement in recruitment is highly desirable, but managing this in a way that is productive requires careful planning and adaptation.
- An effective recruitment program can help reduce attrition, which is a major challenge for many large-scale CHW programs.

CHAPTER 9. TRAINING CHWS FOR LARGE-SCALE COMMUNITY-BASED HEALTH CARE PROGRAMS

- CHW training needs to be carefully adapted to the needs of the trainees, the job, the tasks CHWs are expected to perform, and the context in which they will be working.
- Current training approaches and techniques that are effective for training CHWs should be employed.
- Examples of training programs and their structures from a variety of CHW programs are provided.

CHAPTER 10. SUPERVISION OF CHWS

- Supervision for CHWs is one of the most challenging program elements to implement; yet, it is considered one of the most important elements to successful programs.

- Supervisory responsibilities have changed over time from providing administrative and clinical oversight to the inclusion of psychosocial support to frontline CHWs who face a wide range of challenges on their own.
- Supervision is generally considered to be oversight from a health worker at a peripheral facility; however, this model is costly and difficult to implement. Alternative approaches might include group supervision, peer supervision, and community supervision to distribute the supervision tasks and increase support to CHWs in some contexts.

CHAPTER 11. WHAT MOTIVATES CHWS? DESIGNING PROGRAMS THAT INCENTIVIZE CHW PERFORMANCE AND RETENTION

- Financial compensation is one—but only one—of many influences on the motivations of CHWs to perform their responsibilities.
- Nonmaterial incentives need to be given careful consideration along with financial incentives.
- Indirect nonmaterial incentives, such as the degree to which the environment is supportive of CHWs and the degree to which the health system functions effectively, are also motivating influences for CHWs.
- Lack of appropriate incentives, with resulting high rates of turnover, are common in large-scale CHW programs and costly in terms of actual cost to replace CHWs and also in terms of the performance of the CHW program.

CHAPTER 12. CHW RELATIONSHIPS WITH OTHER PARTS OF THE HEALTH SYSTEM

- 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.

CHAPTER 13. COMMUNITY PARTICIPATION IN LARGE-SCALE CHW PROGRAMS

- Balancing the inherent tensions of a large-scale CHW program, where the CHW is the lowest-tier worker of a national health system while also acting on behalf of the always-changing local world of a community, will be an ongoing challenge requiring decentralized flexibility in program policy, design, and implementation.
- A successful CHW program requires the support and ownership of the community, as well as a supportive social and policy environment for community participation at national, district, and local levels.
- The development and support of community networks, linkages, partners, and coordination is necessary to enable a comprehensive community-participation approach for better health.

- Village health committees and other local governance structures can be effective mechanisms to ensure local leadership, legitimacy, participation, and governance, but these committees require continued training and investment.

CHAPTER 14. SCALING UP AND MAINTAINING EFFECTIVE CHW PROGRAMS AT SCALE

- Effective programming at scale requires having a viable, scalable program that works on a small scale under routine field conditions. This is then followed by careful planning (appropriate to the national context) that assures long-term sustainability at scale.
- Ongoing M&E, with adjustments to the program based on these findings, is essential both for effective scale-up and long-term program effectiveness at scale.
- Scaling up is a political process, so leadership and proper engagement with the political system, national-level stakeholders, and the Ministry of Health (MOH) is essential.

CHAPTER 15. MEASUREMENT AND DATA USE FOR COMMUNITY HEALTH SERVICES

- Routine measurement and data use for community health services are poorly developed in most countries.
- Such information systems, if well-developed and used, can strengthen community health services, including the performance of CHWs.
- Sometimes additional information will need to be collected beyond what is normally reported on routine monthly report forms.
- Descriptions of some of the findings from M&E of large-scale CHW programs in Pakistan and India are provided.

CHAPTER 16. WRAP-UP

- The current enthusiasm for large-scale CHW programs needs to be tempered with a sobering reflection on the disappointments that followed a similar wave of enthusiasm in the 1970s and 1980s and on the challenges that remain in scaling up and sustaining large-scale public sector CHW programs.
- Large-scale public sector CHW programs are complex entities that require adapting a systems perspective to the national and local contexts.
- This reference guide has attempted to avoid categorical recommendations, instead suggesting issues and principles to consider and, when possible, citing relevant program experience.

Guide to the Guide

This guide serves to link themes in CHW program planning, implementation, and evaluation to the chapters in which discussions on the various themes can be found. Themes from the knowledge center at the Global Health Workforce Alliance (GHWA) are also included so that overlapping areas can easily be cross-referenced.

THEMES	CHAPTERS
ACCOUNTABILITY	4,6,12,13,15
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Executive Summary

This guide presents suggested issues and principles to consider and, when possible, brings in relevant program experience, noting challenges in scaling up and sustaining large-scale public sector CHW programs in the 1970s and 1980s. A systems perspective to the national and local contexts is required to understand the adaptive, dynamic, and complex nature of large-scale public sector CHW programs. The most effective program planning mechanism is a feedback loop, where community-level information is fed through the multiple sublevels (e.g., district, regional) to the national level, where policy, funding, and evaluation can be continually revised.

Section 1 of this guide sets the stage, introducing the concept of CHW programs and presenting the history of their implementation. It dives into coordination, partnerships, and the process of governing programs—a complex process involving ongoing interactions among **actors**, such as health care decision-makers, community representatives, and agencies, and **structures**, with regard to the laws, resources, and beliefs within which these actors operate. CHW programs often fall outside the governance structures of the formal health system or are poorly integrated with it; a chapter on governance provides guidance for the laws and regulations needed to support CHW programs.

In addition to good governance, the success of CHW programs also depends on sustainable financing mechanisms. The chapter on financing covers proper costing of a CHW program and how to assure that those costs can be paid for on a sustainable basis. Direct and indirect costs of CHW programs need to be estimated, along with investment and recurring costs, in order to adequately plan for the sustainable financing of a CHW program.

Section 2 on human resources covers the roles of CHWs and their recruitment, training, and supervision. A number of health care services exist that can make a significant difference to mother and child health in poor settings. Because CHWs are close to communities, both geographically and socially, they could potentially be responsible for a number of these services. When planning new CHW roles or expanding the roles of existing CHWs, program planners need to analyze current research evidence and evidence-based guidelines on the effectiveness and safety of relevant tasks performed by CHWs. Planners need to assess whether the recommended CHW roles and tasks are considered acceptable and appropriate by their target population, by the CHWs themselves, and by those who support them. Finally, planners need to think about the practical and organizational implications of each task for their particular setting, regarding training requirements, health systems support, work location, workload, and program costs.

Supervisory responsibilities have changed over time from providing administrative and clinical oversight to the inclusion of psychosocial support to frontline CHWs, who face a wide range of challenges on their own. Supervision is generally considered to be oversight from a health worker at a peripheral facility; however, this model is costly and difficult to implement. Alternative approaches might include group supervision, peer supervision, and community supervision to distribute the supervision tasks and increase support to CHWs in some contexts.

Section 2 also highlights incentives that motivate CHWs and encourage improvements in service delivery. Financial compensation is one—but only one—of many influences on the motivations of CHWs to perform their responsibilities. Indirect, nonmaterial incentives, such as the degree to which the environment is supportive of CHWs and the degree to which the health system functions effectively, are also motivating influences for CHWs.

Section 3 stresses the importance of engaging the community and participatory democracy. Community engagement in recruitment is highly desirable, but managing this in a way that is productive requires careful planning and adaptation. CHW training needs to be carefully adapted to the needs of the trainees, the job, and the tasks they are expected to perform and the context in which they will be working. Examples are provided in Chapters 12 and 13.

Not only are partnerships with the community important, but a collaborative environment within the health system too serves an important purpose in assuring functionality. Well-designed, functional support and interaction between CHWs and health systems are essential for effective community health services. A successful CHW program requires the support and ownership of the community, as well as a supportive social and policy environment for community participation at national, district, and local levels. Village health committees and other local governance structures can be effective mechanisms to ensure local leadership, legitimacy, participation, and governance, but these committees require continued training and investment.

Section 4 focuses on how all the aforementioned elements come together to achieve impact. Routine measurement and data use for community health services are poorly developed in most countries, but are crucial to well-functioning programs.

Ongoing M&E, with adjustments to the program based on findings from these evaluations (feedback loops), is essential both for effective scale-up and long-term program effectiveness at scale. Scaling up is a political process, so leadership and proper engagement with the political system, national-level stakeholders, and the MOH are essential.

The appendixes contain detailed case studies of large-scale CHW programs, a summary of the findings of a key informant interviews about issues and challenges facing large-scale CHW programs, and a listing of important resources. The case studies are from Afghanistan, Bangladesh, Brazil, Ethiopia, India, Indonesia, Iran, Nepal, Pakistan, Rwanda, Zambia, and Zimbabwe.

SECTION 1: SETTING THE STAGE

Chapter 1
Introduction

Steve Hodgins, Lauren Crigler, and Henry Perry

Key Points

- The current enthusiasm for large-scale Community Health Workers (CHWs) needs to be tempered with a sobering reflection on the disappointments that followed a similar wave of enthusiasm in the 1970s and 1980s, noting challenges in scaling up and sustaining large-scale public sector CHW programs.
- Large-scale public sector CHW programs are complex entities that require adapting a systems perspective to the national and local contexts.
- CHWs are a diverse group of community-level workers. This guide distinguishes between two levels of CHWs: (1) full-time, paid, with formal pre-service training and (2) volunteer, part-time workers.
- The guide attempts to avoid categorical recommendations, but rather offers suggested issues and principles to consider and, when possible, brings in relevant program experience.

INTRODUCTION

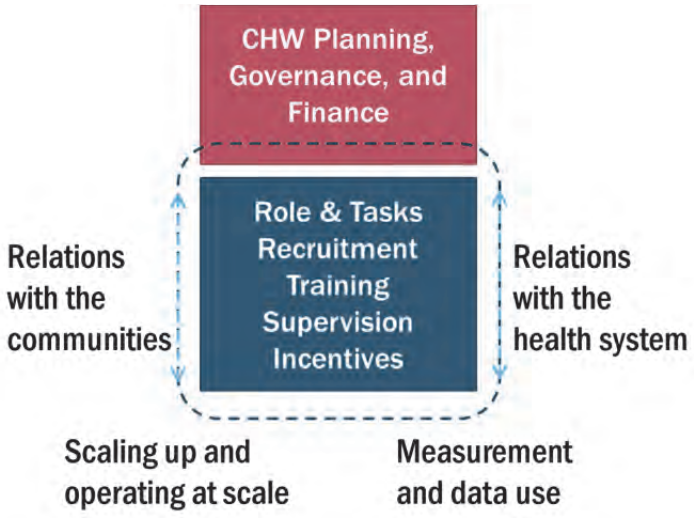
Recently, a renewed interest in CHWs has been seen globally. This renewal provides an opportune moment to take stock of issues and challenges such CHW programs face and what can be done to make them as effective as possible. With this in mind, this manual is intended to be used as a practical guide for policymakers and program managers wishing to develop or strengthen a CHW program, drawing lessons from other countries that have implemented CHW programs at scale.

Most of the evidence regarding the effectiveness of CHWs is derived from studies of small-scale CHW programs. Yet, the large-scale programs currently in existence or those being planned or scaled up are the programs that are going to make the biggest difference in the health of populations in the long run. Surprisingly, our organized knowledge of these programs and their effectiveness is surprisingly limited, although anecdotal information abounds regarding suboptimal functioning on the ground. Furthermore, the challenges they face in functioning effectively are daunting due to their scale and scope. This document focuses on large-scale, mostly public sector, CHW programs and how they might become as effective as possible. We provide many concrete examples of how large-scale programs have organized themselves, but more importantly we raise issues that need to be faced by any large-scale program. Our hope is that this discussion will provide policymakers and program implementers with food for thought that will strengthen the decisions they take on behalf of large-scale CHW programs in their country.

Throughout, we discuss major policy and programmatic issues that decision-makers and planners need to consider when designing, implementing, scaling up or strengthening a national-level CHW program. We offer an overview of specific challenges CHW programs face, country lessons, tools, and other resources that may be helpful, while incorporating relevant programmatic examples as much as possible.

Proceeding from broader, higher-level issues down to the more specific and operational ones, this manual sets the stage with a section addressing planning, governance and finance. The next major section considers a range of important issues related to human resources, notably: roles and tasks of the CHW, recruitment, training, supervision, and motivation. The third section concerns the context for community health work, looking at both the health system and the community. The fourth and final section addresses operational issues essential for achieving program impact, such as scaling up and operating at scale, as well as measurement and data use. All of these functions have critical inter-relations; therefore, design decisions in one area have consequences in many others, as Figure 1 depicts. Within the manual, this concept is reflected in frequent cross-referencing among chapters. Further, the manual includes, as appendixes, profiles of a number of large-scale CHW programs and insights arising from interviews with a number of key thought leaders in global CHW work.

Figure 1. Overview of CHW program sub-systems and their interactions



The contents herein draw particularly upon experiences from large-scale, public sector CHW programs. We have looked comprehensively across a range of factors determining the effectiveness of community health services—and taking a pragmatic view and promoting no single model since CHW programs serve different purposes depending on context. However, we believe that the experiences of other programs often provide useful lessons that can impact decisions to be made regarding CHW programs in additional settings. Specifically, we are interested in the factors that contribute to program effectiveness and performance in institutionalized programs operating in the public sector at scale.

Although decisions are frequently made to establish or close programs on the basis of "effectiveness," in many instances, data available are insufficient to make a solid judgment on how effective these programs have actually been. As such, in trying to capture important lessons about what works under which circumstances, wherever possible, we make such inferences based on the best available evidence (which is often thinner than preferred) and on experience and expert judgment arising from those experiences.

THE COMMUNITY HEALTH CHALLENGE

For more than 50 years, as leaders in primary health care (PHC) have tried to elaborate strategies to better meet the health needs of populations, they have gravitated repeatedly to solutions that involve recruiting and training local people to play roles complementing and supplementing those of health professionals, encouraging healthier practices and care-seeking and, in some instances, providing services that otherwise would fall within the responsibility of health professionals through task-shifting. Such strategies have varied considerably by place and time, with different names for community-level workers being used. Some notable names include: Health Auxiliary Worker, Village Health Worker, Community Health Worker and, most recently, Front-Line Health Worker (albeit, this last designation is used also to cover PHC professionals and lesser-trained community-level workers).

Established in the 1960s–1980s, the initial wave of CHW programs were for a world that was very different from the one today. Many of the societies in which we work have become more prosperous since then: the standard of education and literacy has improved; economies have evolved in the direction of greater monetization and away from traditional subsistence economies; in many settings, the private sector now accounts for a large proportion of health services provided; road networks have expanded; and new technologies (e.g., mobile phones) are

in widespread use. Perhaps most importantly, the world today is much more urbanized and unequal.

Nevertheless, many of the issues that face policymakers, program managers, and external development partners, as they make decisions and design and manage community health programs, are essentially the same as those faced by their predecessors. Namely, how to sustainably finance such a program; how to design it so it will function effectively; how to select, train, motivate, retain, and supervise CHWs; how to ensure consistent supply of needed drugs and commodities; and how to monitor and ensure performance. Now more than ever, CHW programs need to be resilient and adaptable, adjusting to new evidence and policies with an improved capacity to implement newly approved recommendations.

Unfortunately, examples can be found today of decisions being made in the development or implementation of CHW programs that repeat mistakes made in the past, dooming programs to the same compromised effectiveness as before. Therefore, the goal of this guide is to enable policymakers and program implementers to reduce the frequency of such decisions, which often fail to take into account lessons from past experience.

SMALL-SCALE NONGOVERNMENTAL ORGANIZATION PROJECTS VERSUS LARGE-SCALE MINISTRY OF HEALTH PROGRAMS

Over the past 50 years, there have been a variety of highly influential, small-scale CHW program experiences, either linked to universities or nongovernmental organizations (NGOs). These experiences have served as the inspiration for important global initiatives in community health. For example, the 1978 Declaration of Alma-Ata was inspired in part by such experiences. Similarly today, recommendations are made to ministries of health and donors, calling for large-scale, public sector CHW programs, based on experiences with much smaller, more intensively supported programs. Though attractive, large-scale CHW programs are not a one-size-fits-all solution, and context-specific considerations must be made at scale. The value of these small-scale experiences is found in the sensitization of national- and global-level decision-makers to the power of CHW programs in achieving population-level health gains. However, these small pilot projects are often not replicable at scale, although they can provide the indispensable seed from which large-scale national programs can emerge.

An example of this discontinuity among successes observed in a small-scale, intensively supported program versus efforts in a large-scale program is the intensive postnatal, home-visit approach pioneered by Bang and colleagues in Maharashtra, India. Based on this approach and a few other small-scale, intensively supported community randomized controlled trials (RCTs) and demonstration projects, the United Nations Children's Fund (UNICEF) and the World Health Organization (WHO) jointly issued a call to ministries of health to introduce such programs at scale. These programs have since been widely introduced, though none have yet achieved high rates of effective coverage (and therefore population-level health impact). The translation from small-scale demonstration projects to large-scale programs is not straightforward and takes time and continued nurturing. It is crucial to understand the conditions necessary for successful implementation of a particular approach and what it would take to meet and sustain these conditions at scale. The need to develop robust organizational support systems in large-scale CHW programs for information systems, logistics of the supply system, management, supervision, and quality oversight are obvious, but lack of attention to these issues has been the downfall of many programs and leads to lost opportunities for program impact in many current programs.

ARE CHWS NECESSARILY THE ANSWER, OR PART OF THE ANSWER, TO YOUR SPECIFIC PROBLEM?

They may or may not be. The appropriateness or adequacy of the local health system can be judged by its results. What population coverage is currently achieved for key health services (e.g., immunizations, family planning [FP], tuberculosis detection, and treatment)? Depending on the setting, an approach involving some kind of outreach may be essential to reach high coverage. In some settings, however, such coverage may be achievable using services based entirely on health professionals. In fact, in some settings, CHWs are not the appropriate answer, and program decisions-makers need to consider feasibility before scaling up any given CHW program. This guide details all the necessary considerations that would feed into a judgment of appropriateness and feasibility of any particular plan for use of CHWs.

A SYSTEMS PERSPECTIVE

Although much of this guide focuses on CHWs, we are more fundamentally concerned about community health services, including efforts to influence health-related household practices and care-seeking. There are various strategies or approaches available to ensure adequate delivery of such services to a population. The use of a particular cadre of worker—whether volunteer or paid and whether a fully trained professional or a lesser-trained community-level worker—is one among a set of choices that, together, constitute the arrangements for community health services in a particular locality.

The CHW works within the context of a program, a community, and a health system. How effectively he or she contributes to improved health in the community depends on the effectiveness of a system. By nature, systems are interconnected, nonlinear, self-organizing, and dynamic. Although there may be some utility in categorizing components of the system as building blocks, to understand the functioning of the system requires that we acknowledge the dynamic interactions among the various system elements. Throughout this manual, we will look at CHWs within this larger systems context. With such a perspective, there is considerable cross-referencing among sections. Furthermore, we will focus not only on CHWs but also on community health **services** and the organization of care.

The organization of services—the system provisions to ensure effective delivery and linkages with the beneficiary population—consists of elements and relationships within a dynamic system. Overall performance of the system (i.e., how well it actually meets the needs of the population it is meant to serve) depends on the effective functioning of all of its parts, as they interact. As a result, design choices or the performance of particular elements can have very important consequences. Both at the design stage and during ongoing implementation, the needs and performance of the system **as a whole** need to be kept in view. This may seem to unnecessarily complicate things. However, if we are interested in effective programs, we do need to grapple with this complexity.

The important take-home message is that **any decision we make about a particular detail within a program potentially has ramifications or consequences for other parts of the system**. One should be wary, therefore, of categorical statements; for example, "to have CHWs who can safely do case management of sick children, an absolute criterion of selection needs to be high school graduation." In a given setting, making such a decision may narrow the choice to men in their early 20s, who may, in turn, not be considered acceptable by the community for a role in caring for sick children, which, in turn, could result in quite low coverage. If that is the case, it may be appropriate to revisit the initial assumption. At the end of the day, we need programs that work—ones that effectively contribute to improving population health status.

Often, in a single location there are multiple programs making use of different types of CHWs. All of these may be officially under ministry of health (MOH) auspices. Yet, with different external partners supporting the programs, there may be little harmonization, with some more generously endowed programs providing more attractive training allowances or other incentives, with significant differences in how supervision is done, and without any provision for coordination across programs or across the different types of CHWs. Adding new CHW programs, or new functions to existing CHW cadres, needs to be understood as not happening within a vacuum, but within a local service delivery context that may, in some ways, be a bit of a mess.

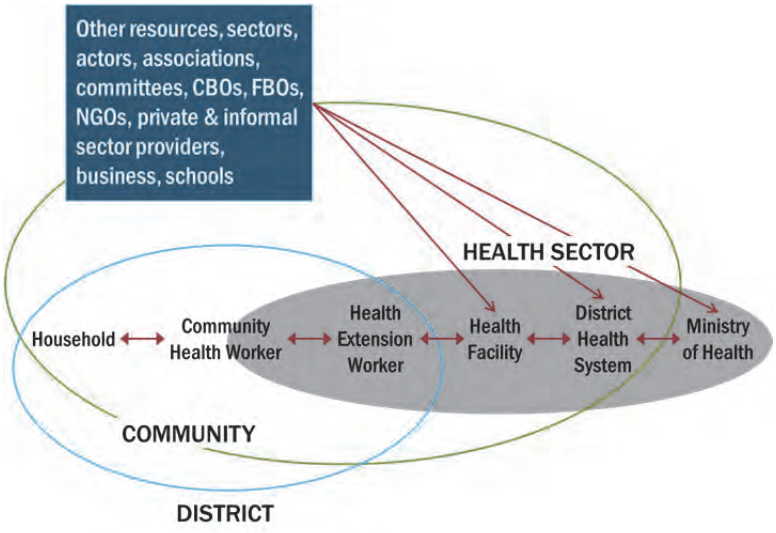
CONTEXT

Any particular CHW cadre works in a setting along with other health workers, CHWs, managers, and actors—each with their own roles and each, potentially, interacting with others. This set of relationships and interactions resembles an ecosystem. In that, these interactions, in turn, can affect the performance of particular actors, the emergence of competing interests, and the evolution of these dynamics over time (Figure 2).

Because different CHW programs are trying to do different things, and they operate in a wide range of settings, specific choices that work well or are essential in one particular setting are not necessarily helpful in another. Ray Pawson et al. have made helpful contributions to our thinking on the need to consider performance for particular types of programs looking closely at **how they are implemented** and the characteristics of the **specific settings** in which they are implanted, seeing how that plays out with regard to program performance.[1] From multiple such cases, one can then progressively build a "midlevel theory" that begins to draw fruitful, if contingent, lessons across settings.

Drawing on Pawson et al., we do not want to be overly prescriptive, but rather to try to raise a range of options and possibilities that need to be considered. Ideally, we would like to make specific suggestions in the form of, "under X conditions or type of context, if you are trying to do A, you should consider L, M, and N." However, appreciating the complex interactions among the various systems dimensions underlying CHW programs, the diversity of what CHW programs are trying to do, and the conditions in which they are implemented, such advice would be very difficult to give. Nevertheless, in this guide, we will try to avoid making categorical recommendations, and instead offer **suggestions for consideration**, making explicit, when possible, the particular program experiences from which the lessons are drawn.

Figure 2. CHWs within the health sector



WHO ARE COMMUNITY HEALTH WORKERS?

The term Community Health Worker is currently used to cover a wide variety of cadres and programs. As such, it can be a source of confusion. For this reason, in this manual, we use the terminology shown in Table 1. Auxiliary Health Workers (AHWs) are, in some settings, considered to be CHWs. They are paid, generally full-time workers with pre-service training usually of at least 18–24 months, who may or may not be recruited from the localities where they serve. In most settings, however, such workers are not considered CHWs.* The next grade down is what we will call health extension workers (HEWs), who are also usually paid, full-time employees but normally have less than a year of initial training (in some cases, just a few weeks) and are generally recruited from the localities where they work. In some cases, compensation is mixed, with a fixed monthly amount plus incentives related to specific activities (e.g., the Accredited Social Health Activist Program in India).

On the spectrum from more to less formalized/professionalized CHWs, below the HEW, we have what will refer to in this guide as Community Health Volunteers-Regular (CHVs-R). These CHVs-R may have a role that can involve not only health promotion but also some limited elements of service delivery. They normally work at least several hours a week, generally not on a salaried basis, but may receive some material incentives. These CHVs-R, in turn, grade into various types of what we refer to as Community Health Volunteers-Intermittent (CHVs-I), whose duties normally involve only health promotion or community mobilization and who, in any given week, may not be involved in any such activity.

We recognize that this list is not fully exhaustive. There are other types that do not closely correspond to any of these categories, and there are cadres that stand in an intermediate position with respect to these types. For example, Ethiopia's HEWs have more training than our category of HEWs, but less than our category of AHWs. However, we will use this vocabulary consistently and will use this typology to anchor our discussion. This clarity can avoid considerable confusion, when we might otherwise make generalizations about CHWs that, in fact, only validly apply to one of these categories.

Table 1. Categories of CHWs

	TERMS OF SERVICE, TRAINING, RECRUITMENT	FUNCTIONS (and further notes)
Auxiliary Health Workers (AHWs)	Salaried and full-time; pre-service training lasting one or more years (in a specialized training institution); not necessarily recruited from the area. May be hired through some unit of local government or through national civil service structure.	These workers often provide routine clinical preventive services (e.g., immunizations, FP), as well as case management, for a limited range of conditions (e.g., childhood illness). These functions may be provided from a very peripheral health unit (e.g., a health post) or, at least in part, from outreach sites.
Health Extension Workers (HEWs)	Salaried and expected to work more or less full-time; initial training generally at least several months (usually provided after recruitment); in some cases, this can be for up to a year. Usually recruited from the area, but may or may not originate in the community where they are serving.	This is the highest level of cadre that is commonly referred to as a CHW, though they may also be considered a type of AHW. Their functions may be very similar to those described above for AHWs.

* Note that in the 1960s and early 1970s, this term was used more broadly than how we are using it, and included health-facility-based support staff, as well as what we are describing as Health Extension Workers.

	TERMS OF SERVICE, TRAINING, RECRUITMENT	FUNCTIONS (and further notes)
Community Health Volunteers-Regular (CHVs-R)	Volunteer with certain regular duties (usually with at least some activity every week); possibly with regular episodes of short training (up to several days at a time) and may have some initial training lasting several weeks. They are from and live within their local communities.	May be involved in case management of childhood illness and in dispensing (e.g., birth control pills, condoms, and antenatal iron). In rare cases, may give injectable contraceptives, such as Depo-Provera or other injections. In some programs, duties and terms of service of CHVs-R start to approach those of HEWs (see above), with significant part-time involvement (e.g., 10–20 hours/week) and financial incentives representing an important source of revenue. These may be performance- or commission-based. In other programs, though these CHVs perform regular functions, they normally put in less time (e.g., 5 hours/week or less) and financial incentives may be minimal or not used at all.
Community Health Volunteers-Intermittent (CHVs-I)	Volunteer, relatively light, intermittent commitment; minimal orientation/training; may be numerous; local.	Typically have functions limited to health promotion, though they may also support periodic campaign activities (e.g., distribution of insecticide-treated bed nets, ivermectin, or vitamin A) and support for immunization campaigns.

VARIATION IN COMMUNITY HEALTH WORKER PROGRAMS

There is a multitude of differing CHW programs. At one end of the spectrum, we have national CHW programs or cadres, under MOHs. These are generally paid, full-time workers belonging to the first two categories above (i.e., AHWs or HEWs). There are, however, examples of programs with CHWs in the third category of CHV-R (e.g., Female Community Health Volunteers in Nepal) and the fourth category of CHV-I (e.g., CHWs in large community-directed intervention programs). National public sector programs may also make intermittent use of CHVs. All of these programs are typically tied closely to peripheral public sector health services (e.g., supported and supervised from health centers or health posts). But there are certainly many exceptions, such as national programs that make use of CHWs not having strong links with a particular health facility. The BRAC *Shasthya Shebika* CHW program is an example of such an exception.

At the other end of the spectrum, there are many NGOs and community-based organizations (CBOs) that have their own CHWs, who are not formally linked with public sector programs. There are also many examples of CHW cadres that are formally recognized by government but have strong links with NGOs (including donor-funded NGOs). Additionally, there are a few examples of large CHW programs operated by major NGOs, a prime example again being BRAC in Bangladesh.

Because our principal interest in this document is on efforts expected to contribute to population health impact at scale, our focus is primarily on large (generally national) programs and cadres operating under the MOH. In addition to varieties in institutional characteristics across CHW programs, programs differ markedly by technical content. On one hand, we have CHWs who are generalists that are responsible for a wide range of primary health care services (e.g., acute illness care, maternal and child health, immunizations, FP, and environmental health). But there are also many examples of cadres of CHWs working for specific technical programs (e.g., HIV/AIDS, malaria, or tuberculosis). In many countries, there are several

different types of CHWs working at the community level, with responsibilities falling under different programs.

CONCLUSIONS

The effective functioning of large-scale CHW programs offers one of the most important opportunities for improving the health of impoverished populations in low-income countries. This guide presents principles and programmatic suggestions that we hope will be useful as decision-makers and program implementers consider the initiation, expansion, or strengthening of CHW programs in their country.

References

1. Pawson R, Greenhalgh T, Harvey G, Walshe K. Realist review: a new method of systematic review designed for complex policy interventions. *J Health Serv Res Policy* 2005; **10 Suppl 1**: 21–34.

Chapter 2

A Brief History of Community Health Worker Programs

Henry Perry

Key Points

- The first Community Health Workers (CHWs) were "Farmer Scholars" who were trained in China in the 1930s and were the forerunners of the Barefoot Doctors, of whom there were more than one million from the 1950s to the 1970s.
- In the 1960s and 1970s, small CHW programs began to emerge in various countries, particularly in Latin America.
- The experience from CHW programs predating the 1970s provided the inspiration for much larger CHW programs in many low-income countries in the 1980s.
- Following the failure of many of the programs in the 1980s and 1990s, new highly successful programs have emerged. As a result of research findings demonstrating the effectiveness of community-based programs in improving child health in particular, there is now a resurgence of interest in and growth of CHW programs around the world.

ORIGINS AND EARLY HISTORY OF COMMUNITY HEALTH WORKER PROGRAMS

The first example of formally well-trained nonphysicians to carry out duties that were normally given to physicians is Russia's *Feldshers* who, in the late 1800s, were trained as paramedics to assist physicians and to function in their stead in rural areas where physicians were not present. In contrast to the Barefoot Doctors in China and their forerunners at Ding Xian in the 1920s, *Feldshers* were literate and had three years of formal training. Large numbers of *Feldshers* also obtained training in midwifery.[1, 2] Further, *Feldshers* were local people with limited training (and were therefore not formally trained medical doctors) who were authorized by the state to provide primary health care (PHC) services in rural villages. In this sense, they constitute an important forerunner of the CHW movement.

The first example of a large-scale CHW program was in Ding Xian, China, in the 1920s. At that time, Dr. John B. Grant, of the Rockefeller Foundation assigned to Peking Medical University, and Jimmy Yen, a Chinese community development specialist with a background in teaching literacy to adults, trained illiterate farmers to record births and deaths, vaccinate against smallpox and other diseases, give first aid and health education talks, and help communities keep their wells clean.[3, 4] These services were delivered by what were originally known as Farmer Scholars, who later became known as Barefoot Doctors, in communities where the infant mortality was more than 200 deaths per 1,000 live births and life expectancy was only 35 years.[5] This CHW program grew rapidly, parallel to and in close coordination with the people's commune movement. By 1972, there were an estimated one million Barefoot Doctors serving a rural population of 800 million people in the People's Republic of China (or roughly one per 800 people).

These Barefoot Doctors were peasants who were given three months of training (which would correspond to our category of health extension worker [HEW]). They were expected to work half-time performing their health-related duties—which included environmental sanitation, health education, immunization, first aid, and basic primary medical care—and half-time doing agricultural work.[6] Central to the role of the Barefoot Doctors was their expected contribution serving as change agents, engaging their fellow community members in addressing and taking responsibility for their health problems.[3]

In the 1960s, the inability of the modern Western medical model of trained physicians to serve the needs of rural and poor populations throughout the developing world was becoming progressively more apparent. The need for new approaches was obvious, and the Barefoot Doctor concept gained attention around the world as a type of alternative health worker who could complement more highly trained staff who did not have university-type training as medical doctors or graduate nurses, such as auxiliaries and paramedics.[7] During this period, the Barefoot Doctor approach served as a guiding concept for early CHW programs in many countries, including Honduras, India, Indonesia, Tanzania, and Venezuela.

With these pioneering experiences and with a growing awareness of the failure of the Western "missionary model," the Christian Medical Commission (CMC), a unit of the World Council of Churches, based in Geneva, began to envision a new approach to providing health services in developing countries. This approach was based on principles of social justice, equity, community participation, prevention, multisectoral collaboration, decentralization of services to the periphery as close as possible to the people, appropriate technology, and provision of services by a team of workers, including community-based workers. Leaders of the World Health Organization (WHO), just down the street from the CMC, began to interact with the CMC and be influenced by them.[8]

These new ideas were reflected in a WHO book published in 1975 entitled *Health by the People*, which consisted of a series of case studies from different countries where CHWs were the foundation of innovative (generally small-scale) community health programs.[9] The book served as part of an intellectual foundation for the International Conference on Primary Health Care at Alma-Ata, USSR (now Kazakhstan) in 1978, sponsored by WHO and the United Nations Children's Fund (UNICEF). This conference was attended by official government representatives from virtually all WHO and UNICEF member countries, making it the first truly global health conference. Ultimately, the conference resulted in the Declaration of Alma-Ata, which called for the achievement of "Health for All" by the year 2000 through PHC. The Declaration was explicit in defining a role for CHWs. Article VII.7 of the Declaration states:

> **Primary health care ... relies, at local and referral levels, on health workers, including physicians, nurses, midwives, auxiliaries, and community workers as applicable, as well as traditional practitioners as needed, suitably trained socially and technically to work as a health team and to respond to the expressed health needs of the community.[10]**

Thus, the Declaration explicitly defined CHWs as one of the important providers of PHC in certain circumstances.

During this early period of experience with CHWs, the movement incorporated two agendas: the first was a **service-oriented** agenda of extension of preventive and curative services within the existing health system, while the second was a **transformative** agenda concerned with engagement of communities in the process of taking responsibility for their health, and addressing the environmental, social, and cultural factors that produce ill health, including inequity and deep poverty.[11–14] This latter orientation was particularly strong in Latin America.

New approaches to health service delivery were particularly important in postcolonial countries in Africa in the 1960s and 1970s, as well as in newly established centrally planned economies.[14] In the 1970s and 1980s, there was a proliferation of government CHW programs at national scale in countries such as Indonesia,[15] India,[16] Nepal,[16] Zimbabwe,[17] Tanzania,[18] Malawi, Mozambique, Nicaragua,[19] and Honduras,[20] as well as in other Latin American countries. During the same period, there was also the beginning of smaller CHW programs operated by nongovernmental organizations (NGOs) in many low-income countries around the world.

In the 1980s, it was becoming apparent that a number of large-scale programs were encountering serious difficulties due to inadequate training and insufficient remuneration or incentives, along with insufficient continuing education, supervisory support, integration with the health system, logistical support for supplies and medicines, and acceptance by higher-level health care providers. Furthermore, in many CHW programs, political favoritism led to the selection and training of individuals who were not well-motivated or suited for the role of CHW.[3] A series of publications in the late 1980s brought attention to these issues, but they expressed optimism that these problems could be overcome without a major setback to the global PHC and CHW movements.[21–23]

WHY COMMUNITY HEALTH WORKER PROGRAMS FAILED IN THE 1980S AND 1990S

Further issues arose in the 1980s. The rising prominence of selective approaches that did not require CHWs, as well as the loss of momentum of the nascent PHC movement as envisioned at Alma-Ata, led to the demise of a number of large-scale CHW programs. Additional factors also contributed to this faltering. The global oil crisis of the 1970s led to a global recession and a

debt crisis for many developing countries in the 1980s. Governments were forced by international donors, most notably the World Bank, to embrace free market reforms and to reduce their public sector financing, including financing for health services. Thus, financial resources needed to support new health initiatives, including large-scale CHW programs, were not available.[14, 24] The cumulative effect of these shocks led to loss of financial and political support for comprehensive PHC generally,[24] and many CHW programs fell by the wayside.[14]

Political commitment for PHC and for strong and effective CHW programs was often lacking. There was a sense that these programs represented "second class care" and that CHWs were a temporary solution. Returning to strategies prevalent before Alma-Ata, priority was again given to investments in secondary and tertiary levels of care, often benefitting primarily urban and elite populations whose influence on government decision-making for health services was notable.[25] Furthermore, monitoring and evaluation systems for PHC programs and for large-scale CHW programs were weak, and evidence of their effectiveness and cost-effectiveness was limited.[25] In a publication released in 1992, when there were more than two million CHWs throughout the world, one knowledgeable observer remarked:

> It is striking how little is known about what CHWs actually do in relation to the tasks assigned to them, the impact of these activities upon health status, how much time they actually spend doing these various tasks, the response they find among the communities they serve, attrition rates, and costs of CHW programs.[13]

Another reason for the loss of momentum among large-scale CHW programs in the 1980s was that these programs required more financial and supervisory inputs than had been originally envisioned.[21] Consequently, many governments reduced or discontinued their CHW programs in the late 1980s and early 1990s, as efforts at selective PHC and vertical programs with strong international donor and technical support gained prominence.[3, 26]

EVOLUTION OF COMMUNITY HEALTH WORKER PROGRAMS THAT EMERGED DURING THE MID-1980S

Successful examples of CHW programs at scale began to emerge during the mid-1980s. Among the most notable was the Brazil national health care program (i.e., Special Service for Public Health—*Serviço Especial de Saúde Pública*, or SESP), which started in 1987. Since then, the program has been able to gradually achieve universal coverage of PHC services and marked improvement of population health status. Of note, the program employs health teams that include one of the largest CHW networks in the world, consisting of 222,280 CHWs called *Visitadoras*, who provide home visits and services to 110 million people.[27–29] (See Box 1.)

Box 1. The Brazilian CHW Program

The Brazilian public health system dates back to large vaccination and other campaigns that were implemented by sanitary police in the late 1800s and early 1900s. The history of the health system is well-characterized by Paim and colleagues in a recent *Lancet* series on Brazil.[30] Briefly, the health system was shaped by the country's tumultuous history. Public health was institutionalized under the Vargas dictatorship, and Brazil's first Ministry of Health was later formed in 1953. A strong private health care system also developed during this time and continued to expand with the support of the federal government, as did PHC programs. The country transitioned from dictatorship to democracy, and 1985 marked the start of the New Republic. The 1986 8th National Health Conference established the principle that health is "a citizen's right and the state's duty."[31]

The *Sistema Único de Saúde* (SUS) (Unified System of Health) was instituted as part of the constitution in 1988. The system has its origins in the struggle for democracy within the country, and health is defined broadly as encompassing social and political dimensions beyond the scope of traditional medical services.[31] This development was associated with a movement to provide social protection, social mobilization, and expansion of social rights[32] to facilitate "community participation, integration, shared financing among the different levels of government, and complementary participation by the private sector"[33] and to provide free access to services.[34] States and municipalities were given taxation authority, and federal guidelines mandated that 10% of this revenue be allocated to health.[35]

CHW programs have been implemented in Brazil for decades, including the successful *Visitadora Sanitaria* program in which these workers provided immunizations, information, and various other maternal and child health interventions.[27] The Community Health Agent (CHA) Program (CHAP) developed as a pilot in Ceará and influenced subsequent PHC programs.[36] The program started in the late 1980s during a drought, after initial pilot projects, including a project that trained 6,000 women in 112 municipalities. The women received two weeks of training to promote breastfeeding, the use of oral rehydration salts, and immunization.[35] In 1989, 1,500 of the original 6,000 CHWs were incorporated with a new CHA system, supervised by local nurses. These CHAs provided mostly health promotion and health education services to clearly defined geographic areas near their homes. The program was highly successful and served as a model for subsequent CHA programs.[35] It did, however, face formal resistance from nurses for a variety of reasons, including unclear roles and overlap of CHA work with that of auxiliary nurses.[37] The first national CHAP was developed in 1991 and implemented as a first national PHC effort, later becoming integrated with the *Programa Saúde da Família.*[38]

The *Programa Saúde da Família* (PSF) (Family Health Program, now called the Family Health Strategy)—was launched in 1994 to expand health care access to the poorest Brazilians.[34] CHAs in programs such as the one in Ceará have been integrated with the PSF.[35] In 1996 the federal government transferred control of the management and financing of health care services to the states[39] and in 2002 CHAs were officially recognized as professionals by Law No. 10.507/2002. CHAs originally provided vertical maternal and child health services, but have evolved into the cornerstone of PHC services.[31]

In the mid-1970s, Bangladesh had started a community-based family planning (FP) program with an initial cadre of Family Welfare Assistants that expanded in the mid-1980s and was complemented by NGO CHWs working in FP. By 1997, Bangladesh had 30,000 female CHWs providing home-based FP services.[40] This program became what has been widely regarded as one of the world's most successful FP programs in a developing country not undergoing rapid socioeconomic development. In the mid-1980s, BRAC, a national Bangladeshi NGO, initiated a CHW program composed of women who were members of a BRAC microcredit savings group. Each group had women who obtained special training in an area of personal interest, including various types of income-generating activities or health. The CHWs were called *Shasthya Shebikas*. This program expanded gradually such that, at present, this national NGO cadre consists of 100,000 CHWs who reach more than 110 million people with comprehensive services.[14, 40]

Another notable program that emerged in the late 1980s is Nepal's Female Community Health Volunteer (FCHV) Program, established in 1988. This program arose out of an earlier CHW program that had begun in Nepal following the 1978 Alma-Ata Conference and failed to receive continued funding from the government in the early 1980s. The resurrected program engaged female volunteers, many of whom had been trained under the initial CHW program, but were abandoned in the earlier 1980s. Initially, their role consisted of FP promotion, first aid, and

some dispensing functions. But, beginning in 1993, the government of Nepal progressively introduced twice-annual distribution of vitamin A capsules to children, delivered by FCHVs. Over the following decade, the National Vitamin A Program gradually scaled up to cover the whole country. Over the past decade, these 40,000 FCHVs have taken on expanded responsibilities that include detection and treatment of common childhood diseases (including pneumonia), distribution of oral contraceptives, and promotion of available health services for first aid, antenatal care, FP, and immunization.[41, 42]

Bangladesh, Brazil, and Nepal are noteworthy because they have had some of the most rapid achievements in reducing under-5 mortality in the world since 1990.[43] The strong CHW programs in each of these countries have all made vital contributions to this important achievement.

COMMUNITY HEALTH WORKER PROGRAMS THAT HAVE EMERGED SINCE 1990

More recently, multiple countries have begun to invest again in large-scale CHW programs. The Lady Health Worker (LHW) Program in Pakistan was launched in 1992 and has gradually scaled up to serve 70% of the rural population, with around 100,000 workers at present.[44] (See Box 2.) Uganda introduced its Village Health Team Strategy in 2003.[44] In 2004, Ethiopia began to train Health Extension Workers (HEWs), who now number more than 30,000.[44] India initiated a Rural Health Mission in 2005 that involves support for more than 800,000 workers called Accredited Social Health Activists (ASHAs).[44]

Over the past decade, as evidence has continued to accrue on the effectiveness of interventions delivered by CHWs, enthusiasm has grown for a stronger investment in CHW programs as a strategy for accelerating progress to reach the Millennium Development Goals (MDGs) for PHC.

Box 2. The Pakistan CHW Program

Pakistan's formal support for PHC dates back to the country's signing of the 1978 Declaration of Alma-Ata.[45] In 1993, Pakistan established the Prime Minister's Program for Family Planning and Primary Health Care, which employed CHWs to provide PHC services in their communities. The program subsequently only employed female CHWs. The LHW Program was developed in 1994.[46] The goal of the program is to reach rural areas and urban slums with a set of essential PHC services, including promotive, preventive, and curative,[47] to improve patient-provider interactions, to facilitate timely access to services,[48] to increase contraceptive uptake, and ultimately to reduce poverty.[45] In 2000, the program was renamed the National Program for Family Planning and Primary Health Care, but it is still commonly called the Lady Health Worker Program.[49]

The 2003–2011 Strategic Plan set the two goals of improving quality of services and expanding coverage of the LHW Program. Key determinants of LHW provision of high-quality service were described as selection based on merit; provision of professional knowledge and skills; supply with necessary medicines and other supplies; and adequate remuneration, performance management, and supervision. A management information system was also understood to be essential to assess and encourage high-quality performance and facilitate informed programmatic decision-making.[50] The 2001–2011 National Health Policy described "investment in the health sector as a cornerstone of the government's poverty reduction plan."[47] At present, there are approximately 100,000 LHWs.

The LHW Program has evolved over time, and LHWs' scope of services has grown from its initial focus on maternal and child health. It now also includes participation in large health campaigns, newborn care, community management of tuberculosis, and health education on HIV/AIDS. There

are concerns, though, that the expansion in the LHWs' role and tasks has increased their job-related stress.[51] LHW programs have also been advertised in a series of mass-media campaigns that promote community uptake of and respect for LHW services.[52]

In spite of growing enthusiasm for expanding CHW programs, as evidenced by a recent high-level call by a global task force to train one million CHWs in Africa,[53] it remains the case, as Frankel noted two decades ago,[13] that our knowledge of the effectiveness of large-scale CHW programs remains limited, and the challenges faced by early large-scale CHW programs appear to still be present.

RENEWED INTEREST AND NEW PROGRAMS IN THE 2000S

A renewed interest in CHW programs has been sparked by a sense of urgency in achieving the MDGs, particularly MDGs 4 and 5 for reducing child and maternal mortality, and from a growing base of evidence on the potential contributions of CHW programs to the health status of populations.[53] This revitalized interest also arose from a commitment to (or financial demand for) decentralization of health services and expansion of services to the poorest segments of the population, who were being left behind by economic progress of the better-off segments of the population.

In Africa, the lack of progress in many countries fueled interest among government leaders and donors in either establishing new cadres of CHWs or, as in the case of South Africa, in reactivating a dormant CHW program that had been previously abandoned. Thus, Ethiopia established its HEW Program in 2004 (see Box 3), while similar initiatives began in Malawi (see Box 4) and Kenya at around the same time. The emergence of the HIV/AIDS pandemic played an important role in the revitalization of CHW programs as many NGOs in Africa, especially in South Africa, turned to this cadre of health workers to deliver specific care to those with AIDS.

Box 3. The HEW Program in Ethiopia

CHWs have an extensive history in Ethiopia dating back to the Alma-Ata Conference. One program during the 1980s civil war employed 3,000 CHWs in Tigray. These workers were selected by their communities to receive training in maternal, child, and environmental health and in malaria diagnosis and treatment. This program was suspended in 1991, at the end of the war, but various CHW programs continued throughout the country.[54]

In 1997–1998, the Ethiopian Federal Ministry of Health launched the National Health Sector Development Program (HSDP). This program shifted the focus of the health system from predominantly curative to more preventive and promotive care and prioritized the needs of the rural inhabitants[55] who account for 83% of the Ethiopian population.[56] A review of the first five years of the HSDP found that challenges remained in achieving universal PHC coverage.[57] In response to these identified needs, in 2003 the government of Ethiopia launched the Accelerated Expansion of Primary Health Care Coverage and the Health Extension Program (HEP).[58] Multiple stakeholders, including the Federal Ministries of Health, Education, Labor, Finance, and Capacity Building were involved in development of the HEW model.[59] The program was designed to expand health service coverage, particularly in rural areas, using locally available human resources. These included community-based human resources such as HEWs, voluntary community health workers (vCHWs)[58] and Community Health Promoters (CHPs). The first group of HEWs were trained in 2004–2005.[60] At present, there are 34,000 HEWs working out of 15,000 health posts.

Box 4. The Malawi CHW Program

The current CHW program in Malawi dates back to the 1950s, when Health Surveillance Assistants (HSAs) were recruited and salaried by the MOH to provide immunizations. In the 1960s and 1970s, the HSAs played a prominent role in the smallpox eradication campaign. They were at the frontline for managing cholera epidemics in the 1970s and 1980s and were engaged in environmental health education in the 1990s. With financial support from the Global Fund to Fight AIDS, Tuberculosis and Malaria, in 2008, the government was able to double the size of the HSA workforce to 10,000, so that there would be one HSA for every 1,000 people. Today, HSAs continue to provide health education, promote sanitation and hygiene, and conduct outreach clinics, including immunizations. However, they have, in addition, recently received training in integrated community case management (iCCM) and the diagnosis and treatment at the community level of childhood pneumonia, diarrhea, and malaria.[61]

CONCLUSIONS

The history of the many and varied approaches to expanding health services through the training and deployment of community-level workers provides a meaningful window through which to consider the explosion of interest and expansion of CHW programs throughout the world. The lack of financial and technical support for these programs and the lack of commitment to improving them over time during the 1980s serve as a critically important lesson for today. Developing programs that are financially sustainable and that have strong periodic evaluations leading to ongoing improvements will be essential if today's and tomorrow's programs are to achieve long-term viability and their potential impact on population health.

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Chapter 3

National Planning for Community Health Worker Programs

Jessica Gergen, Lauren Crigler, and Henry Perry

Key Points

- The planning process defines many of the other topics in this manual (e.g., supervision, training, roles and responsibilities of Community Health Workers [CHWs]) using an informed and methodical process.
- The most effective planning mechanism is a feedback loop, where community-level information is fed through the multiple sublevels (e.g., district, subnational, or provincial) to the national level, where policy, funding, and evaluation can be continually revised.
- Careful planning during the design and implementation of a national CHW program results in a context-appropriate program that successfully trains, supervises, and retains CHWs, while simultaneously improving health service delivery on the community level.

INTRODUCTION

Expansion or development of a Community Health Worker (CHW) program on a national level requires a planning strategy that coordinates many of the topics covered in the other chapters, such as Chapters 9 (training), 10 (supervision), and 13 (community relations). Further, incorporating or expanding use of CHWs into existing health system infrastructures—which are often complex and operate differently across countries—is a difficult task that requires careful planning. Planning for such an expansion demands the involvement of multiple stakeholders from the national to the village level. The direct result of careful planning during the design and implementation of a national CHW program is a context-appropriate program that successfully trains, supervises, and retains CHWs, while simultaneously improving the health service delivery at the community level. This chapter addresses the planning process in a very general way, recognizing that most of the specifics of how to go about doing this will vary from country to country and context to context. Since our overall goal in this guide is to not be overly prescriptive and to raise issues that need to be considered when initiating or expanding large-scale CHW programs, we hope that the ideas and concepts presented here will at least provide a framework for beginning the planning process.

PHASES OF THE COMMUNITY HEALTH WORKER PROGRAM PLANNING PROCESS

A national-level plan should coordinate planning committees and stakeholders from multiple governmental and community levels, as well as nongovernmental organizations (NGOs) and relevant implementing actors, to create an informed strategic plan for the CHW program that includes:

- A situational analysis
- An operational model
- Integration of the program with policy
- CHW training
- CHW supervision
- A deployment strategy
- Routine and systematic monitoring and evaluation (M&E)

Clear and carefully chosen strategies across each of these areas, taking into account their inter-relationships, contribute to the success and sustainability of the program at scale. The group charged with planning and developing this effort must give careful attention to ensure that the program will continue to be adequately supported by the multiple levels of government involved, national level down to community level, and that this support includes appropriate provision for long-term financial sustainability (see Chapter 5 for more detail on financing). Table 1 summarizes the key considerations for planning CHW-delivered services, phase by phase. These key steps were informed by the One Million Health Workers document and developed using best practices shared across international organizations and national governments.[1]

Table 1. Phases of planning a CHW program

PHASE 1	POLICY-LEVEL PLANNING	
	Situational analysis	Documents the current state of the local health system, informing planners on the overlap or differing needs of communities.
	Development of an operational model	Provides a framework illustrating how all of the working parts of the health system are expected to function.
	Coordinated planning	Decision-makers meet with stakeholders to determine timeline, indicators, objectives, evaluation tools, and internal communication strategy, and to establish regular planning meetings.
	Policy planning and formalization	Decision-makers communicate a draft of these policies to all stakeholders and then, once feedback has been obtained, formalize the policies.
PHASE 2	**TRANSLATION OF POLICIES INTO A PLAN**	
	Development of the key ideas for the program	Planners translate the CHW program policies into an operational national-level plan.
PHASE 3	**PREPARATION OF A DETAILED IMPLEMENTATION PLAN**	
	Development of details for the specific subsystems of the program	Program implementers develop detailed plans for governance/management, selection, training, supervision, engagement with communities, relationship with the health system, scaling up, and monitoring and evaluation (covered in other chapters).

Adapted from: CHW Task Force. 2011. *One Million Community Health Workers: Technical Task Force Report*. The Earth Institute at Columbia University. New York City, New York. http://www.millenniumvillages.org/uploads/ReportPaper/1mCHW_TechnicalTaskForceReport.pdf

CHW cadres should be selected, trained, and deployed in accordance with local norms and with context-specific constraints in mind. This chapter helps to define clear processes to develop and implement a national plan for community health services. Such a plan must be responsive to local norms, context-specific constraints, and the results of the situational analysis, and the planning process needs to be continuous and ongoing. BRAC's *Shasthya Shebika* CHW Program (Box 1) provides an example of a stable and sustainable national CHW program. This chapter takes a rather top-down approach to how a country might plan a large-scale community health services program. The BRAC example from Bangladesh in Box 1 links top-down strategies with frequent interactions at the grassroots level, and this approach is certainly an option to be considered. Our intention is not to prescribe a unilateral way of planning, but to provide a useful starting point for developing an appropriate planning process.

Box 1. A sustainable large-scale CHW program in Bangladesh[2, 3]

BRAC has recently become the largest NGO in the world. Throughout Bangladesh, BRAC has trained and actively supports 100,000 CHWs known as *Shasthya Shebikas*.

Key Features: This is a public-private partnership successfully deploying a sustainable CHW program at scale without financial support from the government. Over the past two decades, BRAC has scaled up its *Shasthya Shebikas* Program using a sustainable, local financing model whereby *Shasthya Shebikas* earn a modest income by selling medicines and commodities at a competitive market price through a highly efficient supply system managed by BRAC. *Shasthya Shebikas* are responsible for 150–250 households that they visit on a regular basis (every one to two months). They provide general health education and promotion about nutrition, family planning (FP), immunizations, and other priority topics. They treat common diseases, such as

fever, cold, scabies, and diarrhea. They also provide community case management for childhood pneumonia and collect sputum specimens for patients with chronic cough; for those diagnosed with tuberculosis, they dispense directly observed therapy for them. Notably, there are no literacy requirements for *Shasthya Shebikas*.

Shasthya Shebikas are supervised by *Shasthya Kormis*, who are also recruited from their communities. *Shasthya Kormis* are paid a sum equivalent to about US$40 per month to supervise the *Shasthya Shebikas* and perform antenatal care in villages. The *Shasthya Kormis*, all of whom are women, have a minimum of 10 years of schooling and work between four and five hours per day. They accompany each of the *Shasthya Shebikas* in their charge on community visits at least twice per month and meet monthly with their group of *Shasthya Shebikas* to discuss problems, gather information, and provide supplies and medicines.

Shasthya Shebikas earn an income by selling supplies, such as oral contraceptives, birthing kits, iodized salt, condoms, essential medications, sanitary napkins, and vegetable seeds, at cost plus a small profit margin. They receive incentives for good performance that are based on achieving specific objectives during that month, such as identifying pregnant women during their first trimester. Supervisors verify and monitor performance during their visits to communities, where they have the chance to talk with village women.

The development of the *Shasthya Shebikas* Program is an example of a planning process that was deliberate but slow and organic. There was no preconceived national blueprint that was scaled up rapidly. Rather, a viable role was established for these CHWs, appropriate for the Bangladesh context, and a way was found to provide sufficient locally generated financing to motivate these women to carry out their responsibilities. Then, as BRAC was able to provide appropriate training and supervision, the program began to grow over the following two decades.

BRAC is one of the most business-like NGOs in the world, because the profits generated by their various social enterprises are fed back to support program operations—making BRAC nearly 80% self-funded.

PHASE ONE: POLICY-LEVEL PLANNING

Situational Analysis

To ensure effectiveness when designing community health services, it is necessary to begin with a clear understanding of the local environment. A situational analysis can both identify context-specific needs and challenges and guide design decisions about key program elements. To ensure meeting the needs of a diverse population, a national program may use a variety of implementation strategies depending on the local situation. In BRAC's case, it was already operating community development programs and had a "built-in" situational analysis based on its own programmatic experience, since it had been functioning for a decade before beginning to plan and scale up its CHW program.

A situational analysis also documents the current state of the health system and may include information on health services offered by the formal and informal sectors, care-seeking behaviors by priority groups such as women and young children, supply chain management, utilization and coverage of care provided by the health system, and human resources challenges. The social and environmental determinants of health are also critical to include. The situational analysis should provide decision-makers with a comprehensive understanding of the stakeholders and how they, along with their inter-relationships, affect people's access to health services.

Sources of information for a situational analysis can include the following:

- A review of the peer-reviewed and gray literature (e.g., programmatic publications and reports) and NGO projects
- Documentation from meetings with stakeholders (e.g., local leaders, women's groups, church leaders, representatives of the Ministry of Health [MOH], local NGOs)
- Documentation from visits to local communities by small teams to gain a better understanding of the environment, the social and economic context, and the needs expressed by the people living there
- Identification of gaps and existing assets on which to build (e.g., collaborating with current NGO programs, using existing human resources in the health and nonhealth sectors, and engaging with the existing health system infrastructure)
- Formative research on issues that the program is to address and on the communities the program is meant to serve

To expand on the third point listed above, some countries have diverse geographic and sociocultural populations. Oftentimes, a situational analysis needs to be completed at the provincial or subnational levels, as well as on a national level. A good example is India, where rural people, lower-caste people, religious minorities, tribal ethnic groups, women, and the poor in particular suffer gross health inequalities and lack access to good-quality care because of social, geographic, and economic barriers.[4–6] This is one reason why it is important that district and provincial authorities play a strong role in the planning and design processes. Provincial and district leadership involvement in the planning is just the beginning, since their participation is needed across all the areas discussed in this manual—supervision, training, support, supplies, and incentives. Participation by local authorities also plays a key role in governance and accountability, as explained in Chapter 4; therefore, by including key players, their roles, and their interactions in a situational analysis, the most effective manner to involve local leaders can be made clearer.

Specific questions to address in the situational analysis include the following:

- What are the main health problems and who experiences them? Which of these persons can be identified and referred or directly managed by the types of CHWs you expect to deploy? What are the direct, indirect, and underlying causes of these health problems? (This latter question will help frame the operational model as well.)
- Are there specific subgroup(s) of the population that will be a particular focus for the type(s) of CHWs deployed? Who are those most affected by the priority health problems? Who will be the easiest to reach and who will be the hardest? What strategies will be used to reach them?
- What are the social and environmental determinants of health? What are the current interactions across sectors? Who are key actors and what are the power dynamics? Are there significant barriers to health services in terms of gender, ethnicity, religious affiliation, disability, or age?

Development of an Operational Model of the Current Health System

An operational model, as we use the term here, is a representation of how the current health system operates. Development of an operational model provides an opportunity to visualize how the health system functions, including service provision, human resources, technology and information management systems, and the supply and distribution of commodities. Specifically, using an operational model to map the dynamics of the current health system helps those involved in planning to characterize where further development of community health services

fits into the broader health system. For example, if a health system currently has only one clinic for every 10,000 people that offers voluntary HIV counseling and testing (VCT) along with anti-retroviral drug treatment for patients with HIV/AIDS, then an outreach program may need CHWs to provide VCT services and help ensure follow-up appointments for patients who test positive. Further, an operational model can be used to define CHW roles in order to address identified gaps in the local health care system, such as defining who CHWs are, what they do, how they get their supplies, how the system intends to retain them, and what training and supervision will be required.

During the design or scale-up of new community health services, CHW interaction with providers of the health system and their potential impact on the health system itself must also be carefully considered and planned. To aid this endeavor, the World Health Organization (WHO) has produced useful tools for examining the interaction and impact of CHWs on the formal health system, including the WHO Health Systems Building Block Framework, which highlights the inter-relationships of the six major components of a health system (i.e., service delivery, human health workforce, health information system, access to commodities, financing, and governance) and offers a conceptual model of how CHWs may interact with the health system.[7] Additionally, WHO has developed monitoring tools and indicators to assess these health system building blocks. These tools can be used to examine the impact of CHWs on the health system. Using these measurement strategies to track progress of health system indicators ensures that continued improvement in health care and accountability at country and global levels is sustained. (See Chapter 15 on monitoring and evaluation).

Some tools that can be used at this stage include SWOT (strengths, weaknesses, opportunities, and threats) analysis, flow charts, feedback loops, constraints analysis (through the framework of the six WHO health systems building blocks), stakeholder analysis, develop-distort-dilemma (exploring changes—both positive and negative—that could be brought on by introducing a new cadre of workers, for example), power relationships, and cost-effectiveness scenarios.

Coordination of Planning

National-scale implementation of community health services has implications for health care governance from the MOH down to village leaders. Before any implementation of program development or expansion, determining how the multiple levels of government will communicate and interact during the planning, funding, and implementation stages will ease the tensions and challenges that often accompany systematic program scale-up (See Chapter 14, on scale-up, for a more detailed description of these challenges). The level of coordination will depend on the country, the current degree of decentralization, and what responsibilities have been delegated. However, many countries have not succeeded in decentralizing health care, and in these cases, the mechanisms that exist to support health programs at the district and provincial levels should be utilized. Depending on the situation, it may be appropriate to consider, and, if necessary, incorporate NGOs and/or the private sector as part of a national CHW program. Regardless of who will be included in the planning process, coordinated communication is key. For example, in Zambia where multiple NGOs cover the country, it may not be possible for the government to take over all at once, so coordination with and among the NGOs is an important first step.

Health system planning and ongoing monitoring of performance must begin at the community level and provide feedback through various levels to the national level, where policy, funding, and evaluation can be periodically revised. The most effective planning mechanism is a feedback loop, where the community level feeds back information about their program through the multiple levels (e.g., district, provincial) to the national level. Additionally, each level should have a defined set of responsibilities during each stage of program development (i.e., planning, implementation, activity coordination, resource security and dispersion, continual monitoring,

and program improvements). The establishment of responsible bodies at each level, with oversight from central level, helps to ensure clear roles and responsibilities are determined through the process of conducting the situational analysis and building the operational model (two stages of Phase 1).

National-Level Roles and Responsibilities

A planning body at the national level should be established, and this body may comprise high-level leaders, such as members of the relevant government ministries and departments, as well as leaders of NGOs and private partners. The national-level planning body is responsible for providing leadership for the development of community health services. Support and engagement from the finance ministry, national planning commissions, and other sector leaders are useful, if not essential, since the MOH in many countries may not have sufficient political influence on decisions involving significant commitment of new resources. A national committee can provide high-level leadership, make decisions on resource allocation, oversee the development of implementation guidance, monitor implementation, oversee national monitoring and evaluation (M&E), and adapt the program based on M&E findings.

Some questions to consider when forming the CHW national-level planning committee:

- What national governing bodies need to be on the committee?
- Who are the high-level leaders and advocates for CHW programming?
- How often does the committee need to meet?
- What specific planning documents will be needed, and when will they be needed in order to guide the provincial- and district-level planning committees?
- How and how often will the national and subnational committees communicate?
- How will the national-level committee document its meetings and share this information with subcommittees?
- What policy changes are needed to support or integrate a CHW program with the national health sector policy?
- How will data from the district and provincial levels be collected and managed?
- How will the M&E data be used to revise the program? How will this data be shared?

Provincial-Level Roles and Responsibilities

Provincial leaders may include provincial or district supervisors, program implementers, NGO managers, and private sector representatives. Their responsibilities may include planning for the engagement and coordination of key partners in training and for the oversight of supervision activities and the supply chain.

District-Level Roles and Responsibilities

District health committees, when they are present, can help coordination among health facilities, CHW program supervisors, and local NGO partners within the district. District- and municipal-level stakeholders, health care providers and their professional organizations, local NGO leaders, and community-led groups are examples of district-level actors who can be involved in developing and overseeing community health services. Potential responsibilities of a district-level planning committee include ensuring supervisor support and evaluation, overseeing the supply chain, and supporting CHWs from facility-based providers and communities. Relevant questions for district committees include: Are there particular subgroup(s) of the population who will be a particular focus for the type(s) of CHWs deployed?

Who are those most affected by the priority health problems? Who will be the easiest to reach and who will be the hardest? What strategies will be used to reach them?

Health Center Roles and Responsibilities

Further development or expansion of community health services, if not adequately planned and resourced, can overburden an already overstretched health facility staff due to new supervisory and mentoring responsibilities and additional paperwork, meetings, and field visits. (See Chapter 12 on relationship with health systems.) Therefore, effectiveness of any new services will depend, in part, on appropriately engaging health facility staff early in the planning process. As part of the situational analysis, the typical functional state and human resources capacity of health facilities that are expected to be involved in the provision of community health services will be documented. This documentation will help planners determine what additional resources are needed to ensure that health facility staff can take on the functions associated with these new community health services.

The capacity of facility-based staff to take on new supervisory or support roles for community-based cadres will vary by setting. Brazil has mandated that Community Health Agents (CHAs) be supervised by nurses and physicians from the local clinics. In many settings in Brazil, nurses have half of their work time reserved to serve as CHA supervisors. In Ethiopia, by contrast, the supervision of Health Extension Workers (HEWs) falls to a designated supervisory team composed of a Health Officer, a Public Health Nurse, an Environmental/Hygiene Specialist, and a Health Education Specialist.[8]

Community-Level Roles and Responsibilities

A community-based health committee can assume a planning function as well. It may include members from village-level government (e.g., a village development committee), traditional or other local leaders, and representatives from other committees concerned with community development. These committees potentially have the ability to take certain responsibilities for CHW oversight. (See Chapter 13 on community participation.) They can coordinate with the CHW's supervisor, assist the CHW in mobilizing the community, and generate support for CHWs by advocating their importance for the community's improved health. A strong community commitment helps ensure more effective community health services and can mitigate stress points on the system. Planning for this from the outset is important.

PHASE TWO: TRANSLATION OF POLICIES INTO A GENERAL PLAN

The principal ideas that emerge from the planning process need to be converted into CHW program policies, and these, in turn, need to be translated into a general operational national-level plan. In response to political pressures, political leaders often promise to devote resources and enact legislation that will improve coverage, access, and service provision within their country's health system. Yet, too often these promises are inadequately funded, lack proper legislative authorization, and are not integrated with the existing health system. For example, national and provincial initiatives and goals are adopted and supported by political figures throughout sub-Saharan Africa to end preventable maternal and child death by 2030. Implementation research can help in ensuring that the analyses done in Phase 1 can be appropriately translated to the rollout of policies. Adopting evidence-based policies is a prerequisite to effective implementation, and focusing on continuous improvement to better understand challenges that arise in implementation is key in yielding sustainable programs. A critical component of ending preventable maternal and child death is to deliver health services at the household level and ensure referral networks begin at the household. CHWs could aid in achieving this goal. However, without proper legislation to define the role of CHWs within the health system and adequate financing to support this cadre of workers, such a system cannot be developed.

PHASE THREE: PREPARATION OF A DETAILED NATIONAL IMPLEMENTATION PLAN

Once a general operational national-level plan has been created, the next step is to prepare a detailed national implementation plan. Among other things, this preparation requires development of details for the specific subsystems of the program, including governance, financing, selection and recruitment, training, supervision, relationship with the health system engagement with communities, scaling up, and M&E. These implementation components are covered in detail in other chapters. Here, we will briefly focus on planning for training and deployment, supervision, and M&E. (See Chapters 4 and 5, 8–10, and 12–15 for further discussion on these and other issues.)

Training and Deployment

The information collected by the situational analysis, the operational model developed, and the analysis arising from formative research will inform the design of new community health services. Specifically, this information can help direct decisions about selection criteria for CHWs and their training needs. Further, information arising from the situational analysis on spatial distribution of facility-based services can inform the deployment strategy of CHWs.

Questions to consider:

- Who will train CHWs? Will trainers be compensated? What are the incentives?
- What training models will be used? How often will CHWs receive additional training? If there is a hierarchy among CHWs, how are those who receive extra training selected?
- How are CHWs allocated to their posts? Is gender a consideration? Is burden of disease considered?
- What types of activities will CHWs be trained for? Will training be general or will CHWs learn how to carry out specific tasks? Are these tasks for treatment, promotion, or support?

Supervision, Monitoring, and Evaluation

Countries vary considerably in their approaches to supervision. For instance in Brazil, as previously mentioned, national policy mandates that nurses who are selected to supervise CHAs spend 50% of their paid time providing clinical care and the other 50% of time fulfilling their role as supervisors of CHAs. However, this approach would not be appropriate in places where there are massive human resources shortages, such as Sierra Leone, where there are only 1.9 health care providers per 10,000 people. In many instances, clinics have only one or two providers and are bombarded with lines of clients starting at sunrise. Planning for supervision has to take into account the capacity of existing staff to take on additional time-consuming responsibilities. For instance, if a program requires that supervisors accompany and evaluate all CHW work at the household level at least quarterly, fill out reports on CHW commodity use, manage their supply of commodities, and ensure that CHWs have a proper monthly work plan, then the supervisors must have sufficient time for these duties. Inadequate planning for the time and human resources required for CHW supervision has been a common contributor to failed CHW programs.

Ultimately, adequate ongoing monitoring is necessary for sound community health services. M&E is an integral part of any CHW program, particularly since services provided are far away with limited personal contact among CHWs and other members of the health team. As such, M&E tools and mechanisms for their use for feedback into modifying program operations are important when developing a detailed implementation plan.

Questions to consider:

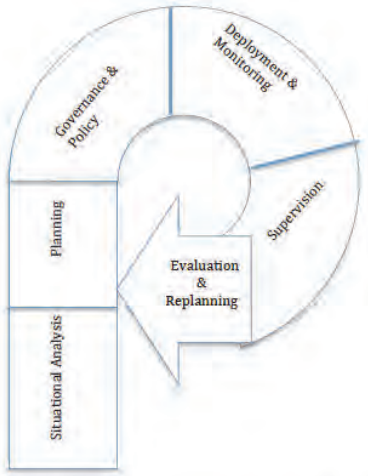
- Who are the supervisors? Are they compensated? What are the incentives? What is their time commitment? Are there gender implications? What are the power implications?
- How many CHWs are supervised by one person? What kinds of information are supervisors noting for their reports?
- Is quality being measured by supervisors in a systematic way? Are the data entered regularly? Who is responsible for collating data related to quality of CHW services from supervisors?
- How are data from supervisors used in impact evaluation projects?

Data Use for Continuous Improvement

Developing an initial plan based on these three phases is just the beginning of national CHW program planning. As a program is implemented, scaled up, or modified, an ongoing replanning process is required. Based on M&E feedback, certain program components may be working very well, while others may not be functioning as intended. To know what is actually occurring requires adequate tracking of intervention coverage and its impact/effectiveness (e.g., whether the CHWs are actually functioning, whether the supply chain is working). Based on information from a variety of sources (e.g., routine monitoring, field visits, special studies), almost invariably certain aspects of program performance will not meet expected standards. Based on such findings, redesign of some program features may be needed to address performance problems.

In short, planning is an iterative process that requires many revisions, improvements, and modifications in order to have an effective CHW program that responds to local needs and that improves the health of the population (Figure 1). Regardless of whether a CHW program is new or old, replanning of program components must happen on a continual basis and be informed by evidence arising from M&E and current recommendations from the global health community. Replanning at least once every 10 years and preferably every five years would seem reasonable. Table 2 contains some of the key components of selected CHW programs that might be useful as one thinks about the content of a plan for a large-scale CHW program.

Figure 1. The P-Process of CHW program planning



Adapted from the *Health Communication*, Piotrow et al. Praeger, 1997, page 27; and Health Communication Partnership (December 2003), The New P-Process: Steps in Strategic Communication [PDF]. Baltimore: Johns Hopkins Bloomberg School of Public Health / Center for Communication Programs / Health Communication Partnership.

Table 2. Examples of key components of selected CHW programs

BRAZIL[9–11]	**POLICY**
	▪ The *Programa Saúde da Família* (Family Health Program) was launched in 1994. ▪ CHAs were officially recognized by law in 2002.
	MANAGEMENT
	▪ CHAs are managed by local nurses who spend half their time working in the local clinic and the other half fulfilling their supervisory role. ▪ The CHAs have a strong referral system in which they report any ill person within their catchment. ▪ Upon discharge, the CHA is expected to maintain the continuum of care and follow up with the patient.
	COMMUNITY INVOLVEMENT
	▪ One of the goals of the Family Health Program is to "promote the organization of the community" and analyze community needs. ▪ Some communities are involved in the organization and budget of health system. At times, the public is able to vote on the proportion of the overall budget devoted to health.
	QUALITY ASSURANCE
	▪ Data is collected by CHAs, which provides municipal-level data on implementation. ▪ CHAs in the program keep records that allow for population-based monitoring of local health conditions and help to identify problems are they arise. ▪ CHAs' role in the community is expected to increase the accountability of the health system.
PAKISTAN[12, 13]	**POLICY**
	▪ In 1993, Pakistan established the Program for Family Planning and Primary Health Care, which employed only female CHWs to deliver health services to communities and was informally called the Lady Health Worker (LHW) Program. ▪ In 2003–2011, the strategic plan set the two goals of improving quality of services and expanding coverage nationwide.
	MANAGEMENT
	▪ Supervision is highly organized and tiered, with several levels of supervision (i.e., supervision of the supervisors). ▪ LHWs are supervised monthly by the LHW supervisors, who are in turn supervised by the District Coordinator and Assistant Coordinator. ▪ Once a month, LHW supervisors should meet with LHWs' clients and make a work plan for the next month.
	COMMUNITY INVOLVEMENT
	▪ There is a community member on each LHW selection committee and each LHW supervisor selection committee. ▪ The community is involved in programmatic decision-making, planning, and M&E. LHWs provide a range of community development services and participate in community meetings.
	QUALITY ASSURANCE
	▪ For the LHW Program, high-quality service is described as selection based on merit; provision of professional knowledge and skills to the LHW; supply with necessary medicines and other supplies; and adequate remuneration, performance management, and supervision. ▪ A management information system is also essential to assess and encourage quality performance and facilitate informed programmatic decision-making.

ETHIOPIA[8]	**POLICY**
	▪ In response to unmet needs, the government of Ethiopia launched the expansion of primary health care (PHC) and the Health Extension Program (HEP), targeted at rural areas, which included community-based HEWs, vCHWs, and health promoters.
	MANAGEMENT
	▪ There are multiple levels of HEW supervision, including the *woreda* (district) supervisory team, comprising a Health Officer, Public Health Nurse, Hygiene Expert, and a Health Education Expert. ▪ In 2005, HEWs reported an average of three supervisory visits over the course of nine months. HEWs supervise a lower cadre of vCHWs.
	COMMUNITY INVOLVEMENT
	▪ There are active health committees involved in the selection and oversight of HEWs. ▪ The committee is supposed to be involved in every step of the HEP from program planning through to evaluation.
	QUALITY ASSURANCE
	▪ The program has extensive M&E systems that include routine reports and monitoring of indicators for maternal, neonatal, and child health; disease prevention and control; nutrition; hygiene; and environmental health. ▪ Indicators include maternal, neonatal, and child health; contraceptive acceptance rate; and number of deliveries attended by skilled birth attendants and/or by HEWs.
NEPAL[14, 15]	**POLICY**
	▪ The first Nepal Health Sector Program (NHSP) was developed for implementation from 2004 to 2009 to increase equality of access and to improve health outcomes. ▪ A second NHSP from 2010 to 2015 aims to increase access/utilization of high-quality services, and reduce cultural and economic barriers to accessing care.
	MANAGEMENT
	▪ Voluntary Health Workers (VHWs) and Maternal and Child Health Workers (MCHWs) supervise the Female Community Health Volunteers (FCHVs) in their catchment areas. ▪ They are responsible for providing support, advice, and feedback during monthly supervision visits. FCHVs meet with village groups every four months to review progress.
	COMMUNITY INVOLVEMENT
	▪ Women's groups and local Village Development Committees (VDCs) are highly involved in the selection and oversight of FCHVs. ▪ A national evaluation demonstrated that mothers groups' functioning improved and they were more supportive of FCHVs.
	QUALITY ASSURANCE
	▪ A recent qualitative study highlighted the need for "context-specific incentives" for FCHVs. Despite serving as volunteers, FCHVs have very low attrition rates in the program with less than 5% turnover each year. ▪ Data, particularly program evaluations and research in the field, are highly influential in programmatic policy development and implementation.

INDIA[4, 16]	**POLICY**
	▪ In early 2000, the government of India developed the National Rural Health Mission (NRHM) to improve rural PHC, accountability, and community engagement in the public health sector, including a provision for a national CHW cadre that focused on FP and maternal and child health. ▪ In 2005, the NRHM launch an Accredited Social Health Activist (ASHA) program.
	MANAGEMENT
	▪ According to national guidelines, there is one ASHA Facilitator (supervisor) for every 20 ASHA workers. The Facilitator is to help with the selection of the ASHAs, run monthly ASHA meetings, establish a grievance redress system, accompany ASHAs on home visits, maintain records of ASHA activities, attend Village Health and Nutrition Days with the ASHAs, and attend monthly block PHC meetings. ▪ The ASHA Facilitator is supervised at the block level by the Block Community Mobilizer, who is in turn supervised by the District Mobilization/Coordination Unit, which liaises with the state-level ASHA resource center.
	COMMUNITY INVOLVEMENT
	▪ ASHAs are to be selected by and accountable to the local village-level government, called the Gram Panchayat, through a participatory process involving the whole village. ▪ After selection, ASHAs are to work closely with the Village Health and Sanitation Committee (VHSC), comprising key stakeholders in the village including the ASHA workers, *Anganwadi* Workers, and self-help group members (women's groups).
	QUALITY ASSURANCE
	▪ Several states have introduced ASHA motivation and recognition initiatives, such as cash awards for the best-performing ASHAs, newsletter and radio programs, bicycles for all ASHAs, and career development opportunities through scholarships to study nursing. ▪ The main source of performance monitoring data is generated by the ASHA Facilitator based on monthly meetings with the 20 ASHAs she or he oversees. ▪ The ASHA Facilitator is responsible for developing health reports on ASHA functionality, as well as consolidating information about pregnancies, births, deliveries, newborn care, and deaths.
IRAN[17]	**POLICY**
	▪ Shortly after 1978, the West Azerbaijan Project, developed in one province, aimed to expand health services through the establishment of a comprehensive health delivery system and training of CHWs (*Behvarzs*). ▪ In other parts of Iran, the use of CHWs expanded to deliver services beyond maternal and child health to include care for the elders and management of non-communicable diseases.
	MANAGEMENT
	▪ Regular supervisory visits to Health Houses, where CHWs are based, are planned and performed by staff members at rural health centers and by provincial and national teams to evaluate program effectiveness and to increase the quality of care. ▪ A unique practice for CHWs in Iran is the "*Behvarz* council," established in 2006, with the aim of engaging *Behvarzs* in problem identification, problem-solving, knowledge transfer, and policymaking.
	COMMUNITY INVOLVEMENT
	▪ Promotion of community participation and other social sectors in health programs is part of the role of *Behvarzs*. ▪ *Behvarz* council meetings are held on a regular basis to discuss a broad range of issues concerning the *Behvarzs'* work, work-related problems, and recommendations to overcome any problems. Meeting minutes and the final report are submitted to the higher-level council for further follow-up. ▪ *Behvarzs'* representatives are responsible for transferring ideas and solutions to other team members and for following up on issues raised in the meeting.

	QUALITY ASSURANCE
	▪ Provincial and national teams use checklists to assess data recording, *Behvarzs'* knowledge, drug supplies and equipment, review of work-related problems, and suggestions from each *Behvarz*.

CONCLUSION

Although health systems are varied and complex, careful planning during the design and early implementation of a national-level CHW program is essential for a context-appropriate program that successfully trains, supervises, and retains CHWs, while simultaneously improving the health service delivery on the community level. The methodology of planning a program at scale is somewhat flexible, but each of the phases outlined in this chapter should be included to ensure that the program design and implementation is both feasible and appropriate. Phase 1 includes a situational analysis, operational model, coordinated planning effort, and supportive policy changes. Phases 2 and 3 are processes meant to ensure that the implementation steps are carefully planned and that information is continually fed back about how well the program is being implemented and how it can be improved. Replanning a program should happen periodically—at least every 10 years—and be informed by evidence arising from M&E and recommendations from those engaged in program implementation. Policymakers and program planners should note that the biggest challenge in planning a national CHW program is the capacity of each level to adequately complete the tasks assigned.

Key Resources

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Chapter 4

Governing Large-Scale Community Health Worker Programs

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Key Points

Improving how community health worker (CHW) programs, and health systems more broadly, are governed is increasingly recognized as important in achieving universal access to health care and other health-related goals. Governing comprises the processes and structures through which individuals and groups exercise rights, resolve differences, and express interests. The process of governing involves ongoing interactions among **actors**, such as health care decision-makers, community representatives, and agencies, and **structures**, including the laws, resources, and beliefs within which these actors operate. Because CHW programs are usually located between the formal health system and communities and involve a wide range of stakeholders at local, national, and international levels, their governance is often complex and relational. In addition, CHW programs frequently fall outside of the governance structures of the formal health system or are poorly integrated with these structures—making governing the programs more challenging. In the past, poor governance has undermined the planning and management of programs and the delivery of services. This chapter discusses the following key questions that decision-makers need to consider in relation to governing CHW programs:

- How, and where within political structures, are policies made for CHW programs?
- Who, and at what levels of government, implements decisions regarding CHW programs?
- What laws and regulations are needed to support the program?
- How should the program be adapted across different settings or groups within the country or region?

INTRODUCTION

In this chapter, we consider and discuss a number of relevant questions regarding the governance of community health worker (CHW) programs. This chapter is intended to be read alongside Chapter 13 on community participation in CHW programs, which addresses governance issues at the community level in more detail.

WHAT IS MEANT BY "GOVERNING" IN THE CONTEXT OF HEALTH SYSTEMS?

Governing in the context of health systems can be seen as being concerned with "political, economic, and administrative authority in the management of health systems."[1] Governing comprises "the complex mechanisms, processes, and institutions through which citizens and groups articulate their interests, mediate their differences, and exercise their legal rights and obligations."[2] As this definition suggests, governing involves ongoing interactions and relationships between **actors**, such as health care decision-makers, community representatives, associations, and agencies, and **structures**, including the laws, policies, resources, and beliefs within which these actors work.[3] Governing is therefore a process rather than a static set of policies and structures. Consequently, this process is closely linked to context and may change over time as societies, health systems, and CHW programs change and evolve. Moreover, governing in the context of health systems may often overlap with management, which is sometimes seen to be more concerned with running or implementing programs.[4]

Governing health services can also be conceptualized in terms of inputs, processes, and outputs.[5] Governance inputs include how and by whom the institutions governing the health system are constructed and managed. This includes "participation," or the stakeholders involved in defining and designing health policies; and "consensus orientation," or the extent to which government officials collaborate with or involve other stakeholders in setting goals and formulating policies for health. The processes of governance concern how administrative procedures and rules governing the health sector are implemented on a day-to-day basis. This includes transparency, accountability, monitoring, and control of corruption. Finally, governance outputs can be seen as the benefits that should result from the implementation of governance rules and processes within a health system. Different political systems may emphasize different governance outputs; these may include measures of how well the health system responds to population needs, equity of access to health services, efficient use of health resources, and responsive and accountable services.

WHY IS GOVERNING AN IMPORTANT ISSUE FOR CHW PROGRAMS?

Decisions on the type of structures established for governing CHW programs, who will be involved in governing (i.e., the actors), and how these will relate to the wider health and political systems are political. These decisions are important, as they will affect a range of other processes in these programs, including day-to-day accountability, and will ultimately impact on performance and sustainability. Some important decision parameters include the following:

- Extent to which the CHW program is part of the formal health system
- Extent to which CHWs are formally recognized as a cadre within the health system
- Extent of decentralization of authority for governing CHW programs and for their management
- Scale of the program
- Roles that key stakeholders, including communities and/or service users, have in governing the programs

- How, and by whom, resources are obtained and administered

Also important is the extent to which CHWs are organized, for example, through a union or health provider organization. Different decisions on these parameters, in response to specific contexts and needs, may result in different models for governing CHW programs, for example, in relation to the health system:

- Some programs are not part of the formal facility-based health system, but have structures that provide good links to this system (e.g., the Accredited Social Health Activist [ASHA] CHW program in India and the BRAC CHW program in Bangladesh).
- Some programs are integrated with the formal health system and are well-supported within it (e.g., the Family Health Teams in Brazil, the Health Extension Worker [HEW] program in Ethiopia, and the CHW program in Venezuela).
- Some programs are centrally driven with national guidance, but implemented through separate structures (e.g., CHW programs in South Africa, which are currently largely implemented through NGOs, but within parameters established at the national level).

These varied models for governing CHW programs have implications, in turn, for how programs are financed and funded; how and by whom CHWs are selected and trained; how CHWs are supported and supervised; how CHWs are paid; and how communities are involved; among many other issues. We discuss the implications of these differing configurations in more detail below.

Improving how CHW programs, and health systems more broadly, are governed is increasingly recognized as important in achieving universal access to health care and other health-related goals. The concept of "good governance" is now used widely and can be understood as the interactions between relevant stakeholders and processes that enable monitoring, transparency, and accountability and that lead to public value and the common good.[6] Improving on how CHW and other health system programs are governed requires a range of enabling factors. For example, clear goals and priorities for the CHW program; appropriate structures for implementing, coordinating, and integrating the program; standards regarding the selection and training of CHWs; data on how well these programs are performing; mechanisms for motivating CHWs and their supervisors; and meaningful involvement of, and accountability to, the range of stakeholders linked to these programs, including local communities and recipients of CHW care. Governing CHW programs, therefore, requires financial and other resources, and how these resources are managed will, in turn, impact the extent to which good governance can be achieved.[7,4] Table 1 provides a summary of governance principles within health care.

Table 1: Health systems governance principles[2]

GOVERNANCE PRINCIPLE	EXPLANATION
Strategic vision	Leaders have a broad and long-term perspective on health and human development, along with a sense of strategic directions for such development. There is also an understanding of the historical, cultural, and social complexities on which that perspective is grounded.
Participation and consensus orientation	All men and women should have a voice in decision-making for health, either directly or through legitimate intermediate institutions that represent their interests. Such broad participation is built on freedom of association and speech, as well as capacities to participate constructively. Good governance of the health system mediates differing interests to reach a broad consensus on what is in the best interests of the group and, where possible, on health policies and procedures.

GOVERNANCE PRINCIPLE	EXPLANATION
Rule of law	Legal frameworks pertaining to health should be fair and enforced impartially, particularly the laws on human rights related to health.
Transparency	Transparency is built on the free flow of information for all health matters. Processes, institutions, and information should be directly accessible to those concerned with them, and enough information is provided to understand and monitor health matters.
Responsiveness	Institutions and processes should try to serve all stakeholders to ensure that the policies and programs are responsive to the health and non-health needs of its users.
Equity and inclusiveness	All men and women should have opportunities to improve or maintain their health and well-being.
Effectiveness and efficiency	Processes and institutions should produce results that meet population needs and influence health outcomes while making the best use of resources.
Accountability	Decision-makers in government, the private sector, and civil society organizations involved in health are accountable to the public, as well as to institutional stakeholders. This accountability differs depending on the organization and whether the decision is internal or external to an organization.
Intelligence and information	Intelligence and information are essential for a good understanding of health system, without which it is not possible to provide evidence for informed decisions that influences the behavior of different interest groups that support, or at least do not conflict with, the strategic vision for health.
Ethics	The commonly accepted principles of health care ethics include respect for autonomy, non-maleficence (a principle of bioethics that asserts an obligation not to inflict harm intentionally), beneficence (actions to benefit others), and justice. Health care ethics, which includes ethics in health research, is important to safeguard the interest and the rights of the patients.

WHAT KEY QUESTIONS DO DECISION-MAKERS NEED TO CONSIDER REGARDING GOVERNING CHW PROGRAMS?

Because CHW programs, to varying degrees, are located between the formal health system and communities, and can involve a wide range of stakeholders at local, national, and international levels, their governance is often complex and relational. CHW programs frequently fall outside of the governance structures of the formal health system or are poorly integrated with these structures, making governing the programs more challenging. In addition to the previously discussed topics, this chapter outlines key questions that decision-makers need to consider for governing CHW programs and illustrates the options for governing with examples and case studies from programs in the field. The key questions:

- How, and where within political structures, are policies made for CHW programs?
- Who, and at what levels of government, implements decisions regarding CHW programs?
- What laws and regulations are needed to support the program?
- How should the program be adapted across different settings or groups within the country or region?

Table 2 summarizes the sub-questions for each of the main questions above. Tables 3 and 4 provide a cross-country comparison of issues in the governing of CHW programs and policies and how these may impact on the work of individual CHWs. These are based on case studies of Brazil, Ethiopia, India, Pakistan, and South Africa. We refer in the main text to examples from

these tables, located in the conclusion of this chapter. These tables also include additional material that complements and illustrates the issues raised in the main body of the chapter.

How, and Where within Political Structures, Are Policies Made for CHW Programs?

CHW programs experience a number of challenges in relation to policy processes. Examples:

- Policies to govern these programs may be lacking if the program is seen to be peripheral to, or outside of, the formal health system or if it has developed out of programs initiated by nongovernmental organizations (NGOs), community-based organizations (CBOs), or civil society organizations (CSOs).
- Existing policies may not be "fit for purpose." For instance, CHW program functioning may be hampered if a national Ministry of Health (MOH) or national health department decentralizes primary health care (PHC) management to the regional or district level, but does not put in place policies that allow managers at those levels to manage and disburse funds to the CHW program itself and its staff.
- It may be difficult to ensure program consistency, for example, in terms of tasks and responsibilities, across a region or country where there are multiple players involved, including local and international NGOs and agencies and government health services. A national CHW policy framework may be needed to achieve this consistency.

It is therefore important to consider how and where policies for CHW programs are made, and the implications of this for developing and running the program. These policy decisions (such as whether to develop a volunteer-based or fully remunerated CHW program) need to be distinguished from implementation decisions (such as the timetable for continuing education of CHWs within a particular district or province).

Key issues to consider for CHW programs include the following:

- Where are policy decisions made?
- Who are the stakeholders involved in defining and designing these policies (participation), and to what extent is this done in a collaborative manner (consensus orientation)?
- Are there important historical legacies that may shape CHW-related policymaking?
- How might wider health and political systems goals in a particular context influence how CHW programs are governed?

Where Are Policy Decisions Made?

Authority to make policy and operational decisions regarding CHW programs is located at different levels of government within different countries, depending on the country's constitutional or legislative arrangements or historical policy legacies (see below). In some countries, such authority may be located with the national ministry or department of health. In other countries, regional or provincial departments of health or legislatures may have authority to develop health policies, or such authority may have been delegated by the legislature or the MOH to an independent body, such as a CHW Commission. Each of these scenarios has different benefits and drawbacks, as follows:

- When policy authority is located at the national level, it may be easier to achieve consistency of approach for CHW programs across a country. However, policymaking may be very removed from the day-to-day running of CHW programs and may therefore not be very responsive to challenges as they are experienced.

