Community Health Worker National Workforce Study

March 2007

U.S. Department of Health and Human Services
Health Resources and Services Administration
Bureau of Health Professions
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Preface

During the past decade, private insurers, business enterprises and the Federal government have implemented or proposed changes in health care delivery and financing. These payers were reacting to unprecedented increases in health-related expenditures amid hypercompetitive global markets. Simply, the cost of providing adequate health care to employees and the population at large had become very high.

Some viewed the community health worker (CHW) workforce as a component of cost-effective strategies addressing the health care needs of underserved communities. However, there was little rigorous, comprehensive research about the CHW workforce.

This report describes a comprehensive national study of the community health worker workforce and of the factors that affected its utilization and development. The research began in 2004 and was concluded in 2007 by the Regional Center for Health Workforce Studies of The University of Texas Health Science Center at San Antonio under contract No. HHSH230200432032C awarded by the United States Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions. The Evaluation and Analysis Branch, Office of Workforce Analysis and Quality Assurance, BHPPr, HRSA, was responsible for overseeing the research project.
Executive Summary

Introduction (Chapter 1). This report describes a comprehensive national study of the community health worker (CHW) workforce. The 27-month research project utilized a survey of verified CHW employers in all 50 States, more in-depth interviews of employers and CHWs in 4 States, conducted a comprehensive review of the literature, and made national and State workforce estimates using databases from the Census and the U.S. Department of Labor, Bureau of Labor Statistics.

During the past decade, private insurers, business enterprises, and the Federal government, responding to the high cost of providing adequate health care to employees and the population at large, implemented or proposed changes in health care delivery and financing. Some of the factors contributing to the cost challenges included population changes, provider shortages, accelerating technological progress, and the increasing complexity of the health care system. Population projections have been predicting a large increase in the U.S. elderly population (estimated to be 87 million in 2050) and, due to higher fertility among minorities, an increase in population diversity and the size of younger cohorts of individuals from low-income families. These changes in the size, structure and diversity of the population have been and will be requiring a broader range of health services for entire families and communities. Cultural understanding, community health education, and translation services have been and will be increasingly needed for delivering effective care to families and communities that are often isolated and underserved. Additionally, many providers are in short supply and have been caring for increasingly large and diverse patient populations in regulated environments that discourage patient/provider interaction and continuity of care. The diffusion of new science and technology while offering encouraging solutions has not yet reached a scale large enough to outpace providers’ shortages and the escalating cost of care. However, telemedicine and new methods of disseminating scientific information have been empowering individuals with less extensive clinical training but strong personal and community skills to become valuable members of established medical teams for improving access, patient communication and compliance, outreach, prevention, and early diagnoses in underserved communities.

These converging demographic and economic forces set the stage for the emergence of the community health worker workforce and its utilization in cost containment and cost-effective strategies aimed at providing health care to the underserved.

CHW Definition

Community health workers are lay members of communities who work either for pay or as volunteers in association with the local health care system in both urban and rural environments and usually share ethnicity, language, socioeconomic status and life experiences with the community members they serve. They have been identified by many titles such as community health
advisors, lay health advocates, “promotores(as),” outreach educators, community health representatives, peer health promoters, and peer health educators. CHWs offer interpretation and translation services, provide culturally appropriate health education and information, assist people in receiving the care they need, give informal counseling and guidance on health behaviors, advocate for individual and community health needs, and provide some direct services such as first aid and blood pressure screening.

**Chronology of CHW workforce development** (Chapter 2). The history of community health workers is rooted in early self-preservation and self-reliance strategies by communities the world over. However, references in the U.S. literature about CHW activities are found mostly after the mid-1960s. For this study, selective lists of critical events marking the evolution of the CHW workforce have been grouped into four periods.

- **During the early documentation period** (1966-1972), the attempts to engage CHWs in low-income communities were experimental responses to the persistent problems of the poor and related more to antipoverty strategies than to specific models of CHW intervention for disease prevention and health care.
- The next period (1973-1989) was characterized by special projects funded by short-term public and private grants, often linked to research in universities, and produced a substantial increase in published studies documenting CHWs’ potential in interventions aimed at health promotion and access to health services.
- **State and Federal Initiatives** (1990-1998) followed. Standardized training for CHWs received greater recognition and there was a surge of communication among CHW initiatives across categorical funding programs. Many bills in support of CHW activities were introduced at the national and State levels, but none passed.
- The latest period included significant Public Policy (1999-2006) actions. Legislation specifically addressing CHWs, their use and their certification was passed in several States and a Patient Navigator bill was signed into law as a major piece of legislation at the Federal level addressing CHW activities. Also, a 2003 Institute of Medicine report on reducing health disparities made recommendations regarding CHW roles.

**Workforce size and characteristics** (Chapter 3). There is no specific occupational code that can be used in official reports for community health workers and, therefore, there are no official estimates of the number of community health workers (CHWs) in the United States. Until now, these workers have been reported under existing occupations that have similar but not equivalent job descriptions.

For this study, estimates were made of volunteer and paid CHWs in each of the 50 States, first by making an assessment of the occupations that were likely to have been used as

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1 The terms *promotores* and *promotoras* are used in Mexico, Latin America, and Latino communities in the United States to describe advocates of the welfare of their own community who have the vocation, time, dedication, and experience to assist fellow community members in improving their health status and quality of life. Recently, the terms have been used interchangeably, despite some opposition, with the term community health workers.
proxies for community health worker activities in reports to the Bureau of Labor Statistics and the Census Bureau. Then, the approximate percent of individuals in those occupations likely to be CHWs was determined. The occupations included in the estimates were counseling, substance abuse, educational-vocational counseling, health education, and other health and community services. CHWs were estimated to be from 5 to 40 percent of the workers engaged in these occupation/industry categories and they were either wage earners (67 percent) or volunteers (33 percent) in not-for-profit and for-profit organizations such as schools, universities, clinics, hospitals, physician offices, individual-family-child services, and educational programs.

Approximately 86,000 community health workers assisted American communities in 2000. California and New York were home to about 9,000 and 8,000 CHWs, respectively. Texas, Florida, and Pennsylvania had between 3,500 and 5,000 CHWs each. The States of Illinois, Ohio, and Georgia had, in that order, a CHW workforce of 3,520, 3,503, and 3,250. Ten States employed approximately 2,000 CHWs each, 7 States about 1,000 CHWs and the remaining 25 States, as well as the District of Columbia, only several hundred CHWs each.

The personal and professional characteristics of CHWs were assessed through a CHW National Employer Inventory (CHW/NEI) in all 50 States, never attempted before this study. A list of contacts, verified through phone calls (2,500), received a letter of invitation and appropriate reminders to participate in a Web-based survey. The inventory represents the most comprehensive and systematic effort to date of contacting, in every State, as many organizations employing CHWs as possible.

**CHW Race/Ethnicity**

The majority of individuals engaged in community health worker activities were either Hispanic or Non-Hispanic White (35 and 39 percent, respectively). The next largest groups were African-Americans (15.5 percent), Native Americans (5.0 percent) and Asian and Pacific Islanders (4.6 percent). Volunteer and paid CHWs had a similar racial and ethnic distribution with a somewhat higher relative proportion of Non-Hispanic Whites in the volunteer group. The majority of CHWs were female (82 percent) between the ages of 30 and 50 (55 percent). The predominance of women in this workforce was partly due to the focus of many programs on underserved children and their mothers as well as to clients’ greater acceptance of female caregivers in their homes. One-fourth of the workforce was younger than 30 and one-fifth was older than 50. Volunteers were more numerous in the older groups. More than one-third of all employed and volunteer community health workers had a high school education (35 percent); about one-fifth had completed some college work (20 percent), and almost one-third had at least a 4-year college degree (31 percent). Paid and volunteer CHWs were similar across levels of educational attainment except that more volunteers had less than a high school diploma and more paid workers had completed some college.
Wages

Sixty-four percent of the positions paid new hires an hourly wage below $13; only 3.4 percent of them paid at or near the minimum wage (under $7 per hour) and 21 percent paid $15 per hour or more. The majority of experienced CHWs (70 percent) received an hourly wage of $13 or more and about half of them received more than $15 per hour, indicating that longevity and/or experience received economic recognition.

Health workers have been engaged with different job titles in different models of care. Titles and models of care ranged from those of volunteer workers seeking the general improvement of a community’s health status to those of outreach workers with specific jobs aimed at reducing the impact of a single illness such as diabetes or HIV/AIDS. The common traits among these diverse roles have been found to be the commitment of these health workers to both the communities they assisted and the organizations for which they worked, the skill of interacting effectively with both, and the ability to motivate clients.

Volunteer CHWs were employed either by grassroots organizations, usually faith-based, or in outreach and health education efforts designed by university researchers and local health care providers, or in programs with ambitious goals but limiting budgets trying to maximize program impact from limited resources.

Populations Served

The communities receiving CHW services included all ethnic and racial groups but, most often, Hispanic/Latino (as reported by 78 percent of the respondents), Black/African-American (68 percent) and Non-Hispanic White (64 percent). One-third of the respondents reported services to American Indian/Alaska Natives and Asian/Pacific Islanders (32 and 34 percent, respectively). The clients targeted most frequently were females and adults ages 18 to 49. Special populations included the uninsured (as reported by 71 percent of respondents) followed by immigrants (49 percent), the homeless (41 percent), isolated rural residents and migrant workers (31 percent each), and colonia residents (9 percent). Programs serving immigrants, migrant workers, and the uninsured were more likely than other types of programs to have volunteer CHWs.

Health Issues and Activities

The most frequently reported health issues for which employers chose interventions that included CHWs were women’s health and nutrition (46 and 48 percent of respondents, respectively). These issues were closely followed by child health and pregnancy/prenatal care (41 percent each), immunizations (37 percent), and sexual behavior (34 percent). Next, employers reported CHW interventions targeting specific illnesses such as HIV/AIDS (39 percent), diabetes (38 percent), high blood pressure (31 percent), cancer (27 percent), cardiovascular diseases (26 percent), and heart disease (23 percent). Programs dealing with cancer, cardiovascular disease, diabetes, and high blood pressure
were more likely to have only volunteer CHWs than programs working with other conditions.

The CHW specific work activities involved culturally appropriate health promotion and health education (as reported by 82 percent of the respondents) followed by assistance in accessing medical and non-medical services and programs (84 and 72 percent, respectively) and complemented by “translating” (36 percent), interpreting (34 percent), counseling (31 percent), mentoring (21 percent) and, more generally, social support (46 percent) and transportation (36 percent). Related to these work activities, employers reported specific duties such as case management (45 percent), risk identification (41 percent), and patient navigation (18 percent), and direct services such as blood pressure screening (37 percent).

Key functional areas for CHW activity included creating more effective linkages between communities and the health care system, providing health education and information, assisting and advocating for underserved individuals to receive appropriate services, providing informal counseling, directly addressing basic health needs, and building individual and community capacity in addressing health issues.

Models of Care

The study identified five prevailing models of care engaging CHWs: (1) *Member of care delivery team*. In this model, the CHW was largely subordinate to a lead provider, typically a physician, nurse, or social worker. Tasks were relatively specific and generally delegated by the lead provider. (2) *Navigator*. The navigator role placed greater emphasis on the CHW’s capabilities for assisting individuals and families in negotiating increasingly complex service systems and for bolstering clients’ confidence when dealing with providers. The navigator model did not necessarily require a high degree of clinical supervision, but it did require a high level of awareness about the health care system. The major contribution by CHWs in this model was that of improving access and educating consumers as to the importance of timely use of primary care. (3) *Screening and health education provider*. This model of care has been one of the more common, and was often included in many categorically funded initiatives on specific health conditions such as asthma and diabetes. CHWs taught self-care methods, administered basic screening instruments and took vital signs. CHWs were able to gain access to hard-to-reach populations and were willing to work in neighborhoods or rural areas where other professionals were reluctant to practice. There were concerns, however, about the quality of services and information provided by CHWs, prompting calls for strict evaluation of the CHWs’ training and close supervision of their activities. (4) *Outreach-enrolling-informing agent*. “Outreach worker” was a common job title for CHWs, and it addressed the need of many programs to reach individuals and families eligible for benefits or services and persuade them to apply for help or come to a provider location for care. (5) *Organizer*. This model of care more often involved volunteer CHWs who became active in a community over a specific health issue, promoting self-directed change and community development. The models listed were not always
mutually exclusive and the list was compiled with the intent of integrating several but not all of the existing classification schemes.

