

**Por, Para y Con la Comunidad: A Comparative Analysis of Community Health Worker
Interventions in Latin America and the United States**

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I would like to dedicate this thesis to my mother, the most influential Community Health Worker in my life; and to my father, who has always encouraged my scholarship.

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ABSTRACT

Community health workers (CHWs) represent an invaluable link between individuals and health care in diverse regions around the world. They have been employed on varied scales since the 1800s to connect people with resources ranging from water sanitation to primary health care. A wide body of literature supports that CHW programs positively impact health outcomes. Many of the world's most pressing health issues including infectious disease, chronic illness, and access to primary care have been approached at the community level through the use of lay health workers. Studies from regions across the globe support the view that community-based approaches to these challenges are effective, and that CHWs are imperative to the success of such programs.

During the summers of 2012 and 2013, I worked closely with CHWs as an intern and fellow for the Peruvian branch of the non-profit public health organization Partners in Health (Socios en Salud) in Lima, Peru. This project stems from my experiences facilitating workshops for CHWs in urban Lima, where I observed community-based accompaniment in action. Through critical analysis of my work and that of others researching community health and development, I identify key features of CHW involvement that help explain the successes and setbacks of community health provision in Latin America and the United States. I ultimately conclude that CHWs are uniquely suited to bridge the gap between existing public health strategies and vulnerable communities.

CHWs improve health status and care delivery and are cost effective. Countless studies with rigorous methods have demonstrated the measurable advantage that CHWs provide towards addressing today's greatest health concerns. The main question I am left with is, why not here? The U.S. boasts an enormous network of tertiary care facilities working alongside clinics, but lacks support from within communities to connect the neediest patients with available services. In this project, I explore the potential of CHWs to improve the lives of those who are medically underserved by current strategies in the U.S. In the current era of health care reform, there has never been a more opportune time to integrate the proven CHW advantage into existing health infrastructure.

INTRODUCTION

This thesis builds upon my work with CHWs in Peru through examining my experiences in light of the community health literature. I critically consider the contributions of the many CHWs that I met and collaborated with in order to draw conclusions about the fundamental tenants of community health in action. To better understand and reflect upon my experiences working with CHWs in Lima, Peru, I compare and contrast what I saw, with the conclusions of current researchers in the field. Through critical analysis of my work and that of others researching community health and development, I identify key features of CHW involvement that help explain the successes and setbacks of community health provision. This exercise allows me to contextualize my personal understanding of the experiences of my informants. Furthermore, I explore the policy-relevant potential of CHWs to improve the lives of those who are underserved by current public health and care provision strategies. I ultimately consider my findings with respect to health care delivery in the United States in the current era of health care reform.

Rational

During the summers of 2012 and 2013, I had the great privilege of working with CHWs in Lima, Peru. During the summer of 2012, I interned for the Peruvian branch of the non-profit, global health organization Partners in Health (PIH). My interest in this internship with PIH's sister organization, Socios en Salud, stemmed from my academic path as a Spanish and Biological Sciences double major at Mount Holyoke, as well as my goals in the health care field as a future physician. I saw interning with Socios en Salud as an opportunity to improve my professional Spanish language skills, as well as observe large-scale public health interventions in

practice. Furthermore, Socios en Salud's extensive projects addressing tuberculosis (TB) and human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS) in Lima intrigued me as a pre-medical student majoring in the Biological Sciences.

PIH operates in twelve countries worldwide providing "a preferential option for the poor" through community-based interventions, research, and health systems improvement.¹ CHWs are central to the health initiatives of all PIH branches, and are the practical agents of PIH's community based accompaniment model.² PIH believes in accompanying patients in their illnesses, supporting people through what one PIH employee described as "a ministry of presence".³ This same employee claimed that this practice is PIH's distinct advantage in the field of development.

"That we [PIH employees] do not walk away when things appear impractical, unfeasible, or futile. We stay, to perhaps accept defeat again and again, if only to show the world that the people we serve are worth more than the steps they may gain or lose on their path to a more dignified life".⁴

This type of individualized service to the poor has only been possible through broad reaching CHW involvement within all branches of PIH.

I visited CHWs in their homes and communities in an effort to better understand their role as a Socios en Salud program intern in 2012. These visits quickly turned into investigative ventures, as I asked questions trying to identify the challenges they face with respect to

¹ The left wing, Catholic implications of this mission do not stem from religious affiliation, as PIH is a secular organization. However, one of the founders of PIH, Paul Farmer, frequently references his Catholic upbringing as having influenced his work on behalf of the poor and sick. That being said, Farmer has been quoted saying, "...intellectually, Catholicism had no more impact on me than did social theory." Farmer does, however, view liberation theology as an important guide on the path to achieving health care as a human right (see Farmer and Weigel 2013); Partners in Health. "Our mission." Partners in Health. <http://www.pih.org/pages/our-mission> (accessed October 10, 2013).

² Partners in Health, "Our mission."

³ Garrity, Phil. "Measuring the Immeasurable." The Huffington Post. http://www.huffingtonpost.com/phil-garrity/measuring-the-immeasurable_b_3600991.html (accessed March 28, 2014).

⁴ Garrity, "Immeasurable."

emergency care provision in their communities. Many of the CHWs I interviewed ran *botiquines*, small first aid posts funded through a collaborative relationship between these individuals and Socios en Salud. These *botiquines* were established by Socios en Salud to bring basic medicines and health support to communities far removed from formal health services in Lima. Socios en Salud's *botiquines* project interspersed these health posts amongst hillside and outlying shantytowns in the impoverished Lima district of Carabayllo.⁵ Although the majority of these posts were located in archetypal Latin American slum settings, two were run from the homes of CHWs living in Carabayllo's rural zone. A key piece of information I gathered from the many CHWs I met was that, in addition to their regular duties at the health posts, they were often called upon to provide urgent care to their neighbors and other members of their communities.

The vast majority of CHWs that I talked to had no formal first aid or emergency response training. Because of this, the assistance that these CHWs were able to provide in urgent care situations varied enormously. Some had been trained in first aid or had previously worked in a health care setting, but the majority relied solely on their community connectedness and past experiences to respond to such cases. Many of the CHWs I talked with shared heart-wrenching stories in which they had lacked the skills and resources to minimize the suffering of a neighbor. Many others recounted seemingly miraculous events in which they had leveraged their limited means to save life or limb. All of the CHWs I met were eager to learn more and wished for enhanced support from Socios en Salud and the municipality of Carabayllo to do so. Nearly all the CHWs referenced transportation and roadway inadequacy as barriers to effective health care delivery in their communities. These CHWs also suggested numerous practical skills that would help them better serve their communities such as, taking blood pressure readings, wound care,

⁵ Official project title: *Empoderamiento de la Comunidad en Promoción de la Salud en el Distrito de Carabayllo*; approximately 16 *botiquines* were established.

and safe patient mobilization.

Based on the information I collected on these visits, I prepared a syllabus and educational materials for a first aid and emergency response course that would respond to the concerns expressed by CHWs working in *botiquines* in Carabayllo, Lima. CHWs who worked with Socios en Salud in other capacities in the community were also invited to participate. For the two months that followed, I drew upon my knowledge and skills as an Emergency Medical Technician (EMT) to instruct a 6-week long emergency care course for a group of over 20 community health workers. I collaborated with two offices within Socios en Salud to run this course: DOTS-Plus Care⁶ and *Proyectos Sociales*. I worked closely with three nurses through these offices, two from DOTS-Plus Care and one from *Proyectos Sociales*. They helped me revise and improve course training materials, as well as shared their health care expertise to expand the scope of the course. I appreciated that these individuals also provided me with feedback regarding the accessibility of the course module to our target audience. They never hesitated to correct my Spanish, tell me a term was too technical, or add a slot for group discussions. Throughout the course, we facilitated many conversations with the CHWs that empowered them to compare and contrast traditional treatments and medically recommended approaches.

After an exciting summer working with Socios en Salud and CHWs, I felt like my work in Peru, and with CHWs, was just beginning. I had helped Socios en Salud identify a knowledge

⁶ DOTS-Plus care was the TB home care project office. DOTS stands for, Directly Observed Treatment Short-course. As outlined by the WHO, there are five elements of DOTS including, political commitment with increased and sustained financing, case detection through quality-assured bacteriology, standardized treatment with supervision and patient support, an effective drug supply and management system, and monitoring and evaluation system, and impact measurement. DOTS is an effective strategy to combat TB, but if poorly implemented can lead to multi-drug-resistant (MDR) TB or extremely drug resistant (XDR-TB). DOTS-Plus deployed nurses and CHWs to support patients at risk for abandoning treatment in urban Lima, a hot-spot for MDR and XDR –TB.

gap among the CHWs they worked with in Lima, but I wanted to help the organization expand the reach of such trainings to many more CHWs. I stayed in contact with my Socios en Salud mentors following my internship, and we discussed plans for continued collaboration. My mentors and I were excited about the prospect of bringing more student EMTs from Mount Holyoke to Lima to continue first aid and emergency response training for CHWs.

I identified the Davis Projects for Peace Foundation as a unique funding option that mirrored the values of my proposed efforts in Peru. With the help of Marielena Lima, a fellow Mount Holyoke student and EMT, I prepared a project proposal that emphasized the ways in which CHWs were uniquely suited to decrease the negative health effects brought about and compounded by structural violence. In my proposal, I argued that training CHWs in first aid would bring health services to groups with historically inadequate access to formal health institutions. I was ultimately granted a \$10,000 Davis fellowship in support of my plans to work with CHWs in urban Lima during the summer of 2013. I returned to Lima with my project partner and began implementing two courses simultaneously in two of Lima's poorest districts: San Juan de Lurigancho and Carabayllo. Our day-to-day work was made possible through extensive collaboration with Socios en Salud, specifically employees of their *Proyectos Sociales*, DOTS-Plus, and research offices.

Through the Davis fellowship, I was able to share experiences with over 60 health workers between the two districts. My project partner and I elected to use a portion of our fellowship funding to purchase comprehensive first aid kits for participating CHWs. We trained CHWs in both courses how to take vital signs and perform patient evaluations using their new materials. Our teaching strategy centered upon instructing material and facilitating group discussions regarding emergency care of the sick and injured in these communities. This

approach allowed for context-centered coursework that responded to the needs of the communities where these health promoters worked. Furthermore, this teaching model fostered skill and confidence building among CHWs, which promoted a central goal of our project: to teach CHWs to be first aid and emergency response instructors themselves. At its conclusion, my partner and I felt confident that our students would go on to improve the health of their communities through teaching first aid and assisting others using these skills. Following the course, participants seemed more empowered to provide health services and continue educating themselves and others. Overall, it is expected that our project will have lasting, local impact through the actions of the remarkable CHWs we had the honor of instructing.

Also during my time as a Davis fellow, I formed part of a qualitative research team within Socios en Salud's Community Based Accompaniment with Supervised Antiretrovirals (CASA) project (also referred to as *Proyecto CASA*). This project employed a randomized controlled trial (RCT) design, enrolling HIV patients living in central Lima who were receiving highly active antiretroviral therapy (HAART) at government health centers through the national HIV program and pairing half of its participants with a CHW. These health promoters provided twice-daily visits to supervise HIV therapy among this group, while the other half of participants managed their own therapy, serving as the control group.^{7,8} Clinical outcomes of both groups were compared and results indicated that CHW support is correlated with improved virologic suppression and HAART adherence, as well as a number of other positive health measures, as

⁷ Shin, Sonya, Maribel Muñoz, Jaime Bayona, Jhon Zeladita, Sam Slavin, Adolfo Caldas, Eduardo Sanchez, Miriam Callacna, Christian Rojas, Jorge Arevalo, and Jose Luis Sebastian. "How Does Directly Observed Therapy Work? The Mechanisms and Impact of a Comprehensive Directly Observed Therapy Intervention of Highly Active Antiretroviral Therapy in Peru." *Health and Social Care in the Community* 19, no. 3 (2011): 261-271.

⁸ Muñoz, Maribel, Jaime Bayona, Karen Finnegan, Sonya Shin, Cesar Bonilla, Jose Luis Sebastian, Jorge Arevalo, Christian Rojas, Miriam Callacna, Eduardo Sanchez, Adolfo Caldas, and Jhon Zeladita. "Community-based DOT-HAART Accompaniment in an Urban Resource-Poor Setting." *AIDS and Behavior* 14, no. 3 (2010): 721-730.

compared to patients with HIV who were not receiving this type of individualized support.⁹ The income levels and living conditions of the participants in this study and their matched controls indicated that they were poor and living in a resource poor setting. Therefore, despite inadequate health outcomes among the world's urban poor¹⁰ especially those affected by HIV, this study supported the idea that people living in environments of deprivation can achieve positive outcomes when provided the necessary support.

My research team was interested in the role of CHWs from the perspective of patients living with HIV receiving directly observed (DOT) HARRT from these community agents. We sought to describe the role of CHWs based on the perceptions of patients as reflected in interviews following 12 months of CHW treatment support. Our preliminary results suggested that CHWs play a complex role in the lives of the patients they accompany. All patients recognized that a fundamental part of the CHW role was to observe HIV therapy, specifically the medication regimen (“*[venía] para ver y vigilar que tome mi pastilla*”). Furthermore, the majority of patients described how CHWs provide various other forms of support, including emotional support, advice, and education.

Our results suggested that CHWs not only improve health outcomes among patients living with HIV who are impoverished, but also the social context of these patients. For example, patients described how CHWs expanded their social networks and connected them with local services like *Vaso de Leche*, a government program that provides daily food supplements to populations living in poverty and at risk for undernutrition.¹¹ Furthermore, patients recognized

⁹ Muñoz *et al.*, “DOT-HAART,” 721-730.

¹⁰ Throughout my project, I use the term “poor” to describe individuals living in settings and circumstances of economic and social deprivation.

¹¹ *Vaso de Leche*, literally meaning “Glass of Milk,” is a government sponsored nutritional assistance program. The program is carried out from community spaces, where community members distribute milk and breakfast foods paid for by the government to needy families free of charge.

that CHWs educated them about their disease, which can be seen as an important step towards limiting the spread of HIV within these central Lima *barrios*. Patients also discussed other health education they had received from their CHWs, such as the importance of cleanliness in the home, not eating food cooked by street vendors, and maintaining good personal hygiene.

Working with CHWs opened my eyes to health disparities in Peru, which increased my awareness of similar inequalities in the United States. For two months during the summer following my freshman year at Mount Holyoke (2011), I shadowed a physician and volunteered at the Knox County Clinic in Rockland, Maine. This clinic provides free primary health care services to patients ineligible for Medicaid but too poor to afford health insurance. This experience showed me a different side of health care in my hometown. However, only after interning with *Socios en Salud* did I realize the extent to which inequalities in health care delivery exist in the United States.

Reflecting on my experiences at the clinic after returning from Peru, I recognized parallels between how this clinic filled unmet health care needs and what CHWs were doing in Lima's poor urban settlements. Like CHWs, Knox Clinic employees (the majority of whom were volunteers) played a critical role in connecting vulnerable patients with services in their communities. For example, if a patient needed a prescription, clinic staff would connect this person with a prescription assistance program. Patients with outstanding ER bills would be counseled to apply for financial help through free-care/charity-care programs. CHWs in Lima similarly connected their patients with local safety nets.

Analyzing the role of CHWs from the perspective of patients as part of the CASA project allowed me to fully appreciate their impact on the lives of the disenfranchised and sick. Having witnessed the reach of PIH programs in Lima, Peru, I was interested to learn more about health

projects involving CHWs in other countries in the Americas as well as to further explore their role in Peru. Growing up in rural Maine, where issues of accessing health care and insurance insecurity are commonplace, I was eager to investigate programs employing CHWs in the United States—both current and past. This project builds upon my work in Peru by examining my experiences and contributions in light of the community health literature.

The Community Health Worker

The earliest modern forerunners of what are conceptualized today as CHWs originated in Russia in the 1800s and were called *feldshers*. These were local people who were trained as paramedics and midwives to assist physicians and provide services in rural areas that lacked medical practitioners. This cadre of paraprofessional health workers marked an important precursor to the CHW movement, as it was the first documented embodiment of state authorized, community-based primary care provision.¹²

The first model for large-scale CHW programming was established in China in 1949, preceded by local efforts beginning in the 1930s. These early efforts included the training of rural citizens to record epidemiological data, administer vaccinations, and provide basic health education and primary care.¹³ This work led to the establishment of national policy sponsoring what became known as the Barefoot Doctor program. Barefoot doctors were so named to emphasize that they performed medical services in addition to their role as farm workers.¹⁴ By 1972, the program had expanded such that there were an estimated one million barefoot doctors

¹² Perry, Henry, and Rose Zulliger. *How Effective Are Community Health Workers? An Overview of Current Evidence with Recommendations for Strengthening Community Health Worker Programs to Accelerate Progress in Achieving the Health-related Millennium Development Goals*. Baltimore: Johns Hopkins Bloomberg School of Public Health, 2012.

¹³ Perry and Zulliger, “Millennium.”

¹⁴ Newell, Kenneth W. *Health by the people*. Geneva: World Health Organization, 1975.

living, working, and providing medical services in China's rural agricultural communities.