- When policy authority is delegated to an independent body, it may facilitate more rapid and responsive policy development since these decision-makers have a clear focus on the CHW program. However, policies made by this body may not be well-aligned with other policies developed by the MOH or other government ministries.

Those wishing to develop or change policies governing CHW programs need to consider the following:[2]

- Where are laws and regulations relevant to health initiated?
- Do laws need to be initiated by cabinet or parliament? Can other stakeholders initiate laws or regulations through other mechanisms?
- Who can initiate such laws and regulations? Do laws need to be initiated by a government minister or a ministerial permanent secretary?

In addition, consideration needs to be given to what provisions there are locally for accountability and support. For example, what recourse do citizens have if they feel that they have not been treated respectfully, or if CHWs are not carrying out their duties adequately? This is addressed in more detail in Chapter 13.

Box 1: Governance, and where policy decisions are made, within the Brazilian Family Health Program[8]

In Brazil, the new constitution adopted in 1988 reinforced the role of state (provincial) and municipal governments in implementing public policies, while the central government had the role of issuing the main guidelines for implementing public policies. Later legal provisions shifted more responsibility for the management and organization of health services over to municipal governments. At the same time, these legal provisions emphasized the technical and financial role of the central government and the states. Municipalities have the authority to decide whether to implement the Family Health Program. Once a decision to implement is made, the local government determines the organization of the program in its municipality, for example, specifying the number of family health teams it wants to establish and selecting the areas to which these teams will be assigned.

The positive effects on the program resulting from such a process of implementation appear to be more local ownership of implementation and improved local management of the program. On the other hand, the process could lead to unprepared and uncommitted local management, as well as heterogeneity of implementation.

Box 2: Governance of programs supported by the National Rural Health Missions in India[8]

The three tiers of governance (i.e., government, state, and *panchayats*) in India pose challenges for a range of government programs, including for carrying out certain functions of the National Rural Health Mission (an initiative of the Ministry of Health and Family Welfare to strengthen rural health services). An evaluation from 2009 reported that transfers of funds to lower levels of governance were being held up at the state levels. The evaluation proposed direct disbursement of funds from the central government to the *panchayats* as a solution to this problem. However, it was noted that this change may be difficult, given that health is defined as a state responsibility in the constitution of India. The evaluation suggests that individual states would like to gain more autonomy from the center. However, states are reluctant to devolve the necessary powers to govern CHW programs to the *panchayat* level, where primary health centers and sub-centers are located. Similar tensions were reported between the central government and the states in relation to program financing.

Who Are the Stakeholders Involved in Defining and Designing These Policies and to What Extent Is This Done in a Collaborative Manner?

A range of stakeholders may have roles in defining and designing CHW policies. The extent to which there is wide participation in this process may depend on the orientation of the political system within a particular context, the formal and informal power stakeholders are able to exert, and the attitudes of those driving a particular policy process.

Which stakeholders are involved in CHW policymaking, and how these stakeholders are involved, have important benefits and drawbacks for programs:

- When it is not clear who has final responsibility for policymaking, decisions may not be made or may be much delayed.
- When policy decision-making is dispersed across a range of stakeholders, important inconsistencies may develop across program policies. For example, CHWs may have authority to deliver antibiotics for neonatal sepsis in one region of a country but not in another; or they may be compensated differently among regions, as is the case with India's ASHA Program.
- Involving a wide range of relevant stakeholders in CHW program policymaking may help to build consensus, consistency, and buy-in regarding these policies. This, in turn, may facilitate implementation of CHW policies. However, it may be difficult to achieve such consensus, and decision-making may, as a result, be very prolonged, or may fail to keep pace with changes encountered by the programs on the ground.

Questions that need to be considered in relation to stakeholder involvement include:*

- *Who are the key stakeholders for policies related to community health services?*

  In addition to the national Ministry or Department of Health, stakeholders may often include other ministries or departments, such as Finance, Education and Training, Employment, Public Works; provincial or regional ministries or departments of health; CSOs; professional organizations, such as doctors' or nurses' unions; regulatory authorities, such as bodies that register health care professionals; private sector organizations, such as private clinics; national and international NGOs, who may employ or manage CHWs or other elements of the health system; CHWs themselves; communities where CHWs are working; and donors, including bilateral and multilateral organizations and private foundations.

- *To what extent are these key stakeholders consulted and involved in policymaking for community health services? To what extent is there a consensus orientation, in which state authorities cooperate with other stakeholders in policy development?*

  There may be a trade-off between involving a very wide range of stakeholders and involving a narrower group of stakeholders. The former approach may maximize input and buy-in to a policy but may result in no one stakeholder having overall responsibility for policy development, leading to delays and indecision. The latter approach may make the policy process more manageable, but may reduce buy-in or may result in policies that are not aligned with related policies in other government departments or sectors.

* Adapted in part from Siddiqi S, Masud TI, Nishtar S, et al. Framework for assessing governance of the health system in developing countries: gateway to good governance. *Health Policy* 2009; 90(1): 13-25.

- *How are inputs solicited from stakeholders?*

  There are a range of ways in which this may be done, including convening a national or regional policy dialogue,[9-11] requesting written inputs, and holding public consultations. Important challenges include the following:

  - Having a leader or champion who has motivation, the necessary experience with CHW programs, and the credibility with stakeholders to take forward a consultation process. The leader also needs to have the authority to adapt the policy based on the inputs received.
  - Having resources for and commitment to a consultation process.
  - Having skills to synthesize inputs received in ways that advance the policy process.

- *How are the varied objectives, motivations, and views of different stakeholders reconciled within the policy process?*

  Stakeholders may have very different views in relation to a particular policy question, based on their constituencies. For example, an international donor may lobby for a "vertical" CHW program for a particular health problem, such as providing treatment support for people living with HIV/AIDS. However, the national department of health may favor a more integrated model, in which CHWs are part of the PHC team in each primary care facility, and may see this as more useful and appropriate in the setting. At the same time, a professional association for nurses may be concerned to limit the range of tasks that CHWs are permitted by policy to undertake because the association wants to protect their profession's scope of practice.

  Those leading and managing the policy process need to decide if the views of stakeholders will be made available publicly, the extent to which consensus is desirable or possible, and what mechanisms will be used to address the different views and objectives of different stakeholders. Mechanisms that may be used include involving key stakeholders in drafting a policy and facilitating dialogue on a draft policy.

Are there Important Historical Legacies that May Shape CHW-Related Policymaking?

In addition to being constrained by existing laws and regulations, policymaking for CHW programs may also be shaped by historical legacies. These legacies may include previous and current policies, experiences, and practices. For example, a CHW program may have been established with the specific purpose of improving equity of access to health care for historically marginalized groups, such as populations living in geographically remote areas of the country. The Brazilian Family Health Program, for instance, has its antecedents in a regional program, established to respond to a severe drought (see "historical legacies" row in Table 3). The model developed in this setting has shaped the program across the country.

Programs may also be shaped by specific health system legacies: for instance, CHW policies may need to take into account an existing nurse auxiliary cadre or a program based on salaried CHWs, or may need to absorb an existing network of community health volunteers. Efforts to establish a national CHW policy framework in South Africa, for example, were influenced by the absence of a national CHW program and the presence of a large number of small-to-medium-sized programs, largely managed by NGOs, in which CHWs had different scopes of practice and levels of training (see "size of the program" and "historical legacies" rows in Table 3).

Historical legacies are important, as they may determine stakeholders' views of and reactions to policies. These legacies may also constrain what is possible; for instance, it may be difficult to make substantial changes to CHWs' existing scopes of practices, such as introducing curative

tasks to a program focusing on health promotion, or to the types of recipients targeted, for example, from women and children to everyone in the household or from rural to urban households.

Questions that need to be considered here include:

- *Are there important health system legacies, in relation to governance, financial, or delivery arrangements,† that may shape CHW-related policymaking?*

  It may be very challenging to establish community-led systems for governing CHW programs in a health system in which governance and financial management are highly centralized and in which there is little experience with more decentralized forms of governing. Similarly, it may be difficult to put in place policies to expand the roles of CHWs if these roles are likely to be seen to overlap with those of another cadre.

- *Are there important political system legacies, in relation to institutions, interests, or ideas‡ that may shape CHW-related policymaking?*

  Issues to be considered here include whether there is a constitutional mandate to decentralize the management of programs to district level; whether important funders of a CHW program, such as the ministry of finance or international donors, will support a policy change; and whether there is a body of research that may provide support for shifting the way in which a health service is delivered.

- *To what extent are these historical legacies in alignment with the planned policy? What scope is there for reshaping the policy or bypassing these legacies?*

  Decision-makers involved in governing CHW programs need to consider how these historical legacies may impact a planned policy. A number of tools are available, such as a SWOT (strengths, weaknesses, opportunities, and threats) analysis, which may be useful in approaching this assessment in a systematic way.[12-14]

How might Wider Health and Political System Goals in a Particular Context Influence How CHW Programs Are Governed?

How CHW programs are governed may be influenced by the particular goals or benefits (sometimes called governance outputs) that have been prioritized within a specific health or political system. CHW and other health policies may be assessed by decision-makers in relation to the extent to which they help to achieve these goals or outputs. Such goals may include improved equity, improved responsiveness to population needs, greater efficiency in the delivery of services, more decentralized services, increased employment, and greater involvement of the private sector in the delivery of services.

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† Governance arrangements are concerned with political, economic, and administrative authority in the management of health systems, as noted above. Financial arrangements include funding and incentive systems, while delivery arrangements include human resources for health, as well as service delivery.

‡ Drawing on political science theory, the term "institutions" is used here to refer to both the formal and informal structures and processes of policymaking (constitutional rules, structures through which decisions are made, and features of the policy process, such as the level of transparency). The term "interests" concerns the stakeholders who shape a policy and their views on whether the policy will have benefits or drawbacks for them or others. The term "ideas" refers to the values and knowledge held by stakeholders, including those in government and civil society, and comprises information from both research and experience.[12–14]

There are a number of ways in which wider health and political system goals may influence how CHW programs are governed. Firstly, it may be difficult to develop CHW program policies and governance processes where these do not align with wider goals. For instance, developing structures to allow CHWs to work more closely with private sector providers, such as drug dispensers, may not be feasible if such arrangements are not seen as legitimate or important within the wider health system. Similarly, the governance of CHW programs may be neglected if there is a shift in goals in the political system toward increasing the number of providers with higher levels of training, such as nurses and doctors. In contrast, ways of governing CHW programs that align closely with political system goals, such as the decentralization of services, may be easier to develop and implement.

Secondly, health and political system goals may drive the development, or indeed the demise, of a CHW program. In many settings, programs have been developed or scaled up to help achieve the goal of improved equity in access to health services. In Ethiopia, the HEW program aims to improve access to care for rural populations particularly (see "historical legacies" row in Table 3). In South Africa, efforts by the first democratic government to improve equity and quality in PHC prioritized nurses as the lead cadre and viewed CHWs as providing second-rate care. Consequently, funding and support for CHW programs declined and many programs ceased to function[15] (see "historical legacies" row in Table 3).

Questions that need to be considered in relation to health and political system goals include:

- *What goals are emphasized currently within the health and political system in a particular context?*
- *To what extent will CHW-related policies help to achieve these goals, and how can this be demonstrated within the policy process?*
- *What changes need to be made to proposed CHW policies to better align them with relevant governance goals?*
- *Where CHW-related policies diverge from prioritized governance goals, how can this be justified and advocated for within the policy process?*
- *Are there role players with political influence who can advocate for CHW programs?*

There are a number of ways, both formal and informal, in which these questions may be considered. Those governing CHW programs can reflect on the goals of the program and those of the wider health and political system, and the extent to which CHW policies will help to achieve these wider goals. Wider consultations, such as deliberative dialogue processes,[10] may be useful in identifying current and future health and political system goals, in considering how CHW policies align with these, and in assessing how the governing of CHW programs may need to shift in order to support important health and political system goals. A number of policy analysis tools are available that may be useful in this process.[16-19]

Who, and at What Levels of Government, Implements Decisions Regarding CHW Programs?

After a policy decision has been made, the next key challenge is transforming this policy into practical actions. Policy implementation is challenging in most settings for a range of reasons, including the complexity of the health system. The process of implementing policy decisions may involve multiple levels of government, as well as other stakeholders, and the coordination and management of complex processes. Such complex processes may include (1) limited financial resources or difficulties in disbursing resources to the levels where they are needed; (2) deficits of other resources, including human resources for health care delivery and management; (3) competing priorities within and beyond the health system; and (4) challenging physical

environments, such as very remote communities. The implementation of decisions regarding CHW programs may, therefore, take place in an unsystematic way or be slowed by a range of obstacles. Careful and systematic planning is needed to ensure that CHW program policies are implemented as intended.

Questions that can be considered by policymakers when planning the implementation of policies for CHW programs include the following:[§]

- *What factors might affect the successful implementation of the policy? In what ways can potential barriers be overcome or minimized and facilitators harnessed?*
- *Is there a clear implementation plan for the policy that includes the objectives to be achieved, adequate resources, and a timeframe, and that addresses important barriers and facilitators? Additional issues to be considered here include:*
  - What is the extent of decentralization for the implementation of CHW policies? Which stakeholder(s) will lead and which level(s) of government and other agencies need to be involved?
  - What strategies should be considered in planning implementation of the policy in order to facilitate the necessary changes among health care recipients, health care professionals, organizations, and the health system?
  - How will implementation of this policy affect the day-to-day running of ongoing CHW (and other) programs?
  - To what extent will communities and CSOs be involved, and how will this be operationalized? (See Box 3 below and Chapter 13 on relationships with communities.)
- *How will implementation ensure that key governance goals, such as equity, participation, and accountability, are maximized?*
- *How will implementation of policies be monitored and evaluated to ensure that their objectives are met? (Also see Chapter 3 on planning for CHW programs.)*

Box 3. Community involvement in CHW program implementation in Zimbabwe[8]

Studies analyzing the implementation of the Village Health Worker (VHW) program in Zimbabwe provide in-depth analysis of why such local citizen bodies may have failed to stimulate meaningful community involvement. These studies suggest that the government, while attempting to redirect resources to the village level, developed an increasingly large bureaucracy that reinforced centralization of power. Local citizen bodies, in turn, became extensions of the central government structures. People's representation was supposed to be mediated through village and district committees. However, these structures were regarded by communities as remote and as a part of civil service structures that were accountable to the government, and not to poor people within communities. Effective popular mobilization in the planning and development of the VHW program was seen to have declined in inverse relation to the bureaucratization of the program.

[§] Adapted from Siddiqi S, Masud TI, Nishtar S, et al. Framework for assessing governance of the health system in developing countries: gateway to good governance. *Health Policy* 2009; 90(1): 13-25 and Fretheim A, Munabi-Babigumira S, Oxman AD, Lavis JN, Lewin S. SUPPORT tools for evidence-informed policymaking in health 6: Using research evidence to address how an option will be implemented. H*ealth research policy and systems / BioMed* Central 2009; 7 Suppl 1: S6.

What laws and regulations are needed to support the program?

The governing and implementation of CHW programs may be shaped or constrained by existing laws or regulations** in relation to, for instance, the organization of health services, human resources, drugs, technologies, and financing. As noted above, these "policy legacies"[20] may include regulations regarding the kinds of health care providers who can prescribe and dispense different types of medications. These legacies may also include laws regarding the disbursement of funds from health departments to community structures that may be responsible for supporting CHWs.

Further, CHW programs may experience challenges if laws and regulations that are needed to enable effective program functioning are not put in place in a timely manner or if existing laws and regulations are not amended as needed. For example, regulations in Brazil regarding the need to advertise civil service posts nationally were changed to help ensure that CHWs employed by the Family Health Program came from the community in which they were to work.[21] In South Africa, it has been argued that the functioning of CHW programs was hampered by poor regulation that limited the rights of CHWs and contributed to low pay levels.[22]

Appropriate legal and regulatory frameworks are, therefore, needed for large-scale programs to function effectively.[23] These need to address issues related to CHWs, such as selection and remuneration, as well as issues related to the wider health system, such as governance structures for PHC. As such, those developing and scaling up CHW programs need to consider which existing laws and regulations need to be taken into account and whether changes to them are needed to ensure the effective governing of the program and its implementation as intended.

Questions that should be considered in relation to laws and regulations:

- *Which laws and regulations are relevant to the governing and scale-up of CHW programs?*
- *How are these laws and regulations translated into rules and procedures that may affect program implementation in the field, and who has responsibility for this?*
- *Will any changes be required to these laws and regulations to allow the program to be scaled-up as intended? Will any new laws and regulations be needed?*
- *Where laws or regulations need to be promulgated or amended, which government bodies would be responsible for leading this process? Which other bodies would need to be involved in this process? Are there key laws or regulations that may act as critical barriers or bottlenecks to policy implementation and that should be priorities for promulgation or amendment?*
- *What is the likely timeframe for these legislative or regulatory processes?*
- *Can scale-up be implemented in parallel to changes in laws and regulations?*

How should the program be adapted across different settings or groups within the country or region?

For CHW programs operating at scale, there may be tension between, on one hand, adopting a fairly standard approach to the governing of programs and to their implementation and, on the other hand, trying to ensure that the program is tailored to the needs of different settings or groups. The former approach may allow for more rapid scale up and may require fewer

** A law can be defined as "a rule of conduct or action prescribed or formally recognized as binding or enforced by a controlling authority" (From: www.merriam-webster.com/dictionary/law Accessed 26 June 2013). A regulation can be described as "A law on some point of detail, supported by an enabling statute, and issued not by a legislative body but by an executive branch of government" (From: www.duhaime.org/LegalDictionary/R/Regulation.aspx, accessed 26 June 2013).

resources. The latter approach, while more resource intensive and more difficult to implement, may help to ensure that the program is seen as useful by local communities and health services, may be more sustainable,[24, 25] and may have a greater impact in the medium to long term.

There are a number of reasons why programs may need to be adaptable. Firstly, different population groups within a country may have very different health and therefore program needs. Secondly, programs may need to be adapted for particular local contexts, such as remote areas with poor physical access where operational challenges differ dramatically from more densely populated urban areas. Thirdly, CHW programs may need to be adapted to local or regional health system arrangements, such the availability of other health care providers in the area, the presence of private drug sellers or other sources of drugs, or the extent of private sector health care provision.
Questions that need to be considered:

- *Is the program targeted toward specific groups or settings in the country or region?*
- *Are there important differences across groups or settings in the country or region that may affect the roll-out of the program and that may require its adaptation?*
- *If the program is to be adapted:*
  - What are the specific needs of these groups or settings; what barriers do these groups experience in accessing the program; and what challenges might be encountered in adapting the program to their needs or setting?
  - Which are the core elements of the program that should be retained across settings or groups and which elements can be adapted to address specific needs?
  - To what extent does adaptability need to be built into the program policy?
  - Which entities will have responsibility for adapting the program in response to local needs?
  - Will the adapted program need to be piloted before it is scaled up?

ADDITIONAL CONSIDERATIONS

Other issues that may be important to consider in relation to governing CHW programs at scale include the requirements that scale-up of the program might impose on the health system (including managers, health care providers, and users) and on other sectors. Factors affecting the sustainability of the program, and ways in which national, regional, and international stakeholders can be mobilized to support a national CHW program, are also important. These issues are discussed further in the chapters on relations with the health system (Chapter 12), on financing (Chapter 5), and on planning (Chapter 3).

CONCLUSIONS

Governing CHW programs can be complex because of the location of these programs between the formal health system and communities, and the involvement of a wide range of stakeholders at local, national, and international levels. CHW programs frequently fall outside of the governance structures of the formal health system or are poorly integrated with it.

The most appropriate and acceptable model(s) for governing CHW programs depends on the community, on local health systems, and on the political context of the program. Policymakers and other stakeholders in each setting need to consider what systems are currently in place and what might work in their context, and develop a locally tailored governance approach.

Where community or local participation is well-established, models of community governance and accountability may be appropriate and useful for CHW programs. Where local participation in governance is not well-established (e.g., because governance of the health and political systems are highly centralized) or is weak, stakeholders need to explore other mechanisms for accountability.

It is challenging to include a very local participatory structure for governing a CHW program within a large-scale program, and there are few sustained examples of this. For large-scale programs, formal local governance structures, such as elected local government councils, may need to be relied on. Stakeholders need to consider how to organize CHW program governance in such contexts.

Ultimately, local participation in governing CHW programs is difficult to achieve at scale without substantial resources, adequate planning, and sustained attention to maintaining these local structures. Stakeholders must consider what resources are needed and how these can be made available.

Table 2: Governing CHW programs—key questions and sub-questions

KEY QUESTIONS	SUBQUESTIONS
How, and where within political structures, are policies made for CHW programs?	*Where are policy decisions made?* ▪ Where are laws and regulations relevant to health initiated? Do laws need to be initiated by cabinet or parliament? Can other stakeholders initiate laws or regulations through other mechanisms? ▪ Who can initiate such laws and regulations? Do laws need to be initiated by a government minister or a ministerial permanent secretary? *Who are the stakeholders involved in defining and designing these policies (participation), and to what extent is this done in a collaborative manner (consensus orientation)?* ▪ Who are the key stakeholders for policies related to community health services? ▪ To what extent are these key stakeholders consulted and involved in policy making for community health services? To what extent is there a consensus orientation in which government authorities cooperate with other stakeholders in policy development? ▪ How are inputs solicited from stakeholders? ▪ How are the varied objectives, motivations and views of different stakeholders reconciled within the policy process? *Are there important historical legacies that may shape CHW-related policy making?* ▪ Are there important health system legacies in relation to governance, finance or service delivery that may shape CHW-related policy making? ▪ Are there important political system legacies in relation to institutions, interests or ideas that may shape CHW-related policy making? ▪ To what extent are these historical legacies in alignment with the planned policy? What scope is there for re-shaping the policy or bypassing these legacies? *How might wider health and political systems goals in a particular context influence how CHW programs are governed?* ▪ What goals are emphasized currently within the health and political system in a particular context? ▪ To what extent will CHW-related policies help to achieve these goals, and how can this be demonstrated within the policy process? ▪ What changes need to be made to proposed CHW policies to better align them with relevant governance goals? ▪ Where CHW-related policies diverge from prioritized governance goals, how can this be justified and advocated for within the policy process?

KEY QUESTIONS	SUBQUESTIONS
	▪ Are there role players with political influence who can advocate for CHW programs?
Who implements decisions regarding CHW programs, and at what levels of government?	▪ What factors might affect the successful implementation of the policy? In what ways can potential barriers be overcome or minimized and facilitators harnessed? ▪ Is there a clear plan for implementation of policy decisions that includes the objectives to be achieved, adequate resources, and a timeframe, and that addresses important barriers and facilitators? ▪ How will implementation ensure that key governance goals, such as equity, participation and accountability, are maximized? ▪ How will implementation of policies be monitored and evaluated to ensure that their objectives are met?
What laws and regulations are needed to support the program?	▪ Which laws and regulations are relevant to the governing and scale up of CHW programs? ▪ How are these laws and regulations translated into rules and procedures that may affect program implementation in the field, and who has responsibility for this? ▪ Will any changes be required to these laws and regulations to allow the program to be scaled up as intended? Will any new laws and regulations be needed? ▪ Where laws or regulations need to be promulgated or amended, which government bodies would be responsible for leading this process? Which other bodies would need to be involved in this process? Are there key laws or regulations that may act as critical barriers or bottlenecks to policy implementation and that should therefore be priorities for promulgation or amendment? ▪ What is the likely timeframe for these legislative or regulatory processes? ▪ Can scale-up be implemented in parallel to changes in laws and regulations?
How should the program be adapted across different settings or groups within the country or region?	▪ Is the program targeted toward specific groups or settings in the country or region? ▪ Are there important differences across groups or settings in the country or region that may affect roll out of the program and that may require its adaptation? ▪ How will the program be adapted, if this is needed?

Table 3: Cross-country comparison of CHW program governance[6]

	KEY GOVERNANCE CONSIDERATIONS	RELEVANCE AND IMPORTANCE OF THE ISSUE	COUNTRY				
			BRAZIL FAMILY HEALTH PROGRAM	PAKISTAN LADY HEALTH WORKER PROGRAM	INDIA ASHA PROGRAM	SOUTH AFRICA WARD-BASED PRIMARY HEALTH CARE (PHC) OUTREACH TEAMS	ETHIOPIA HEALTH EXTENSION PROGRAM
Inception year (as a national program)			1994	1994	2005	2011	2003
Cadres	Is there one or are there several cadres?	Historical experiences, both negative and positive, may shape views and responses. Diversity and unclear boundaries can lead to conflict among cadres and/or gaps in provision	Community Health Agent (CHA)	Lady Health Worker (LHW)	Accredited Social Health Activist (ASHA)	Community Health Worker (CHW)	Health Extension Workers (HEWs) Health Development Army (HDA, formerly called Community Health Promoters, or CHPs) Various other CHW cadres including Community-Based Reproductive Health Agents (CBRHAs) and HIV lay counselors
Size of the program	Is this a national or small-scale local program?	Size and scope of program impacts on the complexity of governing the program	236,000 working in 33,000 family health care teams	100,000	820,000 ASHAs have been selected (across 31 States and Union Territories)	Prior to project initiation there were around 72,000 CHWs, attached to various NGOs and programs	>34,000 HEWs; >100,000 CHPs in 15,000 *kebeles* (communities)

[6] The information in this table is drawn from the case studies in Appendix A at the end of this guide.

	KEY GOVERNANCE CONSIDERATIONS	RELEVANCE AND IMPORTANCE OF THE ISSUE	COUNTRY				
			BRAZIL FAMILY HEALTH PROGRAM	PAKISTAN LADY HEALTH WORKER PROGRAM	INDIA ASHA PROGRAM	SOUTH AFRICA WARD-BASED PRIMARY HEALTH CARE (PHC) OUTREACH TEAMS	ETHIOPIA HEALTH EXTENSION PROGRAM
Inception year (as a national program)			**1994**	**1994**	**2005**	**2011**	**2003**
Historical legacies	Are there important health system legacies in relation to how programs are governed, and in terms of key players and specific institutions, financial or delivery arrangements that may shape CHW policy-making? To what extent are these historical legacies in alignment with the planned policy? What scope is there for building on or re-shaping the policy or bypassing these legacies?	Historical legacies may define, constrain or facilitate CHW policies. Policy may be shaped by previous experience or existing practices. Legacies will determine what actors think of policy and how they will enact and react to it	The program has its antecedents in a regional program in Ceará State, where it emerged from an emergency response to a severe draught.[26]	In 1993 Pakistan established the Prime Minister's Program for Family Planning and Primary Health Care that employed CHWs to provide primary health care services in their communities. The program subsequently only employed female CHWs and the Lady Health Worker (LHW) program was developed in 1994.	ASHAs are the most recent incarnation of community health workers (CHWs) in a long history of national and state-level CHW programs in India. In many states, the ASHA program built upon pre-existing CHW programs. The Chhattisgarh Mitanin CHW program, launched in 2003 as a precursor to the ASHA program, has retained the name "Mitanin" for their health workers but has otherwise been encompassed by the ASHA program.	South Africa has never had a large-scale, national CHW program, but has had numerous smaller and larger CHW projects since the 1980s. In the 1990s and early 2000s these CHWs often worked as volunteers and single-purpose workers, with insecure funding. The present emerging national program builds on this "stock" of CHWs and their experience.	In the 1997/8 fiscal year the Ethiopian Federal Ministry of Health launched the National Health Sector Development Program (HSDP). This program shifted the health system's focus from predominantly curative to more preventive and promotive care and prioritized the needs of the rural inhabitants who constitute 83% of the Ethiopian population. The "Accelerated Expansion of Primary Health Care Coverage" and the Health Extension Program (HEP) was launched in 2003.

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Inception year (as a national program)			1994	1994	2005	2011	2003
Health system structure	How does CHW policy fit into wider health governance structures?	CHW programs in many settings remain peripheral to the rest of the health system. This undermines their legitimacy, hampers alignment of tasks and responsibilities, and may cut them off from mainstream funding sources.	There are three levels of health care provided in Brazil with strong emphasis on basic (primary) health care. This care is the entry point to more advanced care, but also has promotive and preventive components. Family Health Care Teams are the main service providers and are comprised of one doctor, one nurse, one auxiliary (assistant) nurse, and a minimum of four community health workers.	There are three tiers of governance in the Pakistani public health system: federal, provincial and district. Responsibility for health services rests with provinces, with the exception of a national Ministry of Regulation. The district level is responsible for allocation and supervision of LHWs. All tiers of government are involved in the LHW program, and LHWs are integral to service delivery of most community health initiatives in the country.	The rural public health system is designed from the village to the state level. In addition to an ASHA worker, each village should have an Angan-wadi Worker (AWW). A multi-purpose worker (MPW) and an auxiliary nurse midwife (ANM) are employed to conduct outreach to villages on a monthly basis. The MPW works out of the sub-center, a clinic that serves several villages. The ANM is based in the primary health center (PHC), a larger clinic that is to be open 24/7 and includes a doctor. Referrals can be made from there to the community health center (CHC) and district hospital.	South Africa introduced a district health system shortly after its first democratic election in 1994. The most recent health sector reforms, aiming at revitalizing PHC, have introduced community health services consisting of clinics, school health teams, specialist teams, and PHC outreach teams at community and household levels. First- level hospital care is rendered through district hospitals, and referrals take place from these to secondary and tertiary hospitals.	The Ethiopian health system is decentralized and has been reorganized into three tiers: (1) primary healthcare units comprised of a health center and five satellite health posts along with district/woreda hospitals; (2) zonal/general hospitals; and (3) specialized/referral hospitals.

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Inception year (as a national program)			**1994**	**1994**	**2005**	**2011**	**2003**
Structure of the program	How is the program integrated/aligned with the formal health system?	Signals how the program is located in the governance structures of health system.	CHAs operate as members of the family health care teams (*Equipo de Saúde Familiar*) that are managed by municipalities. These teams are based within the Family Health Program clinics and provide services to 600-1,000 families or a maximum of 4,500 people.	LHWs are attached to a local health facility, but they are primarily community-based, working from their homes. The homes of LHWs are named Health Houses, and emergency treatment and care are provided from these houses.	ASHAs are based in their villages but refer people to their local CHC and PHC. Village Health and Sanitation Committees (VHSCs), composed of village residents including the ASHA, also provide support for the ASHA's activities (see: "Local (community) governance" row). Although service delivery varies by state, in general, ASHAs are expected to attend weekly meetings at their local PHC and make home visits in the community as needed. They work approximately 2 hours a day, four days per week.	The new system for the first time sees CHW as part of the system of service delivery. Similar to the Brazilian model, PHC outreach teams consist of 5-6 CHWs supervised by a nurse. They render services in households and communities, and refer patients to clinics as needed.	The aim of the HEP is to "provide equitable access to promotive, preventive and select curative health interventions through 30,000 government-salaried Health Extension Workers (HEWs), two per *kebele* (neighborhood), located at a health post. The HEWs, young local women with grade 10 education, are recruited by Kebele and Woreda Councils and given one year of training prior to employment with the Woreda Health Office.

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Inception year (as a national program)			1994	1994	2005	2011	2003
Employment status of CHWs	Are CHWs employees of the state and/or appointed by communities?	Signals who CHWs are accountable to, and how firmly embedded they are in structures of the health system.	State employees	State employees	Considered volunteers but receive a government stipend.	Employed by NGOs who in turn have service contracts with state health services at district level.	State employees
Program financing	How are CHW programs financed?	How CHW programs are financed reflects both national and local priorities and is also a key governance mechanism.	The Family Health Program is co-funded by states and municipalities, but regulated by the national government. The CHW program is an integral part of Family Health Program and thus funded as part of it.	The Pakistani government is the largest funder of LHW services, although the program has been underfunded since its inception. The vast majority (around 70%) of the costs are comprised of LHW stipends, drugs and contraceptives. 4% of overall costs are for training.	In 2006, the Ministry of Health and Family Welfare (MoHFW) stipulated that the program would cost US$185 per ASHA. This included the costs of selection, social mobilization, training, drug kits, identity cards and support for ASHAs through the PHCs and supervisors. It did not include the ASHAs' stipends, which were to come from the budgets of other MoHFW initiatives.	In the past, programs were largely funded from external grants. The new program will increasingly be funded through the health budget.	Financed by a mix of national and sub-national government entities, bilateral and multilateral donors, non-governmental organizations, private contributions, along with user fee revenues. At the local level, financing and planning are decentralized and the *woredas* receive block grants to cover HEP expenses.

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Inception year (as a national program)			**1994**	**1994**	**2005**	**2011**	**2003**
Program scale-up	Will the program be taken to scale and, if so, how will this occur?	CHW programs generally aim to improve access to and quality of health care for remote and poor communities.	In 1990 there were 78,805 CHAs and there are now over 236,000 CHAs that provide services to 98 million people within 85% of Brazil's municipalities.	A 2000 evaluation estimated that 150,000 LHWs were needed to obtain optimal coverage in the country. Since then there has been a consistent scale-up, to 90,074 in 2008. This increased LHW coverage in more rural and poorer areas, but the program still does not reach the most disadvantaged areas.	Initially (2005-2008) the ASHA program was a component of the National Rural Health Mission only in 18 "High Focus States" and in the tribal districts of other states. In 2009 the program was extended to cover the entire country. The target number of ASHAs is 888,650; 94% have now been selected.	The intention is to roll the program out nationally. Numerous pilot sites are operational at this stage and are being carefully monitored and evaluated.	There have been four HSDPs since its inception in 1997. Rollout has occurred in a step-wise manner, in which the speed was influenced by available resources for health posts and presence of eligible women to become HEWs.

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Inception year (as a national program)			**1994**	**1994**	**2005**	**2011**	**2003**
Local (community) governance	How are communities involved in decision-making about CHW activities at local level? Are they involved in selection? Can they hold CHWs to account? Can they influence decision-making about funding, support, etc.?	Community acceptance and therefore community participation is considered central to any CHW program, but mechanisms of community participation in governing programs are often poorly developed and dysfunctional.	Community governance functions through national, state and municipal health councils, over 5,500 municipal councils participating. Councils are comprised of 50% users, 25% health workers and 25% health managers and service providers. Health conferences are also held every four years to propose directives for health policies.	The selection committee for LHWs includes a person nominated by the local community, and potential LHWs are identified through local community structures were possible. Program planning, implementation and monitoring and evaluation also should include community participation. However, the extent to which this occurs varies.	ASHAs are to be selected by and accountable to the local village level government, called the Gram Panchayat, through a participatory process involving the whole village. After selection, ASHAs are to work closely with the Village Health and Sanitation Committee (VHSC). This committee is comprised of key stakeholders in the village.	All health districts have district health councils who have representation from civil society. Implementation is at an early stage and uneven throughout the country. Furthermore, community health committees are supposed to oversee the functioning of service delivery in communities and facilities.	There are active health committees involved in the selection and oversight of HEWs and they are involved in these activities with CHPs in some geographical areas. Additionally, the *kebele* council is supposed to be involved in every step of the HEP from program planning through to evaluation.

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Inception year (as a national program)			**1994**	**1994**	**2005**	**2011**	**2003**
Relationship with the formal health services	What are lines of reporting and accountability? What is the level of integration?	In many CHW programs, links with the formal health services are tentative and not well thought through. Professionals at the first formal level of service delivery (health centers, etc.) often resist engagement with and support for CHWs.	CHAs are managed by local nurses who spend half their time working in the local clinic. Thus, CHAs are closely integrated into formal health services. They also have strong referral systems in which they report any ill person within their catchment area to a nurse.	All LHWs are attached to a First Level Health Facility in the form of either a rural health center or a basic health unit. LHWs generally receive their supplies from these facilities, although there are challenges with insufficient staff and stock outs at local clinics.	Although ASHAs are supposed to be representatives of and accountable to the people, they receive their payments through the ANM at the PHC and are often treated as extensions of the health system.	CHWs are managed by nurses and structurally linked to the formal health services. Prior practices and experiences were very mixed and dependent on links between NGOs and health services. They were often dependent on personal relationships as well.	HEWs are full members of the formal health workforce. They staff health posts and are responsible for CHPs and model families. Many HEWs work in hard-to-reach and isolated areas, where supervision, supplies and referrals remain a challenge.

Table 4. Governance structures and mechanisms in relation to the definition, selection, training, support and remuneration of individual CHWs[7]

GOVERNANCE ISSUE	BRAZIL	PAKISTAN	INDIA	SOUTH AFRICA	ETHIOPIA
CHW Criteria	CHAs are adults who work in the community where they are from/ permanently reside. The only other selection criterion is completion of primary school.	LHWs are females who have a minimum of eight years of education. They also must be between 18 and 45-50 years old, reside in and be acceptable to/ recommended by their community, and preferably be married with children.	ASHAs are to have class eight education or higher and preferably be between the ages of 25 and 45. ASHAs are to be "daughter-in-law" of the village, i.e., married women (or widowed or divorced) so that they are likely to live in the village for the foreseeable future.	Criteria for selection vary, but in most cases, cadres who were active through NGOs prior to the introduction of a national program are being drawn on to continue rendering services.	HEWs are adult females who have completed 10th grade. HEWs are supposed to work in or close to their native community/ permanent residence.
Selection Process	CHAs are hired by their municipalities based on their demonstrated abilities while addressing simulated community problems during the selection process.	LHW are selected using a clearly delineated process. LHW posts are advertised and applicants are then interviewed and selected based on pre-set criteria by a selection committee.	Local governance structures and the wider community should be involved in ASHA selection. However, these selection processes are not always adhered to.	Selection processes vary widely, depending on the NGOs who contract with the CHWs.	There are active health committees that are involved in the selection of HEWs from the local community. CHPs are nominated and elected by the community or selected by HEWs and approved by the community.
Scope of Work	One of the goals of the Family Health Program is to promote community engagement and to analyze the community's needs. Thus, CHAs are expected to serve as the link between the Family Health Care Teams and the surrounding community. Family Health Care Teams provide comprehensive care through promotive, preventive, recuperative, and rehabilitative services. Central services provided by CHAs include the promotion of breastfeeding, the	LHWs are expected to link the community to formal health services and to be members of the community where they work. They also provide a range of community development services and participate in community meetings. The LHW program has evolved over time. LHWs' scope of services has grown from an initial focus on mostly maternal and child health; it now also includes participation in large health campaigns,	The government of India describes the ASHA's role as having three key components. First, ASHAs are to play an important role in achieving national health and population policy goals. Second, they are to act link rural people with the health system. Third, they are to serve as social change agents who will create awareness on health and its social determinants and mobilize the community towards local health planning and increased utilization and accountability	A PHC outreach team will initially be responsible for: ▪ Identifying and capturing details of people who live in the households in the catchment area and assessing those who are most at risk; ▪ Providing health promotion and prevention; ▪ Testing for HIV and screening for	HEWs are full-time employees who are supposed to split their time between health posts and the community. HEWs should spend at least 80% of their time in these community-based activities, although considerable anecdotal evidence suggests this is not the case. HEWs' main role is in health promotion, disease prevention, and treatment of uncomplicated and non-

[7] The information in this table is drawn from the case studies developed for this series of chapters (see Appendix A).

GOVERNANCE ISSUE	BRAZIL	PAKISTAN	INDIA	SOUTH AFRICA	ETHIOPIA
	provision of prenatal, neonatal and child care, the provision of immunizations, and the clinical management of infectious diseases, including screening for and providing treatment for HIV/AIDs and tuberculosis. CHAs register the households in the areas where they work and are also are expected to empower their communities and link them to the formal health system.	newborn care, community management of tuberculosis and health education on HIV/AIDS.	of the existing health services. Anganwadi Workers (AWWs) provide basic child health information, medicine and nutritional supplementation to children younger than 6 years of age, pregnant and lactating women, and adolescent girls.	TB; ▪ Checking immunization status of children; ▪ Facilitating use of antenatal care early in pregnancy and use of contraception; and ▪ Responding to the local burden of disease.	severe cases of malaria, pneumonia, diarrhea, malnutrition and measles in the community. HEWs provide a range of services including: prevention/health promotion/health education role; support role for outreach work by health services; community-based distribution role that does not involve clinical judgment; clinical case-management role that involves exercising clinical judgment; ongoing care or support role to assist people with a chronic illness (e.g., HIV/AIDS); and participation or support role in campaign-type activities. They also provide immunizations, injectable contraceptives, basic first aid, as well as diagnosis and treatment of malaria, diarrhea and intestinal parasites.
Training	The national Ministry of Health –with Ministry of Education approval – is responsible for the training of CHAs in Brazil and trains them in regional health schools. CHAs receive eight weeks of training from local nurses, followed by four	LHWs are trained for three months on PHC in classrooms and then have one year of on-the-job training. This should include one week of training per a month for a period of 12 months and 15 days of refresher	ASHAs are to receive 23 days of training over their first year, based on five training manuals. They are then to receive 12 additional days of training each year thereafter. Two additional training modules have just been added to the training	The training existing CHWs have received varies widely, and has been provided by a wide range of NGOs and training providers. The MOH is now aiming to standardize training,	HEWs have more than one year of pre-service training conducted by trainers that were capacitated using a train-the-trainer approach. HEW training is a collaboration of the Ministry of Health and

GOVERNANCE ISSUE	BRAZIL	PAKISTAN	INDIA	SOUTH AFRICA	ETHIOPIA
	weeks of supervised field work. This includes training on home visits, how to conduct a family census, and then on specific priority health care interventions. CHAs receive monthly and quarterly ongoing education training during meetings. CHAs are also trained by nurses and state health secretariat staff in their local clinics; these trainers undergo an 80-hour training module.	training each year, although there is substantial variation in training patterns across provinces. The Federal Project Implementation Unit is responsible for approval of all LHW training and, with the Ministry of Health, develops training curriculum, organizes and coordinates training, and trains master trainers while Provincial and District Project Implementation Units are responsible for the local trainings.	regimen. ASHA training has in some states been outsourced to NGOs, and in other states is being conducted by health professionals within the public system. Training generally takes place in a cascading manner, by which state teams are trained and then pass on their training knowledge to district training teams. These district teams then pass on their training to block-level ASHA trainers. ASHAs are then to be trained at the block or sub-block level.	although this process is still awaiting finalization.	the Ministry of Education and occurs at 40 Technical and Vocational Education Training Schools. CHPs have a brief initial training that is conducted by the HEWs that is less than 3 weeks in length. Women from model families are given 96 hours of training on prevention of communicable diseases, family health, environmental and household sanitation, and health education.
Feedback and Supervision	CHAs are supervised by nurses and physicians from the local health centers. Supervisory nurses spend 50% of their time in these supervisory roles and the rest of the time staffing the local health center, a factor that has been identified as a critical component to the program's success.	Supervision is highly organized and tiered in the Pakistani LHW program. LHWs are each attached to a public health clinic and are supervised on a monthly basis by a LHW supervisor (LHS). There are two layers of supervision above the LHS. LHWs should have community-based supervision at least once a month in which supervisors meet with clients and with the LHWs in the community where the LHW works, review the LHW's work, and jointly make a work plan for the next month.	According to national guidelines, there is to be one ASHA Facilitator for every 20 ASHAs. The Facilitator is to help with the selection of the ASHA, run monthly ASHA meetings, establish a system to respond to ASHA grievances, accompany ASHAs on home visits, maintain records of ASHA activities, attend Village Health and Nutrition Days with the ASHAs, and attend monthly Block PHC meetings. The ASHA facilitator is supervised at the Block level by the Block Community Mobiliser, who is in turn supervised by the District Mobilization / Coordination Unit, which liaises with the state-level	Feedback and supervision is presently provided through NGOs but will in future be provided through the nurse supervisor attached to every outreach team.	HEW supervision appears to vary across the history of the program and geographical contexts. In 2005 HEWs had relatively high levels of supervision with an average of three supervisory visits over the course of nine months. There are supposed to be multiple levels of HEW supervision, including the *woreda* supervisory team that is comprised of a health officer, public health nurse, environmental/ hygiene expert, and a health education expert.

GOVERNANCE ISSUE	BRAZIL	PAKISTAN	INDIA	SOUTH AFRICA	ETHIOPIA
			ASHA resource center.		HEWs supervise other cadres such as CHPs, traditional birth attendants, and Community-based Reproductive Health Agents.
Compensation/ incentives	CHAs are salaried, full-time workers, but there is a large variation throughout the country in their salary. CHAs are supposed to earn at least the national minimum wage of ~US$112 each month.	LHWs receive a salary of about $343 per year and are not supposed to engage in any other paid activity, although some do. The LHW stipend is often the only source of family income and is a critical family support.	Although ASHAs are considered volunteers, they receive outcome-based remuneration for facilitating institutional deliveries, immunization, family planning (surgical sterilization) and toilet construction. More recently, an incentive of US$4.60 (Rs.250) has been established for providing home- based newborn care. Facilitating institutional deliveries is the most common activity for which ASHAs receive payments. ASHAs are also compensated for training days, attending meetings, and additional health-related activities. The amounts vary from state to state.	In most provinces in South Africa, NGOs receive funding from the MOH to contract with and pay CHWs. More recently, at least one province has decided to contract with CHWs directly and put them onto the government payroll. Salaries are approximately at the national minimum wage.	HEWs are regular employees with a regular salary and benefits. A range of non-financial incentives have been effective with CHPs, including formal recognition, ongoing mentorship, certification, and community celebrations.
Career opportunities	No structured opportunities for career advancement for CHAs exist.	The LHW Program offers professional advancement opportunities for LHWs. LHWs can receive additional training to serve as a LHS, which is an incentive for good performance.	Career advancement within the program for ASHAs is limited.	The issue of career development is not addressed in the new policy, but in several provinces pilots are underway to provide career paths into professions such as nursing and social work.	HEWs who enroll in additional training can qualify as registered nurses.

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Chapter 5

Financing Large-Scale Community Health Worker Programs

Henry Perry, Francisco Sierra-Esteban, and Peter Berman

Key Points

- Proper costing of a community health worker (CHW) program and assurance that those costs can be paid for on a sustainable basis are essential for an effective large-scale CHW program. Failure to do so has led to the demise of large-scale CHW programs in the 1980s.
- Direct and indirect costs of CHW programs need to be estimated, along with investment and recurring costs, in order to adequate plan for the sustainable financing of a CHW program.
- CHW program costs vary widely from country to country as a result of contextual factors, such as local labor costs, whether CHWs are paid or voluntary, and the degree to which the program is well-supervised with a strong logistics systems.
- Governments, local communities, and external donors are the main sources of financing for CHW programs.

INTRODUCTION

Community health worker (CHW) and related programs have been promoted over the last half century as a principal means to extend basic health services to large populations of underserved people at low and sustainable cost. However, experiences with the last wave of major CHW development, during the 1980s, showed that the tendency to see CHWs as low-cost health care could be misleading. The relatively low cost of training and supplying individual CHWs—compared to more highly trained health workers—distracted attention from the large number of workers needed and the importance of financing a full range of costs that such programs might require to be successful. Insufficient funding was likely one reason why CHW programs in the 1980s were not sustained.

Financing mechanisms for CHW programs are more than just a means of generating resources. They can be means for incentivizing good performance, generating community ownership, assuring sustainability, and fairly distributing the burden of health care costs. In low-income countries, governments have often under-invested in health, typically in the range of 5% of the national budget. Often, ministries of health have had little clout in the decisions of government finance. Political pressure from elite groups has emphasized support for curative care and urban hospitals. Political support for primary health care (PHC) has been limited, leading to limited political support for CHW programs. Often, financial resources for CHW programs are cut during time of budget shortfalls, thereby increasing pressures on these efforts.[1]

Failure to Consider the Real Costs of CHW Programs

One of the lessons learned from the 1980s was that the planning of large-scale CHW programs failed to consider the real costs of the programs.[2] As one observer noted:

> **...in the decade following Alma-Ata, CHW programs had both low cost and low effectiveness. What the programs needed to improve was the combination of more adequate support, and that implied more resources."[3]**

The cost of supervision was an area frequently overlooked in those programs, and it was later determined that supervision costs can amount to as much as 40% of the salary cost of one CHW.[4] Furthermore, costing a CHW program can be a complex exercise since, in contrast to vertical disease control programs that have distinct budgets from regular governmental operations, CHW programs are more horizontal, and costs are allocated to multiple budgeting authorities. Finally, it was often assumed at the outset that communities would pick up most of the costs of these programs, but this hope was never realized. The Bamako Initiative was an initiative to foster community contributions to support PHC services, including those of CHWs; yet, in spite of great initial enthusiasm, the initiatives were not financially sustainable.

Insufficient attention to the full resources needed for successful and sustained implementation is another reason why CHW programs from the 1980s faltered. The absence of fully defined costs and unrealistic plans exacerbated this problem. Particularly troublesome was the basic idea that once CHWs were trained, they could be sent back to their communities and the communities would somehow pay the costs required to support them, with no additional budgetary commitment from government beyond the training. One expert panel convened by the World Health Organization (WHO) reported in 1989 that "… experience now shows, however, that the costs of training, supervision, personnel, and transport can be very high, and that these require careful planning and make considerable demands on government expenditure."[5]

Lehmann and Sanders, in their 2007 review of CHW programs for WHO, concluded that CHW programs are:

> "… neither the panacea for weak health systems nor a cheap option to provide access to health care for underserved populations. Numerous programmes have failed in the past because of unrealistic expectations, poor planning, and an underestimation of the effort and input required to make them work. This has unnecessarily undermined and damaged the credibility of the CHW concept."[6]

Although CHW programs are neither cheap nor easy to implement, the emerging consensus is that these programs are nonetheless a good investment to promote equity because as Lehmann and Sanders say, "… the alternative in reality is no care at all for the poor living in geographically peripheral areas."[6] Information in the public domain regarding the costs of CHW programs is scarce. In this chapter, we will attempt to share some of this information and link it to other information about financing and costing of health programs more generally.

Key questions to consider in financing large-scale CHW programs, which are discussed in detail below, are:

- What are the elements of CHW programs that need to be included in cost calculations?
- What are the full costs of CHW programs?
- What are the different options for the financing of CHW programs and the strengths and limitations of each option?
- What are some examples of how CHW programs have been financed?
- What guidance can be given to assure that financing becomes a sustainable positive element in CHW program development?

WHAT ARE THE ELEMENTS OF CHW PROGRAMS THAT NEED TO BE INCLUDED IN COST CALCULATIONS?

Total costing for any program activity can be complex. One has to consider all relevant costs, both investment and recurring costs, direct and indirect costs, and not only financial costs but social costs, as well. In making decisions about investments, one should compare the costs of alternative programs along with their relative efficiency and effectiveness. However, such a formal analysis is rarely possible because of its complexity.

A typical cost framework will distinguish between investment costs (i.e., those one-time costs needed for program start-up) and recurrent costs (i.e., the costs that must be met annually to sustain programs). Table 1 provides a typology of CHW program costs that need to be considered during the planning stage of a CHW program.

Table 1. A typology of costs for CHW programs

TYPE OF COST	INVESTMENT COSTS	RECURRING COSTS
DIRECT	Initial planning, management, and administration	Ongoing planning, management, and administration
	Establishing governance and stewardship (including certification, accreditation, and quality control)	Ongoing costs of governance and stewardship (including certification, accreditation, and quality control)
	Developing training institutions, and initial training of CHWs and supervisors	Costs of continuing education of CHWs and supervisors
	Initial recruitment and training of CHW and supervisors	Costs of recruitment and training of new CHW and supervisors
	Initial orientation of health staff	
	Initial community engagement, engagement with community leaders, and community mobilization (including publicity)	Ongoing costs of maintaining community engagement, engagement with community leaders, and community mobilization
	Initial costs of determining remuneration, setting up the payment system, producing the first set of uniforms, identification badges, etc.	Salaries and benefits for CHWs and their supervisors, accessories for identification of CHWs (uniforms, badges, etc.), other incentives (e.g., costs of community appreciation days)
	Initial purchase, materials, supplies and medicines, drug kits	Annual purchase of materials, supplies, medicines and drug kits including contracting and procurement costs as well as distribution costs
	Initial purchase of equipment, furniture, and vehicles	Maintenance or rent of vehicles, furniture, and equipment; fuel
	Costs of buying or building new operational facilities for CHW program management and for training CHWs (CHWs are not based in facilities)	Utility bills, maintenance and repairs
	Planning of monitoring and evaluation	Ongoing monitoring and evaluation
INDIRECT		Costs incurred by CHWs themselves (out-of-pocket expenses they have to make to carry out their work, opportunity costs) Costs to the health system of additional health care generated by CHW referrals Costs to patients and their families for services provided by CHWs Costs of high CHW turnover (disruption of services, low staff morale, poor quality, recruitment of replacements)

Costing of specific activities in large-scale CHW programs are shown in Table 1. **Investment costs** (including capital expenditures) involve, of course, planning at the outset, which requires budgeting for time and money. Then, there are important issues related to certification, accreditation, and quality control that need to be budgeted at the outset, as well as the development of training institutions for the CHWs and their supervisors. Orientation of health staff to the role of CHWs is an important activity to carry out up front before program

implementation, as well as publicity, community engagement, and community mobilization. Other investment costs include the initial costs of vehicles, equipment, materials, supplies and medicines, and drug kits. Capital expenses for vehicles and equipment will need to be made on an ongoing basis, as well.

Recurrent costs are those costs required to fund the operational expenses year to year. Direct costs are those that are obvious and budgeted for, while indirect costs refer to the support provided to the CHW program from other parts of the health system through administration, training, supervision, and supplies. Indirect costs also include costs incurred by patients or their relatives in obtain services from CHWs.

Table 1 outlines the types of direct annual operational expenses that need to be budgeted for. These include the costs of recruitment and training, compensation, supervision, supplies and equipment, community engagement, and monitoring and evaluation (M&E). Even when CHWs work as volunteers, there are costs incurred by the CHW that need to considered, whether they are opportunity costs (what a CHW could have earned if she had not been working as a CHW) or actual expenses that CHWs may incur in their work that they are not reimbursed for (such as paying for transport to attend meetings or pick up supplies when these are not reimbursed). The value of non-monetary compensation also needs to be considered. For examples, sometimes CHWs receive free health care from the government health system as a form of compensation. This would probably be considered an indirect expense. Salaries or incentives for supervisors need to be included, as well.

In contrast to holding training at the national level in a centralized location (e.g., in the capital), local training cuts down on the costs of transport, lodging, and per diem expenses needed for trainees, but it can also reduce standardization and control over quality of training. In Tanzania, the cost of local-level training was 20% of the cost of regional-level training.[9] There are other costs to be considered. The length of training, of course, has a great impact on the cost of training. When supervisors need transport to visit CHWs at some distance, these costs can be significant. In addition to costs of recruitment and training are the costs (both financial and in terms of reduced health benefits) of CHW turnover, including disruption of services, poor quality of services, and low staff morale by being short-staffed as the remaining workers may have a greater workload.[10]

Maintaining a reliable supply chain for medicines, supplies, and equipment needed by CHWs may involve contracting and procurement costs, distribution costs, and monitoring and auditing costs. These costs are often substantial and if funds are not available to maintain a reliable supply chain, the entire CHW program falters. Accessories for identification of CHWs in the community (e.g., uniforms, T-shirts, dresses, badges, and so forth), as well as costs for recognition of good performance and so forth need to be take into account. M&E activities require personnel, equipment, development, and utilization of health management information systems and evaluation surveys. Travel allowances are sometimes needed for CHWs and usually for supervisors.

If CHW programs work well, they will place additional demands on other routine services, which should be anticipated. For example, beneficiaries may demand additional health services because of improved access to PHC. The costs of providing these additional health care services will need to be considered.

WHAT ARE THE FULL COSTS OF CHW PROGRAMS?

CHW program costs can be considered from a variety of vantage points. This includes costs that need direct funding, as well as in-kind costs. These costs can be calculated as total program

costs, costs per program beneficiary or cost per CHW. Cost per program beneficiary may not be the same as the cost per capita (of the total population) if the CHWs are serving a targeted population, such as mothers and children. Thus, it is important to be clear which cost definition is being used and why it is preferable.

Table 2 lists costs reported by the large-scale CHW programs described in detail in Appendix A. These costs are only roughly comparable because they have not been adjusted for the same year, since the data have been obtained from reports prepared mostly during the past decade. Also, the purchasing value of a U.S. dollar varies substantially from country to country. Finally, the level of training provided, as well as the duties and time commitments of the CHW, vary substantially from one country to another. Further, monthly salaries vary from free local medical care for female community health volunteers (FCHVs) in Nepal to US$25-50 in India and Pakistan to US$84 in Ethiopia to US$100–$200 in Brazil. The annual cost per CHW is in the range of US$170 in India (not including performance incentive payments) to US$745 in Pakistan.

Berman[11] was able to assemble some costs for several large-scale CHW programs in the 1980s. These costs were a small fraction of what is now being proposed for future CHWs in Africa. At that time, for large-scale CHW programs from India, Indonesia, Peru, and Thailand, where CHWs were working as volunteers (except in India, where they were receiving a modest honorarium), the cost per CHW (for training, supervision, supplies, and drugs) was in the range of US$38 per year per CHW in Indonesia to US$725 per year per CHW in Peru. The main expenditures required to support these programs were for training, supplies and equipment, drugs, and the time required for monitoring and supervision.

A very different approach to costing of CHWs was undertaken by McCord and colleagues, as part of their proposal to train one million CHWs for Africa.[12, 13] They carried out a costing exercise to estimate the cost of a modern "professionalized" generalist multipurpose CHW in Africa. These "professionalized" CHWs would be able to: diagnose and treat childhood pneumonia, malaria, tuberculosis, and neglected tropical diseases; screen for childhood and maternal malnutrition. They would receive also one year of training (three months didactic and nine months of supervised field experience) and a monthly salary of US$80. There would be one CHW manager for each 30 CHWs. Services provided would include screening for tuberculosis, deworming, and screening pregnant women for HIV infection. Ultimately, McCord et al. estimated that the total cost of training, equipping, and supporting such a CHW would be US$3,750 per year.

Providing one generalist CHW for every 650 inhabitants and one childbirth specialist for every 3,500 inhabitants in rural Africa would cost US$2.6 billion, or US$6.86 per person covered by CHW services. These authors further suggest that a well-funded CHW program would cost only a small fraction of PHC services overall, which cost in a low-income country in the range of US$50–55 per person.

Another approach to considering the costs of a CHW program is to include not only the cost to provide the program but also the cost to use it. For medical services, these costs include transport and opportunity costs for patients and their families, which for poor people in isolated rural areas, can be significant when obtaining care at distant facilities. As such, the cost savings provided by CHWs, when they can reduce costs for patients, is significant, particularly for those with the lowest incomes.[9] This whole approach to costing—comparing the costs of the CHW program and the benefits it provides to the cost of providing the same services and benefits through facility-based services—is an important exercise, albeit one that can be resource-intensive. Notably, this approach can provide important leverage for justifying the cost of a

CHW program to decision-makers. Further work on developing practical strategies for cost-benefit analyses of large-scale CHW programs is urgently needed.

Finally, program unit costs, as we alluded to earlier, may be affected by the scale of the program. There is some evidence that, in general, health program costs may increase as the program goes to scale, as the coverage of services increases, and as the density of the population served by the program decreases. In general, as health program coverage expands into remote areas, the marginal cost of reaching each additional person increases. In their paper, Johns and Torres[14] describe four mechanism that may explain this situation:

1. Geography and infrastructure: Costs of transporting, training, supplying, and monitoring may be higher in areas of difficult access and undeveloped infrastructure.
2. Human resources: Higher incentives may be required to locate health personnel in remote areas.
3. The extent of fixed costs: Increasing coverage can exceed the productivity function of some goods. For example, a vehicle may be needed to transport only one person or small number of vaccines to areas of remote access or low population density.
4. Managing the process of scale-up.

Table 2. Costs for Selected Large-Scale CHW Programs

COUNTRY/CHW	MONTHLY SALARY/COMPENSATION/ INCENTIVE FOR EACH CHW	ANNUAL COST PER CAPITA	ANNUAL COST PER CHW	SOURCE OF FUNDING
Brazil/ Community Health Agent (CHA)	$100-200	US$41-50 (for the entire primary health care team, including the CHAs). According to one estimate, CHA salaries constitute 22% of the primary health care team salaries, and the cost for a CHW to serve an individual is $9-11 per year.		Mostly, the states and municipalities (states are required to allocate 12% of their total budgets to health, and municipalities are required to allocate 15%). Health Councils exist in some municipalities. These councils help to guide health spending at the local level and mobilize community engagement. However, there are some employer health insurance payments made.
Ethiopia/Health Extension Workers (HEWs) and Health Development Army Volunteers	For HEWs, regular monthly salary of $84 with benefits For volunteers, formal recognition, certificates, and community celebration			National and sub-national entities, bilateral and multilateral donors, user fees; districts (*woredas*) receive grants to cover CHW program expenses.
India/Auxiliary Nurse-Midwives	Salaried government employees, those working at sub-centers, are given living accommodations.			From national government
India/Anganwadi Workers	Approximately $25. They also qualify for a government life insurance scheme. The basic salary (paid with funds from the central government) is often supplemented with additional payments from the state government to additional activities beyond those expected by the central government.			90% from the national government and 10% from the state budget

COUNTRY/CHW	MONTHLY SALARY/COMPENSATION/ INCENTIVE FOR EACH CHW	ANNUAL COST PER CAPITA	ANNUAL COST PER CHW	SOURCE OF FUNDING
India/ASHA Workers	Outcome-based remuneration related to facilitation of institutional deliveries, provision of home-based neonatal care, immunizations, facilitation of family planning (sterilizations), and toilet construction. They are also compensated for attending trainings and meetings. They receive approximately $10 for facilitating an institutional delivery and $3 for each child they facilitate to attend an immunization session.		The program is supposed to cost approximately $170 per AHSA worker per year for all expenses except the outcome-based incentives. This cost includes the selection process, social mobilization, training drug kits, identity cards, and supervision. But because of a lack of absorptive capacity, only half of the allocated budget was spent between 2005 and 2011.	
Nepal/Female Community Health Volunteers (FCHVs)	They receive a dress allowance, an incentive for timely retirement, and free local health services. They are also given a badge, an ID card and an annual day of honor recognizing their work. Local endowment funds exist that are controlled by Village Development Committees which FCHVs can draw from to support income-generation activities. The endowment fund is approximately $500 per FCHV.			
Pakistan/Lady Health Workers (LHWs)	$30 per month (paid directly into personal bank accounts). Payments are frequently delayed.	$0.75 per person served per year	Approximately $745 per year. This is mostly for salary, drugs and supervision. 4% was for training.	89% from the government and 11% from donors during the first 8 years (1995-2003)
Note: These are all CHW programs included in the case studies section: Appendix A. References can be located there. The dollar amounts cited here are not directly comparable since they year of the report varies as does the country of origin, so purchasing power parity has not been accounted for.				

Box 1. Example of a Cost Analysis of a CHW Program in South Africa

In 1997, Bupendra Makan and Max Bachmann carried out an economic analysis of six NGO CHW programs in the Western Cape Province of South Africa.[15] The categories of costs are similar to what we have described here. The analysis found that annualized capital (investment) costs ranged from 5–12% of total costs. It also found that there appeared to be economies of scale, with larger programs having smaller per capita expenses for training, supervision, and support. In addition, it found that programs that had been started more recently had higher costs than those that had been operating for some time.

WHAT ARE THE DIFFERENT OPTIONS FOR FINANCING CHW PROGRAMS AND THE STRENGTHS AND LIMITATIONS OF EACH OPTION?

As shown in Table 1, sources of funding range from the central national government to a combination of revenue from the central national government, state government, and local municipalities, to local contributions from communities (via user fees, volunteer donation of time by CHWs to general community contributions), to funding from international donors. When CHWs are volunteers, they are in fact a major source of the funding for the program. We will consider briefly some of the advantages and drawbacks of each of these sources of financing. Key considerations here are who bears the burden of financing, whether the financing mechanism has incentives for efficiency and quality and how sustainable it is, and what the risks to sustainability are.

The Government as Funder

Funding from government has important advantages, most notably job security for the individual CHW and stability (of a sort) for the program. It also helps the CHW program to achieve a higher degree of equity than would be possible with local community financing. General revenue tax financing is generally more equitable than user-financed services. Programs that rely primarily on community financing, such as fees for services, place greater burdens on poor communities and the sick.

The ASHA Program in India represents an interesting case in which the available government funding actually exceeded the amount spent by the program. Beginning in 2006, the government budgeted approximately US$167 for each ASHA worker per year, but actual expenditures were substantially less than this, particularly in the poorest states such as Bihar. According to a program evaluation:

> **"The primary reason for this low expenditure is the inability or unwillingness to invest in management and support structures at state, district and block levels… Expenditure rates are also reflective of the quality of political and administrative support the programme as the willingness to put money where it matters."[16]**

One of the inherent problems with government funding, particularly from the central level, has been the vulnerability of CHW programs to cutbacks in funding when government shortfalls occur. Even though government funding has a certain degree of sustainability built into it, it has its own instability, as well. The lack of strong political support to continue funding levels for CHW programs in the face of competing demands has been a recurrent problem for large-scale public sector CHW programs.

The Community as the Funder

The concept of community financing is an attractive one, but unfortunately has proved to have serious limitations. Numerous examples exist of failures of sustainable community funding support for CHW activities.[17] Frankel concludes that virtually no examples exist in which community financing led to consistent and regular payment of CHWs.[18]

It is not uncommon for communities to provide labor and pay for the construction of a community health post from which the CHW will work. Profits from revolving drug funds might be used to pay for maintenance of a health post, purchasing supplies, or providing payment to the CHW. Fee for service by CHWs is generally considered to be open to abuse (by placing the profit motive and private practice over the real needs of villagers) and for this reason is not recommended by UNICEF and WHO.[18]

The Chinese Barefoot Doctors were funded with locally generated resources. This was a unique experience since all community assets were controlled by the Communist Party and local Party officials could decide how to use them. Once the collective cooperative economy gave way to private ownership of land, this funding was no longer available and so the program began to be largely financed by fee for service, and the number of Barefoot Doctors gradually declined and now the program is virtually non-existent.

It is possible that too much reliance on community financing can exacerbate inequities since the poorest communities will likely have the greatest health problems but have also the least capacity to pay for services. However, in the case of BRAC Shasthya Shebikas, they earn most of their income by selling drugs and health-related products at a small markup. Since they are closely supervised, it does not appear that the sale of commodities is distorting their activities and the communities, even though they are quite poor, are capable of providing this financing. The incomes of Shasthya Shebikas is quite modest, usually only $10–20 per months (see Box 1).

The CHW as a Volunteer (and therefore the "donor" of his/her time)

This form of community financing, although attractive on paper when making budgets, has serious limitations when a program is expecting a significant amount of work from the CHW. There is a general consensus that this approach can be unjust, inequitable, and unsustainable in the long term, although exceptions do exist. Frankel, in his landmark overview of CHW programs published in 1992, concluded that "there is little evidence that the mobilization of volunteers in national CHW programmes is an effective policy."[18] At the Yaoundé Conference, sponsored by WHO, the participants concluded that "it may be unreasonable, if not unfair, to expect individual CHWs themselves to contribute to the labour costs of the scheme."[15] This conclusion applied to situations in which CHWs have no other source of income and a significant portion of the day is needed to meet the job requirements.

Frankel goes on to say, however, "It is difficult to generalize on this issue, for there are clearly major differences in the time commitment of a CHW whose task it is to offer information on health issues to ten households, compared to the time required for a CHW to offer a curative and preventive service to a population of over one thousand."[18]

Governments face formidable challenges by giving formal recognition and salaries to CHWs because in virtually all countries, CHW programs are not well established nor are their benefits for population health widely recognized. Therefore, CHW programs are commonly one of the first budget items to be cut when budget pressures arise. The provision of a salary carries with it the inherent risk of CHWs unionizing and demanding higher salaries and more benefits. Even though individual salaries are low, the financial implications of these pressures are considerable given the large number of workers involved. Serving in a voluntary role can have certain benefits that are not commonly appreciated. In some settings, government workers are

seen as unmotivated and unproductive or local hostility toward the government exists. In these settings, not linking CHWs to government salary support can be beneficial for a CHW program.

A further challenge in many countries is that the entry-level nurse cadre salary is the country's minimum wage. That prevents the country from hiring CHWs as full-time employees because it would require that entry-level nurses—and perhaps several lower-level nurse cadres as well—be given a raise. Thus, there is a potential ripple effect up the entire health worker pyramid (Kate Tulenko, personal communication).

There are surprisingly positive experiences of NGOs recruiting and effectively using volunteer CHWs. One of these approaches involve Care Groups, in which a paid low-level promoter meets with a group of 10 or so volunteers for two hours every two weeks, and then the volunteer visits with women in 10 adjacent households to convey a key health message. Such engagement requires perhaps four to five hours per week per volunteer. These experiences have been highly empowering and satisfying for the CHWs, and low rates of attrition have been experienced during the four to five year cycle of project funding.[19-21] These programs still require training and supervision, support, incentives (such as T-shirts, skirts), annual community recognition days, and so forth.

One of the world's pioneer CHW programs, the Jamkhed Comprehensive Rural Health Project, has had a highly stable group of volunteer CHWs, with many serving in this capacity for 20 or even 30 years. This has been possible by giving the CHWs training in income-generating skills so they can earn funds on the side in addition to their activities as a CHW. But in general, volunteerism has been associated with a high attrition rate, leading to increased costs of recruitment and training.

External Donors

External donors are most likely to pay for certain start-up costs, such as planning, policy advocacy, technical support, initial training, and procuring an initial drug stock or an initial set of supplies and equipment. They are unlikely, however, to pay for long-term recurring expenses.

WHAT ARE SOME EXAMPLES OF HOW CHW PROGRAMS HAVE BEEN FINANCED?

Boxes 2 and 3 provide examples of very different forms of financing of two large-scale CHW programs: BRAC's CHW Program in Bangladesh and the Community Health Agent Program in Brazil.

Box 2. Financing of the BRAC CHW Program

The BRAC CHW Program is of significance for multiple reasons: 1) its scale, with some 80,000 workers, 2) its innovative financing scheme, and 3) it is an example of an NGO working at large scale (serving 110 million people in Bangladesh). *Shasthya Shebikas*, as the CHWs are called, are first and foremost a member of a BRAC women's micro-credit savings group. They then qualify for training in one of a number of multisectoral programs, including health. After four weeks of initial training, they begin to function within the BRAC community health system that functions alongside the formal government health system and the system of informal providers (of which there are many in Bangladesh). *Shasthya Shebikas* receive their income from a variety of sources. First of all, they sell commodities such as drugs for minor illnesses, contraceptives, feminine hygiene supplies, iodized salt, oral rehydration solution, safe delivery kits, sanitary latrines, and vegetable seeds. These supplies are obtained from the local BRAC office. She procures these supplies there by paying a wholesale price (with an initial start-up loan) and then from the markup

at the time of sale (according to a price fixed by BRAC), she is able to make a small profit. On average, the income from these sales amount to US$10–20 per month. In addition, she receives a small performance-based incentive, such as for identifying a pregnant woman during her first trimester, completing the prescribed treatment of a TB patient, and so forth. The typical monthly income from these incentives is US$8–10 per month. The *Shasthya Shebika's* role is much broader than the services for which she receives compensation, including health promotion and assistance with referrals for health services.[22, 23]

BRAC supports the organizational and managerial system within which *Shasthya Shebikas* work, including the cost of the supervisor (one for every 10 *Shasthya Shebikas*) and the system for providing the drugs and supplies that they use each month.

One of the great attractions of this approach is that through a primary community-based financing scheme, if successful and well-managed, as this one is, there can be a gradual and sustainable scale-up of program activities, with increasing speed. The number of *Shasthya Shebikas* has grown from a few hundred in 1990 to 15,000 in 2000 to 30,000 in 2004 to 100,000 at present.

Note: Akram Islam contributed to this information.

Box 3. Financing of the Brazil CHW program

The Brazil CHW program is an integral part of its PHC program, which has been growing in strength and stature for well over a half-century now. Its 236,000 CHWs, called Community Health Agents, are financed as an integral part of the PHC program. After serious political struggles, the country embraced in the 1980s a strong commitment to social protection, including health, through shared financing by different levels of government, strong community participation, and complementary participation by the private sector. Since CHWs are an integral part of a Family Health Care Team and formally recognized as part of the national health system, the financing for the entire team comes from the same sources. The central government requires that 12% of tax revenues raised by states and 15% of those raised by municipalities be devoted to health. Civic participation is made possible not only through democratic elections but through the formation of Councils at the federal, state and municipal levels which address health system issues, and health conferences are held periodically as well. There are over 5,500 municipal councils in Brazil, and 50% of the members are users of health services, 25% are health managers, and 25% are managers and service providers. They play a strong role in the allocation of financial resources for health. Every four years, health conferences are convened to propose a strategic direction for health services.

The cost of the CHW program is hard to determine because it is so integrated with Brazil's primary health care system. The member of the Family Health Care Team together take joint responsibility for 600–1,000 families (with 4-6 CHAs on each team along with one doctor, one nurse, one auxiliary nurse, and some dental staff).

Funding comes from a combination of sources: national, state and municipal governments, employer health insurance purchases, and out-of-pocket expenditures. The CHWs are employed by the municipality and paid a salary in the range of $100–200 per month. The cost of the Family Health Care Team program is in the range of $41–$50 per individual covered per year, and the salary costs of the CHAs constitute, according to one study, 22% of the total Family Health Care Team salaries. Thus, an approximation of the cost of the CHA program is in the range of $9–11 per person served per year.

The Brazil CHW program is an example of a program in which CHWs have become an essential

and foundational member of the primary health care team and therefore the funding to support CHWs does not come as a separate package but as a part of the overall governmental and societal support for PHC.

Note: See the Brazil Case Study in Appendix A for further details and references.

WHAT GUIDANCE CAN BE GIVEN TO ASSURE THAT FINANCING BECOMES A SUSTAINABLE POSITIVE ELEMENT IN CHW PROGRAM DEVELOPMENT?

General principles regarding costing and financing: First of all, careful planning which takes into account the full costs of the program is essential, and the establishment of a plan for adequate, fair, and sustainable financing must follow. Secondly, establishing a strong a base of political support for long-term financing is critical if government funding is required. Early success can build long-term success—an ineffective program is hard to fund in the long term. Therefore, documenting early program quality and impact can generate political support that will be invaluable in securing governmental financial support. Strong evidence of effectiveness can help to secure political support for funding, and this can be achieved by having a strong monitoring and evaluation program.

Also, developing strong linkages to local sources of revenue can, in the long term, produce gradually increasingly revenue since these sources of support are likely to grow more quickly than will funding from the central government. Finally, if CHWs are adequately remunerated (and have career advancement opportunities), attrition will be low, which can reduce the costs and poor quality associated with high rates of attrition.

CONCLUSIONS

Accumulating evidence on the effectiveness of CHWs in low-, middle-, and even in high-income countries provides strong indications that, for the foreseeable future, CHW programs are not merely a stopgap solution. Investments in these CHW programs are, in fact, investments in strengthening the health system. However, to reach their full potential, CHW programs need adequate financing just as do all essential programs. Whether emerging large-scale CHW programs can garner the financial resources they need to achieve their full potential is a question that is too early to answer at present.

Acknowledgments

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Additional Resources

The *Joint UN Tool for Modeling the Cost and Impact Needed to Reach the Health-Related MDGs* was designed to support the costing and modeling of national strategies from a systems-wide or a program-specific intervention. Information about this can be obtained at: http://www.who.int/pmnch/topics/economics/20090407_joint_UN_tool_ha.pdf.

Another useful resource for estimating costs is a questionnaire used in Brazil by its primary health care program, developed to estimate the potential costs of scaling up the Program *Sauda e Familia* in Brazil. This is available (in Portuguese) at: http://189.28.128.100/dab/docs/geral/determinacao_%20sintese.pdf.

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Chapter 6

Coordination and Partnerships for Community Health Worker Initiatives

Muhammad Mahmood Afzal and Henry Perry

Key Points

- Community health workers (CHWs), unlike other formal human resources for health (HRH) cadres, have diverse links with the formal health system in many countries. They are also positioned within a complex array of relationships in the social setting of the communities where they work.
- The complex and diverse challenges of CHW initiatives that emerge in a number of countries are invariably beyond the power of a single actor to address and require coordination and collaboration among different players and actors at all levels.
- The multisectoral coordination of HRH, including CHWs, is not an objective in its own right; it is a means to an end, while the end objective is universal health coverage (UHC), achievement of Millennium Development Goals (MDGs), and elimination of health disparities within the country.
- The multisectoral dimensions of CHW initiatives demand a multisectoral policy process and a coordination mechanism that can provide an environment and a platform where the related sectors can work together to harmonize and synchronize their efforts.
- There are several national multipartner coordination mechanisms for health; however, the coordination process for CHW initiatives, as well as for other aspects of HRH, should be able to meet the country's needs, and should be aligned with other coordination mechanisms as part of the overall health agenda.
- Synergy and harmonization of financial and technical support from international actors in response to the national needs is vital for CHW initiatives to contribute to UHC and ensure equitable access to the essential health services within that country. A framework for harmonized actions and a joint commitment on CHWs provide appropriate opportunities to synchronize partners' actions in support of CHWs initiatives.

INTRODUCTION

While the world is moving toward the post-MDG era, the World Health Organization (WHO) is focusing on UHC. The critical shortages within the essential health workforce in virtually all low- and middle-income countries still pose a serious obstacle in attaining health goals. In addition, challenges like geographic misdistribution of HRH, limited capacities of many health workers, inadequate retention strategies, weak management systems, and poor working conditions contribute to an inadequate capacity of HRH to provide essential health services at local levels that are readily accessible and appropriate in quality. With this backdrop, CHW initiatives as a part of community-based health systems are absolutely vital and have manifested their value in improving health access and population-level health improvement in many settings. Nevertheless, the underlying challenges are multifaceted and multicontextual. It is globally acknowledged that no single actor or organization can improve the health workforce situation in any given country and, therefore, multidimensional interventions and multisectoral partnerships are essential. The challenge is how to safeguard multisectoral and multistakeholder coordination and ensure synchronization among the partners' and stakeholders' actions. This chapter addresses the following questions: (1) Why are partners and coordination needed for CHW initiatives? (2) What are the challenges of collaboration and coordination for CHW initiatives? (3) What are the policy options for collaboration and coordination for CHW initiatives? (4) What are approaches to national-level multistakeholder coordination? (5) How can initiatives for CHWs and other frontline health workers (FLHWs) best be coordinated?

Why are partners and coordination needed for CHW initiatives?

Based on a rapidly growing evidence base, CHWs are now globally recognized as a key resource for strengthening local health systems and attaining the health-related MDGs. CHWs have expanded access to essential health services in many low-resource environments by filling critical gaps in health promotion and service delivery and enabling progress in a broad range of health outcomes in settings with high disease burdens and limited resources.[1] As countries continue to strengthen their health systems and make efforts to ensure access to essential services, CHWs are becoming ever more important to reach the MDGs, achieve UHC, and reduce health disparities.

Evidence has shown that engaging CHWs not only promotes better access to health services but also saves lives—particularly in the most remote areas.[1] Despite the growing role of CHWs, improvements are needed in the process for developing and managing CHW programs. In many countries, this process has been piecemeal and often centered on individual projects—frequently, vertical programs with separate funding mechanisms—leading to gaps in services as well as lack of integration and synchronization with the local health systems and local health needs.

Within this landscape, national governments along with partners, including supporting donors and technical advisors, can make important contributions toward developing approaches that can strengthen relationships between the CHWs and the formal health system. Principally, CHWs should be an integral component of community-based health programs and the local health subsystem, where they may contribute toward the national and local health goals. CHW roles, responsibilities, and activities need to be integrated with local health plans. Supportive supervision, monitoring, and guidance need to be adequately provided from the related health facilities. By incorporating individual CHW programs and integrating their services into community-based subsystems, countries will be able to accelerate the achievement of the health MDGs and UHC.

The multisectoral dimension of HRH is at the core of the global agenda. The many complex and diverse HRH challenges are invariably beyond the power of a single actor to address and require coordination and collaboration among different players and actors at all levels. Like the other health workforce cadres, CHWs have multisectoral dimensions and implications. The planning, financing, management, implementation, and monitoring of CHW initiatives require actions from and interaction among various sectors and stakeholders, including the ministry of health (MOH), other government ministries (education, labor, finance, local government), regional and local governments and municipalities, regulatory bodies, professional associations, the private sector, civil society organizations, nongovernmental organizations (NGOs), and local communities, not to mention international development partners and United Nations (UN) organizations supporting such programs. Therefore, coordination and synchronization among the various sectors and stakeholders is essential, particularly for policy development, planning, implementation, management, and monitoring and evaluation. To do this effectively demands a robust coordination process and a suitable mechanism that can bring related allies and stakeholders together on a common platform and agenda.

What are the challenges of collaboration and coordination for CHW initiatives?

CHW initiatives face a complex set of challenges that are multidimensional and multisectoral. The most prominent ones are as follows:

- Health systems are usually weak and do not have the capacity to adequately support the delivery of essential health services to the target population. This also constrains the capacity of health workers to operate effectively in these settings.
- There is an inequitable distribution of health workforce, resulting in evident geographical and professional disparities. Geographic areas where the health needs are the greatest have the fewest health care providers, particularly among those with higher levels of specialization.
- The broad political commitment to CHW initiatives is usually limited. Thus, governments do not make CHW initiatives a national priority, nor do implementing partners and stakeholders. Usually, CHW initiatives are seen as the sole responsibility of the MOH, and other related sectors and partners do not become meaningful stakeholders.
- Policies and plans for CHW initiatives are usually deficient. This—combined with limitations of health system capacity, political instability, transparency issues, and other competing priorities in the MOH and government—leads to a highly suboptimal rollout of the program.
- Financial resources to support the CHW initiative are usually inadequate.
- Non-engagement of related stakeholders leads to a vast untapped potential and loss of opportunities for public-private partnerships. The technical and financial inputs of civil society organizations, NGOs, professional associations and networks, and other interested entities and partners are limited and could be much better if stronger collaborative mechanisms were present.
- There is a lack of effective coordination mechanisms and harmonization of actions, leading to fragmentation of the CHW initiative. In many countries, the coordination mechanisms are either deficient or ineffective. This is coupled with weak linkages to existing national coordination mechanisms.
- There is no single typology for CHWs internationally or within countries. Rather, there exists a broad array of types of CHWs with a diverse set of labels and categories describing them and with widely different training, tasks, and management systems.

- There are diverse models of career and incentive structures. Programs with special donor support and a particular disease focus are often able to provide more generous incentives to CHWs, while in some settings CHWs are expected to volunteer their time and, in others, they are compensated by different means.[2]
- Training of CHWs has rarely been integrated into the established health professional schools. In-service and continuous training systems are usually insufficient.

What are the policy options for collaboration and coordination for CHW initiatives?

The complexity underpinning the CHW initiatives calls for multisectoral policy options that pay adequate attention to every critical step: planning, development, recruitment, retention, and management. Multisectoral ownership, political commitment, and coordinated actions by the government sector and related stakeholders are fundamental. Jointly developed solutions endorsed by formal government forums have a better chance of adoption by the different constituencies and stakeholders. Such solutions call for multistakeholder coordination and require collaboration among stakeholders and partners from different constituencies and sectors for developing joint policies and plans in addressing the CHW-related challenges within the overall HRH system and health agenda. In this respect, creating an environment that is conducive for multisectoral coordination and action is the primary responsibility of the government. This requires inclusive engagement and wider consultation with relevant stakeholders from various public sectors, academia, professional and staff associations, governing bodies, NGOs, civil society, and the private sector. The role of the local communities in shaping the CHW agenda is of great significance, particularly in identifying local health needs, setting priorities for CHW roles and responsibilities, identifying CHWs, providing local support, and engaging in CHWs' supervision and performance evaluation.

Though a multisectoral approach is an important theme in the current discourse on addressing HRH challenges, successful multistakeholder coordination is, by its very nature, difficult to achieve. A basic condition of success that is the first step in such coordination is the establishment of a sufficiently competent coordination process to offer a workable platform that will engage all partners and stakeholders, with their resources and competencies, to yield tangible results. National coordination processes should be institutionalized and should bring a suitable national perspective to the policies and plans that emerge, thereby increasing the likelihood that mutual accountability will be fostered and that proposed solutions will be sustainable.

A policy dialogue among the stakeholders is helpful to agree on a joint policy and priority interventions. In many settings, the MOH, as the principal stakeholder, is in the best position to provide stewardship of the coordination process and facilitate the alignment of related sectors by bringing them on board during the key phases of planning, mobilizing the necessary resources, carrying out the strategic interventions, and monitoring the progress and effectiveness of implementation. In this effort, sharing information and insights requires a formal mechanism for continuous policy dialogue and also formal communication channels for sharing the results of the policy dialogue. The MOH, as the lead agency, is also expected to support other sectors in effectively performing their roles related to the CHW initiative, through orientation and building their capacities in policy development, planning, implementation, and monitoring and evaluation.

Building an effective and inclusive partnership network also provides a platform to coordinate and collaborate with development partners and UN agencies for harmonizing their efforts in support of national goals, priorities, and plans and systematically addressing the needs for financial and technical support required for effective CHW programs.

What are approaches to national-level multistakeholder coordination?

It is evident that the multisectoral dimension of HRH issues in general and CHW initiatives in particular demand a multisectoral policy process and a coordination mechanism that can provide an environment and a platform where the related sectors can work together to harmonize and synchronize their efforts. There are several national multipartner coordination mechanisms for health, such as sector-wide approaches (SWAps), country coordinating mechanisms (CCMs), the International Health Partnership (IHP+), national HRH observatories, and country coordination and facilitation (CCF) approaches. However, it is critical to adapt the coordination process to the country's needs.

SWAps call for a partnership in which government and development agencies (under government leadership) interact together in the formulation of policy.[3] Under the SWAp, project funds contribute directly to a sector-specific "umbrella" and are tied to a defined sector policy under a government authority.

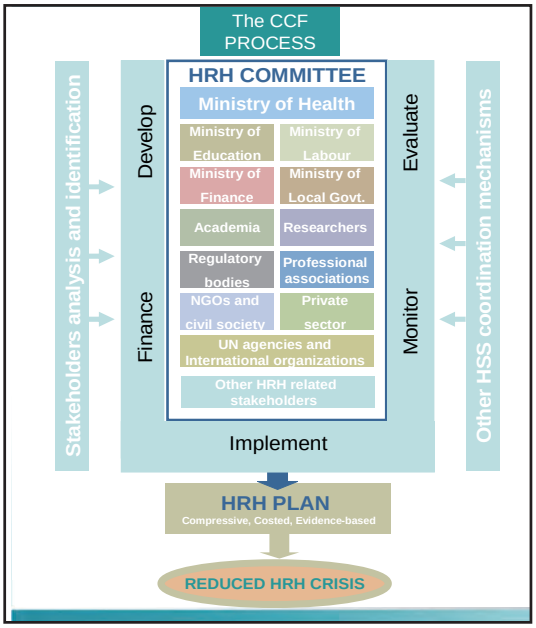
The CCM is central to the commitment of the Global Fund to Fight AIDS, Tuberculosis and Malaria to local ownership and participatory decision-making. CCMs involve representatives from both the public and private sectors, including governments, multilateral or bilateral agencies, NGOs, academic institutions, private businesses, and people living with the targeted diseases. These country-level multistakeholder partnerships develop and submit grant proposals to the Global Fund based on priority needs at the national level. After grant approval, they oversee progress during implementation. For each grant, the CCM nominates one or more public or private organizations to serve as principal recipients who receive and distribute the funds.[4]

IHP+ is a group of partners committed to improving health in developing countries. Partners include international organizations, bilateral agencies, and country governments, and they all sign the IHP+ Global Compact for achieving the health-related MDGs. IHP+ partners work together to put into practice internationally agreed principles for effective aid and development cooperation in the health sector. IHP+ achieves results by mobilizing national governments, development agencies, civil society, and others to support a single, country-led national health strategy or plan; a single monitoring and evaluation framework; and a strong emphasis on accountability.[5]

Establishment of national HRH observatories within MOHs at the country level is supported by the WHO. A national HRH observatory is a national resource for producing, sharing, and utilizing health workforce information and evidence to support HRH policy implementation. It involves a network of all resources and stakeholders in health workforce development in the country. The network monitors and documents implementation of HRH policy and strategies.[6]

The CCF approach was conceived by the Global Health Workforce Alliance in 2009. The document, entitled *Country Coordination and Facilitation (CCF): Principles and Process,* provides necessary guidance to the countries in establishing and/or strengthening multistakeholder coordination processes around the HRH agenda.[7] This approach brings key stakeholder constituencies to a single table to address HRH agenda items. Implementing the CCF approach in a country orients and sensitizes stakeholders to track and support HRH development; to conduct a process for identifying and analyzing stakeholders; to establish HRH committees and technical working groups for developing evidence-based, comprehensive, and costed HRH plans; and to engage stakeholders in resource mobilization, implementation, and monitoring and evaluation of the approach's implementation. Figure 1 illustrates this process. With catalytic support from the Global Health Workforce Alliance, a number of countries have implemented this approach, and they have developed and are now implementing their HRH plans for engaging related stakeholders.

Figure 1. The CCF approach to addressing the HRH crisis at the country level[8]



The key principles of this approach include

- reliance on existing coordination mechanisms when possible,
- inclusive representation of HRH stakeholder constituencies,
- coordinated leadership and stewardship,
- defined roles for stakeholders,
- coherent strategies linked with national health policies,
- joint efforts and actions arising from increased investments in HRH, and
- linkages with other coordination mechanisms.

With this paradigm, CCF enables governments to take the necessary leadership in the planning, coordination, implementation, and management of HRH development at the country level and to work with partners aligned to support this priority pillar of the health system. High-level transparency and accountability are also generated through this process by introducing shared monitoring and evaluation oversight of the different components of the HRH planning, implementation, and related managerial processes.

The CCF approach promotes the HRH strategy and its plan as integral components of the national agenda for developing social and human capital and as valid instruments for the attainment of the health-related MDGs and UHC. Likewise, the CCF process is linked with other coordination mechanisms for health system strengthening (HSS) as well as those set for key national health programs. Such an approach captures the cross-cutting nature of HRH development and enables the HRH development process to directly interface with and benefit from mutual synergies and operational complementarities that these coordination forums offer. The CCF approach also provides a suitable process and milieu for undertaking resource mobilization actions to address the HRH investment gaps at the national level, as this component is a major determinant of success. The creation of HRH “baskets” initiated by some countries for supporting the resource mobilization process constitutes an encouraging endeavor.

How can initiatives for CHWs and other FLHWs best be coordinated?

Although some countries have been able to implement CHW programs within their national health systems by exercising national leadership, still a number of countries require support from donors and international development partners. Many partners are engaged in supporting CHW programs in various countries but find fragmentation of policies and programs to be a big challenge. This calls for harmonized and synchronized actions that support national needs. Particularly, in order to deliver on UHC at the country level, the global health community needs to work together to address critical gaps and inefficiencies at all levels.