**Education and training** (Chapter 4). Employers hiring community health workers have been looking for individuals with some formal education, specific qualities, and certain skills. Also, while employers have provided post-employment training for general education and specific competencies, they have not always offered opportunities for a career as a CHW. Employers reported that the languages most often used by CHWs to communicate with clients were English and Spanish (87 and 70 percent of the respondents, respectively). Less than 10 percent of the employers reported the use of French, Vietnamese, and Chinese. Few (6.4 percent) reported the use of sign language and knowledge of tribal languages (3.8 percent). Cultural competence was defined in this study as “the ability of understanding and working within the context of the culture of the community being served.” This definition was easily understood and agreed upon in field-testing and by employers interviewed in the four States selected for further study. However, responses were mixed as to whether cultural competence required that the CHW be a resident of the area being served.

About half of employers had educational or training requirements for CHW positions. Twenty-one percent mentioned that at least a high school diploma or GED was expected. A Bachelor’s Degree was a prerequisite to employment in 32 percent of the organizations. Most employers required post-hire training of CHW personnel through either continuing education (68 percent) with classroom instruction (32 percent) or through mentoring (47 percent) and on-site technical assistance (43 percent). The length of training reported ranged from nine to 100 hours. Employer-based training often was aimed at both enhancing the generic skills of CHWs and at the acquisition of competencies needed for specific programs. Specific training was required for understanding medical and social services, coordinating access to services, home visiting and patient “navigation,” providing health education and counseling, and administering first aid and CPR. Texas was the first State to adopt legislation governing the utilization of CHWs (1999). It was followed by Ohio in 2002.

Generally, the occupation of CHW has not been viewed as a career, because CHWs have positions that are often short-term, low paid, and lack recognition by other professionals.

**Employers** (Chapter 5). Since statistics on employers were not available, their total was derived from the estimates of paid and volunteer CHWs and findings from the CHW National Employer Inventory (CHW/NEI). The number of organizations employing community health workers was estimated to be 6,300 for the Nation as a whole. This rough approximation was obtained by dividing the average number of CHWs engaged by the employers surveyed for the CHW National Employer Inventory into the estimated national total of CHWs. The industries more likely to employ CHWs were “Individual and Family Services” (21 percent), “Social Advocacy Organizations” (14.2 percent), “Outpatient Care Centers” (13.3 percent), and “Administration of Education Programs” (12.9 percent). Additional industries found to have CHWs among their personnel,
although less often, included “Other Ambulatory Health Care Services” (8.4 percent) and “Office of Physicians” (5.3 percent).

The largest percentage of the organizations engaging CHWs (43 percent) were firms employing between 5 and 19 employees. Twenty percent had between 20 and 49 individuals on the payroll, and another 19.1 percent fell in the 50 to 249 employee category. Few, 2.8 percent, employed 250 to 499 individuals and 2.3 percent had 500 or more employees. About 12.5 percent of the firms had fewer than 5 employees.

Employers’ Hiring Rationale

The occupational characteristics of CHWs that have been motivating employers to hire them were identified by combining findings from the employers’ interviews and information gleaned from the review of the literature. Generally, employers have hired community health workers because they (a) learned about their successful utilization in professional journals, (b) believed that they were cost effective, (c) found that CHWs were capable of organizing communities in developing comprehensive health action plans, or (d) discovered that programs addressing health disparities were more effective when using one-to-one outreach by CHWs. Community health workers were viewed as having contributed to more effective delivery of health-related services because they were (1) effective in gaining access to hard-to-reach populations that had been avoided by other health workers; (2) able to patiently coach clients in culturally appropriate terms and induce behavioral changes; (3) able to successfully communicate with clients, after developing trusting and caring relationships, to impart or gather information and motivate key decisions such as participating in immunization programs; and (4) able to address certain client needs such as adapting health regimens to family and community dynamics.

Recruitment Strategies

Networking has been the recruitment strategy used most often by employers (74 percent). Churches and local businesses have been successful intermediaries in attracting qualified candidates, and clinic-based programs have recruited among patients. Other recruitment methods ranged from mass mailings to partnerships with existing volunteer organizations.

Barriers

Consistently, in the national Inventory, in employers’ interviews and in the literature, the prevalence of short-term funding and the necessary reliance on multiple funding sources were cited by employers and other observers as major barriers to the development of the CHW workforce. Federal and State governments provided most of the funds. Private organizations, local governments, and other sources supported about one-third of the employers. HRSA funding supported many CHW programs principally through the Federally Qualified Health Centers of the Bureau of Primary Health Care (BPHC) and the Healthy Start Programs of the Maternal and Child Health Bureau (MCHB). About one-fourth of employers responding to the “funding” section of the national Inventory
survey reported receiving funding from HRSA or having a HRSA-sponsored program. A growing area of support for CHWs was found to be for-profit firms, both through outsourcing or direct employment. However, most of the information on the utilization of CHWs by for-profit organizations was considered proprietary, sensitive from a competitive viewpoint, and was not available for inclusion in this study.

**Research on the CHW workforce** (Chapter 6). The study described in this report marks the first research effort that used a survey of verified employers in all 50 States to draw a profile of the community health worker workforce. Over the years, there has been a significant increase in the number of published journal articles addressing CHW-related topics, from 62 articles in the 1970s to nearly 400 in the 1990s, and 299 from 2000 to 2005. However, no peer-reviewed journal exists with a specific focus on CHW practice. The quality and scope of research described in the articles varied from few rigorous evaluations of specific medical interventions utilizing CHWs to many descriptive reports of CHW programs. Many studies suffered from small sample sizes, poor research designs, and lack of control groups.

Nine literature reviews have been published between 2002 and 2006 to evaluate the use of community health workers in specific primary care and medical specialty interventions. These reviews represent the best available assessments of findings from research on health interventions that included the use of CHWs. All of the articles reviewed represent contributions to other fields such as pediatrics and health education. Most reported findings were statistically significant, but not all of them had clinical significance. Three of the nine reviews were limited to the involvement of CHWs in interventions addressing diabetes, heart disease/stroke, and pregnancy in minority women. They covered a total of 98 studies, of which 23 were included in more than one review. Two reviews included only randomized controlled trials (RCTs), and one excluded studies measuring only changes in knowledge or attitudes.

**Current trends** (Chapter 7). There are suggestive indications, but no statistical evidence, of the size and direction of change in the community health worker workforce. Using the estimated proportions of CHWs in selected occupations and projections from the Bureau of Labor Statistics, assuming no changes in the proportions over time, the estimate was made of 121,206 CHWs in 2005, an increase of 41 percent from 85,879 CHWs in 2000.

The majority of employers in Texas and Arizona who participated in telephone interviews were optimistic about continuing the employment of CHWs and even expanding their utilization into health care services addressing diabetes, mental health, and oral health. Few employers mentioned plans of involving CHWs in future clinics, emergency rooms, and additional geographic areas. All employers indicated that continued funding was the key determinant of continued CHW employment.

**Reports from selected States** (Chapter 8). Regional workforce profiles were assembled with data gathered from published and unpublished studies and reports, special tabulations of the CHW National Employer Inventory, and 48 unstructured interviews.
with employers and CHWs. The results of the interviews from the larger States of New York and Texas were compared to the findings from the national Inventory and were found to reinforce those findings. The demographic characteristics of community health workers usually mirrored those of the communities they served. In Arizona, they were primarily American Indians/Alaska Natives, most of them tribal Community Health Representatives (CHRs), and Hispanics, mostly engaged in U.S.-Mexico Border or farmworker programs. In Massachusetts, they were mostly White (80 percent). In New York, 37 percent of CHW personnel were Black/African-American, 35 percent were Non-Hispanic White, and one-fourth were Hispanic/Latino(a). In Texas, the CHW workforce was 68 percent Hispanic/Latino(a), 18.5 percent Non-Hispanic White, and 10.7 percent Black/African-American.

In the selected States, as in the Nation, CHWs were mostly female between the ages of 30 and 50. Exceptions were found in certain programs such as Arizona nutrition programs, or fatherhood, HIV case management, and some youth programs in New York, which maintained a predominance of male workers. Educational levels, wages, utilization, and models of care in the selected States are detailed in Chapter 8.
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Chapter 1. Introduction

Background

Payers and public administrators remember well the unprecedented pressure of the unusually large “baby boomer generation” on the educational facilities of the 1950s and 1960s. During the 1970s, the 1980s and the 1990s, boomers’ needs changed and they swayed the political agenda to address jobs and housing, reduce taxes, and attain national and personal economic security. Now that “the big wave,” as some demographers call the baby boomers, has arrived on the shores of the 21st century, its impact has been and will continue to be large. Recent projections estimate an elderly population of 87 million people by 2050, a number greater than the entire U.S. population of 1900. For the 21st century, the baby boomer generation has been and will increasingly be demanding adequate preventive, acute, and long-term care. Additionally, in the United States, the changes in the size and structure of the population have been accompanied by unique changes in its diversity, adding special requirements, such as cultural competence, to the type and the quality of health care necessary to improve health outcomes. Demographic diversity will fuel population growth from 2000 to 2050 at a rate that parallels that of the world population and is 10 times greater than that of other developed countries. Seven percent of that increase will come from Non-Hispanic Whites. African-Americans will increase by 71 percent, Hispanics by 188 percent and Asians by 213 percent. The vitality of the minority population has added large cohorts in the youth side of the age spectrum, requiring a broader range of health services for entire families and communities. Cultural understanding, community health education, and translation services have been increasingly needed for delivering effective care to families and communities that are often isolated and underserved.

While consumers had high expectations for the power of medicine and its technical sophistication, they have been disillusioned at times with the care they received and criticized the health system as too complex, impersonal, budget-driven, and expensive. Empowered by simplified and easily accessible health information on the Internet, better-informed patients have been questioning organized medicine and have been willing to explore more economical, accessible, and patient-focused health assistance outside traditional providers.

Some health providers have been in short supply because either not enough graduates exited the educational pipelines, or unequal economic and psychological rewards

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3 Murdock et al. (2005).
4 National Fund for Medical Education. Advancing Community Health Worker Practice and Utilization: The Focus on Financing. San Francisco (CA): Center for the Health Professions, University of California at San Francisco, 2006.
produced uneven geographic distributions of practice locations, or both. Wherever in practice, they have been caring for increasingly large and diverse patient populations in regulated environments that discouraged patient/provider interaction and continuity of care. Budgetary and regulatory constraints have led to mostly short encounters with patients in medical offices, small clinics, and hospitals. Studies about the quality of care and the safety of patients revealed problems that are currently being addressed by industry, the organized professions, and the Federal government. Science and technology offer encouraging solutions such as early detection of illnesses, less-invasive procedures, shorter hospitalizations, new and better materials for body parts, transferability of medical information, and amazing outreach capabilities through telemedicine. While the diffusion of many of these technologies has not yet reached a scale large enough to outpace providers’ shortages and the escalating cost of care, the new methods of disseminating scientific information and telemedicine have been empowering individuals with less-extensive clinical training, but strong personal and community skills, to become valuable members of established medical teams to improve access, patient communication and compliance, outreach, prevention, and early diagnoses in underserved communities.

Against this backdrop, community health workers (CHWs) stand out as natural bridges between providers and underserved populations in need of care.