In the 1960s, the inability of the “modern Western medical model” to reach the rural poor became especially pronounced in developing nations,¹⁵ and the idea of barefoot doctors began to take hold across the globe.¹⁶ As described by Kenneth Newell in the book *Health by the People*, published by the World Health Organization (WHO) in 1975, this time period was marked by both rapid development of effective health methods and inadequate public health spending, resulting in a strikingly unfair distribution of medical services. This combination proved deadly for the rural poor, and communities began rising up, “using health benefits as trigger mechanisms or consequential benefits of change”.¹⁷ Thus emerged the popular idea of CHWs, as developing nations across the globe began drawing upon local people to fortify health outreach to marginalized communities.¹⁸

Referred to as CHWs, community health advocates, lay health educators, community health representatives, peer health promoters, community health outreach workers, or *promotores de salud*, to name a few, these individuals connect people with services ranging from water sanitation to primary health care. Most commonly these individuals link patients with practitioners and promote health within community settings.¹⁹ Embedded within the CHW role in many settings is an element of social agency for the populations they serve and CHWs are

¹⁵ I use the term “developing” with regard to nations or groups of countries around the globe (“developing world”) to indicate lack of widespread industrialization or fundamental services such as water and sanitation systems in these settings. My purpose in characterizing nations as “developing” or “industrialized” / “developed” is to indicate how health challenges differentially impact people living in these countries. However, I understand that these terms are flawed as they often reproduce problematic hierarchies and stigmas, many of which stem from colonial or neocolonial roots. Also, by classifying a country as “developing” or “industrialized,” I do not mean to suggest that populations in either setting are immune from global health challenges.

¹⁶ Perry and Zulliger, “Millennium.”

¹⁷ Newell, “Health.”

¹⁸ Alfaro-Trujillo, Beatriz, Ana M. Valles-Medina, and Adriana C. Vargas-Ojeda. “Profiles, Perceptions and Motivations of Community Health Workers of NGOs in a Border City of US-Mexico.” *Journal of Community Health* 37, no. 3 (2012): 583-590.

¹⁹ Witmer, A., S. D. Seifer, L. Finocchio, J. Leslie, and E. H. O'Neil. “Community Health Workers: Integral Members of the Health Care Work Force.” *American Journal of Public Health* 85, no. 8 (1995): 1055-1058.

often seen as agents of change and defenders of community interests.²⁰

CHWs have been employed worldwide as a means to a wide variety of ends—providing services ranging from midwifery, management of childhood illnesses, preventative health education, case management of people living with non-communicable diseases (NCDs), to TB, HIV/AIDS, and malaria care. Although the popularity of CHW programs has waxed and waned over the past half century, there has been an overall increase in CHW programs worldwide, which are credited with significantly improving population health in varied settings.²¹ Programs involving CHWs are designed to improve access to health care, provide health education, prevent disease, and improve health indicators among particular populations such as low-income groups.²² In programs committed to these goals, CHWs can act as individual case managers, members of care delivery teams, educators, outreach or enrollment agents, or community organizers. The specific activities of CHWs within a given program may include one or more of these roles and are tailored to meet the needs of the program’s target population or community.²³

CHW functions and care delivery models center upon four main strategies of community health work: client advocacy, health education, outreach, and health systems navigation.²⁴ The way in which CHWs achieve these central goals varies greatly depending on the country and public health infrastructural context within which they work. Furthermore, their activities change based upon the sector in which they work, the services they provide, and the skills needed to

²⁰ Alfaro-Trujillo *et al.*, “Border City,” 583-590.

²¹ Bhutta, Zulfiqar A., Zohra S. Lassi, George Pariyo, and Luis Huicho. *Global Experience of Community Health Workers for Delivery of Health Related Millennium Development Goals: A Systematic Review, Country Case Studies, and Recommendations for Integration into National Health Systems*. Geneva: World Health Organization, 2010.

²² Office of Rural Health Policy. *Health Resources and Services Administration: Community Health Workers Evidence-Based Models Toolbox*. U.S. Department of Health and Human Services, 2011.

²³ Office of Rural Health Policy, “Evidence-Based.”

²⁴ Anthony, Stephanie, Rebekah Gowler, Gail Hirsch, and Geoff Wilkinson. *Community Health Workers in Massachusetts: Improving Health Care and Public Health*. Boston: Massachusetts Department of Public Health, 2009.

carry out such activities. Across the globe, CHWs have contributed to fields such as development, social services, and health care, performing tasks including advocacy, outreach, education, and clinical care. Skills often required of CHWs include communication and translation, cultural competence,²⁵ and education. CHWs have been found especially effective in improving health care delivery in rural areas and were been referenced as a vital resource by the U.S. Health Resources and Services Administration (HRSA) Office of Rural Health Policy in 2011.

Because rural communities are generally highly connected amongst themselves, CHWs provide a distinct advantage in these settings. As members of the communities they serve, CHWs can form lasting relationships with their patients, which can improve their effectiveness as liaisons between these patients and formal health services.²⁶ Furthermore, as community members themselves, CHWs have the know-how to connect their neighbors with helpful organizations and resources in the area. By bolstering the provision of primary and preventative care, CHWs have the potential to improve quality of health care and life in rural communities. This conclusion has been drawn in diverse rural settings worldwide.

As highlighted by Alfaro-Correa *et al.* in their 2011 paper, trained workers have been providing community health outreach in the United States since the 1950s. Federal policies in the United States such as the Migrant Health Act of 1962 and the Economic Opportunity Act of 1964 required this outreach and employed CHWs to provide services in many neighborhoods and migrant worker camps in the U.S. The first large-scale CHW program in the U.S. was implemented in 1968 as part of the Indian Health Service. The Community Health

²⁵ The term “cultural competence” has its origins in the social work and counseling psychology literature of the 1980s, according to a paper by Gallegos *et al.* published in 2008. There is still much debate about the term’s significance and how it should be operationalized. In my research, I use this term to refer to a practitioner or program’s ability to relate with a given patient or population within an appropriate and effective framework for that context. That is, in my work, cultural competence does not relate to racialized culture, but instead to local pressures that mediate social structures and dynamics in a given setting.

²⁶ Office of Rural Health Policy, “Evidence-Based.”

Representative Program aimed to bridge people with resources and to integrate basic disease etiology with local knowledge. Today, approximately 1,400 community health representatives work within Indian Health Service programs in over 560 American Indian and Alaska Native Nations. Although this program was the earliest widespread use of what we understand as CHWs today, many other versions of this figure predate this movement in the U.S., such as school nurses and home teachers.²⁷

CHWs initially had the most success in geographically isolated areas in the U.S. Later, however, CHWs began providing support to inner city communities and ethnic minority groups.²⁸ Some of this extended involvement stemmed from Clinton-era health initiatives that increased funding to community clinics and community-based, long-term care through Medicaid. Although the 1993 Health Security Act presented by the Clinton administration²⁹ was a legislative failure, the numerous smaller policy decisions made by the administration supported community based care and acknowledged the fundamentality of social factors to health outcomes.³⁰ CHW programs benefitted during this time, gaining noteworthy traction in the late 1990s.

In 1998, a survey of an estimated 10,000 CHWs in the United States identified seven core functions of these individuals. These functions consisted of: cultural mediation, informal counseling and social support, providing culturally appropriate health education, advocating for individual and community needs, assuring that people get the services they need, building

²⁷ Sanchez, George J. "Americanization and the Mexican Immigrant." In *Becoming Mexican American: ethnicity, culture, and identity in Chicano Los Angeles, 1900-1945*. New York: Oxford University Press, 1993. 87-107.

²⁸ Swider, Susan M. "Outcome Effectiveness of Community Health Workers: An Integrative Literature Review." *Public Health Nursing* 19, no. 1 (2002): 11-20.

²⁹ The Clinton administration attempted to implement comprehensive health care reform in 1993, which would have radically expanded insurance coverage and health care in the U.S., but the plan did not make it past Congress.

³⁰ Cutler, David, and Jonathan Gruber. *Health Policy in the Clinton Era: Once Bitten, Twice Shy*. Boston: Harvard University and Massachusetts Institute of Technology, 2001.

individual and community capacity, and providing direct services.³¹ All of these functions can be considered with respect to how they bring health services to excluded or otherwise isolated groups. Even so, these functions are hard to define practically; they are complex and dependent on numerous contextual factors including community dynamics. However, all of these roles require that CHWs be attuned to the needs of their communities and be socially connected enough to bring local services within reach of the neediest members of their communities.

Community health literature highlights the deep importance of this health worker-community bond with respect to CHW motivation and performance.³² Some of the overarching goals of CHW programs, include: decreasing health care costs, increasing health care access, strengthening the local economy, and strengthening the family and community.³³ These goals dovetail with the reasoning behind the CHW role; reaching the underserved can result in lower health care costs for patients and providers, along with stronger families and communities.

Methods and Operational Definitions

Because the term “vulnerable population” is broadly defined, I narrow the scope of this term as I use it in my study. Typically, describing populations as vulnerable refers to their association with factors such as: disability, age, gender, health, socioeconomic, and immigration status, geography, and incarceration, among others.³⁴ However, for the purposes of my investigation, I use “vulnerable population” to refer to groups of individuals who experience

³¹ Swider, “Effectiveness,” 11-20.

³² Razee, Husna, Maxine Whittaker, Rohan Jayasuriya, Lorraine Yap, and Lee Brentnall. "Listening to the rural health workers in Papua New Guinea – The social factors that influence their motivation to work." *Social Science & Medicine* 75, no. 5 (2012): 828-835; Robinson, Sheila A., and Donald E. Larsen. "The relative influence of the community and the health system on work performance: A case study of community health workers in Colombia." *Social Science & Medicine* 30, no. 10 (1990): 1041-1048.

³³ Swider, “Effectiveness,” 11-20.

³⁴ Centers for Disease Control and Prevention. "Minority Health." Centers for Disease Control and Prevention. <http://www.cdc.gov/minorityhealth/populations/atrisk.html> (accessed March 29, 2014).

limited access to institutionalized health care. Isolation factors I consider include: geography, socioeconomic status, and community connectedness and access to social networks. The populations I discuss rarely, if ever, have access to regular primary care visits or insurance coverage. Although these isolation factors are not always highlighted specifically in my work, the studies I consider in my analysis focus on groups affected by these factors.

References to race and ethnicity (or “ethnorace”) are presented in my research to reflect popular understandings of difference that are used in the literature, and are not meant to indicate any meaningful genetic variation between groups of people. Racial categories are created through “the process of ascribing somatic essentialized innate difference based on phenotype, ancestry, or culture to ethnoracial groups”.³⁵ Ethnoracial labels are context-dependent, unreliable, and imprecise markers for genetic differences—differential health outcomes ascribed to ethnoracial groups are rarely if ever the result of genetics, but rather institutionalized racism and other structural determinants of health.

My research covers a broad range of topics pertaining to CHWs, however, this breadth of subject matter centers upon information that is possible to be instrumentalized.³⁶ I am especially interested in CHW capacity to improve the health and quality of life of vulnerable individuals and communities in Latin America and the United States. Considering the merits of procedural and cooperative health promotion is helpful to situate the information I present in a policy relevant context. Procedural and cooperative health promotion approaches differ mainly with regard to their directionality. Procedural approaches refer to those initiatives that are “top down”

³⁵ Paradies, Yin., M. J. Montoya, and Stephanie M. Fullerton. "Racialized Genetics And The Study Of Complex Diseases: The Thrifty Genotype Revisited." *Perspectives in Biology and Medicine* 50, no. 2 (2007): 203-227.

³⁶ Here, I use the term “instrumentalized” to mean possible to be put into action, practically. That is, I focus my analysis on CHW program strategies and characteristics that could be applied broadly in a public health context.

in nature.³⁷ The recommended vaccination schedule published by the Centers for Disease Control (CDC) is an example of a procedural public health measure in the United States. As argued by Warr *et al.*, procedural approaches place minimal emphasis on local contexts. This presents few negative repercussions when considering across the board measures such as disease prevention through vaccination. However, applying a procedural approach presents little advantage if its implementation becomes difficult or impossible due to local factors in resource poor settings.

In most cases, a cooperative approach must complement procedural health initiatives in order for them to be successful. Cooperative approaches work from the “bottom up,” considering the challenges of everyday life within a particular setting.³⁸ As mentioned, this becomes particularly important when implementing public health measures in areas with limited resources. Furthermore, cooperative approaches are fundamental to the success of health promotion in areas that are resource poor because the inhabitants of such regions are prone to additional isolation factors that decrease their access to health care. In these situations, the interface between public health policies, physicians, and patients is insufficient to provide all care that is needed. Warr *et al.* recognized that health promotion at the community level lies between the professional and community spheres. Taking this into account, successful health measures in these settings must then include agents from within communities to ensure that care reaches all needy parties. Given the community knowledge and embeddedness that CHWs have been shown to offer, I propose that the CHW role can be used to effectively negotiate the space between institutionalized health care providers and community members.

³⁷ Warr, Deborah J., Rosemary Mann, and Margaret Kelaher. "A Lot of the Things We Do...people Wouldn't Recognise as Health Promotion': Addressing Health Inequalities in Settings of Neighbourhood Disadvantage." *Critical Public Health* 23, no. 1 (2013): 95-109.

³⁸ War *et al.*, "Inequalities," 95-109.

Chapter Outline

My personal experiences working with CHWs have shown me that they are a complex group of individuals, and researching their role in the literature has further emphasized this reality. CHW profiles vary depending on local factors such as cultural practices and educational access, as well as public health infrastructural context. The profile of CHWs becomes more complex when regional and global differences are considered. However, they are not without similarities and I will highlight important shared characteristics of this varied group of individuals later in this text.

In addition to describing CHW profiles in Latin America and the United States, I explore CHW motivations to serve their communities. Understanding the varying roles and guiding principles of CHWs lays the groundwork for my investigation of their impact among vulnerable populations. As many CHWs working worldwide volunteer their time or are low-paid employees, I investigate what factors, other than monetary ones, motivate CHWs to seek to improve public health. Many of the CHWs that I met while working in Lima were highly involved with their local churches. These individuals described their role as CHWs in their communities as part of “serving thy neighbor” and living as “a good Christian”.³⁹ I consider religion as one of many interesting and strong factors that motivate CHWs to perform selfless labor for their communities. I also delve into discussions of CHW payment models, as this is an important topic in recent community and public health literature.

In my analysis, I consider specific features of programs involving CHWs that contribute to their success. For example, I investigate whether compensation models affect CHW program

³⁹ Translated and paraphrased from an interview with a CHW from San Juan de Lurigancho, conducted by Jenna Gill-Wiehl in 2013. This quote was shared at a presentation of her study results to a group of Socios en Salud employees and volunteers.

effectiveness. Furthermore, I touch upon CHW connectedness as I address questions surrounding CHW profiles with respect to the communities they serve. I analyze the health outcomes and evaluations of patients cared for by CHWs in order to tackle questions such as whether or not CHWs who live in target communities perform better than those from outside areas. It is widely assumed that CHWs must share characteristics such as language and economic status with their patients in order to achieve public health goals. However, there is also a large body of work describing the professional capacity of CHWs, which could have implications for their social positioning as compared to their patients as well as their professional development. As health outcomes are intrinsically related to the level of access to community support networks, I also consider how CHWs connect their patients with local safety nets.

My research considers the complexity of CHWs themselves, as well as the community health programs that employ them. Through identifying features of CHW strategies that have been effective in bringing health services to marginalized groups, I situate this information in current health care policy debates and solutions. I draw upon varied sources but am most concerned with that which is possible to be instrumentalized, that is, CHW discourse that is relevant to public health policy decision-making. I ultimately argue that CHW programs are an effective use of procedural and cooperative approaches, and suggest that CHWs should be integrated into health systems so that they may navigate within and between formal health infrastructure and communities.

CHAPTER 1: The Peruvian Profile

“If you've come here to help me, you're wasting your time. But if you've come because your liberation is bound up with mine, then let us work together.”

- Australian Aboriginal Elder Lilla Watson

The purpose of this chapter is to outline community health infrastructure and delivery in Peru, with a special focus on the province of Lima. Overall, this chapter provides the base for chapters two and three, where I critically consider CHW effectiveness and contributing programmatic features, respectively, in Latin America and the United States. This foundational chapter begins with an overview of the Peruvian health service and infrastructure. In this section, I describe how, and where, CHWs fit into the Peruvian health provision strategy. From there, I move on to describe the past and present profile of CHWs in Peru, focusing on how they respond to community needs and context dependent factors. I compare findings published in a 1986 article about a CHW program in northeastern Peru established in the 1970s with my observations from working with CHWs in Lima during the summers of 2012 and 2013. The following section of this chapter focuses on gender in the context of community-based health care delivery and outreach. There, I explore the groundbreaking work of Katy Jenkins, who writes about volunteerism on the part of poor women in urban Lima, Peru. I compare and contrast Jenkins' findings with what I witnessed while working in Lima with female CHWs who were involved with *Socios en Salud* as well as Peruvian Ministry of Health clinic outreach. This is followed by a discussion of CHW training and education historically and today.