In 2012, four separate consultations* highlighted the significance of CHWs and other FLHWs in achieving health goals in low- middle-income countries. The Global Health Workforce Alliance has noted the need for a common set of messages around CHWs and for a joint framework to guide efforts to scale up CHW initiatives within health and development programs. In this context, a synthesis paper[9] derived from the outcomes of these consultations was developed together with an action agenda, presenting the key messages for common actions on the following domains:

- There is an urgent need for alignment and synergies among partners' initiatives.
- Current evidence needs to be put into practice.
- Research is needed on knowledge gaps.
- National-level multistakeholder collaborations are needed.
- There is a need for recognition of the importance of a stronger role for CHWs and FLHWs and their integration into health systems.
- There is a need for national-level consultations and advocacy.
- There is a need for stronger monitoring and assessment of CHW and FLHW programs and for shared accountability.

Moving onward, the key partners of the Global Health Workforce Alliance, based on a shared understanding, jointly developed three working papers that together have become a framework for harmonized partners' actions, also known as the CHW Framework for Partner Action. The papers that make up the CHW Framework:

- *A Framework for Partners' Harmonised Support: Community Health Workers and Universal Health Coverage*[10]
- *Monitoring and Accountability Platform: For National Governments and Global Partners in Developing, Implementing, and Managing CHW Programs; Community Health Workers and Universal Health Coverage*[11]
- *Knowledge Gaps and a Need Based Global Research Agenda by 2015: Community Health Workers and Universal Health Coverage*[12]

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* Four consultations on CHWs and FLHWs in 2012:

1. Technical consultation on the role of community based providers in improving Maternal and Newborn Health (30–31 May 2012;- organized by Royal Tropical Institute, Netherlands).
2. Evidence Summit on Community and Formal System Support for Enhanced Community Health Worker Performance (May 31 and June 1; convened by USAID Global Health Bureau in Washington, DC)
3. Community Health Worker Regional Meeting (19–21 June; convened by USAID-funded Health Care Improvement Project at Addis Ababa, Ethiopia)
4. Health workers at the Frontline—Acting on what we know: Consultation on how to improve front line access to evidence-based interventions by skilled health care providers (25–27 June; convened by NORAD and coordinated by EQUINET at Nairobi, Kenya).

These papers propose a set of guiding principles to support countries and their partners in their efforts to

- harmonize donor support, based on commitments by all partners to collaborate at the global and national levels;
- build greater synergies across CHW programs —within countries and between countries— guided by national leadership, national strategies, and nationally agreed systems for monitoring and evaluation; and
- improve efforts to integrate CHWs into the broader health system, with a particular focus on effective linkages between community-based and facility-based health workers at the frontlines of service delivery, so that all persons and communities receive the health services they need.

The CHW Framework is structured around a "Three-Ones" approach,* with three overriding principles for harmonization:

- One national strategy as the shared basis for CHW program investment and alignment of all partners
- One authority respected by all partners and clearly identified at the national level that also has delegated its authority to an appropriate entity at the district level
- One monitoring and accountability (M&A) framework as the basis for reporting and accountability to all partners

Convened by the Global Health Workforce Alliance and other key partners, a global consultation during a side session at the Third Global Forum on Human Resources for Health at Recife, Brazil, in 2013, endorsed the CHW Framework for Partner Action and concurred on a joint commitment[13] to work together to adapt, apply, and implement the CHW Framework, fostering harmonization and synergies, accountability, and joint action on critical knowledge gaps, and reaching out to all stakeholders engaged with CHW programs.

The commitment promotes alignments with and implementation by partners working toward scaling up CHW programs through their efforts at global, regional, and national levels. In this respect, the key actions derived from the CHW Framework and the joint commitment together provide guiding principles toward harmonizing of support for CHW initiatives. Succinct descriptions of the key actions in three domains are provided below.

1. KEY ACTIONS FOR HARMONIZATION AND ALIGNMENT

At the global level, all actors need to contribute together to a comprehensive systems approach in advocacy, programming, funding, implementation, monitoring, and expansion of the knowledge base for CHW programs. At the national level, principles for alignment and harmonization for CHW programs and initiatives need to be established and made compatible with broader national health system development frameworks. The principles need to be acceptable to and applied by governmental and nonstate actors.

In order to be workable, principles agreed to at the global and national levels need to be applied at the operational level and translated into responsibilities for all involved in CHW field programs. Public and nonstate health managers, providers, trainers, and health programmers need to be involved in this process.

* The Three-Ones approach derives from an approach used in the AIDS response where countries had one National AIDS Committee, one National Plan, and one National M&E Framework.

2. KEY ACTIONS FOR M&A

Accountability for harmonization of CHW initiatives will be achieved by public reporting. The M&A framework calls for scheduled reporting and mechanisms for transparency and public information sharing at national and international levels. It is proposed that the Global Health Workforce Alliance, WHO, or another global coordinating body, through a global convening role, should provide a platform through which national and international partners can disseminate and evaluate their contributions toward the development and support of effective and sustainable CHW programs that are aligned with national policies. A central reporting mechanism may be identified to provide an appropriate global stage through which indicators describing CHW program coverage and effectiveness may be publicly disseminated on a regular basis, at least every two years. In addition, existing reports from WHO and from national HRH observatories will be effective for further dissemination of information at least annually.

3. KEY ACTIONS, KNOWLEDGE GAPS, AND RESEARCH PRIORITIES

The organization and prioritization of a global CHW research agenda need further discussion to build global consensus on the way forward. Particularly, mechanisms that foster collaboration and knowledge sharing of CHW research efforts, and that establish a process for identifying future research priorities, will ensure continued expansion of the evidence base for CHWs. In light of the diversity of stakeholders engaged with CHW programming and the need to align programming with greatest needs at the country level, such mechanisms will be extremely valuable.

Web-based platforms and annual global forums are mechanisms for fostering collaboration and sharing knowledge of CHW research efforts. These platforms may also serve as a global repository for CHW research. At the country level, national forums such as CCF and the national HRH observatories should be used for sharing information and identifying opportunities for collaboration.

Research should also be conducted in partnership with local institutions and emphasis should be placed on building the research capacity of local investigators. Future priorities in research will ultimately be identified through increased collaboration, knowledge sharing, and continued dialogue among stakeholders and partners.

CONCLUSIONS

Considering the significant contributions that CHW programs are now making to the delivery of local health services and the potential of expanded and improved CHW programs to contribute to the achievement of the MDGs for health, UHC, and reductions in health disparities, it is imperative to integrate CHW initiatives into formal health systems. Additionally, the multisectoral dimensions of CHW policy and programming can be better addressed through establishing and strengthening the HRH coordination mechanisms. This will enable related stakeholders to provide their input by sharing their visions, engaging in policy dialogue, exchanging information, participating in joint decision-making, and mobilizing resources, as well as cooperating in implementation and M&A for CHW initiatives. This policy process can further extend its scope to harmonize and synchronize the support actions by the partners and actors toward achieving the MDGs and UHC and, ultimately, eliminating health disparities and ensuring that everyone has equitable access to quality health services. In this respect, various multistakeholder coordination mechanisms as well as the framework for harmonized actions and the joint commitment on CHWs provide appropriate opportunities to synchronize partners' actions in support of CHW initiatives.

Additional Resources

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SECTION 2: HUMAN RESOURCES

Chapter 7

Community Health Worker Roles and Tasks

Claire Glenton and Dena Javadi

Key Points

- A number of health care services exist that can make a significant difference to maternal and child health (MCH) in poor settings. Because community health workers (CHWs) are close to communities, both geographically and socially, they could potentially be responsible for a number of these services.
- When planning new CHW roles or expanding the roles of existing CHWs, program planners need to analyze current research evidence and evidence-based guidelines on the effectiveness and safety of relevant tasks performed by CHWs. Planners need to assess whether the recommended CHW roles and tasks are considered acceptable and appropriate by their target population, by the CHWs themselves and by those who support them. Finally, planners need to think about the practical and organizational implications of each task for their particular setting with regard to training requirements, health systems support, work location, workload, and program costs.
- This chapter provides a list of questions that may help program planners think about important issues when determining CHW roles and tasks.

INTRODUCTION

This chapter will focus on a number of considerations program planners need to make when determining the roles and tasks of CHWs. We will discuss the specific roles and tasks that CHWs could potentially have and present a list of questions that can help planners when making these choices.

What Kind of Roles and Tasks Do CHWs Have Already?

Although there are examples of CHWs having a wide range of roles, most CHW programs within the area of MCH and primary health care tend to focus on a few main areas that fall under three broad categories of health promotion, community mobilization, and treatment (see also Table 1):

- Health Promotion and Preventive Care

  Perhaps the most common role taken on by CHWs is that of health promoter, where the CHW primarily provides information and counseling with the aim of encouraging particular behaviors. CHWs in this role are typically used to promote breastfeeding and child nutrition, family planning, immunization, and other behaviors linked to mother and child health. In addition, CHWs are sometimes also used to promote awareness about social welfare issues, such as domestic violence or alcohol and drug abuse.

  In a second role, the CHW provides preventive health care services by distributing commodities such as bed nets, iron folate supplements and other micronutrients, condoms, contraceptives, and certain vaccines, for example, to all pregnant women or children of a certain age. Although this role usually includes promotional activities, the provision of commodities has logistical implications, as well as implications for how the CHW is perceived by the community, making this role different from that of health promoter.

- Community Mobilization

  In a third role, CHWs act as community mobilizers, initiating activities such as the digging of latrines, the identification of clean water sources, and the organization of nutrition and sanitation days.

- Treatment

  Another role involves the provision of curative health care. Tasks for this role commonly include the diagnosis and management of common childhood illnesses, such as malnutrition, diarrhea, and pneumonia, as well as timely referral to health facilities, when needed.

  Another aspect of treatment is assistance to women during labor and birth. In some cases, this role may be limited to providing support to the mother in the presence of a skilled birth attendant. In other cases, CHWs are trained to manage uncomplicated labor and to detect high-risk pregnancies and labor complications so that timely referral can be made. This role is often taken on by traditional birth attendants (TBAs) who have received additional training and have been incorporated into a formal health care program.

Table 1. CHW Roles within MCH

ROLE	EXAMPLES OF TASKS AND ACTIVITIES	PROGRAM EXAMPLE
Promoter of Health Behaviors and Social Welfare	Provision of information and counseling with the aim of encouraging particular health behaviors and use of health care, including promotion of breastfeeding, child nutrition patterns, family planning, HIV testing, and immunization. Provision of information about social welfare issues, such as domestic violence and alcohol and drug abuse.	In Malawi, local women are selected to work as peer counselors and to provide support to childbearing women in their community. The peer counselors identify pregnant women, make home visits, and provide health education regarding exclusive breastfeeding, infant care, immunizations, prevention of mother-to-child transmission of HIV infection, and family planning. They also provide support to women experiencing breastfeeding problems. The peer counselors receive five days of training, as well as annual refresher training. In addition to this intervention, other local women are also trained to facilitate women's groups, where group members are encouraged to identify and prioritize problems related to maternal and newborn health, and to identify, implement, and assess strategies to address these problems.[1]
Provider of Preventive Health Care Services	Distribution of interventions, such as bed nets, micronutrients, condoms, contraceptives, and certain vaccines, through community-based distribution programs and social marketing programs.	In rural Kenya, a community-based delivery system operationalized by CHWs and vendors serves to distribute Sprinkles (fortified nutrients) to remote households. To be cost-effective, multiple services and products are distributed in one visit, increasing the acceptability of the products through previously established trust. The distribution system is run by the Safe Water and AIDS Project. It supports community vendor groups with distribution of health products including water storage and disinfectant products, bed nets, contraceptives, deworming tablets, and (as a trial during implementation of the Nyando Integrated Health and Education Project), Sprinkles nutritional products. The Safe Water and AIDS Project trains vendors and health workers so they will be qualified to distribute Sprinkles packets. Vendors purchase Sprinkles and distribute them according to the Safe Water and AIDS Project model. Social mobilization events are then organized to introduce vendors to community members. Promotional songs and peer-to-peer communication are used to promote use of Sprinkles and to establish trust. These events also allow for households to follow up with health workers and vendors should they have any questions or concerns regarding the products. Incentives, such as T-shirts and stickers, are given to providers, while incentives of extra free sachets or calendars are given to consumers to participate in the program.[2]
Community Mobilizer	Organization of community health events, such as the digging of latrines, identification of clean water sources, and organization of nutrition and sanitation days	In Rwanda, each village (i.e., *umudugudu*) has pairs of CHWs who are trained in community-based integrated management of childhood illness and are responsible for promoting the use of bed nets for malaria prevention and kitchen gardens to address widespread nutritional deficiencies, as well as providing messages on family planning and enrollment in a community health insurance scheme (*mutuelle de santé*). As part of their community mobilization role, the CHW pairs participate in monthly community work meetings (i.e., *umuganda*), during which they have a few minutes to discuss a health topic. In these discussions, the CHWs identify any serious health issues that require door-to-door follow-up with community

ROLE	EXAMPLES OF TASKS AND ACTIVITIES	PROGRAM EXAMPLE
		members. They also play a big role in health promotion during organized campaigns, such as the national MCH week when they help bring the maximum number of people and provide some services as part of the campaign.
Provider of Curative Health Care Services	Diagnosis and management of common childhood illnesses, for example, diagnosis of malnutrition, diarrhea, and pneumonia. Provision of timely referral when needed.	In Nepal, female community health volunteers (FCHVs) perform a number of tasks, including the detection and treatment of common childhood illnesses, provision of directly observed treatment short-course (DOTS) for TB, distribution of oral rehydration solution and zinc for diarrhea, and provision of pediatric cotrimoxazole tablets for children with symptoms of pneumonia. FCHVs are also trained to identify and resuscitate infants with birth asphyxia. They play an important role in maternal health as well with the provision of family planning supplies and medication for reduction of postpartum hemorrhage.[3-6]
Assistant to Women during Labor and Birth	Provision of continuous support during labor. Management of uncomplicated labor. Detection of high-risk pregnancies and labor complications so that timely referral can be made.	In Ethiopia, TBAs are trained as home-based lifesaving skills (HBLSS) guides. Trainers use a combination of teaching methods, including discussion, demonstration/ drama, pictorial "Take Action Cards," and practice to teach TBAs how to manage normal deliveries and how to recognize and deal with obstetric and newborn emergencies, including when to make referrals. TBAs also pass this knowledge on to mothers and members of the community during community meetings, women's association meetings, antenatal outreach sessions, and when fetching water or firewood.[7]

WHAT KEY QUESTIONS DO PROGRAM PLANNERS NEED TO CONSIDER WHEN SELECTING CHW ROLES AND TASKS?

When planning new CHW roles or expanding the roles of existing CHWs, program planners need to think about several key questions, including:

- How effective and safe will it be to use CHWs to perform a specific task?
- Are CHWs' roles and tasks likely to be regarded as acceptable and appropriate by CHWs and their target population?
- How many tasks and activities should each CHW take on?
- When and where will each task be performed and how much workload will it require?
- What kinds of skills and training will the CHW require when performing specific tasks?
- What type of health system support will the CHW require when performing the task?
- How much will it cost to use CHWs to perform the task?

Each of these questions will be discussed in greater detail in this chapter. Decisions regarding these issues are highly contextual, and our goal is not to offer a prescriptive method for assigning roles and tasks. Instead, this chapter seeks to explore key areas of consideration when selecting roles and tasks and how decision-makers could consider these issues when assigning tasks.

HOW EFFECTIVE AND SAFE WILL IT BE TO USE CHWS TO PERFORM A SPECIFIC TASK?

Several health care interventions exist to have a positive impact on some of the most common causes of serious illness and death among mothers and children in low- and middle-income countries. Some of these interventions are already commonly provided by CHWs, such as breastfeeding support and certain childhood immunizations. Other services that are not frequently provided by CHWs but are also known to have an important impact on the health of mothers and children include kangaroo mother care, newborn resuscitation, and the provision of oxytocin and misoprostol for postpartum hemorrhage, magnesium sulfate for eclampsia, and antibiotics for neonatal sepsis. Although we know these interventions can save lives and improve health, how do we decide which services should be delivered by CHWs?

When making these decisions, program planners should explore what current research evidence and evidence-based guidelines says about the effectiveness and safety of tasks when performed by CHWs. The World Health Organization (WHO) has recently published guidance about the types of tasks for mother and newborn health that CHWs and other health worker cadres can perform.[8] This guidance is based on a thorough examination of the available evidence regarding the effectiveness, acceptability, and feasibility of these options, and was created by a panel of global stakeholders. The WHO has also developed similar guidance concerning the use of CHWs and other health worker cadres for the care of people with HIV/AIDs.[9]

For maternal and newborn health programs, the WHO primarily recommends the use of CHWs for promotional tasks (Box 2). These recommendations are supported by a growing body of evidence that concludes that the promotion of certain health care behaviors and services by CHWs, such as the promotion and support of breastfeeding and childhood immunization, probably leads to significant improvements in MCH.[10] Far fewer studies have, however, explored whether CHWs can effectively perform more curative or invasive tasks.[10-12] For this reason, the WHO has recommended that a number of tasks should be performed by CHWs only in the context of either monitoring and evaluation or rigorous research (Table 2). In other words, policymakers and program planners are encouraged to pilot the intervention and to conduct a rigorous assessment of its effectiveness, acceptability, and feasibility in their setting so that more evidence is available regarding the effectiveness, safety, and feasibility of CHWs performing these interventions.

Table 2. Current WHO Recommendations Concerning the Use of CHWs for Maternal and Newborn Health[8]

RECOMMENDED INTERVENTIONS TO BE PROVIDED BY CHWS FOR MATERNAL AND NEWBORN HEALTH:
Promotion of the uptake of health-related behaviors and health care services for maternal, HIV, family planning and neonatal health, including: ▪ Promotion of appropriate care-seeking behavior and antenatal care during pregnancy ▪ Promotion of companionship during labor ▪ Promotion of sleeping under insecticide-treated bed nets during pregnancy ▪ Promotion of birth preparedness ▪ Promotion of skilled care for childbirth ▪ Promotion of adequate nutrition and iron and folate supplements during pregnancy ▪ Promotion of reproductive health and family planning ▪ Promotion of HIV testing during pregnancy ▪ Promotion of exclusive breastfeeding ▪ Promotion of postpartum care ▪ Promotion of immunization according to national guidelines ▪ Promotion of kangaroo mother care for low birth weight infants ▪ Promotion of basic newborn care and care of low birth weight infants ▪ Administration of misoprostol to prevent postpartum hemorrhage ▪ Provision of continuous support for women during labor in the presence of a skilled birth attendant

RECOMMENDED INTERVENTIONS TO BE PROVIDED BY CHWS FOR MATERNAL AND NEWBORN HEALTH:
Intervention recommended only in the context of monitoring and evaluation: ▪ Distribution of oral supplements to pregnant women (e.g., calcium supplementation for women living in areas with known low levels of calcium intake; routine iron and folate supplementation; vitamin A supplementation for pregnant women living in areas where severe vitamin A deficiency is a serious public health problem) ▪ Intermittent presumptive therapy for malaria for pregnant women living in endemic areas ▪ Provision of injectable contraceptives
Interventions recommended only in the context of rigorous research: ▪ Oxytocin administration to prevent postpartum hemorrhage - standard syringe ▪ Oxytocin administration to treat postpartum hemorrhage - standard syringe ▪ Oxytocin administration to prevent postpartum hemorrhage – CPAD* ▪ Oxytocin administration to treat postpartum hemorrhage – CPAD* ▪ Misoprostol administration to treat postpartum hemorrhage ▪ Low-dose aspirin distribution to pregnant women at high-risk of pre-eclampsia/eclampsia ▪ Puerperal sepsis management with intramuscular antibiotics – standard syringe ▪ Puerperal sepsis management with oral antibiotics ▪ Puerperal sepsis management with intramuscular antibiotics – CPAD* ▪ Initiation of kangaroo mother care for low birth weight infants ▪ Maintenance of kangaroo mother care for low birth weight infants ▪ Injectable antibiotics for neonatal sepsis – standard syringe ▪ Antibiotics for neonatal sepsis –CPAD* ▪ Neonatal resuscitation ▪ Insertion and removal of contraceptive implants
The WHO does not recommend using CHWs for the insertion and removal of intrauterine devices.

*CPAD: compact, prefilled auto-disabled, injection device

ARE CHWS' ROLES AND TASKS LIKELY TO BE REGARDED AS ACCEPTABLE BY CHWS AND THEIR TARGET POPULATION?

Program planners also need to assess whether potential CHW roles and tasks are considered acceptable and appropriate by the CHWs, their target population, and the wider community, including community leaders, husbands, mothers-in-law, and other community members. Attempts to introduce roles and tasks that do not find support among these groups are likely to be unsuccessful. In instances where task shifting takes place, acceptance and support from the health system and its representatives, particularly health professionals working alongside the CHWs, are also important for program success, and is discussed later in the chapter.

Is the Community Satisfied with CHW Roles and Tasks?

Although all stakeholders may agree that issues targeted by the program are important, they may disagree about the chosen solutions. For example, community members may agree that maternal deaths are unacceptably high but may disagree with having CHWs who are instructed to accompany all women in labor to facilities. In other cases, problems can occur when CHWs are continuously confronted with issues that are considered more important than the issues that they have been trained to address. For example, in communities where members suffer from a number of health problems not addressed by the program and where they have poor access to other health care services, CHWs may frequently be approached about issues that are outside their scope of training. CHWs may also be confronted with non-health related problems, such as lack of housing, food insecurity, alcohol abuse, and social and domestic violence. This issue is a particular challenge for CHWs whose scope of practice is defined as health-related only. These sorts of problems are likely to influence recipient satisfaction and uptake of services (see Box 1).

Box 1. Recipients' views of CHW roles and tasks in a Brazilian program

In a CHW program in Brazil, CHW tasks included assessing children's nutritional status, enrolling malnourished children into a milk program, and sharing information about nutrition, immunization, hygiene, respiratory infections, breastfeeding, and prenatal care.[13] According to study authors, the program emphasized education as the key to improving MCH, and program administrators "[assumed that] once people learn how to correctly manage their environment and care for their children, health will improve." Community members disagreed with this assumption, arguing that they knew how to care for their children, but that their income and living conditions prevented them from doing so. Although they accepted those services they perceived to be of use, such as enrollment in the milk program, they regarded most of the services offered as ineffectual, patronizing, and intrusive. As a result, many CHWs who received "less than warm welcomes during home visits" became frustrated and eventually stopped performing their duties.

Are the CHWs Satisfied with their Roles and Tasks?

A mismatch between the needs and wishes of the community and the services CHWs have to offer can also lead to feelings of frustration and impotence among the CHWs themselves.[14] Some CHWs may find it particularly frustrating to deliver promotional services only, and may want to offer "real health care," such as medicines and immunizations.[14]

Has the Community Been Involved In Determining CHW Tasks and Roles?

The involvement of community members and CHWs in program planning is critical to ensure that tasks are seen as relevant and useful (See Chapter 13 on relationship with communities). The delivery of services that are valued by the community and by the CHWs themselves can increase uptake of these services and the CHW's legitimacy and motivation.

Past experience suggests that community involvement can lead to an increase in the distribution of commodities or in the number of curative tasks that CHWs perform. In Nicaragua, the tasks of the CHW were extended to include curative health care, which led to an increase in CHW motivation and community respect and satisfaction.[15] However, it is important to note that any transition from promotional to curative tasks can also represent a double-edged sword, as it could leave CHWs vulnerable to blame if things go wrong or if logistical support fails. CHWs offering services that can be perceived as harmful may be in particular need of visible support from community structures and health facilities (see Box 2).

Box 2. CHWs' concerns regarding social blame in Nepal and Papua New Guinea

In Nepal, a study of CHWs offering gentamicin, an antibiotic, through the Uniject device found that CHWs "were afraid that the injection would be given in the wrong location or would result in a wound or local infection; that the full treatment could not be given to the newborn because the birth did not occur at the home or the CHW was not available to provide the injection; that the baby's health would not improve after the first injection; that the family of the sick newborn would be unhappy or dissatisfied if the health of the newborn did not improve; or that giving seven injections would harm the newborn."[16] CHWs were also concerned about their liability if the baby they were treating died. One CHW said: "'I was worried because if something goes wrong, then what the community will say.'"[16]

In Papua New Guinea, CHWs' concerns about potential social blame when delivering Hepatitis B vaccines to newborns were met by providing them, and village leaders, with a copy of a letter of formal authorization from the National Department of Health.[11]

Community involvement may also lead to a broader scope of practice for the CHW, with more attention given to activities that may be outside the health sector, such as awareness raising and prevention of domestic violence or the establishment of microcredit systems or gardening projects. This more holistic approach may be regarded as more satisfying and relevant to the CHW and the community, but may also require a more complex support system because of the needs for training, supervision, and supplies from sources outside the health sector.

Have the Right CHWs Been Selected?

The acceptability to the community of particular tasks performed by CHWs is also likely to be influenced by the type of CHW who performs them. In many societies, recipients may prefer to receive MCH care from female CHWs. However, the age and life experience of the CHW may also be important. For example, some communities may promote the selection of young unmarried women to work with women of reproductive age, only to find that the young women need to be accompanied by older women as they do their home visits to provide credibility. In addition, the closeness of the CHW to recipients may increase or decrease recipients' acceptance. Recipients may prefer to receive services from people they know well and trust. On the other hand, they may not want to accept services from close neighbors if these services are regarded as particularly sensitive, such as the promotion of sexual and reproductive health. When selecting CHWs, program planners need to consider the nature of the tasks they will be expected to deliver. (See also Chapter 8 on recruitment).

Gender considerations can also go beyond patient preference. Traditional gender roles may affect CHW mobility, workload, hours of work, and incentives. For example, female CHWs may face varying degrees of time constraint because of traditional family duties and roles. Their level of mobility is also likely to depend on permission from spouses or other family members. Families may not be comfortable with female CHWs undertaking certain roles. Furthermore, providing women with a title and career can lead to female empowerment, potentially causing a ripple effect in terms of education and equality. These considerations are context-specific and culture-dependent; a general understanding of gender roles and expectations in the community is critical to program sustainability. Program planners and managers should approach this issue with care in order to ensure that empowerment and change happens in a way that can be effectively integrated into the society rather than quickly rejected, leading to dissolution of CHW programs.

HOW MANY TASKS AND ACTIVITIES SHOULD EACH CHW HAVE?

Program planners will also need to think about the scope of the CHW's role, whether he or she should have a few but specific tasks and activities or have a broad repertoire of responsibilities. A related issue is whether each community should be offered different types of CHWs, each with his or her own specialty or whether they should have access to one "generalist" CHW.

Do Recipients and CHWs Prefer "Specialist" or "Generalist" Roles?

From the recipient's point of view, the "generalist" CHW may make more sense. Having a system in which community members have to relate to several CHWs, each with his or her own "specialty," can lead to confusion about who is offering which task. It can also lead to frustration when CHWs are only able to respond to very specific health issues, for example, when tasks are split between health care for the mother and health care for the newborn or the child. Communities may therefore prefer "generalist" CHWs who can offer a continuity of care, including basic health promotion, preventive care, and the management of common health problems. For MCH, this care could include services tied to family planning, antenatal care, birth preparedness, labor companionship, and postnatal and routine newborn care. The generalist approach may also be more satisfying for the CHWs themselves as it may be

perceived as more meaningful and allows them to achieve a better understanding of the recipient and his or her health and social circumstances.

Despite these advantages, CHWs may find it more manageable to split work between them and to focus on and become skilled at a small number of tasks or to have tasks introduced gradually. In some cases, it may also make more sense to split some tasks between male and female CHWs according to what is most appropriate from a gender perspective. The establishment of male-female pairs of CHWs may also be helpful in settings where it is not safe or socially acceptable for women to travel alone. This system is now being implemented in Rwanda.

Both CHWs and target populations need to be involved in these decisions. Community involvement in program planning may help ensure that the correct balance has been achieved (see Box 3).

Box 3. Community involvement in CHW roles and tasks

In a community-directed intervention strategy, the role of the community is to design an approach to implementing an intervention using the resources available in that community. The logistics, including who will be responsible for implementation, supervision, and monitoring, will also be decided by the community in a way that is perceived as fair and evenly distributed among health workers. This approach has been used for the delivery of ivermectin, an anti-parasitic used for treatment and prevention of onchocerciasis (river blindness), as CHWs and the selection of new CHWs when needed may make decisions more balanced and realistic.[17]

What Is Most Practical for the Health System?

In addition to the recipients' and CHWs' views about the breadth of tasks, program planners also need to consider the practical implications of this decision for the health system. For example, CHWs who are expected to deliver a wide range of tasks will require more training and supervision than CHWs with fewer tasks. This decision also has implications for CHW payment and other incentives, as more tasks may lead to longer working hours and CHWs can reasonably expect some form of acknowledgement for additional training and skills. In contrast, it may be more efficient to train, supervise, and support a fewer number of "generalist" CHWs than to have the same number of tasks delivered by a greater number of "specialist" CHWs. Decisions regarding the number of tasks a CHW should have are also closely related to decisions regarding when and where each task will be performed and the workload each task entails, as discussed below.

WHEN AND WHERE WILL EACH TASK BE PERFORMED AND HOW MUCH WORKLOAD WILL IT IMPLY?

Program planners also need to think about when and where each task can or should be delivered by the CHW and the amount of work anticipated for the CHWs and their supervisors. These factors will have important implications, including the amount of flexibility and influence a CHW has over his or her work day, the appropriate catchment area, suitable incentives, and the opportunity to keep skills up-to-date. Program planners will need to consider the need for transportation, safety measures, and the CHW's freedom of movement.

The level of influence and flexibility a CHW has regarding *when* and *where* a task is performed can vary considerably. Some tasks, such as certain promotional tasks, can often be done in between a CHW's other tasks, at his or her own convenience, and the CHW may also have a lot of flexibility regarding where the task can be done. For example, some CHWs may choose to use ad hoc opportunities and chance meetings, such as social or community events, to deliver

certain promotional services. For other tasks, the CHW may have little influence on when and where they perform the task or how long it will take to complete the task. These include tasks such as continuous support during labor or other childbirth-related tasks. It may also be necessary or preferable to perform other tasks inside the recipient's home, while some tasks may need to be performed in clinics where CHWs can access supplies or need to be supervised by health professionals.

If the task requires the CHW to move around the catchment area, then the program planners will need to consider the need for transportation. In some settings, CHWs traveling around the community or making home visits may be exposed to violence, so safety issues need to be carefully considered. This may include an examination of whether it is appropriate for female CHWs to travel unaccompanied or to enter strangers' homes (see Box 4). Suggested solutions include being accompanied by another individual, working in pairs, and having access to mobile phones. All of these considerations are particularly important if the task requires the CHW to travel at night or for long distances.

Box 4. Problems encountered when CHWs move around the community

A qualitative study of CHWs in South Africa[18] graphically portrays the challenges of working in violence-prone communities:

As a reflection of the South African context in which the intervention was implemented, one of the tasks for supervisors was to ensure that their peer counselors remained safe. This issue was particularly important because peer counselors travelled on foot to visit mothers who lived in poor socio-economic areas prone to violence and drug abuse. One CHW reported the following:

> **The areas are not safe for peer supporters.... We had a peer supporter who went visiting the house and somebody was shot... in her presence.... When you live in the community there's no way we can separate these things. We live with this kind of life in townships and you just need to be very careful when you there.... I said maybe you should avoid that visit, phone her and ask if you can meet somewhere, or just avoid going there because if you get assaulted we will not be able to handle that, it might just be difficult for us.**

A qualitative study of CHWs in Bangladesh speaks of the cultural barriers female CHWs face:[19]

> **Women volunteers are required to go on household visits against the norms of *pardah*. As a result, comments such as "How can *be-pardah* (immodest, shameless) women go house-to-house and roam around?" and "What work do these types of women do?" were commonly expressed by religious leaders and other elders in the village."**

When determining where tasks are delivered, it is also important to assess what the target population regards as appropriate. For example, the extent to which home visits are socially acceptable will vary across settings and tasks.

Different tasks also imply different *workloads* and *catchment areas*. Some tasks need to be performed frequently or to large numbers of people, therefore, the size of the CHW's catchment area may need to be relatively small. Some tasks occur infrequently, such as annual immunization campaigns, or they target health conditions that are relatively rare. In these situations, it may seem reasonable to give CHWs a larger catchment area. However, large

catchment areas imply that the CHW will need to cover longer distances, which has implications for transportation needs. In addition, when catchment areas are too large, CHWs may spend too much time getting to the client or spending time on travel only to find that the client is absent[20]. Another challenge for tasks targeting health conditions that are relatively rare is the issue of quality of care. Although it may seem sensible to train CHWs to deliver antibiotics to treat neonatal sepsis, because he or she may see relatively few cases each year, the CHW has little opportunity to keep his or her skills up-to-date and, therefore, may threaten the quality of care.

CHWs with large workloads are likely to need more incentives than CHWs with lighter workloads. Demands for incentives may also be influenced by the amount of influence the CHW has over his or her working day (see Box 5). Tasks that can be performed within ordinary working hours may require fewer incentives than tasks that need to be performed in response to immediate needs, such as childbirth-related tasks. Tasks that can be done at a time of the CHW's choosing may be particularly appropriate for volunteer CHWs, as this flexibility makes it easier to combine with family and other responsibilities. (See Chapter 11 on incentives.) From a program planner's point of view, however, it is reasonable to expect less from volunteers that work within the constraints of their own daily lives than from salaried CHWs.

Box 5. CHW opinions about the connection between incentives and the tasks delivered in a Nepalese program

In one qualitative study of FCHVs in Nepal,[21] one FCHV stated the following:

> I provide services to the community in my free time, and that's ok. But besides that there are specific days [like when] I need to collect all mothers or kids in my catchment area and [take them] to the health facility. And there are FCHV meetings on specific days at the health facility. So it's not in my free time. I am [tied] to working that day. So for these days, if an allowance is there, that would be good. Jobs like counseling mothers, informing them that tomorrow is immunization day, household visits to pregnant women and the recently delivered, counseling them about nutrition, iron intake, tetanus toxoid vaccinations, and deworming: for these activities remuneration is not needed because we are doing them in our spare time. For Vitamin A distribution, for misoprostol distribution, for all these activities, remuneration is not necessary. I am only saying that for FCHV meetings, for specified days, [and for] support to the outreach clinics, they need to provide (remuneration).

WHAT KINDS OF SKILLS AND TRAINING WILL THE CHW NEED TO PERFORM SPECIFIC TASKS?

Program planners also need to think about the type of skills and training that CHWs will need to perform these tasks. When assessing these issues, program planners may want to think about the following aspects:

- Is the task complex to perform?
- Does the CHW need to tailor the task to the needs and circumstances of the individual recipient and the local context?

- Does the CHW need to make a complex diagnosis before performing the task?
- Does the CHW need to know how to deal with adverse effects or complications?

If the answer is "yes" to any of these questions, the task is likely to require more skills and training. Some tasks, such as the routine distribution of iron folate supplements to pregnant women, are simple to perform, require little or no tailoring or diagnosis, and little knowledge about associated complications. Training may therefore be relatively short. Other tasks, such as training caregivers in the use of kangaroo mother care, are also relatively simple procedures to teach with few components. But, because in this case, CHWs also need to have the skills to detect which infants need additional care and referral, training may be longer. Having well-developed algorithms can, to a certain extent, ease the requirements made of the CHW by providing the CHW with an additional form of support during decision-making. (See Chapter 9 on training).

Promotional tasks are often regarded as simpler to perform than curative tasks. However, in a number of studies, CHWs have particularly emphasized the importance of training in promotional and counseling skills and have viewed health care communication as a complex task for which they often feel unprepared.[14] For example, when promoting family planning methods or HIV testing, CHWs may need to respond to a number of complex questions and concerns and may also experience socially challenging situations (See Box 6). The role of community organizer can also be a challenging one as it is likely to involve complex tasks that need high degrees of tailoring, including the ability to organize and mobilize groups of people and lead them in problem-solving activities. (See also Chapter 9 on training and Chapter 13 on community participation.)

Box 6. CHW opinions regarding training needs in a Pakistani program

A qualitative study of CHWs in Pakistan[22] had the following finding:

> **The respondents suggested refresher training sessions that include role plays on common difficult scenarios as a way to improve communication skills of the workers. They proposed that appropriate information and skills to deal with people who were fixed on strong negative feelings, such as 'we are poor, we can't do anything' or 'a woman's only role is to serve the husband, kids and the family' or 'the life or death of the mother or newborn is the will of God, in which the mortals cannot intervene' would be really helpful. The workers also suggested that information, education, and communication (IEC) materials should be provided to them that could be carried to the households and used for talking about specific health issues.**

WHAT TYPE OF HEALTH SYSTEM SUPPORT WILL THE CHW REQUIRE WHEN PERFORMING THE TASK?

Another practical implication that needs to be determined involves the level of health care system support required for each task. Some tasks can be performed by the CHW alone and with very little support from the rest of the health care system. For other tasks, however, successful delivery depends on a well-functioning and responsive health system.

Health system support may primarily involve supervision, typically from facility-based health workers. For example, Nepalese CHWs who identified infants with symptoms of severe bacterial infections were trained to administer gentamicin, but only if they were receiving regular supervision and observation from facility-based staff.[16] For this to work, CHWs need efficient ways of communicating with other health workers, such as through access to transport or mobile phones (see Box 7). (See also Chapter 10 on supervision.)

Box 7. Use of mobile phone systems in Rwanda

In Rwanda, a text messaging system through mobile phones (Rapid SMS-MCH) was implemented to allow CHWs to communicate with the mother-infant pairs they followed in their communities.[23] Rapid SMS-MCH is a free, open-source software that can be customized to allow CHWs to connect to a national centralized database, the health facility, and an ambulance driver for emergencies. This system allows CHWs to keep better track of pregnancies and MCH outcomes in limited resource settings. It also allows for faster response in case of emergencies and improved involvement of CHWs during the critical moments of their patients' pregnancies.

CHWs can also receive supervision through peer support, such as by working together in teams or in pairs. CHWs in some studies have called for the opportunity to meet regularly with other lay health workers to share experiences and give each other support[14] (see Box 8). (See also Chapter 10 on supervision).

Box 8: CHWs working in primary health care teams in Brazil

In Brazil, primary health care is offered through teams of health workers. The *Equipo de Saúde Familiar* health worker teams provide services to 600-1000 families and have four to six CHWs on each team.[24] In addition to CHWs, doctors, and nurses, teams also sometimes include dentists, dental assistants, technicians, and social workers. The CHWs focus on promotional activities and particularly on family behaviors essential for child health through the community component of integrated management for childhood illness (IMCI). Although most CHWs feel that they have good communication and respect within their teams, some feel undermined by team physicians. Furthermore, CHWs have little opportunities for career advancement. The mutual support that CHWs are able to provide to each other as a result of their close interactions on a daily basis is important to them.[24]

Health system support may be required to ensure a well-functioning referral chain. A number of tasks, particularly related to pregnancy and childbirth care, are given to CHWs on the condition that they are trained to recognize symptoms or danger signs and refer patients to the appropriate health facilities. Referral tasks require that the nearest health facility to be sufficiently staffed and equipped, that CHWs have practical ways of contacting facility staff (e.g., by mobile phone, a runner), that a trustful and collaborative relationship exists between the CHWs and the facility staff, and that the beneficiaries themselves are willing to travel to these facilities for health care and have the funds and the means of transport to do so. However, these factors are not always in place.[14] Both CHWs and recipients may have poor relationships with facility staff or may lack the funds or practical means to contact them (see Box 9). In addition, facilities are often under-resourced and under-staffed, and facility staff may feel that CHW programs will increase their workload as a result of supervision requirements or an increase in referrals, or facility staff may fear a loss of authority.[14] Health professionals may be more likely to accept CHW tasks if boundaries are clear and if they feel that the CHWs make sense in their setting (e.g., by easing some of their own busy workload). For these reasons, health professionals and their organizations need to be involved when deciding on the roles and tasks of the CHW.

Box 9. Problems facing CHW referral in a Zimbabwean program

The excerpt below is from a qualitative study of CHWs in Zimbabwe[25] that identified the following set of issues that highlights issues in the referral of sick patients:

> Apart from the women's perceptions of arrogant and rude clinic staff, mistrust, and fear of cesarean delivery, women themselves were said to use strategies, for example, coming or calling for the TBA when labor was too advanced to be referred, especially also given the prevailing logistical constraints in the villages. The TBAs do not have any means of transport for such emergency cases nor access to a telephone to call for an ambulance. One TBA explained,
>
> > **There are some women who come to you or call you to their homes when they are already in labor. So what do you do? I do not have an ambulance to take them to the clinic. The woman is in advanced labor. How do I walk with her to the clinic? You cannot run away from a woman and leave her groaning; you just have to assist.**

Health system support may also involve access to supplies. Unreliable access to necessary supplies can threaten the implementation of relatively simple interventions and lead to loss of respect in the community for the CHW and the health system (see Box 10).[20] Important considerations include the extent to which certain supplies, such as condoms, can be stored over long periods of time and whether supplies, such as vaccines, require specific storage conditions.

Box 10. Problems facing CHWs in Bangladesh and Pakistan due to a lack of supplies

A study of CHWs in Bangladesh[25] and another study from Pakistan [26] identified problems in obtaining needed medicines. The Bangladesh study reported the following: "While the worker is capable of identifying a most basic medical need – iron for anemia – she must rely on hospital referral, not because she is incompetent, but because there is currently no provision for field distribution of iron tablets or any other medical supplies in the government program." In Pakistan, lady health workers were expected to provide drugs and contraceptives. However, due to poor supply, they faced a lot of embarrassments and accusations by the community of selling drugs and contraceptives in the market.[26]

Finally, health system support may be of a regulatory nature. Regulations may need to be changed to reflect CHWs' scope of practice to allow CHWs to perform certain tasks and to receive legal protection should interventions cause harm. A recent study on task shifting among nurses and midwives in 13 African countries suggested that many of the countries had not revised their national regulations to incorporate additional professional roles and responsibilities that negatively impacted the long-term sustainability of their roles.[27] Similarly, a lack of regulatory support may impede institutionalization of changes, which may also be an issue for CHW programs.

HOW MUCH WILL IT COST TO USE CHWS TO PERFORM THE TASK?

Finally, program planners need to consider how much it will cost for CHWs to perform specific tasks. There may be an assumption that the use of CHWs is cheaper than the use of other health worker cadres, but this is not necessarily true. For instance, some interventions require well-functioning supply chains, referral systems, and supervision. If these supportive elements do not exist, they will have to be developed (which requires start-up costs) so the CHW will be able to perform the task on an ongoing basis. (See also Chapter 12 on relationship with the

health system.) Program planners need to consider a number of potential costs, including the costs of:

- **Training**: These costs include both initial and refresher training and can include the costs of trainer salaries, training materials, and travel and refreshments for both trainers and participants.
- **Supervision**: These costs can include salaries for supervisors and the cost of transport and refreshments for supervisors making field visits. If health workers are being moved from other tasks to provide supervision, then program planners will also need to calculate any costs associated with replacing these health workers.
- **Transport**: These costs can include the cost of travel and refreshments for CHWs visiting clients, accompanying clients to health facilities, and traveling to health facilities to receive supervision and deliver reports.
- **Wages and other incentives**: The type of incentives that CHWs receive varies across programs, but should reflect the type of tasks that CHWs are asked to deliver and the amount of time they spend performing their duties (see also Chapter 11 on incentives). Costs can include salaries and other monetary incentives, such as lunch money, health insurance, and educational stipends. Many programs also make use of non-monetary incentives, such as bicycles and T-shirts. Formal recognition from the community and the health system may also be an important incentive to the CHW and may incur costs. For example, the Nepal government has attempted to incentivize volunteer CHWs through the production of CHW stamps and postcards, an annual CHW celebration, and the production of a TV drama about the valuable contributions of CHWs.
- **Equipment and supplies**: These costs can include medical supplies and promotional materials, and also bicycles, uniforms, telephones, bags, and signboards. These may not all be necessary items for the provision of specific tasks, but may serve as important motivating incentives to the CHW and may increase their social status and visibility in the community.
- **Referral systems**: These costs include any additional costs to the health system to enable CHW referral, including transportation systems, communication systems, and staffing of facilities. Deployment of CHWs may increase the number of referrals arising from communities, which also will have cost implications. (See Chapter 12 on relationship with health systems.)

CONCLUSIONS

Decisions regarding CHW roles and tasks are complex, and each decision has implications for the effectiveness, acceptability, feasibility, and costs of a CHW program. Decision makers should draw from global guidance and research evidence, but they also need to engage with and understand the experiences, needs, and concerns of local communities and health workers.

Key Resources

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Chapter 8

Recruitment of Community Health Workers

Wanda Jaskiewicz and Rachel Deussom

Key Points

- Developing appropriate recruitment policies and processes is a critical feature of an effective large-scale community health worker (CHW) program.
- Community engagement in recruitment is highly desirable, but managing this in a way that is productive requires careful planning and adaptation.
- An effective recruitment program can help reduce attrition, which is a major challenge for many large-scale CHW programs.

INTRODUCTION

Recruiting and selecting the most appropriate individual to fill the role of a CHW is among the most essential elements that contribute to a well-functioning community health strategy. Recruitment is defined as "how and from where a CHW is identified, selected and assigned to a community, including selection criteria and processes."[1] As suggested in the CHW Assessment and Improvement (AIM) Toolkit's CHW Program Functionality Matrix, a best practice for recruitment is to recruit a CHW from within the community through community participation, meeting all selection criteria when possible. In special cases where a CHW may need to be recruited from outside the community, a second best practice is to ensure not only that the community participates in and agrees with the recruitment process, but is also consulted on the final selection of the CHWs.

Ensuring a "citizen voice" through the meaningful participation of civil society groups and communities has contributed to greater accountability for service delivery and improved program quality, as the program can be better tailored to local needs with community input.[2, 3] In addition, community participation in CHW recruitment and selection is more likely to use existing social structures and result in selection of CHWs that understand local issues and can deliver community health messages in a linguistically and culturally appropriate manner.[4, 5] Effective CHW recruitment and selection are key to increasing CHW retention.[6] Although there are many factors that contribute to CHW attrition, careful attention to CHW recruitment and ensuring the "right" person is selected for the job will go a long way to reducing turnover, protecting investments, and obtaining results in CHW programs.

This chapter will help readers to consider key questions, recommendations, and challenges for CHW recruitment planning and implementation, including selection, resource availability, and addressing CHW retention.

KEY QUESTIONS PROGRAM PLANNERS NEED TO CONSIDER WHEN RECRUITING CHWS

Following a systematic approach for CHW recruitment through development and implementation of a recruitment strategy with clear recruitment guidelines will help structure the process and ensure that program planners, managers, community members, and health worker teams are familiar with their respective roles in the recruitment process. To develop an effective and actionable recruitment strategy, stakeholders should consider the following questions and issues:

- What are the specific recruitment needs for the CHW program?
- What are the CHW selection criteria?
- What is the CHW recruitment process?
- How do available resources influence CHW recruitment?
- How can CHW retention be improved?

WHAT ARE THE SPECIFIC RECRUITMENT NEEDS FOR THE CHW PROGRAM?

The scope and intention of the health program as well as the needs of the community should always drive the recruitment process.[7] Before initiating the recruitment phase of any program, it is essential to understand the specific needs and context of the CHW program in which the CHWs will work. In particular, this process relates to having a clear description of the roles,

responsibilities, and tasks the CHW will undertake, the catchment area population in terms of the number of households to be served, as well as the geographic distance they will need to cover. (See Chapter 7 on roles and tasks for more details). This information will enable program designers to define the selection criteria, qualifications, and requirements that specifically correspond to the job that the CHWs will undertake. It also provides a clear scope of work for the CHW so that CHW candidates can determine if they are the right fit for the job.

CHWs that are from the communities that they serve are more likely to be invested in their catchment population's health outcomes and generally more likely to stay. Many CHWs also thrive in positions where there is opportunity for employment promotion. For example, a CHW may initially be recruited and trained, and after some good performance feedback, decide to train as an auxiliary nurse and be promoted. However, it is also important to recruit and select CHW candidates that understand what the job will entail, including the expected performance, conditions, management support, and remuneration (if any). The clear communication and agreement about CHW recruitment, including a defined scope of work, remuneration, and selection based on a transparent process, should drive CHW recruitment strategy and will help improve CHW retention in the long term.

Box 1. The Community's Role in Transparency

Ideally, CHWs are chosen by the community. Yet, the persons selected have an influence on the acceptability and sustainability of the CHW program within the local context. In some cases, CHWs are chosen by chiefs or appointed by government officials who award CHW positions to friends and relatives, or use the appointments as favors, for which they can go back and ask for something in return. The inappropriate selection of CHWs within communities was identified as a disincentive for CHWs. An evaluation survey of CHWs performed by UNICEF in 1989 reported that 45% of the CHWs surveyed were related by blood to their village chief or the sub-chief.[8] In Swaziland, an evaluation found that local chiefs preferred to select CHWs based on their own interests rather than the candidates' qualifications.[8]

Extensive experience and long-standing relationships with communities has helped many nongovernmental organizations (NGOs) and other international organizations to find ways to ensure that the selection process for CHWs is based on each candidate's interest and qualifications.

A more complete list of the factors that must be carefully considered before undertaking CHW recruitment is provided below. Many of these CHW program needs are covered in detail in other chapters of this manual.

- How many CHWs in total need to be recruited? Is recruiting managed at the national, regional, provincial, district or other lower level? Which level or organization will provide the resources for recruitment? What is the timeline for recruitment? (See Chapters 4, on governance, and 5, on financing.)
- What primary care services are included in the CHW strategy? What specific tasks are CHWs expected to carry out? What will be their workload? Are CHWs clear on their role, their responsibilities, and other job expectations? This may include meeting coverage or service delivery targets and reporting on the achievement of program objectives, tasks or activity outputs. (See Chapter 7 on roles and tasks.)
- How many days per month or hours per week are CHWs expected to dedicate to completing the tasks? Is their commitment full-time or part-time?

- What is the catchment population and geographic area for which CHWs are responsible? Will they receive transport support to reach their assigned catchment populations (e.g., bicycles, motorcycles, bus vouchers)?
- Are the CHWs compensated or are they working on a volunteer basis? Is compensation a salary, an hourly wage, or a stipend? What types of incentives, whether financial or non-financial, will be provided? If the CHW has been performing similar types of tasks previously, how were they remunerated, if at all? (See Chapter 11 on incentives.)
- What training will the CHWs receive to ensure their ability to complete assigned tasks (e.g., pre-service training or in-service training)? Are there criteria for certification or other qualification criteria related to CHW training that must be met for CHWs to work? (See Chapter 9 on training.)
- What supervisory and other management support, including resources (e.g., medicines, supplies, job aids, communication stipends) will they receive to enable them to perform well? (See Chapter 10 on supervision.)

WHAT ARE THE CRITERIA OF SELECTION OF CHWS?

Before recruiting CHWs for a community-based program, the criteria or qualifications that each individual CHW should meet to be considered for the program should be pre-defined. The selection criteria may include demographic elements, such as gender, age, marital status, and usual place of residence, as well as education level and ability to successfully complete training on standard competencies, which will be heavily dependent on the specific community-based health strategy that the CHWs will support, as well as the roles and responsibilities they will undertake. Residency is more often an important criterion in the selection of CHWs; recruiting CHWs from within the communities that they serve is considered a best practice[9] although this can cause challenges for large-scale programs that need to systematize the recruitment process. Nonetheless, even for large-scale programs, communities are often involved in the selection process and are consulted on the final selection of the CHW, as she or he needs to be welcomed to serve in their community.

Several persons with knowledge about and experience with large-scale CHW programs interviewed informally for this paper emphasized the importance of community trust and acceptance over other criteria, such as literacy and gender. More than the level of education, it is far more important that the person selected is engaged with his or her work, responsive, accountable, respected, and trusted by the community. These attributes are often associated with age and children. CHWs do not necessarily need high qualifications, but they must be able to and open to learn.

Table 1 presents the main criteria for CHWs in several countries with well-established community-based programs. Each program develops criteria taking into account the service content, cultural attitudes towards married or single women, and the requirements of basic literacy. For example, females should be required for family planning counseling, and, in countries, such as Afghanistan, where women cannot travel alone, females and males are selected to form pairs. Successful examples of programs using illiterate or low-literacy CHWs do exist, such as the Female Community Health Volunteers in Nepal, but in these cases, supervision, training, and appropriate forms using pictorial diagrams are adapted to the situation.

Table 1. Selection Criteria for CHWs in Selected Countries[10-15]

INDIA: ACCREDITED SOCIAL HEALTH ACTIVISTS (ASHAS)	BRAZIL: COMMUNITY HEALTH AGENTS (CHAS)	PAKISTAN: LADY HEALTH WORKERS (LHWS)	ETHIOPIA: HEALTH EXTENSION WORKERS (HEWS)
▪ Female ▪ ≥ 8th grade education ▪ 25-45 years of age ▪ Married (or widowed or divorced)	▪ Adult ▪ Work in community where they are from/ permanently reside there ▪ Be literate	▪ Female ▪ ≥ 8th grade education ▪ 18-50 years of age ▪ Reside in community/be recommended by their community ▪ Married with children ▪ Experience in community development preferred	▪ Female ▪ ≥ 10th grade education ▪ ≥ 18 years of age ▪ Reside in community

Another important criterion for CHW selection is language skills.[16] Although it can be assumed that originating or residing in the community in which a CHW serves would ensure that s/he thus speaks the local language, the linguistic diversity of the catchment population could be such that multiple languages are spoken. Language differences may distinguish socioeconomic or ethnic groups, and efforts should be made whenever possible to recruit CHWs that can communicate with as many subgroups of the catchment population. Alternatively, recruiting several CHWs with complementary language skills to serve the same catchment population is a recommended option.

Selection criteria for CHWs may also be influenced by cultural, gender-based, and social norms that could determine CHWs' effectiveness. For example, if a community health program objective is to increase male involvement in reproductive health and maternal heath, then it may be important that the CHWs be recruited as married couples or at least that some of the CHWs in a specific catchment area be male. However, in India, Pakistan, and Ethiopia, where the community health programs focus on family planning, maternal and child health services and requires the CHW to enter the home or compound of a mother, it was determined that the CHW would be required to be female because it would not be culturally acceptable for a mother to allow an unknown man into the home.

If there were only male CHWs in these contexts, then the programs would be rendered much less effective. Likewise, if it is known that Pakistani LHWs are married with children, then the community members that they reach with family planning messages will be more trusting and receptive to their messages because the LHWs are exemplifying the family values that the communities also support. When a more advanced level of preventive and curative care is required, the selection criteria may include higher-level qualifications or a stricter age range. In India, for example, auxiliary nurse midwives (ANMs) must have finished 12 years of schooling and be between 17 and 35 years of age to be granted admission to the 18-month ANM training programs in nursing schools.[17]

Determining which stakeholders are the decision-makers for setting the criteria for CHW recruitment and selection is another important aspect to consider. In some community-based programs, ministries of health establish the criteria, whether from the central, provincial, or district level. In some countries' CHW programs, the selection criteria are standardized, and all CHWs are recruited against the same list of requirements, regardless of where they will serve. For example, in Mozambique, the *agente polivalente elementar*, or CHW, has been nationally recognized as a health worker cadre, for which training, qualifications, and selection criteria have been standardized nationally as well.[18] Further, it is recommended that any selection criteria concerning CHW competencies should be standardized if there is a common training.[19]

In other contexts, selection criteria may be localized to account for regional or other context-specific variations. Communities may independently determine the type and qualifications of the CHWs that they recruit through community health committees or other local entities. In Mali's decentralized health system, *associations de santé communautaire* determine the criteria, including remuneration, for CHWs that are to serve their catchment populations and subsequently fund and supervise their CHWs, often with municipal support.[20] In India, different states have defined their own criteria for the selection, training, and incentives, according to context. The way that community health needs and cultural context are reflected in a health program in Rajasthan state differ from West Bengal state, for example.[21]

Once CHW selection criteria are defined, the extent to which they are fully met is also variable. For example, in very rural communities where the general level of education is low, it may be difficult to meet defined education criteria. The functionality and governance mechanisms of decision-making entities that ensure that CHW selection criteria are met are also variable, as was noted in India and Ethiopia by Gopinathan et al.[22]

WHAT IS THE CHW RECRUITMENT PROCESS?

The ideal CHW recruitment process entails: establishing criteria, communicating CHW opportunities to identify candidates, interviewing and selecting CHWs from candidates, and hiring selected CHWs.[16] Although in the real world of program implementation many of these steps are full of challenges, we define these ideal steps so that countries can modify them where and when they require.

Developing CHW Recruitment Criteria

Policymakers and program planners at the central level often make decisions regarding the basic criteria for CHW selection. These decisions draw from an analysis in which many factors are considered, including the maturity of the program and its needs, the health and social needs of communities and clients, the size and health service scope of the program, and the organizational and financial capability of regional, district, and local management systems. Where it is feasible, various actors are involved in implementing the process: district health managers, the health facility team to which the CHW may report, other local authorities (including municipalities or traditional chiefs), and communities within the catchment population (whether through village health committees or other civil society representation). The pros and cons of various levels of stakeholder involvement and of the importance of community participation are further discussed later in this chapter.

Communicate CHW Position Opportunities and Selection Criteria

Once the selection criteria have been defined and a job description has been developed, the process of communicating the CHW job position(s) to communities and possible candidates can occur in a variety of ways depending on context and resources. Some methods that have been tried in the United States include:

- Announcing positions at community meetings, churches, and other social group gatherings;
- Conducting face-to-face or internal recruitment;
- Obtaining ideas from well-established and well-connected community-based organizations to help identify applicants;
- Receiving referrals from current CHWs;
- Posting fliers at shared community spaces, local recreational centers, municipalities, and health facilities;

- Placing newspaper advertisements; and
- Announcing positions on the radio.[7, 16]

During the CHW recruitment process, if there is not a clear understanding and acceptance of the proposed tasks for the CHW and how the work will be compensated, then community health workers may fail to perform. For example, in Dhaka, Bangladesh, CHW performance decreased because the expectations regarding workload and remuneration were not fully met.[23] In addition, the stakeholders involved in recruitment should encourage transparency when possible. For example, if the village health committee selects the chief's son due to social pressure from the chief, this could discourage other, more qualified candidates from applying. Even for the chief's son, his recruitment should be discussed openly in the community so that his credibility is not undermined. Transparency is not always readily achieved, but programs should be aware that not communicating clearly might present problems in the long run. Often, local leaders or mother groups are the most qualified to negotiate these types of issues.

Identify, Review, and Select CHWs Based On Agreed-Upon Criteria and Decision-Making Responsibility

How the recruitment process will continue toward selection of CHWs will in part depend on who is driving the recruitment: the community, the health facility, the village health committee, or some combination. In some countries in which the CHW program has reached a mature state, the selection process may include observations of the CHW in a simulated home visit or dealing with a common issue that would be encountered in the field. Also, in rare instances, CHWs may be selected on a trial basis to give the CHW, the community, and the program managers or supervising health facility staff the opportunity to determine if the CHW is right for the job. CHAs in Brazil are hired by their municipalities based on their "aptitude, posture, and attitudes, during simulated community problems" during the selection process.[24, 25]

As stated earlier, it is most ideal when the community can participate in the process of CHW selection and/or approval. Although this process may cause challenges in large-scale programs, it is nonetheless important to engage the community in the process to help ensure that their needs are taken into account. In Eastern and Southern Africa, community participation in health program planning improved program outcomes because facility-centered decision-making did not always favor underserved populations due to the differences in socioeconomic status between more elite, educated mid- and high-level health workers and the rural communities that they served.[26]

In a health center-driven recruitment process, CHWs may be selected with little or no input by community members. In Partners for Health CHW programs in Africa and Haiti, the clinical team interviews CHW candidates to determine if they meet the established selection criteria.[27] Clinical team members include doctors, nurses, social workers, or program managers to ensure that the CHW candidate has the capacity to acquire the clinical competencies expected for the CHW role. Depending on the complexity of tasks that the CHW is expected to perform, community members may not have the knowledge and skills to make this assessment.

Given the skill level for most CHWs in community health programs, recruitment should remain as local as possible. However, in many cases where CHWs require higher-level skills or skills that cannot be found within the community, then external recruitment may need to take place for this underserved area. In India, ANMs, who are very highly trained CHWs, are posted to sub-centers and primary health centers with no input from the communities in which they work.[28] In many cases, the ANM is not from the community. However, once in place, ANMs are expected to serve on the local village health committee so that they can better integrate with the community and participate in community decision-making.[29] Trained CHWs should have

already had exposure to the health issues faced by the community to which they are assigned or by similar communities.[30]

Another important consideration of CHW qualifications during recruitment are the expressed interest and motivation of the candidates. Are they "natural helpers"? Do they have a genuine investment in the health of their community? Do they treat all people with care and respect? Do they demonstrate problem-solving and leadership skills? Directly asking candidates why they are interested in working as a CHW is recommended.[16] A study among rural health workers in Papua New Guinea indicated that social factors and the community play an important role in health worker motivation.[31] Motivational factors will be further discussed in the section on CHW turnover.

Box 2. Examples of various processes for selecting CHWs

ASHAs in India are selected by and accountable to the local village level government through a participatory process that involves the whole village.[32] In Ethiopia, active health committees are involved in the selection of HEWs from the local community. The voluntary CHWs (Health Development Army) who work with the HEWs are nominated and elected by the community or the HEWs, but the community must approve.[33] In Nepal, women's groups and local village development committees (VDCs) are involved in the selection and oversight of female community health volunteers (FCHVs). In Mali, village health committees not only provide oversight for the recruitment process, but additionally compensate and supervise the volunteers working in the villages of that catchment area.

In Pakistan, a community member serves on each of the LHW selection committees, as well as on each of the lady health supervisor selection committees.[25] LHWs are recruited and selected using a clearly delineated process. LHW posts are advertised and applicants are then interviewed and selected based on specific criteria by a selection committee. The committee is comprised of a medical officer-in-charge, who is the chairman, a female medical officer, a lady health visitor/female medical technician, a male health technician/dispenser, and a community member. Selected LHW candidates are verified through documentation, and then formally appointed by the appropriate local health official (Office of the Executive District Officer of Health or the district health officer).[34] They also must be recommended by the councilor, who is a local elected official.[35]

In Table 2, the CHW Program Functionality Matrix from the CHW AIM Toolkit[36] can aid in determining how to assess and strengthen a recruitment process. The CHW AIM proposes 15 programmatic components that have been found to contribute to an effective CHW program; recruitment is considered to be a key component of the tool.

Table 2. Grading of Functionality of Recruitment Processes for CHWs[36]

0 = NON-FUNCTIONAL	1 = PARTIALLY FUNCTIONAL	2 = FUNCTIONAL	3 = HIGHLY FUNCTIONAL (BEST PRACTICE)
CHW not from community, and the community plays no role in recruitment. No or only a few selection criteria exist and are not well known or commonly applied.	CHW is not recruited from the community, and the community is not involved in the recruitment process but approves of final selection. Some selection criteria exist and are well known and applied, but are general and/or do not address specific issues such as gender and marital status.	CHW is recruited from the community, and the community is consulted on the final selection. If, because of special circumstances, the CHW must be recruited from outside the community, the community is consulted on the final selection. Some selection criteria exist and are specific about literacy levels, but do not address gender, marital status, or whether the CHW should come from the local community or not.	CHW is recruited from the community with community participation. If, because of special circumstances, the CHW is recruited from outside the community, the community participates in and agrees with the recruitment process and is consulted on the final selection. All selection criteria – literacy, gender, marital status, local residence – are met when possible.

Hiring Preferred CHW Candidates

Once stakeholders agree on their preferred candidates, CHWs should be hired and integrated into the community health program. If a standard training is a requirement for deployment, the hired CHW should be enrolled in the appropriate orientation or training program (see Chapter 9 on CHW training).

The next section will discuss the availability of resources and how it can influence the CHW recruitment process and further the general availability of resources for retaining CHWs over time.

HOW DO AVAILABLE RESOURCES INFLUENCE CHW RECRUITMENT?

Resource availability for CHW recruitment can have an important effect on how the process is handled. Since the Alma Ata Declaration, many decision-makers not familiar with programming realities on the ground have historically and incorrectly considered community-based health programs to be a low-cost approach to primary health care delivery. As such, the sustainability of adequate financing for CHW programs is too often imperiled by competing priorities in health or other sectors.[37, 38] According to several key stakeholders interviewed for this manual, the number one cause of failure of CHW programs is that decision-makers do not factor in the high cost associated with the support functions required for CHW programs to function effectively. There is a mistaken idea that once CHWs are trained, it is a free program.

The resources allocated for the management and support of this cadre, whether volunteer or compensated, may be further limited or sporadic. Recruitment costs, although often considered only as an initial cost in setting up a program, can become considerable, especially when programs have high turnover of CHWs. This section will discuss resource-related considerations for CHW recruitment: who controls and who contributes toward resources and how additional or existing resources could be used.

It should be noted that how community-based health programs are financed will affect how recruitment takes place and who participates in the process. For example, *mutuelle* health committees, community- and employment-based groupings for resource mobilization, throughout West and Central Africa (Benin, Côte d'Ivoire, Ghana, Mali, Nigeria and Senegal) are tasked with mobilizing local funds for human resources within the health sector.[39] However, in Zimbabwe, the limited local control over available financial resources made it challenging for local health center committees to influence the way that community health programs were run.[3]

What are the resource requirements for successful CHW recruitment? They may include, but are not limited to:

- Time and effort to convene stakeholders to develop and standardize criteria (e.g., developing the recruitment process; CHW selection criteria, tasks, and responsibilities; and other aspects of the community health program as relates to human resources management);
- Costs related to communicating the availability of CHW positions (e.g., printing fliers, paying for newspaper or radio advertisements, and investigating CHW candidates within communities); and,
- Costs related to reviewing and selecting CHW candidates (e.g., obtaining a venue for conducting interviews, reimbursing of any transport or other expenses incurred by the CHW candidate, and announcement of selected CHWs via traditional communication channels).

Consideration of resources should be discussed by the stakeholders involved in CHW recruitment. For a given community health program and any CHW cohorts that are recruited during its implementation, resource investments should be generally standardized. One exception to this may be in a preliminary or pilot phase of program implementation, when modifications may be made prior to scale-up. Ideally, all stakeholders involved in CHW recruitment should make some resource contribution to the process, whether monetary or in-kind. For example, a village health committee could contribute the use of their meeting space. A district health office could provide in-kind transport to CHW candidates using their own vehicle. (See Chapters 4, on governance, and 5, on finance.)

Ensuring effective recruitment and retention of CHWs through the adequate mobilization of resources should be guided by the World Health Organization's (WHO) global policy recommendations for increasing access to rural health workers. These recommendations call for rural health workers (including CHWs) to be provided with an adequate combination of financial and/or non-financial incentives to remain motivated to stay there.[30] The quality of logistical support and supervision provided to CHWs, including promotion of their safety and well-being, will ensure greater CHW motivation and performance.[40]

The following section will further discuss key investments to ensure recruitment of high-quality CHW candidates and their retention.

HOW CAN CHW RETENTION BE FOSTERED?

After attention and care is spent to recruit and select CHWs that meet the job criteria, it is hoped that they will continue to serve their communities for as long as they are able. However, high CHW turnover is not only a common challenge for community health programs but also a red flag pointing to problems of design or execution. Carefully planning and executing a realistic and appropriate CHW recruitment strategy can help to reduce high turnover.[16]

Because many CHWs are recruited from their villages, the challenge of retaining them is not so much one of retaining them geographically at a post, although in some cases, CHWs may move out of their community. In fact, particularly when young, unmarried women are chosen to

become CHWs, moving away is actually a common contributor to attrition. However, in most cases, the challenge is rather to ensure that CHWs continue to perform their tasks actively and effectively. Particularly when a community health program has limited resources to supervise CHWs, and CHWs are working on a volunteer basis, strategies for motivating CHWs are essential. For this reason, issues of CHW turnover and retention should be considered as part of the CHW recruitment process within community health programs. This section will discuss issues and make suggestions for CHWs who move away or retire and those who become inactive due to decreased motivation.

There are important issues related to selection criteria and process that can influence attrition, and the consequences of the various choices should be considered. Usually, CHWs are recruited whenever there is a vacancy, and then trained when there is an opportunity. If there is already high CHW turnover, then a concern about the phased recruitment approach could be that CHW posts remain vacant for longer periods of time, until the next recruitment phase commences. If there is greater control over CHW recruitment at a decentralized level, then recruitment may be ongoing so as to be more directly responsive to community needs. Recruitment may also be contingent on available resources and the preferences of stakeholders. If decision-makers in CHW recruitment are not active or do not have the resources or motivation to recruit, select, and support a new CHW, then the role may not be filled.

Managers of community health programs should review past experiences with CHWs who are leaving their roles and should try to estimate future levels of turnover by answering the following questions:

- How many CHWs are needed?
- How many CHWs are leaving their roles within a given time period (i.e., what is the estimate annual rate of attrition)?
- Why are the CHWs leaving? Are they moving away from the geographic area? Are they aging out of the profession? Are they becoming inactive (i.e., are they losing interest)?
- What is the program's approach for evaluating the recruitment strategy?

If it is determined that there is high CHW turnover (e.g., more than 15% per year), then stakeholders should consider reviewing the community health program to address issues that may affect CHW performance and motivation. High turnover could be a concern because of the additional effort and resources that are required to recruit and train new CHWs and the potential for communities to be without a CHW during the repeated recruitment, selection, and training processes.

To address the retention of CHWs who may move out of their community, it would be important to understand why they are moving. Is it because they are seeking other opportunities for which there are greater incentives? Are they advancing their careers within the health care system or increasing their qualifications to become part of a higher-level health worker cadre? Are there any career path opportunities presented to CHWs to motivate them to advance within the system? If it seems that CHWs are leaving rural and remote areas and heading to more urban areas, it would be important to consider how a revised recruitment strategy might alleviate this problem. Again, the more experience the CHW has in a rural area, especially if they originate from that area, the more likely they will be to stay.[1, 30] A common pitfall is to set the bar fairly high on level of education and not to make married status a requirement. Thus the result is such that young, unmarried CHWs are recruited who are much more likely to move away – to get married, follow a spouse, or get a job in town.

It is recommended that community health program planners consider recruiting CHWs in an age range. Younger CHWs may have more energy to complete their tasks, but without further career and educational opportunities as a CHW, they may be more likely to leave their role to seek other opportunities. Older CHWs may be more likely to remain in their communities, but there is also the issue of older CHWs phasing out and retiring from their work. Also, older CHWs may not be able to cover their assigned geographical area as effectively as younger ones. In addition, they may require new training and skills acquisition. On the contrary, if the program values CHWs who are effective local opinion leaders, an older, more established person is likely to have more credibility than a 20-year old.

Depending on the governance mechanism for CHWs, then older CHWs could be assessed and phased out as needed. Although many of the FCHVs in Nepal are aging, they are not retiring. Older FCHVs in Nepal may be somewhat less "active" in the sense of going out and about and providing services. However, older FCHVs may be considerably more effective than younger ones in the sense that they are often well-respected and, therefore, can be very effective local champions for recommended health practices and service utilization. Women's groups are technically also able to remove FCHVs.[41]

Maintaining CHW effectiveness requires ensuring their motivation to remain active and, thus, productive at their tasks. Supportive supervision is recognized in the literature as a key approach for maintaining CHW motivation, although experience has taught that this is very difficult to achieve in large-scale public sector CHW programs. (See Chapter 10 on supervision.) Supportive supervision should include: regular monitoring of CHWs at their tasks, obtaining feedback from CHWs to consider potential program improvements, and ensuring the safety and wellbeing of CHWs at their work.[42-44] Unfortunately, it is common for few resources to be allocated for CHW supervision, even for paid, full-time CHWs. This shortfall may be because CHWs are widely dispersed from their respective referral primary health care facilities, thus transportation and communication challenges can be common. A top-down supervisory approach – where the CHW supervisor would be responsible for visiting each CHW and for initiating communication – may not be as feasible or effective as a participatory supervision model where CHWs and their communities are provided with the resources and autonomy to seek out the support that they need to perform well and stay motivated. In Thailand, participatory supervision (in which supervisors collaborated with facility-based health staff members and with communities) helped CHWs to be more effective, and the program was better tailored to meet the communities' needs.[45]

Reimbursing CHW transport, for example, to attend regular meetings among CHWs in a district or given geographic area at a referral health center can promote problem-solving and knowledge sharing, encourage peer-to-peer support, and increase CHW accountability and motivation.[40, 46] Or, paying for air time or mobile phone cards could encourage CHWs to communicate more frequently with referral health centers, which improves feedback mechanisms with other health professionals and can also improve the quality of care.[47] Still another example concerns promoting CHW occupational safety and health, a significant contributor to CHW motivation.[40] Indeed, "working conditions, part of the broader human resources management system, are important in terms of creating the conditions for effective and efficient work, boosting morale, and reducing turnover and attrition."[15, 48] Investments in CHW occupational safety and health have the potential to present "win-win" situations, where both the CHWs and their communities benefit.[40]

CONCLUSIONS

CHW recruitment is an important part of any community health program because the process of selecting and deploying appropriate and well-qualified CHWs will lay the foundation for the

program. Ensuring community participation in the planning and execution of the recruitment, selection, and supervision process is considered a best practice as it can improve program outcomes. Convening stakeholders, defining standards, and allocating sustainable resources for CHW recruitment has the potential to further improve the program. Once CHWs have been selected and are working, it is important to consider what kinds of incentives, whether financial or non-financial, will support CHWs to perform well and remain motivated on their jobs.

Key Resources

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Chapter 9

Training Community Health Workers for Large-Scale Community-Based Health Care Programs

Iain Aitken

Key Points

- CHW training needs to be carefully adapted to the needs of the trainees, the job, and the tasks they are expected to perform and the context in which they will be working.
- Current training approaches and techniques that are effective for training CHWs should be employed.
- Examples of training programs and their structures from a variety of CHW programs are provided.

INTRODUCTION

There is growing evidence that well-designed community-based programs using well-trained community health workers (CHWs) can be effective in the context of a wide variety of health programs. However, it needs to be acknowledged that CHWs currently face more competition for their services from other formal and informal providers than was the case when CHWs were first deployed in health programs in the 1970s and 1980s.[1] Communities in low-income settings throughout the world now have ready access not only to traditional healers, but also to a variety of 'village doctors', drug sellers, private doctors, and other health workers. There are also now many more voices in the community providing health information. In addition to these healers, there are other opinion leaders and a much greater reach and impact by the media such as radio, television, mobile phones, and Internet. To survive and improve community health in this evolving environment, a CHW has to be both competent in technical and communication skills and confident in using those skills. This expectation is the challenge for those who will design and implement training programs for CHWs.

In the implementation of a community-based health care (CBHC) program, some new health workers, such as CHWs and their supervisors, will need the full complement of skills, knowledge, and attitude training to enable them to fulfill the tasks and responsibilities defined in the program. The chapters on roles and tasks of CHWs (7) and supervision (10) address the roles and tasks that need to be carefully defined for these cadres. Some of the health professionals that are already employed in the health system, such as health facility-based staff, may need training for new skills to perform their expanded role in part-time support and supervision of the CHWs. Others, such as facility and district health managers, will not need new skills, but will need an orientation to the new CBHC program and need to know why it has been developed to effectively apply existing skills in the implementation and management of the new program. All of these people will also need be motivated to support the new program, part of which requires providing appropriate time allocations to fulfill their managerial and supervisory responsibilities for the CBHC program. Identifying the training or orientation needs of all such staff involved in the management of the community-based program is addressed in the chapters on planning (3) and scaling up (14).

Effective training will emphasize the development of specific competencies and skills required for high-quality job performance. Effective learning and performance of these competencies will require the trainee to acquire a critical body of knowledge and develop appropriate attitudes. This chapter discusses how these competencies can best be achieved and the ways training can be organized.

Key Questions for Planners and Trainers

The key questions to be addressed in this chapter are:

- What sort of CHW and training program is being planned?
- How should the training program be organized?
- Who should be responsible for the governance and management of the training program?
- How can optimal performance be achieved through training?

WHAT SORT OF CHW TRAINING PROGRAM IS BEING PLANNED?

As explained in the introductory chapter, there are two levels of CHWs that are being considered, and within each level, there are two types of CHWs. In Level 1, there are community health volunteers-ongoing and community health volunteers-intermittent (although their names actually vary from country to country and program to program). In Level 2, there

are auxiliary health workers and health extension workers (again, their names may vary). As their roles and responsibilities differ, their training needs also differ. The general differences between these two levels of workers are summarized in Table 1.

Table 1. Typical Training Programs for Different Levels of CHWs

Level 1 CHWs (Intermittent and Ongoing Community Health Volunteers)	Level 2 CHWs (Auxiliary Health Workers and Health Extension Workers)
• Job description usually not extensive • A large total number to be trained • Small numbers trained at one time • Non-residential training • Training sessions only a few days at a time, but may be several sessions • Training close to the community • Literacy may not be necessary • Needs little or no special equipment • Uses community setting for practice and a local health facility for clinical practice • No certification usually provided • Trained by those who are less highly skilled	• Job description more extensive • Variable numbers to be trained • Variable numbers in one course • Residential training • Training lasts 6-18 months • Training may be far from community • Usually requires a minimum of 6 years of school • Needs special equipment, practice labs with models, and a clinical training facility • Certification required for employment • Trained by those who are more highly skilled

CHWs in Level 2 generally have a job description with a broad scope, but many CHWs work for a specific disease control program or in the area of either child health or reproductive health programs. Typically, these individuals are required to have some secondary education and are prepared for their careers with a longer, full-time, residential training program. This type of training program is akin to a conventional professional training as it contains a lot more knowledge content than a Level 1 CHW training program would have. The next section reviews the differences between the training programs for these main groups of community workers.

HOW SHOULD THE TRAINING PROGRAM BE ORGANIZED?

Table 2 summarizes the nature of several different types of national CHW programs and the training programs that have been developed for them. There are a variety of issues that determine the nature of the training program that we will consider in this section, illustrated by these programs.

What Is the Scope of the Roles and Tasks of the CHW?

Multipurpose CHWs have become a familiar feature of many country health systems. The desire to bring essential health services closer to families in their communities means that the range of services provided by CHWs complements those provided by health professionals in primary health care facilities. These services generally include maternal, newborn and child health, family planning, nutrition, and disease control. In Ethiopia, health extension workers (HEWs) have the most extensive job description of all the examples, including skilled pregnancy and childbirth care, which are generally not included among the tasks of other CHWs. The HEW's one-year training is significantly longer than most other multipurpose CHWs, whose training generally lasts for three to six months. In Brazil, community health agents (CHAs) are tasked with less provision of clinical care, but have an extensive health promotion and supportive care role that also includes elder care, mental health care, and the prevention and management of non-communicable diseases.

In contrast, there are many CHWs with much narrower scopes of work, and the duration of their training may be only one to two weeks. For example, at the Community Health Care Site in the Democratic Republic of Congo, the CHWs who provide integrated community case

management (iCCM) for childhood illnesses have a typical training of six days. Other CHWs working on malaria control or in single or combined programs for TB and HIV have similar lengths of training.

Will This Be a Completely New Program or an Adaptation or Expansion of an Existing One?

Among the examples in Table 2, the Ethiopian HEWs, the lady health workers of Pakistan, and the CHWs of Afghanistan have been established as new programs during the last two decades. The current female community health volunteers (FCHVs) of Nepal and the health surveillance assistants (HSAs) of Malawi are much older cadres, but their roles have expanded more recently. The distinction between these types of cadres is not absolute, and even "new" programs begin to add additional tasks quite quickly after the program begins to function (also called "diversification" in Chapter 14, on scaling up). Evidence from recent years on the competence and effectiveness of CHWs in delivering newborn care and providing injectable contraceptives, for example, means that such tasks are frequently added to CHW roles and tasks even for more recently established cadres.

The important point is that if there is already a CHW cadre established in communities, there may be a considerable advantage to expanding the scope of work of that CHW rather than creating a new cadre. This expansion will likely also involve adjusting the incentives for the CHW as well. (This process is discussed in greater detail in Chapter 3, on planning.) In a number of African and Asian countries, iCCM is now being delivered by CHWs that previously were only involved in malaria or diarrhea control programs.[2, 3] Similarly, successful integration of TB and HIV programs has been achieved by retraining community workers previously working for only one program.[4] For the Nepali FCHV, there was a direct link between the MCH and family planning promotion work in the original scope and the gradual addition of iCCM, newborn care, and the provision of contraceptives. For the Malawi HSA, the addition of iCCM and family planning was a change in focus from the earlier disease control role, but it appears to have worked. Nevertheless, the enthusiasm to add more tasks to the job description of the HSAs is creating work pressure for many HSAs and problems for the health system in keeping up with the training needs of new HSAs.[5, 6]

What Educational Level Should Be Required for Entry to the Program?

The usual response is "the highest educational level possible." Indeed, educational level is often assumed to be a way of identifying the most capable people for the job. This requirement may be relevant where educational opportunities are equitable and widespread, but less so if opportunities are restricted. Education should be considered along with other important factors, such as gender. Nepal, Afghanistan, and Pakistan all want women recruited from their communities for the CHWs because in their cultures it is only appropriate for women to be cared for by women. (This topic is discussed further in Chapter 8, on recruitment.) In Nepal and Afghanistan, 65% to 70% of the women selected are illiterate. In Pakistan, they required eight years of schooling. In Ethiopia, the entry level for HEW training is 10 years of school. However, among the pastoralist population, there are very few women with that educational level, so women and some men with a grade six to eight educational level were accepted into a shorter training program.

How important is educational level as an entry requirement into a CHW training program? Broadly speaking, a primary school education provides many skills and experiences unavailable to an illiterate person.[7] However, surveys conducted in Nepal have found little difference in job performance between literate and illiterate FCHVs.[8] Likewise, a secondary school education usually provides an introduction to scientific concepts that make understanding of the biological and medical concepts much easier. However, the correlation with problem-solving skills is less

clear. Many countries have found that a higher educational level for CHWs also brings disadvantages, including the social barrier it may create between the CHW and less-educated people in the community and a preference for living and working in urban areas.

How Long Should the Training Be, Where Should It Be, and How Should It Be Scheduled?

The only programs in Table 2 that include residential training are the Brazil CHAs and the Ethiopian HEWs. The Ethiopian program makes use of existing Ministry of Education training facilities. The other training programs all occur in a health facility or other suitable space close to where the CHWs live to not only avoid the expense of residential training, but also keep the trainees in a familiar situation and allow them to stay at home, in keeping with family or cultural requirements. Familial, agricultural, and cultural issues may also mean that certain times of the year are best avoided for training programs for volunteer CHWs.

The overall length of the training will reflect the size of the curriculum. The Brazil, Pakistan, and Ethiopian programs all have a longer classroom phase than the others, reflecting the greater amount of theory included and the requirement of a secondary level of education. All these programs also have considerable amounts of practical training: 50% for the LHWs, and 70% for the HEWs. Training programs for iCCM generally include clinic sessions on four of the five training days. Both the Nepali FCHVs and Afghan CHWs have programs with two to three integrated classroom and practical sessions lasting two to three weeks separated by two to three months. This schedule intends to focus on learning and practicing one set of skills before moving on to other and perhaps more complex skills.

How Should Trainers Be Prepared?

The establishment and maintenance of a high-quality training program for CHWs is a challenge, especially when so many regular health staff members are tasked to conduct the training. As explained previously, a competency-based training is essential for CHWs to learn the skills they require. Yet, obtaining and making the most of practical experiences is difficult for the trainers. The competency-based approach is often very different from the more traditional training experienced by trainers. There is a need for a core group of master trainers who can train and mentor provincial- or district-level trainers in competency-based approaches and be responsible for maintaining a high quality of training. Trainers in almost all of the programs listed in Table 2 are taught training facilitation/teaching skills and the CHW curriculum. In some instances, training of trainers is done in a cascade fashion, meaning trainers at the local training health facility are supported in the training and monitored by master trainers from the region or district.

When training is being provided in specific training institutions in several locations in different regions of the country by different organizations (as in Afghanistan), the quality of training can be maintained through a process of accreditation of the training schools. Accreditation can be organized directly by the government or by an independent body, but usually the process functions best when all the key stakeholders are represented and have distinct and significant roles in school assessments and accreditation program oversight. A standards-based approach, using a survey instrument with measurable indicators to assess training facilities, clinical practical facilities, the staff and the school's organization is a rigorous approach. Afghanistan developed such an accreditation program for its community midwifery schools with success.[9]

Table 2: Training programs for different types of community health workers[a]

PROGRAM	ROLES AND TASKS	TRAINING
FULL-TIME, SALARIED, MULTIPURPOSE CHWS		
Brazil		
Family Health Program (1989). ▪ Family health team in the basic health unit serving 3,000 to 4,500 people includes 1 doctor, 1 nurse, 1 assistant nurse and about 6 CHAs. Each CHA cares for about 150 households. ▪ CHAs are recruited from their communities and need 8 years of schooling. ▪ State employees, on salary. ▪ Now about 236,000 CHAs.	▪ Annual household registration and assessment of risk status. ▪ Promotion and monitoring of skilled care at the clinic for: – Maternal, newborn, and child health; – Family planning and female cancers; and – Environmental health, adolescent health, elder care, mental illness. ▪ Infectious disease surveillance and support for management of TB, HIV, and chronic non-communicable diseases.	▪ Curriculum developed by Ministry of Health (MOH) with Ministry of Education approval. Municipalities may adapt it to local priorities. ▪ An 8-week residential course is followed by 4 weeks of supervised fieldwork. ▪ Refresher training is monthly. ▪ Training done by nurses, supported by staff from state health secretariat. ▪ Nurses do an 80-hour teacher training module. State specialists do 540 hours at technical school to become a specialist in professional health education.
Pakistan.		
LHW Program (1994). ▪ LHWs are community-based, caring for 100-200 households and are supervised by the health facility. ▪ Recruited from the community, preferably a married woman with 8 or more years of schooling. ▪ Now about 100,000 LHWs. ▪ Full-time salaried workers.	▪ Register families and do 5-7 home visits each day to promote facility care for pregnancies and childbirth and immunizations. ▪ Growth monitoring, nutrition education, and distribution of micronutrients. ▪ Provide condoms, contraceptive pills, and injections. ▪ Community case management of childhood illnesses and essential newborn care. ▪ Supervise directly observed treatment short-course (DOTS) for TB. ▪ Education on hygiene, sanitation, and prevention of HIV infection.	▪ Federal Project Implementation Unit of the MOH approves the curriculum and trains master trainers. ▪ LHWs have 3 months classroom training, followed by 1 week of practical training each month in the health facility for a year. ▪ Refresher training is for at least 1 day each month (15 days each year). ▪ Health facility staff members do the training after 9 days of teacher training and 3 days assessment in a health facility. They receive an additional 20% salary for the 15 months of the training. ▪ District trainers support them.

[a] Most of the data in Table 2 are taken from World Health Organization and Global Health Workforce Alliance. 2010. *Global Experience of Community Health Workers for Delivery of Health Related Millennium Development Goals: A Systematic Review, Country Case Studies, and Recommendations for Integration in National Health Systems.* WHO and Global Health Workforce Alliance: Geneva, Switzerland.

PROGRAM	ROLES AND TASKS	TRAINING
Ethiopia.		
Health Extension Program (2004) ▪ Primary Health Care Unit includes 1 health center (for ~25,000 people) with 5 satellite health posts (~5,000 people) ▪ Each health post has 2 HEWs and 20 community health promoters ▪ HEWs are recruited from their communities and should be women with 10 years of schooling ▪ More than 34,000 HEWs ▪ Salaried civil servants	▪ Hygiene and environmental sanitation ▪ Pregnancy, childbirth, and postnatal/newborn care ▪ Case management of childhood illnesses; provision of immunizations ▪ Counseling and provision of contraceptive pills, injections, and condoms ▪ Nutrition; adolescent health ▪ Disease control for TB, HIV, and malaria ▪ Health education and training and support of CHPs	▪ Curriculum designed by the MOH, but training is provided at 40 technical and vocational training schools belonging to the Ministry of Education. ▪ 1-year training program ▪ 30% in classroom, 70% practical, including attachments to health centers and 3 months in a community ▪ Trainers are nurses and environmental workers. They receive 3 months training by MOH instructors.
Malawi		
Health Surveillance Assistants (1980) ▪ Originally community environmental health and disease control workers serving about 1,000 people ▪ Requires 10 years of schooling (recently increased to 12 years) ▪ Now about 11,000 HSAs. 60% are male. ▪ Since 2008, some HSAs have been selected to provide 3,500 village health clinics to villages more than 5-8 kilometers from a health facility ▪ Salaried civil servants	**All HSAs** ▪ Immunizations ▪ Growth monitoring ▪ Disease outbreak investigation ▪ Water and sanitation and health education **Some HSAs** ▪ iCCM of childhood illnesses (since 2008) ▪ Essential newborn care ▪ Family planning ▪ Disease control for HIV and TB	▪ Basic curriculum for 12-week training is from the Environmental Health Unit of MOH ▪ Training is supposed to be provided by district environmental health staff ▪ The iCCM curriculum for the 6-day training is from the Integrated Management of Childhood Illnesses Unit of the MOH ▪ Training for iCCM has been supported by bilaterally-funded projects and implemented by special training teams
VOLUNTEER, PART-TIME MULTIPURPOSE CHWS		
Nepal		
Female Community Health Volunteer Program (1988) ▪ At least 9 FCHVs attached to a health facility, each caring for about 1,000 people ▪ Work about 5 hours each week. Some material incentives ▪ Recruited from community ▪ About 60% are literate ▪ About 50,000 FCHVs	▪ Basic job is to promote use of MCH and family planning services; home and personal hygiene and management of diarrhea; and HIV prevention through home visits and working with mothers' groups ▪ All now do iCCM of childhood diseases and distribute condoms and contraceptive pills ▪ Some are now distributing misoprostol for home births and doing newborn care and resuscitation	▪ The Family Health Division of the Department of Health Services sets the training curriculum ▪ Basic training consists of 2 9-day training sessions 2 months apart ▪ Most FCHVs receive about 3 refresher sessions each year (1-2 days long) ▪ Training of trainers is a snowball process managed by the National Health Training Institute ▪ Training is done by government and NGO staff

PROGRAM	ROLES AND TASKS	TRAINING
Afghanistan		
Community Health Worker Program (2004) ▪ 1 male and 1 female CHW for 100-150 households (about 1,000 people) ▪ Selected from community. Literacy not required. 70% of females and 20% of males are illiterate. ▪ Part-time volunteers ▪ About 25,500 CHWs	▪ Promotion of home and personal hygiene and sanitation ▪ Promotion of skilled MCH care at the facility ▪ Promotion and provision of birth spacing methods, including injectables ▪ Provision of iCCM of childhood diseases ▪ Growth monitoring and essential newborn care. ▪ DOTS care for TB ▪ Lead and train women's care groups (Family Health Action Groups) for health promotion.	▪ Curriculum is managed by the community-based health care section of the MOH ▪ Basic training is 3 training courses (3 weeks long) at 3 monthly intervals ▪ Refresher training courses have included: – 8-day course on postpartum family planning and injectables – 2 courses on iCCM (each 5-days long) – 5-day training and implementation of community growth monitoring ▪ Training done by full-time provincial CHW trainers after 5 days of training on teaching methods and separate training on modules
VOLUNTEER, PART-TIME CHWS FOR COMMUNITY CASE MANAGEMENT OF CHILDHOOD ILLNESSES		
Democratic Republic of Congo		
▪ Up to 3 community health care sites selected in catchment area of health clinic for villages with poor access ▪ 2 part-time male volunteers at each site ▪ Recruited from the community ▪ Should be literate in French ▪ Preference given to previous health promoters	▪ Management of fever, diarrhea and ARI ▪ Growth monitoring ▪ Distribution of iron and deworming tablets ▪ Distribution of condoms ▪ Promotion of immunizations ▪ Health education on above topics	▪ The iCCM curriculum set by the MOH ▪ 5 days of training on health topics and 1 day on site management ▪ 3 monthly 1-day follow-up sessions at the health clinic. ▪ Trainers are from health clinics and the district health office and receive 3 days of training. A ratio of 1 trainer to 2 CHWs is required.