Community health workers are lay members of communities who work either for pay or as volunteers in association with the local health care system in both urban and rural environments and usually share ethnicity, language, socioeconomic status, and life experiences with the community members they serve. They have been identified by many titles such as community health advisors, lay health advocates, “promotores(as),” outreach educators, community health representatives, peer health promoters, and peer health educators. CHWs offer interpretation and translation services, provide culturally appropriate health education and information, assist people in receiving the care they need, give informal counseling and guidance on health behaviors, advocate for individual and

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7 The term “community” is used in a geographic sense describing people living together in a particular area as small as, but not necessarily limited to, a neighborhood, who have some common characteristics and are unified by common interests.
8 The terms promotores and promotoras are used in Mexico, Latin America and Latino communities in the United States to describe advocates of the welfare of their own community who have the vocation, time, dedication and experience to assist fellow community members in improving their health status and quality of life. Recently, the term has been used interchangeably, despite some opposition, with the term community health workers.
community health needs, and provide some direct services such as first aid and blood pressure screening.\(^9\)

CHWs have been a worldwide grassroots phenomenon of fellowship, self-reliance, and survival almost as long as communities have existed as social units of individuals sharing residence, cultural heritage and economic conditions.\(^10\) But only in the 1950s did they begin to be part of deliberate strategies for increasing access and delivering cost-effective and culturally sensitive care to the underserved. CHWs were employed in many sectors of social and health services delivery programs.\(^11\) In 2002, the Directory of HRSA’s Community Health Workers (CHWs) Programs included 35 current and nine recently completed programs that employed CHWs and were funded directly or indirectly by the Health Resources and Services Administration (HRSA). Also, HRSA introduced “health disparities collaboratives,” a program that utilized CHWs to improve care and reduce disparities in Federally Qualified Health Centers (FQHCs).\(^12\)

About This Study

Content

Chapter 2 chronicles the involvement of community health workers in the delivery of health services and summarizes the legislative process relevant to their integration into the U.S. health care system. Chapter 3 provides national and State estimates of paid and volunteer workers and describes the CHW workforce. Chapter 4 addresses their requirements at hire, training, certification programs, and career opportunities. Chapter 5 gives an account of the organizations employing them and of the sustainability of their programs. Chapter 6 reviews the extent and nature of current research and cost-effectiveness studies. Chapter 7 discusses trends in CHW utilization. Finally, Chapter 8 summarizes the results of in-depth inquiries on the status and development of the CHW workforce in four States: Arizona, New York, Massachusetts, and Texas.

References to the relevant literature are made throughout the study and a selected annotated bibliography has been assembled into a companion volume.\(^13\)

\(^9\) Definition of CHWs used in this study. More details on the role of CHWs in the U.S. Health Care System are provided in Chapter 3.


\(^11\) See Chapter 2 for an account of the evolution of the CHW workforce and Chapter 6 for an overview of studies on CHW utilization.


Approach

The study employed four research strategies:

- First, a comprehensive list of articles, books, and published and unpublished reports was compiled. These items, including nine published literature reviews from 2002 to 2006, summarized in Chapter 6, were examined for supporting evidence in addressing the topics of the study. Forty-five of the articles judged to be of particular significance because they were published in reviewed journals, seminal, highly quoted, and/or of noteworthy methodology were selected and summarized in an annotated bibliography published separately from the report.¹⁴

- Second, national and State estimates of the number of CHWs currently engaged in paid and volunteer positions were made using both the Public Use Microdata Sample (PUMS) of the Census Bureau and the Bureau of Labor Statistics’ annual survey of industry “staffing patterns.”

- Third, a survey of programs utilizing CHWs, referred to in this report as the “CHW National Employer Inventory” (CHW/NEI), was conducted in partnership with the Center for Sustainable Health Outreach of The University of Southern Mississippi. For each of the 50 States, contact information for programs currently employing CHWs was verified and individuals familiar with the programs and community health workers were invited to participate in a Web-based questionnaire – hard copies were made available on request – about the type, health goals, and sustainability of the programs as well as the characteristics, education, skills, type of job held, salary, and career potential of the employed and volunteer community health workers.

- Fourth, in-depth accounts of CHW status and development in the States of Arizona, Massachusetts, New York, and Texas were assembled after discussions with local experts, unstructured interviews (referred to as the “CHW National Workforce Study Interviews” or CHW/NWSI throughout this report) with employers and active CHWs, and reviews of published and unpublished reports.

A national technical advisory group was assembled in consultation with the HRSA project officer to review the research plan and its subsequent revisions. The members’ names are listed in Appendix A.

Data sources

The study used both original and extant data. Original data were collected from approximately 900 responses from across the United States¹⁵ and from 48 unstructured interviews with employers and community health workers in Arizona, Massachusetts, New York, and Texas.¹⁶ Existing data were gathered from available reports, comprehensive literature reviews, informative Web sites, literature searches that used both librarians’

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¹⁴ Ibid.
¹⁵ The protocol and the questionnaire employed in conducting the CHW/NEI are included in Appendices C and D, respectively.
¹⁶ Copies of the interview protocols are provided in Appendices E1 and E2. Results from the interviews are included throughout the report as appropriate.
protocols and citations from reviewed articles, and from two national databases: the Public Use Microdata Sample (PUMS) of the Census Bureau and the Bureau of Labor Statistics’ annual survey of industry “staffing patterns.”¹⁷

¹⁷ The databases used to make National and State estimates of paid and volunteer community health workers are described in Appendix B together with the methodology used for the estimates.
Chapter 2. A Chronology of CHW Workforce Development

Health care planners and administrators are giving increasing attention to community health workers as members of established health care teams. This chapter describes the events that, over time, marked their progressive inclusion in public and private health initiatives. A true history of community health workers would begin more than 300 years ago when communities recognized the advantages of assigning to selected gifted community members the responsibility of assisting other members in health-related matters. However, references in the literature about CHW activities are found mostly after the mid-1960s. Few studies in the 1950s described grassroots self-help projects and basic outreach and education initiatives by indigenous workers. Facts and critical events marking the evolution of those grassroots initiatives into what is now the CHW workforce have been grouped into four periods spanning the years 1966-1972, 1973-1989, 1990-1998 and 1999-2006. The list assembled here is not intended to be comprehensive but only suggestive of significant steps in the development of the CHW workforce.

Early Documentation (1966-1972)

During this period, attempts to engage CHWs in low-income communities were experimental responses to the persistent problems of the poor and were related more to antipoverty strategies than to a specific model of CHW intervention for health improvement. Few early studies described CHW effectiveness and its potential.

- The Federal Migrant Health Act of 1962 mandated outreach, but there was no substantial activity involving indigenous CHWs until the 1970s. Earlier farmworker CHW activity, funded by the former U.S. Children’s Bureau, was documented in the 1950s in Florida.
- The earliest documented use of CHWs by the New York City Health Department was in a 1960s tuberculosis program involving “neighborhood health aides.”
- Early Federal support of CHW activity came from the Office of Economic Opportunity (OEO) for antipoverty efforts such as “Model Cities” and the “New Careers for the Poor” under the OEO Act of 1964. In these initiatives, job

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3 Rosenthal EL et al. (1998).
creation was an important objective. Studies discussing this initiative were published as early as 1964.7

• One of the CHW programs that emerged from the antipoverty initiative was the Community Health Representative Program for Native American populations. It originated under the OEO in 1968 and was gradually transferred to the Indian Health Service between 1969 and 1972.8

• One of the first effectiveness studies on CHWs, in which CHWs worked with public health nurses and physicians to encourage compliance with treatment of pediatric respiratory infections, was published in 1970.9

• Early university-based research on CHWs was conducted at Tulane in the late 1960s and early 1970s in partnership with Planned Parenthood of Louisiana and included an early systematic look at factors important to successful employment of CHWs.10

• Although the Medicare and Medicaid Programs were introduced in this period (1965-1968), no documentation was found of any plan to incorporate CHWs into these programs.

Utilization of CHWs in Special Projects (1973-1989)

No major milestones characterize this period, but there was a steady growth of projects funded by short-term public and private grants. The projects were often linked to research and, therefore, during this period, there was a substantial increase in published studies (see Figure 6.1 in Chapter 6). The studies provided scholarly documentation of CHW potential in interventions aimed at health promotion and access to health services.

• In 1978, a World Health Organization (WHO) declaration concerning CHWs was a symbolic milestone that probably stimulated attention to this workforce in the public health sector.11

• The “Resource Mothers” curriculum was developed for the Virginia Task Force on Infant Mortality during the 1980s12 and became one of the early CHW

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11 Kahsay HM, Taylor ME, Berman PA. Community health workers: the way forward. Geneva (CH): World Health Organization; 1998. Note: “In 1978, the International Conference on Primary Health Care in Alma-Ata proposed the development of National CHW programmes as an important policy for promoting primary health care. Alma-Ata signaled a significant shift in health policy that broadened the means of improving health from the delivery of services to include social, economic, and political development.” (p.2)
curricula widely distributed nationally. Indiana used the curriculum to train personnel for the State’s community health worker program, which began in 1994 and focused on maternal and child health. International Medical Services for Health (INMED) developed prototype materials for the Resource Mothers programs, renamed the Resource Mothers project MotherNet in 1994, and continued to provide handbooks for lay home visitors, implementation guidelines for public and private agencies, and curricular materials for training resource mothers.

- In 1989, the Health Education Training Centers (HETC) program was created to serve primarily the U.S.-Mexico Border region and areas of high immigrant populations. The program has played an important role in promoting the utilization of CHWs in public health projects.
- University-based studies explored the potential of “natural helpers” in improving community conditions through the use of existing social networks for problem-solving and diffusion of positive health-related behaviors.

State and Federal Initiatives (1990-1998)

During this period, standardized training received greater recognition, and communication increased among CHW initiatives across categorical funding programs. Many bills were introduced at the national and State levels, but none passed.

- Arizona Health Start, in 1992, was one of the first CHW programs to receive ongoing appropriations from State general revenue.
- Training centers were opened at the Community Health Education Center in Boston in 1993 and at the City College of San Francisco in 1994.
- In 1993, the New Mexico Community Health Worker Association was founded with the support of the University of New Mexico and, in 1996, began annual CHW training conferences under a 3-year development grant from the Robert Wood Johnson and Henry J. Kaiser Family Foundations. Additional associations and networks are listed in Appendix H.

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• In 1993, the National Advisory Committee on Rural Health and Human Services recommended\(^{20}\) that “The Secretary should develop initiatives to broaden access and innovation in health care delivery by supporting local programs that utilize indigenous community workers and paraprofessionals as essential members of community health care delivery teams.”\(^{21}\)

• In 1993, the Centers for Disease Control and Prevention (CDC) awarded a grant for one of the first national conferences on CHW programs and related community-based public health activity: “Mobilizing Resources for Practice, Policy and Research.”\(^{22}\)

• In 1994, the Pew Commission for the Health Professions published a landmark descriptive study about CHWs as integral members of the health care workforce. It was excerpted in a 1995 article in the American Journal of Public Health.\(^{23}\)

• The U.S. Department of Education supported college education for CHWs through a San Francisco program that offered a Community Health Worker Certificate at the City College of San Francisco.\(^{24}\)

• Kentucky Homeplace was established in 1994 with an annual State appropriation to support “Family Health Care Advisors” to serve 58 counties, mainly rural areas in the Appalachian region.\(^{25}\)

• A 1997 report sponsored by the Annie E. Casey Foundation described the potential for employing CHWs in contracts with Managed Care Organizations.\(^{26}\)

• In 1998, the Western Arizona Area Health Education Center, a HRSA-sponsored program, began organizing annual national CHW training conferences.\(^{27}\) These conferences became a focal point for the Promotores de Salud, a distinct CHW workforce devoted to improving the health status of Latino communities.

• The Health Resources and Services Administration, Bureau of Primary Health Care organized, in 1998, the first major national outreach conference on CHW activities to discuss milestones in the field and future strategies across categorical funding programs.\(^{28}\)

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\(^{20}\) Recommendation 93-11: Train Local Health Care Workers


\(^{26}\) Rico C. Community Health Advisors: Emerging Opportunities in Managed Care, Annie E. Casey Foundation, Seedco—Partnerships for Community Development. 1997.


\(^{28}\) Ritchie D. Community Health Workers: Building a Diverse Workforce to Decrease Health Disparities. Providence (RI): Transcultural Community Health Initiative (TCHI), Center for the Study of Race and Ethnicity in America at
The Annie E. Casey Foundation sponsored the National Community Health Advisor Study, the first project aimed at drawing a national profile of CHWs and their work. The study was released in 1998.  

Public Policy Options (1999-2006)

The first State legislation specifically addressing the CHW workforce was passed at the beginning of this period, and the language describing CHWs as “integral members of the health care delivery team,” first found in the 1994 study by the Pew Commission, became frequently used with reference to CHWs. Scientific sessions with this title appeared at the American Public Health Association (APHA) Annual Meetings of 2005 and 2006.