Later in chapter one, I discuss society and culture, program payment models, and CHW motivations to work in service to their communities. In this part of the chapter, I consider the experiences of CHWs who are currently providing services in urban Lima, Peru. Popular cultural values and belief systems contribute to limited professionalization of the CHW role in Lima, while foreign non-profit groups normalize volunteerism on the part of CHWs. Ministry of Health

clinics do not incentivize CHWs monetarily or otherwise, while some non-governmental organizations (NGOs) are known to offer food or stipend incentives. Since professional status and monetary gain are not significant aspects of the CHW role, I consider other factors that drive CHWs living in urban Lima to provide health services and outreach within their communities.

The Peruvian Health Service and Health Provision Context

Although Peru is considered an upper middle income country by the World Bank, 7.8 million Peruvians still live below the poverty line of which 1.8 million are living in extreme poverty.⁴⁰ Peruvians living in rural regions are disproportionately poorer than their urban counterparts. However, Lima represents a special case. Although it is estimated that only 16.6 percent of Lima's population lives in poverty (as opposed to approximately 53 percent in any given rural area), almost 10 percent of those living below the poverty line are living in extreme poverty.⁴¹ These statistics reflect the enormous gap between the rich and the poor in Peru's largest urban center—a reality that is visually impossible to miss in the fourth largest city of the Americas.⁴²

The lack of formal health, sanitation, trash removal, and other services in poor, urban communities in Lima is due in large part to the informal structure of these neighborhoods. The poorest parts of in Lima are home to vast shantytown settlements, which are also the areas experiencing the highest burden of HIV, TB, and parasitic infections. These *asentamientos humanos*, or *pueblos jóvenes*, are made up of informal shelters built from a range of materials

⁴⁰ Andean Airmail and Peruvian Times. "Peru's National Poverty Rate Falls to 25.8 Percent." *Peruvian Times* (Lima), May 9, 2013; As defined at the 1995 World Summit on Social Development, extreme poverty is "a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information."

⁴¹ "Lima." MEDLIFE. <http://www.medlifeweb.org/where-we-work/lima.html> (accessed April 4, 2014).

⁴² In 2007, the population of Lima, Peru was 8.5 million. Migration to the city has only increased since that time and it is now estimated that Lima is home to nearly 10 million people.

and exist on a scale from highly inadequate to relatively sturdy residences. New building and habitation occurs in these settlements without urban planning or formal property titles. Steady migration of poor Peruvians to Lima has greatly increased the size of these *pueblos jóvenes*. The Peruvian government has successfully brought sanitation and other services to many of these communities, but bringing these resources takes time. As new settlements are blooming over Lima's hillsides and older settlements are expanding, government supply has a hard time keeping up with demand. This leaves people in many parts of Lima without basic services for years.

These settlements are heavily affected by migration—movement into the settlements from rural areas of Peru continues to increase, while families also move from shantytowns into formal developments. My experience living and working in Carabayllo showed me that migration to *los pueblos jóvenes* in Lima was rarely the ultimate goal of families leaving rural parts of Peru. One Peruvian co-worker of mine described the migration of poor Peruvians from *provincia* to Lima as analogous to poor immigrants entering the United States—instead of the “American dream,” these people were searching for the “Lima dream.” The centralization of services that has occurred in Peru is striking, to the point where all major educational, health care, and business organizations are located in Lima, with nothing more than satellite locations elsewhere in the country.⁴³

The vast majority of the Peruvian population receives health care coverage through the public sector, while a small percentage receives coverage and services from private health institutions.⁴⁴ Peru's public health service infrastructure consists of subsidized and employment dependent branches. The subsidized branch covers health services for uninsured citizens through

⁴³ Lloyd, Peter Cutt. "Peru: land and people." In *The "young towns" of Lima: aspects of urbanization in Peru*. Cambridge Eng.: Cambridge University Press, 1980. 17-33.

⁴⁴ Jenkins, Katy. "'We Have a Lot of Goodwill, but We Still Need to Eat...': Valuing Women's Long Term Voluntarism in Community Development in Lima." *Voluntas* 20, no. 1 (2009): 15-34.

the Seguro Integral de Salud (SIS)—health care for this population is provided at a network of Ministerio de Salud (MINSA) health facilities. Salaried workers in the formal sector receive insurance through EsSalud and EPS, a combination of public and private coverage. The private sector can be further broken down into for-profit and non-profit branches. The for-profit private health sector includes non-governmental insurance providers, clinics and hospitals, and laboratory service operators, among many other specialized and general services and facilities. Although it serves primarily the wealthiest part of the population, the private sector is an important provider of ambulatory and hospital services on a fee for service basis for less affluent citizens. The non-profit branch includes NGOs, social action organizations, and some churches that provide medical services.⁴⁵

The majority of Peruvians receive health coverage and care from public sources. Reflecting this reality, MINSA accounts for 81% of all health service infrastructure and 87% of Primary Health Care centers.⁴⁶ EsSalud, funded publicly and by formal sector employers and employees, consists mostly of hospital services in urban areas, and often duplicates existing MINSA services. This allows members of the formal employment sector to bypass crowded MINSA establishments. Health establishments operated through MINSA include hospitals, health centers (*centros de salud*), and health posts (*puestos de salud*). Government sanctioned CHW programs, virtually all of which are volunteer-based, are generally operated out of *centros* and *puestos de salud*. To execute many of their community health projects and studies, Socios en Salud contracts a subset of CHWs serving a particular health region through MINSA establishments to perform additional patient accompaniment tasks.

⁴⁵ Jenkins, “Goodwill,” 15-34.

⁴⁶ Jenkins, “Goodwill,” 15-34.

Past and Present: CHW involvement in Peru

CHWs have been involved in health care provision and outreach in Peru for nearly half a century. In an article by Hewett and Duggan published in 1986, a group of “health promoters” are described as having played an instrumental role in improving the health of isolated tribal peoples in the northern Amazonian regions of Peru. Specifically, a health promotion program was implemented in support of the Aguaruna tribe. The health promoter profile illustrated in this article is surprisingly similar to the health worker profiles I observed while working in urban Lima, Peru in the summers of 2012 and 2013. First, promoters were described as being elected by their local communities. This type of selection is mirrored in the current selection process of CHWs in Lima, where it is common practice for local health centers to send out a call to the surrounding community for volunteers interested in improving health among their population. Generally, those who volunteer and are chosen for these positions are leaders in their communities and have been living in the catchment area of the health center for more than five years.

Although health centers in urban Lima rarely provide monetary or instrumental support to their health workers, when NGOs enlist their help for directed community projects it is common practice to incentivize CHWs. For example, the prominent NGO for which I worked, *Socios en Salud / PIH*, offered collaborating CHWs monthly *canastas*, food baskets containing staples like rice, beans, and cleaning supplies. In the article about health workers in northern Peru during the 1970s, health workers were incentivized with housing and crop maintenance assistance. These northern Amazonian communities also built small health posts for the health workers, as well as set aside funds for medicines. I witnessed similar instrumental support for CHW involvement while working with *Socios en Salud*. The NGO’s social projects office orchestrated the

construction of *botiquines*, small wood-framed and aluminum-roofed health posts, for health workers supporting outlying shantytown communities in Lima. Socios en Salud also collaborated with a local non-profit medicine supplier to bring low-cost medicine to these *botiquines* and the underserved population in its vicinity.

The health promoters described in this article worked four hours per day attending to patients and were always available to the community in cases of emergencies. My main involvement while working with Socios en Salud was providing first aid and emergency response training to CHWs. I was motivated to facilitate this training due to a marked need for emergency care providers in outlying shantytown communities as expressed by local CHWs. CHWs told me that they were often called upon to aid in emergency situations, but lacked the skills necessary to aid effectively. Hewett and Duggan explain that health promoters in these isolated Amazonian communities received training to provide both routine and emergency care—something that was considered necessary in order for these individuals to successfully carry out community health efforts. To ensure these competencies, these health promoters were initially required to attend a three-week long basic training class and then a two week long refresher course each year.

Community-Based Accompaniment: Women's Work?

One of the most interesting aspects of Hewett and Duggan's article is its discussion of female involvement in health promotion in this part of Peru during the 1970s. A Spanish development group pioneered the health program described in the article in the early 1970s, but by 1983 only two female health promoters has been elected out of some 92 participating communities. Noting the lack of female health promoters working in these northern Amazonian

communities, the program organized training for a group of 20 women from this area who were later elected to health promoter positions. After two years, four of these promoters had left their positions; some left when they were married. At this time, the remaining health promoters offered suggestions for the continuation of female health promoter programming. Their suggestions included: training more female health promoters, electing their own female health supervisors, and funding a special mother-child health program. The authors describe how female health workers provided a unique advantage in improving the health of their communities, because many common problems pertained to women and children, and women often felt uncomfortable approaching a male health promoter with these issues.

It appears that involving women in health promoter programs in this part of Peru, starting in the 1980s, had an important impact on community health as well as women's progress. One notable change that occurred in communities that switched from a male health promoter to a female health promoter was that women in these communities began requesting that health promoters be present at their deliveries. This was an interesting shift, as there was no tradition of birth attendants among the Aguaruna people living in northern Peru. The article describes that following this initial positive response to female health promoters, more women were trained and that trainings were geared towards older women with children. A female health supervisor was also employed to advise this growing group of female health promoters.⁴⁷

I found this history particularly interesting because of its stark contrast with my experience working with CHWs in urban Lima in 2012 and 2013. Firstly, all of the participants of the first aid and emergency response courses I facilitated were female. All but one of the CHWs described by patients in *Socios en Salud's* CASA project exploring the role of CHWs

⁴⁷ Hewett, N. C., and F. E. Duggan. "A primary health care project in the Amazonian jungle of northern Peru." *BMJ* 293, no. 6550 (1986): 805-807.

from the perspective of patients were female. Furthermore, all of the field supervisors of CHWs with whom I interacted, both within and outside of Socios en Salud, were female.⁴⁸

However, there are other factors to consider regarding gendered involvement in community health work. For instance, there are differences in social perceptions of certain roles or professions depending on region. Health advocacy roles are one such example. In more rural parts of Peru, men are more active in the community health arena and view their involvement as a form of economic and social advancement. In areas such as Lima, however, low-paying or volunteer health work pales in comparison to the more lucrative employment options available to men in urban settings. Jenkins found that in the NGO she researched, although both men and women began working as CHWs, women were the only long-term holders of this position. According to Jenkins, male CHWs in Lima were interested in moving into paid positions within the NGO that had hired them, and when it became apparent that this was not an option, they discontinued their health promotion role.

There are also fewer job opportunities in Lima for poor women than there are for men in similar economic situations. For example, the informal moto-taxi and slightly more formalized taxi industries are almost completely male dominated—seeing a female *moto-taxista* or *taxista* is extremely rare in the streets of urban Lima. Another service industry dominated by men is the auto repair arena. Female dominated industries, such as the beauty and laundry, do not compare in scale to predominantly male businesses. Overall, it appears that the gendered nature of health advocacy work depending on region in Peru precipitates the high level of female involvement in community health work in urban settings, as well as greater male participation in *provincia*.

⁴⁸ I had been told, however, that health promoters *en provincia*, outside of greater Lima, were predominantly male.

CHW Training and Education

I was intrigued by Hewitt and Duggans' discussion of health promoter training. I was impressed to see that health promoters in the program discussed were provided with extensive training that included instruction of advanced topics. For instance, health promoters were encouraged to engage in discussions about management of local problems and were taught medical skills such as how to give injections and perform patient examinations. The agency that health promoters were given in this instance contrasts with some of what I saw while working with CHWs in Lima. First of all, CHWs working in Lima (in conjunction with health centers or NGOs) do not always undergo a standard training process. Instead, CHWs often receive project specific training usually related to a specific Lima district or subset of districts. For example, CHWs assisting *Socios en Salud* in their CASA project took a class about HIV transmission and treatment in central and east Lima, and those working with TB patients as part of DOTS-Plus Care were educated about TB and the side effects of TB treatment. This training was important for the success of these interventions, but did not encompass all of the skills that CHWs use or might need to use on a day-to-day basis in their communities.

In my experience, CHWs generally desired more education than they were provided. Whether CHWs were supporting NGO projects or health center initiatives, or both, CHWs often expressed interest in acquiring more health care related skills. As an example of this, I spoke with a number of CHWs who asked for training on how to give injections. Multidrug Resistant (MDR)-TB patients require daily injections as part of their treatment per the Peruvian National TB protocol and CHWs supporting these individuals often assist with their injections despite their lack of formal training. *Socios en Salud* has trained CHWs how to give injections in the past, but never with the authorization of Peruvian Ministry health centers or *redes de salud* (local

health networks). Socios en Salud employees expressed ambivalence about teaching these skills, recognizing on one hand that they were acting against the wishes of the *Ministerio*, but also feeling a duty to teach because of their understanding that CHWs would continue to assist their patients with injections with or without proper instruction. The assistance with patient injections by CHWs filled a clear need in low-income communities served by resource-poor health centers. However, Ministry of Health employees were clear with CHWs that such advanced skills must be reserved for formally trained health professionals like nurses or *técnicas*.

Although CHWs provide needed support to patients in poor Lima districts on behalf of government funded clinics, especially to patients with limited mobility, they are barred from training considered specific to professional roles. This is likely affected by the job insecurity experienced by low-level professional workers in the health arena. *Técnicas* represent the lowest level health professional in the Peruvian health system, similar to Emergency Room technicians (ER-techs) or Certified Nurses Aides (CNAs) in the U.S. Given this status, *técnicas* earn low wages and live in conditions precariously close to poverty. *Técnicas*, thus, are understandably unwilling to relinquish any of their “special skills,” like giving injections, which result in their formal employment. One of my students in the impoverished district of San Juan de Lurigancho started volunteering at a government health center as a CHW and later became a *técnica*. This student represented one of the rare cases in which a CHW was able to successfully join the professional ranks of the health center she originally served as a volunteer.

Society and Culture

Jenkins explores the complex hierarchies that “grassroots women,” CHWs prominently among them, must navigate in the community development sphere in her article, “Exploring hierarchies of knowledge in Peru: scaling urban grassroots women health promoters' expertise.”

Jenkins supports the idea that health promoters are “grassroots professionals,” experts in the field of health promotion in resource-poor settings. However, Jenkins recognized that despite their unique perspective and understanding of vulnerable populations, CHW knowledge is often undervalued in the development arena. According to Jenkins, this undervaluation stems in large part from the increasingly professionalized climate of development efforts. Jenkins highlights that currently, in the field of development, experts are assumed to be outsiders that must be called on to propose solutions to development challenges. In my experience, these experts usually have advanced degrees such as a Masters in Public Health (MPH). However, CHWs have extensive practical skills and experience that arguably supersede the qualifications of such “experts” to institute change on the local level in such settings.⁴⁹ Because CHWs lack credentials, their skills often do not lead to income generation and are not valued appropriately in the development arena.

Jenkins explores the barriers to professionalizing health promoters in Lima from the perspectives of race, class, and education. By discussing the history of poor medical practice in Lima and throughout Peru, Jenkins highlights some of the negative connotations associated with health professionals. From mass sterilization campaigns in the 1990s during the Fujimori regime,⁵⁰ to widespread maltreatment of patients at underfunded public clinics, Peruvians have good reason to be wary of health professionals. However, despite this wariness, there are still indisputable and recognized advantages to becoming a professional.

⁴⁹ Jenkins, Katy. "Exploring Hierarchies of Knowledge in Peru: Scaling Urban Grassroots Women Health Promoters' Expertise." *Environment and Planning* 41, no. 4 (2009): 879-895.

⁵⁰ In 2002, the BBC reported on more than 200,000 people in rural Peru being pressured into being sterilized by the Peruvian government under former President Alberto Fujimori. According to Fernando Carbone, the health minister at the time, the government provided misleading information, incentivized vulnerable citizens with food, and threatened to fine families if they had more children. It was found that poor, indigenous people living in rural regions of Peru were the main targets of the sterilization campaign until 2000, when Fujimori fled Peru amid allegations of corruption.

The majority of the health promoters that Jenkins described in her article held some secondary education, with a minority holding only primary education. This was also the norm among the group of CHWs with whom I worked in Lima's *pueblos jóvenes*. However, during my time in Lima I met two CHWs who were becoming *técnicas de enfermería*. One CHW told me that her daughter, inspired by her mother's work as a health promoter, was in medical school. These examples illustrate that although CHWs have traditionally held minimal education, there is a movement among them to professionalize—especially in a generational sense.

Although race and ethnicity are generally not openly discussed in Peru, nuances of skin tone and class color most spheres of Peruvian culture.⁵¹ The professional debate is no exception and it has been suggested that there is an inherent “whitening” associated with gaining professional status.⁵² Becoming a professional allows individuals to enter the middle class, which has, due in large part to Peru's colonial past, historically been associated with having lighter skin.⁵³ This “whitening” with professional status is often socially constructed and does not correlate with actual skin color. Most Peruvians living in urban centers can be described as *mestizo*, but education differentials continue to reinforce “shades of ‘whiteness’ underlying a class system in which middle and upper classes are perceived to be ‘whiter’ than lower class individuals despite often having similarly mixed racial heritage”.⁵⁴ That is, behavior and demeanor are conflated with skin color. Professionalizing the CHW role would allow this group of typically poorly educated, urban *mestiza* women to be perceived as middle class and reap the social benefits of this perception, such as increased respect and authority, however problematic

⁵¹ Jenkins, “Hierarchies,” 879-895.