WHO SHOULD BE RESPONSIBLE FOR THE GOVERNANCE AND MANAGEMENT OF THE TRAINING PROGRAM?

When a CHW program is part of a vertical program in a MOH, the oversight of the training program is usually implemented by the same group. For the HEWs and the general purpose CHWs, options and practice vary. Oversight of the training for the overall CHW program is usually the responsibility of a unit within the MOH. The CHW program and the CBHC unit are frequently part of a health services or primary health care division. Management of the training implementation may come from that unit or may be delegated to a national training institute that is responsible for training programs for the MOH. The Nepal National Health Training Institute is a good example of this arrangement. Involvement of the Ministry of Education is unusual for this type of program, but the Brazil CHAs' curriculum had to be approved by that Ministry of Education, and the HEW training program in Ethiopia made use of Ministry of Education vocational training facilities.

When a new program is being planned and designed, it is helpful to have both a steering committee and an *ad hoc* or formal technical advisory committee(s). The steering committee should have a broad membership of all the stakeholders of the program to guide and approve the design of the training. The technical groups will usually represent the key stakeholders and will ensure that the CHW program and its training program involve the best practices that are appropriately adapted and applied to the country situation or its different regions. The Malawi HSA program has long been organized by the environmental health section of the MOH. With additional roles and tasks being added to the job description, other sections of the MOH are becoming engaged, such as the section concerned with the Integrated Management of Childhood Illness. (See Chapter 3, on planning, for more detail.)

HOW CAN OPTIMAL PERFORMANCE BE ACHIEVED THROUGH TRAINING?

The first thing to recognize is that the performance of CHWs depends upon the impact of many factors other than training. Evidence suggests that knowledge of correct actions is not sufficient to ensure that the right thing will be done. Box 1 lists some of the common individual factors and environments that frequently affect CHW practices. The quality of training and the regularity of refresher training are important determinants of performance, but the recognition of other significant factors can lead to the development of appropriate strategies to address them.

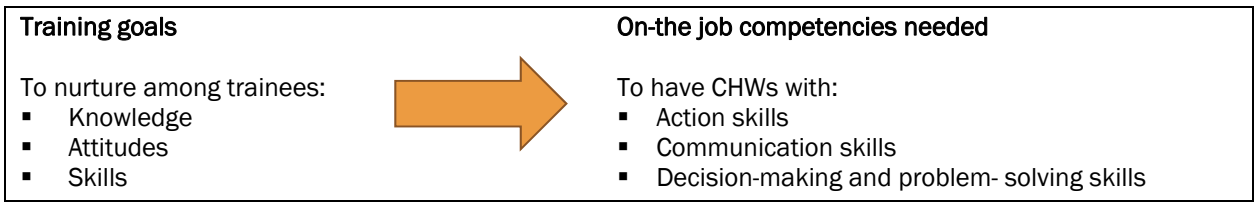
Foremost, proper performance of the required activities and tasks of a CHW requires competence in the skills to perform those tasks. This is why more emphasis is now being placed on competency-based training rather than the traditional knowledge-based training. Figure 1 shows the main types of competencies required of a CHW, and it also emphasizes the supportive role of both knowledge and appropriate attitudes in addition to skills. A detailed description of activities and tasks—discussed in Chapter 7, on CHW roles and tasks—is required to then do a detailed task analysis for preparing performance protocols and the training curriculum. This analysis involves examining each task to be performed by the CHW, identifying any sub-tasks, and then describing the skills that are required for satisfactory performance. Any particular task may involve any combination of psychomotor, communication, and decision skills.

Each of these three types of competencies or skills is different and requires different types of learning experiences. The factor common among all of them is the requirement of active participation in the learning experience by the trainee CHW to achieve competency.

Box 1: Factors influencing CHWs' performance[10]

- CHW factors: Knowledge, skills, motivation, and job-satisfaction; confidence in work guidelines and own skills; fear of bad outcomes; perceptions of patients' demands; and fear of losing clients to other healers.
- Patient factors: Severity of illness; patient's demands; patient's age; sex; and social status.
- Work: Complexity of the work, presence, and clarity of the work guidelines and frequency with which guidelines are changed.
- Sociocultural environment: Traditions and values of communities.
- Work conditions: Amount of work, access to and quality of support and supervision, availability of supplies and equipment.
- Educational support: Opportunities for refresher or in-service training.
- Incentives: Existence and regularity of financial and non-financial incentives.
- Economic environment: Cost of living, alternate job opportunities, economic conditions of country and health system.

Figure 1. A conceptual framework for training of Community Health Workers



Actions: Psychomotor skills

Psychomotor skills are a wide range of skills that include making observations and doing things. Table 3 illustrates the range of action skills that might be required of a CHW, depending upon the roles that he or she is required to play.

Table 3: Action/psychomotor skills

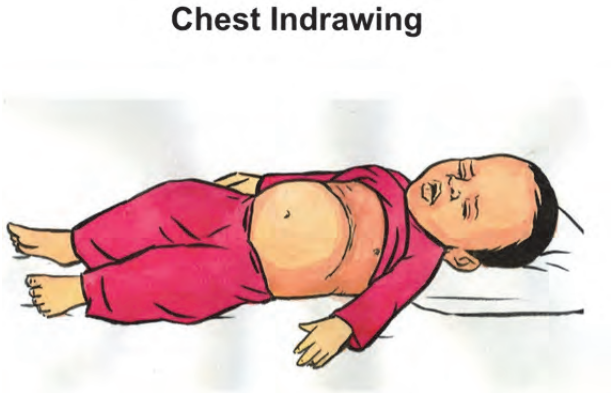
TYPE OF ACTION	EXAMPLES
Observation	Count breathing rate using a timer or watch, detect rib in-drawing, skin- pinch test for dehydration, listen for stridor.
Performance of medical procedure	Give different types of injection, administer eye ointment, apply chlorhexidine or gentian violet to a baby's umbilical cord. Deliver a baby, tie, and cut a baby's umbilical cord.
Use of supplies and equipment	Take blood, and use a malaria rapid diagnostic tool. Weigh a baby or measure the mid-upper arm circumference. Package medicines for a sick child; prepare and give oral rehydration solution.
Recording and reporting	Complete a patient record or a monthly report.
Construction	Construct a stand for a domestic hand washing basin. Construct a safe pit latrine.

There are three stages in the learning process for action skills: demonstration, simulation, and supervised practice in the work place. Verbal or written descriptions alone have little value for learning. Demonstrations can be done in the work setting, but often suffer from poor visibility when there is a large group of students. Videos of procedures have the advantage of being designed to maximize visualization of the key points with a clear commentary and repetitions of

key points. They can also be viewed anywhere, at any time, and as often as desired. Videos on laptops are used to demonstrate clinical signs to CHWs in the Democratic Republic of Congo.[2]

Pictures or photographs can be useful for many clinical signs that can be demonstrated without video. Some more complex tasks may require the development of a job aid that provides a checklist for all the steps. Packaged instructions for equipment, such as malaria rapid diagnostic tests, may need to be supplemented with a more clearly understood version.[10] In Afghanistan, a pictorial version of the algorithms for community case management of sick children was developed for literate and illiterate CHWs. Full-page versions of the pictures of selected key clinical signs were prepared as flip charts for demonstrations. (See example in Figure 2.) However, all the pictures and symbols were first submitted to a thorough process of pretesting and modification with both literate and illiterate CHWs.

Figure 2. Demonstration Picture



Simulations provide an opportunity for the students to practice actions in a supervised "classroom" setting. Students can count each other's breathing rates.[3] Simply made models can be used for many procedures and for practicing use of equipment, such as weighing and recording the weight of a model child, resuscitation of a newborn using a doll, or giving an injection. The more that students have practiced by simulation, the more confident they will be when faced with the real-life action in the work place. Therefore, whenever possible, time should be made available during periods when the students are in a clinic or field site for practice to ensure that these basic action skills are learned before attempting any more complex communication or decision skills that involve those actions.

Communication Skills

Interpersonal communication and counseling skills have received more attention and programmatic emphasis in recent years. Contraceptive failures and discontinuation of contraceptive use often highlight communication failures in family planning services. For counseling in child case management, observation studies have been more helpful than exit interviews at identifying problems.[11, 12] Observations of CHWs in their community work setting are much more difficult to arrange than in a clinic, but awareness of difficulties and/or deficiencies in counseling should prompt attention to strengthen the communication skills of CHWs.

An important point of clarification with health program managers is to agree on the objectives of CHW communications, in particular, which specific behavioral changes will be sought in the community. This will have implications for selecting the range of skills for communicating with both individuals and with groups. Table 4 shows both an illustrative list of communication tasks of CHWs and the types of communication they represent. The importance of considering the type of communication objective is to distinguish what can be accomplished through one-to-one

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[2] Very good examples of professionally made videos on newborn care and other topics are available from the Global Health Media Project online at http://www.globalhealthmedia.org.

[3] One of the consistently weaker skills of CHWs is accurately counting breathing rates. Use of minute timers (separate or on a mobile phone) is clearly more effective than using a watch second hand. However, rather than trying to count breaths, less literate and numerate individuals may be more effective comparing the child's breathing rate with a string and weight pendulum swing. A 35 cm pendulum swings at 50 per minute, the cutoff point for the rate of breathing that indicates pneumonia in a child younger than one year of age.

peer counseling and what needs to be addressed through a group approach. With appropriate training in interpersonal communication and counseling skills, CHWs are successful in one-on-one exchange of information, such as teaching home management of sick children or the use of a contraceptive, as well as persuading women to use preventive care services.[13, 14] An approach that improves both the effectiveness and the efficiency of health promotion is the care group.[15] In this approach, the CHW (as in Afghanistan) or another facilitator recruits 10 to 15 respected women (the care group) who will be trained on a regular basis in a health message or skill and then share that information with the women in about 10 of her neighboring households.[16]

Table 4. CHW communication skills

SELECTED CHW COMMUNICATION TASKS	TYPES OF COMMUNICATION BY OBJECTIVE
▪ Asking a mother about her child's sickness ▪ Counseling a couple on choices of contraceptive ▪ Explaining how to treat the sick child at home and when to return ▪ Persuading a women to go to the clinic for antenatal care ▪ Advising a couple on the advantages of using a long-acting contraceptive ▪ Persuading an expectant mother to breastfeed early and to defer washing the newborn ▪ Changing childbirth management practices at home births	▪ Collect information ▪ Provide information ▪ Teach how to do **well** what the person already wants to do ▪ Encourage someone to do what is acceptable, but not most convenient or affordable ▪ Address local fears and myths ▪ Change social norms of behavior

There are those health-related behaviors that seem to have been particularly resistant to health education efforts over the years, particularly those concerning pregnancy, home delivery, and newborn care. The global movement to improve maternal health by training traditional birth attendants (TBAs) failed because trained TBAs were unable to change these practices. After being trained, TBAs were sent back to communities where any effort to change birthing practices was usually met with community resistance. Community beliefs and norms of practice are socially shared; these were the community's "authoritative knowledge."[17] Differences in the cultures of home and facility deliveries also explain the reluctance of many women to go to facilities for care.[18, 19] It has been found, therefore, that where social norms need changing, community-oriented rather than individual-oriented approaches are needed. In particular, women's groups that have practiced participatory learning and action have resulted in significant improvements in maternal and newborn health.[20] However, the "participatory learning and action" approach requires more sophisticated group facilitation skills than interpersonal communication and counseling.

Practical learning experiences are essential for the development of communication skills. Where audiovisual aids are available to assist in communicating messages, these must be available for practice use during the training. Using these aids is often the easiest way for the student to learn, understand, and be able to explain the messages. Especially useful is the application of role play in the training to ensure that the student learns to respond to the questions or objections of her/his audience. Discussions among the students may bring to light the common beliefs, practices, and any misunderstandings about scientific health practices. Sometimes, it is better to conduct formative research to identify the issues that the CHW needs to be prepared to address when talking with individuals or groups and develop model answers.

Decision-Making Skills

Decision-making in a health care setting follows one of three strategies: pattern-recognition, the application of rules or algorithms, and hypothetico-deductive reasoning.[21] The latter, which is used for complex diagnostic problems and requires detailed understanding of clinical science to

propose and then test for alternative diagnoses does not apply to CHWs. Rather, CHW programs are designed so that almost all the common situations that a CHW may encounter can be readily recognized and managed.

For example, as with most of the cases of malaria, pneumonia, or diarrhea that a CHW will manage, each condition in its moderate and severe forms has a pattern of symptoms and signs that is usually not difficult to recognize. Because of this ease, many CHWs do not routinely continue to use the iCCM algorithm charts, and they do so without impact on the quality of their care.[22] The iCCM charts are useful in learning the patterns and should be used more closely in situations when there is little information provided in the caregiver's story of the illness. In Afghanistan, the pictorial version of the iCCM charts was produced with all necessary information on the classification, management, and follow-up conveyed by field-tested pictures and symbols. It proved as popular with the literate CHWs as with the illiterate. (See sample chart in Figure 3 at the end of this chapter.)

The work of all health workers is increasingly designed to incorporate evidence-based best practices. For this reason, guidelines and protocols for most aspects of a CHW's practice are being developed and applied. The protocols are incorporated into job aids or patient reporting forms. (See Figure 4 at the end of this chapter for an example of a CHW report form.) For example, home-based newborn care programs all involve a series of home visits provided by CHWs at critical times during the antenatal and postnatal periods, each with a particular set of tasks designed to prevent or identify early any neonatal health problems.[23]

The learning approach to decision skills again follows the sequence of demonstration, simulation, and supervised practice. Simulation involves the use of case-based learning, including case studies and case-based questions. Most importantly, at each step in the sequence, trainees must understand and then become more confident in the use of the charts or other job aids.

The Place of Knowledge and Attitudes

Although the emphasis of CHW training is on the development of skills, there is a need for a certain level of knowledge and explanation to support the skills. Moreover, attitudes and motivations are well recognized as key elements in the quality of care that is provided.

Assessing the appropriate amount of knowledge and the types of explanations to provide to CHWs is not easy. Distinctions from "must know" to "helpful to know" to "nice to know" are important. The temptation is almost always to provide too much information because it is interesting to both teacher and student. Increasing amounts of knowledge in proportion to the level of background education is usually appropriate in response both to their desire for explanations and to their ability to grasp different concepts. Model curricula tested in similar settings in other countries may provide useful guidance. The best approach may be to have some experienced trainers research the amount of information required to assure competence and motivation in one or two pilot training courses.

Attitudes conveyed by CHWs are important in their relationships with patients of all social status and ethnic groups, the community and its leaders, and other health workers. Attitudes are also very much involved with the CHW's motivation and job satisfaction. The development of appropriate attitudes, such as concern, respect, and responsibility, should be consciously and explicitly part of all aspects and stages of the training program. A general discussion of the role of attitudes and motivations is essential in an introduction to the principles of interpersonal communication. However, the most effective way for students to learn appropriate attitudes is to repeatedly ask about the feelings and needs of patients and community members in all the various learning situations. One of the chief values of a role play is that it gives an opportunity

for the group watching the role play to observe and discuss the attitudes being conveyed by each of the participants and discuss how the CHW might have improved his/her performance. Most importantly, the trainers will be constantly modeling good and bad attitudes in all that they do; therefore, the issue of good attitude development needs to be an essential part of the selection and preparation of the trainers.

Evaluation of Student Competencies

Assessment of the CHW student's ability to perform the activities and tasks required to conform to an acceptable standard is necessary for all training programs. It is certainly essential for programs that provide certification at the end of the training. However, because the whole focus of the program is the development of a range of specific skills or competencies, acquisition of each skill and competency needs to be explicitly evaluated. Written or oral examinations that test the student's knowledge about what needs to be done will not suffice. A valid and relevant assessment of competency requires **observation of the performance** of that task and checking its quality against a checklist of essential components.

Mastery of a skill requires repeated practice, first in simulations and then in the real-life setting. Supervised learning means that the teacher monitors the student's performance with a performance check list to identify those aspects that were done well and those that need improving. Such a process is referred to as "formative evaluation." "Summative evaluation" is the application of the same technique toward the end of the training program to ensure that the student has reached and maintained a satisfactory standard. One of the simplest and most widely applied approaches to the development and evaluation of skills is the use of a procedures logbook. For each student, the logbook specifies the critical skills to be learned and the number of simulation and real-life experiences to be had and provides space for the instructor to add a performance score and sign off when the learning exercise has been completed. This book provides structure and standards to the training program and can be applied to all training schools.

What Should Be the Role of Follow-Up Monitoring and In-Service Training in the Overall Training Program?

One of the findings that has emerged from experimentation with different approaches and lengths of training of health professionals in Integrated Management of Childhood Illness is that the length of initial training is less critical than assuring follow-up monitoring of performance and in-service training.[24] The same principle almost certainly applies to CHWs. Because CHWs generally receive less hands-on practice of skills in their initial training, regular supervision of practice and in-service training is most desirable. The training of CHWs in the Democratic Republic of Congo includes a schedule of three full days of in-service training every month at the health center after completion of initial training. The purpose of these monthly trainings is to observe and correct the practices of CHWs and build their levels of confidence with newly learned skills. Similarly, the monthly week-long practical training sessions at the health center for the Pakistan LHWs fulfill the same goal.

Many CHW programs recommend that supervisors arrange for a regular refresher training each month when the CHWs bring their reports and restock supplies. Frequently, this training does not happen, for many reasons, especially if CHW supervision has been an add-on to the clinic health workers' otherwise full-time job. A more effective approach may be more regular but less frequent in-service training days at the clinic, but separate from the administration days. A provincial or district training team could organize these sessions rather than relying on the existing clinic staff. Such an approach needs to be formally adopted and then budgeted if it is to work.

What Is the Place of mHealth Applications?

Evidence on the effectiveness of mHealth applications is still scarce.[25] The most common applications are one-way text messaging and phone reminders for appointments and healthy behaviors and for data gathering and reporting. Innovative applications with mobile phones for CHWs include job aids for procedures or health education, clinical algorithm tools, and tools for data gathering and reporting.[26] In a few cases, these may be combined. In Tanzania, an iCCM application on a hand-held device proved much easier and quicker to use than the paper iCCM charts, thereby encouraging more regular use.[27] One example of the value of mobile phones for learning and refresher learning is the use of multimedia applications on the mobile phone, providing easy access whenever and wherever the information is required. For example, the newborn care series produced by the Global Health Media Project, which was previously mentioned, is available for download on mobile phones.

FITTING THE TRAINING TO THE SITUATION

Too often, when there is a problem with a health program, it seems to be assumed that the solution is "more training." Training is a necessary, but not sufficient, basis for successful CHW programs. Initially, the design of the program is more important: how the roles and tasks of the CHWs will fit with and complement the roles and tasks of the health staff of the supervising health facility; how well they cooperatively meet the health needs of the community and its socio-cultural setting; and whether the CHWs understand exactly what they should do and have the time, job-aids, tools, and other resources to do it.

Getting the design right is one of the main tasks of those responsible for the governance and management of the CHW program and its training program. (These are discussed further in Chapter 3, on planning, and Chapter 4, on governance.) Membership both on the oversight/steering committee and on the technical committees should include representatives of all the relevant stakeholders to ensure that serious considerations do not get overlooked.

The type of CHW training to be adopted will depend upon several factors:

- First, the scope of the roles and tasks to be performed by the CHW. Will it be a multipurpose worker to extend primary care to populations without access to facilities or will it be a narrower scope to support a vertical program such as HIV/AIDS or child health?
- Is this training for a new CHW program or will it build on and expand an existing type of CHW?
- Will the CHW be a full-time salaried worker or a part-time volunteer? This factor will depend very much on the numbers required and the resources to pay for their training and salaries.
- What level of education will be required for entry to the program? This requirement will depend on:
    - The current general levels of education among either the men or women in the communities from which they are to be selected,
    - Whether the CHW is a full-time salaried worker or part-time volunteer.

The characteristics of an effective training program for CHWs are summarized in Table 5.

Table 5: Different training approaches and their effectiveness

	TRAINING APPROACHES	DESCRIPTION	EVALUATION OF BENEFIT FOR LEARNING
Educational techniques	Interactive techniques	Active educational experience that allows dialogue and interaction that includes simulations, role plays and case-based learning in preparation for supervised real-life experiences.	Interactive techniques that encourage the learner to process and apply the information have been found to be much more effective than didactic techniques for knowledge and skills acquisition.
	Didactic techniques	Passive educational experience that includes lectures and reading.	
Timing	One time	All the material is presented only once, at one time.	Information or learning experiences that are spaced or repeated over time produce better learning outcomes than single training interventions.
	Spaced and repeated	Information or learning experiences are spaced apart and/or repeated several times.	
Location	At work site	Trainees receive training at the facility or in the community where they will work (or in a similar community).	Most effective skill acquisition and performance takes place in an environment as similar to the work situation as possible.
	Away from work site	Training is in a classroom or other site remote from the CHW's community.	
Teaching/learning media	Print	Manuals and handouts	Manuals may be good guides of content for the trainers, but are poor methods of learning for students. Appropriate for some job aids for fully literate CHWs.
	Pictures	Pictures, cartoons, or photos. Can be on paper or on electronic devices.	Much more effective than words. Can be compiled into charts of algorithms and protocols for job aids. Still useful as health education aids.
	Multimedia	Audio and/or video content on computers, mobile and smart phones, DVDs, and radio.	Can be used interactively, repeatedly, and almost anywhere. More effective than either print or still pictures for learning.
*Adapted from [28]			

Because most CHWs lack much formal education, it is very important that the training program is very explicitly competency-based rather than the more traditional knowledge-based approach. Learning needs to be active and interactive; didactic methods do not work. For the same reason, print manuals are not useful to the CHWs, although they may be appropriate as trainers' guides. Pictorial and multimedia materials are more useful for demonstrating what needs to be known. Most important is constant practice in the use of pictorial job aids that describe activity protocols or provide audiovisual support to health promotion. Evaluation of the CHWs in training should emphasize a process of "formative evaluation" that checks on progress in performance all the way through the training rather than just at the end.

Furthermore, the learning setting needs to be as similar and close to the work setting as possible. Clinic settings for practicing clinical skills are not the same as a village home, but they do ensure that sufficient cases may be available and help the CHW to become comfortable with the clinic and how things are done there. The lack of formal education and the need to consolidate competencies also means that there is great advantage in dividing the training into a series of modules separated by a period of practice in the community. (See examples from Brazil, Ethiopia, and Pakistan in Table 2.) Dividing the training allows the CHW to implement

and become confident in some skills before going back to learn new ones. Ideally, this process then continues through the process of supervision and the process of in-service and refresher training after initial training is completed.

CONCLUSION

All sub-systems in CHW programs are important, and training is one of them. Careful planning and utilization of appropriate approaches to the training of CHWs is essential for effective program functioning. Adapting training to fit the needs and capabilities of trainees with limited education is one of the great challenges facing CHW programs, but experience and capabilities in this area are growing rapidly.

Figure 3. Example of pictorial iCCM Chart from Afghanistan

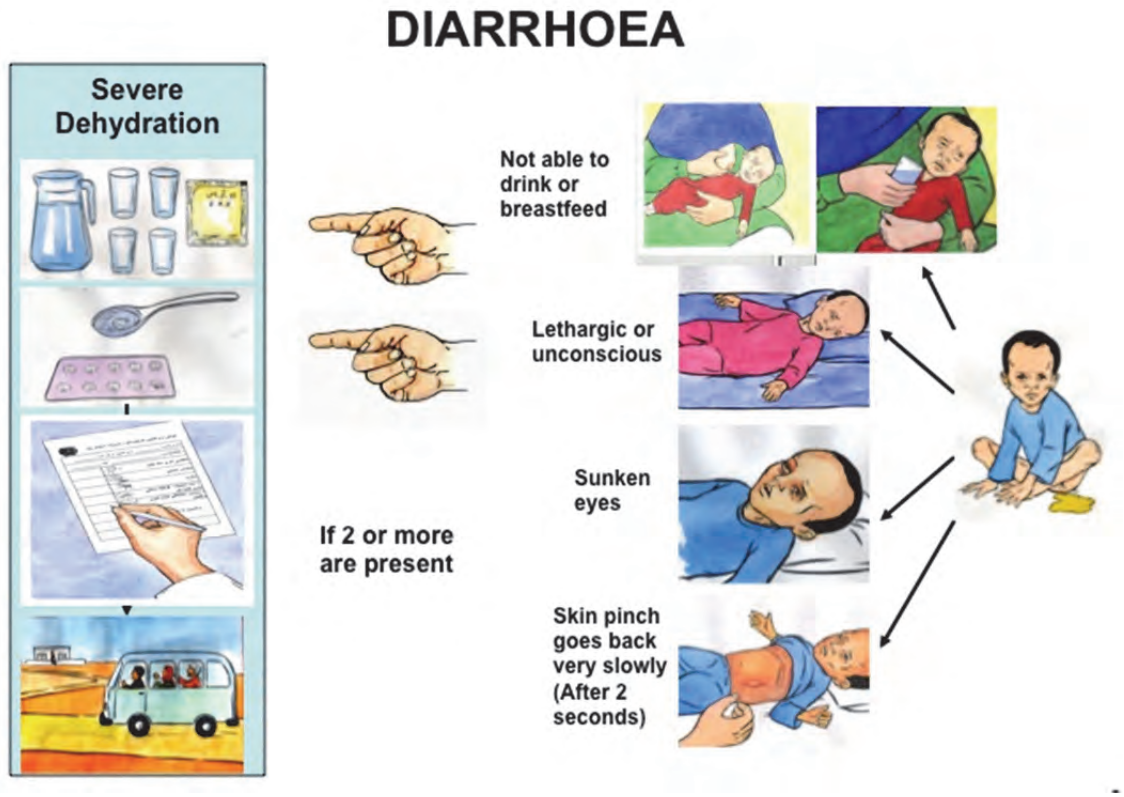

Figure 4. Patient form incorporating the iCCM Algorithm used by CHWs in Democratic Republic of Congo

DEMOCRATIC REPUBLIC OF CONGO / MINISTRY OF HEALTH

CHILD PATIENT FORM Form N°.....

DATE: ...../..... / ..... NAME OF THE SITE CHW (*Relais*).....

HEALTH ZONE: ..... HEALTH CENTER: ..... SITE: .....

1. IDENTIFICATION

Names: ..... Mother's Name: ..... Adress: .....

Gender M F Age ..... Weight ....Kg Child's Nutritional status Green Yellow Red

2. COMPLAINTS (Tick NO or YES)

	NO	YES	For how many days	Treatment received at home
Fever			.....days	.....
Diarrhea.....			.....days	.....
Cough or cold.....			.....days	.....

SPECIFY other complaints.....

3. LOOK FOR DANGER OR WARNING SIGNS (REFER IF YES)

ASK, SEARCH Tick	NO	YES	ASK, SEARCH Tick	NO	YES
Infant from 1week to 2 months brought to the SITE	NO	YES	Palmar pallor or anemia	NO	YES
Nutritional status of the child , RED	NO	YES	Difficulty breathing or wheezing	NO	YES
Is the child able to drink or breastfeed?	NO	YES	Any disease that lasts 15 days or more	NO	YES
Does the child vomit all that he consumes?	NO	YES	The child is often sick	NO	YES
Did the child have convulsions or is convulsing now?	NO	YES	The child is very weak	NO	YES
The child is unconscious or not responding to external stimuli	NO	YES	The child becomes sicker despite adequate home care	NO	YES

4	FEVER (= Hot to the touch or history of fever within the 2 days)		(Tick) NO YES		
	REFER IF:	- Fever which continues after 2 days of home treatment with Artesunate + Amodiaquine and Paracetamol, (or SP + paracetamol in the absence of Art + AQ)	NO	YES	FEVER case to be REFERRED
		- Fever with generalized rash	NO	YES	
	FEVER case to be treated at the site	All the problems above are absent,	NO	YES	MALARIA
5	DIARRHEA	(= Loose stool 3 times per day or more)	NO	YES (Tick)	
	REFER if:	- Signs of dehydration (sunken eyes, thirst, skin pinch goes back slowly, agitated child), or	NO	YES	DIARRHEA case to be REFERRED
		- Blood in the stool, or	NO	YES	
		- Liquid diarrhea (like water)	NO	YES	
	DIARRHEA case to be treated at the site	All the problems above are absent	NO	YES	Simple DIARRHEA
6	COUGH or COLD	NO YES (Tick)			
		Respiratory mvts= Nber ..... per Minute (Write)			
	BREATHING IS FAST	- 50 respiratory movements (or more) in a child aged < 1 year	NO	YES	PNEUMONIA
		- 40 respiratory movements (or more) in a child aged > year	NO	YES	
	BREATHING IS NORMAL	- less than 50 respiratory movements in a child aged < 1 year	NO	YES	COUGH or COLD
		- less than 40 respiratory movements in a child aged > 1 year	NO	YES	
7	MALNUTRITION	(we have to search for point 7, 8, and 9 in every child)			
	SEVERE MALNUTRT° to be referred	- Visible and severe Thinning	NO	YES	Severe MALNUTRIT°
		- or swollen lower limbs	NO	YES	
	Slight MALNUTRITION or Children at risk	Low weight for age: - In the YELLOW stripe, or	NO	YES	SLIGHT MALNUTRITION or Child at risk
		- Stationary weight or decrease after 3 successive weightings	NO	YES	
	NO MALNUTRITION	- Normal weight (GREEN Zone),	NO	YES	NO MALNUTRITION
		- No signs of malnutrition	NO	YES	

8. VACCINATION STATUS, CPS and Vitamin A CPS CARD SEEN. NO YES (Tick)

	- Did the child attend to weighing sessions?	NO	YES	*Catching up*	NO YES
	- Is the child immunized?	NO	YES	*Catching up*	NO YES
	- Did he receive Vitamin A?	NO	YES	*Catching up*	NO YES
9 OTHER PROBLEM	ANY OTHER PROBLEM (refer)	NO	YES	OTHER: Refer	

10. REFERRED CASES NO YES	ADVICE FOR CASES REFERRED TO THE INTEGRATED HC
• If the child can breastfeed or drink; continue to breastfeed on the way (or give expressed milk in a cup) or give sugar water in case of a weaned child	• IF FEVER: Paracetamol (½ Tab for child < 3 years old, ¾ Tab for child between 3-5 years old) + Bath in plain water or wrap the head wet in case of high fever.
• INFANT of 1 week to 2 months: keep the child warm	• IF DIARRHEA: give frequently sips of ORS with a cup, (even in case of exclusive breastfeeding)
	NOTE: FILL OUT THE REFERENCE FORM AND REFER

11. TREATMENT

TREATMENT OF FEVER/MALARIA

1) Drugs
   A) ANTI MALARIA drugs:
   - Child 2-6 month: QUININE drops 20%(1 drop/kg of weight, 3 times per day, for 7 days)
   - Child 7-11 months: Art ½ Tab + AQ ½ Tab, for 3 days (TOTAL 1½ Tab Art + 1½ Tab AQ)
   - Child 12-59 months: Art 1 Tab + AQ 1 Tab, for 3 days

   Note: In case of lack of ART+AQ, give the SP according to the following dosage:
   - Child 2-11 months: SP ½ Tab single-dose, only for 1 day
   - Child of 1-2 years: SP ¾ Tab single-dose, only for 1 day.
   - Child of 3-5 years: SP 1 single-dose Tab, only for 1 day

   B) Paracetamol 500 Mg Tab: (4 times per day).
   - Child less than 3 years old: ½ Tab, for 2 days (TOTAL 4 Tab)
   - Child above 3 years old: ¾ Tab, for 2 days (TOTAL 6 tab)

2) Advice: See CHART 1
3) Appointment after 2 days

TREATMENT OF DIARHEA

1) Drugs:

   a) ORS (at least 2 bags) or other recommended liquids:
   - ½ glass of ORS after each stool: Child < 2 years
   - 1 glass of ORS after each stool: Child 2 years and above

   (If Vomiting: Wait 10 min. then give again)

   b) Mebendazole: 100 mg Tab 2 times per day for 3 days (TOTAL 6 Tabs) (or 1 Tab of 500 mg single-dose from one year of age)

   c) Zinc Tab for 10 days with the following dosage:
   - ½ 20 Mg tab, child of less than 6 months (TOTAL : 5 Tabs)
   - 20 mg tab, child 6 months and above (TOTAL: 10 Tabs)

2) Advice: See CHART 2
3) Appointment after 2 days

TREATMENT OF PNEUMONIA AND COUGH/COLD

1) PNEUMONIA :

   a) COTRIMOXAZOLE
   - Child 2 - 6 months: ¼ Tab 2 times per day for 5 days (TOTAL 2½)
   - Child 6 months - 3 years: ½ Tab 2 times per day for 5 days (TOTAL 5 Tab)
   - Child 3 years - 5 years: 1 Tab 2 times per day for 5 days (TOTAL 10 Tab)

   b) Remedy against cough: Lemon juice (diluted) or honey
   c) If fever: See Treatment for malaria.

2) SIMPLE COUGH OR COLD:
   a) Remedy against cough (Lemon juice or diluted honey)
   b) If fever: See treatment for malaria.

3) Advice: See CHART 3
4) Appointment after 2 Days

MANAGEMENT OF SLIGHT MALNUTRITION

1) Drugs

   a) Mebendazole : 100 mg Tab 2 times a day for 3 days (TOT 6 Tabs)
   (or 500 mg Tab single dose from one year of age)

   b) Ferrous sulfate 1 tablet per day for 1 month (TOT 30 Tabs)

2) Advice : See CHART 4

3) Appointment after 2 days to verify whether the advice given was followed,

   Then appointment after 7 days

12. CATCHING UP (See Vaccination status, CPS & Vit. A, and advice for catching up if necessary)

In all cases, encourage the mother to continue child weighing sessions, immunization and Vitamin A supplementation at the HC

13 FOLLOW UP VISIT CARRIED OUT? NO YES

INSTRUCTIONS FOR FOLLOW UP APPOINTMENT.

A.

POSSIBILITY n°1: The child's mother returned ☐	POSSIBILITY n°2: The child's mother did not return ☐
Tick if: a. Returned according to the given appointment ☐ b. Returned immediately due to child worsening health ☐	Tick why she did not return: a. Consultation by a traditional practitioner or traditional treatment ☐ b. Lack of money ☐ c. Child got better ☐ d. Mother's activities: Seller, field, work, illness in the family... ☐ e. Death ☐ f. Other causes: ☐

B IS THE CHILD's STATE AGGRAVATED? (Ask the mother) NO ☐ YES ☐ (Tick) IF YES, REFER

C DOES THE CHILD HAVE A NEW COMPLAINT? NO ☐ YES ☐ IF YES, TAKE A NEW FORM

D LOOK FOR WARNING AND DANGER SIGNS REFER IN CASE A SINGLE SIGN IS PRESENT

	NO	YES
• The child is unable to drink or breastfeed	☐	☐
• The child vomits all that he consumes	☐	☐
• Had convulsions or convulsing now	☐	☐
• Unconscious or very weakened	☐	☐
• Difficult breathing (pulling or wheezing)	☐	☐
• Palmar paleness (anemia)	☐	☐
• The child becomes sicker	☐	☐

	NO	YES
• Fever that persists despite treatment	☐	☐
• Appearance of rash and/or pruritus	☐	☐
• Dehydration signs	☐	☐
• Blood in the stool,	☐	☐
• Very liquid diarrhea (like water)	☐	☐
• or another abnormal phenomenon	☐	☐

E. IF THE CHILD HAD COUGH OR COLD, Nber of respiratory mvts/minute ☐ Fast Respiration? NO ☐ YES ☐ REFER IF YES

F. VERIFY IF THE CHILD RECEIVED HIS DRUGS AS PRESCRIBED. Did he receive his dose? NO ☐ YES ☐
- Verify the remaining quantity of drugs in the mother's bag.

G. ADVISE TO CONTINUE CHILD TREATMENT
- Ask the mother to recall how she administered the drugs (review the «3 HOWS »)
- If the mother administered well the drugs, CONGRATULATE AND ENCOURAGE HER TO CONTINUE THIS WAY
- If the mother has administered the drugs inappropriately, make a demonstration on drug dispensation (review the « 3 HOWS ») then ask her to repeat and administer a dose in your presence. Verify her understanding.

Additional Resources

Many training materials and resources are available on the Internet. Many are very good, but it is important to check the intended audience. Materials that have been prepared especially for CHWs are not easily found. The following suggestions of Web sites are not complete, but may lead to some good quality materials.

GENERAL SOURCES

Teaching Aids at Low Cost/TALC: a unique charity dedicated to providing free and low cost books, DVDs, and other educational materials for health care workers in a variety of languages. Community health materials include child and newborn health, environmental health, communicable diseases, including HIV and TB, nutrition and food security, management of disabilities, and community mobilization (www.talcuk.org).

The World Health Organization Web site (www.who.int) is an essential site to check on agreed international standards on management protocols, including iCCM, HIV, TB, family planning, etc. In addition, there are training manuals and/or job aids for CHWs on some topics, such as iCCM, newborn care, and family planning.

TRAINING METHODS

Abbatt FR. 1992. *Teaching for Better Learning: A Guide for Teachers of Primary Health Care Staff*. WHO. Available from TALC (www.talcuk.org).

Werner D and Bower B. *Helping Health Workers Learn*. Hesperian Foundation. Available from TALC (www.talcuk.org).

ReproLine plus (reprolineplus.org), a resource of Jhpiego, has several publications on competency-based learning and teaching methods.

CHILD HEALTH AND NUTRITION

The USAID BASICS project (www.basics.org) has published a set of nine components of the Toolkit for Community Case Management of Childhood Illnesses. This toolkit was developed in the Democratic Republic of Congo and is available in French and English.

Training guide for Community-Based Management of Acute Malnutrition (CMAM). 2008. Guide for trainers and participant handouts. Available from Family Health International. CD–ROM can be obtained by emailing a request to fantamail@fhi360.org.

REPRODUCTIVE HEALTH

Home-Based Life Saving Skills. A four-book set manual and other teaching-learning materials can be bought from the American College of Nurse-Midwives. Life Saving Skills is a more advanced training course. See www.midwife.org.

The Global Health Media Project (www.globalhealthmedia.org) has prepared an excellent series of videos on newborn care in English, Swahili, and Spanish. These videos are available for free download. A second series on the management of labor and delivery is in preparation.

ReproLine plus (reprolineplus.org), a resource of Jhpiego, has several publications on community-based family planning and other aspects of reproductive health.

Family Health International (www.fhi360) has training materials on family planning and HIV.

The K4Health Project (USAID) has a Web site on toolkits (www.k4health.org/toolkits) that has several useful training resources on family planning and HIV.

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Chapter 10

Supervision of Community Health Workers

Lauren Crigler, Jessica Gergen, and Henry Perry

Key Points

- Supervision for community health workers (CHWs) is one of the most challenging program elements to implement; yet, it is considered one of the most important elements to successful programs.
- Supervisory responsibilities have changed over time from providing administrative and clinical oversight to the inclusion of psychosocial support to frontline CHWs who face a wide range of challenges on their own.
- Supervision is generally considered to be oversight from a health worker at a peripheral facility; however, this model is costly and difficult to implement. Alternative approaches might include group supervision, peer supervision, and community supervision to distribute the supervision tasks and increase support to CHWs in some contexts.

INTRODUCTION

Supportive supervision is a process of guiding, monitoring, and coaching workers to promote compliance with standards of practice and assure the delivery of quality care service. The supervisory process permits supervisors and supervisees the opportunity to work as a team to meet common goals and objectives.

Supervision is frequently thought of as the main link between CHWs and the health system. Facility-based supervisors, whether from the nearest primary care center or the district health office are important because they have the ability to monitor the quality of services, provide technical support and refresher training, and collect information, forms, and other data from the periphery to feed into the national health information system.

The concept of supervision has evolved over the last two decades. Traditionally, supervisors visited workers to audit performance, their supervisory activities were primarily administrative, and their attitudes were often punitive and critical of those they supervised. More recently, the role of the supervisor has become "facilitative or supportive" as supervisors try to create a more supportive environment for the CHW by helping them to solve problems, coaching them on skills, and becoming more involved in their activities. In this new role, supervisors enhance the credibility of CHWs within their communities by clarifying their roles, ensuring they have the supplies they need to perform their work, and addressing problems community members might have. Supervisors can offer psychosocial support to CHWs who are isolated and often deal with very challenging situations such as mental illness, family-based violence, and infectious and chronic diseases.

Published literature about supervision is replete with statements about how important supervision is to successful CHW programs. For example, one recent review of community-based health programs made the following statement:

> **It is important to note that well-functioning local health facilities are important for the success of community-based interventions. These facilities are usually the source of supplies, provide a point of referral for patients with severe or uncommon illnesses that cannot be satisfactorily managed at the community level, and a base of operations for field supervisors who provide ongoing motivation, training and supervision of CHWs. This supportive supervision is essential in order to maintain the quality of community-based interventions, including health promotion, which CHWs provide."[1]**

In a recent review of literature on CHW productivity, the authors suggested that productivity was based on a combination of three elements: (1) knowledge and skills, (2) motivation, and (3) the work environment. The work environment encompassed workload, supervision, supplies and equipment, and level of respect that other health workers had for the CHWs. In their review, the authors maintained that supportive supervision was a critical factor in creating and maintaining an enabling work environment.[2] In another recent study, the majority of participants stated that supervision was one of the most important factors for maintaining a functional cadre of motivated CHWs because supervisors serve as a link between CHWs and the health system. The support that supervisors can provide CHWs helps them to feel valued and feel like an important part of a larger organization.[3]

However, the reality is that most of the time in CHW programs, supervision is virtually non-existent or of questionable value even when it does occur. According to a recent review of studies of the effectiveness of supervision of CHW programs, some supervision interventions

demonstrated only a small positive effect on health worker practices and knowledge, while other studies showed no benefit or were inconclusive.[4, 5]

WHAT ARE THE CHALLENGES IN IMPLEMENTING SUPERVISION?

Although very few program managers would take the position that supervision is not important, many programs fail to design and implement a supervision system that is both functional and beneficial. In large-scale CHW programs, supervision is rarely implemented successfully. Providing effective supervision is not easy, and it is expensive. Unless programs have budgeted and planned appropriately (see Chapters 3 on planning and 5 on financing), the likelihood is that it will not be implemented well. Poor supervision has been shown to be as ineffective as no supervision at all.

Box 1. Country examples of ineffective supervision

Although a review of recently published supervision studies and policy briefs describe a conceptual shift to the supportive supervision approach, which requires the supervisor to actively problem solve, field reports of actual practices tell a different story.[6] In-depth interviews with health workers in both Kenya and Benin found that half perceived supervision as an act of control and criticism. These health workers also reported that supervision was infrequent, irregular, and lacking in feedback.[7]

In a recent study from Zambia, it was clear that supervision is not always perceived as helpful by CHWs. Following introduction of CHWs into Zambia's primary health care system, 78% of the CHWs interviewed reported regular (monthly) supervision, but 48% mentioned that supervision did not have any benefit to them. In this example, the supervisor was provided by a rural health center staff member who did not utilize a standardized method or checklists when conducting supervisory visits.[8]

Box 2. Key challenges to supervision

- Travel expense and logistics
- Supervisors are really not "supervisors"
- Supervisors do not have appropriate tools and support to conduct supervision
- Supervision is not a priority
- Supervisors don't understand the CHW's role or the context in which they operate
- Gender issues complicate the supervisory process because often supervisors are men and CHWs are women

The cost and logistics associated with traveling to visit CHWs is perhaps the greatest challenge. Most supervision systems require that supervisors travel from a peripheral health facility to the village where the CHW works. The distance requires the use of motorized transportation (motorbike or vehicle), and one of the following conditions is often present: (a) there is no vehicle or motorbike assigned to the facility, (b) the source of transport is not in working order, (c) there is no money to buy fuel, (d) the vehicle is being used for some other purpose. Per diems (a fee paid when employees such as supervisors carry out some special activity, such as traveling out into the field for some purpose) often become the real motive for supervisory visits rather than to provide the support CHWs need. Although visits should happen with relative frequency, such as at least once every 3 months, in reality, they occur rarely. Furthermore, frequently different

supervisors conduct supervision visits to the same CHW and may be unfamiliar with both the CHW and the CHW's context, thus, detracting greatly from the value of the visit.
The task of CHW supervision is most often handed to the lowest level provider in the primary care system – generally a nurse or midwife in a rural health center. Sometimes, someone from the district or regional health office will also conduct supervision visits to CHWs. However, in both cases, these "supervisors" already have a full-time job, and the task of supervision is rarely included in their job description. As a consequence, CHW supervision becomes relegated as a very limited and intermittent activity. Supervision is often the activity that is deferred as other tasks and crises demand attention from health workers in peripheral primary health care facilities or in district management offices.

Supervisors are rarely prepared to be supervisors. Whether the CHW supervisors are district health officers or primary care nurses, they are usually not trained in supervision and, therefore, they are not prepared to provide the kinds of support CHWs need. Supervisors need skills in counseling, problem solving, and quality improvement. Supervision tools and checklists, when they exist, are often overly complex and long, and not practical aids for supervisors or for CHWs.

Supervisors usually have more years of higher education and come from different social environments – either from a different geographical area or from a more urbanized setting. Most commonly, supervisors have never tried to function in the work environment of a CHW, thus, they lack an inherent understanding of the CHW's role and the challenges CHWs face in performing their work.

Not uncommonly, CHWs are women, and their supervisors are men. This gender difference creates certain barriers that can be difficult to overcome, particularly for the aspects of the CHWs' work that involves maternal and child health.

WHAT KEY QUESTIONS DO PROGRAM PLANNERS NEED TO CONSIDER WHEN DEVELOPING A SUPERVISION SYSTEM?

To design and implement an effective supervision strategy, it is important for decision-makers to clarify their aims and objectives from the outset. Different countries present different challenges in supervision, and it is advisable to become aware of what potential pitfalls, as well as the advantages, that might be present. A basic situation analysis that includes a review of policies, guidelines, and supervision logs, as well as stakeholder interviews and field visits using the questions shown in Table 1 can help to determine the strengths and weaknesses of the current supervisory system.

Table 1. Questions to guide a rapid assessment to inform the design/redesign of the CHW Supervision System

Policy	▪ What are the objectives of CHW supervision? ▪ Is there a functioning primary health care (PHC) supervision system and can it be adapted/expanded to include CHWs? ▪ What services are CHWs asked to provide? ▪ Are there supervision standards and guidelines for CHW performance? ▪ Do the financial resources exist to sustain a CHW supervision system?

Management	▪ Are management tasks and clinical tasks clear? ▪ Are supervisory roles clear and integrated into job descriptions? ▪ How many supervisors have been trained in supervision? ▪ Is there a supportive context for supervision (e.g., distances to travel for supervision that are manageable, suitable transportation that is available)? ▪ Are there nongovernmental organizations (NGOs) and civil society organizations that are currently conducting supervision? ▪ Is there a community health management committee? If so, what is its role? ▪ How are supervisors supervised? ▪ How are health facilities involved in the delivery of community health services? ▪ Are supervisors selected with a gender-focus in mind? Are men asked to supervise young women? Are female supervisors safe and accepted in communities?
Quality assurance	▪ Is there a management information system? ▪ How do supervisors observe and monitor CHW performance? ▪ How do supervisors use data for decision-making and supporting CHWs? ▪ Has the quality of supervision provided been evaluated? ▪ What mechanisms exist for feedback from the community regarding the services provided by CHWs or other health system issues?
Community involvement	▪ Do supervisors make visits to communities? ▪ What other volunteer or paid workers are in the community? Are they supervised? ▪ Do supervisors (or should they) make household visits with CHWs? ▪ Do community members provide feedback to the supervisor about their CHW? ▪ How involved are community groups and leaders in health and other community issues?

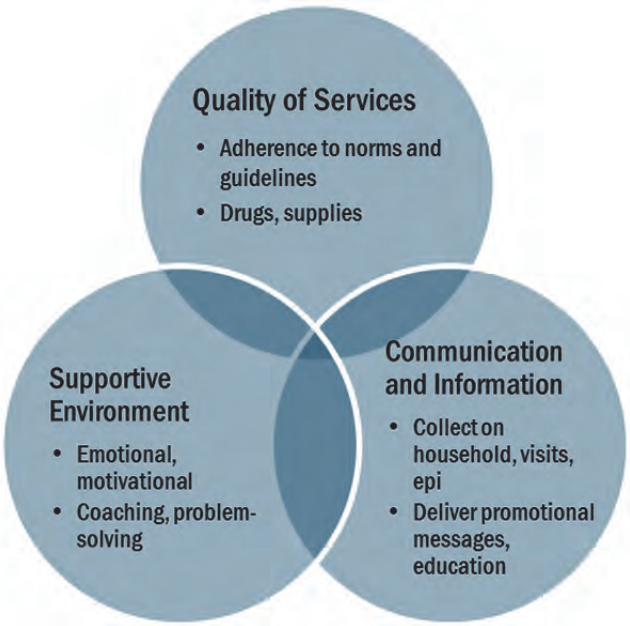
Once the situation analysis is complete, policymakers can make better decisions about what supervision policies and guidelines are appropriate in their context by asking the following questions. Some questions, as noted, are also addressed in other chapters of this manual.

1. What are the objectives of CHW supervision?
2. What working strategies should shape the supervision approach?
3. What standards and guidelines are needed to guide CHW performance? (See Chapter 7, on CHW roles and tasks)
4. Who will perform the supervision? Who will supervise the supervisors?
5. How often should supervision be done?
6. How can you ensure that supervision visits are planned, implemented, and tracked? (See Chapter 3, on planning)
7. How will information be used to improve performance? (See Chapter 12, on health system linkages)

WHAT ARE THE OBJECTIVES OF A SUPERVISORY SYSTEM?

Supervisors generally are asked to address three different areas in their supervisory capacity: (1) quality assurance, (2) communication and information, and (3) a supportive environment (Figure 1). However, policymakers and program planners will need to define priorities and develop indicators in each category that will be important to track.

Figure 1. Objectives of supervision



Quality of Services

In many cases, the supervisor is the only consistent link that the CHW has with the formal health system and is expected make sure that the CHW understands his/her tasks and can perform them to an acceptable standard. High-quality services also require the continuous monitoring and improvement of CHW performance through measurement, feedback, and learning—tasks that are generally assigned to supervisors. When new tasks are assigned, the supervisor should train, or reinforce (if refresher training is offered), the CHW in these tasks. An involved supervisor will perform household visits with the CHW and use this opportunity to seek feedback from clients, coach the CHW as s/he performs her tasks, and provide feedback to both the CHW and the household. This level of involvement by a supervisor is best demonstrated by BRAC's supervisors, *Shasthya Kormis*, who visit clients with the CHWs they supervise (*Shasthya Shebikas*). They meet with women's groups to discuss health issues. The supervisor is also expected to supply the CHW with whatever drugs and other items required to complete her tasks.

Communication and Information

The supervisor also needs to communicate, gather, and share information with the CHW. The supervisor gathers data from the CHW to learn where she has gone, how many clients she has seen, what services she has provided, and other statistics on the overall health and well-being of her catchment area. Sometimes, if the CHW is not very literate, the supervisor can help her complete forms and show her how to draw or select pictures to communicate what is happening within a community. The supervisor also provides the CHW with updates on new guidelines and other information regarding the health status of a community, a planned event such as a vaccination campaign, and other key information from the Ministry of Health (MOH).

Supportive Environment

The third area of consequence is that of providing support to the CHW. The supervisor coaches and helps the CHW solve problems s/he might encounter. Also, as the CHW is often isolated and asked to provide support and counsel to patients with difficult conditions, s/he sometimes needs counseling and support herself. A supervisor also often can help the CHW develop or maintain a respectful relationship with his/her community by positioning himself/herself as an important and valued member of the health team, and by clarifying and reaffirming to the community the

importance and the details of the specific expectations the CHW is trained and expected to meet.

Supervision is one of the 15 key components addressed in the CHW Assessment and Improvement Matrix (AIM) tool that enables CHW programs to assess the functionality of a program and to make improvements according to specific criteria [9]. For supervision, the CHW AIM tool suggests the following: "Supervision of CHWs should be carried out regularly to provide feedback, coaching, problem solving, skill development, and data review. According to the CHW AIM tool, the indicators for ideal supervision include:

- Encounters every 1–3 months between the supervisor and the CHW that include reviewing reports and monitoring data collected by the CHW;
- Training of supervisors in supportive supervision and in the technical skills that CHWs need to have so that they can use supervisory tools (checklists) during encounters (and hopefully during observation of CHWs at work) to aid their supervisees appropriately;
- Use of locally acquired data for problem-solving and coaching during supervision meetings; and,
- Visitation of CHWs in their communities, carrying out home visits with CHWs, and providing skills coaching to CHWs.

WHAT WORKING STRATEGIES SHOULD SHAPE THE SUPERVISION APPROACH?

It is advisable for strategies to be agreed upon by key policymakers, stakeholders, and program managers that will guide the design of a supervision approach. For example, the following principles might be considered:

Build upon what exists: Understanding what is already functioning and building upon it is important. Do not create parallel systems.

Use a bottom-up approach: Engaging CHWs and communities in the design and process of supervision will encourage participation.

Focus on planning and monitoring the implementation: Plans to supervise are frequently made but not carried out, and the implementation process itself is not monitored. Therefore, supervision becomes the lowest priority to program implementers.

Engage all levels for accountability: Supervisors alone (regardless of who is supervising) should not bear all of the responsibility. Supervisors of supervisors, CHWs, communities, and even clients can share in both the process and making each other accountable for its completion.

Develop capacity at all levels in data management, teamwork, and problem-solving: Basic data use, teamwork, and problem identification, prioritization, and resolution are skills that everyone, including community members and engaged clients, can use to solve problems.

WHAT STANDARDS AND GUIDELINES ARE NEEDED?

It is advisable to develop a set of standards and guidelines that clearly state to all stakeholders, including CHWs, community members, supervisors, health workers, and ministry officials, what are the objectives, responsibilities, results, and outcomes of the supervisory system. This document should include a detailed description of the tasks that supervisors are asked to perform, as well as the tasks and performance standards for CHWs: what supplies and

equipment CHWs should have, the content of the supervision visit, its frequency, and the optimal profile and set of skills needed by supervisors. It should also describe who and how supervisors themselves are supervised and how to monitor the quality of supervision itself. Standards and guidelines generally form the basis for supervisor training curricula and are used in the development of monitoring forms, checklists, and user-friendly tools that can help supervisors and CHWs prepare for and meet performance expectations. (See this chapter's appendix for examples of forms and checklists for supervisors.)

The process to develop the standards and guidelines should involve a wide range of stakeholders, including MOH officials, regional authorities, community groups, facility managers, nursing associations (if, in fact, a nurse will supervise), and of course, CHWs themselves.

WHO WILL PERFORM THE SUPERVISION? WHO WILL SUPERVISE THE SUPERVISORS?

Although it is most common to see a nurse or other health worker from a peripheral facility tasked with the supervision of CHWs, it is not necessarily the only option. Alternative supervision approaches are presented in the next section, but can include group supervision (in which multiple CHWs gather to meet with the facility health worker in either the health center or a village); peer supervision (in which peers take on some of the supervision role through peer-to-peer learning, support, and problem-solving); and community supervision (community groups, health committees, or community associations take on some of the monitoring and feedback role in supervision). In many countries, NGOs and multilateral partners also provide support for supervision and training of CHWs.

HOW OFTEN SHOULD SUPERVISION BE DONE?

As mentioned above, regular encounters between the supervisor and the CHW are recommended. Monthly visits are best, as regular reinforcement of skills and frequent communication is important for CHW motivation and performance. However, quarterly visits are more practical for most programs, and even they may be difficult and costly to maintain. Other CHWs, community organizations, and peer groups can offer coaching, emotional support, and feedback to CHWs and should be considered as alternatives, or additions, to the support that CHWs can receive. Also, mobile technology can provide support to CHWs between visits, provide answers to immediate questions, and be used by supervisors and facility staff for distance coaching and skills updates. These approaches are described in more detail in the following section.

HOW CAN YOU ENSURE THAT SUPERVISION VISITS ARE PLANNED, IMPLEMENTED, AND TRACKED?

Although yearly planning takes place in MOHs at the central, regional, district, and even community levels, plans are not always followed. They frequently focus on the achievement of coverage or health indicators, while management processes (such as supervision) are overlooked. Supervisors are rarely prepared for their supervisory tasks in advance. Because supervision is not made a priority, it can be superseded by other events that are viewed as more critical. A planning process is only as good as its implementation, and action plans require implementation, monitoring, and evaluation. Tracking and reporting mechanisms should be put in place that help regional, district, and local officials adhere to their plans, monitor their own implementation, and report not only on indicators alone, but also on the processes that are needed to achieve target indicators.

HOW WILL INFORMATION BE USED TO IMPROVE PERFORMANCE?

Program planners and managers need information gathered from the community level on a wide range of indicators: coverage, mortality, morbidity, logistics, numbers of households reached, numbers of clients served, and so on. However, because CHWs are the closest link to communities, they are often asked to collect more data than is actually used. Frequently, various programs and donors will require data on specific indicators. CHWs are asked to provide all of the information requested, regardless of duplication and without an overall strategy on data collection and management. Moreover, the information flow is usually upward, with little information flowing back down to the community so that CHWs understand how to use the data to solve problems. Supervisors can play a critical role in this process by monitoring the quality of data that is collected and working with CHWs and local leaders to share the collected data with the CHWs and communities for problem-solving at the community level.

Box 3. Supervision from the health center in the Pakistan Lady Health Worker Program

There is a highly organized and tiered supervision strategy in the Pakistani Lady Health Worker (LHW) Program. Each LHW is attached to a health clinic and is supervised on a monthly basis by a LHW supervisor.[10] These supervisors are then regularly supervised by a LHW program District Coordinator and/or an Assistant District Coordinator. Each LHW should have supervision in her village at least once a month, at which time the supervisor should meet with clients and with the LHW, review the LHW's work, and collaboratively prepare a work plan for the subsequent month.[11]

The 2008 review of the LHW program found that 80% of LHWs participated in a supervision meeting in the previous month. Astonishingly, 90% of supervision meetings occurred in the village, and 59% of these included meetings of the supervisor with the LHWs' clients. Additionally, 91% of LHWs had meetings in the health facility within the previous 30 days, and 98% had produced a work plan for the previous month. Supervisors frequently used checklists during the meetings and scored LHW performance, although LHWs were generally not told their score. On average, LHW supervisors supervised 23 LHWs and 60% had full-time access to a vehicle, although not all received their allowance for fuel and related expenses.[11]

APPROACHES TO CHW SUPERVISION

This section describes the most common approach to CHW supervision and some alternative approaches that CHW program managers can consider. Each approach has strengths and limitations, and some are more tried and tested than others. Still, given the generally poor quality of supervision that has existed in most programs to date, broadening the approach of who provides supervisory support and how supervisory support is offered might allow for more practical, less costly supervision that is more effective.

External Supervision from Health Center or District Health Office

In some countries, such as Pakistan, CHW supervision is part of a national supervision strategy that is already functioning. This model generally assumes that a nurse or midwife from a peripheral health facility has the responsibility to supervise CHWs, or that district or sub-district officers make supervision visits to CHWs. In some CHW programs (such as in Ethiopia), CHWs work at health posts but conduct home visits and supervise volunteers out in the communities. Supervisory visits are planned quarterly, although some programs attempt this supervision on a monthly basis depending on the distances, the availability of health staff to supervise, and the numbers of CHWs to be supervised.

Box 4. External Supervision in Rwanda's CHW Program

The Rwandan MOH has established a robust community health structure, in which each district has a community health supervisor and each health facility in the district has an in-charge of community health. In each village, there are now three CHWs: two "*binômes*" (one male and one female CHW) who address community integrated management of childhood illness, and one CHW for maternal health. Concern Worldwide implemented a program from 2007 to 2011 in six districts in Rwanda in which CHW cooperatives—consisting of 150 to 300 CHWs from 40 to 80 villages—each managed by a cell coordinator, met on a quarterly basis in a health facility. Within each cooperative, peer groups of 15 to 20 CHWs were formed and met at least monthly for peer support and learning opportunities. A 2011 evaluation of this approach by Concern Worldwide reached the following conclusions:

> "CHWs found the model to be a motivating factor in their work. Compared to CHWs working independently, CHWs working as a group provided greater peer support, developed a stronger commitment to implementing health activities, and found more creative solutions to problems."[24]

Furthermore, the cell coordinator's aim is to follow up on, supervise, and strengthen CHWs' activities. Although the cell coordinators have clear roles, there are too few of them to consistently supervise the 150–300 CHWs that each cell coordinator is responsible for. At each health facility there is a CHW-in-charge who meets with the cell coordinators and also makes visits to supervise CHWs. At the district level there is a CHW supervisor who collects and reports on key health indicators collected by CHWs for the district, and at the central level, the community health desk is responsible for all community activities.

Although CHWs are volunteers, they do receive performance-based incentives. In addition, CHW cooperatives are managed and overseen by a community health committee at the sector level. The cooperatives sign a performance contract with the MOH and are compensated for the achievement of indicators in the contract. The CHWs receive 30% of the compensation for their contribution, and 70% goes into the collective fund for the CHW cooperative.

These supervisory visits link the CHW services to the formal health system, provide an opportunity to collect data on a range of issues such as the numbers of patients seen, home visits made, or pregnant women in the catchment area. Supervisors also distribute drugs or supplies, sometimes observe CHWs performing services, reinforce important messages, such as timely and appropriate referral and emergency transport arrangements, and provide coaching to help CHW address issues faced by the CHW in performing his/her work. This approach, if funded appropriately and performed consistently, can have the benefits of strong clinical oversight, coaching, and mentoring of CHWs; integration of new protocols and procedures into CHW work; and more attention to health system issues that affect the CHW, such as a lack of drugs or supplies. This approach is also potentially scalable, assuming that it is built onto a health system with supervisors who are health workers at a peripheral health facility, who are themselves supervised, and have available time and capacity to carry out the supervision.

Box 5. Supervision in the Ethiopia Health Extension Workers Program (HEP)

The Ethiopian Health Extension Program has been described by the MOH as "our flagship program, the pillar of our health system."[12] The Health Extension Program was launched in 2003 by the Government of Ethiopia, and at present there are 38,000 health extension workers (HEWs), including 4,000 working in urban areas. HEWs are full-time employees who receive one year of training. They divide their time between caring for patients at their health post and outreach services into the community.

HEW supervision appears to vary across the history of the program and geographical contexts, but in 2005, HEWs had relatively high levels of supervision, with an average of three supervisory visits over the course of nine months.[13] There are multiple levels of HEW supervision, including the *woreda* (district) supervisory team that is comprised of a health officer, public health nurse, environmental/hygiene expert, and a health education expert.[14]

HEWs themselves supervise lower community-level workers, such as volunteers of the Health Development Army (who are each responsible for five households), community-based reproductive health agents, and traditional birth attendants.[15] One of the important features of the HEW Program is that career advancement opportunities are present, so the HEWs can advance to become HEW Supervisors and eventually nurses, an important feature that is rarely present in other CHW programs. This feature has major significance for overcoming some of the important limitations to CHW supervision that exist in many programs, not to mention providing long-term motivation to CHWs.

A modified approach to health center or district health office supervision is used in Ethiopia where there are multiple levels of HEW supervision, as well as supervision of the community volunteers (Health Development Army). In Ethiopia, the district supervisory team supervises the HEWs, who are a paid cadre and part of the formal system. The HEWs then supervise the community volunteers. This tiered approach has advantages in that it is potentially more scalable than asking facility-based health workers to supervise individual CHWs, and HEWs have the potential to advance in their career path through this supervisory responsibility.

Group Supervision of CHWs

Group supervision involves a group of CHWs meeting together with a supervisor. Meetings usually include regular supervisory activities (collecting data, discussing problems, and continuing education) in a group rather than in an individual context. Group supervision meetings can occur at health centers or in villages, and this approach has been implemented in many ways.

In Mozambique, the international NGO World Relief pioneered the care group model as part of its Vurhonga Child Survival Project in Mozambique (1995-2003). A care group consists of 10 to 15 community-based health volunteers who regularly meet with a supervisor once or twice a month for training, supervision, and support. Care group volunteers, who visit with 10 to 15 of their neighbors every 2 to 4 weeks, provide peer support, develop a strong commitment to health activities, and find creative solutions to challenges by working together as a group. Care groups are the core element in an emerging model for organizing, training, supervising, and motivating volunteers in a cost-effective, sustainable manner. Care groups achieve broad, deep, and lasting community change.[16-19] The Care group model highlights the motivational benefits of working in a team and its efficiency in terms of time and logistics. Groups are reported as a useful arena for problem solving, allowing for both peer support and technical guidance from a supervisor.[3]

Box 6. Supervision in the Nepal Female Community Health Volunteer (FCHV) Program

The Nepal FCHV Program has been in existence since 1988. The number of FCHVs and their scope of work have gradually increased over this period after gaining global recognition for their outstanding contribution to achieving high levels of coverage of childhood vitamin A supplementation throughout the country. Community organizations, such as women's groups,

support CHWs in identifying pregnant women, alerting FCHVs to problems, and delivering key health messages to their villages.

FCHVs meet as a group once per month with their supervisors at the nearest facility; they bring monitoring reports, discuss problems, and support each other's work. In interviews conducted during the development of the CHW AIM tool, FCHVs were generally happy with this system.

Women's groups and local village development committees are highly involved in the selection and oversight of FCHVs. Mothers' groups are also expected to discuss family planning and to provide information to other mothers. There have been challenges with disempowered women's groups, however, so a guideline was developed on how to strengthen mothers' groups. Following the development of the guidelines, national government stakeholders developed and evaluated a pilot program to determine the programmatic impact on health indicators and mothers' group functioning. Mothers' groups' functioning improved, and they were more supportive of FCHVs. They also were more aware of their authority to remove FCHVs.

Community Supervision of CHWs

Innovative approaches to supervision include engaging the community and having community organizations play a greater role in providing feedback and guidance to CHWs and their supervisors. The role that communities can play in the supervisory process differs by context and community, but can often involve community members helping to set and clarify expectations of what kinds of services the CHW will provide, agreeing on how the CHW will respond to issues within the community, and deciding how the community can support and help the CHW by participating in the management and care process. A community action cycle, wherein the community works together to identify and prioritize problems, plan and implement solutions, and evaluate progress can contribute to the creation of demand for services: "The key to the success of community empowerment was the moment when the community engaged with the problem-posing, problem-solving process and recognized that they could collectively change their circumstances."[20] Although this action cycle might not be considered part of traditional supervision, these inputs and support mechanisms contribute to the improved supervision of workers more generally. (See also Chapter 13 on community relationships.)

Box 7. Community supervision with public health care providers in Uganda

A randomized field experiment on community-based monitoring and evaluating of public primary health care providers found that providers who were monitored and supported by the community tried harder to serve their clients, resulting in increased utilization and improved health outcomes for community members.[21] The experiment focused on the accountability relationship between the citizen-clients, and their ability to hold providers accountable for quality service provision. To test whether community-based monitoring works, local NGOs facilitated village and staff meetings in which members of the community discussed the baseline status of health service delivery. These committees also discussed how the primary health care providers working in the MOH system compared to other providers, and how the public providers could improve health service provision. The purpose of this open-dialogue discussion was to initiate a process of community-based monitoring that was then sustained by the community.

This community-based approach successfully increased both quality and quantity of primary care provision at government health centers. Utilization increased by 20%. Waiting time and staff absenteeism also improved significantly.

Such an approach could be used to monitor the work of CHWs as well.

The Community-Directed Interventions (CDI) Program in multiple countries in Africa uses an approach in which communities are given important responsibilities for the planning and implementation of highly targeted interventions aimed at priority diseases.[22] The approach encourages communities to take ownership of the clinical intervention process, defining who, when, and where the intervention will be implemented, how it will be monitored, and what financial incentives or other support will be provided to CHWs, who are selected by the community.

An evaluation of the CDI program conducted in 35 health districts in Cameroon, Nigeria, and Uganda, revealed that community participatory processes were important, and CHWs were deeply committed to the CDI process. By engaging and empowering communities, the CDI program has prompted an eagerness on the part of communities to participate in the provision of multiple interventions, leading to cost savings for the health system, as well as increased health system impact.[23] This experience indicates that communities can become strong and active partners in CHW programs. Communities can select, motivate, and supervise CHWs if a linkage is provided to health programs for training, technical support, and technical supervision.

The effectiveness of supervision by communities depends on the degree to which the community is able to obtain appropriate information on CHW functioning and access to resources that can motivate CHWs for outstanding performance and sanction them for sub-standard performance. This approach is most feasible when community groups, such as community health committees or mothers' groups, are already active in other areas of community management, such as income generation schemes or water and sanitation management. This approach can strengthen existing community systems, but may not be appropriate when there are weak social connections, such as in urban settings where the population may be transient. In some cases, such as Rwanda, community health committees are directly involved in the financial management of performance-based incentives and provide administrative oversight to CHWs, but play little role in the supportive supervision of CHWs.

Peer Supervision of CHWs

Using peers, such as other CHWs, to aid in supervision is another model that is being tested and implemented in a growing number of countries. Peer supervision is focused on CHWs helping other CHWs learn new skills and assessing the quality of work performed by fellow CHWs. Examples of this approach are the following:

- Peers observing CHWs performing consultations and providing feedback
- Peers supporting less-experienced colleagues (e.g., through on-the-job training)
- High-performing peers mentoring others who are having more difficulty
- Peers discussing issues and problem-solving with CHWs
- Peers being promoted to a more formal supervisory role

Table 2. Summary of four approaches to supervision according to the six key questions

SUPERVISION MODEL	EXTERNAL SUPERVISION: Health worker from health center or supervisor from district health office.	GROUP SUPERVISION: Health worker supervises group of CHWs (at facility or in community).	COMMUNITY SUPERVISION: Community plays a role in defining expectations, providing feedback, tracking CHW activity.	PEER SUPERVISION: Peers play a major role in supervising each other.
Objectives	Provides (1) a direct link between CHWs and the health system (protocols, guidelines, monitoring of quality), (2) supplies, drugs, and equipment, (3) collection of information, and (4) one-to-one support for the CHW.	Provides (1) a direct link between CHWs and the health system (protocols, guidelines, monitoring of quality), (2) supplies, drugs, and equipment, (3) collection of information, and (4) group support for the CHWs.	Community helps define and manage quality. Community plays a role in providing incentives for good performance, and sanctions for poor performance.	Emphasis is on joint problem-solving, skills development, and peer support arising from understanding what the other is experiencing.
Prerequisites	A functioning health center within a reasonable distance from the community. Travel resources (vehicle, fuel, per diem). Adequate numbers of supervisors. Supervision tools.	A functioning health center within a reasonable distance from the community. Travel resources (means, fuel, per diem). Supervision tools.	A culture of community involvement. Agreement on the role of the CHW. Strong community leaders (or community health committee). Training in supervision, data use, problem solving.	Multiple cadres of CHWs or villages that are near each other. Oversight from the health system for supplies, skills, and training. Travel resources (means, fuel, per diem). Meeting resources for CHWs.
Optimal Frequency	Monthly to quarterly	Monthly to quarterly	Monthly meetings	Quarterly meetings, in between if possible
Key Implementation Considerations	Strength of formal health system (ability of health center staff to supervise, time, training, and materials). Travel resources (means, fuel, per diem). Proximity of clinics. Method to measure success; evaluate supervisors and system.	Easiest model to implement. PHC staff time to plan meetings, meet CHWs. Proximity of communities. Method to support and measure success of individual CHWs.	Challenges in measuring success or impact. Community-based training, resources, materials. Strong community-based organizations.	Types and numbers of CHWs in proximity. Peer-based training and materials. Facilitation skills.

SUPERVISION MODEL	EXTERNAL SUPERVISION: Health worker from health center or supervisor from district health office.	GROUP SUPERVISION: Health worker supervises group of CHWs (at facility or in community).	COMMUNITY SUPERVISION: Community plays a role in defining expectations, providing feedback, tracking CHW activity.	PEER SUPERVISION: Peers play a major role in supervising each other.
Key Scale-Up Considerations	Success at district or regional level.	Success at district or regional level.	Community by community; difficult to scale quickly.	Success at district or regional level.

A recent review of peer-reviewed published literature related to supervision of peripheral health workers (including CHWs) in low-income countries tried to identify effective forms of supervision and innovative approaches to supervision.[25] Although supportive supervision makes intuitive and practical sense, only a few well-documented examples of the beneficial effects of supervisory support on health worker performance exist in the literature. The review of the evidence identified three general innovative approaches to supervision:

- Use of peer assessments, group assessments, self-assessments, community-assessments, and combinations of these;
- Use of checklists; and
- Focus on problem-solving at the supervisor, provider, or community levels.

The authors identified the most promising specific innovations in supervision to be the following:

- Group supervision focused on goal setting and problem-solving;
- Engaging stronger peers to support weaker peers through on-the-job training and mentoring;
- Community monitoring of health worker performance; and
- In addition to onsite visits from supervisors, include periodic self-assessments (which might be recorded and shared with a supervisor) and regular phone calls from a supervisor.

Finally, of particular note, the authors concluded that overarching themes among innovative approaches to supervision included incorporating a review of data into the supervisory process, focusing on problem-solving, and targeting supervisory efforts to high-priority locations and high-priority health workers.

THE EMERGING ROLE OF MHEALTH IN SUPERVISION OF CHWS

As mentioned in the opening section, mHealth (the practice of medicine and public health supported by mobile devices) can provide support to CHWs between visits by providing answers to immediate questions they may have. It may also be used by supervisors and facility staff to provide coaching and skills updates for CHWs from afar. The use of mHealth is gaining increased attention as it provides opportunities to rapidly connect people, thereby reducing delays in patient care, managerial, and supervisory decisions required for day-to-day health system functioning. With the continuous growth of mobile network coverage and unprecedented spread of mobile devices in the developing world, many mHealth initiatives are now being implemented in developing countries.

In Uganda, the Rakai Health Sciences Program piloted the use of mobile phones to monitor patients in a rural HIV/AIDS treatment program in Rakai, Uganda.[26] CHWs were given mobile phones to send real-time text messages containing clinical and drug adherence data to higher-trained providers for review and triage. Results showed that most clinical workers agreed that the quality of care had improved, while the overall cost of such a program remained very low.

In Ghana and Zambia, MOHs are using cell technology for data collection and monitoring of supplies for stock outs of rapid diagnostic tests for malaria and to supplement other information gathering and verification at facilities. In Rwanda, an innovative technology based on short message service (RapidSMS) developed by UNICEF establishes a communication and alert system, supports documentation of pregnancies in the community, and promotes contact between pregnant patients and health facilities to promote antenatal care utilization and institutional deliveries. It is used by CHWs to register new pregnancies in their communities and to monitor the pregnancies through delivery and postpartum. It is especially useful when danger signs during pregnancy occur and helps to facilitate referrals; it has an emergency alert-system and provides immediate feedback to the CHW advising on immediate actions and requesting an ambulance to ensure the timely transfer of the mother and (if delivery has occurred) her newborn for emergency obstetric and neonatal care.[24]

Box 8. Supportive supervision and quality improvement using Mobile Technology

Abt Associates, Jhpiego, and Marie Stopes International collaborated on a mobile learning and performance support pilot called Mobile for Quality Improvement (m4QI) conducted in Uganda from September 2010 to August 2011.[27] The objectives of m4QI were to develop and test a technology-supported approach to performance improvement, including processes for identifying performance gaps in adherence to protocols, managing the delivery of text message reminders, and improving the effectiveness of supportive supervision and follow-up. Thirty-four family planning outreach health workers received SMS text messages with daily instructions, tips, and quizzes related to standards, guidelines, and advice for working with clients. This pilot produced a process and software tool that can be replicated in resource-poor settings to assess delivery and make data-driven programmatic decisions for supportive supervision and follow-up training.

Another example is from Nigeria, where mHealth was used to strengthen supportive supervision for detection of patients with TB.[28] Supportive supervision visits are performed monthly or quarterly at TB facilities to provide monitoring of clinical, laboratory, and commodity functions. Using a mobile smartphone for data entry instead of paper forms has decreased both human error in data entry and lag time of forms to get to policymakers and managers. To date, more than 50 supervisors have been trained and use the new smartphones and checklists to perform supervisory activities. The National TB Program is considering using the software platform on the smartphone that will link the TB supervision data into the District Health Information System throughout Nigeria. The potential of such systems for supervising CHWs is obvious.

CONCLUSION

Although supervision is one of the most challenging areas to implement in a CHW program, it is also an area ripe for innovation. By looking at the objectives of supervision as described in this chapter, it is possible to divide the responsibilities among multiple parties. For example, CHWs are commonly supervised by health workers based at health facilities who are overcommitted and not able to perform the role adequately. Designing a program in which groups of CHWs visit a facility on a quarterly basis to meet with their supervisor might be supplemented by a peer support structure in which other CHWs receive training in how to support each other between visits. If community groups are involved in monitoring the CHWs' activities and in understanding what indicators are important to look at, they might become more involved in

the care process overall. Cell phone technology could aid both the CHW and the community in communicating service needs and supply stock outs in advance, thus preparing the CHW's supervisor in the facility what supplies that should be on hand before the CHWs make their group visit. Cell phones can also be used by supervisors to provide on-the-job skills coaching for CHWs and by CHWs among themselves to enable them to support each other and ask questions when they encounter difficulties.

The development of an effective supportive supervision system takes time (at least two years) and significant financial resources. It is not a quick fix. Decision-making authority must be decentralized to frontline supervisors. CHW program implementers should first select which of the range of supportive supervision mechanisms and tools are appropriate for the context, then adapt and test them, and then use this experience to gradually strengthen the program of supervision.

Key Resources

See the appendix to this chapter.

Ministry of Health and Population (Malawi): Integrated Supervision Checklist. Available online at: http://gametlibrary.worldbank.org/FILES/595_Guidelines%20for%20Routine%20MOH%20Supervision%20-%20Malawi.pdf.

Appendix: Examples of Forms and Checklists for Supervisors

ENGENDER'S COPE CLIENT-PROVIDER FLOW CHART[1]

(Developed for clinics, but could be adapted for CHWs seeing clients in the community)

Site: Sunshine Clinic **Date:** September 10th, 2004 **Session:** Morning

CLIENT NUMBER	TIME IN–OUT	TOTAL TIME	CONTACT TIME (in minutes)	WAITING TIME (in minutes)	SERVICE TYPE (primary)	SERVICE TYPE (secondary)	VISIT TIMING	COMMENTS
01	8:00–8:50	50	40	10	B	C	2	
02	8:10–9:20	70	11	59	C	-	2	
03	8:15–9:23	68	14	54	C	-	2	
04	8:15–9:25	70	6	64	G	-	2	
05	8:15– 9:50	95	17	78	A	D	2	
06	8:15–11:00	165	57	108	F	D	1	
07	8:20–1:30	310	74	236	A	D	2	
08	8:20–11:00	160	17	143	F	-	1	
09	8:20–10:22	122	8	114	C	-	2	
10	8:28–12:55	267	193	74	E	D	2	
	Total							

Codes: Service Type

A—Antenatal care
B—Postpartum and newborn care
C—Family Planning
D—Reproductive Tract infections (RTIs)
Includes sexually transmitted infections (STIs)
E—HIV
F—Gynecological services
G—Men's reproductive health services
H—Infertility
I—Other (Please Describe)

Codes: Visit Timing

1—First visit
2—Follow-up visit

[1] Adapted from: EngenderHealth. 2003. *COPE Handbook: A Process for Improving Quality in Health Services*. EngenderHealth.

SUPERVISOR CHECKLIST FOR IMMUNIZATION PROGRAM AT HEALTH CENTER LEVEL[2]

(Developed for health centers, but could be adapted for CHWs working with immunization outreach sites in the community)

Name of Supervisor _____

Province/Municipality: _____ **Operational District:** _____

Health Center: _____

Date of Supervision:...../...../.....

Date of Previous Supervision: ...../...../.....

General Situation:

Number of staff: _____ **Villages covered** _____ **Total Population:** _____

Target children (< 1 year of age) _____

I. Questioning to Health Staff and Reports Checking

1. Is the number of immunization days implemented equal with the number planned? *Yes / No

2. Has the graphic of the following up the coverage rate of the vaccination been appropriately done every month? *Yes / No

3. Has the rate of wastage been checked?

TYPE OF VACCINE	IMPLEMENTATION	ANNUAL PLAN
BCG	.....%	.....%
DTC 3	.....%	.....%
Polio 3	.....%	.....%
Measles	.....%	.....%
TT2+	.....%	.....% (for pregnant women)
TT2+	.....%	.....% (for others)

4. Check the immunization's result in the reports and count the number in the immunization log sheet in the previous month.

TYPE OF VACCINE	IN THE REPORTS	IN THE IMMUNIZATION LOG SHEET	CORRECTION
BCG			Yes / No
Measles			Yes / No
DTC 3			Yes / No
TT2+ (Pregnant Women)			Yes / No

5. Are there any appropriate refrigerators to keep the vaccines? Yes / No

6. Has the graphic of monitoring the cold chain been correctly and regularly drawn every month? Yes / No

[2] Children's Vaccine Program at PATH. 2003. *Guidelines for Implementing Supportive Supervision: A Step-by-Step Guide with Tools to Support Immunization*. PATH: Seattle.

EXAMPLE OF A SUPERVISORY TRANSPORT BUDGET SHEET

This is a sample tool for planning and calculating the cost of supervision visits. Distances, per diem rates, and fuel and maintenance costs are normally found in district/regional micro-plans or in national/district budgets.

Table A: Transportation costs per supervision visit

A	B	C	D	E	F	G
DISTRICT	TOTAL KMS	COST OF FUEL PER KM	MAINTENANCE PER KM	TRANSPORTATION COST OF SUPERVISION VISIT = (C+D) X A	NUMBER OF SUPERVISION VISITS PER YEAR	TOTAL TRANSPORTATION COSTS PER YEAR = E X F
District 1	4,460	49 CFA	60 CFA	486,140 CFA	3	1,458,420 CFA
District 2	4,200	49 CFA	60 CFA	457,800 CFA	4	1,831,200 CFA
District 3	22,512	49 CFA	60 CFA	2,453,808 CFA	3	7,361,424 CFA
District 4	4,200	49 CFA	60 CFA	457,800 CFA	3	1,373,400 CFA
District 5	4,620	49 CFA	60 CFA	503,580 CFA	4	2,014,320 CFA

Table B: Per diem cost per supervision visit

A	B	C	D	E	F
DISTRICT	PER DIEM RATE	NUMBER OF PER DIEM DAYS PER VISIT	NUMBER OF SUPERVISORS PER VISIT	NUMBER OF SUPERVISORS PER YEAR	TOTAL PER DIEM COSTS PER YEAR = B X C X D X E
District 1	5000 CFA	2	1	3	30,000 CFA
District 2	5000 CFA	2	1	4	40,000 CFA
District 3	5000 CFA	4	2	3	120,000 CFA
District 4	5000 CFA	2	1	3	30,000 CFA
District 5	5000 CFA	2	2	4	80,000 CFA

Table C: Total supervision costs per year

A	B	C	D
DISTRICT	TOTAL TRANSPORTATION COST PER YEAR (TABLE A, COLUMN G)	TOTAL PER DIEM COSTS PER YEAR (TABLE B, COLUMN F)	TOTAL SUPERVISION COST PER YEAR = B+C
District 1	1,458,420 CFA	30,000 CFA	1,488,420 CFA
District 2	1,831,200 CFA	40,000 CFA	1,871,200 CFA
District 3	7,361,424 CFA	120,000 CFA	7,481,424 CFA
District 4	1,373,400 CFA	30,000 CFA	1,403,400 CFA
District 5	2,014,320 CFA	80,000 CFA	2,094,320 CFA

DIRECT OBSERVATION SUPERVISION CHECKLIST FOR A REPRODUCTIVE HEALTH PROGRAM[3]

Community Reproductive Health (RH) Project
Counseling for RH Services- Supervision Checklists

Name of CHW: _____

Date and Location: _____

ASPECT TO BE ASSESSED	NOT DONE	POORLY DONE	WELL DONE
1. Greeted/welcomed client			
2. Introduced her/himself			
3. Explained the purpose of visit			
4. Asked client about his/her RH problems/needs			
5. Asked client what he/she knew about family planning (FP)/sexually transmitted diseases (STDs)			
6. Displayed available FP methods			
7. Used relevant information/education/communication (IEC) materials			
8. Helped client select a method/plan of action			
9. If pill is chosen, did CRW use checklist to screen?			
10. If injectable contraceptive is chosen, did CRW use checklist to screen?			
11. Explained to the client how to use method			
12. Demonstrated to client how to use method			
13. Explained possible side effects			
14. Emphasized the importance of condoms for STS/HIV prevention			
15. Responded correctly to client's questions			
16. Gave follow-up appointment			
17. Thanked client			
18. Demonstrated sensitivity to client's gender			

Overall positive comments:

Suggestions for improvement:

Any follow-up required:

[3] K4Health. Supervision Checklist (www.k4health.org/.../Directly-observed%20Supervision%20Checklists)

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Chapter 11

What Motivates Community Health Workers? Designing Programs that Incentivize Community Health Worker Performance and Retention

Christopher J. Colvin

Key Points

- Financial compensation is one – but only one – of many influences on the motivations of community health workers (CHWs) to perform their responsibilities.
- Non-material incentives need to be given careful consideration along with financial incentives.
- Indirect non-material incentives, such as the degree to which the environment is supportive of CHWs and the degree to which the health system functions effectively are also motivating influences for CHWs.
- Lack of appropriate incentives, with resulting high rates of turnover, are common in large-scale CHW program and costly in terms of actual cost to replace CHWs and also in terms of the performance of the CHW program.

INTRODUCTION

A perennial challenge in CHW programs is the question of how to motivate community members to engage in community health work as CHWs, to remain in these positions once trained, and to perform their work effectively over time. Motivation is a complex phenomenon that is the product of a range of psychological, interpersonal, and contextual factors. Thus, there is no one right or best way to motivate CHWs in their work, but there are some lessons that can be gleaned from the experiences of other CHW programs. This chapter reviews the question of CHW motivation and identifies a range of issues that policymakers and program managers would need to grapple with as they consider how best to motivate CHWs in their own context.

The most common approach to developing and sustaining motivation in CHW programs revolves around the use of discrete "incentives." These incentives are often understood in a fairly narrow fashion, as specific forms of reward—like payments, promotions, or awards—to motivate CHWs to perform specific tasks or achieve a certain level of performance. It is in this sense that many policymakers, program managers, and CHWs themselves understand the term "incentive."

However, one can also define CHW incentives as any factor that increases motivation to engage and perform well in CHW work. In Bhattacharyya's (2001) seminal review on this issue, the authors used the concept of "incentives" (and "disincentives") in just such a broad fashion.[1] The value of this more expansive idea of incentives is the insight that the factors that serve as incentives for CHWs to perform well are far more numerous and complex than just the explicit financial or non-financial incentives (in the narrow sense) offered by programs to reward particular behaviors. Decent salaries and opportunities for advancement may motivate CHWs, but so too can supportive colleagues, a safe working environment, and the recognition of the community.

This chapter shares this broad view of incentives and discusses a wide range of factors that can support or inhibit a CHW's motivations to engage in CHW programs and perform well in their tasks. It examines how CHW programs can produce and sustain CHW motivation by paying attention to the many different factors that act as incentives for their work.

KEY QUESTIONS

- What forms of incentives are there?
- What are decisions related to incentives that must be made?

WHAT FORMS OF INCENTIVES ARE THERE?

Although there are many ways to define and categorize incentives, some common and useful distinctions can be made. Table 1 presents some illustrative examples of these common categories of incentives.

Table 1. Common categories and examples of CHW incentives

	FINANCIAL INCENTIVES	NON-FINANCIAL INCENTIVES
DIRECT INCENTIVES	*Terms and conditions of employment*: salary/stipend, pension, insurance, allowances, leave	*Job satisfaction/work environment*: autonomy, role clarity, supportive/facilitative supervision, manageable workload
	Performance payments: performance-linked bonuses or incentives	*Preferential access to services*: health care, housing, education

	Other financial support: reimbursement of costs (travel, airtime), fellowships, loans, ad hoc	*Professional development*: continuing training, effective supervision, study leave, career path that enables promotion and moving into new roles
		Formal recognition: by colleagues, health system, community, wider society
		Informal recognition: T-shirts, name tags, access to supplies/equipment, bicycles, etc.
INDIRECT INCENTIVES	**HEALTH SYSTEM**	**COMMUNITY-LEVEL**
	Well-functioning health systems: effective management, consistent M&E, prompt monthly payments, safe environment, adequate supplies, and working equipment	Community involvement in CHW selection and training
	Sustainable health systems: sustainable financing, job security	Community organizations that support CHWs
	Responsive health systems: trust, transparency, fairness, consistency	CHWs witnessing visible improvements in health of community members
COMPLEMENTARY/ DEMAND-SIDE INCENTIVES	**HEALTH SYSTEM**	**COMMUNITY-LEVEL**
	Health care workers witnessing and grateful for visible improvements in health of community members	Community members witnessing and grateful for visible improvements in health of its members
	Policies and legislation that support CHWs	Successful referrals to health facilities
	Funding for CHW activities from state or communities	CHW associations

CHW incentives are most commonly divided into financial and non-financial incentives. Both of these kinds of incentives might be referred to as "direct" since they are specific incentives offered directly to individual CHWs as part of a CHW program. Most programs offer some form of financial incentive. In larger government-run programs, these might be modest but full-time salaries. In non-governmental organization (NGO)-run or community-supported programs, these incentives might be small stipends and reimbursements for travel or airtime. Rwanda and India, for example, have developed performance-based incentive programs that reward CHWs for better job performance. India also offers a life insurance program to some of its government CHWs, and some NGO programs in South Africa offer scholarships for further training. Common non-financial incentives found globally include formal uniforms, T-shirts, and name tags; access to bicycles and medical supplies; and preferential access to health or housing resources. See the first set of rows in Table 1 above for common categories and examples of direct incentives.

The second set of rows in Table 1 lists what can be called "indirect incentives." Dambisya et al.[2] define indirect incentives as incentives "not specific to individuals or groups, but to the system as a whole." Dambisya focuses on health systems-related indirect incentives, such as good management, sustainable financing, fairness, and transparency. In many settings, indirect incentives have been identified by CHWs and program managers alike as critical success factors for effective CHW programs.

Bhattacharyya et al.[1] also describe "community-level factors that motivate individual CHWs." These include community involvement in CHW training and selection, and community support for the work of CHWs. These forms of community involvement are not intended to directly incentivize CHWs, but promoting a positive and effective working relationship with the communities they serve can be a powerful motivating force for CHWs. Therefore, these kinds of incentives can be considered as community-based forms of indirect incentives and are placed

alongside the health system-related ones in the second set of rows in Table 1. (Also see Chapter 13 on community relations for more detail.)