- In 1999, CHW training and certification legislation was passed in Texas. This bill mandated pilot projects involving CHWs in Medicaid managed care as well as a feasibility study on CHW certification.
- The El Paso Community College (EPCC) Community Health Worker Program began in the fall of 2000 as a community-driven project.
- In 2000, the National Rural Health Association issued public policy statements supporting expanded roles for CHWs. Similar statements were issued in 2001 by the American Public Health Association and in 2003 by the American Association of Diabetes Educators.
- In 2000, the APHA New Professionals interest group changed its name to Community Health Worker Special Primary Interest Group (CHW SPIG).
- In January 2001, a meeting of State and Federal representatives convened in San Antonio, Texas, to discuss policy options for integrating CHWs into programs such as Medicaid, Women Infants and Children (WIC), Food Stamps and Head Start.
- In 2003, credentialing legislation (HB95) was passed in Ohio.

Brown University, Feb 17-May 17, 2004; Fox D. Strategy sessions held for the development of a national CHW organization. Connections 2002; 3 (2):5.
29 Rosenthal EL et al. (1998).
30 HB 1864, which became effective on 9/1/99, created the Promotora Program Development Committee (PPDC). Specifically, it stated: “The purpose of this article is to establish a temporary committee that will study certain issues related to the development of outreach and education programs for promotoras or community health workers and that will advise the Texas Department of Health, the governor, and the legislature regarding its findings.”
36 HB95 (125th General Assembly); under this act, the Board of Nursing was given the authority to develop and implement a certification program for community health workers and began issuing certificates in February, 2005.
• Three States passed bills mandating studies of the State CHW workforce; they were released in New Mexico (2003), 37 Virginia (2006), 38 and Massachusetts (2005). 39
• In 2003, the University of Arizona (Project Jump Start), supported by the U.S. Department of Education, Fund for Improvement of Post Secondary Education (FIPSE), began the development of a standardized CHW educational program. 40 A follow-up project, the CHW National Education Collaborative, was funded by FIPSE in 2004. 41
• The Institute of Medicine’s 2003 report on reducing health disparities made recommendations regarding CHW roles. 42
• A major study in 2003 by Brandeis University recommended a central CHW role in demonstration projects to address disparities in cancer prevention and treatment. 43 The study led to the funding of six demonstration sites for cancer Patient Navigator services to minority Medicare recipients. 44
• The Federal Office of Minority Health and the Agency for Healthcare Research and Quality discussed the CHW role in culturally sensitive interventions in their 2004 research agenda on cultural competence. 45
• In June 2005, a Patient Navigator bill was signed into law as the first major CHW legislation adopted at the Federal level. 46
• In 2006, the Office of Management and Budget solicited public comment on changes to be considered for the existing Standard Occupational Classification system that may include “community health worker” as an occupation. The revision will be completed by the end of 2008. 47 Comments were submitted by the public recommending the creation of a new code for community health workers as a distinct occupation. 48

46 HR 1812 Patient Navigator Outreach and Chronic Disease Prevention Act of 2005.
A 2-year grant from the Robert Wood Johnson Foundation to the Georgetown University Law Center to create a national network of CHWs began on August 1, 2006.
Chapter 3. The Community Health Worker Workforce

There are no official estimates of the number of community health workers (CHWs) in the United States because there is no specific occupational code to report them in national databases.¹

Until now, CHWs have been counted in official reports under existing occupations that have similar but not equivalent job descriptions. The distinguishing CHW roles are those enhancing outreach and effectiveness of health services to underserved communities.

An appropriate definition of the CHW occupation for its inclusion in national statistics is now being considered. Comments were submitted by the public to the Office of Management and Budget recommending the creation of a new Standard Occupational Classification (SOC) code for community health workers. As the job descriptions that define the community health worker occupation are better understood and documented, it is possible to estimate the CHW workforce from existing data with greater confidence.

Size of the Workforce: National and State Estimates

After making an assessment of the occupations that were likely to have been used as proxies for community health worker activities in reports to the Bureau of Labor Statistics and the Census Bureau and of the percent of individuals in those occupations likely to be CHWs, estimates were made of volunteer and paid CHWs in each of the 50 States.² The occupations included in the estimates were counseling, substance abuse, educational-vocational counseling, health education, and other health and community services. CHWs were estimated to be from 5 percent to 40 percent of the workers engaged in these occupations and they were either wage earners (67 percent)³ or volunteers (33 percent) in not-for-profit and for-profit organizations such as schools, universities, clinics, hospitals, physician offices, individual-family-child services and educational programs.

¹ Data on the American workforce are collected by Federal and State agencies using the 2000 Standard Occupational Classification (SOC) System, which provides a means to compare occupational data across agencies. In the SOC, all workers are classified into one of more than 820 occupations according to their occupational definition. A job description -- indicating job duties, skills, education or experience required to perform that job -- explains each occupation. The SOC does not contain a “community health worker” code and job description. Consequently, CHWs have been undetected by official National and regional data collection programs and, since, by law, all paid employees must be reported by employers, CHWs have been counted under existing occupational classifications. Individuals filling out U.S. Census Bureau questionnaires have been describing their activities as community health workers, which later have been coded under an existing SOC code.

² The codes used to identify CHWs from the two data sets were chosen by matching job descriptions of CHW activities in the relevant literature with those in the 2000 SOC system, by asking experts, and by using information gathered in conducting the CHW employer inventory described later in this chapter. The results reported in this study are based on the 2000 Staffing Patterns data collected by the U.S. Bureau of Labor Statistics (BLS) and the Public Use Microdata Data Sample (PUMS, 2000) collected by the U.S. Census Bureau. Estimates of paid CHWs were made using both the Census and the BLS data sets. Estimates of volunteer CHWs were made using the findings from the CHW National Employer Inventory conducted for this study and described later in this chapter. The estimates for the Nation, using the two independent data sources, differed only by 6.1 percent. Larger differences were found for some single States. The totals shown in Table 3.1 are an average of estimates from the two data sets. In Appendix B, the methodology of the estimates is described in detail.

The estimates, shown in Table 3.1, indicate that in the year 2000 there were approximately 86,000 community health workers assisting American communities. California and New York were home to about 9,000 and 8,000 CHWs, respectively. Texas, Florida, and

Table 3.1 Estimates of Paid and Volunteer CHWs in the United States by States and Census Regions

<table>
<thead>
<tr>
<th>Census Region and State</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
<th>Total CHWs*</th>
<th>Rank by Total CHWs</th>
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<td>Census Region and State</td>
<td>Paid CHWs</td>
<td>Volunteer CHWs</td>
<td>Total CHWs*</td>
<td>Rank by Total CHWs</td>
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<td>Wyoming</td>
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</tbody>
</table>


*May not sum to total because of rounding and adjustments made for the estimates of volunteer CHWs.

Pennsylvania had a workforce between 3,500 and 5,000 CHWs each. The States of Illinois, Ohio, and Georgia had, in that order, a CHW workforce of 3,520, 3,503, and 3,250. Ten States employed approximately 2,000 CHWs each, 7 States about 1,000 CHWs and the remaining 25 States, as well as the District of Columbia, only several hundred CHWs each. The distribution among the four Census regions was: 22 percent of total CHWs in the Northeast, 24 percent in the Midwest, 33 percent in the South, and 21 percent in the West. The methodology employed to produce these estimates is described in detail in Appendix B.

**Who are the Community Health Workers?**

Personal and professional characteristics of CHWs were assessed through a never-before-attempted CHW National Employer Inventory (CHW/NEI) in all 50 States. A list of contacts (2,500), verified through phone calls, received letters of invitation and appropriate reminders to participate in the survey. The CHW/NEI – not a sample survey, impossible since an official count of all employers of CHWs had never been made –
represents the most comprehensive and systematic effort to date of contacting, in every State, as many organizations employing CHWs as possible. A response rate of 36 percent (900 respondents) yielded the first detailed national- and State-specific information on CHWs and their activities.\(^4\) Table 3.2 displays key demographic indicators of CHWs and Table 3.3 the wages earned by CHWs. The findings from the CHW/NEI did not contradict the information extracted from the extensive review of the literature conducted for this study.\(^5\)

### Table 3.2 Demographic Characteristics of CHWs

<table>
<thead>
<tr>
<th>Race and Ethnicity -- N=504</th>
<th>Total CHWs</th>
<th>Paid</th>
<th>Volunteer</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian/Alaskan Native</td>
<td>5.0</td>
<td>7.0</td>
<td>0.5</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>4.6</td>
<td>5.9</td>
<td>1.8</td>
</tr>
<tr>
<td>Black/African-American</td>
<td>15.5</td>
<td>14.9</td>
<td>16.8</td>
</tr>
<tr>
<td>Hispanic</td>
<td>35.2</td>
<td>37.3</td>
<td>30.8</td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>38.5</td>
<td>33.8</td>
<td>48.3</td>
</tr>
<tr>
<td>Other</td>
<td>1.2</td>
<td>1.1</td>
<td>1.4</td>
</tr>
</tbody>
</table>

| Age -- N=488                  |            |      |           |
| Less than 30                  | 25.4       | 23.8 | 28.4      |
| 30 to 50                      | 54.8       | 59.5 | 46.1      |
| Over 50                       | 19.8       | 16.7 | 25.5      |

| Gender -- N=495               |            |      |           |
| Female                       | 81.6       | 85.7 | 72.0      |
| Male                         | 18.4       | 14.3 | 28.0      |

\(^4\) The online CHW/NEI was conducted in partnership with the Center for Sustainable Health Outreach (CSHO) of The University of Southern Mississippi, which, independently from this study, had begun working on a National Inventory of CHW Programs. The research team at The Regional Center for Health Workforce Studies (RCHWS) of The University of Texas Health Science Center at San Antonio developed and implemented an extensive verification and enhancement protocol to refine the original list of contacts provided by CSHO, which took responsibility for sending invitations and reminders and making follow-up calls. The tabulation of the responses were made specifically and exclusively for this study. The Inventory process is included in Appendix C and a copy of the questionnaire is available in Appendix D.

The majority of individuals engaged in community health worker activities at the organizations responding to the CHW/NEI were either Hispanic or Non-Hispanic White (35 and 39 percent, respectively). The next largest groups were African-Americans (15.5 percent), Native Americans (5.0 percent) and Asian and Pacific Islanders (4.6 percent). Volunteer and paid CHWs had a similar racial and ethnic distribution with a somewhat higher relative proportion of Non-Hispanic Whites in the volunteer group.

The employers responding to the CHW/NEI indicated that a majority of CHWs (55 percent) working for them were predominately female (82 percent) between the ages of 30 and 50. One-fourth of the workforce was younger than 30 and one-fifth was older than 50. Volunteers were more numerous in the older groups.

More than one-third of all employed and volunteer community health workers had a high school education (35 percent), about one-fifth had completed some college work (20 percent), and almost one-third had at least a 4-year college degree (31 percent). Paid and volunteer CHWs were similar across levels of educational attainment with two exceptions: (1) more volunteers (13.5 percent) had less than a high school diploma than paid CHWs and (2) more paid workers had completed some college (22 percent) than their volunteer counterparts.

CHW positions have often been described as low-wage. However, the employers responding to the CHW/NEI survey reported a range of substantially different compensation levels. Sixty-four percent of the positions paid new hires an hourly wage...
below $13, only 3.4 percent of them paid at or near the minimum wage (under $7 per hour), and 21 percent paid $15 per hour or more. The majority of experienced CHWs (70 percent) received an hourly wage of $13 or more and about half of them (49 percent) received more than $15 per hour, indicating that longevity and/or experience received economic recognition.

Additional relevant information on CHW wages was found in the literature. According to the Massachusetts Department of Public Health (MDPH), in 2004, the average yearly income for CHWs was approximately $23,000 yearly, $6,000 less than the average for that State. The same report indicated that CHW salaries did not increase proportionally to educational level, work experience, or tenure. In California, a 1998 survey of health care providers in the San Francisco Bay Area revealed that 26 percent of full-time CHWs earned less than $20,000 a year, 44 percent earned between $20,001 and $25,000, 20 percent earned between $25,001 and $30,000, and 10 percent earned more than $30,000. Data from a 1999 multi-State research project reported the compensation of CHWs as ranging from $8,880 to $39,860 annually. Similar annual earnings were documented in 2003 job market assessment completed in Florida, with entry-level salaries between $17,170.98 and $27,580.89, and an average annual salary of $22,376. A 2002 Virginia survey reported CHW median hourly wages of $10.50. Job postings revealed that State and local health departments in Maryland paid CHWs a range of $20,894 to $32,093, and a “Health Worker III” in San Francisco with a minimum of two years’ experience, holding a position similar to that of a CHW’s, was paid $1,702 to $2,069 biweekly or $44,252 to $53,794 annually.