⁵² Jenkins, “Hierarchies,” 885.

⁵³ Radcliffe, Sarah A. "Five Centuries of Gendered Settler Society: Conquerors, Natives and Immigrants in Peru." In *Unsettling Settler Societies: Articulations of Gender, Race, Ethnicity and Class*. London: SAGE publications, 1995. 188-207.

⁵⁴ Jenkins, “Hierarchies,” 885.

this may be.

It is important to consider, however, that because the vast majority of CHWs in urban areas are female, professionalizing their role might feminize and consequently devalue community health work. This happened in the United States with respect to professional positions such as bank teller and teacher, which were once considered middle class, white-collar jobs and as such were male dominated. After these roles were feminized, they ultimately lost their white-collar status in a historical process that arguably explains why these positions are underpaid and undervalued today.⁵⁵

In Peruvian culture, there is an interesting practice of using professional titles to denote superiority.⁵⁶ The term *doctor/a* is often used by people of lower status to address not only medical and academic professionals, but also people in positions of authority regardless of their qualifications. I experienced this practice while teaching in Lima, where I noticed that my students would often address me as *doctora*. I would correct them, explaining that I was a *paramédica* and did not have a medical degree. Despite my corrections, students continued to refer to me as *doctora*, and other than continuing to correct them, I did not place much weight on these interactions. I did not realize at the time that this practice had less to do with my schooling and more to do with my social positioning as course instructor. Furthermore, I wonder if this behavior was also impacted by my light skin color and identity as a college student visiting from the United States. Perhaps my association with academia was enough for my students to presume that I held a professional position.

Payment Strategies

⁵⁵ Preston, Jo Anne. "Occupational gender segregation Trends and explanations." *The Quarterly Review of Economics and Finance* 39, no. 5 (1999): 611-624.

⁵⁶ Jenkins, "Hierarchies," 879-895.

In her article entitled “We have a lot of goodwill but we still need to eat...’: Valuing Women’s Long Term Volunteerism in Community Development in Lima,” Jenkins addresses additional challenges that CHWs face in Peru’s largest urban center. Specifically, Jenkins delves into issues of economic remuneration for CHWs who contribute their time and energy to community health projects largely on a volunteer basis over extended periods of time. Jenkins highlights that women’s voluntary labor is widely considered an integral part of the “global development architecture.” However, Jenkins questions whether this assumption is sustainable, considering that many of these women are living in poverty themselves, and as such have many other responsibilities related to their survival and that of their offspring.

As mentioned previously, CHWs form the practical arm of the many PIH initiatives worldwide. PIH began working in the shantytowns of Carabayllo, Lima, Peru in the early 1990s and Socios en Salud gained independence as a sister organization of PIH shortly thereafter. From their earliest project, providing MDR-TB treatment to 12 patients in the outlying district of Carabayllo, Socios en Salud has worked closely with CHWs. PIH as a worldwide organization claims to support CHWs as professionals, including fair pay as part of their description of this support.⁵⁷ The majority of CHW involvement with Socios en Salud is, and has been since the 1990s, on a voluntary basis. As described earlier, Socios en Salud’s common remuneration practice today consists of providing CHWs with monthly *canastas* filled with food and common household items, such as soap or laundry detergent. The success of Socios en Salud programming involving CHWs in Peru has, thus, been predicated on the low cost/high benefit model of poor urban women volunteering to care for their communities—a well established practice in the development arena.

⁵⁷ Partners in Health. "Community Health Workers." Partners in Health. <http://www.pih.org/priority-programs/community-health-workers/about> (accessed April 1, 2014).

Although CHWs collaborating with Socios en Salud in Lima receive a generous *canasta* each month, they are still, for all intents and purposes, volunteering their time because they are not being paid a wage based upon the services that they provide. Although I find this practice problematic, it is likely a result of economical strategizing on the part of PIH in Boston. The majority of PIH sister organizations worldwide operate clinics and/or hospitals in the communities that they serve. Socios en Salud is unique in its project-centered approach to health interventions. Because of this, it is likely that PIH prioritizes the monetary reward of Socios en Salud associated CHWs less than CHWs operating within a PIH hospital or clinic network.

Jenkins offers a comprehensive overview of the present health care climate in Peru, in which she highlights that many of the poorest citizens lack access to medical attention due to the privatization of many health services, such as ambulance. It is this health care environment that necessitates health care provision by and within communities. As poor families struggle to access care, poor urban women increasingly become the main health care providers for their families and communities. This is impacted by the gendered assumption that women are “natural caregivers,” and they should therefore be responsible for caring for their whole communities. NGOs have bolstered this type of health care provision in poor Lima communities, placing CHWs as the cornerstone of their community health initiatives. This reinforces that idea that community care is the responsibility of women and, to a certain extent, exploits gender inequality in Peruvian culture.

NGO community health involvement in urban settings in the developing world, such as Lima, Peru, has stemmed in large part from problematic health care provision strategies relying on privatized systems. This also is a result of global movement away from public health initiatives and increased emphasis on the bottom line of public health spending—minimizing per

capita health investment.⁵⁸ These systems render health care inaccessible to a large portion of the population and lead to extensive health care provision by entities such as CHWs. Jenkins critiques the long term voluntary work of poor urban women as a result of increased privatization of health services. The CHWs that Jenkins described in her article provided formal services and worked long hours meeting unmet health care needs in urban Lima. However, Jenkins described how, although these CHWs dedicated time, energy, and skills to their work in the community, they receive a “tip,” not a living wage. This type of arrangement reinforces the assumed voluntary nature of community health promotion. The *canasta* approach to remuneration used by Socios en Salud similarly deemphasizes the professional nature of CHW, thus contributing to and complying with the volunteer status of CHWs in Lima, Peru.

South America has a long history of informal health practitioners, such as shamans and traditional birth attendants, meeting the health care needs of isolated populations.⁵⁹ Furthermore, since the 1980s, women’s activism in the community development sphere in Latin America has propelled numerous development initiatives.⁶⁰ However, despite romanticized outsider perspectives of selfless community organizing for political and social reform, women’s involvement in the public arena has primarily been a “practical response to their situation of poverty and deprivation”.⁶¹ Volunteer community health provision by poor women in Lima stems from this history, and NGOs have perpetuated their “triple burden” by integrating them into the global development architecture.⁶² Jenkins also suggests that attitudes surrounding the remuneration of CHWs depend, in part, upon cultural understandings of “women’s work.”

⁵⁸ Mukherjee, Joia. "Reducing Health Disparities: Changing the Public Health Paradigm." Lecture, Controversies in Public Health from Mount Holyoke College, South Hadley, March 8, 2013.

⁵⁹ Jenkins, “Goodwill,” 15-34.

⁶⁰ Jenkins, “Goodwill,” 17.

⁶¹ Jenkins, “Goodwill,” 17.

⁶² Jenkins describes the “triple burden,” community, reproductive, and productive, of poor women in the global south in her 2009 paper (“Goodwill”).

Jenkins suggests that because the vast majority of CHWs in urban Lima are female, there is an assumption that they are not the “breadwinners” of their families.

CHWs collaborating with NGOs in low-income settings are often extended a small financial incentive or material benefit by the organization, as exemplified by the *canasta* model, which they and their families come to rely on given their economic situation.⁶³ Baines argues that unwaged labor in social services operates “along a continuum with ‘compulsion’ at one end and ‘coercion’ on the other”.⁶⁴ The case of female CHWs in urban Lima serves as an example of the continuum described by Baines in practice: cultural expectations of caring and a legacy of women’s activism provide the compulsion, while small benefits offered by NGOs coerce.

Many NGOs operating in Latin America, *Socios en Salud* being no exception, rely on women’s long-term, volunteer-based commitment to community development. This model assumes that CHWs are able to donate their time and energy extensively, however, the reality is that undue burden is placed on many women living in the developing world. Despite the obvious problems with this model, the idea that CHWs will work as volunteers has been promoted since the 1978 Alma Ata Declaration. At this time, volunteerism on the part of impoverished community members appeared the only means to create measurable change in the developing world with extreme cost effectiveness.⁶⁵ Considering this history is critical to understanding why CHWs are widely unpaid despite their measurable impact.⁶⁶

CHW Motivations

⁶³ Jenkins, “Goodwill,” 18.

⁶⁴ Baines, Donna. “Caring for nothing: work organization and unwaged labour in social services.” *Work, Employment and Society* 18, no. 2 (2004): 267-295.

⁶⁵ For the purposes of my project, the term “cost-effective” refers to when preventative health spending is less than palliative care related health spending. I also use this term to highlight strategies that result in less health dollars spent than current standards, whether preventative or palliative.

⁶⁶ I discuss CHW effectiveness in quantitative terms in chapter two.

Despite the impressive amount of time and service that the CHWs that I worked with in Lima gave to their communities, these women were not paid a wage by Socios en Salud or the Peruvian Ministry of Health. This lack of monetary incentive led me to investigate other motivations perceived by, or potentially influencing, the drive of these women to volunteer their time and energy in service to their neighbors. The CHWs themselves would highlight that their work was voluntary, but often indirectly expressed resentment that they were not paid for their work. “*Sabe que no nos pagan*” (“You know that they don’t pay us”) and similar remarks were common, indicating that CHWs were proud of their voluntary work but also hyperaware that their contributions were worth a wage. One source of the pride that I gleaned from CHW comments about this subject seemed as if to stem from their knowledge of their self-sacrifice.

When I asked the CHWs I met in Lima why they did their work, they often couched their responses in notions of Christian ministry to others. For instance, one CHW whom I met in one of Lima’s impoverished outlying districts described how she was happy to serve her community, especially since she was already very involved in her church. This particular CHW, who worked closely with a large group of HIV-positive patients, stated that her faith helped her help others. She explained that sharing her understanding of the Christian faith brought her closer to the patients she supported. A colleague of mine at Socios en Salud in 2013 conducted a number of in-depth interviews with CHWs and presented her initial findings near the end of her summer tenure. This colleague shared the following quote that she found representative of the religious reasoning she heard from CHWs when they were describing their motivations, “Jesus said to help thy neighbor—that’s what I’m doing”.⁶⁷

In the interviews of project CASA patients that I analyzed, I found that patients often

⁶⁷ Translated and paraphrased from the original Spanish.

described their CHWs as being *bastante religiosa* (quite religious) or explained their health promoter's motivation by noting their religious tendencies (“...*ella cree bastante en Dios*”).

One patient shared the following quote describing the advice that her CHW would give her:

“Ella se pone a conversar conmigo pues me dice ‘no, no te preocupes Dios sabe por algo te da esta enfermedad, vas a ver que de un momento a otro vas a estar sana como yo por ejemplo estoy sana así vas a estar sana’ me decía así, me daba valor de conversarle, para esto venía, si nos conversaba bastante de Dios nos conversaba”.⁶⁸

This quote reflects the content of the conversation I had with a CHW about her interactions with patients regarding religion. In this quote, it is clear that the CHW role transcends health promotion and motivates both the patient and the CHW to continue their fight towards improved health.

In her research surrounding CHWs in Lima, Jenkins noted that health promoters were quick to emphasize the non-profit nature of their work, stressing that it was *sin fines de lucro* (not for profit). Jenkins suggests that this emphasis, like their voluntary labor, is also gendered and reflects the Latin American ideal of *marianismo*.⁶⁹ This female version of *machismo* stresses the spiritual and moral superiority of women as compared to men—the most prevalent aspect of *marianismo* being the idea of self-sacrifice. The idea of *marianismo* supports what I perceived as pride with respect to self-sacrifice in my interactions with CHWs.

Apart from religious and ideological motivations, CHWs cited other reasons for their extensive community involvement. For instance, CHWs frequently expressed that they promoted health because they wanted to help their communities *seguir adelante*. This goal of pushing their neighbors forward against the odds suggests that these women have internalized the economic

⁶⁸ “She would talk with me, well, she said to me ‘no, don’t worry God knows why you were given this disease, you are going to see that from one moment to another you are going to be well like me. I, for example, am healthy and just like me you are going to be healthy’ she told me like this, she gave me value talking with her, for this reason she came, yes we talked a lot about God, we talked.” Female patient enrolled in CASA intervention arm. Translated with punctuation added from the original Spanish.

⁶⁹ Jenkins, “Goodwill,” 15-34.

and otherwise structurally determined misfortune of their communities. Furthermore, implicit in this CHW mindset is the fact that poor urban settlements in Lima often lack formal health and sanitation services. Reflecting the history and motivations of women's activism in Latin America, it seems that CHWs living in these settlements feel a responsibility to make up for the formal services that are missing through their health promotion efforts.

The unique and varied modes of motivation that I witnessed while working with CHWs in Lima are important, especially in light of the lack of economic remuneration for their efforts. However, this kind of multifaceted motivation is supported by Franco *et al.* as typical of successful health sector workers. These authors describe the fact that financial incentives are insufficient to yield the quality and efficiency desired in health provision settings, suggesting that health worker motivation is acted upon by “multiple layers of influence” drawn from individual, organizational, and broader societal contexts.⁷⁰ Economic factors, human psychology, organizational development, human resource management, as well as sociology in turn affect these influences. These authors argue that health sector reform can positively impact health worker motivation. However, this argument may be less applicable to the situation of CHWs operating within the Peruvian health care system than it is to outreach workers in the United States. Although it is a compelling argument, financial incentive in the form of a fair wage may be a necessary component to allow such “layers of influence” to improve health worker performance.

Razee *et al.* performed qualitative analysis of 33 interviews with CHWs working in rural Papa New Guinea and identified a number of key social factors influencing their motivation.⁷¹

Among these factors were community context, gender and family issues, health beliefs, and

⁷⁰ Franco, Lynne Miller, Sara Bennett, and Ruth Kanfer. "Health Sector Reform and Public Sector Health Worker Motivation: A Conceptual Framework." *Social Science and Medicine* 54, no. 8 (2002): 1255-1266.

⁷¹ Razee *et al.*, "Listening," 828-835.

attitudes of patients and community members. Overall, the motivations of the CHWs who participated in this study centered upon their being part of a strong, supportive community. These findings are interesting to consider in the context of urban Lima, Peru given the dynamic nature of the poor communities in which CHWs predominantly work.

As described earlier, the CHW role is under-professionalized by health care staff, and CHW program funding from government sources is non-existent. In light of this reality, it seems that CHWs living and working in Lima's poorest communities have a patchwork of motivational factors that, although they do not include financial nor significant health sector support, allow them to provide care to their neighbors in need. This patchwork has been substantial enough to establish a dedicated community development force among poor women living in informal settlements in Lima. However, it is important to question whether or not this type of reasoning, grounded firmly in ideas about self-sacrifice for the greater good, will be passed on to the next generation. Furthermore, as these motivations stem largely from a strong sense of community I am curious whether this type of voluntary community organizing will withstand the waves of migration into and out of Lima's shantytowns. I discuss arguments for context dependent remuneration for CHWs among other aspects crucial to community health initiative success in chapter three.

In this chapter, I sought to describe the local context and historical backdrop of my experiences working with CHWs in Lima, Peru during the summers of 2012 and 2013. Furthermore, this chapter set the stage for the discussions of CHW program features that contribute to their effectiveness in a variety of contexts that follow in chapters two and three. I began chapter one by describing the key features of the Peruvian health care system, highlighting that the public sector provides most health services while private clinics and specialty offices

provide care to the most affluent citizens. I also discussed the dynamic and resource-poor community health context in which CHWs work in urban Lima. My consideration of the history of community-based health service provision in Peru centered upon a program that was established in the northeastern part of the country in the 1970s. This CHW program placed a great deal of emphasis on training and program expansion, as well as establishing long-lasting community health infrastructure. The CHWs I worked with in Lima during the summer of 2012 were predominantly operators of community *botiquines* that were established by *Socios en Salud*. Many of these women also volunteered through their local Ministry of Health clinics, or supported *Socios* programming on an as-needed basis.

Also in this chapter, I brought up the current trend in the community health sphere towards the CHW role being predominantly taken on by women. This discussion was followed by sections on Peruvian society and culture, payment strategies, and motivational factors impacting CHW involvement. Social norms, such as gendered division of labor in the home with women doing more care-related tasks, contribute to the predominance of female CHWs in Lima, as well as in other parts of the world. Payment of CHWs is inconsistent in the non-governmental arena and nonexistent in the public sector. Non-monetary motivators for performing community health work include, religious beliefs, the cultural value of *marianismo*, and a strong spirit of camaraderie within economically struggling communities. I conclude this chapter of my project on a skeptical note—are inconsistent health sector support of CHWs and weak collective identity sustainable in this, or any other, part of the world?

CHAPTER 2: Community Health Workers Improve Patient Outcomes Internationally

“ If we train village health workers, and make sure they’re compensated, then the resources

*intended for the world's poorest ... would reach the intended beneficiaries.” - Paul Farmer
(when asked what single intervention would most improve the health of those living on \$1 a day)*

A wide body of literature supports the idea that CHW programs positively impact health outcomes in varied populations and settings worldwide. Many of the world's most pressing health issues including, infectious disease, chronic illness, and access to primary care have been approached at the community level through the use of lay health workers. Studies from regions across the globe support the view that community-based approaches to these challenges are effective, and that CHWs are imperative to the success of such programs. My purpose in this chapter is to outline and analyze representative studies of CHW effectiveness as they pertain to patient health outcomes, health care access, and beneficial program design. The research I present in this chapter is not exhaustive, but provides evidence of CHW effectiveness in varied settings and offers insights into programmatic elements that enhance the CHW advantage. Most of the studies I discuss in this chapter center upon the interaction between CHWs and vulnerable patients in Latin America and the United States, but occasionally I draw upon exemplary work done in other parts of the world.