Finally, incentives, whether direct or indirect, are generally defined by their impact on the motivation of individual CHWs. Bhattacharyya et al.[1], however, make an useful distinction between factors that motivate individual CHWs and factors that motivate others to support and sustain CHWs in general. Here, we have called these "complementary incentives" because they complement efforts to incentivize CHWs themselves. One example might be the greater support for CHWs and their work that can emerge when health care workers or community members witness tangible changes in health outcomes that are the result of CHW initiatives. As with the indirect incentives, we have divided complementary incentives into health systems and community-specific ones (see the third set of rows in Table 1).

Because we have taken a broad view of incentives, as all those factors that affect the motivation of CHWs, many of the incentives we discuss below will overlap with issues raised in the other chapters in this book (for example, supervision, financing, training, and governance). To try to reduce duplication, we will consider them here only with respect to their impact on CHW motivation and performance.

Case study: incentivizing CHW cadres in India

CHW program designers and managers often do not fully understand the complex set of motivations that lead CHWs to engage in the difficult work that they do. Many programs rely on a vague notion of altruism to explain why CHWs take on this work and offer small "stipends" and ad hoc incentives, such as T-shirts, to keep CHWs engaged. Altruism is indeed, for most CHWs, paid or not, an important source of intrinsic motivation.

Creating and sustaining CHW motivation over time, however, is much more complicated than relying on altruistic motives or the occasional symbolic or material incentive. To illustrate how challenging it can be to produce and maintain CHW motivation over time, we present here a brief case study of three linked CHW cadres in India and the various, and contrasting, ways in which they have been incentivized in their work.

Auxiliary nurse midwives (ANMs) were established in the 1960s as part of the Indian government's effort to offer maternal and child health (MCH) services at a lower level than its primary health care (PHC) centers. ANMs are paraprofessional, village-level midwives with several years of MCH and midwifery training, but are not considered fully-qualified health professionals. Over time, their scope of tasks has expanded considerably beyond midwifery to a range of preventive and curative services, including family planning and immunizations. They are not selected by the community and are transferred regularly to different communities. They are full-time salaried employees and also receive some housing benefits.

The anganwadi worker (AWW) cadre was created in 1975 as the centerpiece of the government's Integrated Child Development Service program. The initial focus on children from birth to six years of age has expanded to include nutritional support and health education for adolescent girls and lactating women, and in some states, even curative services. They receive 2 to 3 months of training, and are responsible for a wide range of preventive and promotive services. They are supposed to be selected and managed by the community, and as 'honorary workers,' are paid a monthly stipend, which functions as a salary for most AWWs. They work closely with ANMs and accredited social health activist (ASHA) Workers (see below).

The ASHA initiative began in 2005 as part of the Indian government's restructuring of its rural primary healthcare system. ASHA Workers (often called simply ASHAs) live in the communities where they work and are supposed to raise community awareness around health and the social

determinants of health. They should also work to enable communities to plan, access, and hold accountable their local health services. They are selected and managed by the community and receive one month of training. They are considered unpaid volunteers, but receive outcome-based payments from some of the activities that fall within their scope of work, including promoting immunizations, facility deliveries, family planning, and latrine construction. They are also compensated for time spent in trainings and meetings.

There are some common health system-related challenges shared by all three of these cadres that affect CHW motivation and performance. Poor training and supervision are frequent complaints. Also, their overall workloads and their scopes of work seem to increase continuously. Finally, poor quality health services affect their relationships to the communities they are supposed to serve and represent.

There are also motivational challenges specific to each type of worker. ANMs struggle with frequent transfers within the health system that can separate them from their families and weaken ties to the communities where they work. AWWs also suffer weak links to many communities in practice, even though they are supposed to be selected and managed by communities. In reality, the AWW program has been too top-down and inflexible in its approach, and this has affected program responsiveness and AWW morale. AWWs' monthly stipend, and their long-standing presence in communities, however, does bolster their status and provides many a sense of superiority over the ASHAs with whom they work.

The issues of motivation and incentive are probably most complicated for the ASHAs. Though classed as volunteers, the outcomes-based payment scheme incentivizes work that produces income. Therefore, ASHAs often neglect tasks that do not generate funding. ASHAs also receive their funding from ANMs at the PHC centers, and this funding has led them to be perceived by many as part of the health system rather than as community-level activists. Nonetheless, ASHAs are increasingly dissatisfied with the funding they do receive and have lobbied for more remuneration. States have begun to introduce a range of additional financial and non-financial incentives, such as cash awards for the best performing ASHAs, newsletter and radio programs, bicycles, and nursing scholarships.

Although ANMs, AWWs, and ASHAs represent different points on the spectrum between paid and unpaid CHWs, they are impacted by many of the same health system-wide challenges that affect motivation. The specific ways in which they are incentivized also have their own unique impacts, both positive and negative, on their motivation. Well-intentioned attempts to incentivize the work of the ostensibly volunteer ASHAs toward priority health outcomes, such as immunizations and facility births, have resulted in several unintended consequences. These consequences present ongoing challenges to ASHA program managers as they try to strike a balance between promoting a wide-ranging social health activist role for ASHAs and financially incentivizing priority health activities.

WHAT ARE DECISIONS RELATED TO INCENTIVES THAT MUST BE MADE?

Designing effective incentives to increase motivation and performance is clearly a complex task and requires careful attention to a range of interconnected factors. Like any other aspect of the health system, incentives need to be 1) properly designed through review of the evidence and consultation with stakeholders, 2) implemented, managed, and monitored on an ongoing basis, and finally, 3) evaluated to assess their effectiveness and plan for changes. These three steps outline the stages of a generic program "planning cycle" that is commonly used to manage programs over time.

The decision questions discussed below are designed to help policymakers, program managers and implementing staff at all levels to think through how various elements of a CHW program work (or do not work) together to increase CHW motivation and improve recruitment, retention, and performance. The first decision question explores the issue of how to design direct incentives, the second examines the design of indirect and complementary incentives, and the third reviews issues related to sustaining, managing, and evaluating incentives over time.

DECISION 1: WHAT KIND OF DIRECT FINANCIAL AND/OR NON-FINANCIAL INCENTIVES SHOULD CHWS RECEIVE?

Background

Policymakers and CHW program managers wrestle with this question most directly. It is often framed as a choice between "paid" and "volunteer" models, but the options and the challenges involved are actually much more complicated. In fact, there is a spectrum of possible approaches, from volunteers who cover their own costs and determine their own hours of work on one end, to salaried CHWs on the other end who have contracts, supervisors, and benefits similar to the other health care professionals with whom they work. Every program, however, that we have reviewed provides some kind of direct incentive for participation.

In practice, most CHW programs fall somewhere in the middle and incentivize their CHWs with some combination of salary or stipends (depending on whether they are considered to be employed by the government or acting as volunteers from the community) and a range of non-financial incentives such as uniforms, T-shirts, training opportunities, or community recognition. CHW salaries are typically less than those of nurses, but are still a substantial means of support for most CHWs. Stipends for volunteers, by contrast, are often framed as mere "honoraria" or "token" payments to volunteers, meant to reimburse them for the cost of their travel or their food during the day.

In most of the economically marginalized communities where one finds CHWs, however, these stipends and other non-financial incentives can still represent a significant financial or material benefit. Non-financial incentives, such as training opportunities, preferred access to healthcare services, or access to uniforms and bicycles can also have substantial material benefit. Even stipends that are well below the minimum or average wage in a community are often meaningful enough to keep CHWs, who might otherwise be completely unemployed, engaged in this work.

Whether or not these stipends can be justified ethically or whether they are legal with respect to local labor law is a separate but important concern. When CHWs are employed full-time as members of the formal health system, they typically enjoy many of the same legal protections and financial benefits as other employees. When framed as volunteers, however, they can sometimes be paid very little, despite the fact that the services they perform can require considerable time and energy and look very similar to the work of other paid healthcare staff.

Many of the non-financial incentives can also be quite powerful motivators of CHWs. These motivations include not only altruism rooted in religious or cultural norms of self-sacrifice for others, but also the desire for social recognition and status. Being identified as a valued member of the community and/or a trained member of the health system can be an important source of social standing and affirmation for CHWs. Successful CHW programs typically offer a mix of financial and non-financial incentives. There is no general rule for how many of these incentives should be offered or at what level, but successful incentive strategies do reflect the local contexts and concerns of the CHWs. This includes not only the country's cultural or religious context but also its economic, political, and social contexts.

Key Issues to Consider

Programs need to consider local precedents and expectations with respect to CHW incentives (see 1.1 in Table 2 below). Past or present CHW programs, operated either by the state or by NGOs, may have offered incentive packages that then become the basis for the expectations around new CHW programs. Local cultural and religious norms also shape the expectations of CHWs (see 1.2 in the Table 2 below). Religious norms can support the altruistic impulse behind CHW work, and, in some cases, financial incentives may be perceived as a direct threat to religious norms of service. Some have argued that this is the case, for example, among the Female Community Health Volunteers (FCHVs) in Nepal, whose participation in CHW work is often framed explicitly as part of a religious duty to serve. In other cases, however, social values may instead highlight the importance for fair and equitable levels of financial incentive.

Program designers and managers should also try to understand the personal motives and triggers of CHW involvement (see 1.3 in Table 2 below). Some CHWs are motivated to do this work because of personal experience with a specific health problem. Many of the CHWs in Southern Africa who work on HIV/AIDS programs, for example, have direct experience themselves or in the families with the disease. For others, the involvement of people in their social network can trigger their engagement. No matter how personal these motivations and triggers for involvement might be, however, they can and should be reinforced through social recognition of the value of CHWs (see 1.4 in Table 2 below). Programs can support the intrinsic motivations of CHWs by recognizing them for their contributions and encouraging community affirmation of their importance and impact. For example, Afghanistan holds an annual "CHW Day." Nepal too has a national day of recognition for its FCHVs and also provides them with ID cards to identify them as representatives of the health system.

Often, CHWs judge the value of incentives in terms of how equitably they are distributed, how consistently they are provided, and how they relate to the local labor market and economic contexts. The fairness of incentives matters because incentives are generally perceived to signal something about how the health system or community values CHWs (see 1.5 in Table 2 below). Incentives do not have to be *equal* across all sub-categories of CHWs, but when they are seen to be inconsistently or *inequitably* distributed, CHWs express frustration and resentment at both the implied message this sends, as well as the domino effect it can have on a family's welfare and access to resources.

Similarly, the sustainability of incentives is critical, and incentives that are distributed at inconsistent intervals, or run out at unexpected times can communicate lack of regard for CHWs as well (see 1.6 in Table 2 below). FCHVs in Nepal, for example, had their small stipends discontinued when the financing proved unsustainable. CHWs in Pakistan and South Africa often suffer demotivating delays in their monthly payments.

The messages that these delays and inequities can send about the value of a CHW's time and effort are also interpreted against the backdrop of the local labor market and economic contexts (see 1.7 in Table 2 below). If alternative employment opportunities are relatively plentiful, CHWs may have higher expectations of how their time is recognized and compensated. On the other hand, if work is scarce, CHWs may accept lower levels of incentive, both because there are few alternatives and because CHW training experience can provide a "stepping stone" to hard-to-reach employment opportunities.

To help policymakers and program managers think about the impact of local context on the particular mix of incentives that might be most effective, Table 2 reviews each of these issues and offers some questions to consider when designing incentives for CHWs.

Table 2. Questions to consider regarding direct incentives

1.1 Local precedents and expectations	Are there (or have there been) other CHW programs in the area? What have they offered as incentives? Do CHWs in your program expect the same? How will they interpret something less or something different? Are you in "competition" with these other programs? If so, how will you motivate CHWs to join and remain in your program, even if your incentives are different?
1.2 Local cultural and religious norms	What are the cultural or religious values that sustain altruism among CHWs? Does the work they do speak to those values? Is there a potential conflict between the material benefits offered (such as stipends) and these values about the virtue of self-sacrifice? Are there ways to manage this tension? How widely shared are values in actual practice or is there diversity in the value systems that motivate CHWs?
1.3 Personal motives and triggers of CHW involvement	How many of the CHWs in your program have some personal connection to the health problems addressed? What was their trigger for getting involved? How do the incentives offered relate to (promote or hinder) these personal motives and triggers for CHW involvement?
1.4 Social recognition of the value of CHWs	How are CHWs made visible in the health system and the community? How is their identity, their status and the value communicated? In what ways are CHWs formally recognized by the health system and the community?
1.5 Fairness of incentives	Are the incentives in your setting distributed fairly among different types of CHWs? If some CHWs are offered more or different incentives, is there a good justification for this and do the CHWs involved understand this justification? Are there inequities with respect to gender, age, type of work, length of service, religious or ethnic affiliation, or geographic region?
1.6 Sustainability of financing	How sustainable is the incentive package you are offering? Does it rely on overseas or special project funding from the MOH? Are alternative funding sources available? What do the CHWs understand about the longer-term sustainability of this financing?
1.7 Local labor market and economic context	How bad is poverty or unemployment in the area and how does this shape the meaning of the incentives offered? What are the other job opportunities available to CHWs, if any? Do CHWs see their training and experience as a CHW as a "stepping stone" to other job opportunities?

The seven key issues raised in Table 2 are not exhaustive, but they cover some of the most frequent kinds of questions that arise when trying to design and implement effective CHW incentives. Every local context will answer these questions differently, but if they can be answered well, there is a good chance that the particular mix of incentives offered to CHWs will be effective and sustainable.

DECISION 2: HOW CAN THE HEALTH SYSTEM AND THE COMMUNITY CONTRIBUTE TO INDIRECT AND COMPLEMENTARY INCENTIVES FOR CHWS?

Background

Although most of the attention paid to CHW incentives revolves around direct financial and non-financial incentives, it is also important to consider indirect and complementary incentives. Indirect and complementary incentives are those features of the health system and community context that either support or inhibit CHW motivation for their work (see Table 1 above). We have outlined a series of questions regarding these kinds of incentives in both the health system and the community in Table 3 below.

It should not be surprising that a well-functioning health system is motivating for CHWs and health care professionals alike. A well-functioning health system that also promotes recruitment, retention, and performance of CHWs includes: good training and supervision, clear roles and responsibilities, adequate supplies and equipment, up-to-date health information, effective referral relationships, and fair and transparent forms of accountability.

Key Issues to Consider

CHW programs operate in contexts where health systems are struggling. Although strengthening these health systems is a necessary long-term endeavor, there are some small improvements that can be made in the short-term that have a big impact on CHW motivation. CHWs can be motivated, for example, by having clear roles and responsibilities and the opportunity for feedback to and from both their peers and managers (see 2.1 in Table 3 below). The supervision chapter in this volume (Chapter 10) highlights some practical ideas for how managers can help CHWs, and those with whom they work, be clear about what CHWs can be expected to do and, as importantly, what CHWs should not be expected to do. Strong nurse supervision of community health agents (CHAs) in Brazil has been identified, for example, as a critical factor in that program's success.[3]

CHWs also express a desire for the opportunity for personal growth and professional development (see 2.2 in Table 3 below), which involves not only the development of personal and professional skills required to do one's work, but also opportunities for developing new skills and promotion. The lack of longer-term planning for a career path is often identified as a critical reason CHW programs struggle with high turnover and dissatisfaction. Providing CHWs opportunities to take leadership roles among their peers, as is done in Rwanda and Pakistan, can have important benefits for motivation.

The day-to-day working relationships among CHWs and between CHWs and other health care professionals can also have a powerful effect on motivation (see 2.3 in Table 3 below). When CHWs feel valued by nurses, doctors, and other healthcare staff, their motivation can be greatly increased. On the other hand, indifference and hostility from these staff can put a serious drain on the job satisfaction CHWs may be getting from other parts of their work.

The community context also plays an important part in producing and sustaining CHW motivation. Clear lines of accountability and recognition across the health system and the community are important, especially if CHWs are seen to represent and work for both the health system and the community (see 2.4 in Table 3 below). It is important for CHWs to know whom they are "reporting" to, both for recognition of a job well done and also to manage poor performance or work conflict. The relationship between CHW, community, and health system can be complicated, however, as we saw in the India case study presented above, and what happens in practice is often not what is intended in policy.

In smaller CHW programs, supporting CHW "champions" in the community can also help to sustain CHW recruitment, retention, and performance (see 2.5 in Table 3 below). Many programs are started by dedicated local founders and/or sustained by the devotion of the time and resources of a few or key community champions of CHWs. Many of the NGOs that run CHW programs in South Africa are sustained by these kinds of champions. Even as programs scale up, making a place for the involvement of local champions in the community or the health system can be useful.

Similarly, working effectively with civil society partners is a critical element of a strong CHW program (see 2.6 in Table 3 below). In some contexts, civil society partners such as NGOs take direct responsibility for managing and delivering CHW services. In settings where CHW

services are state run, however, the participation and buy-in of civil society organization can still provide a valuable source of community energy and legitimacy for CHW programs.

Finally, the relationship between the community and the health system is an important part of the context as well (see 2.7 in Table 3 below). How CHWs see their work and are valued by their community and depends on the history of this relationship. In some places, where state-run health services and/or the state more generally, are perceived with suspicion and even antagonism, CHWs may need to downplay their relationship to the health system. In others, where the state is trusted or biomedicine is seen as a source of prestige, CHWs may value opportunities to be seen as representatives of the health system.

Table 3 below reviews each of these issues and offers some questions to consider when designing incentives for CHWs.

Table 3: Questions to consider regarding indirect and complementary incentives

2.1 Clear roles, responsibilities, and feedback	▪ Do CHWs have clear job descriptions and distinct roles? ▪ Are the other health care workers aware of these roles? Are there areas of ambiguity or overlap? ▪ Do CHWs have the chance to get and give feedback from other staff or managers on a regular basis?
2.2 Personal growth and professional development	▪ What elements of the CHW role promote personal growth (e.g., social, emotional, psychological, intellectual skills, and development)? ▪ How can these elements be strengthened in the program? ▪ What elements of the CHW role promote basic professional development (e.g., computer, administrative, financial, or logistical skills)? How can these elements be strengthened in the program?
2.3 Day-to-day working relationships	▪ Do CHWs ever get the chance to work with each other in their daily work? ▪ Are there CHW associations or networks? ▪ How do CHWs and healthcare professionals relate to each other? How does the work environment affect these relationships? ▪ How are conflicts between CHWs and other health care workers addressed?
2.4 Accountability in the health system and community	▪ Are there multiple or confusing lines of accountability for CHWs (e.g., do they report to both the health system and the community or civil society managers)? ▪ How are conflicts or issues of poor performance among CHWs handled and by whom? ▪ How can overlapping or confusing lines of accountability be clarified or reconciled?
2.5 CHW "champions"	▪ Are there "champions" behind the CHW programs in your context, whether from the community, the health system, or civil society? ▪ How do they contribute to the program and what risks does their participation involve? ▪ Is the policy environment flexible enough to allow champions to emerge and contribute to CHW programs in a positive way?
2.6 Role of civil society partners	▪ What is the character of civil society (e.g., NGOs, community-based organizations, faith-based organizations and other forms of community organization) and how does civil society engage with CHWs? ▪ Who runs these organizations and do they represent broader community interests and perspectives? ▪ How does the relationship between civil society and the health system affect CHW motivation? To what extent does the CHW program's success rely on civil society?

2.7 Community's relationship to the health system and government	▪ What is the historical relationship between the local community and the health system/government? ▪ If one of antagonism and mistrust, how does this impair CHW motivation? ▪ If one of solidarity and confidence, how does this promote CHW motivation?

Again, many of the issues raised in Table 3 above involve broader issues in the health system (and are dealt with in other chapters), the community, and civil society. They are often not easily modifiable by CHW policymakers and program managers. However, these issues can often be understood and their effects anticipated and mitigated by CHW programs. Thinking about the troubled history of the relationship between a community and its health system might lead a policymaker, for example, to offer non-financial incentives that highlight the CHW's community identity (through NGO-led community appreciation days) rather than their relationship to the health system (through uniforms or name tags). Knowing that difficult relationships in a clinic between CHWs and nurses impact CHW motivation might lead a program manager, for example, to find ways of promoting better working relationships through shared training opportunities or joint staff meetings.

DECISION 3: HOW WILL CHW INCENTIVES BE DESIGNED, NEGOTIATED, MONITORED, EVALUATED, AND RE-ADJUSTED OVER TIME?

Background

Once programs have addressed some of the issues raised in Decisions 1 and 2 above, and once they have developed an effective mix of direct, indirect, and complementary incentives, the next challenge for both program designers and managers is maintaining the impact of these incentives over time. As one of our key informants put it:

> The number two issue [leading to the failure of CHW programs] is related *to lack of long-term perspectives* with regard to CHW careers [career trajectory] and long-term issues that CHW programs face.

As part of the preparation for this volume, we have reviewed the available evidence on incentive programs and asked individual program managers about their experiences of running CHW programs. We found that there is much more attention paid and evidence available with respect to the initial design of incentive packages, and much less is known about how to effectively manage and adjust these packages over time. In many cases, it appears that, once instituted, incentive packages either do not change or they change due to external circumstance (e.g., loss of funding) rather than a planned process.

Maintaining the motivation of CHWs through the appropriate incentives is critical for program effectiveness, regardless of where they fall on the spectrum between volunteers and paid employees. Therefore, it is important to see incentives not as a static problem with a straightforward answer, but as a dynamic process over time that requires attention.

Key Issues to Consider

The first step in thinking about how to use and manage incentives over time is to ensure an inclusive design process from the beginning that meaningfully incorporates the perspectives, needs, and expectations of the CHWs themselves (see 3.1 in Table 4 below). Proper consultation early on can be vital in ensuring that incentives are seen as legitimate and appropriate on an ongoing basis, even if the incentive package does not meet many of the expectations of CHWs. Early consultation also lays the foundation for an easier process at a later stage of reviewing and adjusting incentives. Just as with the initial design process, the process of evaluating and

reflecting on incentives and making changes to incentives packages should be similarly inclusive.

Once an incentive package has been designed and implemented, ongoing management is required for a number of reasons. For example, workloads for CHWs can change over time. The case study from India highlighted the fact that the tasks allocated to CHWs also often change and can present new technical challenges for individual CHWs who may have less capacity or experience. Feeling that the workload and technical requirements of the job are "do-able" is an important incentive for CHWs, especially given that their scope of work is often poorly defined and supervision weak (see 3.2 in Table 4 below).

CHW incentives can also lose their effect and can interact in unexpected ways over time (see 3.3 in Table 4 below). The case study of the ASHAs in India above illustrated several unintended consequences of the outcomes-based incentive scheme in that program. These included an over-emphasis on those health tasks that could generate income and an association of ASHAs with the health system, even though they were supposed to function as community-based activists. Similarly, FCHVs in Nepal are increasingly dissatisfied with the small stipends they have received. Rather than seeing payments as contrary to religious imperatives, they are starting to lobby for full salaries. Managing these kinds of issues that emerge over time requires ongoing attention.

Finally, CHWs themselves change over time as do the social, economic, and political contexts in which they work (see 3.4 and 3.5 in Table 4 below). The longer a CHW remains in a program, the more likely they are to have (more) children or pursue further training and education. Their interests may shift over time, and their motivation for engaging in CHW work may wax or wane. Although programs cannot attend to the changing circumstances of every CHW, ongoing supervision would provide an opportunity to identify and respond to some of these changes as they emerge. Similarly, changes in the social and community contexts, in the economic situation, or in the political circumstances of the country can also impact, positively or negatively, on the ongoing effectiveness of CHW incentives.

Table 4 below reviews each of these issues and offers some questions to consider when designing and managing incentives for CHWs.

Table 4: Questions to consider regarding the ongoing management and evaluation of CHW incentives

3.1 The importance of feedback and participation in the policy/program cycles	▪ What kind of planning and consultation went into the design of incentives at the beginning of your CHW program? Were CHWs consulted? If so, how? If not, why not? ▪ What do CHWs feel about the current, formal incentive package? ▪ Are there opportunities for soliciting their feedback and feeding it into ongoing policy and program design cycles? ▪ Do CHWs perceive this consultation process to be fair and responsive?
3.2 Ensuring the "do-ability" of CHW work	▪ How is the CHW's set of responsibilities decided on and how do managers ensure CHWs have the capacity to fulfill these responsibilities? ▪ Will managers know if the workload or the job requirements are exceeding the capacities of individual CHWs? ▪ Do CHWs have the opportunity to speak out about issues of workload or technical capacity? ▪ Are CHWs or program managers able to re-organize tasks to improve the "do-ability" of the role?

3.3 Sustaining the effect of CHW incentives and managing their unintended consequences	▪ How do CHWs understand and prioritize the various incentives (of all kinds) offered by the program? ▪ What increased or alternative incentives do they say would help sustain their motivation? ▪ Are incentives sustainably and equitably distributed? ▪ Have there been unintended consequences of a particular mix of incentives in a program? ▪ Does policy afford program managers flexibility in adjusting the mix of incentives?
3.4 Change over time as motivations, needs, and capacities of individual CHWs change	▪ Have the incentives offered to CHWs remained the same over a long period of time? ▪ If so, do they still motivate CHWs? ▪ If not, should the incentive be increased or complemented with another kind of incentive? ▪ As CHWs get older and have families, do they report that previous incentives are less relevant and alternative incentives potentially more effective?
3.5 Changes in social, cultural, political, economic, health systems, and demographic contexts	▪ Since the initial design of a CHW program and its incentives, what has changed in the broader context that might impact on these incentives? ▪ Have there been changes in the priority diseases, disease-related stigma, demographics of the local setting, political or social conflicts, economic opportunities, or structure of the health system? ▪ If so, do any of these changes affect the incentives offered to CHWs?

As with the indirect and complementary incentives outlined in Decision 2 above, the challenges of managing CHW incentives over time are often outside the control of program designers and managers. Some of these challenges can be anticipated and planned for, but many cannot. The key question, therefore, to ask in these circumstances is not what kinds of incentives will last the longest over time, but what kind of local process for designing, managing, and re-evaluating incentives will be most effective at responding to these changes over time.

CONCLUSION

This chapter has highlighted the fact that there is no easy, one-to-one relationship between incentives, motivation, and practice. Local relationships, contexts, histories, beliefs, and expectations can each have a dramatic effect on how and why a particular mix of program features may or may not work to incentivize CHWs in a particular place and time.

Many of the factors described above are features of the broader health system or social and economic context (see especially Decisions 2 and 3). We have argued above that although programs cannot change or predict many of these factors, they can anticipate and manage them, which is especially important because the "stick" factors – the factors that keep one in a job –are generally much weaker for CHWs than they are for health care professionals. [4] Thus, it is critical to pay careful attention to all the factors that motivate CHWs to engage, remain in, and perform their best in this important work.

Key Resources

A good in-depth case study related to CHW incentives: Glenton C et al. 2010. The female community health volunteer programme in Nepal: decision makers' perceptions of volunteerism, payment and other incentives. *Soc Sci Med* 70(12): 1920-7.

A good overview on incentives: Strachan D et al. 2012. Interventions to improve motivation and retention of community health workers delivering integrated community case management (iCCM): stakeholder perceptions and priorities. *Am J Trop Med Hyg* 87(5 Suppl): 111.

A useful empirical study that also incorporates a helpful conceptual framework for sources of CHW motivation at individual, family, community, and organizations levels: Greenspan JA, McMahon SA, Chebet JJ, Mpunga M, Urassa DP, Winch PJ. Sources of community health worker motivation: a qualitative study in Morogoro Region, Tanzania. *Hum Resour Health* 2013; **11**: 52.

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SECTION 3: CHW PROGRAMS IN CONTEXT

Chapter 12

Community Health Worker Relationships with Other Parts of the Health System

Henry Perry, Steve Hodgins, Lauren Crigler, and Karen LeBan

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.

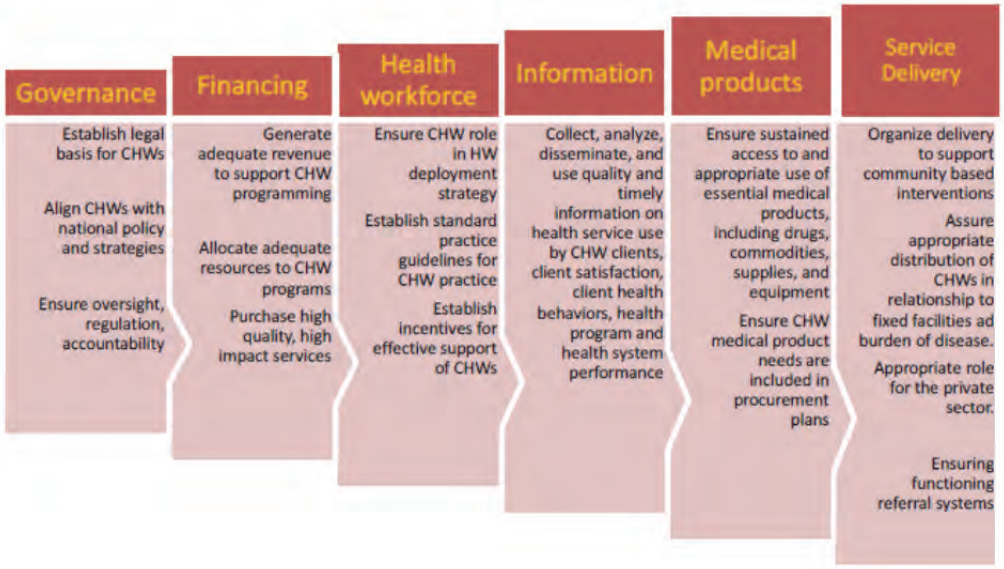
A health system is interconnected, dynamic (i.e., changing over time), self-organizing, and nonlinear. Programs that are to be integrated with this complex system should be designed with the dynamic and adaptive nature of the system in mind. That is, unintended consequences and feedbacks within the system 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 5 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 Appendix A 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 Appendix A 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 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 Appendix A.
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Chapter 13

Community Participation in Large-Scale Community Health Worker Programs

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Key Points

- Balancing the inherent tensions of a large-scale community health worker (CHW) program, where the CHW is the lowest-tier worker of a national health system while also acting on behalf of the always-changing local world of a community, will be an ongoing challenge requiring decentralized flexibility in program policy, design, and implementation.
- A successful CHW program requires the support and ownership of the community, as well as a supportive social and policy environment for community participation at national, district, and local levels.
- Cost and time of the implementer, district, and national-level personnel should be factored in when designing a community participation strategy.
- The development and support of community networks, linkages, partners, and coordination is necessary to enable a comprehensive community-participation approach for better health.
- Village health committees and other local governance structures can be effective mechanisms to ensure local leadership, legitimacy, participation, and governance, but these committees require continued training and investment.

INTRODUCTION

The Alma-Ata Declaration of 1978 affirmed that health is a fundamental human right and encouraged the active participation of recipients of health services and communities in the planning, organization, operation, and management of health care systems.[1] The right to health can be viewed as a right to health care and a right to conditions that promote good health. Community participation provides an opportunity for citizens to have a voice in ensuring the state meets their needs and to contribute to life-affecting processes, while building or rebuilding trust between the public and the health system.[2] Health care is also experienced in a highly complex personal and community context where

- people are more likely to use and respond positively to health services if they have been involved in decisions about how these services are delivered;
- people have individual and collective resources (time, money, materials, and energy) to contribute toward their individual and collective health goals;
- people are more likely to change health behaviors when they are involved in deciding how that change might take place; and
- people gain information, skills, and experience in community involvement that helps them take control of their own lives and challenge social systems.[3]

CHW programs thrive in communities that have been mobilized as part of a larger political process for promoting better public health (i.e., in China and Brazil), but generally struggle where CHWs themselves are given the responsibility of galvanizing and mobilizing communities. Even when CHWs have support from community-based, faith-based, or nongovernmental organizations (NGOs), they can struggle when asked to take the lead in mobilizing communities, rather than working with the support of already active communities.

A CHW, by definition, is embedded in, drawn from, or at least related to the community in some way; and aims to make appropriate health promotion and service delivery strategies that reflect the political, environmental, social, and cultural dynamics and realities of the community. The CHW provides health care services in communities that are dynamic, evolving, and often unpredictable. The successful provision of such services requires that the CHW be known and trusted by the community. This important relationship with the community presents a challenge to national health programs. The challenge is to develop a national health program with standardized health system tools, clinical guidance, and performance targets based on medical evidence that are critical for scale-up, while at the same time empowering CHWs to respond appropriately to the specific needs and realities of local communities. The CHW stands at the intersection of these seemingly highly divergent needs.

In Part One, this chapter will review key questions related to community participation strategies, including:

- Why is community participation important to CHW programs and what does it look like?
- How can community participation be used to shape the design and management of CHW programs?
- How do you adapt community participation to local situations?
- What are key barriers and enablers to community participation?
- How can a community participation policy be designed to support a CHW program?
- What are various components of a functioning community participation strategy?

- How can governments maximize support of nongovernmental and faith-based actors in CHW programs?

Part Two will review community management structures in supporting CHW programs and answer the following key questions:

- What are common issues and good practices with community management structures?
- What are key questions to consider when designing a strategy for community management structures?

PART ONE: COMMUNITY PARTICIPATION AND COMMUNITY HEALTH WORKER PROGRAMS

Why Is Community Participation Important to Community Health Worker Programs and What Does It Look Like?

The ultimate responsibility of the CHW is to support equitable improvements in the health of the community he or she serves by both improving access to health services as well as building the capacity of individual, families, and communities to protect their own health. Therefore, efforts to strengthen CHW programs should seek community participation in planning, supporting, and monitoring service implementation to ensure that services are appropriate, the coverage of quality services is high, and that benefits accrue to those in greatest need.[4]

CHW programs often struggle to be successful when not part of a broader community engagement process. Such community engagement should be seen as an integral component of an effective CHW program. Community engagement refers to the process of getting community members involved in decisions that affect them, including the planning, development, management, and evaluation of health services, as well as activities, which aim to improve health or reduce health inequalities.[5] Its effectiveness is likely to depend on having explicit methods for involving individuals and communities, clearly defined roles and responsibilities, training for policymakers and clients, and adequate funding.

Figure 1 From passive to active community participation

Community engagement includes a variety of community participation approaches and runs along a continuum, from passive to transformative, and from informing, consulting, co-producing, and delegating power, through to more direct community control.[6] A 2011 review of CHWs[7] suggested that when managed effectively, a CHW program that is integrated with a well-functioning primary health care (PHC) system can provide a crucial link between community members and the PHC system itself, thereby providing a means for a continuum of care across multiple points of service. An earlier review[8] warned that CHWs often do not achieve their potential at scale due to social, cultural, and management factors, which are inextricably linked with the CHW's sometimes ambiguous position between the formal health sector and the community. Fostering the development of interpersonal, institutional, and community trust is therefore critical for effective CHW programs. Strategies to mitigate gender and cultural power barriers should be considered. A good CHW program can serve as a catalyst or platform for community participation.

Communities with high levels of community capacity—defined as the individual and aggregate strength of members to overcome barriers and cultivate opportunities to improve the overall well-being of a community and its individuals—are associated with improved health behaviors and ongoing collective action for health.[9] Community participation is important for communities and their health and enables CHW program success. Community ownership in the African Community-Directed Treatment Program, as defined by community leadership, selection of volunteers, and planning for the distribution of the drug ivermectin (to prevent river blindness), has been correlated with project sustainability.[10] CHWs can support community participation by sensitizing and educating the community on the benefits of health programs, supporting women's groups and other community-based organizations (CBOs) to participate in health activities, and providing an opportunity for communities to engage more directly with the health system.

In order for CHWs to effectively carry out their duties, a level of trust between the CHW and the community is needed to enable relationships that will produce positive health outcomes. Trust is one of several critical factors, along with respect and partnership, that are easily overlooked when a CHW program is put into place.[3] CHWs can be from highly divided communities, within which they face a great deal of conflict. Class, caste, and other divisions can affect their own positions and loyalties. The organization responsible for the CHW, generally the state, an NGO or a faith-based organization (FBO) may influence the success of the CHW in working with the community. When employed by the government, CHWs may feel more responsible to their employer than to the community, limiting their success in motivating behavior change. Government-employed CHWs may also spend more time supporting health center services due to the shortage of other qualified personnel and have minimal time to administer services within their community.

Box 1. Country Examples of Community Engagement

In Brazil, the Family Health Care Team includes a CHW who is directly tasked with promoting the organization of the community and acting as a link among different sectors, enabling the community to address barriers to health by taking collective action. Uganda employs a Village Health Team strategy with nine different types of community workers, including the CHW, a community medicine distributor, hygiene extension workers, peer educators, and traditional birth attendants (TBAs) to mobilize the community. In Ethiopia, communities support the Health Extension Agents in communication activities using traditional and indigenous community associations, such as women's groups, youth groups and religious institutions. In India, Village Health and Sanitation Committees, composed of village residents including the Accredited Social Health Activist (ASHA), provide support for the ASHA's activities.

An effective community engagement strategy will draw on community resources that can support CHWs to most effectively accomplish their health goals and tasks. We know that CHW programs change in both predictable and unpredictable ways as community and health systems evolve. Feedback from and the active involvement of all parties are needed to adapt effectively to these changes. CHW programs also need to learn how to meaningfully tap into the community's reservoir of good will, volunteerism, self-interest, and desire to help others in the community. Table 1 illustrates some roles communities can play to support CHWs and the health system.

Table 1. Illustrative roles communities can play to support CHWs and health systems, using the World Health Organization (WHO) health system building blocks framework

HEALTH SYSTEM BUILDING BLOCKS	ILLUSTRATIVE COMMUNITY ROLES TO SUPPORT CHWS
Service delivery	▪ Participate in multiple levels of CHW programming, including identification of objectives, formulation of action steps, support of health outreach activities, selection of CHWs, supportive supervision, and evaluation of CHW performance. ▪ Increase demand for and use of CHW health services. ▪ Determine fair and just distribution of CHW community activities and program benefits. ▪ Provide support and incentives for CHW to perform interpersonal counseling, especially for home care, preventive and promotive practices and referral. ▪ Develop and support collective systems for emergency transport and other referrals. ▪ Participate in planning meetings with the CHW helping her to problem solve when issues, such as alcohol abuse, violence, and other health problems, surface. ▪ Utilize new information technologies, such as mHealth (or mobile health), to support the CHW with health information sharing. ▪ Take collective action based on CHW information whether it is advocacy, behavior change, or participation in service delivery. ▪ Advocate for quality of care provided by CHWs and health centers.
Health workforce	▪ Utilize health innovations brought by the CHW and share them with peers. ▪ Ensure that the CHW-recommended appropriate action is extended to the disadvantaged groups in their community. ▪ Extend the reach of CHW health services by organizing peer groups for women, mothers, men, grandmothers, youth, or other people living with illness. ▪ Provide feedback through CHWs to professional providers to ensure the quality of care.
Health information system	▪ Support CHWs to collect vital events information, and identify and prioritize health problems based on accessible local data. ▪ Utilize local communication channels to diffuse health information brought by CHWs and make it public.
Essential medical products, vaccines and technologies	▪ Support CHWs by holding government accountable for the delivery of authorized health products, medications, and technologies at accessible locations.
Health financing	▪ Contribute labor, land, produce, cash, and other resources to support CHWs, locally appropriate health services, and disadvantaged populations. ▪ Support CHWs to access and leverage government and other resources to address local health priorities. ▪ Establish or contribute to community insurance schemes. ▪ Participate in events and promote products recommended by CHWs and health centers.
Leadership and governance	▪ Organize representatives of local leadership and governance structures to support CHWs. ▪ Ensure that health services provided by CHWs and local health facilities meet and are accountable to community needs. ▪ Ensure that health services provided by CHWs and local health facilities provide quality care. ▪ Work through CHW connections to focus political attention on government resource allocation decisions, prioritization of basic health services, and prevention of disruptions in the formal health system.

As seen in Table 1, community members can support the work of CHWs in all six building blocks of the health system. Community members are involved with various stakeholders within the health system and with each other in various complicated relationships influenced by their social networks. These dynamic interactions and multiple perspectives overlay location-specific power dynamics. Complex adaptive systems analysis, using tools such as network analysis and causal loop diagrams, can help managers develop more effective ways to use these community systems to improve rather than impede CHW programs.[11] One can often find examples of conflict and distrust between community health providers—such as traditional healers, alternative healers, informal drug dispensers, and others—and the formal health workers.[12] Where these social, cultural, and likely political power struggles are found, quality of care and established care-seeking patterns will likely suffer. Therefore, when introducing CHWs into such a scene, it is wise to bring these groups together through mediation and community engagement in order to develop the most useful way that CHWs can be integrated into the existing care structure while building trust and a sense of their legitimacy within the community.[13]

How Can Community Engagement Be Used to Shape the Design and Management of Community Health Worker Programs?

In order for CHWs to effectively carry out their duties, a level of trust between the CHW and the community is needed to enable relationships that will produce positive health outcomes. A CHW program can be designed in a way to maximize trust among CHWs, their clients, and the community at large, or at the least, to minimize the initial level of mistrust that might exist. In a 2012 interview, William Brieger, Professor of International Health at the Johns Hopkins Bloomberg School of Public Health, gave the following recommendation:

> **Time and energy should be spent to ensure that communities have realistic expectations of the CHW program. When CHW responsibilities are not accurately portrayed to the community, false expectations may be set up resulting in CHW attrition or program stagnation.**

An enabling environment is critical to the establishment of a CHW program, requiring sound national policy and buy-in at district, facility, and community levels. Time must be factored in to sensitize all staff and community members that will have a role in supporting a CHW program. This may require advocacy, use of champions, and a series of community meetings. The importance of community participation in all aspects of CHW program design is discussed throughout the various chapters shown in Box 3. Specific roles of the community are summarized here, but covered in more depth in these other chapters. Contextual factors such as existing social structures, culture, and community needs influence all of these design elements.

Box 2. Community Participation in Selection of CHW in Bangladesh NGO program[14]

The NGO BRAC has a program of more than 100,000 CHWs called Shasthya Shebikas. With a focus on equity, the CHWs are recruited from village-based BRAC credit and development groups, called Village Organizations, formed by poor women in each village. The Village Organization nominates prospective female candidates to regional BRAC office members who finalize the selection. They deliberately select candidates who do not live near a health facility in order to increase health access for remote communities and to avoid competition with the health facility.

Box 3. CHW program design elements that can benefit from community participation

Defining role and tasks..... Chapter 7
Selection..... Chapter 8
Training..... Chapter 9
Supervision..... Chapter 10
Incentives..... Chapter 11
Monitoring and evaluation..... Chapter 15

CHW Selection

CHW selection should be an open and transparent process within each community. Though requiring more time and additional effort, having the right CHW for the job in each community is critical to an effective program—and one of the most important components in community participation. In all communities, there are people and/or groups that dominate decisions about resource utilization. It is critical to recognize the influence of these people and to recognize that selection will most likely face issues of power and control. Communities are complex and vary in their dynamics, making community participation in the CHW selection process critical, whether the CHW is ultimately community selected or state selected.

Box 4. Common CHW selection criteria[15]

- Elected or endorsed by the community
- Well-respected member of the community, with a good reputation
- Honest, friendly, good communication skills
- Willing to make household visits
- Able to attend initial training and periodic refresher training courses
- Willing to be supervised by the community and attend health center meetings
- Live in the community
- Share local language/culture

The degree to which the program leaders engage community members and the degree to which community members understand what is to be expected of CHWs are important factors in determining whether the community makes a good selection. The ideal in both cases is to involve as many people from the community as possible (e.g., men, women, youth, elders, different castes, different tribes, wealthy, poor) in the selection itself or in witnessing the selection, so that the candidate is truly representative, not hand-picked by a leader, and not automatically of an elite caste. Dispelling notions of favoritism during the selection process is important to diminish any mistrust that could lead to jealousy or loss of willingness to cooperate.

To promote the program goal of equity, the selection criteria may favor underserved population representatives, such as women, those who are illiterate, and members of lower caste groups. Program designers should be careful of criteria that might exclude certain groups. For example, Benin set education level requirements high, feeling that it would help with data collection and reporting. However, the policy ended up excluding women who would have been a better fit for the community. In Ethiopia, when the proposed grade 10 educational level cannot be reached, program managers can change the educational and gender criteria. In the Uganda Community-Directed Intervention (CDI) Program for onchocerciasis, community members are organized around kinship groups, and these kinship groups select the ivermectin distributors from among themselves. Although the recommendation was to select one Community-Directed Health Worker (CDHW) per 250 people, Uganda decided to allow every self-identified kinship or neighborhood group to select as many CDHWs as practical. This provides a higher concentration of CHWs per population, each with the support of their kinship group.[16] Programs need to be flexible enough to adjust policies at the local level.

Box 5. Community participation in selection of CHW in Brazil[14]

In Brazil, the CHWs are selected through a public process with community members. The Municipal Health Council, with support of the State Health Secretariat, conducts the process and guarantees transparency. Candidates are assessed for their aptitude, posture, and attitudes during a simulated community problem. The State Health Secretariat sets up interview schedules and conducts the interviews in public places, such as schools or community meeting halls. Communities encourage candidates to apply.

Box 6. Community participation in selection of CHW in different states of India[17]

The CHW selection process laid down in India's guidelines specifies a sequence of events: starting from community mobilization, with facilitators helping in enabling weaker communities to articulate their choices based on a set of criteria, village meetings, and finally *Panchayat* (block level) endorsement of the final choice.

According to an evaluation in 2011, however, the entire sequence has almost never happened. In Assam, Andhra, West Bengal, and Kerala, a formal multistakeholder committee assigned by the government with this task made the decision. In Orissa, meetings of women's self-help groups facilitated by the Anganwadi Worker made the choice, while in Jharkhand it was the Village Health Committee. The evaluators found no clear evidence that the various selection processes made much difference to the overall health outcomes of the program, as long as the contribution of other selection factors, such as transparency and community participation, were followed.

The formal introduction of CHWs back into their community after training can also be very helpful for the success of the program. This introduction could be in the form of a town hall meeting to make sure that the community is aware of and understands the CHW role. In Nepal, such a meeting made an important difference to the acceptability of CHWs in the community. It can also be important to have local leaders endorse the CHW.

Defining the CHW Role

To be trusted, the CHW should be able to address the community's broader social development needs in addition to their health needs. It is important that the parameters around the roles and obligations of the CHW, the community, and the health center are clear. Two ways in which community members can participate are in the creation of the job description or by contributing to a code of conduct that will then be visibly displayed. Statements in a code of conduct often include behaviors, such as avoiding alcohol when serving as a community provider, not asking

for favors or monetary gifts from the community, being gentle and attentive, and so forth. In some countries, groups of CHWs create a common code of conduct that is then shared with the community. Common challenges include unrealistic expectations and undefined job descriptions.

Community members may also help to design the CHW's role to tailor it to their needs. While the national program may set up an essential health package, the community may prioritize certain aspects. If the community people do not see that a CHW has a role or something to offer them, then the program will not work. For example, while developmental and educational activities are considered important, curative services are demanded by communities who do not have access to these services.[18] While existing CHWs may deliver preventive interventions with minimal supervision, CHWs who deliver community case management (CCM) treatments for common childhood illnesses require more training and support from facility-based services.[19] Table 2 provides examples of the importance of community participation and the ways communities can participate in various health tasks.

Table 2. Community Participation by different CHW roles

CHW ROLE	IMPORTANCE OF COMMUNITY PARTICIPATION	WAYS COMMUNITY CAN PARTICIPATE
Health promoter, including communication, counseling, and support to improve health and prevent disease.	Behavior change requires repeated, intensive contacts over a period of time, and is influenced by peer support and community norms.	Participatory community or peer groups who witness visible change provide support and continuity for behavior change.
Health provider, including treatment of common illnesses, referral to health facilities, and care and support to the chronically ill.	Cultural perceptions of illness and treatment may undermine prevention, treatment, and care options unless addressed openly. Social relations of care, if not understood and managed well, can worsen health status.	Participation in community planning approaches or formative research to uncover specific terminology and belief patterns that lead to behavior change. Participation in quality improvement processes for provider interaction and use of facility-based services. Election of specialized volunteer cadres who are patient advocates or who support referral to CHW.
Agent of change, including support for community mobilization, empowerment, and human rights.	Structural risks to good health (power dynamics, poverty, discrimination) will not change without community action.	Engagement in the problem-posing and problem-solving process at community meetings can lead to collective action to change circumstances.
Health manager, including vital event and other reporting.	Communities may not want to provide vital events information to government agents.	Election of volunteer cadre who support the CHW with household visits to neighbors (i.e., Care Group approach: see www.caregroupinfo.org).

Box 7. Training: Country Examples[20]

India prioritized the building of CHW skills in village health planning, while Brazil has taken on a human rights framework that focuses on problem-solving and conflict-resolution skills. An evaluation of the Brazilian program found that community health agents (CHAs) needed more knowledge about how political, financial, and environmental factors influence community health and how that applied knowledge influenced the effectiveness of the CHAs.

While the community as a whole does not generally participate heavily in training, some training is conducted in the community and may involve community members. Besides learning technical health skills, the CHW needs to demonstrate respect and empathy for the patient by listening and expressing care and concern. Role playing of potential situations in the community is critical and is often followed by practice in the community. Training for community leaders in the CHW program, especially at the time of initiating a CHW program or during times of program change, can also be critical.

Supervision

While a CHW needs a trained health supervisor, she also needs supportive supervision from community members. Many communities already have village health committees (VHCs) or other existing community management structures that were established as part of national health or democracy initiatives. These groups provide feedback to the CHW if any complaints are received regarding her performance; help her with problem-solving, especially if it relates to water and sanitation or other determinants; provide incentives, especially in the form of recognition; resolve conflicts that may arise; and have the ability to influence termination of work should there be discord between the CHW and the community.

Social support for CHWs from the community is a powerful motivator, but needs to be combined with incentives from the health system. Community involvement in CHW selection and supervision is key, as is public recognition. Community members need to have trust in the CHW. Support from community leaders provides her with legitimacy. Community management structures, whether formal or informal, can provide in-kind material support. Examples include exemption from duties in the community (e.g., community patrol and cleaning day responsibilities), donation of farm labor to help with the CHW's own farming, or donations (e.g., chickens or vegetables). In Jamkhed, India, farmers' clubs supported CHWs and helped them solve community problems.

Box 8. Recognition and Motivation

CHW Recognition in Nepal
In 2003, the female CHW program established a National FCHV Day and the districts have been encouraged to hold events to celebrate this day.

CHW Motivation in Rwanda[21]
A study in Rwanda found the three biggest motivators for CHWs to be the opportunity to develop social relationships through the work, trust and esteem from neighbors, and helping the community/saving lives.

Monitoring and Evaluation

If health facility workers, the CHW, and community members discuss and understand household data and vital events collected by CHWs and see the impact of what is happening in their community over time, the influence of CHWs in the community will become increasingly evident, resulting in increased CHW motivation.[22] Community-based health information

systems, birth registries and community scoreboards collected by CHWs, when fed back to the community, enable community members to understand the epidemiology of their setting and to prioritize solutions. Community management structures can also support the CHW in advocating to local government and health facilities for supplies and resources.

Box 9. Community Accountability

In Uganda, researchers used a randomized control trial to study the impact of an accountability methodology (Citizen Voice and Action facilitated by World Vision staff) that enabled poor people to scrutinize whether those in authority fulfilled their health responsibilities. After one year, absenteeism was reduced along with the average wait time for a clinical consultation. Under-five mortality declined while the number of women seeking prenatal care and using skilled birth attendants increased.[23]

How Do You Adapt Community Participation to Local Situations?

The level of community engagement needed will vary with the health outcome desired, the capacity of the community, and the degree to which the cultural context is supportive. No matter what approach is used along the community participation continuum, it will only be effective if it is responsive to community needs and implemented well. In underserved communities, especially among poorer populations, a community engagement strategy that is more robust and transformative will be needed. Finding the right balance between a CHW strategy that is highly tailored to local needs, on the one hand, and a rigid national program on the other hand that does not allow for local adaptation is key. A highly tailored strategy may take too long for national implementation, while a rigid program may prove ineffective because CHW messages and tasks may not be appropriate for particular communities. A CHW program should have community engagement principles that support a continuum of community participation, depending on circumstance that enables design and implementation flexibility at the local level. The challenge is to maintain the momentum of engagement over time, assessing the environment, and adjusting the program to respond appropriately to social and political realities.

Box 10. *Atencion a la Ninez en la Comunidad* (AIN-C) *Monitora* Strategy in Honduras[24]

AIN-C devoted considerable care to developing an operational strategy related to the community *monitoras'* job description, their selection, their task execution, training, supervision, and replacement. The goal was to overcome common problems with volunteer community worker schemes and to allow maximum flexibility for local ownership. The job of the *monitora* is manageable for a volunteer, as they work on average 15 hours per month.

The following are a few of the critical considerations:

Flexibility and ownership: Every community is made the owner of its program and of its success in achieving healthy growth in their children. Communities decide if they want to have the program in their community, how many and who will be *monitoras*, how they will reach every child younger than two years of age every month, how they will create a community environment that favors adequate child growth, and how they will interact with the government's health infrastructure.

Teamwork with specialization: A key practice implemented by AIN-C is the use of a team of volunteers at the community level rather than relying on just one person. Communities are told that they can choose anywhere from two to about five *monitoras* to be trained. Having a team means that each member contributes different strengths. One may be good at weighing and charting while another is good at counseling. In addition, a team minimizes the effect of turnover

and enables all members to help each other learn and remember lessons from the training. The fact that over a five-year period, six to eight people might have worked in their community's AIN-C program (instead of just three) strengthens community commitment, knowledge, and ownership of the process and the program.

Focus on tasks: The job description of the *monitora* is the basis for determining all other program actions because their tasks support the community effort. The *monitora* manual is not a technical guide, but rather an operational guide to the actions that must be completed.

Flexibility in operationalizing tasks: AIN-C guidance does not give precise details on how *monitoras* are to perform their jobs. Instead, the program, in collaboration with the community, establishes goals for outcomes that must be reached. How the *monitoras* choose to reach the goals is up to them. For example, all children younger than two years should be seen by a *monitora* each month. Whether the *monitoras* accomplish this by, for example, house-to-house visits, neighborhood meetings, or community-wide meetings, is up to them.

Rewards and incentives: AIN-C provides regular incentives to its volunteers, and these incentives have both intrinsic and market value. Incentives are regularly provided and planned for—just like all other operational aspects of the program. Examples of the incentives are a letter from the Secretary of Health thanking the family of the *monitora* for their generosity, an identification card with a photo of the *monitoras*, and regular community parties in honor of the *monitoras*. Training and monthly meetings at the health center are also seen as incentives.

What Are Key Barriers and Enablers Community Participation?

Engaging in and supporting the empowerment of the community for community health decision-making and action is a critical element in health promotion and disease prevention. The impact of programs that target individual behavior change is often transient and diluted unless efforts are also undertaken to bring about systematic change at multiple levels of society.[25]

External and internal factors constrain the promotion of participatory development. External obstacles include the role played by development professionals and donors for immediate results, co-optation by government of community participation (e.g., using the political system as a form of social control), and the tendency among governments and development agencies to favor and apply certain selection criteria that favor the more vocal, wealthier, more articulate and educated groups. Further, governments and development groups may favor investment in product delivery and under-invest in the more intangible social processes and community participation that are critical to the product's use and long-term sustainability. Internal obstacles refer to conflicting local interest groups, gate-keeping by local elites, and local apathy.[26] A CHW can often do little to overcome these factors, which are inherent in the system.

Table 3 offers some of the factors that can either negatively or positively influence the success of community participation efforts with CHWs. Planners and organizers of these efforts may find it useful to keep these factors in mind as they plan for community engagement efforts in their setting. The categories and barriers were from a review of community engagement initiatives in the United Kingdom.[5] The more enablers who are present, the easier it will be for a CHW to engage the community in a meaningful way. The greater the number of barriers, the more a longer-term investment in developing meaningful partnerships with stakeholders will be required.

Table 3. Barriers and enablers of community engagement with CHWs[5]

CATEGORY	BARRIER	ENABLER
Power	Misuse of power by professionals, leaders, and developmental actors ▪ Discursive – defining who can be engaged ▪ Positional – controlling the terms of engagement ▪ Financial – shaping level and type of support provided for communities	▪ Broad community participation with an appropriate cross-section of community members ▪ Specific CHW selection criteria favoring disadvantaged groups ▪ Involvement of community governance group
Skills and Knowledge	Lack of relevant skills and knowledge impeding communication	▪ Clear and realistic goals for CHW and community with appropriate skill-based training and continuing education ▪ Networking among peer CHWs and shared learning
Practices of Engagement	Style of meetings, failure to accommodate cultural diversity, accessibility	▪ Environment of mutual respect, understanding, and trust ▪ Open and frequent interaction, information, and discussion ▪ Skilled convener
Transaction Costs	Time lost and financial resources required, especially in rural areas	▪ Members see engagement to be in their self-interest and benefits of engagement as offsetting costs such as small visible activities ▪ CHW travel stipend and perceived valuable incentives
Cultural	Stereotypical attitudes among officials toward gender roles and disabled; dominance of deficit images of communities as having high needs and few assets	▪ History of collaboration and cooperation in the community ▪ Partnership-Defined Quality (PDQ) and other quality improvement approaches*
Active or Passive Resistance	Apathy and disinterest in communities that have been co-opted in the past	▪ Positive past experience ▪ Members feel ownership and share a stake in both process and outcome
Appropriateness of Approaches (models of engagement)	Not being able to reach consensus; unrealistic expectations; confusion between representative governance (where the representative decides on behalf of the community) and participatory governance (where everyone votes)	▪ Basic governance training ▪ Clarity of roles and guidelines ▪ Shared vision
National Policy Context	▪ Tensions between representative and participatory democracy ▪ Different forms of governance: participative versus managerial setting of targets versus central control with inspections and audits ▪ Tensions between the objectives of different policies – community partnerships versus organizational efficiencies	▪ High-level commitment over time ▪ Favorable political and social climate ▪ Shared vision with guiding principles ▪ Governance training

*Partnership-Defined Quality (PDQ) is a process for engaging communities and health care providers to work together in defining, implementing, and monitoring activities intended to improve the quality of care.

CATEGORY	BARRIER	ENABLER
Other Factors	Lack of resources	▪ Technical support from NGOs and voluntary sector ▪ Diversity in the types of opportunities for various community groups ▪ Sufficient resources

How Can a Community Participation Policy Be Designed to Support a CHW Program?

A policy or guidance document that outlines principles for community engagement should enable the government to:

- Set aside resources for investment in community engagement strategies, including CHW training and support, and in community management structures, training and support
- Make clear that the community needs to be involved in health care policy and delivery in government plans
- Enable multiple stakeholders in various parts of national and local government, the private sector, and the voluntary sector to better harmonize with and support community engagement strategies
- Enable civil society to hold both government and communities accountable

The policy should be created with representatives of government, NGOs, and civil society actors so that these strategies are not co-opted by governments to try and delay action or diffuse public criticism, legitimize an existing poor-quality service, or divest itself of responsibilities by passing them on to communities. The policy should also ensure that a small non-representative group of elites within the community cannot abuse these principles. The formation of a Community Health Desk, an office within the Ministry of Health (MOH) that oversees community health policies and practices, as implemented in Rwanda, may be helpful for coordination and iterative learning of lessons learned and new practices.

What Are Various Components of a Functioning Community Participation Strategy?

While many countries have policies that support a functional CHW program and the development of community management structures as a main community participation strategy, a community engagement strategy is more complex, requiring multiple actions throughout the health system. Establishing political buy-in at national, district, and local levels of government is critical, as is establishing processes for maintaining appropriate expectations at the different levels. Community involvement in decisions about health systems has the potential to improve health care services. However, its effectiveness is likely to depend on having explicit methods for involving community people and clearly defining roles and responsibilities, for training of policymakers and clients, and for ensuring adequate funding.[27] A long-term investment and commitment is also needed for a cultural shift in viewing communities as impediments to public health to viewing them as agents of change.

An example of a robust community engagement strategy was developed by the National Institute for Health and Clinical Excellence in the United Kingdom.[28] It calls for coordinated implementation across ministry departments and organizations, long-term investment, organizational change processes to align values and attitudes to encourage community engagement, and training of staff and communities at national, regional, and local levels. Its

implementation, however, did not positively impact population health, though it did positively impact social capital and community empowerment.[29]

One of the main reasons why a program does not get implemented as planned is because program managers have strong and differing views of how a program ought to unfold. Different stakeholders have different explanations of how a CHW's work would lead to improved health status and what she should or should not do with respect to both the provision of curative care services and community empowerment and mobilization.

Box 11. India – Different Interpretations of the Role of the CHW

The government of India's policy is that the ASHA worker is a CHW that provides health promotion along with curative services. In the states of Kerala and West Bengal, the majority of stakeholders felt that the ASHA should only conduct health promotion activities and assist the facility with data collection and recording. Her role in responding to common but potentially life-threatening illness was down-played and not fully supported, undermining the huge investment in the ASHA program.

In the state of Assam, the state officials pushed for a health promotion role only for the ASHA worker, while district and field managers were advocating for a role that involved engagement of the ASHA worker in curative care. The lack of role clarity undermined the community's confidence in the ASHA. Of particular note was the fact that she was often out of supplies and her drug kit was not consistently refilled.

In the state of Andhra Pradesh, NGOs were involved in the selection and training of the ASHA worker at an early phase and brought an activist empowerment approach. In contrast, state officials and district medical officers supported only a health promotion role. Both groups ended up equally critical of the program, even becoming hostile to it. Even though national ASHA guidelines have been developed and approved, key mechanisms such as the process of selection, the emphasis on social mobilization, the refilling of the drug kit, and the development of a strong support system are modified on a state-by-state basis.

The Comprehensive Rural Health Project in Jamkhed, India, one of the world's pioneering CHW programs and India's first CHW program, is contracted by the government to provide training in the ASHA system to both government and NGO staff and to CHWs. Their program mandates that all people involved in the CHW program, from top-line supervisors to field managers, receive at least some training, including personal experience with community engagement, so they are fully aware and supportive of the CHW program.[17]

How Can Governments Maximize their Work with Non-Governmental and Faith-Based Actors?

NGOs and faith-based organizations (FBOs) were working with CHWs prior to the Alma-Ata conference in 1978. They have brought both human and financial resources to establish and support CHW programs as part of a broad technical and community mobilization effort, especially in underserved communities. They have brought new innovations in CHW program design and management, and they have tested MOH policies in the field for their effectiveness. They have established learning and training centers that have enabled others to adapt their approaches and scale them up, and they have built the capacity of local organizations and district programs of MOHs. Much of their focus is on equity and serving hard-to-reach and disadvantaged populations. Their expertise in community mobilization and community organization enhances the work of the CHW. Their efforts have enabled millions of people around the world to access basic medical care. FBOs, especially in many countries in Africa where they provide more than half of the countries' health services, have a major role in

providing health services for mothers and children. WHO estimates that 30%–70% of clinics and hospitals across Africa are owned or managed by FBOs.[30]

In some countries, NGOs manage very large CHW programs that are complementary to the work of CHWs employed by government, such as the CHW programs of the Catholic Pastorate of the Child in Brazil and BRAC in Bangladesh. NGO-administered CHW programs are better able to respond to changing circumstances since there is less of a formal bureaucracy involved. They also can reach populations with minimal access to formal facilities and assist in community mobilization efforts, including the use of multisectoral strategies, such as linking health programs with literacy or micro-credit programs.

On the other hand, multiple uncoordinated NGO efforts may undermine a national CHW strategy. NGOs may have a mosaic of different training systems with differing content and quality; competitive and duplicative working strategies limiting efficiency and the quality of care; diverse sets of competing incentive packages causing conflicts of interest; parallel services creating competition and friction with the MOH; and diversity in quality assurance, supervision and reporting systems, making it difficult for the MOH to have a coherent picture of CHW activities.[31] Thus, NGO programs can undermine large-scale CHW programs when not harmonized with government strategies.

NGOs should be encouraged to support a CHW system, following MOH guidance with input from civil society and other stakeholders, including CHWs. Policies should enable the NGO sector to support CHW services on behalf of the ministry, test CHW innovations in the field, set up complementary cadres of community volunteers especially in areas of high mortality, and build the capacity of community-based groups and organizations, including community governance structures. Encouraging multiple cadres of volunteers and groups who support a formal full-time, fully trained, and paid CHW may be part of a holistic CHW strategy, enabling the right numbers and mix of CHWs to support the specific needs of varying communities. Experience shows that CHW programs that have been sustainable have strong links with the government health system.[18]

Box 12. Kabeho Mwana (Life for a Child) Project in Rwanda[32]

Three international NGOs—Concern Worldwide, International Rescue Committee and World Relief—worked with the Community Health Desk in Rwanda to test a new CHW strategy in six districts of Rwanda that served approximately one-fifth of the country's population. Rwanda is in the process of organizing all CHWs into cooperatives. In 2014, there were a total of 449 CHW cooperatives and of those about half are legally registered and recognized. Each cooperative has 100–250 members, through which CHWs meet quarterly at health centers. Each type of CHW is supposed to reach the entire village with messages limited to their CHW function. The project introduced a Peer Support Group (PSG) model to coordinate and cross-train CHWs in different behavior change communication interventions. PSGs averaged 20 CHWs from four to five neighboring villages who met at least once a month for training on health topics and for joint planning of home visits and other health promotion activities. Each CHW visited approximately 10 households per month to deliver messages on healthy family practices outlined at the PSG meetings. The repeated, familiar contact with fewer households resulted in increased CHW utilization and health behaviors, influencing the government to consider adoption of this strategy as national policy.

PART TWO: COMMUNITY MANAGEMENT STRUCTURES

In 1989, WHO recommended that an effective CHW program have the support of a group composed of members of the community who have active links with the health sector and improves governance at the local level. We refer to these groups as community management structures known by different names, such as village health committees, community health

committees, ward health committees, community advisory boards, and health management committees. In most countries, these management structures provide support to the CHW at the community level and a bridge to the health system, and may also be linked with the local political system. Well-functioning committees can describe their roles and responsibilities and how they relate to other groups, including the CHWs, the health facility, and the district health authorities.

Objectives of a Community Management Structure[19]

- Provide a support system for CHWs
- Work with CHWs to mobilize the community for improved health
- Assist with communication to and from the district health system and the local administration
- Advocate for supplies and investments critical to good health.

In other countries, health facility management committees (also known by different names such as health center committees) may exist, either as the predominant community management structure or in addition to other community governance structures. The health facility management committees provide oversight of the health facility, including CHWs who are associated with that health facility. These committees generally have administrative and financial responsibilities, such as ensuring the facility meets the community needs to increase usage, oversight of facility budgets and staffing, resource-generation activities, and management of insurance schemes to lower cost barriers for the poor. Because of their duties, these facility management structures have the potential to be more contentious and generally require more intensive support.

What Are Common Issues with Community Management Structures?

While many countries have active community management structures, they are generally weak. Table 4, modified from the CHW Assessment and Improvement Matrix Tool,[15] highlights some best practices along with the most common issues and functionality problems of community management structures described in the literature.[33] An assessment of existing issues may help a ministry plan and budget for ongoing support. In many cases, clear and transparent guidance and exchange of good practices may be a solution. An EQUINET review of district health systems in East and Southern Africa found that community participation can have the most impact when supported by functional local management structures that promote participation in decision-making in addition to carrying out administrative tasks. However, when these structures are composed of elites, they are not accountable to any defined constituency and broad community participation is constrained.[34]

Table 4. Community Management Structures: Guidance from the Assessment and Improvement Matrix[15]

COMPONENT	GOOD PRACTICE	ISSUES THAT ARISE	RESULTS WHEN NOT DONE WELL
Recruitment/ Selection to Community Management Committees	Selection of enough members to represent the main social groups in the community while maintaining a small enough group to make decisions and take actions (6–12 members) Builds on well-functioning community structures where possible Selection by a broad segment of the community Election of esteemed community representatives rather than elites with sufficient gender, ethnic/tribal, and disadvantaged groups represented	Generally, committees are staffed by health workers, community members, and appointed key figures, but there is little guidance on optimal numbers and selection criteria and processes including size of committees, women, and quotas to ensure adequate representation of different segments of the community	There is a lack of consistent and regular functioning due to having a quorum Males may dominate Community members are selected by the community leader and may be the relatively affluent or prominent members seeking political gain
Committee role	The alignment, design and clarity of role from the community, CHW and health system perspective is known to all	Roles of the committee are not formalized Confusion exists regarding different roles such as governance, co-management, CHW support, resource generation, community outreach, advocacy, intelligence, social leveler	The committee generally wants to respond to community-expressed needs but may be seen by the health system as a utilitarian mechanism for supplying resources Views on if, when and how to involve communities and CHWs differ significantly between stakeholders on the committee They may have different implicit views of a CHW model focused on individual behavior change versus interventions that seek more broad community change
Initial training	Training is provided to the committee members on participatory, decision-making processes and problem-solving skills	Committee members may have inadequate training for their role Their health knowledge and management skills vary as does their confidence to lead	The committee is ineffective in solving issues between the community, health system and the CHW
Continuing training	Ongoing training is provided to committees to reinforce initial training, and build organizational development skills and health literacy to solve root causes of poor health	There is generally no budget or system to provide ongoing training that reflects committee's needs	Committees falter and may cease to function

COMPONENT	GOOD PRACTICE	ISSUES THAT ARISE	RESULTS WHEN NOT DONE WELL
Budget	Designated funding to enable community committees to take action to support CHW and health outreach activities	Under-resourced committee	Unable to perform actions
Supervision of the committee	Supportive supervision is carried out regularly to provide coaching and review of CHW activities and local data	Many committees have unclear reporting structure to local government or health system Inadequate support and poorly integrated into health system	Committee may be non-functional
Program performance evaluation	Evaluation to assess work and health changes over a period of time. Include key performance indicators related to community governance committees in job descriptions of relevant supervising health workers and managers and by conducting periodic structured audits of governance committees	No evaluation to know whether committee work is effective or not	Committee may falter over time or not be aligned with current health conditions
Community incentives to participate	An incentive package of non-financial incentives such as training, recognition, certification, etc. appropriate to job expectations	Community members are not publicly recognized There may be general community unawareness and no incentives for participation	Community members view participation in health as a tedious task of administrative supervision without pay and may cease to come to meetings
Incentives for supervising health workers to participate	An incentive package of non-financial incentives such as training, recognition, certification, etc. appropriate to job expectations	Duties may be seen as additional to work responsibilities with no added benefit	Lack of motivation to participate at committee meetings Seen as additional layer of administrative supervision by untrained people
Community involvement	The role that the community plays in supporting and joining the committee and supporting the CHW is well-understood	Social, political, and cultural factors all impact on the purpose, form, type and effectiveness of community involvement Health literacy, necessary knowledge of legal frameworks, and skills needed to participate effectively are wanting	When the community role is implemented poorly, it might create community resistance to participation
Referral system	A process to support the CHW with referral assistance when needed	Community has not created an emergency transport system for referrals to a health facility	Life-saving emergency transport systems and logistics help for referrals do not work

COMPONENT	GOOD PRACTICE	ISSUES THAT ARISE	RESULTS WHEN NOT DONE WELL
Communication and information management	Processes used by the governance structure include monitoring data flows to the health system and back to the community, publicly sharing information, and using data for service improvement Tools such as patients' rights charters, citizen report cards, suggestion boxes, health clubs, are used	Public health data do not exist Community does not take appropriate action to address disease epidemiology or address root causes of disease	Perceived lack of transparency may cause community resistance to change CHWs and health workers are not accountable to the community No or slow change in disease reduction
Linkages to health system	Community management structures are linked to the larger health system, with a supporting management culture that encourages transparency and openness between the health facility, CHWs and the community	Relationships among community committees, CHWs and the health system unclear Mistrust and imbalance in power and information	Health workers may control committees Community governance structures may be perceived as interfering with health worker duties, especially those related to use of funds and drugs Deterioration in communication from central ministry about the purpose and function of community governance structures may cause a decline in community governance
Country ownership	The MOH or other ministries have policies in place that integrate and include community governance structures in health system planning and budgeting and provides logistical support to sustain them	Unclear legal position Lack of support	Without a clear mandate, the community management structure has no direct influence over the core budget governing a CHW or health facility and little influence on clinic management There is a lack of clarity on the extent of the community's decision-making power to hire/fire the CHW

Box 13. Village Health and Sanitation Committees (VHSCs) in India[17]

An evaluation of the ASHA program in India reported in 2011 found that where VHSCs are established and functional, they are supportive of many health activities and functions, though there is room for improvement, especially in the key task of village health planning. In Assam State, one ASHA facilitator was hired for 10 ASHA workers to provide support in holding VHSC meetings, counseling families, accompanying newborn visits, and supporting immunization and antenatal care services.

Box 14. Revitalizing Community Health Committees in Liberia[35]

Community Health Committees (CHCs) were a community management structure supported by the Ministry of Health in Liberia before the civil war. Medical Teams International (MTI) revitalized these traditional structures to support Household Health Promoters. Each CHC had on average eight members, including community leaders such as imams, pastors, women leaders, and trained community midwives. MTI developed a self-assessment tool around the following key tasks to enable the CHCs to appraise themselves at yearly intervals:

- Frequency and organization of meetings
- Participation and leadership in meetings
- Problem identification
- Prioritization and action planning
- Support to Household Health Promoters
- Utilization of locally collected data
- Establishment of emergency health funds and transportation system
- Participation in conflict prevention and resolution

What Are Key Questions to Consider When Designing a Strategy for Community Management Structures?

There is no one-size-fits-all approach for designing or implementing a strategy on community management structures related to CHWs. However, a discussion around some key questions, as shown in Table 5, can help open the way for decisions on their potential roles and functions. A policy on community management structures would follow an assessment of their current content and context in relationship to a CHW program, followed by discussions on stakeholder perceptions and guidance around the mechanism.

Table 5. Questions to consider in the design of a community management structure strategy[36]

CONTENT Questions

- What is the purpose?
- What is the intended depth of community involvement?
- Who introduced the initiative and why?
- Does it build on existing community organizations and networks?
- Who is expected to represent whom and how?
- What technical knowledge is required?
- What training, supervision, and support are included for different actors?

CONTEXT Questions

- Is community accountability prioritized nationally and internationally?
- How decentralized is the health system?
- How clear are lines of responsibility and accountability at different levels of the health system?
- Does the mechanism challenge or complement other health system interventions, existing community structures and socio-cultural norms?

PROCESS Questions

Stakeholder Perceptions and Relations

- What are the different parties' views on the relevance and relative costs and benefits of this mechanism?
- What are relationships of power and trust and different levels within institutions, and among individuals? How will these be affected?

Mechanism Functioning

- Who represents whom and how?
- Who sits in groups and committees?
- How are they selected and how do they link to the health system and the community?
- How clear are their roles? What is their motivation?
- How are decisions made?
- How much of a decision-making role do they have in practice?
- How was the intervention introduced? Which stakeholders were involved? How and at which stage? How did this work?
- What training took pace and what resources were allocated in practice?
- What are the links to other institutions? How does information and communication flow among and within institutions?

CONCLUSION

This chapter highlights the critical importance of community participation to a CHW program. Because community participation can take many forms, and because each community is unique and always changing, large-scale CHW programs should be designed to enable local flexibility and tailoring in relation to community assets and needs. Maximizing community participation is not the sole responsibility of the CHW. Community participation is a process that requires leadership from the overall CHW program, as well as the support of the health system and local government at all levels, and partnerships with other organizations. The formation or strengthening of a community management structure, such as a village health committee, is often a strategy of choice for the community support of a CHW. However, these structures also require ongoing support and training if they are to work well.

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SECTION 4: ACHIEVING IMPACT

Chapter 14

Scaling Up and Maintaining Effective Large-Scale Community Health Worker Programs

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Key Points

- Effective programming at scale requires having a viable, scalable program that works on a small scale under routine field conditions, followed by careful planning (appropriate to the national context) that assures long-term sustainability at scale.
- Ongoing monitoring and evaluation (M&E), with adjustments to the program based on these findings, is essential both for effective scale-up and long-term program effectiveness at scale.
- Scaling up is a political process, so leadership and proper engagement with the political system, national-level stakeholders, and the Ministry of Health (MOH) is essential.

INTRODUCTION

A pitfall affecting many areas in global health, including community health worker (CHW) programs, is the tendency of planners and managers to uncritically assume that because something works well when implemented on a small scale, with fairly intensive engagement and support (undertaken by an nongovernmental organization [NGO], for example), there should be no problem doing more or less the same thing on a large scale (under the Ministry of Health [MOH], typically). As discussed in the introductory chapter (see Chapter 1), there have been a number of noteworthy small-demonstration experiences over the history of primary health care (PHC) program implementation that have influenced thinking about what is possible at the community level. Although not necessarily "replicated," they have served as inspiration and informed planning for the development of somewhat analogous efforts, some of which have also been effective at large scale. But such successful translation is far from straightforward. Often, the results obtained by CHW programs operating at large scale are far less impressive than those seen in demonstration projects.

Although not necessarily "replicated," these demonstration experiences have served as inspiration for the development of somewhat analogous efforts that have also been effective at large scale. However, such successful translation is far from straightforward. Often, the best that can be done at large scale is a pale shadow of the conspicuous successes seen in demonstration projects.

Highlight the challenge of scaling up a community-based PHC program is offered at the outset as a word of caution. When successful demonstration projects are proposed as solutions to nationwide problems of PHC, the challenges of achieving this proposition should be recognized. Policymakers and planners need to look critically at the landscape of all the specific requirements that needed to be met to achieve that success. A careful look at the settings where implementation is planned is required, along with a determination of what it would take to meet these requirements—at scale. Is there a robust enough policy framework and adequate political support, management and supply systems, numbers of staff, and financial resources for successful scale-up and continued long-term effectiveness? If the picture looks favorable, it may be warranted to cautiously proceed, first implementing on a limited scale but under realistic conditions (i.e., what one could expect to provide at scale), and monitoring closely for performance, ready to make any necessary adjustments to address identified barriers or constraints to good performance. Then, as an approach is progressively validated, we can move toward scale.

So, from the beginning we are focusing not merely *getting to scale*, but on what it is going to take to ensure a functional and effective program (with demonstrated impact) on a continuing basis once we are at scale. In this chapter, we discuss a number of questions that policymakers and program managers need to consider when considering taking CHW programs to scale. We assume here that the MOH will be guiding the scale-up of a national CHW program.

Key Questions

- What kind of planning is needed for CHW programs to operate at scale?
- How do we get to scale?
- What are some of the pitfalls of scaling up?

Box 1 contains a set of detailed issues that relate to both the key questions for this chapter, as well as to other chapters in this guide. In this chapter, we focus on the core questions related to scaling up specifically.

Box 1. Some key issues to consider when scaling up a CHW program

Below are some detailed issues that need to be considered as a scaling-up process is being envisioned. These issues have been adapted specifically to CHW programs, but the questions were originally developed to address issues of scaling up any type of health program.[1] Help with addressing these issues is what this entire guide is about, so the information in each of the various chapters of this guide can contribute to the process of answering each of these questions.

- What is the range and complexity of activities or tasks that the CHW program includes (i.e., what exactly is being scaled up?), and what implications does this have for scale-up?
- To what extent, and how, will the CHW program be tailored to local needs and capacity, and what are the implications for scale-up? Is there a model or pilot project that will provide a 'blueprint' for scale-up?
- How will CHWs actually deliver their services in the community?
- What are the requirements of the CHW program in terms of the governance/regulation of services at national, regional and local levels, and what are the implications for scale-up?
- What are the requirements that the CHW program imposes on the capacity of the health system and its institutions, and on managers and health care providers? What are the implications for scale-up?
- What requirements are needed for good performance?
- What demands will the scale-up make on the current system? What requirements and demands would this make on existing managers or clinical staff? How can these demands be met? What possible unintended negative (or positive) effects can this have elsewhere in the system? What would the costs be, both in terms of rolling out the new service and in recurrent costs?
- Is the widespread implementation of the CHW program likely to have important impacts on the health sector at large and on other sectors beyond and, if so, what are the implications for scale-up?
- What are the likely cost and financing considerations of scaling up and sustaining the CHW program? What new procurement costs and salary costs would we need to plan for? How would these costs be covered?
- What systems, including M&E systems, need to be in place to ensure quality of service provision for effective performance at scale?
- Is the CHW program sustainable over the long term? Is the CHW program or its effects likely to change over time?
- What are the likely impacts of scale-up on equity? Should high need areas be prioritized rather than trying to achieve uniform coverage?

What Kind of Planning Is Needed for CHW Programs to Operate at Scale?

Table 1 outlines a series of steps that should be considered when planning the scale-up of a CHW program. The questions outlined here bring us back to many of the issues addressed in Chapter 3 on planning.

Table 1. Planning process for scaling up CHW programs

Vision of desired future: What would this look like?	Durable impact at scale High effective coverage Appropriate service delivery model(s) effectively ▪ implemented at scale
↓	
What conditions need to be satisfied to achieve this vision?	▪ Realistic testing/refining of service delivery approach(es) ▪ Policy, systems, and operational conditions are met, including: – Supplies of drugs and commodities – Personnel (service providers, managers, and so forth) equipped and supported for their roles with appropriate training, and tools – Supervision and monitoring systems in place and functioning
↓	
What needs to be done to meet these necessary conditions? How will we get there, and what are the priority initial tasks?	Specify who will be responsible for developing: ▪ Roles/responsibilities ▪ Work plans/budgets ▪ Coordination/planning/oversight
↓	
What needs to be done now, and over the coming year(s)? Who will need to be doing what?	Specify who will be responsible for developing: ▪ Roles/responsibilities ▪ Work plans/budgets ▪ Coordination/planning/oversight

Developing a Scale-Up Plan

A good plan is always a work-in-progress and will need to be adapted as scale-up progresses. Looking beyond just the first steps of planning for scale-up to how to ensure continued institutionalized high performance at scale is the long-term goal. Doing so requires foresight and making appropriate choices now to ensure that we create the conditions for success later.

A "learning phase"[1] (or piloting) is a realistic, reasonably large-scale practice run, which is rigorously monitored to generate learning on key operational issues. On the basis of the learning from this phase, the approach may be adapted to try to ensure better performance in the next stage of scaling up. The best plans are those that have been adjusted in response to feedback as plan implementation proceeds.

Elements that need to be considered in planning (from which specific anticipated strategic tasks can be derived) include the following:

- Supplies of drugs and commodities
- Personnel (e.g., service providers, managers, and so forth) equipped and supported for their roles with appropriate training and tools

[1] Note that learning and adapting (modifying based on what we are learning) needs to be done at all phases, including once we have fully institutionalized and "scaled up" an effort.

- Supervision and monitoring systems in place and functioning
- Human and institutional actors and their perceptions, needs, and interests
- Regulatory and approval issues
- Performance management. (This involves monitoring key indicators of the program, including quality of training and quality of care. See Chapters 9, on training, and 15, on M&E.)
- Supply chain and other key systems issues
- Product issues (Is there an appropriate fit of the proposed program with the users and the context?)
- Resources/funds needed at each stage of the plan
- Human and institutional actors and their perceptions, needs and interests
- Direction

Scaling up and maintaining an effective CHW program over the long-run also requires performance management. This is best carried through processes that include monitoring of key indicators of the program, including quality of care. (See Chapter 15 on M&E.)

Sustaining Impact at Scale

For CHW programs, it is important not just to achieve implementation at scale, but also to maintain effective programming at scale. Below, we describe some principles for sustaining impact at scale.

Gain and Maintain Support from Policy-Makers at the Relevant Levels

Key gate-keepers and opinion leaders (e.g., leading pediatricians in the country) need to be informed and "won over" to the initiative through early one-on-one informational briefings and exchange of views. Potential champions, who are well-placed to influence opinion and decision-making, need to be identified and encouraged.

Policy and regulatory processes, both formal and informal, must be dealt with from the beginning. Examples of formal processes include registration with drug regulatory bodies and revisions to the Essential Medicines List, if the program will introduce any new medications. Informal processes include fully informing and eliciting concerns from key government and non-governmental counterparts, opinion leaders, and funding agencies.

Sustain Program Momentum

Program momentum may diminish for a range of reasons including withdrawal of support from a key stakeholder, budgetary constraints, poor management and supervision, and so forth. (See chapters on financing, supervision, and relationship with other parts of the health system.) One proactive strategy to avoid loss of momentum is the formation of a technical working group with MOH leadership and establishing an ongoing and meaningful involvement by all key partners in directing the initiative. An alternative is to assign this responsibility to an existing technical working group, if it has a suitable membership and mandate. An example might be a Ministry-led working group responsible for community health services. Sustaining program momentum involves ensuring effective and sustained functioning of whatever group is selected, including that regular meetings are held, action points are identified, and follow-up is carried out.

Ensure that What the Scale-Up Initiative Offers Will Appeal to the Intended End-User

Formative research can help in identifying the potential end users' current practices, perspectives, and preferences with respect to the specific new service planned. These end-users include the MOH, the district health system, front-line health workers, and beneficiaries. In developing any new approach, strategy, or product, one has to start with where the user is now, "bridging from the known to the new." Formative research can help to establish this strategy. Then, messaging and strategies related to scaling-up can be geared to this current reality. Not uncommonly, there is a major disjunction between what people want and what programs can deliver.[2]

Achieve and Maintain High Coverage (Especially Among Segments of the Population Where Disease Burden Is Concentrated)

Design a delivery strategy tailored to the country context, taking advantage of available channels or platforms. Start with a learning (pilot) phase, implementing at limited scale (e.g., within one district), but under conditions closely approximating what one would expect when institutionalized and running as a normal program. Rigorously monitor during this phase, and then, based on what has been learned, revise and streamline the approach for implementation at the next stage of scale (preferably not nationally).

Through all phases, from early learning to at-scale implementation, ensure continued sound performance management—at all levels, monitoring important aspects of program performance (in particular, effective population coverage), and actively addressing identified performance issues. This monitoring is likely to entail incorporating appropriate population coverage indicators into the routine health information system, and ensuring that coverage is monitored at all levels as a basis for taking action to ensure good performance.

Secure long-term arrangements for procurement, if the initiative involves a particular program commodity, and ensure an adequately robust supply chain; special attention will be needed to do so.

HOW DO WE GET TO SCALE?

Conceptual Frameworks

There are two major conceptual frameworks on scaling up health interventions that are widely used in global health: one developed by ExpandNet/World Health Organization (WHO)[3, 4] and the other by Management Systems International.[5] A principle guiding both is an "open systems perspective," which views scale-up in the context of existing systems (e.g., political, legal, policy, socio-cultural, health sector, and organizational systems). As mentioned previously, another key principle is that scaling-up is a *political* process and there will always be resistance to change and issues that need to be negotiated with the political system.[6] Scale-up requires leadership to champion adoption and maintenance of an innovation and is more than the implementation of technical steps.

The ExpandNet/WHO model consists of five components: the innovation, the user organization, the environment, the resource team, and the scale-up strategy (Figure 1). Adapting this framework to CHW programs is reflected as follows:

- **The innovation** – this refers to the program to be scaled up and including the specific interventions that it comprises
- **The user organization(s)** – this refers to the organization(s) primarily responsible for implementing the program, and those organizations that work closely with it or support it

- **The resource team** – this refers to individuals and entities promoting or facilitating the scale-up process
- **The environment** – this refers to conditions external to the user organization that are fundamental to scaling up the program (this is sometimes referred to as the context)
- **The scale-up strategy** – this refers to plans and actions necessary to scale up the program

Figure 1. The ExpandNet/WHO framework for scaling up[3]

Attributes Contributing to Success (from ExpandNet)

Building on some of the diffusion of innovation literature that has permeated the social science literature over the past four decades, we describe here some of the ways to design a scale-up that might facilitate success.

The Innovation

While some health interventions can spread passively with minimal help, substantial strategic planning and action is normally needed to successfully scale-up CHW programs. According to Glaser, Abelson, and Garrison,[7] innovations that possess the following "**CORRECT**" characteristics may be more likely to spread:

- **Credible** – based on sound evidence, supported by respected persons or institutions
- **Observable** – results that can be seen by user organizations
- **Relevant** – addresses relevant needs
- **Relative advantage** – has benefits over existing practices
- **Easy to implement and understand** – straightforward to learn and put into practice
- **Compatible** – consistent with existing values and norms of the user organizations
- **Testable** – can be tried out on a pilot basis without a long-term commitment to adoption and scale-up

With any important new CHW initiative under consideration, these issues should be addressed at the planning stage. What can be done to create more optimal conditions for successful spread? Or as Simmons[4] frames it, "Are there ways to simplify the innovation while making sure that essential components that produce successes are not lost?"

The User Organization

As a condition for successful adoption and implementation, the user organization (which in this case generally will be the MOH and its district health systems) needs to be convinced of the need for the particular program, and have the necessary capacity and resources to implement it. Champions are a key ingredient to advocate and inspire others at all phases, including when an initiative is first being considered, as well as much later, ensuring serious attention to ongoing implementation.[3, 8, 9] According to McCannon et al.,[8] to be effective, champions should be respected, have an established platform from which to speak, be aligned with the cause, and be willing to publicly support the cause. Experience and capacity are preconditions for effective implementation at scale.[3] A user organization with the capacity for large-scale implementation has the needed infrastructure and human resources network to undertake the rollout process and to ensure adequate continuing resources and systems support to maintain sound performance.[10, 11]

Resource Team

The "resource team" could consist of a technical working group, convened under MOH auspices. Leadership could be supplemented from partner agencies or academic institutions. To be effective, those making up the resource team need collectively to have sound leadership, advocacy, and managerial skills in addition to technical and implementation skills.[3, 9, 10, 12] Whether the team is advisory or has a decision-making role must be set out clearly, and the relationship between the resource team and implementing organization needs to be negotiated and formalized.

Strong leadership and management are also needed to create a vision for scale (by defining the scope of the proposed effort and how it fits into the health needs of the country) and to develop strategies to build momentum and energy over time.[8] Further, advocacy skills are needed to influence the views of user organizations and opinion leaders (e.g., the MOH, regulatory bodies, professional bodies, and donors) and to garner their support.

The User Organization/Resource Team Relationship: Factors Promoting Success

- Close physical proximity[3]
- Opportunities to develop informal contacts and relationships[10, 13]
- Clear and established norms for operation[8]
- Compatibility in organizational values, norms, and systems[5]

Environment

The national political environment can influence the choice and pace of scale-up strategies. The political environment often exerts a marked influence on national decisions to go to scale with CHW programs, and the stability and longevity of such support can affect decisions about whether a gradual, phased approach is adopted or a rapid scale-up is selected to take advantage of a politically opportune time.[14] The timing and duration of support from donor and international organizations can also influence the approach. In the past, the international political environment has been an important factor in the renewed interest in CHW programs.

There are considerable differences among settings that are relevant to community health services and that need careful consideration when planning for larger-scale implementation. Contextual issues of particular importance to large-scale implementation of community health services include:

- Local epidemiology, including population demographics and burden of disease
- Local mix of PHC services, including public, private and NGO providers, what categories of health workers are present, and the density of health care providers per unit population
- Strengths and weaknesses of the local PHC system, including in relation to governance, financial, and delivery arrangements

The guided process may involve three types of scale-up: scaling up horizontally, vertically, and through diversification[3, 9] **Horizontal scale-up** involves expansion, in that, increasing the number of beneficiaries reached by the CHW program. This can be done additively by increasing the overall size of the program through one or more separate community-based organizations that work in non-overlapping catchment areas but provide similar, if not identical, CHW services. The Bangladesh national family planning program was scaled up in this way (see below).