The CHW/NEI found that the majority of employers were paying employment benefits to their CHW personnel. The most common were mileage reimbursement (76 percent of employers); health insurance and sick leave (71 percent each); vacation accrual (68 percent); personal leave (56 percent); and a pension or retirement plan (54 percent). Tuition assistance and educational leave benefits were reported by 31 percent and 16.9 percent of employers, respectively. These findings confirm reports from the literature. However, in Massachusetts, many of the CHWs indicated that health insurance was not provided as part of their positions, and 53 percent of the CHWs in New Mexico relied on public health insurance or had no health insurance coverage.

6 MDPH (2005).
10 VCHO (2002).
14 MDPH (2005); NMDH (2003).
How CHWs are Utilized

The utilization of community health workers was found to reflect the definition of their role in the health care delivery system included in Chapter 1.

*Community health workers are lay members of communities*\textsuperscript{15} *who work either for pay or as volunteers in association with the local health care system in both urban and rural environments and usually share ethnicity, language, socioeconomic status, and life experiences with the community members they serve. They have been identified by many titles such as community health advisors, lay health advocates, “promotores(as),” \textsuperscript{16} outreach educators, community health representatives, peer health promoters, and peer health educators. CHWs offer interpretation and translation services, provide culturally appropriate health education and information, assist people in receiving the care they need, give informal counseling and guidance on health behaviors, advocate for individual and community health needs, and provide some direct services such as first aid and blood pressure screening.*

Drafting an operational definition of the CHW occupation has presented challenges because these health workers have been engaged with different job titles in different models of care.\textsuperscript{17} Titles and models of care ranged from those of volunteer workers

\textsuperscript{15}The term “community” is used in a geographic sense describing people living together in a particular area as small as, but not necessarily limited to, a neighborhood, who have some common characteristics and are unified by common interests.

\textsuperscript{16}The terms *promotores* and *promotoras* are used in Mexico, Latin America, and Latino communities in the United States to describe advocates of the welfare of their own community who have the vocation, time, dedication and experience to assist fellow community members in improving their health status and quality of life. Recently, the term has been used interchangeably, despite some opposition, with the term community health workers.

seeking general improvement of community health status\textsuperscript{18} to those of outreach workers with the specific mission of reducing the impact of a single illness such as diabetes or HIV/AIDS in individuals or entire communities.\textsuperscript{19} The common traits among these diverse roles have been found to be the commitment of these health workers to both the communities they assisted and the organizations for which they worked, their skill of interacting effectively with both, and their ability to motivate clients.

In an article in the American Journal of Preventive Medicine, researcher John McKnight\textsuperscript{20} explained that to achieve and maintain health, it is necessary to have the harmonious operation of two systems. The health care system produces units of service and relies on control and evidence-based accountability to achieve its ends of preventing and treating disease, but only the community itself (the second “system”) can produce the self-motivation and supportive relationships needed to actually produce and maintain health.\textsuperscript{21}

The harmonious operation of the two systems is particularly challenging in underserved environments, and CHWs were found to be capable of facilitating their interactions. In the following pages, the current utilization of volunteer and paid community health workers is described.

Programs with volunteer CHWs

Programs employ volunteer CHWs for different reasons and these determine how the volunteers are utilized. Programs can be classified under three models.

\textit{The grassroots organization model:} Grassroots community-based initiatives often have been faith-based, and have had either a broad goal, such as helping welfare families to become self-sufficient and to adopt healthy behaviors, or narrow purposes such as supporting HIV-positive individuals or substance abusers. Because of their origins, many of these models have not been well documented. An exception is the network of farmworker comités in California, supported by the Center for Community Advocacy. This model of community self-determination was featured in the design of the Promotores Comunitarios, a well-documented initiative funded in 2005 by the California

\begin{itemize}
\item \textsuperscript{18} Many interest groups such as the Community Health Worker Special Primary Interest Group (CHW SPIG) of the American Public Health Association give, in defining the CHW occupation, special emphasis to CHWs as “frontline public health workers” and to their impact on “building individual and community capacity” (in a recent recommended definition by the Policy Committee Chair, July 2006). Altpeter M, Earp JAL, Bishop C et al. Lay health advisor activity levels: definitions from the field. Health Educ Behav 1999; 26 (4):495-512.
\item \textsuperscript{19} Altpeter M et al. (1999).
\item \textsuperscript{21} McKnight contended that we need both “tools” – the health care system and community-based initiatives – to achieve and maintain health, as the health care system cannot produce health and the community must do that for itself. Health care systems need/want changes in client behavior – clients who utilize services appropriately, keep appointments, follow provider instructions and practice healthful behaviors; they also need better information in order to manage risk – information about the quality of care currently provided, emerging health problems in the population, and a better understanding of community-generated health risks. Communities need/want improved access to services, information and assistance on self-care and obtaining benefits, improvements in overall community conditions and individual/family opportunities, and a general sense of control over their environments.
\end{itemize}
Endowment in eight rural communities. Another example was a multi-program initiative in rural Alabama built on community assessments and priority-setting organized by resident committees of volunteer CHWs.

The lay health advisors model: This model is an outreach and/or health education effort, usually designed by university researchers or local health care providers, with “lay health advisors” or “natural helpers” as part of interventions involving the encouragement and support of naturally occurring community-based social networks. These models were aimed at durable changes in knowledge, attitudes, and behaviors that were more likely to occur when supported by communities’ social networks.

The program survival model: Programs with ambitious goals and budget constraints have been engaging volunteer CHWs to maximize program impact from limited resources. Some of these programs also employed paid CHWs as recruiters and supervisors of volunteer CHWs and often managed a paid and volunteer workforce.

Table 3.4 shows the percent of employer respondents to the national Inventory who utilized only volunteers, only paid CHWs, or a combination of volunteers and paid CHWs.

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Table 3.4 Percent of Programs Employing Paid and Volunteer CHWs by Census Region

<table>
<thead>
<tr>
<th>Census Region</th>
<th>Paid and Volunteer</th>
<th>Volunteer Only</th>
<th>Paid Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northeast</td>
<td>25.0</td>
<td>0.7</td>
<td>74.3</td>
</tr>
<tr>
<td>Midwest</td>
<td>22.4</td>
<td>6.0</td>
<td>71.6</td>
</tr>
<tr>
<td>South</td>
<td>23.1</td>
<td>9.2</td>
<td>67.7</td>
</tr>
<tr>
<td>West</td>
<td>32.6</td>
<td>4.1</td>
<td>63.2</td>
</tr>
<tr>
<td>U.S.</td>
<td>26.3</td>
<td>5.5</td>
<td>68.3</td>
</tr>
</tbody>
</table>


CHWs’ Activities and Roles

Work activities or job descriptions define occupations. The term “role” is used in this section to describe the specific models of care within which CHWs perform the “jobs” that are part of their occupation.26 These models are described later in this section. Different classification schemes could have been used. The ones adopted here attempt to integrate many useful characteristics of previous analyses into one comprehensive format.

As shown in Table 3.5, the communities reported by employers as those where CHWs have been utilized included all ethnic and racial groups but, most often, Hispanic/Latino (as reported by 78 percent of the respondents), Black/African-American (68 percent), and Non-Hispanic White (64 percent). One-third of the respondents (32 and 34 percent, respectively) indicated that American Indian/Alaska Native and Asian/Pacific Islander communities have been receiving CHW services. The clients targeted most frequently were females and adults ages 18 to 49. Special populations receiving CHW services included the uninsured (as reported by 71 percent of respondents) followed by immigrants (49 percent), the homeless (41 percent), isolated rural residents and migrant workers (31 percent each), and colonia residents (9 percent).27 Programs serving immigrants, migrant workers, and the uninsured were more likely than other types of programs to have volunteer CHWs.

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26 In the literature, the term “role” is also used as a synonym for “functions” or “activities.” The semantic differences are noted and accounted for in reporting the findings from the literature review.

27 The term colonia and its plural, colonias, mean, in Spanish, community(ies) or neighborhood(s). In the United States, these terms are being used to describe low-income or economically distressed residential areas along the United States/Mexico Border and in other regions in the country that may lack some of the most basic living necessities, such as potable water and sewer systems, electricity, paved roads, and safe and sanitary housing.
Table 3.5 Target Population of CHW Activities by Percent of Respondents

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>N=587</th>
<th>Paid Only</th>
<th>Volunteer Only</th>
<th>Paid and Volunteer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian/Alaskan Native</td>
<td></td>
<td>33.3</td>
<td>11.8</td>
<td>34.4</td>
<td>32.4</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td></td>
<td>35.9</td>
<td>11.8</td>
<td>34.4</td>
<td>34.1</td>
</tr>
<tr>
<td>Black/African-American</td>
<td></td>
<td>70.5</td>
<td>58.8</td>
<td>64.4</td>
<td>68.1</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td></td>
<td>76.3</td>
<td>76.5</td>
<td>81.9</td>
<td>77.9</td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td></td>
<td>65.1</td>
<td>38.2</td>
<td>67.5</td>
<td>64.2</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>20.6</td>
<td>17.6</td>
<td>19.4</td>
<td>20.1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>N=587</th>
<th>Female</th>
<th>92.6</th>
<th>97.1</th>
<th>92.5</th>
<th>92.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td></td>
<td>77.1</td>
<td>76.5</td>
<td>85.0</td>
<td>79.2</td>
<td></td>
</tr>
<tr>
<td>Transgendered</td>
<td></td>
<td>23.4</td>
<td>8.8</td>
<td>34.4</td>
<td>25.6</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age groups</th>
<th>N=587</th>
<th>Younger than 1</th>
<th>51.1</th>
<th>23.5</th>
<th>39.4</th>
<th>46.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5</td>
<td></td>
<td>54.2</td>
<td>29.4</td>
<td>46.3</td>
<td>50.6</td>
<td></td>
</tr>
<tr>
<td>6-12</td>
<td></td>
<td>48.6</td>
<td>35.3</td>
<td>54.4</td>
<td>49.4</td>
<td></td>
</tr>
<tr>
<td>13-17</td>
<td></td>
<td>70.2</td>
<td>50.0</td>
<td>66.3</td>
<td>68.0</td>
<td></td>
</tr>
<tr>
<td>18-21</td>
<td></td>
<td>81.4</td>
<td>88.2</td>
<td>78.8</td>
<td>81.1</td>
<td></td>
</tr>
<tr>
<td>22-49</td>
<td></td>
<td>81.4</td>
<td>91.2</td>
<td>83.8</td>
<td>82.6</td>
<td></td>
</tr>
<tr>
<td>50-64</td>
<td></td>
<td>61.6</td>
<td>76.5</td>
<td>71.9</td>
<td>65.2</td>
<td></td>
</tr>
<tr>
<td>65 and older</td>
<td></td>
<td>52.9</td>
<td>73.5</td>
<td>64.4</td>
<td>57.2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Special Population</th>
<th>N=587</th>
<th>Immigrants</th>
<th>48.2</th>
<th>58.8</th>
<th>47.7</th>
<th>48.7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Migrant workers</td>
<td></td>
<td>28.7</td>
<td>41.2</td>
<td>32.7</td>
<td>30.5</td>
<td></td>
</tr>
<tr>
<td>Isolated rural residents</td>
<td></td>
<td>28.7</td>
<td>32.4</td>
<td>37.9</td>
<td>31.4</td>
<td></td>
</tr>
<tr>
<td>Colonia residents</td>
<td></td>
<td>7.1</td>
<td>17.6</td>
<td>9.8</td>
<td>8.5</td>
<td></td>
</tr>
<tr>
<td>Homeless</td>
<td></td>
<td>40.0</td>
<td>26.5</td>
<td>45.1</td>
<td>40.6</td>
<td></td>
</tr>
<tr>
<td>Uninsured</td>
<td></td>
<td>68.2</td>
<td>82.4</td>
<td>73.9</td>
<td>70.5</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>17.9</td>
<td>17.6</td>
<td>20.3</td>
<td>18.5</td>
<td></td>
</tr>
</tbody>
</table>

Source: CHW/NEI (2006); multiple responses permitted.