Although the literature pertaining to the outcome effectiveness of CHWs is extensive, many studies fail to use research methods compatible with those routinely used to study best practice in the health care field. Thus, my consideration of studies evaluating CHW effectiveness with respect to patient outcomes follows a literature review model put forth in a 2009 Massachusetts Department of Public Health (DPH) report on CHWs in the Commonwealth. This model only included studies in which the lay health workers were described as members of the target community, sharing important characteristics with the population such as ethnicity or other

“key experiences”.⁷² In the studies deemed appropriate for review, there were selection criteria for CHWs and job specific training. Many of the studies reviewed employed a randomized controlled trial (RCT) design. Overall, this method of literature review was established in order to present a review of research findings about CHW impact with respect to health access, disparities, cost, and quality in a manner useful and reliable for policy and program development in Massachusetts. I adopted aspects of this model for my research in order to analyze studies that presented a level of scientific rigor in their research methods so they might be applicable to health care practice and public health efforts in Latin America and the United States. Using this model as a guide also allowed me to center the research presented in this chapter upon the policy-relevant impacts of CHWs, which I identified early on as an important aspect of my project.

In addition to taking into account the Massachusetts DPH literature review model, I also limited the scope of my literature search primarily to studies evaluating CHW effectiveness among populations affected by HIV/AIDS and those considering groups with limited access to primary care services. HIV/AIDS differentially affects poor, underserved populations and contributes significantly to disease burden worldwide. The WHO states that HIV/AIDS, TB, malaria and neglected tropical diseases cause 32% of all ill health in Africa, and negatively impact health outcomes across the globe.⁷³ In 2000, HIV/AIDS surpassed TB as the leading cause of death in adults worldwide related to infectious disease.⁷⁴ Centering my research on studies of the prevention and treatment of HIV and increasing access to primary care provides an important perspective on the potential of CHWs to target similar issues of, perhaps, lesser burden.

⁷² Anthony *et al.*, “Improving,” 79.

⁷³ Nakatani, Hiroki. "HIV/AIDS, TB, Malaria and Neglected Tropical Diseases (HTM)." About WHO. <http://www.who.int/about/structure/organigram/htm/en/> (accessed April 3, 2014).

⁷⁴ Farmer, Paul. "Chronic Infectious Disease and the Future of Health Care Delivery." Lecture, Shattuck Lecture, December 19, 2013.

Evaluating CHW contributions to HIV/AIDS and primary care programs provides insight into ameliorating diseases such as diabetes and cancer, which present similar challenges with regard to managing chronic conditions. Furthermore, studies evaluating CHW contributions to HIV infection reduction may influence behavior-related preventative health measures. HIV/AIDS accompaniment carried out by CHWs in resource-poor areas in Haiti, Peru, and Rwanda can inform treatment strategies for individuals suffering from the disease in settings of depravity in other parts of the world, including the United States. Studies done in the American Southwest to evaluate the effectiveness of CHWs in connecting at-risk individuals with preventative health screenings can provide useful insight into how to employ CHWs to improve the reach of federal public health initiatives in the U.S. and elsewhere. Overall, considering HIV/AIDS and primary care provides a unique lens through which to evaluate the outcome effectiveness of CHWs in Latin America and the United States.

Many of the studies described in this section were carried out in developing nations, and the majority in conjunction with existing public health programs. As described by Paul Farmer in his 2013 Shattuck lecture, learning from programs established in resource-poor settings can help policy makers minimize the “know-do gap” in countries around the world.⁷⁵ This gap can be fatal to those living with chronic illness in settings of poverty, where the distance between “know” (effective therapies) and “do” (health care delivery) has often been deemed insurmountable. Farmer argues that good ambulatory care, plus innovations in financing and care delivery, can minimize delivery gaps and improve health care equity. PIH has supported the cost-effectiveness of providing care to people living in resource-poor settings, while emphasizing the ethics and social responsibility of doing so. As highlighted in PIH studies and in other research outlined

⁷⁵ Farmer, “Future.”

here, CHWs are the cornerstone of quality ambulatory care and are critical to achieving positive health outcomes among individuals living with chronic infections in such settings. Therefore, this chapter also discusses specific aspects of CHW programs that make them effective, while also considering their scalability.

This chapter begins with a section describing CHW involvement in the treatment and prevention of HIV/AIDS. Here, I consider studies evaluating CHW contributions to the care of persons with AIDS, as well as those that measure CHW impact on HIV transmission reduction. Randomized controlled trials (RCTs) comparing CHW support plus national standards of HIV/AIDS care to the standard alone support the view that CHWs improve AIDS biomarkers, such as viral load and CD4 count, as well as the psychosocial status of HIV positive patients.⁷⁶ Studies of CHW impact on HIV transmission reduction among high-risk populations support the idea that CHWs reduce the risky sexual behaviors of those counseled.⁷⁷ The studies discussed in this first section also highlight the importance of CHW relatability to the target population, emphasizing that CHWs should be perceived by patients as peers in order to have maximum effect. I also consider how these studies conceptualized the CHW role. In the following section, I continue examining the CHW role by evaluating their contributions to primary health care services and access. I conclude this chapter with an argument for integrating CHWs as paid employees into existing public health apparatus in order to have maximum impact on the health of vulnerable groups.

⁷⁶ Muñoz *et al.*, "DOT-HAART," 721-730; Franke, M. F., P. E. Farmer, A. R. Socci, F. Kaigamba, M. L. Rich, J. Mukherjee, A. Binagwaho, H. Epino, K. D. C. Walker, P. Niyigena, E. Bagiruwigize, A. Patel, and M. Hakizamungu. "Improved Retention Associated With Community-Based Accompaniment for Antiretroviral Therapy Delivery in Rural Rwanda." *Clinical Infectious Diseases* 56, no. 9 (2013): 1319-1326.

⁷⁷ Wilson, P. A., and T. E. Moore. "Public Health Responses To The HIV Epidemic Among Black Men Who Have Sex With Men: A Qualitative Study Of US Health Departments And Communities." *American Journal of Public Health* 99, no. 6 (2009): 1013-1022; Sánchez, Jesús, Mario De La Rosa, and Claudia A. Serna. "Project Salud: Efficacy of a Community-Based HIV Prevention Intervention for Hispanic Migrant Workers in South Florida." *AIDS Education and Prevention* 25, no. 5 (2013): 363-375.

CHW Involvement in the Treatment and Prevention of HIV/AIDS

CHWs improve the lives and clinical outcomes of HIV positive patients, and represent a powerful resource in the fight against AIDS worldwide.⁷⁸ Researchers in Peru and Rwanda have performed randomized controlled trials comparing the outcomes of patients receiving CHW support versus those receiving national HIV/AIDS care standards alone. These studies found that CHWs significantly improved not only the clinical outcomes of patients, but also their perceived psychosocial state.⁷⁹ Studies performed in Haiti and the United States highlight that CHWs effectively increase health care access among vulnerable populations, connecting these individuals with primary care and health insurance coverage.⁸⁰ Worldwide, CHWs are recognized for their unique ability to provide culturally competent care to the highest risk populations.⁸¹ In studies evaluating CHW involvement in HIV/AIDS programs, researchers highlight that CHW relatability and cultural sensitivity makes them the ideal frontline health workers to combat this heavily stigmatized disease.⁸²

In a study analyzing the contributions of the NGO Zanmi Lasante (a sister organization of PIH) within Haiti's public health system, CHWs are described as central to treating and

⁷⁸ Franke *et al.*, "Retention," 1319-1326; Farmer, "Future"; Bhutta *et al.*, "Global"; Mukherjee, J. S., and Fr. Eustache. "Community Health Workers As A Cornerstone For Integrating HIV And Primary Healthcare." *AIDS Care* 19, no. 1 (2007): 73-82.

⁷⁹ Muñoz, Maribel, Adolfo Caldas, Jaime Bayona, Sonya Shin, Milagros Wong, Betty Espiritu, Jhon Zeladita, Dalia Guerra, Fernando Arteaga, Jose Luis Sebastian, Jorge Arevalo, and Eduardo Sanchez. "Matching Social Support to Individual Needs: A Community-Based Intervention to Improve HIV Treatment Adherence in a Resource-Poor Setting." *AIDS and Behavior* 15, no. 7 (2011): 1454-1464; Franke *et al.*, "Retention," 1319-1326.

⁸⁰ Hunter, J. B., J. G. De Zapien, M. Papenfuss, M. L. Fernandez, J. Meister, and A. R. Giuliano. "The Impact of a Promotora on Increasing Routine Chronic Disease Prevention among Women Aged 40 and Older at the U.S.-Mexico Border." *Health Education & Behavior* 31, no. 4 suppl (2004): 18S-28S; Flores, G. "A Randomized, Controlled Trial of the Effectiveness of Community-Based Case Management in Insuring Uninsured Latino Children." *Pediatrics* 116, no. 6 (2005): 1433-1441.

⁸¹ Perry and Zulliger, "Millennium."

⁸² Mukherjee and Eustache, "Cornerstone," 73-82; Wilson and Moore, "Responses," 1013-1022.

preventing HIV, as well as improving primary health care access.⁸³ Zanmi Lasante's model depends upon CHWs, who supervise HIV therapy and perform outreach—locating patients with active infection and reaching at-risk populations. This study found that CHWs effectively identified at risk patients in the community in most cases. CHWs were also found to increase access to primary health care as evidenced by service uptake by community members, including those identified as most vulnerable. Furthermore, the authors describe general job training and positive self-definition as crucial for CHWs to successfully support patients.

As mentioned in chapter one, many of the CHWs with whom I interacted while working with Socios en Salud in Lima, Peru expressed interest in, and emphasized the importance of, regular educational opportunities for *promotoras comunitarias*. From my observations, lacking such opportunities led *promotoras* to perceive themselves as less effective and capable. The CHWs included in this Zanmi Lasante study, performed by another PIH affiliated NGO, similarly expressed that a strong educational foundation is important to achieving success in their work. These CHWs supporting patients in Haiti, however, were generally more satisfied with their training and self-definition as a health promotion cohort. These CHWs did have a higher level of training than the CHWs I worked with in urban Lima, having completed an eight day training on HIV transmission, prevention, and social determinants, as well as how to carry out Directly Observed Therapy (DOT).⁸⁴

From my experience and research, it is likely that this discrepancy in training and, consequently, perceived self-efficacy stems from differences in CHW profile and recruitment between these two programs in Haiti and Peru. In Cange, Haiti, Zanmi Lasante hires CHWs as part of the clinical outreach staff at the hospital operated by this NGO on the central plateau. In

⁸³ Mukherjee and Eustache, "Cornerstone," 73-82.

⁸⁴ Partners in Health. "Knowledge Center: Global Health Discourse and Tools." *Accompagnateur Training Guide*. <http://www.pih.org/library/accompagnateur-training-guide> (accessed April 7, 2014).

Lima, Peru, on the other hand, Socios en Salud primarily contracts CHWs who are associated with public health centers for specific projects.

The differing CHW perceptions between these two PIH programs emphasize the importance of employment continuity, remuneration, and professional opportunity for the success of CHW initiatives. As outlined on the NGO's website, PIH is publically committed to the payment, training, and professional treatment of CHWs and encourages governments and other NGOs to follow suit.⁸⁵ CHWs working with Socios en Salud, however, appear to be in a unique situation. As one of the few PIH sister organizations that does not operate a medical facility, Socios en Salud instead runs community-based projects utilizing CHWs. These CHWs, thus, are not PIH employees working at a PIH affiliated hospital or clinic, they are incentivized volunteers supporting community level interventions funded by Socios en Salud. These projects are increasingly research driven and are heavily dependent upon grant funding. This is an important point of difference for these CHWs, who do not receive payment for their services (they receive monthly *canastas*), and have little opportunity to advance professionally within the ranks of Socios en Salud. A similar situation was described in an article by Jenkins and outlined in chapter one, where CHWs performed important and measurable tasks for a Peruvian NGO in Lima, but were not granted promotional avenues.⁸⁶ It seems that CHWs working with PIH in Haiti experience some of the same challenges as CHWs who collaborate with PIH in Peru, but health promoters in Lima experience less job security, training opportunities, and continuity than their Haitian counterparts.

Although Socios en Salud has and continues to offer numerous educational opportunities to the CHWs with whom they collaborate, these trainings are usually offered to small groups of

⁸⁵ Partners in Health, "Community."

⁸⁶ Jenkins, "Goodwill," 15-34.

CHWs who are associated with particular projects. For example, CHWs contracted as part of Socios en Salud's community-based DOT-HAART study (referred to earlier as CASA) learned about HIV/AIDS in order to support patients involved in that study, receiving training similar to that of CHWs in Haiti and described above. However, other CHWs collaborating with Socios en Salud at the time in other capacities did not benefit from these trainings. Although fiscally impossible due to project specific funding, offering this type of training more broadly would have almost certainly proven useful—especially for the many current and former Socios en Salud associated CHWs working with TB patients, many of whom are also HIV positive.

The promising results of the CASA study suggest that the training provided to CHWs involved in the project was effective. In the study, which matched CHW support to HIV treatment in urban Lima, patients receiving regular visits from CHWs had significantly better clinical outcomes than those receiving HAART alone.⁸⁷ The effect of the intervention was assessed primarily based upon the proportion of participants with virologic suppression, but also took into account self-reported indicators of patient psychosocial status. At two years, participants who had been assigned CHWs were more likely to be on HAART, report adherence, and to have achieved virologic suppression than their matched controls. Among participants co-infected with TB, outcomes were significantly better among those that had received DOT-HAART (CASA cohort) as compared to their matched controls. TB cure was achieved in 81.8% of patients in the CASA cohort, whereas only 48.6% of matched controlled were smear negative at 24 months.⁸⁸

While working as part of a qualitative research team under CASA, I learned about the complex ways that CHWs impact the lives of the patients they accompany. My team's objective

⁸⁷ Muñoz *et al.*, "Adherence," 1454-1464.

⁸⁸ Muñoz *et al.*, "Adherence," 1460.

was to describe the role of CHWs from the perspective of patients involved in CASA. To do this, we used an institutionally developed coding tool (*libro de códigos*) to categorize and later analyze the material from 14 general interviews that were conducted at 12 months into the CASA. Working with these interviews, we were specifically looking for references to patient experiences with their CHWs. Although nearly all of the patients whose interviews we worked with described CHWs as primarily responsible for observing HIV treatment, emotional support was cited almost as frequently as a key aspect of the CHW role.⁸⁹ Patients described that CHWs supported them without judgement and improved their outlook on life. This quote describing the motivational support provided by a CASA *promotora* is representative of this result, “*Me apoyaba bastante a que no me deprimiera, no me decía todo va a pasar, vas a ver que de acá a un tiempo vas a estar mejor*”.⁹⁰ Many patients relayed that their relationship with their CHW became one of friendship, with the CHW providing meaningful advice and support, “*...a ella le contaba todo, como te digo todos mis temores también y ella me aconsejaba me decía no haz esto, haz esto y me sentía más aliviada más tranquila...*”.⁹¹ Our preliminary results indicate that CHWs constitute a positive and healthy presence in the lives of HIV patients living in urban, resource-poor settings, which in turn improves treatment adherence and self-efficacy. Furthermore, our findings suggest that CHWs allow patients to work through many of the emotional aspects of living with HIV/AIDS so they might recuperate emotionally as well as physically. Our results support the work of Muñoz *et al.*, who describe the psychosocial status of

⁸⁹ These results were part of a preliminary draft of a paper being prepared for publication under the Community-based Accompaniment with Supervised Antiretrovirals (CASA). Statistical tests were not employed. Statements indicating “most” or “rarely” are supported by the coded responses of a majority or minority of respondents.

⁹⁰ “She supported me a lot so that I would not feel depressed. No, she told me, everything will pass, you will see that from here on out you will get better.” Translated from Spanish interview transcript with punctuation added.

⁹¹ “I told her everything, how do I say this, I shared all of my fears [with her] and she advised me, she told me, don’t do this, do that, and I felt relieved, more relaxed.” Translated from Spanish interview transcript with punctuation added.

patients living the HIV who received CHW support as significantly better than their unaccompanied matched controls.⁹²

Two years from the start of the CASA intervention period, participants with CHW support exhibited not only improved physiological markers, such as decreased viral load and higher CD4 count, but also reduced stigma related to their HIV status. As measured by the Berger Stigma Instrument and HIV Self-efficacy Questionnaire, patients in the CASA cohort reported significantly less HIV-related stigma and significantly greater social, emotional, and instrumental support as compared to patients in the control group.⁹³ These results suggest that CHW support paired with the Peruvian national HIV treatment regimen significantly improves physiological as well as psychosocial outcomes. The data presented in this article suggest that comprehensive, individualized support can enhance the clinical outcomes and lifestyles of persons living with HIV/AIDS (PLWHIV) in poor, urban settings.