Vertical scale-up involves institutionalization, in that, ensuring sustainability of the scaled-up program through changes in high-level systems, such as policies, budgets, and laws.[3, 9] The timing of advocacy to promote institutionalization depends on the innovation promoted. In some instances of institutionalization, laws or regulations must be changed in order to allow for task-shifting of health activities to CHWs (e.g., authorizations for properly trained and supervised CHWs to manage childhood pneumonia with antibiotics in the community). This has to take place prior to the launch of the CHW program. In other instances, institutionalization occurs after the CHW program has demonstrated impact, as in the case of the Bangladesh family planning program, discussed further below.

Finally, scaling up by diversification refers to adding new interventions into an existing CHW program. An example of this is CHWs who were originally trained to monitor growth and treat malnutrition are now also trained to treat childhood diarrhea and pneumonia.[9] An unguided approach to scale-up can also be carried out multiplicatively through the creation of learning centers, centers of excellence, or living universities around which scaling up takes place.[9, 15]

WHAT ARE SOME OF THE PITFALLS OF SCALING UP?

Scaling-up a CHW program is a complex and challenging process. Even if heroic efforts are made to consider and plan for success, there will always be many factors that lie outside of the program's control. For example, the availability of resources may not be synchronized with the policy or political environment.[14] However, many challenges can be mitigated by foresight and careful planning. Designing the initial program with scalability in mind certainly helps the scaling up process. (For an example of this, see Islam and May's 2011 case study on BRAC's community-based tuberculosis program relying on CHWs.[16]) Coordination and consensus among multiple implementing partners is vital but often difficult to achieve. A common strategy endorsed by all stakeholders is necessary so that the MOH can give its full support in a coordinated way. (For an example of where this was not done, see the case study of scaling up mHealth in Sri Lanka, where inadequate coordination and different funders of demonstration sites led to the creation of standalone systems that were very difficult to unify.[17])

Expanding tasks of an existing cadre or starting out anew with a totally new cadre is an important to issue to settle up front. For example, a CHW cadre involved primarily in

immunization outreach services can progressively have new duties added. In Malawi, health surveillance assistants (HSAs) have long been responsible for outreach immunization services. Recently, case-management of childhood illness has been added to their duties. Alternatively, new cadres of CHWs have been created and they have been given comparatively long initial training and, from the beginning, have been expected to cover a wide range of duties. This has been the case, for example, with health extension workers (HEWs) in Ethiopia. There is no single correct strategy, in this regard. However, it can be very challenging to simultaneously introduce a broad range of new functions. It can also be challenging for trainees to adequately absorb all the necessary material and it can be very difficult to put in place adequately functional support systems to cover the requirements of multiple interventions and programs. If these conditions can be met, then this more ambitious approach can be successful. In many settings however, more modest initiatives, such as incrementally adding on functions to CHWs, may stand a better chance of success.

By giving serious attention to such questions up front, we can more confidently make decisions about if and how to proceed. We can design a process focusing not just on a short-term rollout effort, but with serious attention to ensuring that all the necessary conditions can be achieved and maintained such that the desired new service will continue to be effectively delivered. All too often, CHW programs have fallen prey to pitfalls that are not widely known and certainly not described or analyzed in the peer-reviewed literature or even in publicly available documents. Such pitfalls are detailed below.

Inappropriate Pilots/Learning Phases

In many instances, NGOs or donor-supported projects develop relatively small-scale programs or services relying on CHWs and with relatively intensive inputs (for example, with regard to training and supervision). Where evaluations of these programs show very promising results, the models may be promoted for large-scale implementation. However, unless piloting has been done under conditions closely approximating how these activities would be delivered at scale, many important issues of feasibility, scalability, sustainability, and so forth are unlikely to have been adequately addressed or evaluated. It can be very risky to proceed with scale-up without getting answers to such questions.

As important issues of scalability tend not to be addressed in most pilot programs, many MOHs have grown impatient with external partners proposing yet another pilot program. Instead, they insist that partner support be invested in the introduction of new interventions or program elements *at scale*, from the very beginning. Depending on the complexity of the innovation, this can be a very risky practice. In many instances, a learning phase, conducted under realistic program conditions but rigorously documented and evaluated, can answer many critical questions that need to be addressed in developing a sound strategy for implementation at scale.

Too Rapid a Pace of Geographic Spread

Too often, there is an uncritical rushing forward to "take it to scale," assuming that sound implementation will take care of itself. And all too often, several years down the road, someone will do a rigorous evaluation and demonstrate that the program has achieved virtually no impact in spite of major efforts and financial inputs. Therefore, for any change that could involve community-based services and before committing to a new initiative, it is important to look very closely at the current health system, such as staffing and management capacity, systems support, service utilization patterns, and population coverage of services, to determine needs *and* also what we can realistically expect from the health system to deliver.

Whether due to political pressures or timing constraints on availability of funds, there can be considerable pressure on both governments and external partners to introduce and expand new programs very quickly. Typically with rapid spread, many aspects of implementation may be

inadequate, including monitoring of program performance. The key metric of success may be the number of districts "covered" or the number of CHWs trained, rather than measures of service delivery, utilization, or health behavior. In many instances these programs perform more poorly than was initially expected. In contrast, some of the most effective community health programs now operating at large-scale expanded at a very measured pace, with quality of the program work carefully attended. A good example of this is the vitamin A supplement distribution program in Nepal, in which female community health workers (FCHWs) were the key players. Scale-up was done over a period of 10 years, with new batches of districts added each year, and serious attention was given to the quality of implementation and to the ongoing monitoring of population coverage.

Failure to Ensure the Quality of Training

This failing was one of the important contributors to the disappointing results seen with most integrated management of childhood illnesses scale-up efforts. In many instances, large-scale, rapid, cascade-model training initiatives have resulted in seriously compromised *quality* of training. Good training requires good trainers, who tend to be in short supply, and it requires careful monitoring of the quality of training. A hybrid model that has been used in many stronger CHW training programs has been to ensure the presence of at least one expert, external trainer with *every* training batch, to help ensure the quality of training.

Envisioning Scaling-Up Simply as a Training Cascade

There are many examples where scale-up has been conceived of as an intensive, cascade training initiative (when trainers are taught, then they teach trainers of trainers, and so on). Although there may be instances where this is appropriate, in very many cases the results (when finally rigorously evaluated) turn out to be very disappointing. If, in fact, the key missing piece is providing CHWs with appropriate knowledge and skills, an appropriate training can result in a service being properly delivered. However, for most new community health interventions or services, providing CHWs with knowledge and skills is just one of a number of conditions that need to be met for the service to be properly provided (and to reach the intended population at high coverage). So, even if well-done, training alone will generally not be sufficient to produce the desired change.

Scaling Up without Ensuring Long-Term Sustainability

Some scaled-up CHW initiatives have been successful initially, but the success was short-lived. Continued improvements in population health requires continued high-quality program activity, and that, in turn, requires continued vigilance in ensuring that the program remains functional and reaches a large proportion of those needing it. For both MOHs and external partners, it can be much more appealing to throw effort and resources into the latest new narrow approach than to keep flogging away at an established program.

Large-scale CHW initiatives probably need to be planned with a 10-year horizon at least. Otherwise there may not be much point in starting at all. This requires a secure political commitment and secure funding, among other things. Continued progress in pushing down maternal and child mortality, for instance, requires that important community-based programs remain solid and functional. This is much more likely to happen if it is planned for from the beginning of scale-up efforts and if key partners firmly commit not only to support scale-up but to the ongoing, longer-term efforts to ensure that programs continue to perform solidly.

Lack of Adherence to Basic Standards

Basic standards need to be set and, secondly, some governmental or quasi-governmental body (e.g., a CHW program board) needs to be tasked with monitoring implementation and the

quality of care and ensuring that the implementing agencies adhere to the basic standards. This is a governance issue as well. (See Chapter 4 on governance.)

In many settings, even when new community health services come under MOH plans and structures, implementation is by NGOs, multilateral agencies, or donor-supported projects. One consequence is that initiatives that may look very neat and tidy in national planning documents but may be implemented by different partners in very different ways. The way training is done may differ; the use of incentives may vary; program elements or CHW duties not appearing in national plans may be added in different settings—all due to the varying priorities or interests of the partners. Some governments have been quite assertive with external partners, insisting on adherence to standards. This can be very helpful in avoiding the free-for-all that otherwise often develops.

At the same time, there can be legitimate reasons for variation in community health services. Most obviously, for example, the situation in urban areas is very different from rural areas. There are generally far more health workers of all types, and private practitioners often play a very important role in providing health services. Reaching the population with health messages in an urban area needs to be done in quite a different way than how one would do so at a village level. Similarly, pastoralist groups or remote, sparsely populated regions may require different approaches to community health services than those in more densely populated rural areas. In some cases, the appropriate programmatic response will be to use completely different delivery modalities. In other cases, modest modifications may be sufficient. For example, for optimal service delivery coverage, the ratio of population/CHW may need to be adjusted, with a smaller number of households per CHW in smaller, more remote communities.

EXAMPLES OF COMMUNITY HEALTH WORKER PROGRAM SCALE-UP

Numerous examples exist of CHW programs that have been scaled up, but there are far fewer examples of CHW programs that have been scaled up and effectively sustained for a long period of time. The Barefoot Doctor program in China collapsed as rural communes collapsed. India's early national CHW program, which was initiated in 1978, scaled up quickly to produce 500,000 CHWs. But, because of lack of attention to proper selection, training, supervision, and linkage to health facilities, the program was abandoned within only a few years.[18]

India

By far the most dramatic scale-up of a CHW program has been India's ASHA Worker Program, which began in 2006 and now, less than a decade later, has close to one million workers, making it the largest CHW program in the world. The recent evaluation of the ASHA Program demonstrated that almost one-third of households were not reached by AHSA workers, and they were among the most disadvantaged members of the population.[19] The evaluation concluded that improving the skills of ASHA workers is still needed, as are improvements in supervisory and commodity supply.

Brazil

Another of the world's largest CHW programs is Brazil's Community Health Agent (CHA) Program, which now has 236,000 CHAs. This program expanded over three decades and was closely integrated with the PHC program of the country and its family health care teams (*Equipo de Saúde Familiar*). There is evidence that this scaling-up process has been effective, with maintenance of high-quality services, high levels of coverage, and very impressive achievements in terms of national progress in reduction of maternal and under-five child mortality.

Bangladesh

Bangladesh has a long history large-scale community health services. The most notable of these are the national community-based family planning (FP) program, the national oral rehydration therapy program, the national tuberculosis program, and the BRAC CHW (Shasthya Shebika) program. The development and expansion of these programs took different trajectories. The Bangladesh FP program, generally considered one of the most effective in the world in a low-income country not undergoing rapid socioeconomic development, began with an effective pilot program in a typical rural district (Matlab) in 1977. There, CHWs visited homes, promoted FP, and distributed birth control pills and condoms. A strong operations research effort (including a control area where such services were not implemented) demonstrated an increase in coverage of services and a decrease in fertility.

This provided the impetus for a gradual scale-up nationally over the following two decades, with a specially funded program at icddr,b (formerly the International Centre for Diarrhoeal Disease Research, Bangladesh) called the Rural Extension Project, which played a resource team function, providing ongoing monitoring and support for scale-up. In addition, activities were coordinated between the government and NGOs (many of which were funded by the United States Agency for International Development) so that there was eventually a uniform and national coverage of household services provided by FP CHWs (called family welfare visitors, or FWVs). This scaling up process took place gradually over a two-decade period with the total fertility rate declining from one of the highest in the world in 1971 (6.3) to 2.3 at present, one of the lowest rates in the world among countries at similar levels of development. The program eventually had 23,500 government-paid FHWs and another 7,000 CHWs supported by NGOs.[20, 21]

The BRAC National Oral Therapy Extension Program (OTEP), mentioned previously, is a good example of a large-scale CHW program that focused on a single intervention and was not envisioned initially as a long-term sustained program. BRAC gradually scaled up a home visitation program in which trained CHWs (called oral rehydration workers or ORWs) visited every rural household in Bangladesh—12.5 million in total—to teach mothers how to manage childhood diarrhea using home-based commodities, such as sugar, salt, and water. The house-to-house visits by ORWs have changed the norms of childhood diarrhea treatment, and Bangladesh now has one of the highest utilization rates of oral rehydration therapy for childhood diarrhea in the world, with 81% of children with diarrhea given oral rehydration solution (ORS). The scale-up process included a strong M&E component managed independently by icddr,b.

Following a pre-pilot and a pilot stage, the OTEP program expanded in phases, with the first phase reached 2.5 million households over a three-year period (1980–83), the second phase reaching twice that many households over the subsequent three-year period (1983–86), and in the final three-year period another 5 million households. Scaling up involved organizing CHWs into decentralized teams with strong provisions for supervision and accountability. An innovative program of CHW performance evaluation was developed by independent evaluators visiting 10% of homes following an educational session given by a CHW. CHWs with outstanding performance were rewarded with a financial bonus, thereby motivating workers and improving program effectiveness. This is an example of a national CHW program implemented by an NGO working in close collaboration with the government, other NGOs, and multiple donors.[21, 22]

The Bangladesh MOH has also scaled up an innovative national community-based tuberculosis program involving CHWs in collaboration with NGOs. CHWs visit homes and identify those with a cough of more than three weeks duration and then collect a sputum specimen that is examined microscopically by a MOH technician at a government health facility. The CHW

working with the NGO then supervises directly observed therapy (DOTS) of those who test positive. This program began in 1994 follow a successful pilot program led by BRAC, in close coordination with the MOH, in one district that took place between 1984 and 1991, with expansion to nine additional districts in 1992 and eight more in 1995. Now, this program has gradually expanded so that there are 10 collaborating NGO partners. Case detection rates are quite high—in the range of 80%—and treatment success rate is in the range of 85%.[21, 23, 24]

In short, BRAC's experience with successful scale-up of a number of different community-based health interventions involving CHWs all involve a similar process: develop and pilot a model program that is scalable, then gradually scale it up with a strong external M&E process so that mid-course corrections can be made. Maintenance of strong training programs and strong supervisory support at each step is essential for success.

CONCLUSIONS

Effectively scaling up of a CHW program and sustaining effective program functioning at scale are enormous challenges. However, examples of well-run programs at scale suggest that this is achievable with the proper combination of leadership, visioning, planning, identification of the appropriate model, fitting the program to the local and national contexts, ensuring long-term financial support, and continuing performance improvements on the basis of rigorous ongoing M&E. Learning from successful and failed experiences of other programs can also provide invaluable insights.

Key Resources

WHO. Beginning with the end in mind: Planning pilot projects and other programmatic research for successful scaling up. World Health Organization. 2011. http://www.expandnet.net/PDFs/ExpandNet-WHO%20Guide%20-Beginning%20with%20the%20end%20in%20mind%20-%20May%2019,%202011%20-%20draft.pdf

WHO. Nine steps for developing a scale-up strategy. World Health Organization. 2010. http://www.expandnet.net/PDFs/Nine%20steps%20for%20developing%20a%20scaling%20up%20strategy%20-%20WHO%20publication.pdf

WHO. Practical guidance for scaling up health service innovations. World Health Organization. 2009. http://www.expandnet.net/PDFs/WHO_ExpandNet_Practical_Guide_published.pdf

Pallas SW, Minhas D, Perez-Escamilla R, Taylor L, Curry L, Bradley EH. Community health workers in low- and middle-income countries: what do we know about scaling up and sustainability? *Am J Public Health* 2013; **103**(7): e74-82.

Simmons R, Fajans P, Ghiron L, eds. Scaling up health service delivery: from pilot innovations to policies and programmes. 2007. http://www.expandnet.net/PDFs/Scaling-Up_Health_Service_Delivery-WHO-ExpandNet.pdf

ExpandNet scaling-up bibliography: http://www.expandnet.net/biblio.htm

Case studies of scaling up health programs in developing countries are addressed in the following volume:

Cash RA, Chowdhury AMR, Smith GB, Ahmed F. *From One to Many: Scaling Up Health Programs in Low-Income Countries*. Dhaka, Bangladesh: University Press Ltd.; 2011.

The following is a detailed guide, also focusing particularly on public sector efforts for scaling up:

MSH. A guide for fostering change to scale-up effective health services. 2007. http://erc.msh.org/toolkit/toolkitfiles/file/FC_Guide2.pdf

The following guide draws particularly from NGO experiences in South Asia:

Kohl R, Cooley L. "Scaling up: from vision to large-scale change," Management Systems International. 2005. http://www.msiworldwide.com/files/scalingup-framework.pdf

The following guide, as the title suggests, is particularly oriented to maternal-newborn scale-up efforts:

Robb-McCord J, Voet W. Scaling up practices, tools, and approaches in the maternal and neonatal health program. Jhpiego. 2003. www.jhpiego.org/resources/pubs/mnh/scaleupMNH.pdf

The following guide draws on an approach developed by the Institute of Healthcare Improvement:

Massoud MR, Donohue KL, and McCannon CJ. 2010. Options for Large-scale Spread of Simple, High-impact Interventions. *Technical Report*. Published by the USAID Health Care Improvement Project. Bethesda, MD: University Research Co. LLC (URC). http://www.ihi.org/NR/rdonlyres/B37CD455-9F65-422F-878F-3DB1C920A380/0/MassoudDonahueMcCannonLargeScaleSpreadHighImpactInterventions_USAIDURCSept10.pdf

Issues in the scaling up of integrated community case management of childhood illness in Africa are addressed in the following document:

> Oliver K, Young M, Oliphant N, Diaz T, Kim J. *Review of Systematic Challenges to the Scale-Up of Integrated Community Case Management: Emerging Lessons & Recommendations from the Catalytic Initiative (CI/IHSS)*. New York, NY: UNICEF; 2012. Available at: http://www.unicef.org/infobycountry/files/Analysis_of_Systematic_Barriers_cover_1163.pdf.

Related to our focus here on scale-up is the challenge of closing the research-to-practice gap. The following review captures a broad range of this literature:

> Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M. & Wallace, F. (2005). Implementation Research: A Synthesis of the Literature. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network (FMHI Publication #231). http://www.fpg.unc.edu/~nirn/resources/detail.cfm?resourceID=31

Two other useful resources (not specific to health) are the following:

> Greenhalgh T, Robert G, Macfarlane F, Bate P, Kyiakidou O. Diffusion of Innovations in Service Organizations: Systematic Review and Recommendations. Milbank Quarterly 82(4); 2004: 581–629.
>
> Daniel Taylor-Ide and Carl Taylor. Chapter 22. How to go to scale. Just and Lasting Scale: When Communities Own Their Futures. Baltimore: Johns Hopkins University Press, 2002, pp. 282–307.

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3. Simmons R, Ghiron L, Fajans P. Nine steps for developing a scaling-up strategy Geneva, Switzerland: World Health Organization, ExpandNet, 2010.http://whqlibdoc.who.int/publications/2010/9789241500319_eng.pdf
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14. Simmons R, Shiffman J. Scaling up health service innovations: a framework for action In: Simmons R, Fajans P, Ghiron L, eds. Scaling Up Health Service Delivery from Pilot Innovations to Policies and Programmes. Geneva, Switzerland: World Health Organization 2007: 1-30.
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Chapter 15

Measurement and Data Use for Services Provided by Community Health Workers

Steve Hodgins, Dena Javadi, and Henry Perry

Key Points

- Routine measurement and data use for community health services are poorly developed in most countries.
- Such information systems, if well-developed and used, can strengthen community health services, including the performance of community health workers (CHWs).
- Sometimes additional information will need to be collected beyond what is normally reported on routine monthly report forms.
- Descriptions of some of the findings from monitoring and evaluation of large-scale CHW programs in Pakistan and India are provided.

INTRODUCTION

Measurement for a program is analogous to senses for the human body. It is an essential function, required for program effectiveness. It tells what is happening, alerting people to areas that need attention. Data are used at different points in the development and implementation of program activities. Data are used to define or characterize a problem that may call for some new action. So, for example, we may be relying on health facility-based care for immunization. Considering routinely generated data on service volume, we may determine that population coverage is very low. That could prompt decisions to develop new modes of service delivery that more adequately meet the needs of the population (possibly including a new use of CHWs). Data coming from special studies or periodic population surveys can also serve this purpose of helping us better understand problems that may need new approaches.

Another important use of data is evaluation. Typically, formal evaluations are a donor requirement associated with major program initiatives. Most often, they are done as one-offs, sometimes finding very disappointing performance, resulting in decisions to make major changes in direction. Related to evaluations is the measurement and analytic work associated with pilot activities. From such findings, decisions can be made about whether or not to proceed with scale-up, and what particular aspects of a demonstration activity need to be modified.

Finally, returning to the analogy with senses and the human body, measurement can serve a critical function informing, on an ongoing basis, what is happening and where adjustments need to be made. As important as the other uses of measurement are, this chapter focuses primarily on the ongoing collection and use of data related to community health services for purposes of continually improving performance and impact. This process requires appropriate documentation and information management systems and requires equipping CHWs and other health workers on appropriate documentation and data management and use for improving services.

KEY QUESTIONS

- What does monitoring and evaluation consist of?
- What are the steps in developing a monitoring and evaluation system?
- What are methods for routine monitoring and performance management?
- When is routine measurement not enough?

On this ongoing function, Lant Pritchett et al. supplement the conventional concepts of "monitoring" and "evaluation" with the idea of "structured experiential learning," adding an additional "e" to M&E, to get MeE.[1] They point out that typically: (1) "evaluation" is done infrequently, and by some external entity; and (2) ongoing "monitoring," of the usual kind, is done as an administrative, reporting function. What is needed is more than this; they call for "structured experiential learning," by which they mean rigorous, real-time tracking of important aspects of program performance by implementers, with tight feedback loops and continuous attention to address performance problems.

In the case of many tasks or program activities conducted by CHWs, even routine (administrative) monitoring may be missing because health management information systems (HMISs) commonly fail to capture services provided more peripherally than at the health facility level. The fact that a function gets measured and reported does not necessarily mean that it will get meaningful attention to ensure performance, but if it is not monitored at all there is little likelihood of effective performance management. This need for monitoring is true

of all services, but is particularly important for community health services that often are not adequately monitored. Too frequently, they are also scaled up and implemented over long periods without being subject to rigorous evaluation. Unfortunately, there have been few examples of rigorous, large-scale evaluations of community-based services.*

Some community-based services are frequently captured in routine monitoring or health information systems. For example, in many settings outreach strategies and the use of health auxiliaries are important for delivery of immunization services. Where this is the case, these services are generally reflected in routine health information systems, though not necessarily disaggregated from health facility-based provision. For many other programs, however, services provided by CHWs frequently are not captured at all. For example, CHWs may be depot holders for oral rehydration solution (ORS), condoms, or oral contraceptives, yet distribution of these commodities/services by CHWs may not be captured in the HMIS. Health education and community mobilization functions are typically not captured at all or, if documented and reported, the information may not be interpretable. For example, a report on the number of community education sessions conducted per month by a CHW does not really provide any useful information about the quality of the session, the number of attendees, and so forth.

There is a general principle that what gets measured gets attention. Health facility and program managers at all levels are only empowered to actively and effectively manage performance of their services and programs if they have a good idea how things are actually going. That requires selection of meaningful indicators, appropriate ongoing measurement, review of the collected information, and actions taken in response to the information collected. So, although we acknowledge the importance of traditional "monitoring" and "evaluation," what is particularly important here is the "e" in MeE, i.e., what Pritchett et al. refer to as "experiential learning." This term can be understood as ongoing monitoring/measurement to track and manage services to improve performance. As we have seen, immunization is a program area that, in many settings, is managed in a way that can serve as a model for other areas of community-level service delivery.

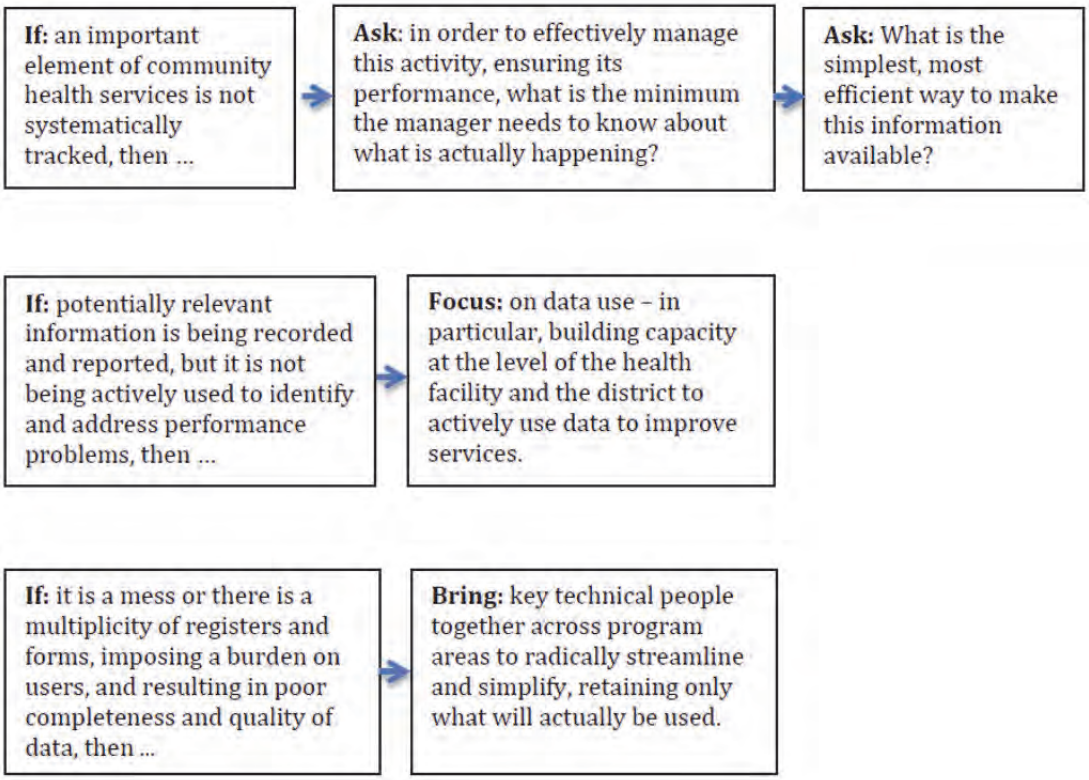
WHAT ARE THE STEPS IN DEVELOPING A MONITORING AND EVALUATION SYSTEM?

If a program activity is judged to be important, managers need to have a good idea how it is actually doing. Frequently, enough checking can certainly help a lot. But, supplementing this monitoring with more systematic checking, using indicators and information systems, is generally necessary.

There are several common problems, calling for specific responses as shown in Figure 1.

*A notable exception is the multicountry evaluation of community health services by Bryce et al.[2]

Figure 1. Steps in developing a functional information system for community health services



WHAT ARE METHODS FOR ROUTINE MONITORING AND PERFORMANCE MANAGEMENT?

Virtually all primary health care services have routine health information systems, consisting of registers, forms, and reports. They may also include standardized case records, patient-held cards/records, and more specialized information sub-systems, for example, for health facility-level supply chain management. Some systems have provision for capturing services delivered at outreach sessions or at the household level, with dedicated registers or forms used at that level. In most instances, there are no institutionalized provisions for processing and using information collected through these various tools other than for extracting certain items for submission in monthly or quarterly reports. Although there may be integrated information systems that consolidate across all or some programs or services at the primary healthcare level, the more usual situation is a multiplicity of documentation tools associated with different programs. This system imposes a documentation and reporting burden on health workers and CHWs (to the extent that they, too, are obliged to record such information). It also contributes to problems of data quality and completeness and further reduces the likelihood of active data use for quality improvement. Integration of the CHW health information system into the system for the health center to which CHWs are attached ensures that CHW work is part of the national health information system.

There are other possible data sources for routine monitoring and performance management. These sources can include documentation arising from supervisory contacts, individual patient records, and material generated from institutionalized death audit processes.

WHEN IS ROUTINE MEASUREMENT NOT ENOUGH?

As already discussed, measurement related to health program performance has several important functions. As a basis for developing strategy, understanding the current situation helps in prioritizing, directing design decisions, and determining resources needed. But, as services are delivered over time, there are also important dimensions of performance and of drivers or determinants of performance that cannot be readily measured through the normal means available to us for routine monitoring. For example, an important target of many CHW programs is changes in specific household practices. If part of a CHW's role is to promote exclusive breastfeeding at the household and community levels, the most important measure of effectiveness is what is actually happening with breastfeeding rates. Normally, that cannot be measured any other way than by a representative household level survey of the whole population. Similarly, if an important focus of CHW work is to promote appropriate care seeking for danger signs, we will not be in a position to properly measure this practice based only on public sector service delivery statistics.

There can also be important drivers or determinants of performance that program managers need to accurately judge. For example, morale or motivation of health workers (including CHWs) can be a very important factor influencing their performance. But, routine monitoring tools do not provide any insight into such factors. For important aspects of program performance that do not lend themselves to routine measurement, periodic surveys, and special studies can provide valuable information, although normally we have to be satisfied with getting this information far less frequently than we would like. Certain CHW programs, such as Pakistan's lady health worker (LHW) program and Nepal's female community health volunteer (FCHV) program, have had the benefit of periodic surveys specifically looking at those programs. These surveys have provided invaluable information on what the CHWs are doing and on factors influencing performance.

EXAMPLES OF MEASUREMENT AND DATA USE IN SPECIFIC CHW PROGRAMS

Here we present three examples of data use in large-scale CHW programs. The first of these (Box 1) describes how CHWs tally up their daily work and then consolidate their data into a monthly report for submission to the next higher level in the system. This community-based health information system has the advantage of guiding the CHW in his or her daily work and providing the capacity for calculation of coverage of services in the CHW's catchment area. The second example (Box 2) describes how information about CHW performance collected by supervisors in India is passed up through the system for monitoring purposes. The third example (Box 3) describes evaluations of national CHW programs in India and Pakistan. In India, the assessment was carried out by the National Health Systems Resource Centre, a technical support institution with the National Rural Health Mission, for the national accredited social health activist (ASHA) program. In Pakistan, the assessment was carried out by a private external entity. In both cases, the process was a transparent one, and the results are publicly available.

Box 1. An example from Ethiopia of village-based monitoring of CHW activities[3,4]

The community health information system developed for the Ethiopian Health Extension Program for the Southern Nations, Nationalities, and Peoples state consists of a comprehensive system built around identifying households and families and creating a health folder for each family. At the time of home visits, the CHWs (called health extension workers, or HEWs) carry the family folder with them to record information. The HEW also completes a tally sheet for recording at the end of each day the number of services that s/he provides by type of service (e.g., antenatal care, immunizations). Instead of putting a tally mark for the service, however, the HEW records the household number. Supervisors can then assess the quality of the information by looking directly at the family health folder for households that were reported to have received a service.

For families in need of a special service during a given month, the family folder is put in a placeholder "tickler" file for that month. In some health posts (where HEWs have a base of operations), the HEWs put small pieces of paper with the household number on it into certain pouches marked with the type of service that needs to be provided to someone in that household (e.g., antenatal care, family planning, immunization). This has led to better targeting of services and increased coverage in the HEW catchment areas. The HEWs summarize their daily tally sheets to produce a monthly report for their supervisor. This system is now in the process of becoming electronic, thereby facilitating the compilation of summary statistics.

Through this system, HEWs can calculate coverage indicators for their own catchment areas (e.g., percentage of children 1–2 years of age who have obtained all of their immunizations).

Box 2. An example from India of regional-level monitoring

In India's ASHA program, ASHA supervisors monitor performance and report on it. The reports on ASHA functionality involve recording whether ASHAs are completing such tasks as (1) visiting newborns within the first day (for newborns born at home), (2) attending immunization camps, (3) visiting households to discuss nutrition, and (4) acting as directly observed treatment short-course (DOTS) providers (to directly administer TB medication).[5] These reports are then submitted to the block community mobilizer on a monthly basis and assessed quarterly to determine what percentage of ASHAs are functional. These results are then submitted to the district coordinator, who grades each block in the district based on ASHA functionality. Finally, the monitoring data are consolidated at the state level, and each district is graded.

Similar to the ASHA example, monitoring systems for anganwadi workers (AWWs) in India start at the village level and data flows to the child development project officer at the block level and finally to the Ministry of Women and Child Development at the state and national level. Data are reviewed at each level and applied in decision-making. The monitoring and information system is currently being updated and revised so that each state adheres to a common national standard. The revision process involves creating online monitoring software for use at the block level, new information registers, and new reporting formats from the village to the state level.[6]

Box 3. Examples from India and Pakistan of assessments of their entire national CHW programs

India

In India, in 2009 and 2010, the National Health Systems Resource Centre, a technical support institution with the National Rural Health Mission, conducted an assessment to determine what components of the ASHA program work, where, under what circumstances, and to what extent.[3] The evaluation was done in three phases: Phase 1 was a qualitative study and a review of secondary information; Phase 2 was a structured questionnaire of a sample of stakeholders in two districts of each of the eight states selected for inclusion in the evaluation (in each district, 100 ASHA workers, 600 beneficiaries, 25 auxiliary nurse-midwives, 100 AWWs, and 100 community leaders who are representatives of the Panchayati Raj institutions). In Phase 3, the findings were discussed with key stakeholders at the national, state, and district levels; follow-up observations were made over a two-year period on how the findings of the evaluation were incorporated into program operations. The National Health Systems Resource Centre's 207-page report had findings and recommendations specific to each state. In addition, the overall recommendations arising from the evaluation results included, among others, the following:

- Improve ASHA worker skills in counseling and interpersonal behavior change in areas related to nutrition, care in pregnancy (including recognition of maternal complications and referral), home-based care of the newborn, prevention and management of illness in the young child, prevention of communicable diseases, and promotion of good health practices.
- Improve the quality of supervisory support and improve the drug kit refill process.
- Reinforce efforts to ensure that every household in the village is reached by an ASHA worker.
- Focus on advocacy for the program so that policymakers and others in the health system understand the potential impact of the program on saving maternal, newborn, and child lives.
- Establish a system to monitor ASHA functionality at the block, district, and state levels.
- Clarify and build synergy among the overlapping roles of AWWs, auxiliary nurse-midwives, and ASHA workers.
- Establish improved processes for replacement of ASHA workers and create opportunities for career advancement for qualified ASHA workers. This process will require competency-based training and certification of ASHA workers.
- Promote ASHA worker motivation by achieving a good balance between appropriate remuneration and a spirit of volunteerism and desire to benefit the community.[†]

Pakistan

In 2009, Oxford Policy Management conducted an external evaluation of the LHW program in Pakistan, covering the period from 2003 to 2008.[5-9] It included a survey of a nationally representative sample of households and a similarly representative sample of LHWs. Separate interviews were conducted with LHW supervisors, selected medical staff, and community groups. The goals of the evaluation were to examine the level of performance of LHWs and determinants of performance level and to measure quality and coverage of services, including coverage among the poor. In addition, reviews of management, organizational systems, program expenditures, and unit costs were done, resulting in 11 reports, including reports for each province of the country.

Among the many findings of the evaluation were that the LHW program has effectively managed its expansion from 70,000 to nearly 100,000 LHWs without undermining its impact, although there are still serious problems encountered with supplies, equipment, and clinical referral

[†] The report's statement was: "We need to forge a way forward that builds on the ASHA's own reiterations of community service, as being her main motivating element and the concept of volunteerism and activism. At the same time we also need to ensure that we do not become exploitative of her service, and that we respect the need to value her service and compensate her adequately for her time." [p. 127].

services. However, the evaluation did identify that 25% of LHWs exhibited low levels of service, including working outside of their catchment areas for other organizations and charging for services (which is prohibited). In addition, it found that high turnover in management positions impeded program performance. Coverage in the most disadvantaged areas of the country is still incomplete, so the program will still need to expand further.

CONCLUSION

Measurement and use of data for strengthening community health services at the local level can strengthen the performance of CHW programs. In addition, well-developed national CHW program evaluations conducted at 5- to 10-year intervals can serve to guide national program strengthening. For CHW programs to remain relevant and effective and to maintain political and governmental support for their long-term sustainability, well-developed monitoring and evaluation activities will be essential.

Useful Resources

Segone M, ed. *Country-Led Monitoring and Evaluation Systems: Better Evidence, Better Policies, Better Development Results*. Geneva, Switzerland: UNICEF Regional Office for CEE/CIS; 2009. Available at: http://www.ceecis.org/remf/Country-ledMEsystems.pdf.

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Chapter 16
Wrap-Up

Henry Perry, Lauren Crigler, and Steve Hodgins

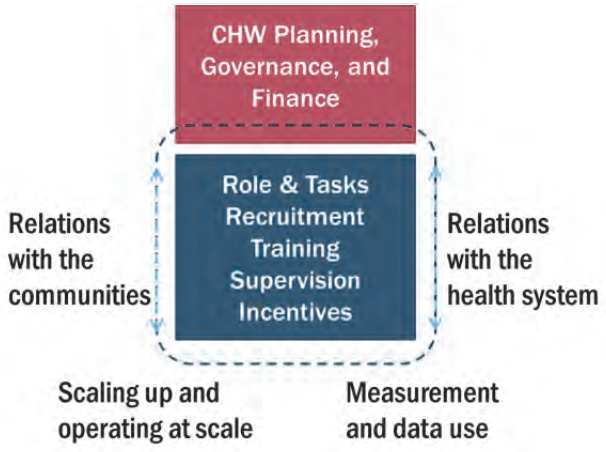
Key Points

- The current enthusiasm for large-scale Community Health Worker (CHW) programs needs to be tempered with a sobering reflection on the disappointments that followed a similar wave of enthusiasm in the 1970s and 1980s and that challenges in scaling up and sustaining large-scale public sector CHW programs remain.
- Large-scale public sector CHW programs are complex entities that require adapting a systems perspective to the national and local contexts.
- This reference guide has attempted to avoid categorical recommendations and has suggested issues and principles to consider and, when possible, has cited relevant program experience.
- CHWs are not a stop-gap measure in a second-rate health program, but a permanent part of a highly functional and effective first-class health system.

Given the recent re-emergence of interest in large-scale CHW programs, we have taken the opportunity to take stock of issues and challenges that these programs face and what might be done to make them as effective as possible. This reference guide is intended to be a practical guide for policymakers and program managers who wish to develop or strengthen a CHW program, drawing lessons from other countries that have implemented CHW programs at scale. We have discussed major policy and programmatic issues that decision-makers and planners need to consider when designing, implementing, scaling up, or strengthening a national-level CHW program. We have offered an overview of specific challenges CHW programs face, country lessons, tools, and other resources that may be helpful for policymakers and program managers. As much as possible, we have brought in relevant programmatic examples.

We return to Figure 1 that was presented in the Introduction to highlight the inter-relationships between all the different parts of the "system" that makes up a CHW program. As should be even clearer than perhaps it was at the outset, because all of these functions have important inter-relations, design decisions in one area have consequences in many others.

Figure 1. Overview of Community Health Worker Program Sub-systems and Their Interactions



For more than 50 years, as leaders in primary health care have tried to elaborate strategies to better meet population health needs, they have gravitated repeatedly to solutions that have involved recruiting and training local people to play roles complementing and supplementing those of health professionals, encouraging healthier practices and care seeking and, in some instances, providing services that otherwise would fall within the responsibility of health professionals through task-shifting.

Strategies have varied considerably by place and time. Different names for community-level workers have been used. Some notable ones include: "health auxiliary," "village health worker," and "community health worker" and, most recently, "frontline health worker" (albeit, a designation used also to cover primary health care professionals, as well as lesser-trained community-level workers).

The initial wave of CHW programs established in the 1960s, 70s, and 80s was for a very different world from today. Many of the societies where we work have become more prosperous since then; the standard of education and literacy has improved; economies have evolved in the direction of greater monetization and away from traditional subsistence economies; in many settings, the private sector now accounts for a large proportion of health services provided; road networks have expanded; and new technologies (notably mobile phones) are now in widespread use. Perhaps most importantly, the world today is much more urbanized.

Nevertheless, many of the issues that face policymakers, program managers, and external development partners as they make decisions and as they design and manage community health programs are essentially the same as those faced by their predecessors: how to sustainably finance such a program; how to design it so that it will function effectively; how to select, train, motivate, retain, and supervise CHWs; how to ensure consistent supply of needed drugs and other commodities; and how to monitor and ensure performance. Also, now more than ever, programs need to be resilient and adaptable, adjusting to new evidence and policies to enable them to implement newly approved recommendations.

Unfortunately, examples can be found today of decisions being made in the development or implementation of CHW programs that repeat mistakes made in the past, dooming programs to the same compromised effectiveness as last time round. Our goal is for this reference guide to enable policymakers and program implementers to reduce the frequency of such decisions that fail to take into account lessons that can be drawn from past experience.

The accumulating evidence regarding the effectiveness of CHWs in low-, middle- and even in high-income countries provides strong indications that for the foreseeable future CHW programs are no longer just a stopgap solution. Investments in them are, in fact, investments in strengthening the health system. But, to reach their full potential they need adequate financing, just as all essential programs do. Whether emerging large-scale CHW programs can garner the financial resources they need to achieve their full potential is a question that is too early to answer at present.

Each of the chapters in this manual is authored separately, so they may differ in style and approach; however, in each case, authors were asked to present a series of key questions and provide alternative scenarios that might help decision-makers identify the best solution for their particular challenge.

Across chapters, there are key themes that emerge:

- Planning, managing, and financing CHW programs is complex because CHW programs generally fall somewhere between the formal health system and communities, and rely on the involvement of a wide range of stakeholders at local, national, and international levels. CHW programs frequently fall outside of the formal health structures and are poorly integrated with it.
- Careful planning that takes into account the full costs of the program is essential, and a plan for adequate financing that is fair and sustainable must follow. Establishing a strong a base of political support for long-term financing is critical if government funding is required. Early success can build long-term success – an ineffective program is hard to fund in the long term.
- Balancing the inherent tensions of a large-scale CHW program in which the CHW is the lowest tier worker of a national health system and also acts on behalf of the always changing local world of a community will be an ongoing challenge requiring decentralized flexibility in program policy, design, and implementation.
- Attention to human resources, from role definition and recruitment to training, supervision, and incentives must be considered in full at the outset (if possible) of the program. Each of these areas individually and cumulatively provides the means and mechanism for the delivery of quality services. The program is responsible for providing basic and realistic support for people expected to deliver any kind of service to a community.

- Early program quality can generate political support that will be valuable in providing the needed governmental financial support. Strong evidence of effectiveness can help to secure political support for funding and can be achieved by having a strong monitoring and evaluation program.
- Where community or local participation is well established, models of community-driven programs and local accountability may be appropriate and useful for CHW programs. Where local participation in governance is not well established (for example, because governance of the health and political systems are highly centralized) or is weak, stakeholders need to explore other mechanisms for accountability.
- It is challenging to include a very local participatory structure for governing a CHW program within a large-scale program, and there are few sustained examples of this. For large-scale programs, formal local governance structures, such as elected local government councils, may need to be relied on. Stakeholders need to consider how to organize CHW program governance in such contexts.
- Engaging localities in the governance of large-scale CHW programs is difficult to achieve without substantial resources, adequate planning, and sustained attention to maintaining these structures. Stakeholders need to consider what resources are needed and how these can be made available. However, the development and support of community networks, linkages, partners, and coordination is necessary to enable a comprehensive community participation approach for better health.

Although many themes and issues have been explored, we have not included a whole range of topics that are of great importance, but must be addressed elsewhere. These include the following:

- The effectiveness of specific interventions and specific strategies for delivering them in the community.
- Current advances in the application of mHealth for CHW programs and the potential of mHealth for CHW programs in the future.
- The adaptation of CHW programs to urban environments.

CONCLUSIONS

- Our goal in this reference guide has been to offer reflection and, hopefully, some guidance for policymakers and program implementers as they begin to plan new CHW programs, scale up existing programs, and/or strengthen existing programs. In 1987, Berman, Gwatkin, and Burger asked if CHWs were a "head start or false start towards Health for All."[1] The scientific evidence and programmatic experience that have accumulated over the past three decades (only a small portion of which has been cited in this guide) have provided a new and stronger foundation for being certain that CHWs definitely move the world toward Health for All, and not just as a stop-gap measure, but for the foreseeable future. We hope that this reference guide will help to enlighten the way—even if just a bit—toward Health for All. We firmly believe that the challenges of CHW programming can be met and that CHWs will not continue to be seen as stop-gap measures in second-rate health programs, but rather as a permanent part of a highly functional and effective first-class health system.

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APPENDIXES

Appendix A

Case Studies of Large-Scale Community Health Worker Programs: Examples from Afghanistan, Bangladesh, Brazil, Ethiopia, India, Indonesia, Iran, Nepal, Pakistan, Rwanda, Zambia, and Zimbabwe

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Introduction

Throughout this guide we have referred to specific community health worker (CHW) programs, but in a cursory fashion, referring to one aspect of the program or another. Here, we provide an overview of seven large-scale CHW programs. All of these are public-sector programs except for the first example from Bangladesh, which describes the CHW program of BRAC. BRAC (formerly the Bangladesh Rural Advancement Committee) has recently become the largest nongovernmental organization, or NGO, in the world. It has almost 100,000 CHWs in Bangladesh.

The examples provided below are meant to inform policymakers and program implementers in designing, implementing, scaling up, and strengthening large-scale CHW programs. CHW programs, by their very nature, are a product of the local context because many geographical, historical, cultural, social and health-system factors influence how CHW programs emerge and evolve. Thus, as is appropriate for a guide such as this, these case studies provide examples of how CHW programs emerge and operate in regions throughout the world—Asia, the Middle East, Africa, and South America.

THE COMMUNITY-BASED HEALTH CARE SYSTEM OF AFGHANISTAN*

Summary

Background

The Afghanistan CHW program is part of the community-based health care (CBHC) component of the Basic Package of Health Services (BPHS), which was developed in 2003 after the end of 25 years of violence and conflict. At the present time, there are approximately 19,000 CHWs.

Implementation

CHWs are based in pairs at health posts as a male and female team, usually as spouses or as family members. They are trained and supervised by NGOs who have contracts from the government to implement the BPHS, including CHW training and supervision, in specific districts.

Training

CHWs receive three separate 3-week modules with a month of field experience in the village in between. Trainers attempt to visit all the trainees in their villages during the month of field experience.

Roles/Responsibilities

CHWs provide a comprehensive set of services from health promotion to provision of health services to referral to the next level of care at a Basic or Comprehensive Health Center. Of note is their capacity to carry out community case management of acute childhood illness (pneumonia, diarrhea, and malaria, where malaria is endemic), treatment of patients diagnosed with tuberculosis (TB), and provision of family planning (FP) commodities.

Incentives

CHWs are volunteers.

* This account was prepared by Iain Aitken, Advisor on Community-Based Health Care to the Ministry of Public Health, Afghanistan, through Management Sciences for Health from 2004 to 2012, and by Said Habib Arwal, Head of the Community-Based Health Care Department of the Ministry of Public Health, Afghanistan, since 2004.

Supervision

Each health facility supporting health posts has a Community Health Supervisor (CHS). CHSs visit monthly each health post where a pair of CHWs is based, and the CHWs come monthly to the "parent" health facility where the CHS is based for a joint meeting with the other CHWs.

Impact

CHWs now provide a major portion of primary health care (PHC) services in Afghanistan and are widely recognized as one of the important contributors to Afghanistan's marked improvement in health status during the past decade.

Background

For almost 25 years, from 1978 to 2002, Afghanistan suffered from war and internal conflict. Before 1978, the health system had not been very well developed, and after conflicts ceased in 2002, there were only a limited number of health facilities, and these were run by the government or by NGOs. Most health professionals had fled the country if they could. The population was largely illiterate and social and economic structures were very weak.

The transitional Islamic Government of Afghanistan made two key decisions for the development of the health services in 2003. The first was the development of the BPHS. In consideration of the primary health needs of the population; the availability of effective, evidence-based interventions; the levels of resources required; and the goal of creating an equitable health system, priority was given to the health of women and children. The second decision, in light of the nonfunctioning of the government health delivery system, was to contract out health care delivery to NGOs through a series of partnership agreements. Funding of these contracts was provided by the World Bank, the US Agency for International Development (USAID), and the European Union. This arrangement has continued and has been developed over the past 10 years.

A key element of the BPHS was the inclusion of a CBHC component, centered on the use of CHWs at a village health post. The innovation that had not been a part of previous attempts to use CHWs was that each health post should have one female CHW as well as one male CHW. The inclusion of female CHWs was considered necessary because of the constraints that women and their children faced in obtaining services at health facilities. These constraints arose because of security issues as well as cultural norms.

In 2004, agreement was reached on a job description for the CHWs, a CHW training curriculum and training manual were completed, and training of CHWs by NGO trainers started. The NGOs had targets for the numbers of CHWs to be trained. Within the first year it became very clear that the expectation that health facility staff would be able to make time to provide supervision to the CHWs was proven unrealistic. In 2005, therefore, a new category of CHSs was created. These were envisioned as full-time staff based at the peripheral health facilities.

Key Health Needs

Much of Afghanistan's population is scattered across deserts, and another major portion of the population lives in remote mountain valleys that are usually cut off for several months during winter. So the development of accessible health services is a major health challenge that can only be met through the development of community-based programs.

A further challenge was the weakness of the existing health facilities. In 2003, for instance, only 24% of hospitals had the capability of performing cesarean sections. Furthermore, only 21% of health facilities had female health staff (a necessity if women are going to be examined by a trained health provider), and only 467 midwives were available in the entire country. This all

contributed to a maternal mortality ratio (MMR) estimated at 1,600 per 100,000 live births, an under-5 mortality rate of 257 per 1,000 live births, a child stunting rate of 48%, a total fertility rate of 6.7, and a crude birth rate of 48 per 1,000 population. Only 23% of the population had access to safe water and 12% had improved sanitation. More than 50% of the population was at risk of malaria. Only 8% of pregnant women received skilled antenatal care (ANC) and only 14% of women delivered in a health facility. The contraceptive prevalence rate (CPR) was 8.5% and the child immunization rate was 30%. As a result of the war there was also a considerable burden of disability among soldiers and the civilian population, including mental illness.

Health System Structure

The government health system operates in each of the 34 provinces. Each province has a provincial referral hospital, and each district in the province has a district hospital. In addition, there are many Basic Health Centers and Comprehensive Health Centers staffed by doctors, nurses, and midwives, whose numbers correspond to the size of the populations they serve and their workload. Each of the district-level facilities has a network of health posts with CHWs in its catchment area. The median number of health posts per health facility is now between 15 and 20. However, some facilities support up to 50 health posts. Each health post is supposed to have one male and one female CHW, and serve a maximum of 150 households.

Scope of Work of the CHWs

The CHW is active in the following activities.

Health promotion (through personal and group activities, including Family Health Action (FHA) Groups, with the support of a village health committee, the Shura-e-sehie). Topics addressed are the following:

- Safe water and sanitation, personal and food hygiene
- Prevention of malaria, including use of insecticide-treated bed nets (ITNs)
- Safe pregnancy, childbirth preparedness, and care in the postpartum period
- Pregnancy and child nutrition, including breastfeeding
- Immunization
- Birth spacing and contraception
- Use of maternal and child health (MCH) and birth spacing services at the health facility

Direct patient care services:

- Community case management of childhood illnesses and referral of complicated cases
- Screening for and referral of suspected TB cases, and community-based treatment of cases with directly observed therapy (DOT)
- Counseling about and provision of contraceptives
- First aid and trauma management

Management activities:

- Getting to know the families in the community and maintaining a community map showing families requiring or using particular services

- Reporting vital events (births, maternal deaths, and deaths among children younger than 5 years of age), and submitting a monthly report for the national health management information system (HMIS) of all health post activities
- Managing the health post and maintaining all equipment, supplies, and drugs

Community Roles

Each community with a health post has a health committee—the *Shura-e-sehie*. The *shura* members are selected by the community with help from the CHW, the CHS, and the head of the health facility. The health *shuras* provide leadership and support to all health-related activities in their communities. They select, support, and supervise the CHWs in the community. They encourage families to make full use of preventive and curative health services. They provide leadership in the adoption and promotion of new behaviors and social norms.

Attempts at different times to form women's health *shuras* have met with varying degrees of success. However, women's FHA Groups have proved very effective in promoting healthy behavior change among women and their families. The female CHW selects a group of 10–12 women who are respected in the community and whom she trusts. They are given a series of monthly "lessons" on important health topics, including home hygiene, diet and nutrition, care of newborns and young children, and use of health services. Each woman is encouraged to put the lessons into practice and then demonstrate and share them with the women from 8–10 of the households in her neighborhood. In about one-third of the provinces, the FHA Groups have also carried out growth monitoring of children in the community.

CHW Selection Process and Criteria

CHWs are selected through a consultation process between the NGO staff and the community elders. Each health post is supposed to have a male and a female CHW; these are frequently spouses or other close relatives, allowing them to work together. They should be more than 18 years old and be respected members of the community. There has been no upper age limit. There is no education requirement, but if a person with education meets the other criteria, they may be preferred.

Training of CHWs

The basic training course for the CHWs consists of three separate 3-week modules with a month of field experience in the village in between when CHWs can practice their new skills before moving on to the next module. The trainers attempt to visit all the trainees in their villages during the practical month.

The modules are designed to take the CHWs from simpler to more complex skills. The first module deals with common infectious diseases, environmental and personal hygiene, the prevention of malaria and diarrhea, some principles of health education, and the management of diarrhea and eye and skin infections. The second module is on promoting MCH. This includes the CHW's role in ANC and birth preparedness, postnatal and newborn care, breastfeeding and nutrition, and immunization. The CHWs also learn some basic first aid. The third module includes community case management of childhood illnesses, TB, birth spacing promotion and provision of contraceptive methods, and further skill development in talking with people about sickness, treatment, and birth spacing.

While the basic scope of the CHW's work has not changed, over the last five years the details of the job have been modified somewhat and training methods and job aids have been improved. New tasks given to the CHWs include postpartum FP and provision of injectable contraceptives, newborn care, and growth monitoring of children. An improved training package and pictorial

job aid for community case management as well as TB-DOT have been developed. These have been incorporated into a revised training manual and curriculum.

Support and Supervision

Each health facility supporting health posts has a CHS, who is almost always a man. In less than 10% of facilities there is also a female CHS. Their selection criteria include a high school education, residence in the district where they will work, and good communication skills.

Their job description includes

- Regular on-the-job training provided to the CHWs,
- Assurance on a monthly basis that the health posts have adequate supplies and drugs,
- Supervision of the quality of the community maps and monthly reports,
- Planning and management of all community health activities in the catchment area, and
- Support of the community health *shuras*.

These activities are managed through monthly visits to each health post and a monthly meeting of CHWs at the health facility where the CHS is based. CHSs frequently have a motorcycle and a fuel allowance that makes it possible for them to visit the health posts. CHSs participate in all the training programs provided for CHWs. In addition, special training courses are provided specifically to the CHSs to build their capacity as supervisors, trainers, and managers.

Linkages with the Formal Health System

The Afghan CBHC system is an essential part of the national health system and a key element in the BPHS. CHWs are linked to a health facility and given technical supervision and supplies by the CHS. Their monthly reports are part of the national HMIS. In the province, the NGO that is responsible for managing the community-based work has a CBHC Coordinator and CHW trainers to manage and support the CBHC program. In the Provincial Health Office, there is usually someone who is the CBHC focal point. Since 2012, about one-third of provinces have specific CBHC Officers to oversee and promote all CBHC activities in the province.

At the national level, there is a CBHC Department in the Ministry of Public Health (MOPH). Its role within the overall stewardship role of the MOPH is to promote CBHC, oversee policy and program development, monitor implementation, and coordinate the inputs of other technical departments (e.g., the Departments of Child Health, Reproductive Health) in the MOPH that are stakeholders in CBHC.

Compensation and Motivation

Afghan CHWs have been volunteers from the beginning of the program. This policy has been reviewed and reaffirmed periodically because the issue of salary is constantly raised. Attempts to encourage financial support for CHWs from the community itself have never been very successful. Since 2008, CHWs have received allowances to cover travel and food for all monthly meetings at the facility and any training courses they attend. In some provinces, CHWs participate in the polio campaign and in the National Immunization Days, and for this they receive an honorarium. In some areas, CHWs may receive financial or “in-kind” rewards for referrals of particular categories of patients.

Since 2010, December 5 has been recognized as National CHW Day in Afghanistan. Celebrations are held for CHWs at both the national and the provincial levels. The quarterly *Salamati Magazine* is designed for and distributed to all CHWs.

Monitoring and Data Use

At the community level, the CHWs prepare and update a community map. This displays all households in the community and, with use of different symbols and colors, locates women and young children requiring/receiving preventive health services, FP, or TB treatment.

The CHWs keep a monthly record of their activities and any births or deaths on the Pictorial Tally Sheet. This is designed so that it can easily be used by illiterate CHWs. For every service provided, the CHW puts a line (tally) in the appropriate box indicated by a picture representing that service. At the end of each month, the CHS transfers this information into a health post report, which is then combined into an aggregated CBHC report for the health facility. These and the health facility reports are all entered into a database at the provincial level and forwarded quarterly to the national HMIS Department. Checks and analyses of the data are done at both national and provincial levels. Usually, a specific set of priority indicators are monitored regularly for program management purposes.

Demonstrated Impact of the CBHC Program

HMIS data on the management of sick children and the provision of contraceptives are the best data to illustrate the relative contribution of CHWs to these services. Since 2003, the numbers of health services being provided to the population have increased dramatically. At present, CHWs are treating 30% to 36% of all cases of childhood acute respiratory infections and diarrhea recorded by the HMIS. Of the reported provision of contraceptives, 55% of women who are using short-term methods are being supplied by CHWs. Rates of ANC, skilled birth attendance, and immunizations have all also increased markedly. While CHWs and FHA groups have, no doubt, contributed to these, the presence of a female health worker in most health facilities has also been essential.

The Afghan Mortality Survey 2010 found marked improvements in utilization of services and health status compared to the levels observed in 2003. The CPR was 20% (compared to 8.5% in 2003); the total fertility rate was 5.1 (compared to 6.7 in 2003); 68% of women had obtained ANC (compared to 8% in 2003); 34% of births were attended by a skilled birth attendant; 64% of children with diarrhea were given oral rehydration solution (ORS) or safe home fluids; and 64% of children with symptoms of pneumonia were given antibiotics. The under-5 mortality was estimated at 105 per 1,000 live births (compared to 257 in 2003) and the MMR was estimated at 372 per 100,000 live births (compared to 1,600 in 2003). Although its contribution cannot be precisely measured, the CBHC system has undoubtedly played a major role in the dramatic progress that has been achieved.

Financing of CBHC and Its Development

The BPHS implementation by NGOs, including the CBHC program, continues to be financed by the World Bank, USAID, and the European Union. Most of the funding for development of the CBHC program has come from USAID. GAVI Alliance; the Global Fund to Fight AIDS, Tuberculosis and Malaria; the Japan International Cooperation Agency; and some smaller donors have also supported these activities.

Program Scale-Up

Because CBHC has been part of the BPHS from the beginning, its scale-up has been part of national health planning. Each provincial NGO contract and each contract renewal has included a target for the training of CHWs. The current total of 29,000 CHWs is approaching the total anticipated to provide national coverage at the desired ratio of health posts to population. Two additional population groups have received attention in the past three years: nomads and those living in urban communities. Modifications to the CHW job descriptions and

to the training programs have been made according to the special circumstances of these populations.

Challenges

Afghanistan has developed considerably over the past 10 years. However, security has worsened in the past few years, illiteracy persists in the adult population, and poverty has not diminished, especially in rural areas. All of these challenges remain barriers to reaping the full health benefits of the services provided by CHWs.

THE BRAC *SHASTHYA SHEBIKA* COMMUNITY HEALTH WORKER IN BANGLADESH†

Summary

Background

Bangladesh has a history of using CHWs to support health services. BRAC has been a driving force and has been refining its strategies. The *Shasthya Shebika* (SS) Program is rooted in a gendered perspective, focusing on the need for female health workers in Bangladesh to address socio-cultural barriers to access to health care services. BRAC first adopted the Barefoot Doctor approach used in China a half-century ago and trained male paramedics, but then shifted the approach in the early 1980s to focus on women with lesser training who were often illiterate.

Implementation

In 1990, there were 1,080 SSs, and by 2008 the number had grown to 70,000. At present, there are approximately 100,000 SSs.

Training

SSs receive 4 weeks of basic training by the local BRAC office. They are trained to treat common medical conditions, to promote a wide variety of health behaviors, and to refer patients to preventive and curative services as appropriate.

Roles/Responsibilities

During monthly household visits, SSs provide health promotion sessions and educate families on nutrition, safe delivery, FP, immunizations, hygiene, and water and sanitation. They also use this time to sell health products, such as basic medicine, sanitary napkins, and soap. BRAC introduced the sales component to provide a small profit as an additional incentive for and motivation to the Community Health Volunteers (CHVs) to continue working. When someone has an illness that the SS cannot manage, the person is referred to government health centers or a BRAC clinic.

Incentives

CHVs are given small loans to establish revolving funds, which they use to make some money by selling health products at a small markup.

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† This case study was written by Dena Javadi and Jessica Gergen, students in the Johns Hopkins Bloomberg School of Public Health, and Henry Perry. Dr. Perry lived in Bangladesh from 1995 to 1999 and has served as an advisor to BRAC.

Supervision

Direct supervision is conducted by higher-level CHWs called *Shasthya Kormis* (SKs). Other program staff at BRAC also provide supervisory support.

Impact

The program is self-sustaining and is widely perceived to have made an important contribution to Bangladesh's remarkable progress in reducing under-5 mortality and to its national TB control program.

What Is the Historical Context of BRAC's *Shasthya Shebika* Program?

Community-based programming with CHWs has been widespread in Bangladesh, especially through the national implementation of Bangladesh's well-known and highly successful national family program. This program relied on FWAs to visit every home on a regular basis to promote the uptake of FP at a time when women were not able to leave the immediate environs of their home.[1] BRAC set up the CHV program to address the health needs of the communities where it works. BRAC community-based integrated programs now reach more than 110 million people in Bangladesh.

The development of the SSs Program has been deliberate, slow, and organic. There was no preconceived national blueprint that was scaled up rapidly. Rather, a viable role was established for these CHWs appropriate for the Bangladeshi context, and BRAC found a way to provide sufficient locally generated financing to motivate the women to carry out their responsibilities. Then, as BRAC was able to provide appropriate training and supervision, the program began to grow over the course of 2 decades.

What Are Bangladesh's Health Needs?

The health status of the poor and vulnerable remains challenging, and families may suffer financial catastrophes if a member falls ill. Communicable diseases, poor MCH, and malnutrition are responsible for high levels of preventable morbidity and mortality. New challenges of the epidemiological shift to chronic and non-communicable diseases are arising, along with environmental hazards from air and water pollution, injuries, and unhealthy behaviors such as tobacco use and violence.[1]

What Is the Existing Health Infrastructure?

While officially Bangladesh has a health system involving a three-tier service delivery system from the Ministry of Health and Family Welfare (MOHFW) with a comprehensive network of public facilities at tertiary, secondary, and primary levels, in practice it is quite pluralistic and unregulated, with low utilization of public sector health centers and district hospitals.[2] There is a mix of public, private, NGO, and traditional providers. These all have different reach and quality, and the public sector is responsible for less than 20% of curative services. The public and private sector have a porous boundary and doctors move between the sectors.[2] Village doctors (informally trained providers who practice allopathic medicine) are the dominant providers of care at the community level.[3]

What Type of Program Has Been Implemented?

BRAC started in the early 1970s by adopting the Barefoot Doctor approach first used in China, but applying it to male paramedics. This approach failed, and BRAC shifted to lesser-trained female CHWs, often illiterate, who were oriented to health promotion and disease prevention.[2]

At present, SSs work part-time in the afternoon, providing services to an average of 250–300 households through monthly household visits.[2] SSs serve as the primary source of health information for their particular catchment areas. They also collaborate with trained traditional

birth attendants (TBAs) in the village as well as mobilize women to participate in national disease control campaigns, come to clinics for basic MCH services, and carry out growth monitoring of children.[1]

During the monthly household visits, SSs provide health promotion sessions educating families on safe delivery, FP, immunizations, hygiene, and water and sanitation. They also use this time to sell health products, a component introduced by BRAC to increase the incentives for and motivation of SSs. When someone has an illness that the CHV cannot manage, the person is referred to government health centers or a BRAC clinic.

Other activities that SSs carry out include the following:[1]

- Identifying pregnancy
- Providing ANC including supplemental food to malnourished pregnant women
- Identifying high-risk pregnancies
- Referring women for tetanus toxoid immunization
- Referring women to a trained TBA for delivery
- Providing postnatal care (PNC)
- Promoting exclusive breastfeeding during the first 5 months of life and continued breastfeeding with appropriate weaning foods thereafter
- Monitoring nutrition and providing supplemental food for low-birth-weight infants when the infant reaches 6 months of age
- Promoting vitamin A supplementation at the time of national campaigns for vitamin A supplementation for children 12–59 months of age
- Providing health and nutrition education and nutritional surveillance for adolescent girls (11–16 years of age)
- De-worming children
- Treating uncomplicated acute illnesses
- Promoting awareness about reproductive tract infections and AIDS

SSs link into the formal MOHFW 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 the national government's health campaigns and usually serve as outreach workers for special campaigns such as vitamin A distribution and de-worming. In addition, SSs identify patients with symptoms suggestive of TB and, on selected days, collect sputum specimens from them. A second-level supervisor (the program organizer) takes these specimens to the district health facility, where they are tested. Then, patients who tested positive are given DOTS by the SS under authorization from the MOHFW (Akramul Islam, personal communication, 2013).[1,2]

What About the Community's Role?

SSs are accepted by the community because they are from the community, answerable to the communities for their activities, and supported by the health system through both BRAC and the government. They serve as health promoters, as the first point of care, and as sellers of medical products.[2]

How Does BRAC Select, Train, and Retain *Shasthya Shebikas*?

BRAC works at the village level through Village Organizations, which are small groups of women who participate in BRAC's microcredit savings and loan program. SSs are self-selected from within these groups.[2] The identification of prospective SSs is made first by the Gram Committee, which is the local village health and development committee. The Gram Committee is made up of 8–10 women, 1 SS, and 1 TBA. The final selection is made by BRAC staff together with local village leaders and government officials.[1] To be an SS, a woman must be supported and selected by the community, between the ages of 25 and 35, married with no children younger than 5 years, and motivated; have some schooling preferably; and not live near a health care facility or large bazaar, which would create competition.[2]

CHVs receive 4 weeks of basic training by the local BRAC office. They are trained on treatment of everyday conditions such as skin and eye infections, common cold and cough, and diarrhea and other abdominal complaints. Some are additionally trained to detect symptoms suggestive of TB and provide drugs to patients who are diagnosed with TB. Many SSs are also trained to diagnose and treat pneumonia in children. Refresher training, done in an interactive and problem-solving way, is central to BRAC's method and serves to keep the knowledge of SSs updated, provide opportunities for discussion of problems, and facilitate regular contact; it also allows SSs to replenish supplies including drugs.[2]

How Does BRAC Supervise Its *Shasthya Shebikas*?

SSs are supervised by SKs, who are also recruited from their communities. SKs are paid a sum equivalent to about $40 per month to supervise the SSs and perform ANC in villages. The SKs, all women, have a minimum of 10 years of schooling and work between 4 and 5 hours per day. They accompany each of the SSs in their charge on community visits at least twice per month and meet monthly with their group of SSs to discuss problems, gather information, and provide supplies and medicines. BRAC program staff members also participate in supervision. There is a formal link to the local government's health service delivery system for referral when necessary.[1,2]

How Is the Program Financed?

SSs earn an income from selling supplies such as oral contraceptives, birthing kits, iodized salt, condoms, essential medications, sanitary napkins, and vegetable seeds at cost plus a small markup. They receive incentives for good performance that are based on achieving specific objectives during that month, such as identifying pregnant women during their 1st trimester. Supervisors verify and monitor performance during their visits to communities, where they have the chance to talk with village women.2 Like most other program activities at BRAC, the SS Program is subsidized by income-generating activities that BRAC operates at scale, including commercial enterprises in handicrafts, milk and poultry production, printing, and banking.

What Are the Program's Demonstrated Impact and Continuing Challenges?

Supervisors track SS performance, and BRAC provides support to address challenges as they occur.[2] One formal study assessed how well SSs managed childhood pneumonia using the protocol approved by the World Health Organization (WHO); the study revealed the SSs performed as well as physicians in implementing this protocol.[4] Another formal study compared the prevalence of TB in districts where SSs were identifying suspected cases and providing DOT for those diagnosed with TB and demonstrated that the prevalence of TB in BRAC areas was half of that in control districts.[5]

Challenges of supervision, livelihoods, accountability, and focus are mostly addressed with systematic supervision, logistic support, and formal links to the health system. SSs still struggle

for legitimacy in the pluralistic health environment, where they may be viewed as second-rate and not as good as doctors.[2]

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THE GOVERNMENT FAMILY WELFARE ASSISTANT AND HEALTH ASSISTANT PROGRAMS IN BANGLADESH‡

Summary

Background

Bangladesh has a history of using CHWs to support health services. At present there are some 219,000 CHWs in Bangladesh, with approximately 56,000 of these, government CHWs. This case study will describe the government programs for Family Welfare Assistants (FWAs), Health Assistants (HAs), and Community Health-Care Providers (CHCPs).

Implementation

FWAs were introduced in 1976 and now number 23,500.[1] Their work focuses on FP and referral of clients for ANC and PNC. HAs were introduced in 1995 but previously they had worked as vaccinators or malaria control workers. At present there are 20,615 HAs.[1] Their work focuses on immunizations, vitamin A supplementation, and detection and treatment of pneumonia, diarrhea, malaria, and TB. CHCPs were introduced in 2010 to staff community health clinics. They now number 12,991.[1]

Training

FWAs receive 21 days of training followed by on-the-job training. HAs receive training of a similar length. CHCPs receive 12 weeks of training.

Roles/Responsibilities

FWAs visit households every 2 months, register couples, motivate them for FP, distribute contraceptives, and refer clients for ANC and PNC. HAs provide immunizations and vitamin A capsules and distribute packets of ORS. They visit homes to promote the use of ORS and to treat acute infections (acute respiratory infection, TB, and malaria). CHCPs provide ANC and PNC; treat cases of pneumonia, diarrhea, and anemia; and give injectable contraceptives.

Incentives

FWAs receive a government salary of $98 per month. HAs receive a government salary of $103 per month. CHCPs receive a government salary of $110 per month.

‡ This case study was written by Dena Javadi and Jessica Gergen, students in the Johns Hopkins Bloomberg School of Public Health, and Henry Perry. Dr. Perry lived in Bangladesh from 1995 to 1999.

Supervision

FWAs are supervised by male supervisors, with whom they meet twice per month. HAs are supervised by Assistant Health Inspectors, each of whom is responsible for five to six HAs. CHCPs are supervised by the Subdistrict Hospital Manager.

Impact

There are no available evaluations of these programs. The strong CHW presence in Bangladesh is widely perceived to have made an important contribution to Bangladesh's remarkable progress in reducing under-5 mortality and maternal mortality.

What Is the Historical Context of Bangladesh's Government CHW Programs?

FWAs were established to scale up the successful pilot FP program in Matlab, Bangladesh. As the program scaled up with external donor support and technical assistance, the details of the FWAs' work has changed slightly, but for more than two decades FWAs were the "backbone" of the government's FP program, which is widely credited as being one of the most successful such programs in the world, in a country not undergoing simultaneous rapid socioeconomic development.[2] The HA program is an outgrowth of the government smallpox and malaria control programs from the 1960s and, later, a government disaster response program. The CBHC program arose in response to the need to improve access to treatment for acute illness and to make injectable contraceptives more available as part of the government's 1996 commitment to establish 18,000 community clinics across the country to provide "one-stop" provision of basic services at a community-owned facility and to reduce reliance on "doorstep delivery" of basic services.[1]

What Are Bangladesh's Health Needs?

The health status of the poor and vulnerable remains challenging, and families may suffer financial catastrophes if a member falls ill. Communicable diseases, poor MCH, and malnutrition are responsible for high levels of preventable morbidity and mortality. New challenges of the epidemiological shift to chronic and non-communicable diseases are arising, along with environmental hazards from air and water pollution, injuries, and unhealthy behaviors such as tobacco use and violence.[2]

What Is the Existing Health Infrastructure?

While officially Bangladesh has a health system involving a three-tier service delivery system from the MOHFW with a comprehensive network of public facilities at tertiary, secondary, and primary levels, in practice it is quite pluralistic and unregulated, with low utilization of public sector health centers and district hospitals.[3] There is a mix of public, private, NGO, and traditional providers. These all have different reach and quality, and the public sector is responsible for less than 20% of curative services. The public and private sector have a porous boundary and doctors move between the sectors.[3] Village doctors (informally trained providers who practice allopathic medicine) are the dominant providers of care at the community level.[4]

What Type of Program Has Been Implemented?

FWAs have been responsible for visiting the homes of married women of reproductive age every 2 months to promote the utilization of FP methods and, to a lesser degree, promote basic MCH activities (child immunization, referrals for ANC, and ORS for childhood diarrhea cases). Historically, HAs were responsible for responding to local emergencies, such as natural disasters, thus justifying the recruitment of only men because, culturally, men have more mobility and flexibility to travel. However, recently women have been allowed to become HAs and are now more mobile, though still not at the same level as men.[2] HAs are supposed to provide immunizations, ORS packets, and vitamin A capsules at immunization sites (Expanded Programme on Immunization Outreach Sites), making occasional home visits for health

promotion, such as using ORS for diarrhea, treating acute respiratory infections, and collecting blood samples for detection of malarial parasites. The HAs' target population is women and children in need of immunization. In addition to their other duties, one FWA and one HA are each assigned to work at a community clinic 3 days a week.[1,2]

CHCPs are based at community-owned clinics, which are open from 9 a.m. to 3 p.m. 6 days a week. Each clinic is supposed to be supplied with 23 essential drugs.

The goal is to have one FWA for every 4,000–5,000 persons and one HA for 6,000 people. There is supposed to be one community clinic served by one CHCP for each 6,000 people. The location of each clinic is supposed to be such that 80% of the population is within a 30-minute walk of the facility.[1]

What About the Community's Role?

There is no explicit role for the community in the selection, training, or supervision of FWAs and HAs. Communities were involved in the designing, planning, monitoring, and implementation of community clinics. They provided land for the clinic and assisted in its construction, while the government provided the necessary funds for construction, provided the supplies and equipment, and staffed the clinic. The community assists further through a community clinic support group that, among other things, helps with the maintenance of the facility.[1]

How Does the Government Select, Train, and Retain Its CHWs?

The community has no explicit role in the selection of FWAs, HAs, or CHCPs. FWAs are required to be female and have at least 10 years of schooling. HAs can be either male or female and also are required to have 10 years of schooling. CHCPs are required to have 10 years of schooling, be a local resident, and be capable of operating a computer.[1] FWAs receive 21 days of training followed by on-the-job training. HAs receive training of a similar length. CHCPs receive 12 weeks of training.

How Does the Government Supervise Its CHWs?

FWAs are supervised by male supervisors, with whom they meet twice per month. HAs are supervised by Assistant Health Inspectors, each of whom is responsible for five to six HAs. CHCPs are supervised by the Subdistrict Hospital Manager.

How Is the Program Financed?

Although external donors, particularly the World Bank, provided significant support for the FWA program during the early decades, all three CHW cadres are supported with government funds at present. The program for community clinics and CHCPs has been highly political from the start, being a signature project of the Awami League government that was closed down when another government came to power in 2001. When the Awami League returned to power in 2008, the clinics were reopened.[1]

What Are the Program's Demonstrated Impact and Continuing Challenges?

There are no available evaluations of these programs. The strong CHW presence in Bangladesh is widely perceived to have made an important contribution to Bangladesh's remarkable progress in reducing under-5 mortality and maternal mortality.

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THE COMMUNITY HEALTH AGENT PROGRAM OF BRAZIL§

Summary

Background

The *Programa Saúde da Família* (Family Health Program, now called the Family Health Strategy and abbreviated PSF) was launched in 1994, building upon several previous decades of experience in rural underserved areas with Community Health Agents (CHAs), who were legally recognized as professional in 2002. Currently, Brazil has 236,000 CHAs working as part of 33,000 family health care teams (*Equipos de Saúde Familiar*).

Implementation

Originally, CHAs provided vertical (centrally directed) MCH services (such as immunizations and FP) in isolated rural areas where services were limited, but have evolved into the cornerstone of the national PHC program that reaches virtually the entire population of the country. CHAs operate as members of the family health care teams that are managed by municipalities. With usually 4–6 CHAs on each team (but sometimes more), each CHA is responsible for 150 families (ranging from 75 to 200 households). Some teams also include a dentist, an assistant dentist, a dental hygienist, and a social worker.

Training

The CHAs are often selected by local health committees, and they must be literate adults who work in the community where they reside. The training of CHAs is conducted at the national Ministry of Health (MOH), but the training curriculum is approved by the Ministry of Education. Nurses provide 8 weeks of formal didactic training at regional health schools. Following this, CHAs receive 4 weeks of supervised field training. CHAs also receive monthly and quarterly ongoing training.

Roles/Responsibilities

The scope of work for the health care teams varies with geographic distribution, but most teams provide comprehensive care through promotive, preventive, recuperative, and rehabilitative services. CHAs register the households in the areas where they work and are also expected to empower their communities and link them to the formal health system.

Incentives

CHAs are full-time salaried workers earning in the range of $100 to $228 per month.

Supervision

CHAs are supervised by nurses and physicians from the local clinics. Supervisory nurses spend 50% of their time in these supervisory roles and the rest of the time working in the local clinic.

§ This case study was written by Rose Zulliger, a student at the Johns Hopkins Bloomberg School of Public Health.

Impact

Brazil has experienced dramatic improvements in a broad range of national health indicators over the past 3 decades, and much of this progress is attributable to the strength of its PHC program and the critical role played by CHAs.

What Is the Historical Context of Brazil's Community Health Worker Program?

The Brazilian health system dates back to large-scale vaccination and other public health campaigns that were implemented by sanitary police in the late 1800s and early 1900s. The history of the health system is well-characterized by Paim and colleagues in the recent *Lancet* Series on Brazil.[1] Briefly, the health system was shaped by the country's tumultuous history. Public health was institutionalized under the Vargas dictatorship in the 1930s and 1940s, and the first MOH was later formed in 1953. A strong private health care system also developed in the 1950s; it continued to expand with the support of the federal government, as did PHC programs. In the 1980s, the country transitioned from dictatorship to democracy, and 1985 marked the start of the New Republic. The Eighth National Health Conference in 1968 established the notion that health is "a citizen's right and the state's duty."

The *Sistema Único de Saúde* (SUS, or Unified System of Health) was instituted as part of the constitution in 1988. The system has its origins in the struggle for democracy within the country. Government responsibilities for health are defined broadly as encompassing social and political realities along with traditional medical services.[1] This includes the support of efforts to provide free access to health care services as well as social protection, social mobilization, and expansion of social rights to facilitate "community participation, integration, shared financing among the different levels of government, and complementary participation by the private sector."[2-4] States and municipalities were given taxation authority, and federal guidelines mandated that 10% of this revenue be allocated to health (since then this minimum has been raised to 12% for states and 15% for municipalities).[5]

CHW programs have been implemented in Brazil for decades, including the successful *Visitadora Sanitaria* (health visitor) program in which CHWs provided immunizations, information, and various other MCH interventions.[6] The CHA program was initiated in the 1980s as a pilot program in Ceará, one of the poorest areas of Brazil. Its success influenced subsequent PHC programs.[7]

The CHA program started during a drought and followed several successful pilot projects, including a project that trained 6,000 women in 112 municipalities. The women received 2 weeks of training to promote breastfeeding, the use of ORS, and immunization uptake.[5] In 1989, 1,500 of these original 6,000 CHWs were incorporated into a new CHA system, supervised by local nurses. These CHAs provided mostly health promotion and health education services in clearly defined geographic areas near their homes. This program was highly successful and served as a model for subsequent CHA programs.[5] It did, however, face formal resistance from nurses for a variety of reasons, including unclear roles and overlap of CHA work with that of auxiliary nurses.[8] The first national CHA program was developed in 1991 and implemented as part of Brazil's first national PHC program; later, it was integrated into the PSF.[9]

The PSF was launched in 1994 to expand health care access to the poorest Brazilians.[4] CHAs in programs like the Ceará one were integrated into the PSF.[5] In 1996, the federal government transferred control of the management and financing of health care services to the PSF and in 2002 CHAs were officially recognized as professionals by Law No. 10.507/2002.[10,11] CHAs originally provided vertical MCH services, but have evolved into the cornerstone of PHC services.[1]

Brazil has made important advances in other areas of health care. It was one of the first middle-income countries to provide free antiretroviral medication for patients with HIV/AIDS. It has developed legislation supporting the use of generic drugs, and it has strong government regulation of private health plans.

What Are Brazil's Health Needs?

Brazil has undergone a demographic, epidemiological, and nutritional transition since the 1970s. During this transition, fertility, infant mortality, and illiteracy have all decreased as life expectancy and urbanization have increased.[1] For example, the infant mortality rate (IMR) has declined from 114 deaths per 1,000 live births in 1975 to 19 deaths per 1,000 live births in 2007. Life expectancy has increased from 52 years in 1970 to 73 years in 2008.[1] The country also has a strong HIV/AIDS program; has completely eliminated polio; and has almost eliminated measles, diphtheria, and Chagas disease.[12]

Despite these positive advancements, the country is plagued by increasing levels of non-communicable diseases, including very high levels of hypertension and diabetes.[1] Other persistent health challenges include overuse of health care services and medications, and challenges in the field of reproductive health such as high levels of utilization of unsafe abortion services, high rates of adolescent pregnancy, and high rates of mother-to-child transmission of sexually transmitted infections.[4] There is also a large burden of homicide and traffic-related deaths, and dengue and visceral leishmaniasis remain important problems.[12]

What Is the Existing Health Infrastructure?

There are three levels of health care provided in Brazil, but the country strongly emphasizes the first level—basic PHC. This level is the entry point to more advanced care and includes promotive and preventive components. Family health care teams are the main service providers and comprise one doctor, one nurse, one auxiliary (assistant) nurse, and a minimum of four CHAs.[1,3] Secondary care, consisting of community-level hospitals, has many challenges, including its high reliance upon the private sector.[1] Tertiary care is provided at specialty referral hospitals, mostly by the private sector and public teaching hospitals, leading to high costs among other challenges.[1]

The current health system consists of the SUS, a private subsector, and a private health insurance subsector. The private sector is regulated by the National Supplementary Health Agency (*Agência Nacional de Saúde Suplementar*).[10] Private providers are often subcontracted by the SUS to provide a range of services at the secondary and tertiary levels. Coordinating the mix of public and private services remains a challenge for Brazil's health system.[13] The private subsector has grown substantially with state support, while the public subsector of PHC services remains often underfunded, which potentially compromises its ability to guarantee quality of and access to PHC.[1] Additionally, private health insurance is disproportionately used in the southeast and south regions of Brazil. Overall, 75% of Brazilians are dependent solely on the SUS for health care.[14]

CHAs employed by the PSF are hired through special contracts in order to expedite hiring and provide more competitive salaries than is legislated for civil servants in Brazil. This has many benefits, but it means that CHAs lack job security and fringe benefits afforded to other civil servants, leading to higher staff turnover.[12]

Finally, a central feature of the Brazilian health system is the engagement of civil society in decisions about government health programs. This is structured by the formation of councils at the federal, state, and municipal levels, along with the periodic use of health conferences.[2]

What Type of Program Has Been Implemented?

CHAs are closely integrated into formal health services.[5] They operate as members of the family health care teams described above that are managed by municipalities.[7] Throughout Brazil's population of approximately 200 million people, there are 236,000 CHAs working in 33,000 family health care teams.[1] These teams are based within PSF clinics and provide services to usually 600–1,000 families (1,500–3,000 people), but they occasionally serve as many as 4,500 people.[1] With 4–6 CHAs on each team normally, each CHA is responsible for 150 families (ranging from 75 to 200 households). Some teams also include a dentist, an assistant dentist, a dental hygienist, and a social worker.[14,15] CHAs are part of the team that primarily operates outside of the health facility to provide health education promotion and linkage to referral services.[3] One study of CHAs in Araçatuba, a city in São Paulo state, found that 83% of CHAs reported good communication within the teams, although some CHAs felt that physicians undermined their work.[8] Unfortunately, there are no structured opportunities for career advancement for CHAs.[14]

The scope of work for the health care teams varies with geographic distribution, but most teams provide comprehensive care through promotive, preventive, recuperative, and rehabilitative services. Key services provided by CHAs include the promotion of breastfeeding; the provision of prenatal, neonatal, and child care; the provision of immunizations; and participation in the management of infectious diseases, such as screening for and providing treatment for HIV/AIDs and TB.[16,17] CHAs register the households in the areas where they work and also are expected to empower their communities and link them to the formal health system.[14] However, not all CHAs receive training on community mobilization and not all are engaged in this activity.[8,14]

In the 1990s, CHAs were trained to provide integrated management of childhood illness (IMCI) in the home, including providing prescription antibiotics for children suspected of having pneumonia. Unfortunately, this stopped in 2002 following pressure from medical societies.** Nurses have also pressed against allowing CHAs to administer injections.[12]

Other significant cadres of CHWs in Brazil include those trained and supported by the Catholic NGO Pastorate of the Child. This NGO has a network of 260,000 volunteer CHWs who promote child survival through low-technology interventions such as the administration of ORS for childhood diarrhea.[4]

What About the Community's Role?

One of the goals of the PSF program is to "promote the organization of the community" and to analyze the community's needs.[18] Thus, CHAs are expected to serve as the link between family health care teams and the communities served by the teams.[9] The community is also involved in the organization and budget of the health system, and some municipalities and states have developed a system in which the public is able to vote on the proportion of the municipal budget allocated to health.

In 1993, health councils were functioning in 84% of the rural municipalities of the state of Ceará in northeastern Brazil. These councils were responsible for conducting assessments and making recommendations on health priorities and collection and disbursement of funding, among other roles.[5] A 2001 review of CHAs in the city of Araçatuba, São Paulo, found that municipal health councils—comprising representatives from government, health services, and the community—were responsible for the allocation of financial resources for health. They also developed health strategies and mobilized communities' involvement in health.

** In many countries where the need to expand access to services is great, commonly there is pressure from medical and nursing societies to limit CHWs' management of conditions that involve dispensing medications.

There are now health councils operating at a national, state, and municipal level with over 5,500 municipal councils throughout the country. Council membership is allocated as follows: 50% are users, 25% are health workers, and 25% are health managers and service providers. Health conferences are also held every 4 years to "propose directives for health policies."[12]

How Does Brazil Select, Train, and Retain Community Health Agents?

The CHAs in the early Ceará program were selected by local health committees. There were two selection criteria: (1) they had to come from and reside in the area where they would be working and (2) they had to be literate.[16,17] At the outset, priority was given to recruiting CHAs in households most affected by the drought as well as on their responses to hypothetical community problems presented during the selection process.[5,14,19]

CHA training is conducted in regional health schools operated by the national MOH using curricula approved by the Ministry of Education.[14,19] CHAs receive 8 weeks of training from local nurses, followed by 4 weeks of supervised fieldwork. This includes training on home visits and how to conduct a family census, and then on specific priority health care interventions. CHAs receive monthly and quarterly ongoing education training during meetings[5,14] Those who teach CHAs receive an 80-hour training module.[14,20]

CHAs are salaried, full-time workers. In 2006, CHAs in Araçatuba earned a monthly salary of 500 Brazilian reals (US$228), representing 22.3% of the total family health care team's salary costs. However, the Araçatuba CHAs had higher education levels than most CHAs in the national program, where the monthly salary is 40% to 50% lower.[8,14]

How Does Brazil Supervise Its Community Health Agents?

CHAs are supervised by nurses and physicians from the local clinics.[20] Supervisory nurses spend 50% of their time in these supervisory roles and the rest of the time staffing the local clinic. The role of the nurse as a supervisor is clearly defined, and nurses have protected time to perform their supervisory role. Strong supervision of CHAs has been identified as one of the important contributors to the program's success.[21]
Brazil also has strong referral systems. CHAs report any ill person within their catchment area to a nurse and the CHA may, at times, escort the person to the local health facility. Upon the patient's release, the CHA is expected to maintain the continuum of care and follow up with the patient. This role performed by CHAs helps to ensure accountability of the health system to local health needs.[14]

The PSF has an information system that utilizes data collected by CHAs.[14] This has helped to strengthen vital statistics reporting, rapid identification of problems, and implementation of locally relevant solutions.[1,5]

How Is the *Programa Saúde da Família* Financed?

The recent health advancements in Brazil have occurred alongside an evolving health system and increased investment in health. Between 1990 and 2010, the proportion of the gross domestic product (GDP) spent on health increased from 6.7% to 8.4%. Out-of-pocket expenditures have increased steadily as have other expenditures in the private sector such that now, 57% of health-related expenditures are from the private sector. The growth of funding from the public sector has been more constrained.[1]

The financing of the health system in Brazil is decentralized and arises from a variety of funding sources, including taxes, social contributions, out-of-pocket expenditures, and employer health insurance purchases.[1] The PSF provides services free of charge to recipients, and the program is financed on a capitation basis with incentives for municipalities to increase

coverage.[7] Since 1996, states and municipalities have been responsible for the management and financing of health care. Now, states must allocate at least 12% of their total budget to health; municipal governments are required to spend 15% of their total budget on health—a requirement met by 98% of municipalities.

In 2006, the Brazilian government health expenditure was $252 per person, which is less than in neighboring countries such as Argentina ($336) and Uruguay ($431). An estimated additional $100 per person is spent each year in order to achieve universal health coverage in Brazil.[10]

What Are the Program's Demonstrated Impact and Continuing Challenges?

Brazil has experienced dramatic improvements in a broad range of national health indicators over the past 3 decades. This includes marked increases in access to MCH interventions and marked reductions in maternal, infant, and child mortality as well as marked reductions in childhood stunting. There have also been reductions in the health disparities within the country. The Millennium Development Goal (MDG) 1 indicator of a 50% reduction in the percentage of underweight children and the MDG 4 indicator of a two-thirds reduction in under-5 mortality between 1990 and 2015 have already been met.[4,12]

A variety of factors such as socioeconomic development, social improvements, and conditional cash transfers have facilitated this progress, but the PSF and various health interventions have been critical components in the improved health indicators.[4] Victora and colleagues used vital statistics, United Nations model life tables, and census data to compare infant mortality in areas with different levels of PSF coverage. They found that while infant mortality was highest within poor communities irrespective of level of PSF coverage, when PSF coverage was higher, the mortality differences between poor and rich communities were less.[4]

Macinko and colleagues used public data from each state to determine the impact of the program on infant mortality from the pre-intervention period (1990 to 1994) to the period from 1999 to 2002, when PSF expansion had occurred.8 During this time period, the IMR decreased from 49.7 per 1,000 live births to 28.9 and PSF national coverage increased by 36.1%. The authors found a significant and temporal relationship between coverage by PSF and decreased IMR. A 10% increase in PSF coverage was associated with a 4.6% decrease in the IMR, holding all other variables constant. A different analysis found that the program was associated with a 13% to 22% reduction in the IMR, depending on the level of PSF coverage.[17] Additional analyses of municipal-level data found that exposure to the PSF program was associated with a reduction in mortality, with the greatest impact on under-5 mortality. The programmatic impact was largest in the poorest municipalities as well as in the more rural regions in the country with worse baseline health indicators.[17,18]

Current challenges within the Brazilian health system include a high turnover of the PHC workforce, lack of integration between different primary health clinics, lack of investment in linkages and integration between PHC and other levels of care, and management challenges. The competing interests of the health system subsectors also require a reconsideration of the most appropriate roles of the public and private sectors.[1] Additionally, patients are provided very different levels of care by private providers depending on whether their care is funded by the SUS or by private health insurance, and there are concerns related to low quality of care provided for patients whose care is funded by the SUS. There are perverse incentives for private providers to provide more services (such as cesarean sections) since they are reimbursed by fee-for-service (as in much of the United States). There are also rising costs for private health care, and the SUS remains underfunded.[1,12] Progress has been made toward reducing socioeconomic and regional gaps in service access and in health indicators, but gaps remain and there are some charges of insufficient commitment by the federal government to the SUS.[10,12]

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ETHIOPIA'S HEALTH EXTENSION PROGRAM††

Summary

Background

The first cadre of Health Extension Workers (HEWs) was trained in 2004. In the following years, Ethiopia expanded its PHC programs in hope of achieving universal health coverage. Human resources that serve at the community level in Ethiopia include: HEWs, voluntary CHWs, and Community Health Promoters (CHPs), now called Health Development Army (HDA) volunteers.