Table 3.6 lists the most frequently reported health issues for which employers chose interventions that included CHWs. Women’s health and nutrition were reported by 46 and 48 percent of respondents, respectively. These issues were closely followed by child health and pregnancy/prenatal care (41 percent each), immunizations (37 percent), and sexual behavior (34 percent). Next, employers reported CHW interventions targeting specific illnesses such as HIV/AIDS (39 percent), diabetes (38 percent), high blood pressure (31 percent), cancer (27 percent), cardiovascular diseases (26 percent), and heart disease (23 percent). Programs dealing with cancer, cardiovascular disease, diabetes, and high blood pressure were more likely to have only volunteer CHWs than programs working with other conditions.
The work activities related to these interventions first involved culturally appropriate health promotion and health education (as reported by 82 percent of the respondents), followed by assistance in accessing medical and non-medical services and programs (84 and 72 percent, respectively) and complemented by “translating”28 (36 percent), interpreting (34 percent), counseling (31 percent), mentoring (21 percent) and, more generally, social support (46 percent) and transportation (36 percent). Related to these work activities, employers reported specific duties such as case management (45 percent), risk identification (41 percent), patient navigation (18 percent),29 and direct services (37 percent). Programs involving case management, direct services,30 risk identification, and transportation were less likely to involve only volunteer CHWs than other programs.

Table 3.6 Health Problems Addressed and Services Provided by Percent of Respondents

<table>
<thead>
<tr>
<th>Health Problems</th>
<th>N=620</th>
<th>Paid Only</th>
<th>Volunteer Only</th>
<th>Paid and Volunteer</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
<td>22.0</td>
<td>38.2</td>
<td>36.5</td>
<td>26.8</td>
<td></td>
</tr>
<tr>
<td>Cardiovascular disease</td>
<td>22.0</td>
<td>38.2</td>
<td>32.9</td>
<td>25.8</td>
<td></td>
</tr>
<tr>
<td>Child health</td>
<td>43.4</td>
<td>26.5</td>
<td>36.5</td>
<td>40.6</td>
<td></td>
</tr>
<tr>
<td>Diabetes</td>
<td>32.9</td>
<td>55.9</td>
<td>46.1</td>
<td>37.7</td>
<td></td>
</tr>
<tr>
<td>Heart disease</td>
<td>19.6</td>
<td>38.2</td>
<td>28.7</td>
<td>23.1</td>
<td></td>
</tr>
<tr>
<td>High blood pressure</td>
<td>27.9</td>
<td>44.1</td>
<td>37.1</td>
<td>31.3</td>
<td></td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>35.8</td>
<td>17.6</td>
<td>52.1</td>
<td>39.2</td>
<td></td>
</tr>
<tr>
<td>Immunizations</td>
<td>39.6</td>
<td>23.5</td>
<td>32.9</td>
<td>36.9</td>
<td></td>
</tr>
<tr>
<td>Infant health</td>
<td>40.3</td>
<td>20.6</td>
<td>35.3</td>
<td>37.9</td>
<td></td>
</tr>
<tr>
<td>Nutrition</td>
<td>46.8</td>
<td>55.9</td>
<td>47.9</td>
<td>47.6</td>
<td></td>
</tr>
<tr>
<td>Obesity</td>
<td>31.0</td>
<td>32.4</td>
<td>38.3</td>
<td>33.1</td>
<td></td>
</tr>
<tr>
<td>Physical activity</td>
<td>27.2</td>
<td>38.2</td>
<td>29.3</td>
<td>28.4</td>
<td></td>
</tr>
<tr>
<td>Pregnancy, prenatal care</td>
<td>43.7</td>
<td>20.6</td>
<td>38.3</td>
<td>41.0</td>
<td></td>
</tr>
<tr>
<td>Sexual behavior</td>
<td>31.0</td>
<td>17.6</td>
<td>44.3</td>
<td>33.9</td>
<td></td>
</tr>
<tr>
<td>Women’s health</td>
<td>44.9</td>
<td>29.4</td>
<td>52.1</td>
<td>46.0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Services N=596</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Assist in accessing medical services/programs</td>
<td>85.0</td>
<td>85.3</td>
<td>82.7</td>
<td>84.4</td>
<td></td>
</tr>
<tr>
<td>Assist in accessing non-medical services/programs</td>
<td>71.5</td>
<td>67.6</td>
<td>72.8</td>
<td>71.6</td>
<td></td>
</tr>
<tr>
<td>Build community capacity</td>
<td>30.8</td>
<td>38.2</td>
<td>44.4</td>
<td>34.9</td>
<td></td>
</tr>
<tr>
<td>Build individual capacity</td>
<td>33.8</td>
<td>52.9</td>
<td>48.1</td>
<td>38.8</td>
<td></td>
</tr>
<tr>
<td>Case management</td>
<td>46.3</td>
<td>32.4</td>
<td>44.4</td>
<td>45.0</td>
<td></td>
</tr>
<tr>
<td>Community advocacy</td>
<td>50.0</td>
<td>52.9</td>
<td>60.5</td>
<td>53.0</td>
<td></td>
</tr>
<tr>
<td>Counsel</td>
<td>29.8</td>
<td>20.6</td>
<td>34.6</td>
<td>30.5</td>
<td></td>
</tr>
<tr>
<td>Cultural mediation</td>
<td>17.8</td>
<td>29.4</td>
<td>16.0</td>
<td>18.0</td>
<td></td>
</tr>
<tr>
<td>Interpretation</td>
<td>33.5</td>
<td>35.3</td>
<td>33.3</td>
<td>33.6</td>
<td></td>
</tr>
<tr>
<td>Mentor</td>
<td>18.8</td>
<td>11.8</td>
<td>27.2</td>
<td>20.6</td>
<td></td>
</tr>
<tr>
<td>Patient navigation</td>
<td>16.0</td>
<td>29.4</td>
<td>19.8</td>
<td>17.8</td>
<td></td>
</tr>
<tr>
<td>Provide culturally appropriate health promotion/education</td>
<td>81.3</td>
<td>79.4</td>
<td>83.3</td>
<td>81.7</td>
<td></td>
</tr>
<tr>
<td>Provide direct services</td>
<td>37.8</td>
<td>14.7</td>
<td>41.4</td>
<td>37.4</td>
<td></td>
</tr>
</tbody>
</table>

28 As explained later in this chapter, “translation” services address both linguistic and cultural mediation.
29 “Navigation” is a new term/work-activity that indicates specific guidance in using the health care system and which many respondents most likely considered a synonym of “assisting in accessing medical services.”
30 Examples include taking vital signs and blood pressure screenings.
The work activities listed in the Inventory questionnaire were the result of literature reviews, the judgment of individuals knowledgeable about CHWs, and field testing with employers and community health workers. A 2003 literature review of 18 programs\textsuperscript{31} includes a list of CHW duties corresponding to specific health intervention strategies (Table 3.7) that complements the list of health issues in Table 3.6 by indicating the type of programs utilizing CHWs and providing examples of their duties.

### Table 3.7 Program Component Description with Community Health Worker Duties

<table>
<thead>
<tr>
<th>Program Component</th>
<th>Description</th>
<th>Community Health Workers’ Duties (Example)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outreach</td>
<td>Reaching persons and groups beyond and exceeding those customarily contacted</td>
<td>Case finding/locate cases; conduct health screening; schedule appointments; make follow-up calls; send reminder cards; refer as needed; staff mobile units; network in the community with peers</td>
</tr>
<tr>
<td>Culturally sensitive care</td>
<td>Use knowledge of language, cultural practices, beliefs, etc., to structure appropriate plan of care and strengthen therapeutic alliance</td>
<td>Translate language; link peers and professionals through liaison activities; develop/select culture-specific health materials for peers; establish/begin new services/programs; train health professionals on culture</td>
</tr>
<tr>
<td>Health education/ counseling</td>
<td>Impart knowledge and develop critical reasoning to enable health decision-making and to advise, recommend, suggest</td>
<td>Educate/counsel in groups or one on one; coordinate mass media campaigns: articles, newsletters, brochures, video, radio, etc.; develop and distribute resource guide</td>
</tr>
<tr>
<td>Health advocacy</td>
<td>Promote and encourage positive health behaviors among peers</td>
<td>Serve as role model; mentor; do crisis intervention; lobby</td>
</tr>
<tr>
<td>Home visits</td>
<td>Meet peers in their home, thus reducing barriers to care</td>
<td>Sojourn; evaluate home environments; give social support (and other duties, see above)</td>
</tr>
<tr>
<td>Health promotion/ lifestyle change</td>
<td>Employ behavior change strategies in group or individual meetings</td>
<td>Be a leader/coach</td>
</tr>
<tr>
<td>Perinatal care</td>
<td>Support perinatal health of mother and child during prenatal, delivery, and postpartum period</td>
<td>Provide outreach/early prenatal care, nutrition, parenting and child care</td>
</tr>
<tr>
<td>Transportation/homemaking</td>
<td>Provide health-related transportation; home chores</td>
<td>Drive/arrange for travel; help with cleaning/food preparation</td>
</tr>
</tbody>
</table>

Source: Nemcek MA et al. (2003).
Key areas of CHW activity

1. Creating more effective linkages between communities and the health care system

Gathering information for medical providers. “Maternal-Child Health Advocates” worked in teams with a public health nurse in Chicago to identify health problems and health care deficits.  

Educating medical and social service providers about community needs. CHWs in Ingham County, Michigan, identified the need for customizing primary care services to new enrollees in the Ingham Health Plan (IHP) and were empowered to use appointment slots dedicated to new enrollees, making the primary care system more user-friendly.

Translating literal and medical languages. Some bilingual “community health advisors” (CHAs) provided literal translation from one language to another or, more commonly, explained medical terms to patients. Actual interpretation during patient-provider encounters was viewed as potentially inappropriate for a CHW without rigorous training.

2. Providing Health Education and Information

Teaching basic concepts of health promotion and disease prevention. CHWs have been utilized effectively in delivering basic health messages in a culturally appropriate way. Promotores(as) in one migrant farmworker project were responsible for distributing protective eyewear and conducting regular eye safety trainings. In one health promotion program emphasizing nutrition and physical activity for older women, each CHW worked with 20 participants whom they contacted every two weeks and motivated to join walking groups.

Helping to manage chronic illness. CHWs in one pediatric asthma demonstration project participated in a standardized system of care based on the National Asthma

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3. Assisting and Advocating for Underserved Individuals to Receive Appropriate Services

Case finding. In one substance abuse program, CHWs were able to gain access to high-risk neighborhoods, recruit intravenous drug users (IDUs) as study participants, deliver educational interventions, and gather initial and follow-up data from participants in those neighborhoods, achieving a 75 percent completion rate for follow-ups.  

Helping clients to ask for and receive the services they need. This role was found to be especially important for mental health services. Also, CHWs were reported to be effective in promoting the use of childhood immunization services. In one program, trained volunteer CHWs assisted identified families with referrals, provided reminders, and tracked clients to immunization services through home visits and telephone contacts.

Making referrals. CHWs in a Seattle hypertension program identified at-risk individuals by conducting blood pressure screenings in community locations, providing referrals and appointment assistance, providing appointment reminders, and assisting in resolving barriers to obtaining care.

Advocating for individuals. “Resource Mothers” (RM) in South Carolina recruited pregnant teens through community presentations and other outreach and became their advocates in obtaining the prenatal care they needed.

Advocating for community needs. In one breast cancer screening program, volunteer “lay health advisors” (LHAs), supervised by paid CHWs, developed their own strategies for outreach to African-American women including training sessions for physician practices, community health centers, and local health departments.

Providing follow-up. CHWs in one heart health program took over non-emergency cases with elevated blood pressure, took vital signs, provided education, and identified barriers to access and appointment keeping. CHW notes were recorded.