Franke *et al.* describe similar results in their study evaluating treatment retention associated with community-based accompaniment in Rwanda. Through a prospective observational cohort study, the authors found that participants who received CHW support were significantly more likely than individuals in the control group to be retained in care with viral suppression at one year. The findings of Franke *et al.* indicate that CHWs improve patient care retention when supplementing the clinic-based, Rwandan national model for antiretroviral therapy delivery.⁹⁴

By comparing CHW accompaniment plus national standards for HIV treatment with national standards alone, Muñoz *et al.* and Franke *et al.* establish CHWs as critical to enhancing

⁹² Muñoz *et al.*, “Adherence,” 1454-1464.

⁹³ Muñoz *et al.*, “Adherence,” 1461.

⁹⁴ Franke *et al.*, “Retention,” 1319-1326.

the results of existing HIV programs in Peru and Rwanda, respectively. These authors provide hard evidence that points to CHWs as the missing link in national strategies aimed at treating and preventing HIV/AIDS. These studies support the idea that CHW accompaniment improves patient outcomes, but they also present a powerful case for the inclusion of CHWs within existing public health infrastructure. The results of this research suggest that CHWs are not autonomous agents of health improvement among PLWHIV, but are instead crucial for existing national HIV/AIDS strategies to achieve best possible results.

In a 2009 study exploring public health responses to the disproportionate number of HIV/AIDS cases among Black men who have sex with men (MSM) in the United States, Wilson and Moore found that culturally appropriate frontline health workers were a key feature of effective strategies.⁹⁵ These authors outlined how health departments, and the community-based organizations (CBOs) that they support, link federal funding for HIV/AIDS care to affected American communities. The CDC, for example, provides state and local health departments with significant funding aimed at reducing HIV transmission risk behaviors.⁹⁶ Wilson and Moore noted that cultural competence and cultural sensitivity were critical to the success of HIV/AIDS prevention programs implemented by these health departments and their associated CBOs.

The authors argue that culturally appropriate program design is especially important when targeting Black MSM, and suggest that the profile of many current health department and CBO employees renders them ill-suited to address the high rates of infection and transmission within this population. Wilson and Moore state that Black MSM confront greater stigma with regard to their HIV status than other HIV positive individuals within their ethnic group, and highlight that Black MSM have little in common with the frontline health workers currently

⁹⁵ Wilson and Moore, "Responses," 1013-1022.

⁹⁶ Wilson and Moore, "Responses," 1013-1022.

employed in these settings. The authors argue that this may be limiting the success of programs aimed at addressing HIV/AIDS among this particular group, and recommend that health departments and CBOs make a concerted effort to employ more people of color, including Black MSM, in order to more effectively combat the disease within this high-burden population. Using qualitative methods to critically analyze the public health response to HIV/AIDS among Black MSM, this study provides compelling evidence for the use of community health workers within existing public health infrastructure in the United States.

Wilson and Moore present a possible solution to the issue of CHW professionalization and payment that was discussed in chapter one. Their research emphasizes the importance of continuity between health departments and CBOs and their clients, while downplaying the viability of a volunteer model for community health work. Wilson and Moore see a lack of employee accessibility as a key barrier to HIV program success in health departments and CBOs in United States and suggest emphasizing aspects of the CHW profile during the employment process as a way to ameliorate this issue. Instead of arguing for the implementation of volunteer CHW initiatives in addition to existing programs, Wilson and Moore urge these organizations to consider improving existing programs through the employment of professionals who are relatable to the target population.

Wilson and Moore's work begins to debunk the idea that CHWs must be poor to serve the poor, or that they must have education levels similar to their target population in order to be understood by them. These authors suggest that perceptions of shared characteristics on the part of patients towards CHWs are much more important. For example, as pointed out in Wilson and Moore's research, patients respond better to CHWs that appear to have a similar ethnic background or who use familiar vernacular. Although these characteristics could be associated

with a particular socioeconomic or educational status, the association is not necessary. It appears that the employee profile currently predominating in CBOs and public health departments does not lend itself to recognition and trust by Black MSM. By hiring people who can relate more adeptly on a personal level with members of this high-risk group, CBOs and health departments could potentially improve their impact on HIV prevention and treatment among Black MSM.

While working in Peru, I observed that CHWs worked as volunteers (incentivized in some cases with monthly *canastas*) and generally shared a similar level of income and educational status to their patients. These shared characteristics were frequently referenced by Socios en Salud employees as an important part of their effectiveness. Reflecting upon this association now, however, shared class was assumed to constitute an overlap of cultural experiences between CHWs and their patients. This was not always the case though, as two of the most experienced CHWs I worked with in conjunction with Socios en Salud lived in significantly better conditions than the patients they served. Despite obvious economic advantage over their patients, these women effectively connected them with services, while providing culturally appropriate companionship and support.

Many of the documents I have drawn upon in my research to describe the CHW role have discussed the unique value of CHWs as inexorably tied to their class-related membership to low-income communities. Although living in target communities and having shared experiences is supported almost universally as crucial for CHW success, perceptions of CHW class status based on level of education or income are arguably much less important. In fact, employing individuals with ties to vulnerable communities or social groups as public health professionals could link resource poor communities more closely with existing quality care, while also facilitating positive role-modeling. The two CHWs referenced above had higher levels of social capital than

their patients, which likely improved the community connectedness and class navigation skills of their patients.

Primary Care and the Professional CHW

The Camden Coalition of Healthcare Providers in New Jersey, Prevention, Access to Care and Treatment (PACT) in Boston, Massachusetts, the California Black Health Network, and the Care Coordination program in New York City employ community members from varied backgrounds (from health professionals to laypeople) to improve health care delivery among high-risk populations. All of these programs aim to connect especially vulnerable patients with quality health care, and do so by paying health promoters or expanding the reach of existing health care providers. By definition, then, these entities associate CHWs closely with their organizations, instead of labeling their function as exclusively outreach. I propose that the consideration of CHWs as agents of “inreach” is key to the success of these community-based programs.

Although access to health care in the United States is highly variable due to regional and socioeconomic constraints, such as lack of public transportation or limited service accessibility for non-English speakers, CHWs across the nation are promoting efficient use of the current health care infrastructure. Furthermore, the programs referenced above highlight the highly malleable nature of the CHW role, emphasizing that there is no one size fits all CHW profiles or intervention strategies. This was discussed in the introduction as well as in chapter one, but these initiatives present various models for community level patient support that would allow for successful CHW program implementation in diverse settings in the United States and abroad. The PACT program in Boston, for example, has trained and employed former drug-users to be CHWs and provide outreach in areas where HIV is most prevalent. A similar model is employed

within the National Health Service (NHS) in the United Kingdom. Titled the Expert Patients Program, the NHS empowers those living with chronic illness to manage their medical condition with confidence and to mentor patients newly diagnosed with chronic disease.⁹⁷ Zanmi Lasante has included experienced HIV/AIDS patients as part of their CHW cadre providing antiretroviral therapy and counseling in rural Haiti. The idea of mentorship associated with community health work warrants further attention in the United States and perhaps expansion in other parts of the world.

In 2013, Sánchez *et al.* demonstrated that community-based intervention carried out by culturally competent CHWs improved HIV prevention behaviors in Hispanic⁹⁸ migrant farm workers in South Florida. This study showed that farm workers who received HIV specific peer counseling were more likely to engage in safe sex and other HIV prevention strategies than their matched counterparts receiving guidance related to healthy practices in general. Although this study primarily focused on the sexual health related behaviors of the participants, subject perception of the CHWs as “peers” was a notable feature of the program. Both groups attended interactive sessions, which were conducted in Spanish and offered the same participant benefits (flexible scheduling, financial incentive, and snacks). During the nine months following the intervention, participants receiving HIV prevention guidance were nearly five times as likely as their peers in the control condition to report using condoms consistently. Overall, this study supports the idea that community-based HIV prevention programs are more successful if guidance is individualized and “culturally tailored”.⁹⁹ Employing CHWs who are perceived by

⁹⁷ National Health Service. "NHS general practitioners (GPs)." The Expert Patients Programme (EPP). <http://www.nhs.uk/NHSEngland/AboutNHSservices/doctors/Pages/expert-patients-programme.aspx> (accessed April 7, 2014).

⁹⁸ In my research, the word “Hispanic” is used with reference to the historical exclusion of people who have been phenotypically associated with Latin America and does not imply any real or significant biological differences.

⁹⁹ Sánchez *et al.*, “Salud,” 363-375.

the target population as similar to themselves is arguably a key factor in successful community level interventions. Finally, this study suggests that CHWs can effectively decrease HIV prevalence among Latino farm workers in the United States, a group with historically low access to health services.

Wilson and Moore and Sánchez *et al.* echo the conclusions of researchers in Peru and Rwanda, finding that integrating CHWs into existing public health aparati improves HIV/AIDS care and prevention. The former authors highlight the fact that CHWs are effective at reaching vulnerable and high-risk patient populations in the United States. From a public health standpoint, CHWs represent a realistic avenue through which to improve the results of not only existing HIV programs in America, but also current initiatives to improve primary and preventative health care provision. By realistic, I refer to a cost-effectiveness argument for CHW inclusion in health departments and CBOs. Wilson and Moore suggest that CHWs be employed in existing roles within these organizations—as frontline health workers who interact directly with target populations. This argument recognizes the capacity of individuals to work as CHWs within state or local public health organizations, using a unique skill set including community connectedness and relatable personal characteristics. Wilson and Moore propose that the CHW profile should become part of employment standards for positions requiring community interface within health departments and CBOs in order to make federal dollars go farther in the fight to end AIDS. Similarly, employing CHWs could control health care costs related to poor primary care access in the United States.

Further illustrating this point, in a randomized controlled intervention carried out in a rural U.S.-Mexico border region, researchers found that women who received CHW support were significantly more likely to obtain annual preventative exams than those who received only

reminders about their check-ups.¹⁰⁰ The women in this study were 40 or above and were identified during household surveys between 1999-2000 as uninsured. These women, representing a population at high-risk for breast and cervical cancers, were subsequently offered a free comprehensive physical exam. Following this exam the women were randomly divided into two intervention arms, one group received a postcard reminder about a follow-up exam and the other received a written reminder plus a visit from a *promotora*. Women who met with a *promotora* were 35% more likely to go to their rescreening appointment than their matched controls. This study concluded that using CHWs to increase compliance with routine health care visits is a highly effective strategy for bringing health services to this vulnerable population in the United States.

Trogon *et al.* demonstrated that the National Breast and Cervical Cancer Early Detection Program (NBCCEDP), operated by the CDC, decreases costs as more women are screened and services are provided.¹⁰¹ These authors provide strong evidence in support of the cost-effectiveness of programmatic expansion to reach more women in need of breast and cervical cancer services. In order to evaluate the cost-effectiveness of NBCCEDP programs, the researchers considered all cost incurring aspects of program administration. Employee salaries represented a large component of program costs in all locations, comprising 19.4% of total expenditures on average, with registered nurses providing case management and coordination services at program locations countrywide.¹⁰² The overall recommendation of this study was to scale up NBCCEDP efforts in order to reach more needy parties, which would further control costs. In light of this recommendation, including CHWs in this expansion would appear a wise

¹⁰⁰ Hunter *et al.*, "Promotora," 18S-28S.

¹⁰¹ Trogon, Justin, Donatus Ekwueme, Sujha Subramanian, and Wesley Crouse. "Economies of scale in federally-funded state-organized public health programs: results from the National Breast and Cervical Cancer Early Detection Programs." *Health Care Management Science* (2013).

¹⁰² Trogon *et al.*, "Economies."

choice. Not only have CHWs been shown to improve the compliance of at-risk individuals with routine screening efforts, but these professionals could also be hired by programs at lower salaries than, for example, registered nurses. Although more CHWs might be hired, their increased reach would improve program cost-effectiveness overall.

Suggesting that CHWs are well suited for this type of role, Flores *et al.* found that community-based case managers significantly improved child access to insurance coverage in low-income communities in Boston, Massachusetts.¹⁰³ This randomized controlled trial evaluated the effectiveness of community-based case management in connecting uninsured children with insurance coverage. Children who were assigned a case manager were approximately eight times more likely to obtain health insurance than children whose families were provided only with Medicaid and State Children's Health Insurance Program outreach and enrollment. The study took place in East Boston and Jamaica Plains and involved 275 children and their families; the researchers described their study population as predominantly Latino.¹⁰⁴ This study illustrates that CHW intervention can mitigate far reaching health related issues in the United States with impressive results.

The work of Hunter *et al.* and Flores *et al.* highlights how CHWs can increase primary health care service uptake by vulnerable populations. Hunter *et al.* focused on an uninsured, female, and largely Hispanic population in the Southwest and found that CHWs significantly increased compliance with preventative health screenings. This finding has important implications for existing programs in the United States, such as the NBCCEDP, and suggests that CHWs could greatly improve the reach of such programs into vulnerable populations. Flores *et al.* outlined the success of CHWs with regard to connecting low-income, Latino children in

¹⁰³ Flores, "Uninsured," 1433-1441.

¹⁰⁴ Flores, "Uninsured," 1433-1441.

Boston with health insurance. This study provides evidence that relatable individuals with ties to at-risk communities can act as liaisons between these populations and federally funded public health programs. Both of these studies support the idea that CHWs are capable of working within current health infrastructure in the United States and could improve the cost-effectiveness of caring for at-risk populations within this system.

Throughout this chapter, I have outlined important ways in which CHWs can help treat the existing burden of HIV/AIDS in Latin America and the United States, as well as strategies to prevent new cases from developing. Researchers in the United States have identified CHWs as effective outreach agents among populations who have historically had low access to primary health care services. Furthermore, throughout this chapter I have discussed the viability of professionalizing the CHW role. In the latter part of this chapter, I advocated for increased inclusion of CHWs within the United States public health system. The studies presented in this chapter call attention to areas in which community based initiatives could be scaled up in order to help achieve national public health goals. In the following chapter, I discuss existing large scale CHW interventions in the United States and analyze their programmatic elements and outcomes. Ultimately I discuss elements of targeted scale ups that would address some of the key health problems plaguing Americans today.

CHAPTER 3: Scaling Up the Community Health Worker Advantage

I mean, everybody should have access to medical care. And, you know, it shouldn't be such a big deal. – Paul Farmer

CHW programs have existed in varied forms since the 19th century and have been subject to much interest and study since the 1960s. During the past ten years, an impressive number of studies have been published investigating the impact of CHWs on the health of populations with limited access to formal health services.¹⁰⁵ Despite positive experiences with CHW programs in both public and private sectors in the United States and abroad (see chapter two), CHWs have yet to be integrated into mainstream health care provision in the U.S as care providers.¹⁰⁶ The purpose of this chapter is to apply my experiences working with CHWs in Peru and their demonstrated effectiveness in the Americas, to an argument for targeted scale-ups and expansion of CHW programs in the United States.

We are entering a new era in which communities in the developing world are increasingly gaining access to CHWs and clinics, while tertiary hospitals remain few and far between. The United States, on the other hand, boasts an enormous network of tertiary care facilities working alongside clinics. What the United States health care system lacks is support from within communities to connect those in need with the many services available. Both the United States and countries in the developing world need to strengthen their CHW programs but for different reasons. The U.S. is considered to have strong health infrastructure but lacks agents to help the neediest patients navigate the system. Many developing countries, on the other hand, need CHWs to fill health care provision gaps.

In an article published in the Bulletin of the World Health Organization in 2013, Tulenko *et al.* argue that only through community level interventions will it be possible to achieve universal access to health care. The authors state that since the Declaration of Alma-Ata in 1978, “inconsistent support of CHWs and failure to integrate them into the health system have impeded

¹⁰⁵ Perry and Zulliger, “Millennium.”

¹⁰⁶ Anthony *et al.*, “Improving,” 3.

full realization of their potential contribution in the context of primary health care”.¹⁰⁷ In this chapter, I discuss the successes, failures, and scope of CHW programs in the United States informed by my experience training CHWs in Lima, Peru. Through analyzing current and past community health interventions in this country, I frame CHWs in the current context of health care reform and identify key programmatic features that enhance CHW performance. Overall, the research presented in this chapter speaks to the potential of CHWs to fortify public health efforts currently underway in the United States.

Why Not Here?: CHW Programs and Potential in the United States

In an exhaustive report on CHW contributions to health care provision and public health published in 2009, the Massachusetts DPH described CHWs as critical to achieving the today’s most pressing health care challenges. These authors emphasized that the CHW role is uniquely suited to increase health care access, reverse racial and ethnic health disparity trends, and provide culturally competent services, all while controlling health care costs.¹⁰⁸ As some of the most pressing issues facing the U.S. health care system today, this report makes the case that CHWs represent an untapped cadre in the arena of health care repair. The Massachusetts DPH report concludes that CHWs are essential to both state and national level health care reform. Since the time this report was published, Massachusetts has gained national recognition for their health care reform model, which includes CHWs and was critical to the development of the Patient Protection and Affordable Care Act (PPACA, signed into law in 2010).

In 2010, the WHO and the Global Health Workforce Alliance prepared a systematic

¹⁰⁷ Tulenko, Kate, Sigrun Møgedal, Muhammad Afzal, Diana Frymus, Adetokunbo Oshin, Muhammad Pate, Estelle Quain, Arletty Pinel, Shona Wynd, and Sanjay Zodpey. "Community health workers for universal health-care coverage: from fragmentation to synergy." *Bulletin of the World Health Organization*, June 1, 2013.