Implementation

HEWs are supposed to split their time between health posts and the community. The HDA volunteers' role is to increase utilization of primary health services through part-time work (less than 2 hours per week) within their communities.

Training

HEWs have more than 1 year of pre-service training conducted by trainers who were taught through a cascade train-the-trainer approach.

Roles/Responsibilities

The main responsibilities of HEWs include health promotion, disease prevention, and treatment of uncomplicated and non-severe illnesses, such as cases of malaria, pneumonia, diarrhea, and malnutrition in the community.

Incentives

HEWs are formal employees and are paid a salary. HDA volunteers are not monetarily compensated, but receive nonfinancial incentives such as formal recognition, ongoing mentorship, certificates, and recognition at community celebrations.

Supervision

Supervision is conducted by the *woreda* (district) supervisory team, which comprises a health officer, a public health nurse, an environmental/hygiene expert, and a health education expert. In 2005, HEWs had an average of three supervisory visits over the course of 9 months.

Impact

Ethiopia is making some of the strongest improvements in health in all of Africa at present. Its declines in under-5 mortality and in maternal mortality, along with dramatic improvements in the CPR, are among the most notable in all of Africa. HEWs are widely seen as the main reason that services have expanded and these results have been achieved.

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†† This case study was written by Rose Zulliger, a student in the Johns Hopkins Bloomberg School of Public Health.

What Is the Historical Context of Ethiopia's Community Health Worker Program?

CHWs have a long history in Ethiopia, dating back to around the time of the 1978 Alma Ata Conference on Primary Health Care. One early program in Tigray, during the time of the civil war there in the 1970s and 1980s, trained 3,000 CHWs. These workers were selected by their communities to receive training in maternal, child, and environmental health and in malaria diagnosis and treatment. The Tigray program was suspended in 1991 at the end of the war, but various CHW programs continued throughout the country.[1]

In the 1997–1998 fiscal year, the Ethiopian Federal MOH (FMOH) launched the National Health Sector Development Program (HSDP). This program shifted the health system focus from predominantly curative to more preventive and promotive care, and it prioritized the needs of the rural inhabitants, who make up 83% of the Ethiopian population.[2] A review of the first 5 years of the HSDP found that challenges remained in obtaining universal PHC coverage.[3]

In response to these unmet needs, the Government of Ethiopia launched in 2003 two programs: (1) the Accelerated Expansion of Primary Health Care Coverage and (2) the Health Extension Program (HEP).[4] Multiple stakeholders, including the Federal Ministries of Health, Education, Labor, Finance, and Capacity Building, were all involved in the development of the HEW model.[5] The program was designed to expand health service coverage, particularly in rural areas, using locally available human resources. These included community-based human resources such as HEWs and CHPs, now HDA volunteers.[4] The first group of HEWs was trained in 2004–2005.[6] Between 2005 and 2008, the HSDP aimed to deploy 30,000 HEWs in 15,000 health posts with the goal of achieving universal PHC access by 2008.[7,8]

There have been numerous recent changes in the HEP. Following the rapid expansion of HEP coverage in rural areas, attention shifted to scaling up these services in urban and pastoralist communities. In 2009, the FMOH launched the Urban HEP, which trained female clinical nurses for 3 months as urban HEWs.[9] Rural HEWs were initially used in health promotion and disease prevention; in 2010 their services were extended to include treatment of uncomplicated diseases. The CHP Program has also undergone changes and these volunteers are now called the Health Development Army (HDA). Associated with the title change is a shift from an NGO-directed program where each volunteer is responsible for 25–30 households to a government program with one volunteer for every 5 households. HDA volunteers' new scope of work also includes broader development work beyond health.

What Are Ethiopia's Health Needs?

Ethiopia has a large burden of communicable diseases, nutritional disorders and maternal/neonatal conditions, but progress has been made in the past 5 years.[10] Key health issues in Ethiopia include high rates of maternal and child mortality and malaria.[11] The MMR for Ethiopia is 470 deaths per 100,000 live births and women have very low prenatal and postnatal service utilization.[12,13] Leading causes of maternal mortality include obstructed/prolonged labor, pre-eclampsia/eclampsia, and malaria.[8] The country also has a high IMR of 59 deaths per 1,000 live births and a high under-5 mortality rate of 88 deaths per 1,000 live births.[13] The leading causes of deaths among children younger than 5 years of age are pneumonia, diarrhea, malaria, neonatal problems, malnutrition, and HIV/AIDS.[5]

Infectious diseases in Ethiopia stretch the health system's resources and are associated with substantial morbidity and mortality. Ethiopia is among the five countries in sub-Saharan Africa with the highest prevalence of malaria. In Tigray, malaria is the leading cause of hospital admission and death.[14] TB and HIV are important problems. The national HIV prevalence was 2.3% in 2009. At that time, only 8.2% of HIV-positive pregnant women received prophylaxis for prevention of mother-to-child transmission (PMTCT) of HIV. Although the national TB cure rate and treatment success rate are relatively high at 67% and 84%, respectively, it is estimated

that only 34% of cases are detected.[8] Additionally, environmental factors facilitate disease transmission. For example, 38% of Ethiopian households report no toilet facility.[13]

What Is the Existing Health Infrastructure?

The Ethiopian health system is decentralized and has been reorganized into three tiers. Tier 1 is made up of PHC units comprising a health center (one health center for 15,000–25,000 people) and five satellite health posts (one health post for 3,000–5,000 people) along with *woreda* hospitals, each serving 60,000–100,000 people. Tier 2 includes zonal/general hospitals (one hospital for 1 million to 1.5 million people). And Tier 3 involves specialized/referral hospitals (one hospital for 3.5 million to 5 million people).[8,15,16]

In addition to the expansion of HEWs, the Ethiopian government has increased the number of medical students and health officers, some of whom are trained using an accelerated curriculum.[17] This expansion of health personnel is motivated by substantial deficits in human resources. For example, the country has a shortage of 19,489 midwives, and only 3% of births in rural areas are attended by a skilled birth attendant.[4]

What Type of Program Has Been Implemented?

HEWs are a formally recognized cadre that has strong political support, including from the FMOH and the prime minister.[18] HEWs are supposed to manage the other CHW cadres, but their relationship with these cadres in the field is not clear.[4,7]

HEWs are full-time employees who are meant to split their time between health posts and the community. These expectations have changed considerably since the HEW program was initiated. HEWs were originally conceived as links between their local community and the formal health services, dedicating at least 75% of their time to community outreach activities.[19,20] Despite these guidelines, there is some evidence that HEWs spend more time at health facilities, and recent reports indicate that HEWs should spend 50% of their time in the health posts.[21]

There have been four HSDPs since 1997–1998. In 1997, there were 76 health posts, 243 health centers, and 87 hospitals.[8] Rollout has occurred in steps; the speed of expansion has been influenced by available resources for health posts and presence of eligible women to become HEWs. As of June 2007, the HEP covered 59% of villages (with 17,653 HEWs) and had constructed 66% of 9,914 projected health posts.[19] By the end of 2009, 33,819 HEWs had been trained and deployed and 14,416 health posts had been constructed.[8]

The main role of the HEW is in health promotion, disease prevention, and treatment of uncomplicated and non-severe illnesses such as malaria, pneumonia, diarrhea, and malnutrition. HEWs provide a range of services, including prevention, health promotion, and health education; support role for outreach health services; distribution at the community level of commodities whose use does not involve clinical judgment; clinical case-management that involves exercising clinical judgment; ongoing care or support to assist people with a chronic illness (e.g., HIV/AIDS); and participation in and support of campaign-type activities. They also provide immunizations, injectable contraceptives, basic first aid, diagnosis and treatment of malaria and diarrhea, and treatment of intestinal parasites.[15]

The role of HDA volunteers is to increase utilization of primary health services. They work less than 2 hours per week within their communities. Their services include prevention, health promotion, and health education; support for outreach work by health services; and participation in or support of campaign-type activities. They are expected to be model community members and to share health information with others in their communities. This includes information on latrine construction, waste disposal, personal hygiene, ANC,

immunization, infant feeding, and FP.[22] Other cadres that provide community-oriented services include community counselors, peer educators, and home-based care providers who provide HIV-related services.[20]

What About the Community's Role?

Village health committees are involved in the selection and oversight of HEWs. In some geographical areas they are also engaged with HDA volunteers. Additionally, the *kebele* (ward) council is supposed to be involved in every step of the HEP, from program planning through to evaluation.[23]

How Does Ethiopia Select, Train, and Retain Health Extension Workers and Community Health Promoters?

HEWs are adult women who have completed 10th grade. HDA volunteers can be male or female and must be older than 15 years old and, preferably, literate. However, the literacy level in Ethiopia is very low: 51% of women have no education and only 29% of rural women are literate.[8,13] This necessarily limits the number of eligible women in each community.

HEWs and HDA volunteers are also supposed to work in or close to their community of origin or their permanent residence, yet the first HEWs largely did not meet this criterion. Only 8% of interviewed HEWs were assigned to work in the village where they were born, and 52% were from urban areas. Many trained HEWs preferred to be placed in a community other than that in which they were born, and only 16% expected to stay in the *kebele* where they were currently employed for more than 3 years.[7]

HEWs have more than 1 year of pre-service training conducted by trainers who have been taught by a higher level of trainers.[24] HEW training is a collaboration of the MOH and the Ministry of Education and occurs at 40 technical and vocational education training schools.

HEW training includes didactic and clinical training in modules on (1) family health services, (2) disease prevention and control, (3) hygiene and environmental sanitation, and (4) health education and communication.[4] HEWs also recently received a one-time 1-month in-service training provided in response to identified inadequacies in their initial training. As of 2007, 4,772 HEWs had completed integrated refresher training conducted by *woreda* health offices and health center staff.[23] A 2007 study of this continuing education for HEWs found that most HEWs underwent multiple continuing education trainings on malaria and reproductive health, among other subjects. There was, however, little coordination of these trainings, and HEWs expressed a desire for additional training on basic nursing care, home delivery, and care of children with common childhood diseases.[25]

Before CHPs became HDA volunteers, they received an initial training conducted by the HEWs. CHPs were given 96 hours of training on prevention of communicable diseases, family health, environmental and household sanitation, and health education.[6]

Compensation for the two cadres of health workers is as follows: HEWs are regular government employees with a regular salary and benefits, while HDA volunteers do not receive financial compensation. A range of nonfinancial incentives has been effective with CHPs and now HDA volunteers, including formal recognition, ongoing mentorship, certificates, and recognition at community celebrations.[22]

How Does Ethiopia Supervise Its Health Extension Workers?

HEW supervision has varied throughout the history of the program, and it currently varies from one geographical location to another. In 2005, HEWs had relatively high levels of supervision: each HEW had an average of three supervisory visits over the course of 9 months.[7] There are supposed to be multiple levels of HEW supervision, including by the *woreda* supervisory team that comprises a health officer, a public health nurse, an environmental/ hygiene expert, and a health education expert.[23] HEWs supervise the cadres such as HDA volunteers as well as TBAs and community-based reproductive health agents.[26]

The program has extensive monitoring and evaluation (M&E) systems that include routine reports and monitoring of indicators for maternal, neonatal, and child health; disease prevention and control; nutrition; and hygiene and environmental health. Among the indicators that are reported are contraceptive acceptance rate, deliveries attended by skilled birth attendants and by HEWs, TB case detection and cure rates, and proportion of households using latrines.[21]

How is the Health Extension Program Financed?

The HSDP has been financed by national and sub-national government entities, bilateral and multilateral donors, NGOs, private contributions, and user fee revenues. Current HSDP funders include the GAVI Alliance's Health System Strengthening Program; the Global Fund to Fight AIDS, Tuberculosis and Malaria; and the Carter Center, among others.[17]

The total per capita health expenditure in 2007–2008 was $16.09.[8] A costing exercise determined that an additional $11.96 per capita per year for 5 years (totaling $8.83 billion) would be required to meet Ethiopia's health-related MDGs. This investment would reduce under-5 mortality by 32% and maternal mortality by 55%. Forty-five percent of the budget would be allocated to sustain and strengthen the HEP. There is, however, a substantial gap between the amount required to achieve the MDGs and the current level of funding.[8]

The costs of HEWs are as follows: $234 for 1 month of training; $178 for the apprenticeship; and $84 monthly for the salary of one HEW.[16] At the local level, financing and planning are decentralized and the *woredas* receive block grants to cover the expenses of the HEP.[20]

What Are the Program's Demonstrated Impact and Continuing Challenges?

By 2008, 24,534 HEWs had been trained to provide services, leading to substantial increases in health service coverage. The percentage of the population that is served by the program has increased from 61% in 2003 to 87% in 2007.[27] The program has also demonstrated success in health service areas such as increased use of ITNs.[19] The percentage of pregnant women and under-5 children using an ITN was over 40% in malarial regions.[8] Significant, positive associations were also found between exposure to the HEP and child vaccination uptake, ITN use by children and pregnant women, utilization of ANC early in pregnancy, and proper disposal of babies' fecal matter.[28] Additionally, some regions have achieved increases in institutional deliveries and tetanus vaccination coverage.[29]

In 2009, ANC coverage was 68% and PNC coverage was 34%. The percentage of deliveries performed by HEWs was 11% and the percentage performed by skilled health personnel increased to 18.4%. Full immunization coverage reached 66%,[8] and HEWs were found to be making an important contribution to improving the effectiveness of TB control at a modest cost.[30]

The HEP has faced a number of challenges in its implementation, including delayed construction of health posts, delayed provision of health kits to HEWs, inadequate supervision

for HEWs, and deficiencies in training.[27] The reach of HEWs is also limited in some settings.[19] Additionally, a survey of HEW knowledge of maternal and neonatal health, skills, and confidence in providing services found substantial gaps.

HEWs are often younger women who may not be trusted by the community to assist during delivery.[26] A recent analysis of strengths, weaknesses, opportunities, and threats identified numerous weaknesses in the HEP, including low health service utilization; weak referral systems; low service quality; shortage of drugs, medical supplies, and equipment; and lack of a career trajectory for HEWs.[8] The analysis also raised a concern that the increasing number of tasks allocated to HEWs and their growing workload will compromise their ability to complete their tasks. Finally, additional challenges for the HEP include high levels of staff turnover and lack of integration of services.[9]

In spite of many operational challenges to the operation of the HEP, Ethiopia is nonetheless making very impressive progress in achieving its health-related MDGs. The under-5 mortality has declined from one of the highest in the world in 1990 (204 per 1,000 live births) to 68 in 2011, enabling Ethiopia to reach the MDG for child health—one of the few African countries to achieve this so far.[31] The MMR has declined from 950 per 100,000 live births in 1990 to 350 in 2010 and is expected to come close to achieving the MDG for women's health by 2015.[32] In addition, Ethiopia has achieved one of the "most rapid and unprecedented" expansions of contraceptive prevalence in Africa and, in fact the world, with the CPR increasing from 8.2% in 2000 to 28.6% in 2011 (based on national Demographic and Health Surveys [DHSs]).[33] The HEWs are widely seen, both within and outside of Ethiopia, as one of the major reasons these remarkable results have been achieved.

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INDIA'S AUXILIARY NURSE-MIDWIFE, *ANGANWADI* WORKER, ACCREDITED SOCIAL HEALTH ACTIVIST, MULTIPURPOSE WORKER, AND LADY HEALTH VISITOR PROGRAMS‡‡

Summary

Background

India has three cadres of CHWs. The first created is the Auxiliary Nurse-Midwife (ANM), who is based at a subcenter and visits villages in addition to providing care at the subcenter. The second is the *Anganwadi* Worker (AWW), who works solely in her village and focuses on provision of food supplements to young children, adolescent girls, and lactating women. The most recently created cadre is the Accredited Social Health Activist (ASHA), who also works solely in her village. ASHA workers focus on promotion of MCH, including immunizations and institutional-based deliveries, for which they receive a performance-related fee.

Implementation

There are at present 208,000 ANMs, 1.2 million AWWs, and 857,000 ASHA workers. They each have their own supervisory systems and payment systems.

Training

ANMs receive 18 months of training while AWWs and ASHA workers each receive 3–4 weeks with additional trainings from time to time.

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Roles/Responsibilities

ANMs are now officially Multipurpose Workers (MPWs) with a broad set of responsibilities, including the support of AWWs and ASHA workers. Some obtain additional training to manage birth complications and refer women with complications to higher levels of care, and some obtain additional training for insertion of intrauterine devices. AWWs manage nutritional supplementation at *anganwadi* centers for young children, adolescent girls, and lactating women. They also help with promotion of healthy behaviors and mobilization of the community for improved water and sanitation, participation in immunization activities and other special health activities. ASHA workers are given performance-based incentives that focus around facilitating institutional deliveries, immunizations, provision of basic medicines (including oral contraceptives), and referral of patients to the subcenter.

Incentives

ANMs are paid a government salary. AWWs are considered to volunteers but are paid an "honorarium" of about $27–$29 per month. ASHA workers receive performance-based incentives, such as $10 for facilitation of an institutional delivery and $2.50 for facilitation of a child's completion of immunizations. They also now receive $16 per month for completing their day-to-day routine tasks independent of the specific tasks for which they receive performance-based incentives.

Supervision

Supervision of each of these three cadres is carried out independently. For all cases, there is a widespread consensus that the supervision is inadequate.

Impact

Evaluations of these programs have produced mixed results. Wide variations exist in the quality of training and in the competency and effectiveness of these CHWs, but strong efforts are under way (particularly for the ASHA Program) to improve training, supervision, remuneration, and logistical support.

What Is the Historical Context of India's CHW Programs?

The network of primary health centers currently forms the foundation of the Indian rural health care system and also the main link to India's CHW programs. These primary health centers were established in the late 1940s, shortly after India's Independence in 1947. When subcenters were created below the primary health center level in the 1960s, lower-level temporary health workers were required to staff them.[1] In response to this demand, the Indian MOHFW created the ANM cadre.[2] This was followed by the establishment of AWWs for child development through the Integrated Child Development Service (ICDS). The newest addition to the CHW family has been ASHA workers, established by the MOHFW.

At the time the ANM program was launched, ANMs received two years of training focused primarily on MCH, with midwifery being the focus of nine out of the 24 months of training.[3,4] ANMs were envisioned to be village-level midwives with "less than full qualifications."[3] Within a decade, in the early 1970s, the role of ANMs was expanded to include a wide range of preventive and curative work at the village level, particularly around FP and immunization.[2] With the expansion of their role, ANMs transitioned from temporary to permanent staff within the health system.[1] At the same time, ANMs were also reclassified in the health system, from a nurse-midwife to a female MPW.[5] In response to the Srivastava Committee's call for improved ANM training to reflect their multipurpose role,[6] in 1977 the Indian Council of Nurses approved a syllabus for ANM training that focused on an expanded set of responsibilities and reduced the midwifery component of the training from 9 to 6 months.[4] At the same time the number of subjects included in the training increased, the duration of training was reduced from 24 to 18

months because, as MPWs, ANMs were no longer considered to require extensive and specialized training.[3,7]

The National Rural Health Mission (NRHM), launched in 2005, is the latest broad vision for improving comprehensive primary health services for the rural poor in India. ANMs are positioned as a key health worker within the NRHM human resources framework.[3] The NRHM doubled the number of ANMs at subcenters from one to two full-time staff.[8]

In 1972, the central government released an interministerial survey suggesting that existing social welfare and nutrition programs in India were not improving the nutritional status of children.[9] The government attributed these program failures to resource constraints, inadequate coverage, and fragmentation.[9] To address some of these shortcomings, the Government of India initiated the ICDS scheme in 1975. *Anganwadi* Centers, staffed by AWWs, are the central implantation mechanism of the ICDS. The term *anganwadi* comes from the word *angan*, meaning courtyard. The *angan* is traditionally an open space at the center of the house where families can gather and where food is often prepared.

The ICDS program began with a two-year pilot phase involving 4,981 Anganwadi Centers in 33 blocks[§§] throughout India.[10] An evaluation found that the program increased BCG and DPT immunization rates, improved the distribution of vitamin A and supplementary food provisions, and improved child nutrition status.[11] Subsequent evaluations in 1978 and 1982 found further positive outcomes, and the scheme was scaled up throughout the 1980s. Program coverage expanded rapidly, from 33 blocks in 1975, to 4,200 around the year 2000, and over 5,500 in 2003.[12-14] During the 1990s, the program's budget and number of beneficiaries almost doubled.[13]

ICDS initially focused on the health issues of children from birth to six years of age.[15] However, over the decades, ICDS has expanded to include nutritional support and health education for adolescent girls (under the *Kishori Shakti Yojana* scheme) and lactating women. In some states the AWW has been envisioned as a curative health care provider and equipped with drug kits to address common illnesses among young children.[16,17] However, more recent ICDS reports have indicated that this component of responsibility for drug provision has been eliminated from AWW's work.

Beginning in 1978, inspired by the first successful CHW program in India—the Jamkhed Comprehensive Rural Health Project—the government of India embarked on a national scale-up of the Jamkhed CHW model. Over the course of five years, some 500,000 Village Health Guides were trained in rural India with the goal of having one Village Health Guide for every 1,000–2,000 people. These CHWs had three months of formal training to treat minor ailments and first aid, and they were paid a small stipend.[18] They had no supervision. Some major problems that were documented during program scale-up included lack of a functioning supply chain for the Village Health Guides, lack of supervision, and lack of community engagement. Selection of trainees was based more on political considerations (and connections to local leaders) than on motivation to serve and competence (R Arole, personal communication, 1997).

In 1979, two years after the program had been deployed, an evaluation of the program found that 40% of Village Health Guides reported not receiving their drug kits, and over 60% had not received the supplementary materials for community health and counseling.[19] In addition, about 50% of the Village Health Guides reported not receiving the CHW manual that was supposed to be used as a reference guide for village activities.[19]

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§§ Blocks are rural jurisdictions ranging in population from fewer than 100,000 to more than three million; several blocks (approximately 10) make up a district and several districts (from two in Goa to 75 in Uttar Pradesh) make up a state.

Some of the challenges that the Village Health Guide Program faced were lack of government buy-in and support following program implementation.[18] Moreover, community engagement in program design and deployment inhibited the program's acceptability and sustainability at the rural community level.[18] Community members that the Village Health Guides were intended to serve reported feeling that the PHC provided by the government lacked responsive and caring health care workers, and did not address the communities' health needs.[18] By 1983, the program had clearly failed and was abandoned by the government.

The Village Health Guide Program failed to provide the funds required to assure that supervision and the needed materials and supplies were available. The government's financing of the program was heavily dependent on external aid, and the program was poorly managed.[18] Furthermore, the government failed to integrate the community health efforts of the Village Health Guides with responses to other public health problems, such as water supply, and with economic growth opportunities like agricultural inputs and land reclamation.[18] Finally, the Village Health Guide scheme failed to provide supportive supervision to the Village Health Guides, which affected their accountability, job satisfaction, and motivation.[18]

In the early 2000s the Government of India was in the final stages of developing the NRHM, which was seen as an "architectural correction" for the rural PHC system.[20] Since then, the NRHM has guided an increase in public health care expenditure from 0.9% of GDP to 2%–3% along with expanded state-level efforts to improve accountability and community engagement in the public health care sector.[20] The initial draft proposal for the NRHM included a provision for a national CHW cadre focused only on mobilizing FP and promoting institutional delivery. Civil society actors argued that such a narrowly defined role for CHWs would be a lost opportunity and was "not in conformity with the spirit and experience of CHW programmes".[21] The MOHFW responded by creating a stakeholder task force to design the ASHA Program. This task force, together with the MOHFW, developed the ASHA Guidelines that became central to defining the program's scope.[21] When designing the ASHA Program, the task force drew lessons not only from earlier, relatively unsuccessful, state-run CHW programs, but also from several successful civil society-run programs.[21] These civil society programs included the Comprehensive Rural Health Project in Jamkhed, Maharashtra (1970–present) and SEARCH in Gadchiroli, Maharashtra (1980–present). Both of these programs showed that female CHWs with minimal formal education can bring about significant improvements in rural health conditions, provided they have strong training and support.

In 2005, when the NRHM was launched, one ASHA worker for every 1,000 people was a key feature.[20] In many states, the ASHA program built upon preexisting CHW programs. For instance, in Rajasthan, *Anganwadi* Center Helpers were nominated to become ASHAs. Andhra Pradesh's Women Health Volunteers were renamed ASHAs. The Chhattisgarh *Mitanin* CHW program, launched in 2003 as a precursor to the ASHA Program, has retained the name "*Mitanin*" for their health workers, but has otherwise been absorbed by the ASHA Program.[22] Initially (2005–2008) the ASHA Program was a component of the NRHM only in 18 high-focus states and in the tribal districts of other states. In 2009 the program was extended to cover the entire country of 31 States and Union Territories, although Tamil Nadu opted to continue limiting the ASHA Program to tribal areas only.

Now there are 1,203,300 *Anganwadi* Centers across India, each one staffed by one AWW,[23] 207,868 ANMs,[24] and 857,000 ASHAs.[21]

What Are India's Health Needs?

In the past 60 years, the health status of Indians has improved markedly. The IMR has declined from 120 per 1,000 live births in the 1970s to 42 in 2010.[25] Life expectancy at birth has risen from 36 years in 1951 to 65 years in 2010. In 1951, women had an average fertility rate of 6.0,

while in 2010 it was 2.4. The MMR has also declined from 400 maternal deaths per 100,000 live births in 1998 to 178 in 2010.[25,26]

However, despite rapid growth in GDP over the last 20 years,[27] India has consistently failed to meet national and international health targets, and it has improved its health status more slowly than most other Asian countries.[28] India continues to have high rates of maternal and child mortality from communicable diseases along with poor management of chronic diseases of adulthood.[29-32] India's rank in the human development index among 177 countries rose only two positions between 1999 and 2004—from 128th to 126th.[28] One-fourth of all child deaths and 20% of all maternal deaths in the world occur in India.[32,33] Rural people, lower-caste people, religious minorities, women, and the poor all suffer from the marked health inequalities that exist in India and from a lack of access to good quality care because of social, geographic, and economic barriers.[28,34-36]

India is facing a "double burden" of disease, meaning that large proportions of mortality in the population can now be attributed to communicable disease on one hand and chronic conditions on the other. Communicable diseases, such as respiratory infections and diarrhea, are often considered diseases of poverty and disproportionately affect children and the poor. Chronic conditions such as mental health disorders, diabetes, and cardiovascular disease are often considered diseases of more affluent populations and typically cause death among adults later in life. Chronic diseases now account for more than one-half of deaths in India,[37,38] and communicable diseases account for 29%.[38] The remaining mortality is from injuries (10%), perinatal conditions (7%), and maternal conditions (1%). In 2008, one-third of all deaths in India were among people younger than 14 years of age, and 86% of these deaths were due to communicable diseases or perinatal conditions.[39] Among adult deaths, approximately one-fourth can be attributed to communicable disease and 65% to chronic diseases.[39]

What Is the Existing Health Infrastructure?

The rural PHC system includes CHWs at the village level. Each village is supposed to have one AWW and one ASHA worker. AWWs provide information about basic child health and nutritional supplementation for children younger than six years of age, to adolescent girls, and to lactating women.[40] The AWW is based out of an *Anganwadi* Center and is the key functionary of India's ICDS.[41]

MPWs, generally a male MPW and an ANM, who is female, conduct outreach to the villages on a monthly basis. They focus on infectious disease and on MCH. MPWs work out of the primary health subcenter, a clinic that serves several villages. This subcenter is open around the clock and normally has a doctor on staff. Referrals can be made from there to the primary health centers and from there to the district hospital. Primary health centers form the second level of the health system, and they are based in larger villages or small towns. In terms of accountability, currently the state's Minister of Health and Family Welfare oversees the system, delegating responsibility to district medical officers (DMOs), who in turn oversee the block medical officers (BMOs).

India also has a prominent private health care sector. In fact, the majority of Indians seek care at private facilities rather than at free government health centers because of convenience, ease of accessibility, and perceived superior service. Even the poorest quintile of the population seek private care for 76% of their outpatient medical care and 58% of their inpatient care.[42] Health care spending composes 4.1% of India's GDP, which is a fairly average percentage for a developing country.[43] Households pay out of pocket for over 70% of health care expenditures in the country.[43]

What Type of Program Has Been Implemented?

The ANM cadre is the most well-educated and oldest cadre among the village-level health workers, having been established in the 1960s. The AWW is also well-established in the domain of childcare and nutrition, having been part of the health care system since the mid-1970s. The ASHA is an entirely new cadre, launched in 2005 by the NRHM.[20] As the new and often younger addition, ASHAs are monitored and supported by the ANM and AWW. The ASHA is seen by some policymakers as a means of reducing the labor burden on the ANM[44] and is often seen as the ANM's assistant or helper.[45]

ANMs are women with 18 months of training who manage FP, immunization, and MCH programs. They are based out of subcenters, the lowest facility in the rural public health care system.

AWWs are female nutrition and child development workers who receive one month of training. They run preschool centers and provide nutritional supplementation for children, lactating and pregnant women, and adolescent girls. They are based out of *Anganwadi* Centers, which serve as preschools and spaces for the storage and preparation of supplementary foods.[46] The AWW is supported by a part-time assistant, called an *Anganwadi* Helper (AWH) or sometimes also called a *Sahayika.*

ASHAs are female CHWs who receive 23 days of training and who encourage women to seek ANC and give birth in health centers, assist the ANM with health events such as immunization days, and provide basic first aid and medical supplies such as ORS, contraceptive pills and iron folic acid tablets.[20] ASHA workers are to be based in their villages, and they refer people to their local primary health center and community health center. Village Health and Sanitation Committees, composed of village residents and the ASHA worker, also provide support for the ASHA's activities (see also the section on the community's role below). Although the precise manner of ASHA functioning varies by state, in general ASHAs are expected to attend weekly meetings at their local primary health center and make home visits to people in the community as needed. They are supposed to work approximately 2.3 hours a day and 4 days per week, except during training and mobilization events (such as health education or immunization promotion), when they are expected to put in more time.[47]

The Government of India describes the ASHA's role as having three key components. First, ASHAs are to play a central role in achieving national health and population policy goals.[48] Second, they are to act as a bridge between the rural people and the government health system. Third, they are to serve as social change agents, described as follows:

> ASHA will be a health activist in the community who will create awareness on health and its social determinants and mobilize the community towards local health planning and increased utilization and accountability of the existing health services.[47]

This third component of the ASHA's role is ambitious. Early programmatic evaluations have found limited scope for this type of awareness raising, with many ASHAs working primarily on tasks such as immunization and promoting institutional delivery.[45]

The ASHA's formal tasks are as follows:[22,49]

- Create awareness and provide information to the community on determinants of health such as nutrition, basic sanitation and hygienic practices, healthy living, and work conditions.

- Provide information on existing health services and the need for timely utilization of health and family welfare services.
- Counsel women on birth preparedness, safe delivery, care of the young, breastfeeding and complementary feeding, immunizations, contraception, and prevention of common infections, including sexually transmitted infections.
- Mobilize the community and facilitate access to health services.
- Work with the Village Health and Sanitation Committee to develop a comprehensive village health plan.
- Facilitate health-care seeking for pregnant women and children requiring treatment/admission to the nearest health facility.
- Provide primary medical care for minor ailments such as diarrhea and fevers, and provide first aid for minor injuries.
- Provide DOT for patients with TB.
- Carry essential provisions (ORS packets, TB medicines, iron and folic tablets, chloroquine [in malaria-endemic areas], disposable delivery kits, oral contraceptive pills, and condoms) for use in the community.
- Inform the health system of births, deaths, disease outbreaks, and unusual health problems.
- Promote construction of toilets under the Total Sanitation Campaign.
- Provide home-based newborn care (a new role added in 2011).

ASHA drug kits are refilled through a state-to-village distribution system. Drug kit supplies are procured at the state level by the Office of the Chief Medical Officer of Health. They are then distributed to the block-level health facilities and then on to each primary health center in the block. At monthly ASHA meetings, drug kits are restocked when only 25% of the needed contents are present. ASHA facilitators maintain Drug Kit Stock Registers and send drug supply requests to the block-level medical officer.[50] In some cases, AWWs act as depot holders for drug kits and help resupply the ASHA workers.[41]

LHVs are ANMs who have been promoted to oversee six subcenters. To be eligible for this promotion, an ANM must have five years of work experience and complete a six-month training program.[1]

MPW-Ms are male health workers who receive six months of training and are linked to a subcenter (along with an ANM).[51] They generally focus on malaria prevention and treatment as well as on encouraging male sterilization. They are considered the "most neglected cadre" as there is no scope for in-service training and over 60% of the positions are vacant.[51]

These different groups of CHWs work together as a team. ASHAs are to be supported and monitored by both ANMs and AWWs. ANMs are responsible for the following tasks in relation to the ASHA:

- Have a weekly or fortnightly meeting with ASHAs
- Act as a resource person, along with the AWW, for the training of ASHAs
- Inform ASHAs about the date and time of the outreach sessions
- Help ASHAs maintain a register of couples eligible for FP, motivate pregnant women to come for ANC, and ensure that pregnant women receive iron pills and tetanus toxoid injections

- Orient ASHAs on the dose schedule and side effects of oral contraceptive pills
- Educate ASHAs on the danger signs of pregnancy and labor so that they can identify and help pregnant women get further treatment when needed
- Inform ASHAs about the date, time, and place for initial and periodic training
- Ensure that ASHAs receive compensation for their performance and for attending trainings
- Participate in and guide ASHAs in the organization of Health Days at the *Anganwadi* Center[46]

AWWs are responsible for the following tasks in relation to the ASHA:

- Guide the ASHA in organizing a Health Day once or twice per week
- Guide the ASHA in undertaking education activities on health issues during Health Days

What About the Community's Role?

ASHAs and AWWs are both to be recruited and chosen by the community, while the ANM is hired and put into position by the district-level health administration.[52] ASHAs are selected by and accountable to the local village-level government, called the *Gram Panchayat*, through a participatory process involving the community. After selection, ASHAs work closely with the Village Health and Sanitation Committee. The NRHM envisions the ASHA worker to "act as a bridge between the ANM and the village and be accountable to the *Panchayat* [local democratic government]."[24]

The AWW serves as a member of the village Self-Help Group. The ANM, ASHA, and AWW together are to be members of the Village Health and Sanitation Committee (VHSC).[53] Self-Help Groups are government-supported voluntary microcredit groups for women. VHSCs are village-level voluntary health groups supported by the local level of the elected government (the *Gram Panchayat*) under the NRHM.[54] The VHSC is to lead the development of a Village Health Plan, which is prepared and implemented by the ASHA, AWW, ANM, functionaries of other departments, and Self-Help Groups.[55]

CHWs are envisioned by the MOHFW to work together on village-level health activities to integrate health facility service provision with village-level health needs. The Program Implementation Plan for the NRHM states that:

> The relationship between the *Anganwadi* Worker and the ANM at the village level and their respective working methods is critical to the improvement of child health services in rural areas.[56]

How Does India Select, Train, and Retain the CHWs?

Selection

AWWs must be female, aged 21–45 years and middle-school educated. Meanwhile, ANMs must have finished 12 years of school, must be female, and must be between 17 and 35 years of age to apply to ANM training programs in nursing schools across India.[57] ASHAs are to have a class eight education or higher and preferably be between the ages of 25 and 45. An ASHA is to be a "daughter-in-law" of the village[44] who is married, widowed, or divorced and who is likely to live in the village for the foreseeable future since unmarried women generally move to their husband's village upon marriage. States were afforded the flexibility to select ASHAs with lower literacy levels in order to ensure local residence and community representation.

Training

AWWs: According to official documentation,[58] AWWs receive 26 days of training over the course of one month; 22 days are for classroom education with mock sessions and four days are for supervised practice at the *Anganwadi* Center. However, a more recent review states that AWWs receive three months of training.[9] The Ministry of Women and Child Development states that the training should employ participatory learning techniques, whereby classroom teaching is to be supported by role play, demonstration, exercises, hands-on experience, and case studies.[58] However, in 2011–2012 only 47% of the AWWs targeted to receive initial training and 51% of the AWWs targeted to receive refresher training actually received it.[15] AWWs are also supposed to receive a seven-day refresher training at various points throughout their careers, but it is not clearly stated how often these trainings are to occur.[58]

ASHA workers: During their first year, ASHA workers receive 23 days of training. Then they are supposed to receive 12 additional days of training each year thereafter. The training manuals (Modules 1–4) have been found to be broadly simplistic, insufficient, and inconsistent.[21] In addition, the first four manuals did not have an accompanying training manual and trainers often just read through the manual with the ASHAs without any structured skill development process.[21] In contrast, Module 5, developed in consultation with the National ASHA Mentoring Group, includes reading material and a facilitator's guide to train ASHAs in social mobilization. Two additional training modules have just been added to the training regimen.[22] ASHA training has in some states been outsourced to NGOs, while in other states it is being conducted by health staff within the public system.

ANMs: ANMs complete 18 months of training. There are 1,284 ANM training institutions in India that are recognized by the Indian Nursing Council. Funding for an additional 132 ANM schools (focused in geographic areas that lack an ANM training school) was made available in the NRHM 2011 funding cycle.[59] The curricula for all ANM training are provided by the Indian Nursing Council. Upon completing their 18 months of training, ANMs are considered to be female MPWs but not skilled birth attendants. The MOHFW is now offering an additional three- to six-week skilled birth attendant training program to ANMs whereby they can learn to better identify danger signs for referral as well as how to actively manage the third stage of labor (particularly with oxytocin or misoprostol) and conduct other emergency measures.[60]

ANMs can also obtain training in the insertion of intrauterine devices (IUDs) and gain permission to insert IUDs. Once an ANM has five or more years of experience, she can seek six months of promotional training to become a Lady Health Visitor (LHV)/HA (Female). It is helpful to position the ANM within the six levels of nursing training in India today: (1) Multipurpose Health Worker-Female training (ANM or MPHW-F), (2) Female Health Supervisor training (HV or MPHS-F), (3) General Nursing and Midwifery training (GNM), (4) BSc. Nursing training, (5) MSc. Nursing training, and (6) MPhil and PhD Nursing training. The ANM, HV, and GNM trainings are conducted in schools of nursing. The last three are university-level courses, and the universities where these programs are located are responsible.[57]

Retention

AWWs: AWWs are considered "honorary workers" who receive a monthly honorarium, but in fact, this honorarium serves as a salary. The payment is composed of a core honorarium from the central government that is often supplemented by additional payments from the state-level government to compensate AWWs for additional work on schemes beyond ICDS. The core monthly payment from the central government ranges from US$27–$29 (1,438–1,563 rupees) depending on the AWW's educational qualifications and experience. Anganwadi Helpers (AWHs) receive $9 (500 rupees) per month.[41]

ANMs: Salaries for ANMs are paid through national health budgets, while the MPW is paid through the state-level health budget.[55]

ASHAs: The ANM serves as the gatekeeper to the ASHA's receipt of reimbursement. ANMs check the ASHA's register to see how many services the ASHA has facilitated for which she can receive payment, such as the number of pregnant women she facilitated in getting an institutional delivery. After approving the register, the ANM sends the register on to the *Sarpanch* (head of village-level government) for approval. On receiving the *Sarpanch's* approval, the ANM is responsible for seeking the ASHA's payment through the closest primary health center. Payments are usually dispatched once every three months. Once the check is prepared for the ASHA, the ANM picks the check up from the primary health center and delivers it to the ASHA.[44] This process is quite convoluted and there have been reports of ANMs keeping portions of the ASHA's payments as a bribe or of ANMs understating the ASHA's earnings.

Although ASHAs are considered volunteers, they receive performance-based remuneration for a range of interventions. Initially limited to facilitating institutional deliveries and immunizations, the range has been expanded considerably to 31 activities. They include provision of home-based newborn care, promoting birth-spacing and birth-limiting FP, provision of DOT for TB treatment, making malaria slides, toilet construction, and follow-up of children with severe acute malnutrition after discharge from a nutritional rehabilitation center. For example, an incentive of 250 rupees (approximately $4.10) is given for providing home-based newborn care. Facilitating institutional deliveries is the most common activity for which ASHAs receive payments. Under the *Janani Suraksha Yojana* (Pregnant Woman Safety Scheme) Program, if an ASHA worker facilitates an institutional delivery, she receives 600 rupees (approximately $10) and the mother receives 1,400 rupees ($23).[61] ASHAs also receive 150 rupees (approximately $2.50) for each child completing an immunization session and each individual who begins to use FP.[62] ASHAs are compensated for training days, meetings, and additional health-related activities on a state-by-state basis.

The ASHA payment system fails to reflect the amount and type of work expected. Although ASHA workers are tasked with a wide range of activities, including developing and implementing Village Health Plans, they receive remuneration for only a very few highly specific activities (such as bringing in women for institutional deliveries). Understandably, ASHA workers tend to focus on the tasks they are paid for. Moreover, many ASHAs are dissatisfied with the current level of remuneration, reporting that they work far more hours than is sustainable for a volunteer position.[63] In response to this, a recent decision has been made to provide an "incentive" (not a salary since ASHAs are still considered to be volunteers) for completion of a set of routine activities regardless of population covered. Now, ASHAs receive 1,000 rupees (about $16) for completing a set of routine and recurrent tasks each month (R. Ved, personal communication).

How Does India Supervise Its CHWs?

Each group of CHWs has a different supervision system. ASHAs, ANMs, and AWWs each have their own separate and different supervisors.

AWWs: AWWs are supervised by an ICDS *Anganwadi* supervisor and the Child Development Project Officer (CDPO). The CDPO is responsible for ICDS at the block level. The ICDS *Anganwadi* supervisor oversees 25 AWWs. The CDPO is supported by a statistical assistant at the block level. The AWW is also supported by the ASHA and ANM on MOHFW programs (for immunization, health checkups, and health-related referrals).

ANMs: There is one LHV or HA (Female) assigned to supervise every six sub-centers. This person is tasked with supervising and providing technical guidance to the ANMs at the sub-centers and reporting to the Medical Officer.[1]

ASHA workers: According to national guidelines, there is to be one ASHA facilitator for every 20 ASHAs. The facilitator is to help with the selection of the ASHA, provide on-the-job mentoring to ASHAs, conduct cluster meetings, maintain records of ASHA activities, attend Village Health and Nutrition Days with the ASHAs, and attend monthly block primary health center meetings.[50] The ASHA facilitator is supervised at the block level by the Block Community Mobiliser, who is in turn supervised by the District Mobilization/Coordination Unit, which liaises with the state-level ASHA resource center. In their 2011 evaluation, the National Health Services Research Center found that some states had supervision only at the block level or delegated ASHA supervision to ANMs and other primary health center staff instead of hiring separate facilitators. In other states, the facilitator was hired only to help with ASHA selection and ceased functioning after selection.

At the national level, the ASHA Mentoring Group meets biannually and advises the MOHFW on ASHA policy and programming. The National Health Systems Resource Centre is the technical support unit under the MOHFW and serves as the secretariat for the ASHA Mentoring Group.[22]

Several states have introduced ASHA motivation and recognition initiatives such as cash awards for the best-performing ASHAs (in Bihar), newsletter and radio programs (in several states), bicycles for all ASHAs (in Assam), and career development opportunities through scholarships to study nursing (in Chhattisgarh).[22]

An ASHA monitoring system has been developed by the MOHFW. The main source of performance monitoring arises from monthly meetings of the ASHA facilitator with the 20 or so ASHA workers she or he oversees. The reports on ASHA functionality involve recording whether ASHAs are completing 10 tasks, including visiting newborns within the first day (for home deliveries), attending immunization camps, visiting households to discuss nutrition, and acting as DOT providers for TB treatment.[50] These reports are then submitted to the block community mobiliser on a monthly basis and assessed quarterly to determine what percentage of ASHA workers are functional. These results are then submitted to the district coordinator, who grades each block in the district based on ASHA functionality. Finally, the monitoring data is consolidated at the state level and each district is graded.

How Is the Program Financed?

AWWs: $8 billion (444 billion rupees) was allocated to the ICDS overall in the 11th Five Year Plan Period (2007–2012).*** Financing for AWW payments and the upkeep of *Anganwadi* Centers comes from both the central and state governments, with the central government contributing 90% and the states contributing 10%. The cost of the food provided by AWWs through ICDS is shared 50-50 by the central and state governments.[41] In 2008, ICDS spent $0.07 (4 rupees) on supplementary food per child beneficiary (aged 6–72 months) per day and $0.09 (5 rupees) on supplementary food per pregnant or nursing woman per day.[41]

ASHA workers: In 2006, the MOHFW stipulated that the ASHA program would cost 10,000 Indian rupees (approximately $163) per ASHA worker per year across 18 high-focus states. This

*** The Planning Commission of India allocates resources to the states based on planning sessions for the upcoming five years; these plans are written up into official Five Year Plans and have been released every five years since 1951.

included the cost of the selection process, social mobilization, training, drug kits, identity cards, and support for ASHA workers by the primary health center and the ASHA supervisor (facilitator). This amount did not, however, include the cost of ASHA worker remuneration, which was supposed to come from the budgets of various other MOHFW initiatives such as the *Janani Suraksha Yojana* Program to support institutional delivery in rural areas.[22]

The program has consistently absorbed less than 50% of its allocated budget because of lack of support structures and other support activities, limited internal capacity, and reluctance to provide support for entities outside of the public sectors, such as NGOs.[22] Absorption varies across states, ranging from 20% in Delhi to 96% in Chhattisgarh, depending on the status of the support structure and the state's commitment to the program (R. Ved, personal communication). From 2005 to 2011, the program spent only 48% of the total funds available, amounting to 5,400 rupees (approximately $88) per ASHA worker.

What Are the Program's Demonstrated Impact and Continuing Challenges?

AWWs: Although early evaluations of ICDS were promising, more recent assessments have been less encouraging. In Lokshin et al.'s study,[64] anthropometric measures of children obtained from the National Family Health Survey were compared in villages covered by ICDS and in matched villages not covered by ICDS. Their analysis found little overall effect of ICDS on nutritional outcomes. Deolalikar found that the presence of an ICDS Centre is associated with a 5% reduction in the probability of being underweight for boys, but not for girls.[65] Another study by Bredenkamp and Akin found that the presence of an ICDS Centre has no significant effect on the nutritional status of children.[66]

Since its inception, ICDS has been implemented with uniform norms, giving rise to critiques of inflexibility and incapacity to adjust to address pockets of more severe malnutrition.[67] The top-down implementation of the program has left very little space for community involvement and has resulted in many ICDS workers (including AWWs) having very little accountability to the communities in which they operate.[12] Many studies have identified implementation problems with ICDS in general, and have specifically identified insufficient AWW training and support as a major barrier to program success.[12,66,68-70] AWW duties require detailed understanding of child nutrition, maternal health and preschool education. "Supply leakage," particularly related to pilfering and resale of food grains from ICDS program stocks, has severely undermined nutrition supplementation efforts. What food does get distributed has been found to focus on children between the ages of four and six years, which is actually too late to optimally influence growth.[68] Greiner and Pyle identified low community involvement in ICDS as a central barrier to program success.[12] Although community selection and support of the AWW are featured in government documents, communities often have little to do with the AWW; similarly, ICDS employees may feel low affinity for the communities in which ICDS operates.

ANMs: There is surprisingly little published evidence of ANM effectiveness. In a placebo-controlled trial from 2002 to 2005, Derman et al. found that ANMs could effectively administer oral misoprostol to reduce rates of acute postpartum hemorrhage and acute severe postpartum hemorrhage.[71] Agrawal et al. found that coverage of antenatal home visits and newborn care practices were positively correlated with the knowledge level of AWWs and ANMs.[72] Specifically, when comparing women visited by AWWs or ANMs who had better knowledge compared with those with poor knowledge, initiation of breastfeeding in the first hour of life, clean cord care, and thermal care were significantly higher among women visited by ANMs or AWWs with better knowledge.

Challenges within the ANM program include a lack of meaningful supervision and mentoring.[73] Mavalankar and Vora also note that an ANM can become an LHV after five years of experience and a six-month training course; however, this six months of training does not include any focus

on supervision or human resource management.[1] Medical officers in particular are often serving a population of over 15,000 people—and more than 30,000 people in the frequent cases where posts are vacant, leaving them very little time to support ANMs.[5] ANMs are thus often left to manage the subcenters largely on their own. Security is another primary concern to ANMs. Iyer and Jesani report how stories of ANMs being called out to homes on false pretenses and sexually assaulted circulated among ANMs in their case study areas.[5] ANMs may be placed at remote subcenters and are often unmarried. Many refuse to go out at night to medical emergencies; some even choose to live away from the subcenter so they are not available for night calls. Unmarried ANMs have reported being verbally harassed by young men in the village and having had stones thrown at them.[74] Furthermore, ANMs are transferred every four years on average, which can often place strain on their family and social lives.[74] Many ANMs end up living away from their husbands and children at some points in their careers.[74]

Mavalankar and Vora highlight the problem of "nonresident" ANMs, citing a 2007[†††] study that found less than one-quarter of all ANMs actually living at the subcenter.[1] If ANMs do not make the subcenter their primary residence, they are unable to provide 24-hour medical assistance and are more likely to be absent due to commutes or extended leave times to visit family. It is not surprising that ANMs choose to live away from the subcenter. Beyond the security concerns mentioned above, living at subcenters places ANMs "on call" at all times. Moreover, subcenters are often little more than concrete rooms and often lack electricity and water.

ASHA workers: The National Health Services Research Centre released ASHA updates in 2009, 2010, and 2011, detailing finances and the status of ASHA training and selection. It is still somewhat early to assess the impact of the program on health indicators. In many states, ASHA selection has only recently been completed. The evaluation report entitled *Improving the Performance of Accredited Social Health Activists in India*, prepared for the International Advisory Panel by the Earth Institute of Columbia University and the Indian Institute of Management, focuses on ASHA functionality rather than impact.[63] The evaluation carried out by the NHSRC entitled *ASHA: Which Way Forward?* found a wide range of functionality for all ASHA tasks.[21] For example, the percentage of all women with children younger than 6 months of age who had received a service from their ASHA ranged from 50% to 70%. Considering that ASHAs are supposed to provide postnatal counseling and encourage breastfeeding after all births, this finding indicates limited functionality. The study also found that it was not the ASHA's educational level (whether or not an ASHA has passed 8th grade) but the number of days of training and the quality of this training that had an impact on the ASHA's knowledge and skills. The report cited evidence that ASHAs increased institutional deliveries, although the rollout of the ASHA program coincided with the introduction of financial incentives for institutional birth for both the ASHA and mother, making it hard to disentangle the actual effect of ASHAs. The report cited no evidence that ASHAs had influenced immunization levels, but also pointed out that the main limiting factor was the availability of vaccines, over which ASHAs had no control. Although at least 70% of ASHAs were found to have been consulted about sick children, few were able to provide appropriate care because they lacked drugs, skills, or support. For example, ASHAs were able to supply ORS in only 27% of diarrhea cases in Bihar for which they were consulted. There have been concerns expressed about a lack of clarity on roles and responsibilities. Many ASHAs are unable to specify their job responsibilities.[63]

The ASHA payment system fails to reflect the amount and type of work expected; although ASHAs are tasked with a wide range of activities, including developing and implementing Village Health Plans, they receive remuneration for only a few activities (primarily bringing in women for institutional deliveries). Understandably, ASHAs tend to focus on the tasks they are

[†††] The URL to access this data was no longer operational when the authors sought to check it, on 8 April 2013. The reference given was: Key Indicators, India, Facility Survey. 2003. http://www.rchindia.org/sr/ki_india.pdf. Accessed September 5, 2007.

paid for. Moreover, many ASHAs are dissatisfied with the current level of remuneration, reporting that they work far more hours than is sustainable for a volunteer position.[63] There are also major concerns about the adequacy and quality of training.[21,63] The training process and manuals have been criticized as dense, knowledge based rather than skills based, and irrelevant to many day-to-day ASHA activities. The ASHA training period is very short (and few ASHAs even receive the requisite 23 days) and assessments of ASHA knowledge and retention have indicated that the training is highly insufficient.[21]

A central challenge at the heart of the ASHA program is supervision and feedback. Despite detailed national guidelines on ASHA supervision, in most states, support structures are weak and were set up several years after ASHAs were to have been selected and trained, almost as an afterthought rather than as a priority activity.[21] However, at the end of 2013, all but three states had at least two levels of support structures and intact payment systems (R. Ved, personal communication).

Although ASHAs are supposed to be representatives of and accountable to the people, they receive their payments through the ANM at the primary health center and are often treated as extensions of the health system. ANMs consider ASHAs their assistants, which diminishes the ASHA's her "social health activist role.".[45] In addition, ANMs provide mentoring and support for the ASHAs linked to their primary health centers, yet have no official supervisory position.[63]

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INDONESIA'S COMMUNITY HEALTH WORKERS (*KADERS*)‡‡‡

Summary

Background

Built on the national women's Family Welfare Movement (PKK) movement of the 1970s, volunteers called *kaders* were trained to conduct health and nutrition promotion activities in each village. In the mid-1980s, the *Posyandu* Program was formally recognized by the MOH. The program's goal was to decrease infant and child mortality, improve FP acceptance, improve nutrition, and empower the community through community health activities.[1]

Implementation

A *posyandu* is a health post in the community that is staffed by *kaders*. *Kaders* are almost exclusively women and are chosen by and from within the community to support services at the *posyandu*. Each *posyandu* serves approximately 100 children younger than 5 years of age or about 700 persons in the community.[1] There are an estimated 1 to 1.5 million *kaders*, and there are 4–5 *kaders* who volunteer at each *posyandu*. Sessions of the *posyandu* are held monthly, at which time mothers and infants receive services at a series of five tables for registration, weighing, result recording, advice or counseling on growth and development, and health services (such as immunization or FP).[1]

Training

Kaders receive one week of training and over time accumulate the skills and equipment necessary to carry out a set of tasks, including growth monitoring and promotion, treating common illnesses such as diarrhea, and preventing disease and malnutrition.

Roles/Responsibilities

Kaders conduct the *posyandu* sessions, where their basic roles include registration and recording on mother-infant cards, weighing, growth monitoring, providing nutrition advice, and counseling on FP. Outside of the monthly *posyandu* sessions, the *kaders* carry out follow-up visits in the community, attend community committee meetings, and update *posyandu* target and utilization data.[2] *Kaders* work about 8–10 hours monthly.[3]

Incentives

The *kaders* provide voluntary service without financial compensation. However, *kaders* may receive informal types of compensation, such as free medical treatment from higher levels in the

‡‡‡ This case study was written by Katharine Shelley, Novia Afdhila, and Jon Rohde. Ms. Shelley and Ms. Afdhila are students in the Johns Hopkins Bloomberg School of Public Health; Ms. Afdhila is from Indonesia and has worked with the CHW program. Dr. Rohde was instrumental in the formation of the Indonesia CHW program in the 1970s.

health system.[3] There is a high cultural value placed on doing something for one's neighbors, so volunteering as a *kader* is highly esteemed.

Supervision

While the nearest subdistrict-level health center (*puskesmas*) provides technical guidance and support, the real accountability of the *kaders* is to the village committee that appointed and supports them in their work. *Kaders* undertake to do "welfare work" for their community, and the monthly *posyandu* session is seen as an important function and contribution to the welfare of the community.

What Is the Historical Context of Indonesia's Community Health Program?

The National Nutrition Survey in 1973 highlighted the prevalence of malnutrition in Indonesia. At that time, over half of the children were undernourished.[4] Throughout the 1970s, various program approaches were undertaken to improve nutrition at the village level. The well-established PKK organization was endorsed by the Ministry of Home Affairs and active in thousands of villages throughout Java promoting self-help activities.[4] Working with local health departments, university departments of pediatrics, and the national FP organization (BKKBN), the PKK became the locus of a set of monthly activities, including resupply of FP commodities, weighing of children, and discussions of improving child health centered around the cooking of a common nutritious meal, all organized and carried out by volunteers, called *kader gizi* (nutrition workers) from the PKK. The point at which women gathered for these services came to be called a *posyandu*, which is an Indonesian abbreviation for *post pelayanan terpadu* (*PosYanDu*).

At the time of the *posyandu* session, these women were given brief training and simple health education aids and followed standard prescribed activities during their monthly meeting focused on family health and child nutrition. The KB-*Gizi* (FP/nutrition) Program grew dramatically during the Third Five-Year Plan (1979–1984), at which time it reached over 30,000 villages.[5] By 1984, over 80,000 *posyandus* in 34,000 villages, run entirely by *kaders*, were providing basic nutrition and growth monitoring services.[4] The MOH began to use these monthly gatherings as a convenient means to expand immunization coverage as well as to provide medical consultations. The MOH subsequently took over these "integrated service delivery posts" and renamed them *posyandus*.[5] After only a decade, the *posyandu* and *kader* program covered 86% of villages in Indonesia with 200,000 *posyandus*.[3]

The National Nutrition Section of the MOH started the Program *Gizi* (UPGK). Initially it depended upon costly food supplements. Monthly weighing sessions started in response to PKK mothers asking how they would know if their children were healthy and growing well. Traditional weighing scales called *dacin* for market commerce were used, along with growth charts that displayed multiple green channels getting greener at the top (like rice that grows greener as it is fertilized) to demonstrate where children were located based on their weight for age and whether their weight was increasing. Finally, the sessions focused on "wisdom of mothers" (*kebijkasanaan ibu*) rather than on "nutrition science" (*ilmu gizi*) as the teaching/learning method.

The *Posyandu* Program thrived during the 14-year period from 1984 to 1998 under President Suharto's rule,[6] expanding to more than 65,000 villages with some 250,000 *posyandus* run by over 1 million *kaders*. Initial skepticism around volunteerism and worry about attrition of *kaders* gave way to pride and recognition for the important community service they provided. Women wishing to retire from their role recruited and trained their replacements, thereby developing a self-perpetuating system of local health and nutrition care. However, the economic crisis during 1997 significantly impacted *posyandu* performance. Some reports indicated that up to 70% of the *posyandus* stopped functioning.[7]

In 2001, the Indonesian Ministry of Home Affairs, through a ministerial letter, called for a revitalization of the *Posyandu* Program. It requested that the government (1) ensure the sustainability of regular *posyandu* activities; (2) ensure the empowerment of local leaders and *kaders* through advocacy, orientation, and training; and (3) institutionalize the *posyandus* by maintaining them both as a physical structure and as a sociopolitical structure within the village system that is accountable to the community. Due to limited resources, the revitalization effort has focused on inactive *posyandus* and those in low-income communities.[2]

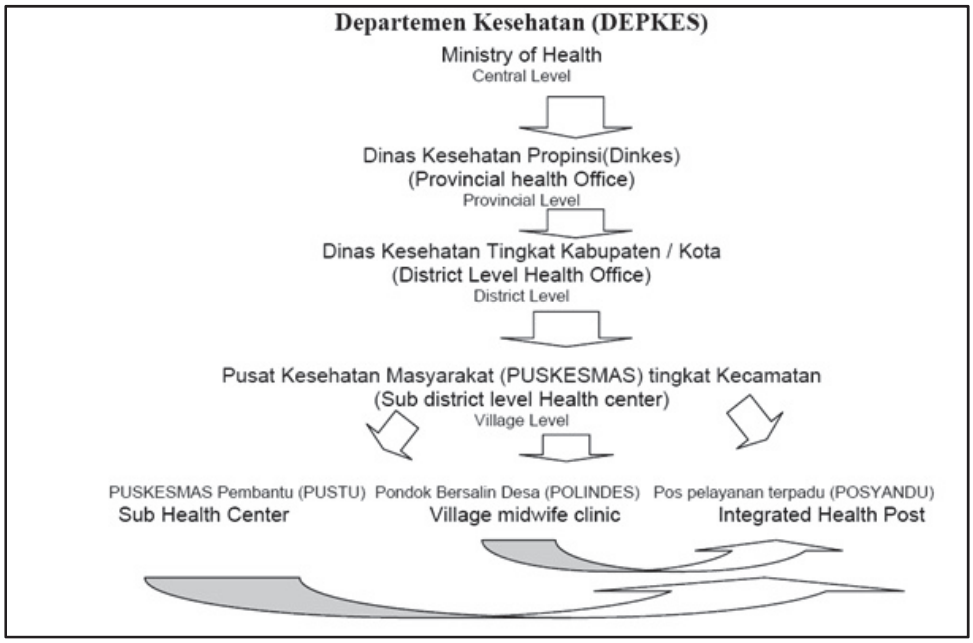
What Are Indonesia's Health Needs?

The *kader* program was primarily developed as a response to addressing malnutrition, which was identified as the greatest threat to Indonesian children in the 1970s.[4] Over the next two decades, with regular attention to monthly monitoring of child growth and use of locally grown foods and recipes, malnutrition was halved without food supplementation programs, so popular at that time in many other countries.[4] Today, malnutrition remains a significant health challenge in Indonesia, but it is far less severe: among under-5 children, 18% are undernourished and 36% are stunted.[8] Indonesia has recorded steadily declining rates of infant mortality over the last 40 years, from 142 deaths per 1,000 live births in 1967, to 68 deaths per 1,000 live births in 1990, to 32 deaths per 1,000 live births in 2012.[9] While in the 1970s, diarrhea was the most prevalent cause of child deaths, the availability of oral rehydration at the *posyandu* and the monthly attention to nutrition and hygiene along with early rehydration in the home for diarrhea cases reduced diarrhea to the 4th or 5th leading cause of death. Now one-third of infant deaths occur within the first month of life, an indication that increased quality of delivery and PNC is needed. Acute respiratory infections, perinatal complications, and diarrhea remain important to address, especially in rural settings.[10]

What Is the Existing Health Infrastructure?

Indonesia's public health system includes facilities at the central, provincial, district, subdistrict, and village levels, largely managed through a decentralized system responsible to the provincial and district levels of government. Indonesia underwent government decentralization in 1999–2000, at which time most health functions and budgets were transferred to the districts, with the national and provincial levels largely setting norms and providing guidance.[11] Referral hospitals are located in the larger cities and provincial centers. District hospitals are present in each of the 580 districts, and community health centers (*puskesmas*) each cover a catchment of approximately 30,000 people. Below the *puskesmas,* at the village level, there is a network of low-level facilities, including *pustus* (sub-health centers), *polindes* (village midwife clinics), and *posyandus* (health posts) (see Figure 1).[11,12]

Figure 1. The health care system in Indonesia, including the *posyandu* (health post) at the community level.[12]



What Type of Program Has Been Implemented?

Community health activities are carried out at the *posyandu*, which is an integrated health post staffed by various community health *kaders*. The *posyandu* links people at the village level with the formal health center and the health care system.[3] Each *posyandu* serves approximately 100 under-5 children or about 700 persons in the community.[1] There are an estimated 1 to 1.5 million *kaders* in Indonesia, based on four to five *kaders* stationed at each *posyandu*. The various types of community health *kaders* include: the *gizi kader* (who works in nutrition); the *kesehatan kader* (who works in health); the KB *kader* (who works in FP); the first aid *kader*; the non-communicable/chronic disease *kader*; and the mental health *kader*. The original idea was to have one *kader* for every 10–20 families.[3] By 2009 there were more than 250,000 *posyandus,* and an average of 3.6 *posyandus* per village.[2,13]

Posyandu sessions are conducted on at least a monthly basis by the five or more *kaders* present at each session.[2] *Kaders* typically work about 8–10 hours monthly.[3] At the *posyandu* session, four tables are set up with at least one *kader* stationed per table. The first table is for registration, the second for weighing of children, the third for marking the growth card graph with the weight outcomes; at the fourth table, the mother is given advice based on the weighing and growth monitoring data. A fifth table was later added to provide immunizations and curative services.

Outside of the *posyandu* sessions, *kaders* are responsible for (1) updating a register with names of pregnant women, postpartum and breastfeeding mothers, infants, and under-5 children); (2) updating the statistics describing *posyandu* session utilization; (3) carrying out follow-up visits to houses of absent participants and participants who need further health education; and (4) attending community committee meetings.[2] Growth monitoring, FP, mental health counseling, general MCH care, guidance on the prevention of diarrhea, and immunization are all provided at the *posyandu* sessions.[13] Infant health care includes immunizations, promotion of early stimulation, growth monitoring, disease detection, and basic curative care. In 2010, coverage of infant health care was 84%, and the monthly *posyandu* session is considered a key reason why

the coverage level is high. The *posyandu* is an important access point for families to bring their infants for routine care.[13]

Posyandu activities are divided into core and optional activities. By offering additional optional activities, a *posyandu* becomes designated as an integrated *posyandu*.[2]

Core activities carried out by *kaders* and their *posyandu*:

- MCH care
- FP
- Immunization
- Nutrition
- Diarrhea prevention and treatment

Optional additional activities:

- *Bina Keluarga Balita* (empowerment of families with children younger than 5 years of age)
- *Tanaman Obat Keluarga* (family herbal farm)
- *Bina Keluarga Lansia* (program for the elderly)
- Pregnancy savings (encouraging women to save in preparation for delivery and for the newborn's needs)

What about the Community's Role?

The *posyandu* and its *kaders* serve as a community empowerment unit on health-related issues that is supervised institutionally by a village committee. Medical and technical supervision is provided by the clinical staff at the *puskesmas*, where a physician, 5–8 nurses, and several midwives work.[2] The selection of the supervising village committee and *kaders* is based on consensus reached within a village-level meeting conducted by staff from the *puskesmas* and attended by village leaders, other respected people in the village, and selected members of committee.[2]

How Does Indonesia Select, Train, and Retain *Kaders*?

The community plays an integral role in selection of *kaders*. Selection criteria include the following:

- Able to read and write
- Social in spirit and willing to work voluntarily
- Knowledgeable about the customs and habits of local people
- Willing to commit the time required
- Residing in the village
- Friendly and sympathetic
- Accepted by the local community

Training of *kaders* lasts less than one week, meaning that only a few technical skills can be learned during that short duration of training.[3] *Kaders* are taught to do very few things, but importantly, the training focuses on learning one task at a time. *Kaders* are given the skills and

equipment needed to carry out that task, and two or three months later they may be trained on the next skill. Many of the skills can be passed on from one *kader* to another, such as preparing and using ORS and zinc, vitamin A distribution, and folic acid and iron distribution for pregnant women.

Evaluations conducted in the 1980s estimated that the annual dropout rate for *kaders* was 20%, and the average length of service for each *kader* was 3–5 years.[3] As *kaders* drop out, new ones are selected and begin to work even if they have not been formally trained.[3] A *kader* who drops out is sometimes responsible for finding and training her replacement.

How Does Indonesia Supervise the *Kaders* and *Posyandus*?

The *posyandu* is a community-driven health service managed and run from, by, for, and with the community. It also receives technical supervision from the staff at *puskesmas*.[2] Each *puskesmas* has at least one general doctor alongside nurses and midwives. At least one *puskesmas* is located in each subdistrict, and someone from the *puskesmas* staff makes a visit to each *posyandu* session. Supervision of the *kaders* is minimal. Health facility staff members who attend *posyandu* sessions are not expected to supervise *kaders*. Rather, they attend the *posyandu* session as respected colleagues, and they incorporate statistics of services provided at the *posyandu* session as the first layer of data used in the district health information system.

How Is the Program Financed?

There is almost no finance requirement after it gets started. Any money is a bonus and used to do what the committee decides on. Financing for the program serves to fund operational activities, nutritional foods for children under 5, *kader* transportation costs, start-up capital for *posyandu* commercial activities, and costs for transport for patients requiring referral. The program is financed through a variety of sources, including:

- Community members, attendee donations, community health savings, donations from community members, and donations from social or religious groups;
- Private commercial sources, such as some companies that adopt a *posyandu* and provide sponsorship;
- Commercial activities undertaken by the *posyandu* itself (such as selling herbal medicine); and
- Government sources (mainly for the early stage of *posyandu* development, particularly for establishing facilities and infrastructure).[2]

What Are the Program's Demonstrated Impact and Continuing Challenges?

The community-level monitoring system is called SKDN and is used in some *posyandus*, depending on the initiative of the local committee, in order to monitor progress. It consists of four indicators which were designed to be simple and easy enough to use for community-level feedback and tracking of progress, but also to provide useful coverage information for the formal health care system.[3] The simple monitoring system was designed to be used at the community level by the people who are collecting the data. The initials SKDN are used to represent the key data points: S for "all"—the number of under-5 children; K for "growth charts"—the number enrolled in weighing; D for the number of children "weighed" during the month; and N for the number of children who "gained weight" during the month. Key indicators are (1) the proportion of children reached (e.g., given growth cards) (K/S); (2) the proportion of children with growth cards who were weighed (D/K); and the proportion of children weighed who gained weight (N/D). A wall chart is then constructed at the community level to track a village's progress.[3]

Measuring impact through these SKDN indicators requires an accurate estimate of the total number of children in the target age group, which is often difficult to ascertain. The latest 2010

figures from the Indonesia MOH indicate that 68% of under-5 children were weighed.[13] The MOH has stated that the decrease in maternal and child mortality as well as the increase in life expectancy in Indonesia are partly attributable to the work of the *posyandus* and *kaders* in the community.[2]

Lack of funding, political support, and new volunteers have been cited as challenges. Some critics say that over half of the *posyandus* are inactive, but others claim this is overstated. The head of the Demographic Institute at the University of Indonesia in Jakarta says, "Times have changed. People no longer take pride in being *posyandu* volunteers [*kaders*]. People also prefer to go to clinics [more] than [to a] *posyandu*."[14] In spite of these vulnerabilities, the *posyandu* system in Indonesia, run by volunteer women for more than 30 years, is probably the largest and longest continuous community-based volunteer health and nutrition program in the world. Driven by women who honestly want to know, "How is my child doing?" and are willing to serve their neighbors by devoting one day a month to a common welfare activity, the *kader gizi* (and other *kaders*) have brought a level of universal health and nutrition care to a huge and diverse population in one of the poorest countries of the world. The *posyandu* and its *kaders* provide a foundation for health in modern Indonesia.

The quality, coverage, and impact of *posyandus* varies by region. The quality of FP services provided at the *posyandu* is heavily dependent on the midwife from the *puskesmas* being present for the *posyandu* session. If she is not able to attend, then women who need replenishment of supplies or an injection will be without protection.[15]

The trend for increased utilization at the *puskesmas* will continue, particularly since a national health insurance scheme went into effect in early 2014 and over the next 5 years will cover everyone in the country. However, the need for the *posyandu* will continue—for growth monitoring of children, for attention to mental health issues, for chronic disease management, and for many other services that can be effectively provided at that level.

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IRAN'S COMMUNITY HEALTH WORKER PROGRAM§§§

Summary

Background

Currently, 90% of health services in Iran are provided by the public sector, and a large portion of basic health services are provided by the over 30,000 village health workers (VHWs), called *behvarzs*, who focus on the health needs of the rural population and specifically on MCH.[1]

Implementation

Following health care reforms in the early 1980s, Iran built Health Houses, each of which was meant to serve approximately 1,500 people living within a 1-hour walking distance. Each Health House (*Khaneh Behdasht*) is staffed by one man and one or more women who provide preventive and basic care.[2] Today 17,000 Health Houses serve 23 million rural Iranians.[2]

Training

The *Behvarz* Training Centers provide pre-service as well as in-service training programs that consist of coursework divided into three grades over a 2-year period.

Roles/Responsibilities

Behvarzs' responsibilities include MCH care, communicable and non-communicable disease management and detection, care of the elderly, oral health care, health care in schools, environmental and occupational health, annual population census, completion of reports and forms, attendance at in-service training sessions, and membership on the *Behvarz* Council.

Incentives

Because the CHW program is an integral component of Iran's PHC system, financing of these workers is regulated into national health planning. The *behvarz* workers are paid a fixed salary approximately one-sixth that of physicians.

Supervision

Regular supervisory visits to Health Houses are planned and performed by rural health centers. Provincial and national teams also evaluate program effectiveness and quality of care.

Impact

Iran has built a strong PHC system, and the *behvarz* CHW program has been a fundamental element of it. The strong progress that Iran has made in improving the health of its population and in narrowing the rural-urban gap in health status since the 1970s is due in large part to the performance of its community-friendly health workers and the PHC system more broadly.

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§§§ This case study was written by Zayna Chowdhury and Dena Javadi, students at the Johns Hopkins Bloomberg School of Public Health.

What Is the Historical Context of Iran's Community Health Worker Program?

The *Behdar* (healer) Training Project in 1942, the West Azerbaijan Project in 1972, and the Village *Behdar* Training Scheme of Shiraz University are all earlier examples in Iran of utilizing local health workers to address health concerns of the rural poor.[3,4] Following the Alma Ata Declaration of 1978, Iran established a network for PHC with a new CHW program that refined and expanded on projects such as the *Behdar* Training Project.[5] The West Azerbaijan Project, developed in one province in Iran, aimed to expand medical and health services by establishing a comprehensive health delivery system and training auxiliary health personnel, which was the translation of a PHC approach into practice. In the same years as the West Azerbaijan Project, similar experiments in the use of auxiliary health personnel to deliver health services were also conducted in other parts of Iran. The PHC program in Iran has expanded beyond MCH services and now also provides services pertaining to elder health, youth health, and non-communicable diseases.

What Are Iran's Health Needs?

CHW programs in Iran are focused on the health needs of the rural population, specifically in terms of infant mortality, maternal mortality, and childhood illnesses such as diarrhea. The content of CHW training is adapted according to changing rural health care needs. For example, midwifery programs in rural areas have been added relatively recently. Needs addressed beyond maternal health include non-communicable diseases, immunization, personal hygiene issues, acute respiratory infection, and FP.[5]

What Is the Existing Health Infrastructure?

There are four levels of health workers: the family, informal and traditional workers, CHWs, and professionals. Health system reform, focusing more on primary care, coincided with the Iranian revolution in 1979. The new health system also integrated medical education and health care services. A goal of the new health system has been the reduction of urban-rural disparities in health outcomes.

What Type of Program Has Been Implemented?

The Health House is the first contact between the rural population and health providers in the PHC network. Each Health House provides MCH care, FP services, health education, environmental and occupational health services, and disease control activities. CHWs conduct home visits. The Health House facilitates referrals to higher levels of care. An annual census of the population is also conducted.[5]

Specific CHW roles and responsibilities include vaccination, growth monitoring, IMCI, breastfeeding promotion, and nutrition support for infants and children. ANC and PNC are provided along with FP services, treatment of minor illnesses, and first aid. CHWs provide care for the elderly, oral health care, care of young people at school, and occupational health. CHWs receive a salary that is approximately one-sixth of a physician's salary.[6]

What About the Community's Role?

Community engagement in health promotion activities became part of the policy agenda in 2004.[5] Promotion of community participation and promotion of collaboration at the local level of other social sector programs with health programs is part of the role of CHWs.

How Does Iran Select, Train, and Retain the Community Health Workers?

Selection and recruitment of CHWs (*behvarzs*) in Iran strongly reflects the WHO definition of CHWs as "members of the communities where they work [who] are selected by their communities."[7] Local people, including religious leaders and families, are involved in the

selection of *behvarzs*. By 2004, a more formal process involving *behvarz* recruitment committees had been established in each district to assess vacancies and to find the most appropriate candidates using local media. A written examination and interview with the candidates are the final steps of *behvarz* recruitment.

Qualifications for *behvarz* candidates include a high school degree. Since 2005, more and more are being selected who have undergraduate university degrees in a health-related field. Both men and women are eligible. *Behvarz* candidates have to be resident in the rural area for at least 1 year. If there is no applicant from the main village, applicants from neighboring villages can be recruited.[5] Moreover, to promote long-term retention of *behvarzs* in rural areas, priority is given to the local candidates or to female candidates whose husbands have a permanent job in the village. The appointment of *behvarzs* should be confirmed by a committee consisting of representatives of the *Behvarz* Training Center, the district PHC division, and the local rural council.

District *Behvarz* Training Centers, which are part of the district health system, provide pre-service as well as in-service training to *behvarzs*.[8] The *behvarz* training program consists of theoretical and practical coursework over a 2-year period as well as clinical placements in Health Houses and rural health centers. *Behvarz* trainers have university degrees in family health, disease management, environmental health, midwifery, and nursing. Training courses are held twice a year for 7–15 *behvarzs*. Students receive free training and financial support (free accommodation, meals, transport) throughout the 2-year period of their training. In return, they are formally obliged to remain in and serve at the village for a minimum of 4 years after the completion of their study.

An important policy change has been the inclusion of *behvarz* training at the university level. The rationales for this change were the following:

- Provision of *behvarz* training at the university level will encourage a larger number of rural high school graduates to choose *behvarz* as their future job.
- A better-educated *behvarz* is more accepted by the community and can provide higher-quality health care to rural families.

The course is still 2 years long and leads to an undergraduate degree. Course topics are constantly under review. In 2006, several new topics—including health education, oral health, elderly health, research methods and problem solving, introduction to statistics, intersectoral collaboration, and natural disasters—were added to the training material. Other new topics include the health system and rural communities, social determinants of health and well-being, communication skills, human rights, and cultural beliefs. These new topics demonstrate a policy shift toward a more comprehensive notion of PHC in Iran.

How Does Iran Supervise Its *behvarzs*?

Regular supervisory visits to Health Houses are planned and performed by staff from rural primary health centers. In addition, provincial and national teams evaluate program effectiveness and quality of care. A number of checklists which are designed by provincial and national health deputies are used to check

- Data recording,
- The *behvarz's* knowledge,
- Drug supplies and equipment, and
- Work-related problems and suggestions identified by the *behvarzs* themselves.

A recent approach to CHW collaboration in Iran is the *behvarz* council, established in 2006 with the aim of engaging *behvarzs* in problem identification, problem solving, knowledge transfer, and policymaking. *Behvarz* councils have been established at different levels of the health system, from the local health center to the district, provincial, and national levels. *Behvarz* council meetings are held on a regular basis to discuss a broad range of issues concerning the *behvarzs'* work, such as recent policies, *behvarzs'* viewpoints about in-service trainings, work-related problems, and recommendations to overcome problems. Meeting minutes and the final report are submitted to the higher-level council for further follow-up. *Behvarzs'* representatives are responsible for transferring ideas and solutions to other team members and for following up on issues raised in the meeting.

How Is the Program Financed?

Because the CHW program is an integral component of Iran's PHC system, financing of these workers is stipulated by national health planning regulations.[5]

What Are the Program's Demonstrated Impact and Continuing Challenges?

After almost 3 decades, the *behvarz* program in Iran has contributed to significant progress for many health indicators. In particular, the gap between rural and urban areas in terms of various morbidity and mortality indicators has narrowed considerably. IMR per 1,000 live births in 1976 was at 60.4 in urban Iran and 123.7 in rural Iran. Since the development of PHC and the *behvarz* program, the IMR per 1,000 live births in 2000 was at 27.7 in urban Iran and 30.2 in rural Iran, showing a distinct improvement.[9]

Studies have examined the job satisfaction of *behvarzs* and the contribution of *behvarzs* to rural health outcomes.[10-14] It has been suggested that the significant improvement in rural health outcomes is strongly related to the performance of community-friendly health workers, although these improvements are unlikely to have been achieved through PHC alone; the period also saw economic growth, a rise in literacy rate, and improvement in environmental services such as access to safe water and sanitation.[11] Common challenges cited by *behvarzs* included insufficient support systems; inadequate infrastructural support such as Health House facilities, physical space, and maintenance; lack of recognition by higher authorities; and the level of incentives.[5] Despite formal supervisory mechanisms being in place, as revealed in policy documents, poor-quality supervision was one of the barriers reported by *behvarzs*. In most cases, supervisory teams do not provide sufficient technical and emotional support and give too much attention to deficiencies.

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NEPAL'S FRONTLINE HEALTH WORKERS****

Summary

Background

The first Nepal Health Sector Program (NHSP) was implemented in 2004 to 2009. It worked to provide equitable access to free basic health services.

Implementation

Each health facility has, in additional to one professional health worker, one VHW, one MCH Worker (MCHW), and usually nine (but sometimes more) Female CHVs (FCHVs) to serve a catchment population of 5,000–10,000 people.

Roles/Responsibilities

Each of the three types of CHWs has a defined scope of work. The MCHWs are full-time employees who offer reproductive services for women. The VHWs are also full-time workers, and they offer family-oriented services such as immunizations and management of newborn infections. The FCHVs are part-time volunteers who provide basic services and health education.

Incentives

MCHWs and VHWs are formally employed and paid by the government for their services. Motivating factors for FCHVs include nonfinancial incentives like a clothing allowance and community recognition.

Supervision

VHWs and MCHWs supervise the FCHVs who work in their catchment areas. VHWs and MCHWs are responsible for resupplying the FCHVs and for providing support, advice, and feedback during monthly supervision visits.

Impact

Among low-income countries, Nepal has been a global leader in reducing its under-5 mortality rate, its MMR, and its fertility rate. In fact, it achieved the MDGs for child health and for maternal health in 2010. There is widespread agreement that CHWs in Nepal, particularly the FCHVs, have played an important role in achieving these important goals.

What Is the Historical Context of Nepal's Community Health Worker Program?

The FCHV Program began in 1988, but faced early difficulties such as a lack of well-trained volunteers, a lack of supplies, and an inability to provide locally desired services, not to mention the challenges of working in mountainous areas with a highly dispersed rural population often reachable only by foot.[1] In the 1990s, the National Vitamin A Program began to work with FCHVs to distribute vitamin A to all children 6–59 months of age.[2] The FCHVs' role was further

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solidified in 1991 with the development of the first National Health Policy under democratic rule. The policy restructured the health system to bring health services closer to the people through health posts and sub-posts, vertically integrated programs, and the development of a new cadre of frontline workers, the MCHWs.[3]

The first NHSP from 2004 to 2009 was developed to increase equality of access and to improve health outcomes. It also sought to coordinate external donors to improve aid effectiveness. In 2006, an Interim Constitution was developed that defined the rights of Nepalis to "free basic health services," among other rights.[4]

Following the success of the first NHSP, Nepal developed a second NHSP for 2010–2015, which set forth the following goals:[4]

- To increase access to and utilization of quality essential health care services
- To reduce cultural and economic barriers to accessing health care services and harmful cultural practices, in partnership with non-state actors
- To improve the health system to achieve universal coverage of essential health services

The second NHSP describes the need to scale up FCHV services and to increase the demand for formal health services such as institutional delivery. A broad range of goals are also described to improve overall health service functionality, such as improved financial management, increased timeliness of procurement, and increased governmental financing of health services.

What Are Nepal's Health Needs?

Nepal is a country with immense health needs and substantial barriers to service delivery. It is a very poor country and most rural inhabitants live in mountainous areas. Service delivery within Nepal is complex given the country's geography. For example, 40% of individuals in the Mountain Region have to travel 1–4 hours to reach their closest health facility.

Nonetheless, substantial progress has been made in health outcomes over the past 20 years, such as an under-5 mortality rate of 48 per 1,000 live births in 2011 compared to 135 in 1990, but challenges remain. For example, nearly half (41%) of all children younger than 5 years of age are stunted from chronic malnutrition. Although health outcomes and service usage have become more equitable across castes, ethnic groups, and wealth quintiles, major disparities still remain. For example, women in the highest income quintile are 12 times more likely to have a trained health worker attend their delivery than women in the poorest quintile.[4]

TB is an additional challenge in Nepal: approximately 45% of the population has latent TB and 40,000 people each year develop active disease.[4] There is also a chronic shortage of health workers in Nepal.[5]

As mentioned previously, the National Health Policy of 1991 restructured the health system to bring health services closer to the people by constructing health posts and sub-posts and introducing a new cadre of workers, the MCHWs.[6] An effort was also made to integrate vertical programs (e.g., immunization and FP) at the district level. The health system in Nepal continues to be centralized and confronts many challenges regarding human resources, including low worker retention, low productivity and morale, and high turnover.[5]

What Type of Program Has Been Implemented?

VHWs, MCHWs, and FCHVs are all based out of local health facilities that serve catchment populations of 5,000–10,000 people. Each health facility has one professional health worker, one VHW, one MCHW, and usually nine (but sometimes more than nine) FCHVs.[7] These cadres

work closely together, supporting one another's scope of work. For example, FCHVs mobilize the communities for immunization by VHWs while FCHVs distribute vitamin A with the logistical support of the other cadres.[7]

FCHVs are frontline, part-time service providers who work an average of 8 hours each week.[8] They receive some financial compensation for certain functions, but they are predominantly volunteers. There is, however, currently discussion regarding provision of cash incentives and some FCHVs are asking for salaries (Sabina Pradham, personal communication, 2012). MCHWs are full-time salaried government employees (R Shesthra, personal communication).

FCHVs primarily promote healthy behavior through motivation and health education,[4] but they also mobilize communities to participate in immunization campaigns, detect and treat common childhood illnesses, provide medications for DOT for TB, distribute ORS packets and zinc for treatment of childhood diarrhea, and treat children with symptoms of pneumonia with cotrimoxazole tablets.[1,2,4,9]

Furthermore, FCHVs are now involved in reproductive and maternal health care through distribution of FP supplies and the dispensation of misoprostol, a tablet taken immediately after childbirth to reduce the risk of postpartum hemorrhage. FCHVs also provide community education and counseling to facilitate healthy practices and generate demand for maternal, neonatal, and child health services.[6] FCHVs are currently being trained to place an antiseptic on the umbilical cord immediately after birth as well as to resuscitate newborns who have birth asphyxia.[4]

MCHWs are full-time workers whose services include FP, treatment of patients at outreach clinics, clinical case management of childhood illnesses, health education/promotion, and participation in immunization and vitamin A campaigns. They also facilitate referrals and are responsible for the supervision of FCHVs.[6]

VHWs are also full-time workers whose services are similar to those offered by MCHWs.[7] These include provision of immunizations, management of newborn infections, and supervision of FCHVs.[6]

What About the Community's Role?

Women's groups and local Village Development Committees (VDCs) are highly involved in the selection and oversight of FCHVs. Women's groups are also expected to discuss FP and to provide information to other women who are not in the groups. There have been challenges with some women's groups that did not function well, though, so guidelines were developed on how to strengthen women's groups. Following the development of these guidelines, a pilot program was implemented that improved the functioning of women's groups and provided increased support to FCHVs. These groups also became more aware of their authority to remove FCHVs. New guidelines have now been finalized and are being implemented in the western part of the country; they will later be scaled up nationally (S Pradhan, personal communication, 2012).

There should be a VDC everywhere FCHVs work. There are at least nine FCHVs associated with every VDC, but at times there may be as many as 50, depending on the population for which the VDC is responsible (S Pradhan, personal communication, 2012). There are also local FCHV associations, but none of these are fully representative of all FCHVs or national in scale.[10] There are local health committees in Nepal that assist with FCHV selection and oversight, but they are not involved with MCHW selection.

How Does Nepal Select, Train, and Retain Its Community Health Workers?

The selection criteria for FCHVs are that they should be women aged 25–45 who are married with children, and preference is given to those who are literate and who are from or residing in the local community. In practice, FCHVs are often illiterate.[11] FCHVs undergo an initial 18 days of training with 5 days of refresher training every 5 years.[4]

MCHWs are women from or residing in the local community who have a 10th-grade education. VHWs can be male or female, but they must be literate, and they are recruited locally. MCHWs and VHWs both have an initial training of about 3 months.[7]
Compensation of FCHVs has been a very controversial component of the program because "there is a balance to be struck between compensating the women for the real financial and time costs that they incur in carrying out their duties, without losing the spirit of voluntary service to the community."[12] Initially, FCHVs were paid a monthly stipend, but this was not sustainable and the stipend was discontinued.[10]

FCHVs receive an incentive for timely retirement at the age of 60 (although many do not want to retire). They also receive free services from Nepal's Ex-Servicemen Contributory Health Scheme, which provides medical insurance for all ex-service personnel eligible for pension, as well as the serviceperson's spouse and dependent children.[12] In addition, FCHVs are given an identification card and an annual day of honor in recognition of their service to the community.[10] They are currently requesting access to income-generation schemes, free schooling for their children, and health insurance (S Pradhan, personal communication, 2012). A 2010 study by Glenton and colleagues explored policymakers', program managers', and FCHVs' perceptions of motivation and incentives. The study highlighted the need for "context-specific incentives" for FCHVs.[10] Despite being staffed by volunteers, the program has very low attrition rates, with less than 5% turnover each year.

A fund was developed by the Nepalese government in 2008–2009 that provided 50,000 Nepalese rupees (approximately US$600) for each of the 3,914 VDCs. The government is contributing an additional 10,000 rupees (approximately $120) to each of these funds every year. The interest from this endowment fund can be accessed by the FCHVs to support income-generation activities. Early evidence shows the program to be successful, although there are challenges with accounting at the village level (S Pradhan, personal communication, 2012).[4] MCHWs and VHWs are formally employed and paid by the government for their services.[13]

How Does Nepal Supervise Its Female Community Health Volunteers?

VHWs and MCHWs supervise the FCHVs that work in their catchment areas. They are responsible for providing the FCHVs with the supplies they need and for providing support, advice, and feedback during monthly supervision visits. Additionally, all FCHVs meet with their respective VDCs every 4 months to review progress.[4] Although the FCHVs receive commodities from their supervisors, there are many challenges with the supply system and the demand for commodities often exceeds the supply.[7]

Data, particularly program evaluations and research in the field, are highly influential in programmatic policy development and implementation. There are, however, many challenges with the current HMIS. The current registers are complicated and have 30–40 indicators, representing a burden for FCHVs. This burden, coupled with the low levels of literacy among FCHVs, have led to concerns regarding the quality of the data collected (S Pradhan, personal communication, 2012).

How Is the Community Health Worker Program Financed?

VHWs and MCHWs are salaried staff of the MOH, so they receive their salary and benefits according to government rules and regulations. The costs of the FCHV program (basic training, refresher training, training materials, in-kind incentives, and so forth) are financed by donor agencies. Generally, the US Agency for International Development pays for the cost of training through its implementing partners (John Snow, Save the Children, Plan International, and others) and the United Nations Children's Fund (UNICEF) provides materials for training and patient education (R Shrestha, personal communication, 2013).

What Are the Program's Demonstrated Impact and Continuing Challenges?

Nepal has made important progress in the past 20 years in improving health outcomes, particularly those related to the MDGs. The MMR has decreased from 539 deaths per 100,000 live births in 1991 to 229 in 2009, and the total fertility rate has decreased from 5.3 in 1991 to 2.9 in 2009. The under-5 mortality rate has had a similarly dramatic reduction, from 158 per 1,000 live births in 1991 to 50 in 2009.[4] A number of factors have contributed to the improved health outcomes, but there is widespread agreement that CHWs have made important contributions to these achievements.