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40 Musser-Granski J et al. (1997).
41 Barnes K et al. (1999).
44 Earp JA et al. (2002).
in the patients’ charts. The CHWs also conducted telephone reminders of follow-up appointments.45

4. Providing Informal Counseling

Providing individual support. Self-efficacy, fostering individuals’ or communities’ capability to accomplish desired changes or actions, has been a key goal of the CHW’s support function.46 Maternal outreach worker programs such as North Carolina’s “Baby Love Maternal Outreach Worker (MOW) Program” provided support during pregnancy, including encouragement of positive behaviors and development of parenting skills, and were found to reduce the occurrence of depression.47

Leading support groups. CHWs performed either clinic-based counseling sessions or home visits and discussion group sessions to provide direct support and encourage the use of the patient’s immediate social network in following treatment regimens. These interventions produced significant and sustained improvements in appointment keeping and blood pressure control.48 “Native Sisters,” a volunteer CHW model with Native American women in the Denver area, focused on increasing breast cancer screening rates. This was carried out by having volunteers lead traditional social support circles.49

5. Directly Addressing Basic Needs

Providing limited clinical services. Some CHWs were trained in taking vital signs. Others were trained to provide first aid and CPR, an important service in remote rural areas. Community health representatives in the Indian Health Service have been cross-trained as emergency medical technicians.50

Meeting basic needs. A CHW-driven survey led to planning and implementation of a farmers’ market that increased access to more healthful foods.51

49 Burhanstipanov L et al. (2000).
51 Mack M et al. (2006).
6. Building Community Capacity in Addressing Health Issues

*Building individual capacity.* CHWs practiced nonjudgmental listening, identification of the clients’ resources, and step-by-step skills development leading to the clients’ ability to advocate for their families.\(^{52}\)

*Building community capacity.* CHWs in one program were involved in community research and planning, directed educational services, and contributed to the development of grant proposals. The investigators suggested that this model of capacity-building could be translated into an application of “stages of change” theory.\(^{53}\)

**Models of Care Utilizing CHWs**

The five prevailing models of care engaging CHWs and identified during this study were (1) member of care delivery team, (2) navigator, (3) screening and health education provider, (4) outreach/enrolling/informing agent, and (5) organizer. These models were not always mutually exclusive. This classification, like the one listing CHW activities, attempts to integrate other classification schemes.

(1) Member of care delivery team

In this model, the CHW was largely subordinate to a lead provider, typically a physician, nurse, or social worker. Tasks were relatively specific and generally delegated by the lead provider. This model was commonly applied to *case management*. The lead provider often was the “case manager of record.” However, the CHW, in some cases, had considerable responsibility for coordination of care. The CHW’s contribution in this model was that of a more efficient *vehicle* for certain team tasks such as patient-provider communication, including tracking patients with unreliable addresses, limited telephone access, or lack of transportation. A significant benefit sought from this model was the *enhanced productivity* of the medical team.\(^{54}\)

In a diabetes program in Baltimore, CHWs made weekly contacts by phone or home visitations to reinforce treatment regimens and assure regular contact with primary care providers.\(^{55}\) In another program, the CHWs’ main responsibilities were to monitor participant and family behavior, reinforce adherence to prescribed regimens, and provide feedback. CHWs in a childhood immunization program located eligible families by reviewing medical records, maintained a tracking system on immunization status, and

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used postcards, telephone reminders, and home visits with non-responsive parents. They managed a caseload averaging 300 children per worker.\textsuperscript{56}

In another example, the CHW was the coordinator of health services for the patient. The CHWs’ duties were to maintain regular contact with assigned patients and assist in developing care plans. CHWs assisted clients to resolve issues that created barriers to care.\textsuperscript{57}

(2) Navigator

The navigator role placed greater emphasis on the CHW’s capabilities for assisting individuals and families in negotiating increasingly complex service systems and for bolstering clients’ confidence when dealing with providers.

The navigator model did not necessarily require a high degree of clinical supervision, but it did require a high level of awareness about the health care system. A contribution by CHWs in this model was that of improving access and educating consumers as to the importance of timely use of primary care.

Navigators for the Gateway to Care Collaborative in Houston, Texas, had specific goals of encouraging individuals to seek services at the lowest level of care appropriate to the health problem, utilize services that prevented disease, improve patient-provider communication, and reduce inappropriate emergency room visits. Navigators were also responsible for assisting individuals in developing family preventive care plans.\textsuperscript{58}

(3) Screening and Health Education Provider

This model of care has been one of the more common, and was often included in many categorically funded initiatives on specific health conditions such as asthma and diabetes. CHWs taught self-care methods, administered basic screening instruments, and took vital signs.

CHWs were able to gain access to hard-to-reach populations and were willing to work in neighborhoods or rural areas where other professionals were reluctant to practice.\textsuperscript{59}

There were concerns, however, about the quality of services and information provided by CHWs, resulting in calls for strict evaluation of the CHWs’ training and close supervision.

\textsuperscript{57} Humphry J, Jameson LM, Beckham S. Overcoming social and cultural barriers to care for patients with diabetes. Western Journal of Medicine 1997; 167 (3):138-44.
\textsuperscript{58} What is a Navigator [Internet]. Houston (TX): Gateway to Care; 2000 [updated 2006 Oct 19/cited 2006 Sep 29]. Available from http://www.gatewaytocare.org/what_is_a_navigator.htm.
of their activities. Ohio’s CHW certification regulations included standards for quality of care by CHWs.60

(4) Outreach/enrolling/informing agent

“Outreach worker” has been a common job title for CHWs, and it addressed the need of many programs to reach individuals and families who were eligible for benefits or services and to persuade them to apply for benefits or come to a provider location for care.

(5) Organizer

This model of care more often involved volunteers rather than paid CHWs. These volunteers became active in the community over a specific issue, promoting self-directed change and community development.61

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Chapter 4. Education and Training of CHWs

Employers hiring community health workers have been looking for individuals with some formal education, specific qualities, and certain skills. Also, while employers have provided post-employment training for general education and specific competencies, they have not always offered opportunities for a career as a CHW.

Requirements at Hiring

Communication skills, combined with the ability to create interpersonal relationships and maintain confidentiality, were considered by most organizations as essential attributes for a job as a CHW. Organizational skills, such as the ability to set goals, develop action plans, and keep records, were highly regarded as well. Also, almost half of the respondents to the CHW National Employer Inventory (CHW/NEI) placed value on bilingual abilities, the ability to coordinate service referrals, and adeptness in promoting and advocating family and community wellness (Figure 4.1).

Figure 4.1 CHW Skills Required by Employers at Hiring

Language skills

Employers reported that the languages most often used by CHWs to communicate with clients were English and Spanish (87 and 70 percent of the respondents, respectively). Less than 10 percent of the employers reported the use of French, Vietnamese, and Chinese. Few (6.4 percent) reported the use of sign language and knowledge of tribal
languages (3.8 percent). Most of the employers surveyed and interviewed did not offer language training\(^1\) and selected CHWs on the basis of their existing language competence.

**Cultural competence**

Cultural competence was defined in this study as “the ability of understanding and working within the context of the culture of the community being served.” This definition was easily understood and agreed upon in field testing and by employers interviewed in the four States selected for further study. However, responses were mixed as to whether cultural competence required that the CHW be a resident of the area being served.\(^2\) The issue is related to the degree of diversity of the population. In New York City alone, out of 2,217 Census tracts, those defined as including highly diverse cultures increased from 70 in 1970 to 220 in 2000.\(^3\) While reliance on one’s culture of origin has been effective in narrow-focus, grant-funded projects targeting persons of similar ethnic or cultural heritage, broader-purpose community or clinic-based programs require that CHWs interact effectively with persons of different cultural backgrounds. Also, relying on CHWs from different communities might be necessary in smaller areas where candidates with the required CHW skills may be scarce.\(^4\) In conclusion, while CHWs were generally hired for their “insider” status and their understanding of underserved populations,\(^5\) employers were ambivalent about the importance of CHWs sharing place of residence with the clients they assisted.

**Education**

About half of employers responding to the “CHW education” component of the National Employer Inventory (N=487) questionnaire had educational or training requirements for CHW positions. Twenty-one percent mentioned that at least a high school diploma or GED was expected. A Bachelor’s Degree was a prerequisite to employment in 32 percent of the organizations.

**Training During Employment**

Most employers required post-hire training of CHW personnel.\(^6\) Two types of training were commonly offered. One was aimed at reinforcing or standardizing the level of

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\(^1\) CHW National Employer Inventory (CHW/NEI) (2006); CHW National Workforce Study Interviews (CHW/NWSI) (2006).

\(^2\) CHW/NWSI (2006).


\(^4\) Health Resources and Services Administration. Impact of community health workers on access, use of services, and patient knowledge and behavior. Bureau of Primary Health Care, Health Resources and Services Administration, U.S. Department of Health and Human Services 1998.


\(^6\) CHW/NWSI (2006); CHW/NEI (2006).
competence of the CHW personnel in the skills required at the time of hiring\textsuperscript{7} and the
other focused on the acquisition of competencies needed for specific programs.\textsuperscript{8} The
degree to which employer-based training emphasized enhancing the generic skills of
CHWs, versus developing special competencies, varied.\textsuperscript{9}

Instruction to reinforce CHW cultural awareness, interpersonal communication, and
client advocacy was offered by 80, 70, and 59 percent of respondents, respectively
(N=518). Training in being a CHW (60 percent) and in leadership skills (38 percent)
indicated that health organizations recognized a distinctive CHW role in health service
delivery. Many employers required the acquisition of special competencies for
addressing specific health issues and diseases (79 and 64 percent) such as asthma,\textsuperscript{10}
cardiiovascular disease (CVD),\textsuperscript{11} genetic screening and services,\textsuperscript{12} or colorectal cancer.\textsuperscript{13}
Also, training was required in understanding medical and social services (55 and 73
percent), coordinating access to services, home visiting and patient “navigation” (53, 47,
and 41 percent), providing health education and counseling (59 percent), and
administering first aid and CPR (40 percent).

Training was administered either as continuing education (68 percent) with classroom
instruction (32 percent) or through mentoring (47 percent) and on-site technical
assistance (43 percent). The length of training reported ranged from nine to 100 hours.\textsuperscript{14}

A recent initiative, the Community Health Worker National Education Collaborative\textsuperscript{15}
(CHW-NEC) funded by the U.S. Department of Education, has convened 21 institutions
of higher education to arrive at a consensus on a standard curriculum for entry-level
preparation of CHWs based on a “core basic-competency” definition for this workforce.
The project is scheduled for completion in September 2007.

\textsuperscript{7} CHW/NWSI (2006).
\textsuperscript{8} Humphry J, Jameson LM, Beckham S. Overcoming social and cultural barriers to care for patients with diabetes.
of the National Community Health Advisor Study. Tucson (AZ): University of Arizona, 1998.
\textsuperscript{9} Ireys HT, Chernoff R, DeVet KA et al. Maternal outcomes of a randomized controlled trial of a community-based
\textsuperscript{10} Love MB, Gardner K. The Emerging Role of the Community Health Worker in California. Results of a statewide
Survey and San Francisco Bay Area Focus Groups on the Community Health Workers in California's Public Health
\textsuperscript{11} Brownstein JN, Bone LR, Dennison CR et al. Community health workers as interventionists in the prevention and
\textsuperscript{12} Bridge M, Iden S, Cunniff C et al. Improving access to and utilization of genetic services in Arizona's Hispanic
\textsuperscript{13} Campbell MK, James A, Hudson MA et al. Improving multiple behaviors for colorectal cancer prevention among
\textsuperscript{14} Campbell MK et al. (2004); DePue JD, Wells BL, Lasater TM et al. Volunteers as providers of health programs
in churches: a report on implementation. Am J Health Promot 1990; 4 (5):361-6; Ireys HT et al. (2001); Lam TK,
McPhee SJ, Mock J et al. Encouraging Vietnamese-American women to obtain Pap tests through lay health worker
educators to conduct a church-based weight-loss program for African American women. Diabetes Educ 2001; 27
(2):231-8; Krieger J, Collier C, Song L et al. Linking community-based blood pressure measurement to clinical care: a
randomized controlled trial of outreach and tracking by community health workers. Am J Public Health 1999; 89
\textsuperscript{15} This project is still in progress.
Credentialing

Texas was the first State to adopt legislation governing the utilization of CHWs (1999). It was followed by Ohio in 2003, and other States have been considering it.¹⁶

Texas

House Bill 1864, enacted by the 76th Texas Legislature in May, 1999, directed the Texas Department of Health (TDH), now the Texas Department of State Health Services (TDSHS),¹⁷ to "establish a temporary committee for studying certain issues related to the development of outreach and education programs for promotoras or community health workers and that will advise the Texas Department of Health, the governor, and the legislature regarding its findings."

In 2001, a system of credentialing was implemented. The program was to be voluntary for promotores(as)/CHWs¹⁸ who do not receive compensation for their services and mandatory for those who are financially compensated for the services they provide. Credentialing was based on eight areas of “core competencies” identified in the 1998 National Community Health Advisor Study¹⁹ and consisting of communication skills, interpersonal skills, service coordination skills, capacity-building skills, advocacy skills, teaching skills, organizational skills, and a knowledge base on specific health issues.