¹⁰⁸ Anthony *et al.*, "Improving," ii.

review of the experience of CHWs related to progress towards the Millennium Development Goals (MDGs). This report outlined background information, country specific cases, and recommendations for the integration of CHWs into national health systems in order to address the staggering health care worker deficit in developing countries, and work towards achieving the MDGs around the world. In collaboration with the MDG Health Alliance, the Bloomberg School of Public Health at Johns Hopkins prepared an updated review of the community health worker literature in 2012 with the aim of providing recommendations that would accelerate achievement of the MDGs. This review considered the effectiveness of various CHW programs around the world, and noted that CHWs “cannot achieve their full potential without the active engagement of communities as collaborating and supportive partners, without a supportive health system or health program”.¹⁰⁹ The work of these authors highlights, once again, that CHWs must be integrated into national health programs to exert their greatest impact. Furthermore, this research emphasizes that consistently reaching the most vulnerable populations will only be possible in any setting through coordinated interventions by agents of health care provision at the local level.

One of the concerns brought up in a 2009 Massachusetts DPH report of CHW impact was the issue of their collective identity. As discussed in chapter two and supported by WHO publications, this type of collective identity must be linked to national health programs and, at least, paraprofessional categorization. There have been coordinated efforts to professionalize the field of community health work in the U.S. since the 1990s. It was at this time that CHWs in diverse community based programs across the country agreed upon using the umbrella term “Community Health Worker” to describe their role. Furthermore, during this period,

¹⁰⁹ Perry and Zulliger, “Millennium.”

standardized CHW training was developed through entities such as the Community Health Education Center and the Outreach Worker Training Institute. These endeavors reflect recommendations made by the American Public Health Association in 2001, which outlined the importance of “branding” CHWs in order to facilitate their integration into the health care, public health, and human services workforce.¹¹⁰

In addition to their known effectiveness in the direct health care fields, CHWs have vast potential to improve the social conditions that influence health outcomes by contributing to efforts such as public housing. As members of the communities they serve, CHWs are uniquely equipped to address the social factors contributing to illness. The American Public Health Association clearly recognized this potential in their 2001 policy resolution surrounding CHWs entitled, “Recognition and Support for Community Health Workers’ Contributions to Meeting our Nation’s Health Care Needs”.¹¹¹ In the United States today, doctors are being pushed to spend less time per patient in order to improve efficiency in clinical settings. With this push, doctors are less likely to elucidate the social determinants of disease during patient interviews and have fewer opportunities to connect local resources with their patients. Now, more than ever, patients are in need of community health agents to help them mediate the increasing distance between clinics and the communities. CHWs are fit to provide one-on-one advice to patients about the varied, direct and indirect factors that impact their health that doctors are often unable or poorly suited to provide.

Daniel Palazuelos, an American doctor currently working between Brigham and Women’s Hospital in Boston and PIH’s sister organization in Chiapas, Mexico (Compañeros en Salud), shared on Radio Open Source with Christopher Lydon that he learns at least as much

¹¹⁰ Anthony *et al.*, “Improving,” 3.

¹¹¹ Anthony *et al.*, “Improving.”

from his Mexican colleagues as he is able to teach them.¹¹² Many of Palazuelos' Mexican counterparts are completing their medical training social service requirement in Chiapas, working as small town physicians. Palazuelos described how these doctors are providing care for whole communities with the help of CHWs. He commented that much of what he is learning from these doctors and CHWs centers upon close patient-practitioner relationships, something that he suggests could be much stronger in the United States.

As articulated by Ophelia Dahl (co-founder of PIH), Palazuelos, and Pat Daoust (SEED Global Health) on a Radio Open Source piece hosted by Lydon, a growing number of young doctors are gaining experience among the poor worldwide prior to taking up professional practice.¹¹³ To emphasize the significance of this trend, in the 1980s, one in twenty doctors entering practice had worked in health care abroad. Today, one in every three doctors graduating from U.S. medical schools have out of country medical experience. Both foreign and U.S. born medical students constitute those gaining global health experience among the poor, as medical schools across the country emphasize health equity as a key aspect of medical education. It is also becoming increasingly common for doctors to split their time between top tier U.S. hospitals and clinical settings in places like Chiapas, Mexico, as exemplified by Palazuelos. Global health expert Ophelia Dahl emphasizes that this new phenomenon has resulted in an impressive exchange of information and training between settings of poverty and areas of affluence in the United States, which offers many learning opportunities for this country in the current era of health care reform.¹¹⁴ The current generation of doctors entering the U.S. health care system are thinking globally while acting locally. Jennifer Zimmerman gives a good example of global

¹¹² Dahl, Ophelia, Daniel Palazuelos, and Pat Daoust. "Rites of Passage: Docs and Nurses in the Developing World." Interview by Christopher Lyndon. Audio blog post. Radio Open Source, WBUR National Public Radio Boston. <http://radioopensource.org/docs-and-nurses-in-the-developing-world/> (accessed February 21, 2014).

¹¹³ Dahl *et al.*, "Rites."

¹¹⁴ Dahl *et al.*, "Rites."

health being practiced locally in the United States in her article “From Haiti To Harvard: Crucial Foot Soldiers Of Health Make Housecalls.”

Published online in CommonHealth, Zimmerman’s piece provides an insightful look at current CHW efforts underway in urban Boston. Zimmerman describes how the Network Health Alliance is orchestrating a large scale CHW experiment aimed at bringing “low-tech lessons” learned in developing nations to improve health care for the first world poor.¹¹⁵ Specifically, this Network Health Alliance program targets high expense, low-income patients with CHW intervention in order to decrease their medical expenses and improve their health care. In this article, Zimmerman quotes Paul Farmer who notes that community level health interventions are gaining traction as United States begins to acknowledge that “it is very expensive to give bad medical care to poor people in a rich country”.¹¹⁶

Zimmerman describes the CHWs working in Boston as “part nagging mom, part medical fixer, part translator and guide”,¹¹⁷ helping their charges navigate their medical conditions while assisting them with daily challenges. These challenges, including transportation, school and housing problems, bad nutrition, and employment obstacles, if left untreated, can snowball into serious illness. Through the Network Health Alliance, CHWs are thus helping families break out of socially-constructed and disease-fueled cycles of poverty.

In the 2009 report published by the Massachusetts DPH outlining the potential of CHWs to improve health care and public health in the commonwealth,¹¹⁸ CHW contributions to these areas are described as highly effective and cost saving. Outside of direct patient care, this report

¹¹⁵ Zimmerman, Rachel. "From Haiti To Harvard: Crucial Foot Soldiers Of Health Make Housecalls." CommonHealth, WBUR National Public Radio Boston. <http://commonhealth.wbur.org/2011/03/health-workers-make-housecalls> (accessed February 21, 2014).

¹¹⁶ Zimmerman, “Housecalls.”

¹¹⁷ Zimmerman, “Housecalls.”

¹¹⁸ Anthony *et al.*, “Improving.”

similarly highlights that CHWs have great potential to diminish the structural determinants of poor health during this era of health reform. Specifically, the Massachusetts DHP recommended that CHW workforce development extend past the health system and into “other sectors of government involved with the social determinants of health”.¹¹⁹

The Network Health Alliance CHW program employs CHWs at \$38-40K per year as part of a larger care management team that includes nurse practitioners, social workers, mental health and behavioral specialists (to name a few). This team, although initially costly to run, is projected to save 2-3% of annual health related costs incurred by these vulnerable and expensive patients in the coming years. The program, launched in 2010, serves 2900 patients living in poverty, all of whom have at least two chronic medical conditions. Most of these patients cost between \$500 and \$15,000 per month to treat (the program’s most expensive patient incurs over \$50,000 per month in health-related expenses). The idea is that comprehensively managing the complex medical conditions of these high-risk patients will save money in the long run.

Although cost effectiveness analysis has yet to be performed, the Network Health Alliance is optimistic that its complex, large-scale community level intervention will succeed based upon the results of its predecessor, PIH’s Providing Access to Care and Treatment (PACT) program. PACT was found to result in a net savings of more than 15 percent after patients were enrolled for two years. Furthermore, other programs modelled after PACT, such as the Care Coordination program in New York City, appear to provide better quality health care at significantly lower cost—what Zimmerman refers to as “the Holy Grail of the entire health system”.¹²⁰

These programs provide compelling evidence that CHW initiatives modelled after

¹¹⁹ Anthony *et al.*, “Improving,” iii.

¹²⁰ Zimmerman, “Housecalls.”

successes in the developing world can deliver similarly improved health outcomes in the first world. Furthermore, the CHW model being implemented by Network Health Alliance and other PACT offshoots emphasizes the feasibility of providing CHWs with a living wage. As mentioned above, CHWs working for the Network Health Alliance are offered a living wage and are included as professionals in a team of clinicians. I believe that this combination of fair pay and professional treatment will continue to be a hallmark of the most successful CHW programs, on both small and large scales in the developing and developed world.

In a post published on the British Medical Journal's group blog site, Daniel Palazuelos reflects on the successes and failures of CHW programs. Palazuelos emphasizes that adequate training and connection to health systems and resources are critical to the success of CHWs, especially those working in rural or underserved areas. Furthermore, Palazuelos characterizes the volunteer CHW model that has been so widely implemented through public health policy in much of the world as completely illogical. He states,

“Health policy towards these health workers, unfortunately, has often taken the form of ... a marginally trained, minimally supported, band of impoverished volunteers who are expected to do alone what the rest of us couldn't, i.e. bring health to all”.¹²¹

In his post, Palazuelos also discusses the importance of compensation that “aligns incentives with outcomes”.¹²² He describes this model of remuneration as context dependent and offers various examples of attractive payment options based on local needs. CHWs are crucial to carrying out many health-related tasks in the developing world and as such should receive appropriate remuneration for their work. Palazuelos does not pinpoint a particular payment model as being ideal, stating instead that various

¹²¹ Palazuelos, Daniel. "Daniel Palazuelos on community health workers." BMJ RSS, British Medical Journal. <http://blogs.bmj.com/bmj/2011/05/06/daniel-palazuelos-on-community-health-workers/> (accessed February 22, 2014).

¹²² Palazuelos, “Health workers.”

methods and forms of compensation could prove effective depending on local context and programmatic expectations. Palazuelos concludes that it is “irrefutable ... that unpaid workers simply don’t, or can’t, work well”.¹²³ Palazuelos’ reflections draw attention to an important theme in recent community health literature: CHW payment improves their impact. In 1978 at the International Conference on Primary Health Care, the Declaration of Alma Ata legitimized volunteer status for CHWs in resource poor areas. What Palazuelos and others are highlighting now, however, is that volunteerism on the part of CHWs, who are themselves living in poverty in such areas, is unsustainable. CHWs must receive long-standing, sustainable training and remuneration if they are to make strides towards bringing health services to needy populations. This method of support contributes to CHW professional development and fosters self-sufficiency among the destitute sick.

Another main point of Palazuelos’s proposal centers upon CHW integration into existing health systems, a topic whose importance I discussed earlier. CHWs must have referral options, ambulances, and contact with doctors at local hospitals at their disposal in order to provide good care and gain confidence in their role. CHWs who lack support networks will not be seen favorably by their patients and will feel disenfranchised in situations where they lack the skills or tools to effectively treat someone in need. Palazuelos urges the rich world to support CHW programs in developing nations through helping these countries implement the crucial aspects discussed above on a large scale, while sustaining funding and bolstering existing health systems.

A similar approach is needed in the United States, where small CHW programs

¹²³ Palazuelos, “Health workers.”

providing appropriate remuneration, training, and networking are already known to work. A national scale-up that maintained these programmatic features and was rich in human and physical resources would almost certainly succeed and create significant savings within years of implementation. Consider as an example the cervical and breast cancer screening program operated by the CDC, which is an existing, cost-effective parallel to this idea.¹²⁴ This government program has demonstrated that cost-effectiveness increases as more women are served, and supports the idea that upfront investment is worthwhile because it avoids the costly treatment paradigms of these two leading killers of women in the United States.

While payment and continuing education are emerging as cornerstones of successful CHW programs, there are many other programmatic elements to consider. The Health Resources and Service Administration (HRSA) office of Rural Health Policy describes different models of CHW involvement including the *promotora de salud*/lay health worker model in their CHW evidence-based models toolbox.¹²⁵ The *promotora de salud* model most closely mirrors the involvement of the CHWs I worked with in conjunction with Socios en Salud in Lima, Peru. HRSA describes CHWs in this model as members of the target population, sharing many of the same sociocultural and economic characteristics. This CHW model is generally employed as part of programs that aim to provide culturally appropriate services to Latina/o and/or Spanish-speaking populations in the United States or to communities in Latin America. This model has been widely used to improve the health of migrant farm workers in the U.S., as well as to provide services in border communities.

This HRSA document outlines that the *promotora de salud* model has been found to be

¹²⁴ Trogon *et al.*, “Economies.”

¹²⁵ Office of Rural Health Policy, “Evidence-Based.”

most effective when *promotoras* are members of the communities where interventions are targeted.¹²⁶ This reflects a broad theme in the community health literature, which suggests that relatability with patients is key to CHW success as liaisons to formal health systems. HRSA adds to this theme, emphasizing that sharing the same language or a few characteristics may be insufficient for effective programming. Although relatability to target populations is an important point to consider with regard to CHW programs, as discussed in chapter two, this CHW relatability is not inexorably tied to perceived class similarities.

CHWs are most effective when they have the resources and training to provide quality care to their target population. CHWs should work among people with whom they experience a strong connection—this connection could be based upon shared cultural experiences, language, social class, or work experience in similar environments. That is to say, the CHW-patient connection does not depend upon CHWs physically and economically “looking like” their patients—it depends upon their preparedness and commitment to serving their patients. This commitment could come from many sources—be they spiritual or material, emotional or physical.

The community health literature promotes the view that CHWs must be members of the target population in order to exert maximum impact. My experience supports this basic idea, however, I believe that community membership on the part of CHWs can come in many forms and is less tied to income and ethnicity than is often suggested. While working with CHWs in Lima, Peru, one of the most ethnically and economically stratified cities in South America, CHWs with varied backgrounds successfully connected patients with equally diverse roots to services. The fundamental characteristic of these CHWs that contributed to their effectiveness

¹²⁶ Office of Rural Health Policy, “Evidence-Based.”

was not their skin color or social class, but their strong commitment to the political projects of the district they shared with their patients, most prominently its public health efforts.

Communities are often defined in terms of ethnoracial sub-populations and income-related class. Although many communities worldwide adhere to this conceptualization of community, there are at least as many exceptions. The province of Lima, Peru, which contains the country's largest urban center, is divided into 43 districts. While some of these districts are relatively easily classified as wealthy or poor, the vast majority cannot be defined by a particular income profile. Skin color and cultural heritage are highly racialized in Peru and this racialization is closely tied to perceptions of economic or educational status (as discussed in chapter one). These complex notions of *peruanismo*, or Peruvianism, confound any efforts to define communities along "simple" ethnoracial lines. Racially and economically stratified communities may be the norm in many parts of the United States and the world, but CHW profiles should not recapitulate this problematic notion of communities.

Requiring that CHWs share ethnoracial profile with their patients conflates phenotype and culture with shared experience. As mentioned above and in chapter one, racial classification in Peru, and arguably in most of the world, does not stem from phenotype or presumed ancestry.¹²⁷ Like most citizens of post-colonial nations, Peruvians associate power with race. This results in factors such as income, educational status, and social mobility playing an important role in creating and racializing sub-groups within the population. CHWs must have a common vision with, and compassion for, the people they serve. Whether this comes from perceptions of shared ethnicity or race, or other sources such as proximity of residence or similarity of situation, is not important. Just as it is morally reprehensible to conduct genetics

¹²⁷ Paradies, "Racialized," 203-227.

research that racializes biology, it is inappropriate for community health initiatives to demand that CHWs identify ethnoracially with the populations they serve. As alluded to in the previous paragraph, dependency on ethnoracial labels in CHW selection needlessly reproduces socially constructed stratification of human groups, which neither supports nor enhances the professional development of CHWs or their efforts to promote patient autonomy.

In my experience, successful CHWs are those that have a vision of better health and opportunity for their communities. For example, the CHWs I instructed in San Juan de Lurigancho came from varied backgrounds and enclaves within this sprawling district, but all wished to improve the health and economic status of their district through direct health service delivery. To a certain extent, the way in which these CHWs conceptualized their work relates to the productivity argument for investing in health.¹²⁸ In large part, this group of CHWs considered the success of their patients contingent upon on their ability to be productive members of the community following treatment. *Socios en Salud* and PIH, at the organizational level, also support this view. *Socios en Salud* operates a program aimed at connecting recovering TB and HIV patients with stable employment, often through microloans to start small businesses. This program, entitled *Generación de Ingresos*, links recovering patients to overall well-being through economic self-sufficiency.

The *Generación de Ingresos* program highlights the importance of confidence and self-esteem in full recovery from illnesses such as TB and HIV. Diseases like these take an enormous toll on patients both physically as well as emotionally, and are highly stigmatized. TB and HIV patients are prone to isolating themselves, depression, and decreased sense of self-worth.