Challenges faced by the FCHV program include growing expectations that FCHVs will provide more services without increased support or incentives; this may compromise retention and recruitment of new FCHVs.[3] Further, there are concerns that FCHV services are hampered by political affiliations and an aging workforce, problems with the supply chain, and a lack of human resources.[3,14]

Another challenge is the current process of gradually phasing out the VHW cadre, who are traditionally responsible for first-line supervision of FCHVs. The VHWs will be replaced with better-qualified Auxiliary Health Workers; however, the latter may be less likely to be local to the area they serve.[4]

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PAKISTAN'S LADY HEALTH WORKER PROGRAM††††

Summary

Background

The Lady Health Worker Program (LHWP) was established in 1994, with the goal of providing primary care services to underserved populations in rural and urban areas. In 2003, the national strategic plan set two goals: (1) improving quality of services and (2) expanding coverage of the LHWP through the deployment of 100,000 Lady Health Workers (LHWs) by 2005.

Implementation

LHWs are deployed throughout all five provinces‡‡‡‡ of Pakistan. These workers are attached to a local health facility, but they are primarily community based, working from their homes.

Training

LHWs are trained in classrooms for 3 months and then have 1 year of on-the-job training. This should include 1 week of training per month for a period of 12 months as well as 15 days of refresher training each year, although there is substantial variation in training patterns across provinces.

Roles/Responsibilities

The scope of services provided by LHWs has grown from an initial focus on MCH to include participation in large health campaigns, newborn care, community management of TB, and health education on HIV/AIDS. LHWs visit an average of 27 households a week, providing advice and conducting consultations with an average of 22 individuals each week.

Incentives

LHWs receive a salary of about $343 per year. They are not supposed to engage in any other paid activity, although some do. The LHW stipend is often the only source of family income and is a critical family support.

Supervision

Supervision is highly organized and tiered in the Pakistani LHWP. LHWs are each attached to a public health clinic and are supervised on a monthly basis by an LHW Supervisor (LHS). LHWs should have community-based supervision at least once a month in which LHSs meet with clients and with the LHWs, review the LHWs' work, and make a work plan for the next month.

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†††† This case study was written by Rose Zulliger, a student in the Johns Hopkins Bloomberg School of Public Health. Zulfiqar Khan, Coordinator (Health System Strengthening), WHO, Pakistan, provided helpful comments on an earlier draft.
‡‡‡‡ Officially, Pakistan has four provinces, one territory, and one capital province. For the purpose of our discussion here, we will refer to all as provinces.

Impact

Pakistan is lagging behind in its efforts to achieve the MDGs for MCH. Although the LHW Program has many positive aspects, the number of LHWs is still not sufficient to provide adequate coverage of services nationally. Thus, expansion of the program and continued efforts at program strengthening will be required to achieve a stronger impact.

What Is the Historical Context of Pakistan's Community Health Worker Program?

Pakistan's support for PHC dates back to the country's signing of the 1978 Alma Ata Declaration.[1] In 1993, Pakistan established the Prime Minister's Program for Family Planning and Primary Health Care, which employed CHWs to provide PHC services in their communities. The program subsequently employed only female CHWs, and the LHWP was introduced in 1994.[2] The goal of the program was to reach rural areas and urban slums with a set of essential PHC services, including promotive, preventive, and curative services; to improve patient-provider interactions; to facilitate timely access to services; to increase contraceptive uptake; and, ultimately, to reduce poverty.[1,3,4] In 2000, the program was renamed the National Program for Family Planning and Primary Health Care, but it is still commonly called the Lady Health Worker Program (LHWP).[5]

The 2003–2011 Strategic Plan set two goals: (1) improving quality of services and (2) expanding coverage of the LHWP through the deployment of 100,000 LHWs by 2005. Key determinants of provision of high-quality service by LHWs include the following: selection based on merit; provision of professional knowledge and skills; supply with necessary medicines and other supplies; and adequate remuneration, performance management, and supervision. A management information system was also essential to assess and encourage quality performance and to facilitate informed programmatic decision-making.[6] The 2001–2011 National Health Policy described "investment in the health sector as a cornerstone of the government's poverty reduction plan."[3]

The LHWP has evolved over time. The scope of services provided by LHWs has grown from an initial focus on MCH to now include participation in large health campaigns, newborn care, community management of TB, and health education on HIV/AIDS. LHWP activities have also been advertised in a series of mass media campaigns that promote community uptake of and respect for LHW services.[7]

What Are Pakistan's Health Needs?

MCH indicators in Pakistan have lagged behind the same indicators in other South Asian countries. In 1991, the under-5 mortality rate was 117 deaths per 1,000 live births and the MMR was 533 maternal deaths per 100,000 live births.[8] Since then, Pakistan has made insufficient progress toward meeting MDG 4 (reducing under-5 mortality). The average annual rate of reduction from 1990 to 2010 was only 1.8% and there were 87 under-5 deaths per 1,000 live births in 2010. Pakistan is, however, making progress in meeting MDG 5 (for reducing maternal mortality) and the MMR has had an annual reduction of 3% from 1990 to 2010. In 2010, the MMR was 260 deaths per 100,000 live births.[9] Part of the high maternal mortality earlier was attributable to the high total fertility rate (5.4 children in 1991) and low access to health services; only 15% of women reported at least one ANC visit during their most recent pregnancy.[8] (The total fertility rate measures the average number of children a woman would have if she lived through her entire reproductive life at the age-specific rates of fertility in her country.) Health care access in Pakistan is further restricted by social and cultural barriers such as women's limited mobility outside of the home without an escort.[10]

What Is the Existing Health Infrastructure?

There are three tiers of governance in the Pakistani public health system: federal, provincial, and district. The federal government historically was responsible for broader policies, planning, and budgeting as well as the HMIS. However, in 2011, the FMOH was dissolved and responsibility for health services was delegated to provinces, with the exception of a national Ministry of Regulation.[11]

Provinces are responsible for LHW allotment, training, and performance. The district level is responsible for allocation and supervision of LHWs.[4,6] All tiers of government are involved in the LHWP and LHWs are integral to service delivery of most community health initiatives in the country.[8]

There has been tremendous growth in the number of health care providers in Pakistan. For example, the number of physicians increased from 70,692 in 1995 to 127,859 in 2007, according to data from the Pakistan Medical and Dental Council and Pakistan Nursing Council.[3] There is also a private health care system in Pakistan that provides services for wealthier inhabitants.[5]

What Type of Program Has Been Implemented?

LHWs are deployed across the nation in all five provinces of Pakistan.[12] These workers are attached to a local health facility, but they are primarily community based, working from their homes.[3] The homes of LHWs are called Health Houses; emergency treatment and care are provided therein.[1] An LHW is responsible for approximately 1,000 people, with priority given to couples of reproductive age and children younger than 5 years.

An external evaluation of the LHWP was carried out in 2008 and reported the following in 2009:

- LHWs visit an average of 27 households a week.
- LHWs provide advice and conduct consultations with an average of 22 individuals each week.
- 85% of households reported that they were visited by an LHW in the previous 3 months.
- 80% of LHWs reported that they worked 6–7 days a week.
- Most LHWs worked an average of 5 hours a day.[2]

The LHWP offers professional advancement opportunities for LHWs. LHWs can receive additional training to serve as an LHS, which is an incentive for good performance.[5]

LHWs have a broad scope of work that includes 22 different tasks.[1] These include promotion of use of contraceptives, provision of FP services (distribution of oral contraceptives and condoms and provision of injectable contraceptives), ANC (alongside traditional and formal medical birth attendants), treatment of illnesses (such as diarrhea, malaria, acute respiratory tract infection, and intestinal worms), and referral of community members with more serious illnesses.[3,4,8,10] In addition, LHWs are expected to provide DOT for TB patients, carry out surveillance for cases of polio, and keep comprehensive records for all of their patients.[1]

The most frequent LHW services, as reported by the 2008 survey of clients, were hygiene promotion, vaccination promotion, and FP services.[2] Seventeen percent of households reported that they consulted with an LHW for curative services.[2] LHWs also frequently support other health campaigns such as polio campaigns.[8]

A 2000 evaluation estimated that 150,000 LHWs were needed to obtain optimal coverage in the country.[3] This led to a strategic plan in 2003 to have 100,000 functioning LHWs by 2005. This

goal was still not achieved by 2008. In 2003, there were a total of 75,038 LHWs working or in training and the number grew to 83,280 in 2005 and 90,074 in 2008.[6]

The expansion of the program from 2000 to 2008 increased LHW coverage in more rural and poorer areas, but the program still does not reach the most disadvantaged areas. Coverage rates have, however, improved.[2] In 2006, the LHWP covered 60% to 70% of Pakistanis in rural areas.[4] There are now plans to double the number of LHWs.[8]

What About the Local Community's Role?

There is a community member on each LHW selection committee and on each LHS selection committee. The community is also involved in programmatic decision-making, planning, and M&E. LHWs are expected to link the community to formal health services and to be members of the community where they work. LHWs also provide a range of community development services and participate in community meetings.[5] LHWs are expected to establish a village health committee, which has two parts—a women's health committee and a men's health committee.

How Does Pakistan Select, Train, and Retain Lady Health Workers?

LHWs are women who have a minimum of 8 years of education. This requirement has been a challenge in some areas where there are no or few women with this level of education.[8] They also must be between 18 and 50 years old; reside in, be accepted by, and be recommended by the communities they serve; and preferably be married with children. LHWs must also be willing to work from their homes. Preference is given to women who have experience in community development.[6] Of LHWs included in a 2008 external evaluation of the program, 66% were younger than 35 years of age, 97% resided in the community where they worked, 66% were currently married, and the average education level was 9.9 years of schooling.[2]

LHWs are selected using a clearly delineated process. LHW posts are advertised; applicants are then interviewed and selected based on the above criteria by a selection committee. The committee is expected to comprise the following members: a Medical-Officer-In-Charge who is the chairman, a female Medical Officer, a Lady Health Visitor (female medical technician), a Dispenser (male health technician), and a community member. They also must be recommended by the councilor, who is a local elected official, and provide a written affidavit that they will perform their duties for at least 1 year after the completion of their training.[12] The selected LHW is then formally appointed by the District Health Officer.[6] LHWs are then initially employed for 1 year, although many continue the work long after the first year.[5]

LHWs receive 3 months of classroom training in PHC and then have 1 year of on-the-job training. This should include 1 week of training per month for a period of 12 months, followed by 15 days of refresher training each year, although there is substantial variation in training patterns across provinces.[1,2,6] The Federal Project Implementation Unit is responsible for approval of all LHW training and, with the FMOH, develops the training curriculum, organizes and coordinates training, and trains master trainers; Provincial and District Project Implementation Units are responsible for the local trainings.[6]

The fourth external programmatic review reported in 2009 that 100% of the LHWs had attended the initial training and 96% had some kind of refresher training in 2008. Eighty percent of LHWs had attended training on child health in the previous year. Seventy-two percent had obtained training on counseling cards, 70% on optimal birth spacing intervals, and 62% on injectable contraceptives during 2008. Eighty-eight percent reported receiving training by male medical doctors and 67% reported receiving training by Lady Health Visitors. Eighty-two percent of LHWs had at least one female trainer.[2]

Recently, training has focused more on counseling skills and competency, although challenges persist. LHW knowledge increased between the third and fourth external programmatic evaluations, but according to the findings of the 2008 survey, there were very low levels of knowledge on certain subjects. For example, only 9% of LHWs stated the correct dosage of chloroquine for children despite having access to manuals and medicine boxes, and only 50% could determine the appropriate weight of a child from a standard-growth monitoring card.[2] Additionally, some LHWs felt they had insufficient communication skills, particularly for addressing difficult topics such as communication with men on FP, establishment of village health committees, and discussion of sexually transmitted infections. These LHWs felt they needed additional training through role plays as well as additional information, education, and communication materials.[7]

LHWs receive a salary of about $343 per year and are not supposed to engage in any other paid activity, although some do.[3] The LHW stipend is often the only source of family income and is a critical family support.[8] Salaries are paid monthly into the LHWs' personal bank accounts, but delays in LHW remuneration are common. Additionally, 9% of patients reported that they paid their LHW for services, which are supposed to be free.[2]

How Are Lady Health Workers Supervised?

Supervision is highly organized and tiered in the Pakistani LHWP. LHWs are each attached to a public health clinic and are supervised on a monthly basis by an LHS.[3] LHSs are then regularly supervised by the LHWP district coordinator and assistant coordinator. LHWs should have supervision take place in the community at least once a month, at which time LHSs meet with clients and with the LHWs, review the LHWs' work, and make a work plan for the next month.[2]

The evaluation of the LHWP found that 80% of LHWs had had a supervision meeting in the previous month. Ninety percent of supervision occurred in the village, and in 59% of the cases, the supervisor met with clients of the LHW. Ninety-one percent of LHWs also reported that they had had meetings in the health facility within the previous 30 days, and 98% reported that they had produced a work plan for the previous month. Supervisors frequently used checklists during the meetings and scored LHW performance, although often LHWs were not told their score.[2]

This same evaluation also assessed the characteristics and knowledge of the LHSs. LHSs are required to have passed 12th grade, but 66% had achieved a higher level by completely graduating or even obtaining some postgraduate education. The LHSs are, on average, 32.5 years old; 69% are currently married. LHSs receive 3 months of full-time basic training at the District Health Office, followed by 1 week per month of classes for the next 9 months. According to the evaluation, 100% of LHSs had attended the 3-month training and 79% had received at least some additional training. They generally had high levels of knowledge, although on a few subjects, their level of knowledge was quite low. LHSs were each responsible for 23 LHWs on average. Sixty percent had full-time access to a vehicle, although not all receive their petrol, oil, and lubricants allowance.[2]

LHW performance is monitored by provincial and district coordinators, and the LHWP also has its own monitoring system.[3] The Monitoring Information System is the monitoring system implemented by the LHWP using standardized monthly reports.[6] LHWs keep comprehensive health records on their community and track individual care and community health indicators.[1] This information is consolidated in monthly reports, and data are presented by managers and inspectors at regular meetings held at all levels to assess programmatic performance and to facilitate discussion of possible resolutions to identified barriers hindering successful program implementation.[6]

A 2006 rapid assessment of the monitoring system by the World Bank found that there were substantial issues with the system, including irregular and inappropriate quality checks, inaccuracies in the aggregation of LHW reports, and poor understanding and analysis of the data. The 2008 external review found that key indicators such as annual recruitment of LHWs were not collected, internal inconsistencies in the data persisted, and there was little demand for quality information from program managers. The review did find that progress had been made in monthly reporting.[6]

How Is the Lady Health Worker Program Financed?

The Pakistani government is the largest funder of the LHWP, but the program has been underfunded since its inception. The LHWP cost $155 million in its first 8 years (through 2003) and was largely supported by government funding, with only 11% provided by external donors. In 2004, $356.6 million was approved for extension of the program from 2003 to 2008. Overall, the program spent approximately $570 per LHW per year between 2003 and 2008.[3]

Approximately 70% of LHWP costs are for LHW stipends, drugs, and contraceptives; and additional 4% are for training.[6,13] LHW salary costs increased 31% between 2003 and 2008, leading to a reduction in other expenditures, especially for LHW kit supplies.[13] Other estimates indicate that the cost per LHW (including her salary, supplies, training, supervision, and administration) is approximately $745 per year (or 75 cents per person served per year).[3]

What Are the Program's Demonstrated Impact and Continuing Challenges?

The LHWP has undergone four external evaluations since its inception, most recently in 2008. The 2008 evaluation included a nationally representative survey of 554 LHWs. There was also a survey of 5,752 households with varying levels of exposure to LHWs (ranging from unexposed households to those that had extensive exposure to LHWs) and extensive qualitative interviews with programmatic supervisors and managers, medical staff, and community groups. The evaluation found that overall LHW performance, defined as the percentage of households who received services from LHWs, improved between 2000 and 2008. Coverage was similar in rural and urban areas. Higher LHW performance was associated with longer LHW experience, increased hours worked in the previous week, and LHW reports indicating that LHWs had a higher level of autonomy in the home, attendance at training, regular meetings with supervisors, and work in communities with Women's Health Committees, among other factors.[2] Ninety percent of community members surveyed indicated that there were health improvements associated with the LHWs' work.[6]

The 2008 evaluation assessed improvements in health indicators and found improvements in tetanus toxoid coverage, percentage of deliveries attended, percentage of children fully immunized, awareness in mothers of how to prepare ORS, and levels of exclusive breastfeeding. There were, however, some negative trends from 2000 to 2008, such as decreases in maternal knowledge of how to prevent diarrhea and a persistently low prevalence (less than 10%) of certain important health-related behaviors such as purifying water prior to drinking it.[2]

The LHWP is highly accepted, and the LHWs have proven adept at taking on additional tasks.[1] The population served by LHWs had substantially better health than the population without LHWs, including an 11% increased likelihood of using modern FP and a 15% increase in immunization coverage among children younger than 3 years of age. The effect of LHW services was generally greatest in poorer households. The program has, however, had little impact on skilled attendance at delivery, growth monitoring, and incidence of diarrhea and respiratory infections in children.[2]

The effect of LHW services has also been demonstrated in smaller, intervention studies. In 2008, Bhutta and colleagues assessed the feasibility of a package of perinatal health care

interventions delivered by LHWs and TBAs.[14] The researchers found that the villages where LHWs and TBAs were linked and received a brief training on newborn care and service delivery had significant reductions in the number of stillbirths and in the neonatal mortality rate. A different study of the impact of the LHWP on contraceptive use found that women in LHW service areas were 50% more likely to use modern reversible contraceptives than those who did not receive LHW services.[10]

Some of the challenges facing the Pakistan LHWP are underfunding and insufficient coverage, with up to 40% of eligible families still not being served by an LHW.[3] Other challenges include low-quality LHW training, poor supervision, inadequate supply systems (especially for drugs and contraceptives), and lack of timely payment of salary. Broader health system challenges include shortages and misdistribution of human resources for health (HRH), weak management, absence of quality-control systems, and a lack of coordination across HRH stakeholders.[11]

There has also been dissatisfaction from LHWs, leading to increased organization of LHWs and demands for additional formalization and benefits. LHWs also have become resistant to participating in intermittent campaigns—such as the polio eradication campaigns—because they had become vulnerable to violence; 11 LHWs were abducted and beaten when they were participating in a 2007 vaccination campaign. LHW boycotts of a 2010 campaign led to a subsequent Supreme Court order for a higher salary (7,000 Pakistani rupees each month).[8] There are concerns, though, that the expansion in LHWs' responsibilities has increased their job-related stress.[15]

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RWANDA'S COMMUNITY HEALTH WORKER PROGRAM[§§§§]

Summary

Background

The Rwanda CHW Program was established in 1995, aiming at increasing uptake of essential maternal and child clinical services through education of pregnant women, promotion of healthy behaviors, and follow-up and linkages to health services.[1] An estimated 45,000 CHWs operating at the village level provide the first line of health service delivery. There are three CHWs in each village: a male-female CHW pair (called *binômes*) providing basic care and integrated community case management (iCCM) of childhood illness, and a CHW in charge of maternal health, called an ASM (*Agent de Sante Maternelle*).[1]

Implementation

When the MOH endorsed the program in 1995, there were approximately 12,000 CHWs. By 2005, the program had grown to over 45,000 CHWs. From 2005, after the decentralization policy had been implemented nationally, the MOH increased efforts to improve MCH services, and between 2008 and 2011, Rwanda introduced iCCM of childhood illness (for childhood pneumonia, diarrhea, and malaria). In 2010, the Government of Rwanda introduced FP as a component of the national community health policy.

Training

Although it is acknowledged in the Community Health Development Strategy that the CHWs in Rwanda should be appropriately trained,[1] documentation detailing the duration, format, and content of overall training is difficult to find. However, in-depth information is available about CHW training for specific programs such as community-based provision of FP and community-based IMCI.

[§§§§] Lauren Crigler is the author of this case study.

Roles/Responsibilities

Three CHWs, with clearly defined roles and responsibilities, operate in each village of approximately 100–150 households.[1] The ASM identifies pregnant women, makes regular follow-ups during and after pregnancy, and ensures deliveries in health facilities where skilled health workers are available. *Binômes* provide iCCM (assessment, classification, and treatment or referral of diarrhea, pneumonia, malaria, and malnutrition in children younger than 5 years of age), community-based provision of contraceptives, DOT for TB, prevention of NCDs, and preventive and behavior change activities.

Incentives

Although CHWs in Rwanda are volunteers, in 2009, the MOH introduced community performance-based financing (CPBF) as a way to motivate CHWs.[2] CHW Cooperatives are organized groups of CHWs that receive and share funds from the MOH based on the achievement of specific targets established by the MOH. By linking incentives to performance, the MOH hoped to improve quality and utilization of health services.[2]

Supervision

Cell coordinators, sometimes assisted by an assistant cell coordinator, visit CHWs to monitor activities, monitor supplies and drugs, and compile all reports from CHWs and submit the information to the In-Charge of Community Health on a quarterly basis. As part of this supervision, cell coordinators also make house visits to see how the CHWs are performing their activities there and verify reports that have been sent by CHWs using mobile phone text messaging (SMS) to the health center.[1] In addition to this line of supervision, the CHW cooperatives also perform an evaluative function and CHWs are incentivized based on the performance of the cooperative.

Impact

Rwanda is close to being on track to achieving its MDGs for MCH by 2015. Its CHW program has played an important role in expanding coverage of basic services, particularly community-based FP services and treatment of childhood malaria and pneumonia.

What Is the Historical Context of Rwanda's Community Health Worker Program?

Rwanda started its community health program in 1995 after the genocide. There are four main objectives of the program: (1) strengthen the capacity of decentralized structures to allow community health service delivery; (2) strengthen the participation of community members in community health activities; (3) strengthen CHW motivation through CPBF to improve health service delivery; and (4) strengthen coordination of community health services at the central, district, health center, and community levels.[1]

When the MOH endorsed the program in 1995, there were approximately 12,000 CHWs. By 2005, the program had grown to over 45,000 CHWs. From 2005, after the decentralization policy had been implemented nationally, the MOH increased efforts to train and provide supplies to CHWs to deliver MCH services. The program has since grown to include an integrated service package that includes malnutrition screening, treatment of TB patients with DOT, prevention of NCDs, community-based provision of contraceptives, and promotion of healthy behaviors and practices including hygiene, sanitation, and family gardens.[1]

What Are Rwanda's Health Needs?

Overall, the Government of Rwanda has demonstrated commitment to the MDGs through its health sector programs and various policies. Notable improvements have been achieved in maternal health: 69% of deliveries are now assisted by a skilled provider, up from 39% in 2005; maternal mortality has declined from one of the highest in the world (1,071 deaths per 100,000

live births) in 2000 to 487 in 2010; and contraceptive use has increased from 10% in 2000 to 45% in 2010.[3] In addition, there has been a vast improvement in the nutritional status of children: between 2005 and 2010, the percentage of children who were underweight declined from 18% to 11% and the percentage of children who were stunted declined from 51% to 44%.[3] Infectious diseases—mainly malaria, ARIs, and intestinal parasites—remain the primary cause of outpatient morbidity.[3]

Although Rwanda has achieved great success in its health sector, it still faces major challenges that include reaching the most vulnerable populations, supporting adequately its CHWs, improving community participation, strengthening programs for NCD prevention, and expanding the financial contribution of the private sector to ensure financial self-reliance of health services.[4]

What Is the Existing Health Infrastructure?

Health sector decentralization laws were implemented in 2005–2006. This led to health personnel and financial resources being decentralized to the district level and the MOH changing its role to a technical supervisor while district governments controlled health program implementation.[3] Significant authority and resources have been transferred from the district level to the health centers and posts within the district.[3] Health services are provided in communities, at health posts (HPs), health centers (HCs), district hospitals (DHs), and referral hospitals. Currently in Rwanda there are four referral hospitals, 42 district hospitals in 30 districts, and 438 health centers.[3] At the lowest level, those in charge of community health activities in the catchment areas of health centers supervise CHWs. The CHWs receive financial compensation through performance-based financing (PBF), determined by the number of essential health services provided. Thirty percent of the total PBF funds is shared among individual CHW members while 70% is deposited in the collective funds of CHW cooperatives. Within each district there are Health Center Committees that provide oversight of community health work, which is directly supervised by various units in each health center. These units include outreach, supervision, and financial control.[1]

What Type of Program Has Been Implemented?

In each village of approximately 100–150 households, there is one maternal health CHW (ASM) and two multidisciplinary CHWs (*binômes*, or the man and woman working as a pair). CHWs are full-time, voluntary workers who play a very key role in extending services to Rwanda's village communities. The CHWs are supervised most directly by the cell coordinator and the in-charge of community services at the catchment-area health center. CHWs now use RapidSMS to submit reports and communicate alerts to the district level and to hospitals or health centers regarding any maternal or infant deaths, referrals, newly identified pregnant women, and newborns in the community.

As decentralization occurred beginning in 2005 and MCH is a top priority for the MOH, a huge focus was placed on basic MCH needs. ASMs have been trained to identify pregnant women, make regular follow-ups during and after pregnancy, and encourage deliveries in health facilities where skilled health workers are available. In addition to following up pregnant women and their newborns, the ASM also screens children for malnutrition, provides contraceptives (pills, injectables, cycle beads, and condoms), promotes prevention of NCDs through healthier lifestyles, and carries out household visits.[1] Between 2008 and 2011, Rwanda introduced iCCM of childhood illness (for childhood pneumonia, diarrhea, and malaria) nationwide. *Binômes* were trained and equipped to provide iCCM (including treatment with antibiotics, zinc, and antimalarials), to detect cases of acute illness in need of referral, and to submit monthly reports. In 2010, the Government of Rwanda introduced FP as a component of the national community health policy, and CHWs were trained not only to counsel but also to

provide contraceptive methods including pills, injectables, cycle beads (for use with natural FP), and condoms. This program was first piloted in three districts and later scaled nationwide.

What About the Community's Role?

Community engagement is a key objective of Rwanda's community health strategy. There are many ways in which communities are involved in improving their health and their access to services; CHWs are but one strategy. Insofar as the CHWs are concerned, however, the community's only role is to recruit CHWs from their villages. Involving the community to a greater degree is a challenge that is documented in Rwanda's new health sector policy documents.[5]

How Does Rwanda Select, Train, and Retain Its Community Health Workers?

CHWs come from the villages in which they live. They must be able to read and write and be between the ages of 20 and 50 years. They also must be willing to volunteer and be considered by their peers to be honest, reliable, and trustworthy.[1] They are elected by village members[1] in a process that involves gathering the volunteers and villagers on the last Saturday of the month (*Umuganda*, or community service day) and voting "with their feet" in a literal sense. The process has been described (in conversation) as one that involves community members lining up in front of the person they support. The individual with the most support is recruited.

Within each of the villages (*Umdugudu*), *Binômes* are trained in community-based IMCI by preparing them to be first responders to a number of common childhood illnesses, including pneumonia, diarrhea, and malaria. The CHWs are also trained on when and how to refer severe cases to the facility. IMCI refresher training is provided through a supportive supervision model, where the supervisor conducts training to strengthen the CHW's knowledge and skills in providing quality case management services in their communities.[6]

Another example of program-specific training is the ten-day training for community-based provision of FP services.[7] A total of 3,061 CHWs in three districts have received this training, which uses participatory methods, having CHWs brainstorm ideas and practice exercises such as role plays and performing rapid diagnosis tests for malaria.[7]

In 2001, prior to the introduction of performance-based incentives and CHW cooperatives, health workers in Rwanda had very low, fixed salaries that were distributed regardless of performance. This led to a demotivated and low-performing workforce.[4] In 2009, the MOH introduced CPBF as a way to motivate CHWs.[2] CHW Cooperatives are organized groups of CHWs that receive and share funds from the MOH based on the achievement of specific targets established by the MOH. Currently, 449 CHW cooperatives exist in Rwanda, with approximately half of these being formally registered and legally recognized.[2] Each health center in Rwanda supervises the CHWs that make up one CHW cooperative. By linking incentives to performance, the MOH hoped to improve quality and utilization of health services.[2] In 2009–2010, the Government of Rwanda piloted the CPBF, and saw a dramatic improvement in maternal health indicators. This demand-side model, which uses CHWs to ensure that women seek appropriate maternal care, led to marked improvements in reported indicators such as the number of deliveries attended by a trained provider and the number of ANC visits.[2]

How Is the Program Financed?

Rwanda's health system financing originates from two main sources. On the supply side, the central treasury transfers funds to districts and health facilities. On the demand side, the system provides health insurance payments for documented services.[3] In recent years, much of the total health expenditures of the Government of Rwanda have come from external sources

such as the Global Fund to Fight AIDS, Tuberculosis and Malaria; PEPFAR (the President's Emergency Plan for AIDS Relief); and the President's Malaria Initiative. In 2011, 47% of the government's total health expenditures ($407 million) was supplied by donors.[3]

However, the Government of Rwanda has increased its own spending on essential health services since 2005; spending is projected to reach 15% of the government's total budget by 2015.[3] Community-based health insurance schemes have allowed for 92% of the population to be insured. This has greatly increased access to health care service and drugs.[3]

What Are the Program's Demonstrated Impact and Continuing Challenges?

The most notable achievements in the health sector include an increase in facility-based deliveries (from 45% to 69%), the introduction of maternal and child death audits at all health facilities, an increase in vaccination coverage (from 80% to 90% for coverage of the complete vaccination scheme), CHW follow-up of all pregnant women, and provision of community-based FP services.[3] CHWs are currently testing all suspected cases of malaria with a rapid diagnostic test and providing treatment when indicated, making it possible now to treat 91% of children younger than 5 years of age who have malaria within 24 hours.[3]

The challenges faced by the Rwanda CHW program are similar to challenges faced by CHW programs in other countries. These include (1) the financial and administrative difficulties in supporting and continuing to build the capacity of CHWs as they increase in number and as the scope of their work expands; (2) the challenge of supervising and effectively equipping CHWs to perform their duties; and (3) low community participation in the health sector and the strong influence of traditional beliefs and traditional medicines. As the number of CHWs has risen rapidly in Rwanda and as their tasks have increased, the Government of Rwanda faces a constant battle to increase the capacity of CHWs and to provide them with the equipment and supplies they need. Refresher trainings are too few and provision of essential equipment is delayed due to insufficient financial resources.[4] Field supervision of CHWs and the transfer of skills and knowledge to the communities to foster ownership and enhance sustainability is a continuing challenge.[3] Each CHW is supposed to be supervised by either the In-Charge of Community Health or the cell coordinator on monthly basis. However, recent findings show that supervisory visits occur only quarterly, if that.[7]

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ZAMBIA'S COMMUNITY HEALTH ASSISTANT PROGRAM*****

Summary

Background

The community HA program is an emerging national initiative to bring PHC as close to the home as possible. The first community HAs were trained during 2011–12 and deployed in late 2012. The Government of the Republic of Zambia (GRZ) aims to scale the program nationally to over 5,000 community HAs using a phased approach.[1]

Implementation

Community HAs are expected to split their time between the health post (20%) and community (80%) for household visits, community education, and health promotion activities.

Training

Community HAs attend one year of formalized pre-service training on prevention, health promotion, and curative care. The 12 training modules include theoretical and practical training components. The tutors at the community HA training school consist of well-experienced health professionals.

Roles/Responsibilities

The main responsibilities of the community HAs are health promotion and disease prevention. Community HAs are also trained in basic curative services that they can provide at the health post and in the community. In addition, they are responsible for identifying patients who are in need of referral to the next level in the health system, usually a health center.

Incentives

Community HAs receive a salary of 2,600 ZMK per month (US$465) and other civil servant benefits. They are also provided with a bicycle, mobile phone, shoes, an umbrella, a backpack, and a uniform—all of which are GRZ property.

Supervision

About half of community HAs are supervised by the in-charge at the nearest rural health center. The remainder of the community HAs work from a health post where one or more additional highly trained staff members are posted. In this case, one of these staff members is designated as the community HA supervisor. Supervision is designed to be conducted at the

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health post and in the community level on a monthly basis using standardized supervisory checklists.

Impact

Since this is a new program that began only in 2011, there is no evidence yet of impact. An initial independent assessment will be carried out in late 2014.

What is the Historical Context of Zambia's Community Health Assistant Program?

Zambia is a landlocked country in Southern Africa with a predominantly rurally based population of 14 million.[2] The majority (81%) of Zambia's facilities are within the public sector. Zambia is faced with a severe HRH crisis due to an overall shortage in the number of health care workers (0.93 clinical staff per 1,000 people), an urban/rural misdistribution of the workforce, and an imbalanced skills mix.[3,4] Beginning with the 2006–2010 Zambia National Health Strategic Plan, the HRH crisis was officially recognized as an MOH priority.[5] Zambia estimated it has less than half as many health care workers as are necessary to deliver basic health care services to the population.[5] Over 60% of Zambians live in rural areas,[6] where access to health care is a challenge, in part due to the distances between populations and providers. It is estimated that only half of the rural population lives within five kilometers of a health facility.[7] HRH challenges are exacerbated by the large burden of HIV, malaria, and TB in the population.[8] The serious HRH shortage also makes staffing difficult: an estimated 40% of positions in rural health centers remain vacant.[8]

In light of these HRH challenges, the National Community Health Worker strategy was launched by MOH in 2010.[1] A central aim of the strategy was to formalize the role of a nationally supported community health workforce, called community health assistants (HAs). The key difference between community HAs and existing CHVs is in the length of training (community HAs undergo one year of standardized training), standard remuneration (community HAs are put on the government payroll), regulation (community HAs are registered through a regulatory body), and incorporation into the Zambian health system (community HAs receive drugs from the supervisory health center).[8] Community HAs are supervised by nurses and are expected to relieve nurses from some of their heavy workload through task-sharing. Zambia framed much of its community HA program around the experience of the HEW cadre in Ethiopia. An in-depth analysis of the development of the community HA strategy, which outlines the policy development process, has recently been conducted.[8]

In addition to community HAs, there are an estimated 23,500 CHVs in Zambia.[9] The volunteer network is primarily managed by implementing partners, mostly NGOs. Results from an assessment of the CHV program will be available in mid-2014.

What are Zambia's Health Needs?

Similar to many other Southern African countries, communicable diseases (HIV/AIDS, TB, malaria) contribute greatly to the overall disease burden in Zambia. Zambia has the 7th highest prevalence of HIV infection in the world, with 12.5% of the population (approximately 1 million people) living with HIV/AIDS.[10] Zambia has among the highest incidences of TB and malaria in the world.[11,12] In addition to the communicable disease burden, in the last decade an increase in the prevalence of NCDs has been observed.[13] During 2008, the top five reasons for visitations to a health facility included: malaria, respiratory infection, diarrhea, trauma, and skin infections.[3]

Zambia is also faced with severe maternal, neonatal, and child health challenges, although the most recent 2007 DHS showed progress in these areas. Since the 2002 DHS survey, the MMR has been reduced from 729 to 591 deaths per 100,000 live births; the IMR has been reduced from 95 to 70 deaths per 1,000 live births; and under-5 mortality has been reduced from 168 to

119 deaths per 1,000 live births.[3] However, Zambia is not expected to reach the health targets for MDG 4 (Reduce Child Mortality) or MDG 5 (Improve Maternal Health) by 2015.[14]

What is the Existing Health Infrastructure?

During the 1980s, health sector reform led to the establishment of semi-autonomous hospital management within hospitals in Zambia.[7] This was followed by further decentralization in the early 1990s, leading to the creation of District Health Boards with increased responsibility for decision-making at the district level.[7,15] In 1995 the National Health Service Act established the Central Board of Health to govern "the executive functions of service provision: commissioning health services in the health sector, performance support, monitoring and evaluation, national human resource development, and national health facilities planning," while the actual management of service delivery was carried out by the District Health Boards.[15] After the dissolution of the Central Board of Health in the mid-2000s, the MOH reassumed full authority. In 2013, the Zambian health system underwent another reorganization with the creation of a separate Ministry for Community Development, Mother and Child Health (MCDMCH). The MOH is still responsible for all aspects of training the health workforce; however, the operations of the community HA at the community level now fall within the purview of MCDMCH, and specifically under the direction of their district-level counterparts.

The Zambian health system is structured into six tiers: (1) Outreach Services; (2) Health Posts (307 altogether); (3) Health Centers (1,131 rural and 409 urban altogether); (4) First-level District Hospitals (84 altogether); (5) Second-level Provincial Hospitals (19 altogether); and (6) Third-level Referral Hospitals (6 altogether).[5] Of the 1,956 health facilities in Zambia, 81% are government owned, 13% are private, and 6% are faith-based.[4]

What Type of Program Has Been Implemented?

Community HAs are formally recognized as a cadre by the MOH and MCDMCH. Over the next 5 years, significant government and donor support is committed for the scale-up of the community HA program.[16] Community HAs can work side by side and in collaboration with other formally trained health staff at the health posts (who are typically nurses and environmental health technologists) and with community development assistants as well as social welfare volunteers at the community level who work on issues related to gender, environmental health, education, personal finance, and home economics. Community HAs also play a role in coordinating with the CHVs to create monthly work plans. One-half of the graduates of the initial pilot class of the community HA training program are stationed side by side with other, more qualified health care workers—this is the ideal scenario in that community HAs can refer patients from the community to the nurse at the health post. A formalized referral process exists, and community HAs maintain a referral log. In many cases, task-shifting from health care workers to the community HAs relieves time pressures, so much so that the health care staff who are based at health posts have requested that community HAs work at the health post (rather than in the community) more than two days per week.[17]

Following one year of training with a curriculum designed to match Zambia's disease burden, the community HAs deploy to their home communities to begin working. Community HAs are required to conduct a basic assessment of their communities before engaging in service provision. This includes a community diagnosis (baseline health status of the community through available primary or secondary data sources) and mapping of the catchment area and resources. These initial activities help community HAs determine the priority health-related issues and support the development of a community action plan. Following action planning, community HAs begin service provision both at the health post and at the community/household level with guidance to spend 20% of their time at the health post, for basic curative and referral services, and the remaining 80% for house-to-house visits (during which they can perform basic

curative and referral services) and community educational health talks about disease prevention and control.

The scope of work for community HAs covers a broad array of services within disease control and prevention and family health packages. The key tasks of the community HAs are listed in Table 1 by programmatic area. Community HAs are instructed to refer patients with severe illness or with diseases outside their scope of training to the nearest health center.

Table 1. Key tasks within the community health assistant's scope of work

Disease prevention and control ▪ Identify and immediately inform health authorities of outbreaks and notifiable diseases in the community ▪ Collect, compile, and report monthly data on community and health post health-related activity
Behavioral health ▪ Identify at-risk persons and refer them ▪ Provide basic mental health counseling
Environmental health ▪ Promote hand washing and advise on principles of good housing and proper sanitation ▪ Inspect construction of latrines and promote good management of latrines ▪ Conduct health education talks on food hygiene and safety ▪ Distribute ITNs and provide information, education, and counseling (IEC) on insect control ▪ Provide IEC on the importance of clean water and water purification techniques ▪ Participate in community-led total sanitation efforts
Reproductive health/safe motherhood ▪ Provide pregnancy testing, HIV testing, and counseling ▪ Promote at least 4 ANC visits; follow up to ensure timely visits ▪ Promote PMTCT treatment for pregnant women who are HIV-positive and follow up with PMTCT clients ▪ Refill prescriptions for folic acid and vitamins ▪ Provide IEC on breastfeeding, tetanus toxoid vaccine, diet, self-care, and substance abuse ▪ Attend emergency deliveries at home or before the pregnant woman reaches a facility ▪ Manage postpartum hemorrhage with misoprostol ▪ Provide the Essential Newborn Care package, including "Helping Babies Breathe" in cases of asphyxia during delivery ▪ Promote postnatal visit to health facility among newly delivered mothers; visit the mother-baby pair 48 hours after delivery if they cannot go to a health facility ▪ Detect postpartum (puerperal) sepsis in mothers and neonatal sepsis in the newborn and refer cases detected ▪ Counsel and provide oral contraceptives ▪ Promote and provide long-term hormonal contraception (e.g. Depo-Provera injections)

Child health
▪ Refer clients to the health center for immunizations; organize outreach sessions in the community for immunization days ▪ Identify and refer cases of neonatal sepsis ▪ Provide ORS and zinc to children with diarrhea ▪ Utilize the iCCM approach in providing care to the sick child aged 2–60 months ▪ Recognize signs of and refer cases of pneumonia, diarrhea with dehydration, measles, cancer, meningitis, mumps, tetanus, and leprosy ▪ Administer deworming medication ▪ Promote appropriate complementary feeding for babies ▪ Administer vitamin and/or iron supplementation
Medical and surgical conditions
▪ Carry out rapid diagnostic testing for and treatment of malaria ▪ Distribute condoms, provide HIV testing, promote adherence to antiretroviral therapy (for HIV), provide IEC to reduce HIV stigma ▪ Provide IEC and behavior change communication regarding the spread of TB, recognition of symptoms, and case management ▪ Collect and transport sputum for TB diagnosis ▪ Administer amoxicillin for non-severe childhood pneumonia ▪ Administer praziquantel to persons infected with schistosomiasis ▪ Provide IEC for common chronic diseases; measure blood pressure to identify hypertension and perform urine glucose testing to identify diabetes
General
▪ Take a history and perform a physical examination for sick patients ▪ Measure vital signs, height, and weight ▪ Provide basic first aid ▪ Provide palliative care

What about the Community's Role?

The Neighborhood Health Committee (NHC) plays an active role as part of the recruiting panel, alongside the District Community Medical Officer (DCMO) and a representative from the supervising health facility. The NHC assists with recruiting and selecting the community HA as well as liaising with the community HA and CHVs. CHVs often accompany the community HA to assist with household visits. CHVs also sensitize the community, assist community-based malaria agents with the diagnosis and treatment of malaria at the community level, and assist community-based distributors of FP by providing counseling.

How Does Zambia Select, Train, and Retain Community Health Assistants?

The MOH alerts provinces and the MCDMCH alerts respective DCMOs about how many recruits to send from their district to the community HA training school. The DCMO works with the NHCs to distribute recruitment flyers in catchment areas that need community HAs. Each recruit is screened by a panel of NHC members, health center staff, and a DCMO representative—and this panel is responsible for making the final selection of community HA candidates. Recruitment preference is given to women who meet the criteria listed below, particularly if they have previously served as a CHV. In the first and second classes of community HAs recruited in 2011 and 2012, approximately half of the trainees were female.

Community HA recruits must meet the following criteria in order to be selected for training:[1]

- Have completed Minimum Grade 12 and 2 "O" levels (one should be in English)
- Be 18–38 years of age
- Be a Zambian citizen, living in the recruitment catchment area for at least 6 months
- Be endorsed by the NHC
- Have passed a personal interview with a panel of NHC members, health center staff, and a member of the District Community Medical Office
- Have previous experience with community health work

Community HA recruits attend one year of formal pre-service training at one of two training schools in the country. A team of 10 tutors teach the community HA recruits in rotating modules with both theoretical and practical components. The practical component involves rotating recruits to local clinics near the training schools. The training modules focus on prevention, promotion, and basic curative care. The curriculum covers the following topical areas: (1) behavioral health sciences; (2) disease prevention and control and PHC; (3) environmental health; (4) reproductive health; (5) child health; (6) medical/surgical conditions; (7) provision of health care at the health post and in the community (including basic diagnostic procedures and provision of a small number of drugs).

The initial pilot class of community HAs also attended a 2-week in-service training for additional skills that had been added later to the community HA scope of work. The skills included, for instance, injecting medication and attending emergency deliveries. Construction of a second community HA training school began in July 2013; upon completion, it will provide the ability to train an additional 208 community HAs per year. Enrollment of the first class is expected in early 2014, thereby increasing Zambia's total community HA training capacity to roughly 500 students per year.

The key retention strategy is recruiting community HAs from their home communities, to which they will return following their training, so they will not have a desire to move elsewhere.

How Does Zambia Supervise Its Community Health Assistants?

Community HA supervisors and district community HA coordinators attend a five-day training at the provincial level for orientation on the community HA program and their key supervisory duties. Supervisors are equipped with a supervision manual and monthly supervision tools to facilitate routine supervision. Each community HA is supervised by the in-charge at the nearest "parent" health facility. In facilities where community HAs work alongside additional qualified staff, the supervisor is located on-site. Otherwise, the supervisor generally comes from the nearest health center. Supervision is designed to be conducted at the health post and in the community. In practice, supervision out in the community rarely happens due to competing needs of the supervisor. The official supervisory visit is intended to occur on a monthly basis.

How Is the Community Health Assistant Program Financed?

Financing to date for the community HA program has been through a multi-stakeholder collaborative process. The British Department for International Development supported the planning and development, pilot implementation, and M&E, and intends to support scale-up through 2018. USAID financed the Zambia Integrated Systems Strengthening Program to provide initial support for training of community HA supervisors and for the salaries of community HA trainers. UNICEF provided support for some of the community HA training materials. The GRZ also contributes financially by supporting recurrent costs to run the

community HA training school, and it now covers the cost for the community HA trainers. In July 2013, the MCDMCH took over financial responsibility for paying community HA salaries.

What Are the Program's Demonstrated Impact and Continuing Challenges?

Results from two impact evaluations are expected later in 2014. Boston University and its local in-country representative partner, the Zambia Center for Applied Health Research and Development, are conducting an evaluation of the impact of community HAs on community access to health care as measured by proportion of children who receive treatment for malaria, pneumonia, and diarrhea. The Clinton Health Access Initiative (CHAI) is conducting a task-shifting study to assess how the introduction of community HAs affects the types and volumes of patients seeking care at the health post and supervising health center. Results from both studies are expected to help inform GRZ policy and decision-making about the community HA program going forward.

In addition to impact evaluations, there is an M&E component of the National Community Health Assistant Program, with specific indicators and registers developed by the MOH and partners for tracking community-level health. A relatively new data reporting system, called District Health Information System Version 2.0 (DHIS2), was incorporated into the program; community HAs are trained on the tools and procedures for utilizing the DHIS2 mobile health reporting platform. Each health post with community HAs received a mobile phone plus copies of registers to support monthly data summarization and reporting. Community HAs are responsible for submitting monthly aggregated data via paper reports to their supervisors and via mobile reports to the national level. At present, mobile data reported by community HAs are not being routinely analyzed, but discussions were under way on how best to utilize the data and how to ensure the data were received at the district level as well as nationally. In the future, this mobile data reporting system may provide key information on the impact of community HAs and their contribution to Zambia's health services.

Finally, a qualitative process evaluation of the rollout of the community HA program was conducted in 2012–13. The evaluation identified several challenges, including (1) lack of regular supervision visits, partially due to transportation challenges; (2) delays in salary payments; (3) inadequate drug supply stocks and/or unwillingness of facility staff to release drugs for community- and household-level use; (4) large catchment areas (more than the originally estimated catchment size of 3,500 persons) and long travel time between villages; (5) communication challenges between the national and district levels; and (6) lack of a clear role differentiation between community HAs and CHVs.[17]

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ZIMBABWE'S VILLAGE HEALTH WORKER PROGRAM†††††

Summary

Background

The VHW program began in the 1980s as part of Zimbabwe's transition toward PHC. VHWs focus on disease prevention and provide community care at the primary level in rural and peri-urban wards, where they serve as a key link from the community to the formal health system.

Implementation

VHWs collaborate with other community-based workers, such as traditional healers, tTBAs, and community-based distributors of FP.

Training

The Ministry of Health and Child Welfare (MOHCW) conducts an initial 8-week VHW training. This consists of a period of classroom training followed by a period of practical training. Refresher trainings are conducted as needed and when funds are available.

Roles/Responsibilities

VHWs have a broad range of roles and responsibilities from prevention and health promotion to treating common conditions (including diarrhea and malaria) and identifying and referring complicated cases to higher levels of the health system.

Incentives

VHWs receive a quarterly allowance of $42, though remuneration is often irregular. They are also provided with a bicycle and a medical supply kit.

Supervision

VHWs are directly supervised by the nurse-in-charge at the health center within their ward. In addition, they are broadly supported by the ward health team at the community level.[1]

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††††† Katharine Shelley, a student at the Johns Hopkins Bloomberg School of Public Health, wrote this case study. We are grateful to David Sanders for his comments on an earlier draft of this.

Impact

There is no information available about the impact of this program.

What is the Historical Context of Zimbabwe's Village Health Worker Program?

Following Zimbabwe's independence from Britain in 1980, Zimbabwe's health sector adopted a strong focus on PHC.[2] Zimbabwe moved from a "curative, urban-based and minority-focused health care system to one which emphasized health promotion and prevention and provided some acceptable level of health care to the majority rural population."[3] As part of the shift toward PHC, the National Village Health Worker Program was formally launched in 1981 with a goal of training 15,000 village-based basic health workers and extending health care coverage to people who would otherwise have no access.[2] This program was influenced by a VHW program introduced in 1980 by the Bondolfi Mission in Masvingo, a southern province of Zimbabwe, where over the course of six months, 293 VHWs were selected and trained.[2]

From 1982 to 1987, the government trained 900–1,000 VHWs annually, so that by 1987 there were 7,000 VHWs.[4] The selection of VHWs was supposed to be driven by the community in consultation with the District Council. In contrast to the Bondolfi VHWs, the national VHW cadre received more formal training and less compensation, and they had to cover a comparatively larger catchment area. Bondolfi VHWs were selected by village committee and remained accountable to the community, whereas the government VHWs were selected by the local government structure, through which they were remunerated (David Sanders, personal communication). Bondolfi VHWs did not receive remuneration, and some were recruited into the government program while others resigned over time (David Sanders, personal communication). The VHWs were not considered to be extensions of the formal government health service, but rather were envisioned to be stewards of the community's commitment to health promotion.[4] In 1984, the VHWs were transferred to the Ministry of Women's Affairs, Cooperatives and Community Development and renamed "Village Community Workers".[1] The Village Community Workers took on a broader set of development activities and, as a result, had little time for health and health promotion activities.[1]

Over the course of a decade, the share of the health budget dedicated to preventive services rose from 6.7% in 1980 to 14.4% in 1989.[2] Unfortunately, economic deterioration in the mid-1990s led to a rapid decline in the health system and health status of Zimbabweans, including a collapse of the VHW program.[5]

A 1999 Review Commission of the Health Sector called for the reintroduction of VHWs into the MOHCW; in 2000, the VHW program was reinstated under the Nursing Directorate of MOHCW.[1] Since 2009, efforts have been under way to revitalize the VHW program, partially through support from the Global Fund to Fight AIDS, Tuberculosis and Malaria and various partner organizations. VHWs are expected to be key players in efforts to reach the MDGs, and they are also now viewed as an essential element of the health system decentralization process.[1] The remainder of this case study describes the current status of the VHW program in Zimbabwe.

What are Zimbabwe's Health Needs?

There has been a dramatic deterioration in Zimbabwe's key health indicators since the early 1990s. Life expectancy fell from 62 years in 1990 to 44 years in 2008,[5] and has since partially recovered to 54 years.[6] The MMR rose from 284 per 100,000 live births in 1994 to 960 in 2010.[7] While the prevalence of HIV has dropped in the last decade from 26% in 2000 to 15% in 2012, there are an estimated 1.2 million Zimbabwean adults living with HIV/AIDS, which places a huge burden on the health system.[8] TB prevalence is 547 per 100,000 population, more than double the average of 243 per 100,000 for Southern Africa, where Zimbabwe is located.[6] The

nutritional status of children is also a key health challenge as indicated by the most recent DHS data: among children under five, 32% were stunted, 3% were wasted, and 10% were underweight.[7]

What Is the Existing Health Infrastructure?

The health system is divided into four levels of care, including primary, secondary, tertiary, and quaternary.[5] The primary level includes VHWs and the rural health centers or clinics that offer basic maternity, preventive, and curative services. For community members, these facilities are the first point of contact with the formal health system.[5,9] The secondary level includes facilities that receive patients on referral from primary-level facilities, but also provide primary care services to patients within the immediate area surrounding the facility. Tertiary-level facilities include the seven provincial hospitals in Zimbabwe, which have specialist staff on hand to deal with referrals from secondary-level facilities. The most advanced level of care is the quaternary level, which includes six central hospitals that have equipment, staff, and pharmaceuticals for dealing with patients requiring highly specialized care.[5]

What Type of Program Has Been Implemented?

The MOHCW outlines several key objectives in its document outlining a strategic direction for the VHW program, including the following:

- To equip communities with knowledge and skills to take responsibility for their own health
- To increase the capacity of communities to prevent and control diseases within communities
- To enable communities to manage and take actions on health activities within communities
- To empower communities to value their own health and to take actions that promote positive behavior change for adopting healthy lifestyles[1]

VHWs provide a link from the community to the formal health system. VHWs have a broad scope of work (Table 2), but they primarily focus on prevention. They provide some curative care, including first aid and treatment of common conditions with drugs (including malaria and diarrhea).[5] VHWs collaborate with other community-based workers such as traditional healers, traditional birth assistants, and community-based distributors of FP.[1] VHWs are provided with various drugs and medical supplies to carry out their multiple roles (Table 2).

Table 2. Village Health Worker Scope of Work and Supply Kit1

Scope of work
▪ Identifying and referring clients that need treatment at health facilities
▪ Collecting community-based health information, which is then shared with the rural health center and subsequently included in the national health information system
▪ General health education and health promotion about water and sanitation, diseases of public health importance, pregnancy and maternal health, and FP
▪ Providing salt and sugar solution or ORS during cholera outbreaks
▪ Providing prophylaxis for malaria
▪ Conducting growth monitoring and giving guidance on breastfeeding and infant nutrition
▪ Following up with HIV-exposed infants and their mothers
▪ Promoting immunization
▪ Participating in IMCI campaigns
▪ Promoting HIV voluntary counseling and testing
▪ Supervising TB patients on DOT
▪ Caring for patients with chronic conditions (hypertension, diabetes, stroke, epilepsy, and so forth)
▪ Conducting outreach events for nutritional monitoring and provision of health services for schoolchildren

▪ Treating minor ailments ▪ Promoting oral and mental health ▪ Collaborating with other community stakeholders and community-based cadres	
Drugs and medical supplies: ▪ Paracetamol tablets ▪ Antimalarial drugs ▪ Alcohol (for cleansing) ▪ Betadine solution ▪ ORS sachets ▪ Tetracycline eye ointment ▪ Bandages (crepe, gauze, triangular) ▪ Scissors ▪ Latex gloves ▪ Salter weighing scale, weighing bag ▪ Mid-upper arm circumference measuring tape ▪ Tape measure ▪ Soap ▪ Aqua tabs ▪ Thermometer ▪ Cord clamps or ligatures	**Other supplies:** ▪ Condoms (male and female) ▪ Uniform, sunhat, badge, raincoat ▪ Tennis shoes ▪ Canvas bag for carrying supplies ▪ Plastic apron ▪ Teaspoon and tablespoon for dispensing liquid medications ▪ Pen, register book, and referral slips ▪ Bicycle, with repair kit ▪ Flashlight and batteries ▪ Timer (for counting respiratory rate)

What about the Community's Role?

According to government documents describing the program, local leaders, including qualified health care workers, teachers, traditional and religious leaders, women leaders, and youth leaders, support the VHWs in a variety of ways, including (1) mobilizing the community around health issues; (2) supporting planning, implementation, and monitoring of VHW activities; (3) mobilizing resources to support VHW activities; and (4) advising the VHWs.[1] In addition, the community plays an essential role in the selection of VHWs as described below.

How Does Zimbabwe Select, Train, and Retain Village Health Workers?

The VHW selection process starts when a clinic or hospital communicates with the community that it needs voluntary workers. The clinic development committee and the political leaders then take the lead in choosing suitable candidates to become VHWs. Persons selected as candidates usually have a proven commitment to the community such as previous volunteer work at their local clinic (CHAI, personal communication). Relying on community input for selection is essential because the community members must have trust and confidence in the VHWs.[1] The community's participation in the selection process differentiates VHWs from auxiliary health workers in that the VHWs answer to the community, while the auxiliary workers answer to the formal health system.[4] The VHW selection criteria include the following:[1]

- Aged 25 years or older
- Mature, married resident of the village
- Able to read and write
- Possessing strong communication skills
- Respected in the community
- Interested in health and development issues

- Willing to work at the community level and on a volunteer basis
- Able to maintain confidentiality of health information

The MOHCW conducts an initial VHW training that lasts 8 weeks. The classroom training is organized into two sessions that are separated by a period of practical training. Refresher trainings are conducted as needed and when funds are available, but new skills and knowledge sharing are generally just taught on the job (CHAI, personal communication). Topics covered in the VHW training include PHC; roles and responsibilities of VHWs in the community; reporting responsibilities of VHWs; the community as the client; communicable and non-communicable diseases; communication, advocacy, social mobilization, and community mobilization; environmental health, water supplies, sanitation, and cholera; malaria; personal hygiene, hand washing, zoonotic conditions; IMCI; nutrition and infant feeding; HIV/AIDS, TB, PMTCT of HIV, voluntary HIV counseling and testing; treatment of minor ailments; first aid and wound care; mental health (stress, burnout, child abuse, hazardous substances); community-based rehabilitation; emergency preparedness and response; collaboration and coordination; contents of the VHW kit; health promotion and education; teaching methods; communication network and technology system; M&E and data management; and dental health promotion and hygiene.[1]

How Does Zimbabwe Supervise Its Village Health Workers?

At the national level, the MOHCW's Director for Nursing Services oversees the VHW program. Responsibilities are further delegated to the Provincial Nursing Officers, District Nursing Officer, and finally to clinic staff (CHAI, personal communication). VHWs are directly supervised by the Nurse-in-Charge at the rural health center within their ward. VHWs are also supported by the ward health team at the community level.[1] VHWs are expected to attend monthly meetings at the rural health center.[1]

How Is the Community Health Assistant Program Financed?

The MOHCW provides funding to a small proportion of VHWs through support obtained from the Global Fund to Fight AIDs, Tuberculosis and Malaria. This funding provides for three weeks of VHW refresher trainings. As of 2010, development partners were supporting VHWs in 24 of Zimbabwe's 60 rural districts. These partners include UNICEF, the WHO, the United Nations Development Program, the Central Emergency Relief Fund of the United Nations, and various NGOs including Merlin, World Vision International, Save the Children, and the Zimbabwe Vitamin A for Mothers and Babies Project.[1]

The VHW role is not supposed to be one of "professionalized" full-time work. Rather, VHWs should work part-time while remaining engaged in normal day-to-day family and village activities.[4] When the VHW program began, it was envisioned that the communities would take over the responsibility of providing compensation to VHWs after one to two years, thereby making the program more community owned and community driven.[4] However, this has not been the case, and compensation has generally come from the government or partners. During 2010, VHWs received a quarterly allowance of $42 from the MOHCW. Some VHWs also received a bicycle provided through the Global Fund.[1]

What Are the Program's Demonstrated Impact and Continuing Challenges?

Several evaluations of the VHW program were carried out in the early 1980s,[4] but data on the impact of the present-day VHW program are not available. Data on routine community activities are maintained by VHWs in a domiciliary visit register. Information from this register is periodically shared with the supervising health facility. Some community-based data are included in the national health information system.[1]

The current number of VHWs is not documented. The goal of the VHW program is to achieve national coverage with 15,000 VHWs.[10] However, only an estimated 19% of villages have currently active VHWs, and a 2009 household survey revealed that fewer than half of the respondents had access to a VHW in their ward.[9] The program faces many challenges. VHW training programs have been closed down in many districts. Remuneration is inadequate and irregular. And shortages of the drug supply are common.[9]

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Acknowledgments

IMAGES/PHOTOS

All global maps were created by others using Generic Mapping Tools (http://gmt.soest.hawaii.edu/).
Many photos were obtained through the Photoshare website (http://www.photoshare.org/) or WHO.

Afghanistan

Left: CHW Ozara Husseini (left) talks to Najiba, who has five children, about the advantages of FP and Najiba's decisions to start taking the pill at Najiba's home in Katasank near Bamyan, Afghanistan, on June 8, 2010.
Photo by Kate Holt, Jhpiego
Right: A CHW provides basic information on newborn care.
http://www.usaid.gov/results-data/success-stories/saving-newborns-rural-afghanistan (Accessed March 14, 2014)

Bangladesh (BRAC)

Left: An SS leaving a home following a visit.
Right: In the Korail slum of Dhaka where BRAC CHWs are implementing a maternal, neonatal, and child health program called Manoshi, an SS visits a mother at home.
Photographs by Henry Perry

Bangladesh (Government)

Left: HAs and FWAs learning how to counsel women in the household using a netbook with digital resources.
Right: FWA with her daily logbook, used for recording health events of her clients.

Brazil

Left: In Ribeirao Preto, Brazil, a mother holds her infant child at a weekly breastfeeding class held at a charity hospital. Social stigma and misinformation continue to plague efforts to promote breastfeeding in Brazil. However, this class was slowly but surely educating and empowering an entire community through the promotion of breastfeeding.
© 2000 Alex Zusman, Courtesy of Photoshare
Middle: Redençao Health Center, one of the clinics in Brazil that achieved accreditation in the PROQUALI Project for reproductive health services.
© 1997 Center for Communication Programs, Courtesy of Photoshare
Right: Brazilian children learn about healthy lifestyles in a local church as part of a program initiated by Lutheran World Relief to raise awareness about the vulnerability of women and children to the AIDS epidemic.
© 1995 Lutheran World Relief, Courtesy of Photoshare

Ethiopia

Left: A CHV in Benishangul, Ethiopia, refers a child to a district health facility.
© 2011 Yolanda Barbera Lainez/IRC, Courtesy of Photoshare
Middle: A health worker holds up artemisinin-based combination therapy pills (ACTs) for malaria treatment in Ethiopia.
© 2007 Bonnie Gillespie, Courtesy of Photoshare

Right: A young mother and her infant in her village near Shashememe in the Oromiya Region of Ethiopia. She is attending a village gathering to discuss FP led by the local community leader, who is also a community-based distribution agent.
© 2005 Virginia Lamprecht, Courtesy of Photoshare

India

Top left: An ANM helps a mother learn kangaroo mother care—important for newborn growth—at District Hospital, Shivpuri district, Madhya Pradesh, India.
© 2012 Anil Gulati, Courtesy of Photoshare
Top right: An AWW feeds a group of children at an Integrated Child Development Services Centre in Bagnan, India.
© 2012 PAB, Kolkata, Courtesy of Photoshare
Bottom left: Women in India work to become ASHAs.
© 2008 Meenakshi Dikshit, Courtesy of Photoshare
Bottom right: A group of ASHAs in India.
© 2008 Meenakshi Dikshit, Courtesy of Photoshare

Indonesia

Left: CHW counsels mother.
Aid in Action. http://ec.europa.eu/echo/aid/stories/asia13_en.htm. (Accessed March 14, 2014.)
Right: Brigida, a community volunteer, weighs 2-month old Mima at a health center supported by Plan in Indonesia.
Plan in Indonesia. https://www.plan.org.au/Our-Work/Countries-we-work-in/Asia/Indonesia.aspx#prettyPhoto[pp_gal]/1/. (Accessed March 14, 2014.)

Iran

Left: Javanparast S, Heidari G, Baum F. Contribution of Community Health Workers to the implementation of Comprehensive Primary Health Care in rural settings. Poster presented at: 138th American Public Health Association Annual Meeting; November 2010; Denver, CO. Available at:
http://www.globalhealthequity.ca/electronic%20library/Iran%20Poster%20English.pdf
Middle: How Obamacare Will Help Mississippi (and America) Implement Lessons Learned from Iranian Health Care
http://thinkprogress.org/health/2012/07/29/602691/aca-mississippi-community-health-iran/
Right: Regular medical checkups by CHWs, Islamic Republic of Iran.
http://www.emro.who.int/cbi/information-resources/health-development-services.html

Nepal

Left: A CHW counts the respiratory rate of a young child in Dhanusha, Nepal.
© 2007 Dilip Chandra Poudel, Courtesy of Photoshare
Middle: Women in Nepal receive HIV prevention information.
© 2004 Rebecca Callahan, Courtesy of Photoshare
Right: An FCHV in Nepal counts the respiratory rate of a young child using ARI Sound Timer to diagnose pneumonia.
© 2010 Dilip Chandra Poudel, Courtesy of Photoshare

Pakistan

Left: At a Basic Health Unit in Punjab province, Pakistan, 23-year-old Tahira Rashid receives counseling from Dr. Fauzia Amin, a female medical officer.
© 2012 Derek Brown for USAID, Courtesy of Photoshare

Middle: A health worker attends to an infant at a free medical camp in a flood-affected area of Larkana district, Sindh, Pakistan.
© 2010 Population Welfare Department Sindh, Courtesy of Photoshare
Right: Women attend a free IUD and medical camp at Udani village in Sindh, Pakistan.
© 2009 Population Welfare Department Sindh, Courtesy of Photoshare

Rwanda

Left: CHW assesses child for presence of malnutrition.
http://gadpcrwanda.blogspot.com/2012/07/community-health-workers-by-alma.html (Accessed March 14, 2014)
Right: CHW records child nutrition information
Partners in Health. http://www.pih.org/priority-programs/community-health-workers/about. (Accessed March 14, 2014.)

Zambia

Left: Two CHAs (blue coats) and one volunteer CHW (a malaria agent) at a health post in western Zambia.
Photo by Katharine Shelley
Right: A CHW visits a client.
Poverty Action Lab.
http://www.povertyactionlab.org/sites/default/files/Recruiting_and_Motivating_CHWs_Zambia.png?1368559148. (Accessed March 13, 2014.)

Zimbabwe

Left: CHWs from Zimbabwe.
Source: MCHIP/Jhpiego
Right: Community-based distribution workers review information in Zimbabwe.
© 2011 Center for Communication Programs, Courtesy of Photoshare

Appendix B

Current Perspectives on Large-Scale Community Health Worker Programs: Summary of Findings from Key Informant Opinions

Sharon Tsui, Elizabeth Salisbury-Afshar, Rose Zulliger, and Henry Perry

INTRODUCTION

There is currently a high level interest in Community Health Worker (CHW) programs from the Secretary General of the United Nations to host-country governments to donor agencies and on down. Some countries have recently launched new cadres of CHWs as part of the primary health care system or are considering doing so. Other countries with mature CHW cadres in national programs are faced with decisions about possible changes in these programs, such as changing the selection criteria of CHWs, adding functions to existing CHW tasks, or modifying compensation arrangements. The majority of available published literature on CHW program effectiveness concerns smaller-scale CHW programs to improve population health.[1] In contrast, little is known about large-scale CHW programs. There is very little documentation on the planning and implementation of these programs. Also, there is a dearth of empirical research on the overall effectiveness of large-scale CHW programs on population health and on the functioning of specific program components, such as financing, CHW retention, supervision, and so forth.

PURPOSE

We explored the opinions of experienced technical advisors, program managers, and evaluators to contribute knowledge on large-scale CHW programs. The specific objectives were to identify: (1) key components of a successful large-scale CHW program, (2) key decisions that CHW program planners must consider when developing a program, (3) common errors made in CHW programs that compromise performance, and (4) areas where further research are needed. The purpose of this exploration was to serve as a guide for planning a systematic assessment of large-scale CHW programs, which is the subject of this guide.

METHODS

We conducted semi-structured in-depth interviews with 14 key informants in fall 2011 and early 2012. Each informant had significant and intensive experience working with large-scale CHW programs: each informant had five or more years of experience in working with one or more national CHW programs and had served as a technical advisor, program manager, or evaluator of a large-scale CHW program. The interviews were conducted one-on-one via telephone or Skype by three of the authors (ES-A, RZ, and HP) and also by two members of the study team—Steve Hodgins and Simon Lewin. See the interview guide in to the appendix of this document. Detailed notes were taken on each interview to record informant responses. The textual data were analyzed by identifying and summarizing *a priori* and emergent themes.

FINDINGS

Contextual Understanding Needed to Design Effective Large-Scale CHW Program

Expert informants emphasized there is no "one-size fits all" model to developing a successful CHW program. The features of a successful program in one setting may not be appropriate in another setting. Rather, informants pointed to the importance of understanding contextual factors, such as cultural, social, political, religious, geographic, economic, and health system factors, to designing an effective large-scale CHW program. Contextual factors can inform the nature of linkages of the CHW program to other services, the scope of services provided by the CHW, compensation, selection criteria, and processes for training and supervision. The following examples highlight how contextual understanding can help design a more appropriate and effective CHW program.

Example 1: CHW Recruitment Process
An appreciation of the cultural and political aspects of social structures and their hierarchy at the village level can help a program designer decide whom to involve in the CHW recruitment and selection process and discern how an applicant's social position may influence his/her effectiveness as a CHW. One key informant stated:

> It is very important to look at the cultural and political aspects of a program. For example, to look at whether you ask a village chief, a community clinic, or a village committee to select a community health worker and what are the different outcomes or implications.
>
> A CHW must have a certain kind of standing within and ties with the community. The person who has this type of standing and community ties may not be the same type of person that the government wants to select as a CHW… the social position of a CHW in the community affects their effectiveness.

Example 2: CHW Selection Criteria
Understanding cultural and geographic factors is especially important in the selection of CHWs. Factors utilized in the selection of CHWs for large-scale CHW programs include age, gender, literacy level, education attainment, marital status, and geographic location (e.g., living in a particular area). Different socio-demographic characteristics are relevant in different communities in the selection of appropriate CHWs. Some communities are more likely to ascribe respect and trust to CHWs who are older and experienced as mothers. One key informant stated: *"It is exceedingly important that CHWs be responsive, accountable, respected, and trusted. These attributes are often associated with age and children."* In other communities, gender norms guide how CHWs interact with the community. For example, another key informant stated: *"Context is important here. In Afghanistan, only male and female pairs are accepted because women can't go outside of the home."* In another example, gender norms dictate where women live after marriage, which can impact where female CHWs can work and their retention. *"Marriage [as a] criterion has pros and cons—women who are unmarried and later get married are likely to leave the community,"* reported one key informant.

Example 3: CHW Payment and Incentives
Informants emphasized the need to find pay and incentives that are relevant to the local context. Varying types of incentives may appeal differently to different communities. Incentives that have been used for large-scale CHW programs may be financial (e.g., transport reimbursement), in-kind (e.g., bags, shirts, or badges), or social (e.g., a "CHW Day" to honor and celebrate this cadre). Considering the CHW's age and social standing within the country's social and economic contexts can also help the program designer identify an appropriate amount of payment and appropriate types of incentives. One key informant stated:

> I think that these issues are very contextual—are the CHWs young or old? High or low class? Young people desire skills and want to show them off. Providing skills might be enough to keep young people interested, but this may not be enough for an older person with high status.

Example 4: CHW Roles and Responsibilities
A clear understanding of the national health system—particularly its stakeholders, how health care is delivered, and its human resource needs—is needed to see where CHWs fit into the larger health system and to clearly define their roles and responsibilities. For example, one key informant noted, "*It is important to understand the organization of the health care delivery in a*

particular setting to be able to understand how and where the CHWs fit in." Another asked, *"Where does the program situate itself in the bigger picture—how is it linked to the health facility, district level, and the ministry of health? How are CHWs supported by the bigger formal system?"* Notably, an appreciation of the various formal and informal stakeholders and their role in health service provision is necessary to ensure that CHWs have specific roles and do not displace other sectors of workers. A commonly neglected stakeholder is drug sellers.

It is also necessary to understand what health services are valued by community members. Several key informants said community members have a tendency to place greater value on curative treatments than on preventive messages. Understanding this tendency is needed to ensure CHWs are meeting some of these needs for them to gain credibility in the community. For example, one key informant said, *"In terms of public health impact, behavioral changes can play a larger role; however, the community listens more when CHWs have some curative role. It can be hard to get the community to listen to a CHW when the only messages are preventive."* Similarly, another key informant stated, *"It is important that the CHWs come with credible skills. CHWs need to be seen as valuable to the community and as providing something that is interesting. Being able to provide "quick fixes" is very valuable in gaining interest or credibility."*

Need for a Long-Term Vision and Planning to Support Large-Scale CHW Program Functioning

Multiple key informants attributed an inadequate long-term vision and a lack of long-term planning as a key reason why some large-scale CHW programs have not been successful. Some informants noted that the lack of a long-term vision is often in response to demands from donors who push ministries of health (MOHs) to focus only on short-term goals and outcomes that are related to a particular funding cycle. This has resulted in inadequate preparation and planning of the program components, such as government ownership of the program, commitment of funds to support long-term costs, planning for a CHW career trajectory, and development of data collection systems.

Example 5: Governance

Governance is a leadership process typically administered by a national government and relates to defining expectations, granting power, and verifying performance. Key informants emphasized how governance of a CHW program is developed over time through a political process by nurturing relationships with relevant stakeholders, such as MOH officials, donors, and opinion leaders. One key informant stated, *"Our failures have been more political than technical. We don't put enough energy into the political side of it - both in terms of government officials and donors."*

Informants have suggested different strategies to promote government ownership of a CHW program. One strategy is for the implementing partner to involve the MOH delegate in program planning as much as possible and develop an advocate for the program. For example, one international organization that was an implementing partner of a new national CHW program gave special attention to nurturing the position and involvement of certain MOH personnel assigned to the CHW program. As a result of nurturing these relationships, the MOH assigned personnel became the *"biggest champions of CHWs in the country,"* reported one key informant. This same informant noted that it is important to keep up with personnel changes in the MOH: *"Any time there is a new leader, new emphasis needs to be placed on educating him or her about what CHWs are capable of."* Another strategy is to appeal first to opinion leaders, such as medical academics or a small group of decision-makers, before getting the MOH on board with the proposed program. Allow opinion leaders to see the program first-hand through dissemination workshops in the community and through site visits. This process can promote awareness of CHW program benefits and address points of skepticism.

Example 6: Financing Large-Scale CHW Programs
Consideration of the long-term costs of program planning is often neglected. Inadequate financing planning for a large-scale CHW program may be caused by donors who rush the government to start a program. According to one key informant, *"Many programs are developed when donors push on the MOH and neither the government nor the donor approaches the new cadre with a long-term perspective. So, activities continue for as long as external funds are available and quickly wither away once the funding has come to an end."*

Also, there is a mistaken tendency for MOHs and donor agencies to assume that CHW programs are low-cost options. As one key informant reported, *"CHWs are not a low-cost alternative; they are a high-cost alternative, but also a high-access alternative. The number one cause of failure* [of large-scale CHW programs] *is that people consider this to be a low-cost option, and they don't factor in the high costs associated with high-level technical support and other support functions."*

In addition to funds needed to start a CHW program, long-term costs are required to provide appropriate continuous training, supervision, incentives, and other support functions, all of which are vital for an effective program. *"There's a mistaken idea that once the CHWs are trained it is a free program. Regular meetings are important because they allow CHWs to get together, learn from each other, engage in healthy competition, obtain additional education, and so forth,"* reported one key informant.

Careful long-term planning is needed to fund the types of training and continuing education strategies that are more costly but are also needed for programs to be effective. For example, one key informant stated:

> My sense is that most of the training should be conducted in their work environment. Of course, the problem with that is that it is very resource intensive because you need quite a number of trainers, but I do think that is the best way. One doesn't expect CHWs to have very high theoretical skills but they should have practical skills. Practical skills can only really be learned in practice so it seems obvious to me that a lot of the training should occur in the community.

Careful long-term planning is also needed to provide appropriate incentives that will motivate CHWs and at levels that can be sustained over time. Care should be taken to ensure that funds provided at the start of the program are no more than the amount CHWs can expect for their work over time. One key informant observed, *"A lot of CHWs get paid very well during their training because it involves three weeks of full-time training. Then they start "working" and they get paid much less because they are not working as much. The full-time pay during training increases their expectations."* Further, key informants indicated that they advised program planners not to provide payments or incentives that cannot be sustained over time. One informant said, for example, *"If a program starts out paying CHWs, it would be very hard to transition it into a volunteer program later. Sustainability is an important consideration with respect to compensation."* One key informant recommended movement toward recognition over compensation and salary because it is more sustainable financially.

Example 7: Training and Continuing Education for CHWs
As was mentioned briefly in Example 6, training and continuing education should be considered in the long-term planning of CHW programs. A long-range perspective to CHW programs may enable program planners to build a broader range of capacity among CHWs and ensure retention of these skills. In the words of two key informants,

> The lack of time or attention to this reflects the fact that we are always in such a hurry. Quite often it would be better if we were developing a multi-purpose type of CHW that you would train slowly, over time, in a piece-by-piece fashion (e.g., train them, let them practice it, train them on something else, let them practice it, etc.). But instead, because we're often in such a hurry, everything gets thrown into one larger training, which isn't as effective.
>
> The approach to attaining and retaining skills is usually inadequate with initial training that offers too little practicum exposure and little or no program effort to confirm and ensure retention of skills.

Informants emphasized repeatedly the importance of using a slower but more rigorous and phased approach to training. Respondents from two informants were as follows:

> CHWs that go through a training for three or six months remember what they learned in the last five days, and everything else is lost. One of my strongest recommendations is training should be shorter but more often. Building Resources across Communities (BRAC) has layered it on one task at a time.
>
> Trying to do tons of messages all at once in one training doesn't work as well. You can't go in with everything all at once. We found our programs were most effective in doing things one step at a time. For example, start with family planning and breastfeeding, then let them practice these messages, then train on other issues.

Also, a key informant highlighted how a phased approach to training can be more responsive to community needs because the flexible training structure can allow the community to decide on what health problems to address. This person said, *"Let the community decide what they want to work on and when. So if they choose diarrhea as a problem they want to address, then you teach the diarrhea module, which includes hand washing and latrines, etc. I feel that very few programs have done this, and those that do, have strong programs.*

Example 8: Defining CHW Tasks and Integration with the Peripheral Health System
There is a tendency to add tasks to CHWs as the program progresses, resulting in overworked CHWs, a lack of programmatic focus, and too many functions for a CHW to be effective. One key informant referred to the experience in Pakistan: *"More and more duties and functions have been added to Lady Health Workers (LHWs) in Pakistan, including from sectors other than health, with the result that their focus has become too diffused. More functional LHWs have been rendered less effective in their core functions."* The addition of new functions to CHWs may result from unrealistic expectations. Another key information observed, *"There is an unrealistic set of expectations in terms of what CHWs are capable of doing—they are often burdened with doing too much and not being able to do anything well."*

Therefore, several informants emphasized the need for a long-term vision of CHW tasks. Program designers need to prioritize key goals to be achieved by CHWs and set these expectations and provide a guideline at the start of the program. One key informant recommended the following:

"There is a tendency for more and more tasks to be added on once the program starts. It is crucial to think about workload during the program development stage and create guidelines and expectations prior to program start. The more it is structured prior to the program start,

the better off. Any optimal or prioritized sets of activities need to be defined before the program starts. Any additional tasks that are suggested or proposed need to be weighed carefully against the goals of the program and workload of the CHWs. It is also important to look at where that task fits in the curricula and how it will affect the ability to address previously outlined important tasks or goals."

To avoid overloading existing CHWs with new tasks, some key informants favor the addition of new cadres of CHWs. For example, one said, *"As you expand the tasks you want CHWs to tend to, it may work better to have multiple cadres of CHWs that can work together as a group—but each working in a vertical manner with his or her specific program."* Other key informants feel that multiple cadres of CHWs serving in the same catchment area may be confusing to the community. One said, *"It is confusing at the local level when there are different types of* [CHW] *workers in the same place."* Also, clients may perceive CHWs from a vertical program to be too limited to help them. Another key informant stated, *"If it's too vertical, the clients often feel the CHW can't help with much."*

Another consideration on tasks to be performed by CHWs is whether the assigned activities can be readily supported by the local health system. One key informant noted, *"Where does the program situate itself in the bigger picture? How is it linked to the health facility, district level, or MOH? How is the program supported by the bigger formal system?"* For example, if CHWs are expected to refer patients to health facilities, then they need the cooperation of health providers at these facilities and the MOH. One key informant, referring to the Jamkhed Comprehensive Rural Health Project (in central India) and the Barefoot Doctors in China, observed:

Without somewhere to refer people who have trauma or significant illnesses, then the program is not as successful. The strength of Jamkhed and the strength of the Barefoot Doctors was their connection to the public health system. CHWs should get feedback on their referrals after they refer someone. CHWs should know what happened, what they diagnosis was, and what the outcome was. Joining in meetings at the clinic is also important for them to feel integrated into the system.

Although there was consensus that CHWs should be connected to the frontline health workers in the local health system, key informants held varying perspectives on the level of integration between the CHW program and the national health system. Some feel that integration of CHWs into primary health care is necessary to ensure service delivery (to be able to refer patients, obtain medications and supplies, etc.) and to provide supervision and accountability of CHW performance. One key informant stated, *"CHWs need to be integrated with the health system at the most peripheral or local level—government needs a link to the frontline health workers to ensure programs are delivered."* Others feel that if CHWs were fully integrated into a peripheral health system that they would be misused. One key informant recommended "engagement" or "active interface" with the peripheral health system over full integration. This informant warned that CHWs would likely be misused because they are viewed as the lowest-level person on the health team, and they would be given tasks that would take them away from their identified scope or tasks as CHWs (e.g., told to clean rooms and latrines at the health facility).

Example 9: CHW Supervision and Career Trajectory

Supervision and long-term support for career advancement of CHWs constitute another neglected program component that needs to be considered at the outset as part of program planning. One key informant reported, "*There is a failure of effective, institutionalized supervision. Often, supervision is a complete afterthought. Initial program efforts consist of developing a training manual, doing mass training and deployment, and then … nothing."*

Nurses or other health staff at a primary health care clinic have been the traditional supervisors of CHWs. However, multiple informants have noted several challenges with this supervision set up. First, supervision is assigned to a staff in the clinic without consideration of whether this person has the time, skills, or desire to perform supervisory tasks. One key informant reflected in the following way, *"Our experience … has been that it is not enough just to have people at health facilities overseeing CHWs as an additional task. We needed to seek out new employees specifically to take on this task of overseeing CHWs. Overloading of supervisors became a problem (e.g., trying to oversee the CHWs associated with 30-40 health posts was too much)."* Second, supervisors based in health facilities often lack means of transport or other mechanisms (e.g., a cell phone for text messaging) to monitor the quality and performance of CHWs. Finally, and most importantly, health providers were not in touch with the technical needs and realities of CHWs, so their supervision was not very effective. One key informant stated:

You have to have the right people to supervise and support CHWs - people who themselves are well-oriented. I worry that in South Africa professional nurses will supervise CHWs. I don't think most professional nurses in South Africa have a very comprehensive approach. They don't know about health promotion, disease prevention, and getting communities involved, yet they will be the direct supervisors of CHWs."

Similarly, another key informant observed that in one program, *"The supervisors often were not as clinically savvy as many of the CHWs, so they were not able to effectively provide technical assistance."* Yet another noted, *"Checklist supervision is minimally effective, if at all. One of the keys to effective programs is making sure that the supervisors or trainers are in touch with the needs and realities of their workers."*

Several informants recommended "reverse supervision" (that is, having an experienced CHW be a supervisor to newer CHWs) as a means to more effectively monitor quality, provide technical support, and help problem solve issues on the ground. *"Reverse supervision at monthly meetings will allow CHWs to help each other solve problems,"* claimed one key informant. Reverse supervision can also be an incentive to retain and motivate CHWs, as it allows them to develop their career. One key informant stated, *"Career development and career mobility should exist. In my experience, the best supervisors are those who have worked their way up and were once CHWs themselves."* Similarly, another key informant about Pakistan's LHW program, *"By selecting the best LHWs and allowing them to be a supervisor to other CHWs was an incentive for others to work harder."*

Need for Relevant Data Collection System for Large-Scale CHW Program

Much of the available data on CHW programs comes from small pilot programs run by nongovernmental organizations (NGOs). These findings may not be appropriate for extrapolation to scaled-up national programs. Several key informants noted it would be helpful to have some type of database where the basic features of large-scale programs are documented. This database could include information such as:

- Number of households per CHW
- Scope of services being provided
- Compensation/incentives
- Selection criteria
- Selection process
- Training process

- Supervision process
- Degree and nature of integration with the primary health care system
- Management and evaluation systems
- Health outcomes measured

This database would allow governments to have a better understanding of what types of programs have been implemented in other settings and perhaps allow for increased collaboration during the planning phases.

Notably, several key informants pointed out the current top-down approach to monitoring and evaluation leads often to situations in which CHWs collect data that are not relevant to their work. One key informant emphasized, *"CHWs who are collecting health information should be able to use the data. If it's not relevant to them or their work, then someone else should be collecting it."*

Several key informants noted that there is a need for better documentation of the CHW program decision-making process at the national level. Having information about how large-scale programs are managed is seen as an important element for better understanding the reasons for the degree of effectiveness of large-scale CHW programs. The key informants also recognized that there is a lack of collaboration in the development of training materials, particularly for illiterate CHWs. Each program seems to be creating its own materials and is attempting to "recreate the wheel."

CONCLUSION

Because of limited published information about the details of large-scale CHW programs, the opinions of those who are knowledgeable about such programs is of value at this time, given the rapidly growing interest in CHWs and the emerging commitments in a number of countries to strengthen existing national CHW programs or to establish new ones. The findings from this review of key informants suggests that as countries engage in these activities, the success of their efforts will depend to an important degree on the quality of realistic planning that is carried out initially, taking into account the real costs required for effective programming and then developing monitoring and evaluation systems that will make it possible for these programs to adjust to needs and problems as they emerge at the local level and at the various levels of management.

Appendix: Interview Guide

Key Informant Interviews

There is currently high-level interest in CHW programs, from the Secretary General of the UN, to host-country governments, to donor agencies, on down. There are a number of countries that have recently launched new CHW cadres, or which are considering doing so. Furthermore, countries with mature CHW cadres and programs are faced with decisions about possible changes in these programs, for example adding functions, changing arrangements with regard to compensation or changing selection criteria.

Despite abundant experience with CHW programs, a vast body of literature documenting these experiences, and several large-scale reviews of such evidence, we see many of the same programmatic mistakes being made repeatedly. For example, while most CHW literature cites the importance of CHW supervision, many programs have not fully invested in the development or maintenance of such supervision. Additionally, much of the guidance available to date pays too little attention to the diversity of kinds of CHW work or of the settings where this work is done. Guidance on offer tends to be either so general as to not be very useful or overly prescriptive, over-generalizing based on specific program experience.

We would like to develop a product which will help to close this gap and influence decision-making through highlighting issues of CHW program design and development. Our goal is to reach beyond the published literature and speak to MoH officials, field officials and other experts about their experiences with such programs. We do not intend to use a case-based model, but rather plan to look at the processes and many decisions faced when developing or changing existing CHW programs.

We anticipate that the principal product of our effort will be a book-length set of papers or chapters that would be available as a free-access, full-text, online journal supplement (modeled in part on somewhat similar efforts around 20 years ago, led by Gill Walt and Stephen Frankel). This will probably be supplemented by other products, possibly including algorithmic decision-aid tools, powerpoints, and/or workshop modules.

As someone with considerable experience working in this area, we would like to tap that expertise and request your feedback and guidance.

1. ***Can you identify any gaps in the currently available CHW literature? If our goal is to assist decision-makers with the planning and revision of CHW programs, what information do you feel would be most useful?***

2. ***Where do you feel those involved in developing or making changes to CHW programs most often run into problems, or make choices which ultimately compromise performance?***

3. ***Where have failed programs gone wrong? Where, with a bit more foresight, can we sharpen up our judgment in making strategic choices concerning CHW programs?***

4. ***We have identified the following topic areas as important decision points in developing a national or large-scale CHW program. Can you provide us with feedback regarding which are the most important to include or other topics we might have left off the list?***

    - CHW selection criteria (only women as CHWs, age range eligible, married/unmarried eligible, literacy or education requirements, etc.)
    - CHW selection process (elected by community, appointed by local health council, etc.)

- Compensation/incentives (volunteers vs. paid salary vs. paid stipend vs. linkage to economy-production such as selling goods as part of role)
- Training (how long is training, how often do CHWs receive further education, etc.)
- Supervision (how often, by whom, etc.)
- Supply chain/commodities (consistent availability to the CHW of the drugs and supplies needed for them to fill their role - e.g. vaccines, antibiotics, antimalarial drugs, oral contraceptive pills, ORS sachets, reporting forms, functioning respiratory rate timers, etc.)
- Catchment population (how many households per CHW)
- Breadth of tasks (vertical program vs. more general information, focused interventions/campaign, curative vs. preventive care etc)
- Support from/integration with rest of PHC system
- Community support/accountability
- Role of external partners (INGOs, donors)
- Sense of ownership of the program by host government
- Performance monitoring
- Task shifting
- CHW safety issues

5. ***Do you have recommendations in terms of managing this process? How can we increase the likelihood that this effort will influence the design/development/implimentation of CHW programs?***

6. ***Could you suggest any other individuals whom you considerable to be knowledgeable about CHW programs, broadly speaking?***

This input will be particularly useful to us at this point, as it will help us prioritize across the various issues we could be addressing. We expect this will be just the first of a number of contacts we will have with you through this process.

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Appendix C
Important Resources

Henry Perry

Important Resources

Here are some important resources that will be useful to program managers and policymakers.

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WEB-BASED RESOURCES

University Research Corporation and USAID. Decision-Making Tool for CHW Programs. (Designed to support national and local decision-makers through the design, planning, and scale-up of Community Health Worker programs.) 2014.

CHW Central (http://chwcentral.org/) is a global resource for and about Community Health Workers. Its vision is to improve and sustain a dynamic global web-based resource that promotes and engages CHWs, enables the wide and rapid sharing of information about CHW work and management, offers resources to help improve CHW programs and CHW

performance, and provides a forum for continuous and online discussions and exchanges among CHWs, public health professionals, and program managers in the United States and across the globe. It also has a listserv associated with it, along with a rich library of CHW resources.

The Community Health Systems Catalog (http://www.advancingpartners.org/resources/chsc) is an innovative and interactive reference tool on country community health systems. The catalog covers USAID-priority countries for population and reproductive health and countries with a demonstrated interest in community-based family planning. This resource is intended for ministries of health, program managers, researchers, and donors interested in learning more about the current state of community health systems.

The 1 Million Community Health Workers Campaign (http://1millionhealthworkers.org/about-us/) aims to expand and accelerate community health worker programs in sub-Saharan African countries, scaling them up to district, regional, and national levels to meet the health-related Millennium Development Goals. With the use of the latest communications technology and diagnostic testing materials, these frontline workers link the rural poor to the broader health care system of doctors, nurses, hospitals, and clinics. The website contains a rich array of resources and current events related to the campaign and CHW programs more generally.

In 2010, the CORE Group, Save the Children, BASICS, and MCHIP collaborated to produce *Community Case Management Essentials: Treating Common Childhood Illnesses in the Community; A Guide for Program Managers*. This guide is available at: http://www.coregroup.org/storage/documents/CCM/CCMbook-internet2.pdf.

In 2011, the USAID Health Care Improvement Project created the Community Health Worker Assessment and Improvement Matrix (AIM) toolkit to help ministries, donors, and NGOs assess and strengthen their CHW programs to improve their functionality. This toolkit is available at: http://www.urc-chs.com/uploads/resourceFiles/Live/CHWAIMToolkitcomplete.pdf.

In 2012, the US Government hosted an international conference to review the evidence related to CHW performance. Their report, entitled *Community and Formal Health System Support for Enhanced Community Health Worker Performance*, is available at: http://www.usaid.gov/sites/default/files/documents/1864/CHW-Evidence-Summit-Final-Report.pdf.