¹²⁸ The productivity argument for health centers upon the idea that investing in health increases workforce productivity, thereby boosting the economy. This argument has been used to validate government spending on a broad range of public health efforts. For instance, proposals to combat undernutrition in the poorest parts of the world are often framed in terms of productivity in order to incentivize developing nations to invest.

Proyecto CASA studies illustrate these tendencies, and measure the extent to which CHWs improve psychosocial status among patients suffering from HIV, or HIV and TB co-infection.¹²⁹ PIH programs worldwide aim to empower patients suffering from chronic and acute ailments to manage their illnesses and take control of their lives. Through CHW support and programs like *Generación de Ingresos*, PIH approaches patients from multiple angles in order to provide them with access to care and treatment, while seeking to boost their self-confidence and self-sufficiency.

Training models for CHWs should take a similar approach—providing health promoters with fundamental skills while also empowering them to take ownership of their training and role in their communities. Depending on community health initiative goals, CHWs will need training in different areas. That is to say, there is no “one size fits all” CHW training program. The goal of my work in Lima, for example, was to provide CHWs with the skills necessary to confront emergency situations in their communities, which lacked good access to emergency medical services (EMS). Therefore, my colleagues and I taught core EMS skills, such as how to take vital signs, move patients, manage burns, and splint injured extremities. As exemplified by my work, the specific skills and continuing education provided to CHWs will vary with project goals. Empowering CHWs to take ownership of new skills as well as their previous knowledge should be a central goal of all CHW training programs.

Building confidence and critical thinking skills should be fundamental aspects of all CHW training models. While working with CHWs in Lima, I realized that virtually no training program could address all the skills that CHWs would potentially need in their community outreach. Although the program I created provided an important base of knowledge, I had no

¹²⁹ Muñoz *et al.*, “Adherence,” 1454-1464.

doubt that the CHWs I was instructing would be confronted with situations requiring skills not addressed in the classroom. Because of this, a portion of all classes was dedicated to group activities that allowed CHWs to share their previous experiences related to emergency medicine. These activities highlighted important community issues, while offering CHWs space and time to reflect upon past situations, how they played out, and what could have been done to improve outcomes. Often, CHWs would have applied traditional healing practices/folk medicine in the cases they presented. As a class, we would consider such practices with regard to their safety, employing both common sense and tools learned in class. In this way, CHWs were encouraged to make good choices, grounded in critical reasoning, for the health of their patients using new and old skills.

As mentioned in the introduction, the goal of my Davis project was to train CHWs to ultimately train one another. My training model, if entirely dependent upon out of country “experts,” would prove useless in the long run. The most experienced and distinguished (academically) CHWs who completed the first aid and emergency response course were certified as instructors at the close of the training period. These certificates were approved by district health officials in San Juan de Lurigancho, and were subject to additional training requirements in order to be valid in Carabayllo. The other CHWs who completed the course earned certificates of participation (either as passing students or participating observers), which they could use as a jumping off point to obtain an instructor certification, or simply as proof of emergency response training. Reports have yet to be shared regarding the teaching efforts of the certified instructors since the end of the course, but the hope is that these CHWs will share first aid skills with their communities and colleagues in their districts and beyond. My partner and I donated the remainder of our project funds in support of these CHW led efforts. Our project did not reinvent

community-based emergency services provision in urban Lima, but instead built upon and improved existing strategies.

Both grassroots and federally funded CHW programs already exist in the United States today. Programs like PACT exemplify how CHW efforts can be cost saving in both public and private sectors. The Community Health Representative Program in the Navajo Nation shows that large-scale, federally funded and operated CHW initiatives are feasible, as this program has operated successfully since 1968.¹³⁰ State and federal agencies, such as the Massachusetts DPH and the U.S. Health Resources and Services Administration, are presenting CHW models as viable solutions to current health challenges. The gap between communities and formal health services in the United States could be bridged by CHWs schooled in the intricacies of the current and emerging health care systems.

CONCLUSION

I began working with CHWs in 2012 as a program intern for Socios en Salud in Lima, Peru. In this position I had the opportunity to interact with numerous CHWs, many of whom shared their experiences with emergency situations. Their stories and the results of a small-scale needs assessment prompted me to design a first aid and emergency response course for CHWs in the Lima district of Carabayllo. With the help of Socios en Salud employees, I carried out a six-week long course for an audience of nearly 30 CHWs. In 2013, I returned to Lima with funding from the Davis foundation to implement a Project for Peace. My project, which I carried out with Marielena Lima (another Mount Holyoke student and EMT), aimed to mitigate the effects of structural violence in shantytowns in urban Lima through providing medical training to CHWs,

¹³⁰ Centers for Disease Control and Prevention. "Community Health Workers/Promotores de Salud: Critical Connections in Communities." Diabetes Public Health Resource. <http://www.cdc.gov/diabetes/projects/comm.htm> (accessed April 14, 2014).

and promoting sustainable educational opportunities for CHWs.

With the support of the Davis foundation, my partner and I ran two courses simultaneously in Carabayllo and San Juan de Lurigancho during the summer of 2013, allowing over 60 CHWs to participate. In addition to covering basic emergency response competencies, these courses fostered teaching and critical thinking skills among CHWs so as to empower them to share their training with other members of their communities, both in situations of emergency and in educational settings. My experiences working with CHWs in Lima left me with many questions about community health work in Peru and Latin America and how such programs currently, or could in the future, operate in the United States.

From start to finish, this project has been inspired by my experiences working with CHWs in Peru. My observations as a participant in CHW programming in urban Lima informed my critical analysis of CHW strategies in Latin America and the United States. Learning more about CHWs over the course of my research, my understanding of many aspects of their role and programmatic features impacting their effectiveness has changed. While facilitating first aid and emergency response training for CHWs, I witnessed, and contributed to, the outreach model of community-based care provision. Although the programming I realized supported sustainable educational opportunities for CHWs in an area of critical community need, it failed to integrate CHWs into the national emergency medical services provision strategy. The CHWs I trained will undoubtedly continue providing services to neighbors in need, exerting positive impact in their communities. However, I now recognize that their impact will be limited as long as they operate in isolation from national efforts.

CHWs working as part of *Proyecto CASA*, like the CHWs I trained in San Juan de Lurigancho and Carabayllo, received project specific training. However, these individuals were

integrated into the existing national HIV/AIDS program through a collaboration between *Socios en Salud* and the Peruvian Ministry of Health. Ideally, the findings of *Proyecto CASA* studies will influence public health policy for the treatment and prevention of HIV/AIDS in Peru, and result in broad integration of CHWs into the health system to accompany people living with HIV. Now, comparing my project approach with the model exemplified by *Proyecto CASA*, I see that CHWs are most effective when they are integrated into structures already addressing pressing health care challenges. That is, when CHWs are trained and supported to navigate the distance between communities and global health policy—when they are employed as agents of “inreach.”

In chapter one, I explored the history of CHW programs in Peru as well as key features of these initiatives over time. Comparative analysis of CHW involvement in Peru over the past half century revealed that community health work has shifted from a male-dominated venue to an arena occupied largely by female contributors. Today, nearly all CHWs in urban settings are female, and in rural areas male CHWs work with female counterparts to provide outreach and care. The gender shift in community health work towards greater female contribution had important implications for the role of women in rural communities in the 1980s, and continues to improve women’s standing in Peruvian society today. However, female leadership in the community health arena may exacerbate problems of underpayment and lack of professional status, due to the normalized volunteer status of women activists in Latin America. Many of the CHWs I met in Lima emphasized that their volunteerism contributed to the greater good, exhibiting a strong sense of pride in their self-sacrifice.¹³¹

My experiences in Lima, and research into the Peruvian health promoter profile, led me to critically consider how, and in what areas, CHWs are trained to provide care. I referenced the

¹³¹ Referred to in chapter one, see *marianismo*.

work of Katy Jenkins, who provides important insight into the dynamic between “grassroots professionals,” such as CHWs, and the international development efforts that often support them.¹³² Jenkins highlights the value of local knowledge and connectedness of these individuals, and suggests that it is underutilized by international aid organizations.¹³³ I added to this information, considering how many of the CHWs I worked with in Lima expressed frustration that they were not trained to a higher level by the Ministry of Health, so as to provide services like injections to their patients. Furthermore, I discussed remuneration practices with and towards CHWs as they related to societal and cultural ideas of volunteerism and professional status. Throughout my investigation, I found that remuneration practices varied widely not only in Peru, but also in developing and developed nations. Ultimately, in chapters two and three, I considered viable payment and training models that facilitate CHW opportunity and effectiveness.

In the second chapter of my project, I analyzed a number of studies that investigated the impact of CHWs with respect to HIV/AIDS treatment and prevention, and primary care. I focused my attention on studies discussing CHW programs in Latin America and the United States that targeted low-income, or otherwise vulnerable patient populations. I focused the scope of my research into this topic by using the literature review model presented by Anthony *et al.* in their report on CHWs for the Massachusetts DPH.¹³⁴ Following this model allowed me to focus on studies that were carried out with a high level of scientific rigor, and that can be considered broadly relevant to health care practice and public health efforts in the Americas. Many of the studies that I discussed in chapter two were performed in resource-poor settings, allowing me to

¹³² Jenkins, “Hierarchies,” 879-895.

¹³³ Jenkins, “Hierarchies,” 879-895.

¹³⁴ Anthony *et al.*, “Improving.”

highlight the feasibility and cost-effectiveness of CHW programs. In this section of my project, I highlighted Proyecto CASA and the preliminary results of the qualitative research study I helped carry out as a Davis fellow under Socios en Salud in 2013. The findings of these two projects emphasized the importance of accompaniment in the treatment of HIV/AIDS, highlighting what I term “the CHW advantage.” My careful analysis of CHW contributions in the areas of HIV/AIDS prevention and treatment, and primary care supported previous research claims that CHWs promote health equity and improve health outcomes.

The first section of chapter two centered upon CHW involvement in the care of people living with HIV/AIDS and efforts to limit transmission of this disease. In this part of the chapter, I discussed randomized controlled trials that evaluated the impact of CHWs on the physical (AIDS biomarkers) and emotional (psychosocial well-being) status of patients living with HIV/AIDS. These studies found that people affected by HIV/AIDS who had the support of a CHW did significantly better than their matched controls, as measured by factors such as viral load and perceptions of stigma.¹³⁵ Studies in Rwanda and Haiti found that CHWs improved patient retention in HIV/AIDS care programs and effectively identified patients with active infection in community settings.¹³⁶ I also analyzed features of CHW programs in the United States as described by studies evaluating their contributions to HIV prevention efforts among vulnerable populations. From these studies, I concluded that CHWs are able to exert the greatest positive impact in the lives of their patients when they are granted professional status within existing public health infrastructure.

In the following section, “Primary Care and the Professional CHW,” I discussed a variety of CHW programs operating in the United States in an effort to highlight CHW capacity to

¹³⁵ Muñoz *et al.*, “DOT-HAART,” 721-730; Muñoz *et al.*, “Adherence,” 1454-1464; Hunter *et al.*, “Promotora,” 18S-28S.

¹³⁶ Mukherjee and Eustache, “Cornerstone,” 73-82; Franke *et al.*, “Retention,” 1319-1326.

improve access to primary care. Analysis of these programs in light of my experiences working with CHWs in Peru led me to the following conclusions: 1) CHW compensation is critical to programmatic success in terms of quality and sustainability; 2) CHWs should be relatable to target populations, but this can be independent from factors such as socioeconomic status and ethnoracial labels; 3) frontline health workers are most cost-effective when employed as professionals within health departments or community based organizations. In chapter three, I applied and supported these conclusions through an analysis of existing CHW programs in the United States.

Throughout chapter three, I considered the potential of CHWs to fortify public health efforts currently underway in the United States, such as the National Breast and Cervical Cancer Early Detection Program. I began chapter three by considering the current state of health care access and provision in the U.S. Drawing upon the community health literature, my knowledge as a participant-observer in CHW programming, and considering the strengths and weaknesses of U.S. health services for vulnerable patient populations, I concluded that support from within communities to connect high-need patients with existing services is lacking. However, I did find and analyze a number of successful programs currently operating in the United States in which CHWs are working to bridge this critical gap in the system. Programs such as the Network Health Alliance's CHW initiative in Massachusetts provide an excellent example for the growth of current efforts and the development of new ones.

Researching this aspect of my project, I found an impressive body of literature supporting the idea that large-scale CHW programs could solve today's most challenging health problems in the United States and abroad. Numerous entities, including the WHO and various public health departments within the U.S., have published convincing arguments and evidence for the

comprehensive integration of CHWs into health infrastructure in the U.S. Analyzing the content of these documents, I found further evidence that CHWs are integral to reaching the most vulnerable patient groups, and concluded once again that CHWs exert the greatest impact when included within health systems.

After discussing the collective identity of CHWs and their potential to mitigate many of the social determinants of poor health, I considered the importance of knowledge exchange between CHW programs in developing nations and the United States. Programs such as those operated by the Network Health Alliance and Partners Healthcare are using “low-tech lessons” learned in developing nations to improve health care for the first world poor. (footnote Zimmerman) By targeting high-cost, high-need patients who are living in poverty, these initiatives lower financial burden on Medicaid and Medicare, while significantly improving the health and social status of these individuals. Furthermore, these programs are leading the way when it comes to fair remuneration practices for CHWs, providing CHW employees a living wage and professional status. Unlike many of their predecessors, these and other successful CHW programs operating in the U.S. today do not require community membership or shared experience with the target population on the part of CHWs. I see this as an important shift in CHW programmatic features. Rather than being chosen based on class or community membership or ethnoracial labels, CHWs should be hired based on their ability to effectively accompany their clients, improving their health while navigating a system that also allows them paths of professional development.

I conclude chapter three with a discussion of training strategies and CHW self-confidence. I suggest that training models for CHWs should foster empowerment in addition to skill building. Furthermore, I emphasize that there exists no “one size fits all” CHW training

paradigm—CHWs should be trained according to the goals of the community health initiatives within which they are employed. I used my emergency response training module for CHWs in urban Lima as an example of this kind of context-dependent educational strategy. I highlighted that this module promoted both confidence building and critical thinking skills, thus acknowledging that no classroom experience will fully prepare students for the many real-world challenges they may face.

Analyzing CHW strategies in Latin America and the United States brought me to one overarching conclusion: The way that CHWs have been popularly defined and applied has limited their impact on a global scale. Since the Declaration of Alma-Ata, nations have been systematically encouraged to deploy volunteer health workers into the neediest communities to solve, alone, the problems that the world's public health leaders have failed to address.¹³⁷ Unsurprisingly, from the start this strategy has had minimal success. Defining CHWs as agents of outreach fundamentally limits their effectiveness. Lacking instrumental and infrastructural support, CHWs can do little to improve the health of vulnerable populations. Only when CHWs form part of public health and health provision strategies can they contribute to solving pressing health problems. As noted by Daniel Palazuelos, CHWs need referral options, ambulance support, and appropriate remuneration, among other resources depending on context, to achieve health goals.¹³⁸ Furthermore, my research has led me to conclude that CHWs should move both within and between public health programs and communities, adapting and applying services in order to enhance the results of such programs and improve the health of community members. Therefore, I suggest that CHWs be even more broadly defined and deployed as agents of “inreach,” not outreach, so that they may bridge the gap between big ideas and human lives—the

¹³⁷ WHO. "Declaration of Alma-Ata." WHO. http://www.who.int/publications/almaata_declaration_en.pdf (accessed April 17, 2014); Palazuelos “Health workers.”

¹³⁸ Palazuelos “Health workers.”

distance between effective treatments and prevention strategies and the communities that need them most.

Glossary of acronyms

CASA	Community-based Accompaniment with Aupervised Antiretrovirals, also referred to as <i>Proyecto CASA</i>
CBO	Community Based Organization
CD4	CD4 cells, or T-helper cells, help fight infection and their count indicate the stage of HIV or AIDS in a patient
CDC	U.S. Centers for Disease Control and Prevention
CHW	Community Health Worker
CNA	Certified Nurses Aide
DOT	Directly Observed Therapy, seen in treatment paradigms for various diseases (e.g. DOT-HAART)
DOTS	Directly Observed Treatment Short-course, refers to frontline tuberculosis treatment regimen
DPH	Department of Public Health
EMT	Emergency Medical Technician
HAART	Highly Active Antiretroviral Treatment
HIV/AIDS	Human Immunodeficiency Virus infection / Acquired Immunodeficiency Syndrome
HRSA	U.S. Health Resources and Services Administration
MDG	Millennium Development Goals
MINSA	Peruvian Ministry of Health
MPH	Masters in Public Health
MSM	Men who have sex with men

NBCCEDP	National Breast and Cervical Cancer Early Detection Program
NCD	Non-Communicable Disease
NGO	Non-Governmental Organization
NHS	National Health Service
PACT	Providing Access to Care and Treatment
PIH	Partners in Health
PLWHIV	People Living With HIV/AIDS
PPACA	Patient Protection and Affordable Care Act
RCT	Randomized Controlled Trial, study design
SIS	Seguro Integral de Salud, meaning comprehensive health insurance
TB	Tuberculosis
WHO	World Health Organization

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