Applicants for the Certified Community Health Worker credential in Texas must either show successful completion of an approved training program or document equivalent experience.²⁰ Training programs must include at least 20 clock hours of instruction in each of the eight competency areas. Renewals are biennial and require 20 hours of continuing education. There is no fee for either the original application or for renewal.

Senate Bill 751, enacted in May 2001, called for the Texas Health and Human Services Commission to require health and human services agencies to use certified CHWs/promotores(as), “to the extent possible,” in performing health outreach and education programs for recipients of medical assistance.

¹⁶ Arizona, California, Kentucky, Massachusetts, Nevada, and New Mexico were listed as those considering certification in May ML, Kash B, Contreras R. Southwest Rural Health Research Center: Community Health Worker (CHW) Certification and Training - A National Survey of Regionally and State-based Programs. Office of Rural Health Policy, Health Services and Resources Administration, U.S. Department of Health and Human Services 2005. No additional information was provided as to how each of these States were considering certification.
¹⁷ TDH became the Texas Department of State Health Services (TDSHS) in 2004.
¹⁸ Defined in Chapter 1.
¹⁹ Rosenthal EL et al. (1998).
²⁰ Required experience includes 1,000 hours of activities using the core competencies in a 12-month period ending no later than January 2005.
Ohio

The Ohio certification program began in 2003 and operated under authority of Chapter 4723-26 of the Ohio Revised Code, the Nursing Practices Act. The credential is called a “certificate to practice” and is awarded after completion of an approved training program. The Ohio provision allowing documentation of experience as a substitute for training expired in 2005. Ohio provided for reciprocity through certification by “endorsement” for CHWs holding similar credentials from other States. Renewals are biennial and require 15 hours of continuing education and a $35 fee.

The Ohio program’s rules provided for delegation of some nursing tasks from an RN to a CHW but included the limitation that the nurse may not supervise more than five CHWs at one time. Approved training programs must consist of at least 100 hours of didactic instruction and 130 hours of clinical instruction, which may include community-based fieldwork in a setting where CHWs commonly work. “Nursing task” skills must be taught by an RN. The rules indicated the intent that CHWs be able to apply credit hours from CHW training programs to other health career-related education. As of September, 2006, there were three accredited certification training programs for CHWs.

Other State Initiatives

In 1994, the Indiana Medicaid Program authorized specially trained and supervised CHWs to make reimbursable home visits to high-risk pregnant women. The Indiana CHW certification program was designed to be used only as part of this program. The State health department created its own curriculum and certification was awarded on completion of an approved training program following that curriculum. Trainers were required to be State-certified “care coordinators” (RNs).

Alaska created another certification program limited to one health service. The Community Health Aide/Practitioner (CHA/P) and Dental Health Aide/Practitioner (DHA/P) programs provide basic care in remote villages under medical and dental supervision, including control of certain prescription drugs under standing physician orders. Since the duties of CHA/Ps and DHA/Ps included more direct clinical care activities than those of other CHWs, the required training was more extensive and clinical in nature, covering 520 hours of instruction.

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22 ORC §4723-26-08 and -09
23 ORC §4723-26-10 and ORC §4723-26-12
25 May ML et al. (2005).
Career Opportunities

Generally, the occupation of CHW has not been viewed as a career. The reasons have been short-term and unstable employment, generally low wages, lack of occupational identity, lack of recognition by other professionals, and the fact that CHWs have not been fully integrated into the U.S. health workforce.26

In a survey sponsored by the Massachusetts Department of Public Health, 76 percent of CHWs perceived that the only possible advancement available to them consisted of building skills and increasing their levels of responsibility within their current positions. Only 28 percent reported opportunities for promotion despite the fact that 73 percent of CHW supervisors were former CHWs.27

CHW credentialing has brought greater emphasis on CHW career patterns, but little has been published on this topic. Some CHW positions have been considered by some to be stepping-stones to other health and social service careers. One California program considered part of its mission to encourage successful CHWs to move on to other employment, thereby opening these positions for other community residents.28

The only effort targeted toward CHW career advancement was noted in New Jersey, where the AHEC Program received HRSA funding in 2005 to create (among other objectives) a CHW career development initiative in the State. The initiative would establish model standards for career development as well as a system of supports for CHWs who wished to pursue education and training to enter other health-related occupations.29

In California, some local health departments have utilized CHWs in unionized positions, working in standardized job descriptions with up to four levels of seniority.30 Three of the Texas employers interviewed had multi-level CHW career ladders, but none of the CHWs interviewed in the four selected States had CHW-specific career ladders within the organizations for which they were working.

26 Love MB et al. (2004).
27 Massachusetts Department of Public Health. Community Health Workers: Essential to Improving Health in Massachusetts, Findings from the Massachusetts Community Health Worker Survey. Boston (MA): Division of Primary Care and Health Access, Bureau of Family and Community Health, Center for Community Health, March 2005.
29 HRSA Grant number U77HP03629 to the University of Medicine and Dentistry of New Jersey, School of Osteopathic Medicine, effective September 1, 2005.
Chapter 5. The Employers of Community Health Workers

Statistics were not available on the number or type of CHW employers. Therefore, estimates were derived from the data used to identify the total of paid and volunteer CHWs engaged to assist in the delivery of care to underserved communities.

Industry and Size Estimates

The number of organizations employing community health workers was estimated to be approximately 6,300 for the Nation as a whole. This is a rough approximation obtained when the estimated national total of CHWs is divided by the average number of CHWs engaged by the employers surveyed for the CHW National Employer Inventory (CHW/NEI).¹

The industries found to be more likely to employ CHWs were “Individual and Family Services” (21 percent), “Social Advocacy Organizations” (14.2 percent), “Outpatient Care Centers” (13.3 percent), and “Administration of Education Programs” (12.9 percent). Additional industries found to have CHWs among their personnel, although less often, included “Other Ambulatory Health Care Services” (8.4 percent) and “Office of Physicians” (5.3 percent).²

The sizes of the organizations engaging CHWs are shown in Figure 5.1. The largest percentage (43 percent) were firms employing between five and 19 employees, 20 percent had between 20 and 49 individuals on the payroll, and another 19.1 percent fell in the 50 to 249 employees category. Few were “large” employers: 2.8 percent employed 250 to 499 individuals and 2.3 percent had 500 or more employees. About 12.5 percent of the firms had fewer than five employees.

¹ The estimates and the Inventory are discussed in Chapter 3 and the methodologies employed in each are explained in Appendix B and Appendix C, respectively.
² Employers identified during the National survey were matched against listings from the American Labor Market Information System USA-INFO through a special confidentiality agreement with the Texas Workforce Commission (TWC) that protected individual firm records and allowed the use of employers’ information only in large aggregates. These records contained the North American Industry Classification System (NAICS) codes of employers as well as the number of total employees, thus allowing the identification of the industries engaging the majority of paid and volunteer CHWs and their average size. Of the verified employers in selected States, 57 percent (759 of 1,327) were successfully matched against the employer records database. For the successfully matched records, 92 percent (701 of 759) corresponded to the industries identified for inclusion in the estimates of paid CHWs. (Additional information on the estimation process, as well as the identification of employers’ industry, is available in Appendix B.)
Figure 5.1 Size of Community Health Worker Employers

Source: Study file of CHW employers whose industry affiliation could be verified -- N=744

Perceived Benefits of Hiring CHWs

The occupational characteristics of CHWs that have been motivating employers to hire them were identified by combining findings from the employers’ interviews and information gleaned from the review of the literature.

Generally, employers have hired community health workers because they (a) learned about their successful utilization in professional journals,3 (b) believed that they were cost effective,4 (c) found that CHWs were capable of organizing communities in

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developing comprehensive health action plans, or (d) discovered that programs addressing health disparities were more effective when using one-to-one outreach by CHWs.

Community health workers were viewed as having contributed to more effective delivery of health-related services because they were (1) uniquely effective in gaining access to hard-to-reach populations that had been avoided by other health workers; (2) able to patiently coach clients in culturally appropriate terms and induce behavioral changes; (3) able to successfully communicate with clients, by developing trusting and caring relationships, to impart or gather information and motivate key decisions such as participating in immunization programs; and (4) able to address certain client needs such as adapting health regimens to family and community dynamics.

Recruitment Strategies

Networking has been the recruitment strategy used most often by employers (74 percent). Churches and local businesses have been successful intermediaries in attracting qualified candidates, and clinic-based programs have recruited among patients. Other recruitment methods ranged from mass mailings to partnerships with existing volunteer organizations. Fifty percent of the respondents to the CHW/NEI

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5 Friedman AR, Butterfoss FD, Krieger JW et al. Allies community health workers: bridging the gap. Health Promot Pract 2006; 7 (2 Suppl):96S-107S. Note: In one example, seven local sites of a national asthma control program independently developed comprehensive community action plans. The plans varied in approach; all included significant roles for CHWs.
15 Barnes K et al. (1999).
reported referrals by community members or CHW staff. Many employers (69 percent) complemented networking with traditional advertising.

**Funding Sources**

Consistently, in the national Inventory, in employers’ interviews and in the literature, the prevalence of short-term funding and the necessary reliance on multiple funding sources were cited by employers and other observers as a major barrier to the development of the CHW workforce. Figure 5.2 shows that 66 percent of the employers surveyed for the national Inventory reported two or more sources of funding.

**Figure 5.2 Percent of Employers Supporting CHW Programs From One or More Funding Sources**

![Pie chart showing percent of employers supporting CHW programs from one or more funding sources.](chart)

Source: CHW National Employer Inventory (CHW/NEI) (2006), N=527

Figure 5.3 shows the percent of employers by the type of agency that gave financial support to the CHW programs. Federal and State governments provided most of the funds. Private organizations, local governments, and other sources supported about one-

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third of the employers. Similar patterns of funding were found in most recent State and local workforce studies on CHWs.\textsuperscript{17}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure5_3.png}
\caption{Percent of Funding of CHW Programs by Source}
\end{figure}

A 2006 study by the National Fund for Medical Education (NFME) of the University of California at San Francisco was the most current and comprehensive account of how CHW programs are financed.\textsuperscript{18} The study, titled \textit{Advancing Community Health Worker Practice and Utilization, The Focus on Financing}, relied on a comprehensive review of the literature and structured interviews with 25 knowledgeable informants representing 14 States plus the District of Columbia who were either employers or directly involved in educating, training, financing, managing, or studying the CHW workforce. The NFME study, confirming findings from the CHW/NEI, concluded that prevailing short-term funding induced frequent modifications in program focus in response to changes in priorities of funding sources. This hindered the evolution of the CHW workforce.


\textsuperscript{18} NFME (2006).
The NFME study predicted that charitable foundations, government grants, Medicaid, State/Federal government general fund appropriations, and private companies will be the major potential funding sources of the future.

The most successful CHW programs, reported the NFME researchers, are those that (1) have the mission of providing specific services to underserved target populations, (2) address the delivery of health care holistically, that is, attending to the total health needs of the population being served, (3) have clearly identified unmet health needs and intervention strategies, (4) can document outcomes with solid data indicating favorable changes in access, cost, or health status, (5) are able to attract the assistance of “champions” who have leverage for winning support for CHWs, and (6) can offer training to the CHWs on the specific services needed.19

Sources of Long-term Support

Health Resources and Services Administration (HRSA)

HRSA funding has supported many CHW programs nationally, principally through Federally Qualified Health Centers of the Bureau of Primary Health Care (BPHC) and Healthy Start Programs of the Maternal and Child Health Bureau (MCHB). Some of the programs supported by the HIV/AIDS Bureau included CHWs as “peer educators” or “peer outreach workers.” About one-fourth of employers responding to the “funding” section of the national Inventory survey reported receiving funding from HRSA or having a HRSA-sponsored program (26 percent, N=634). A 2002 report from the Health Resources and Services Administration, MCHB listed examples of programs from four Bureaus, and a partial list of shorter-term project grants from the Office of Rural Health Policy.20

The Health Education Training Centers (HETC) program of the Bureau of Health Professions (BHPPr) was the only program in HRSA with a specific legislative mandate to support the CHW workforce. A report for the 2004 National HETC Annual Meeting described 42 CHW programs supported by HETCs as “best practices.”21

In conducting the in-depth investigations of the selected States reported in Chapter 8, the following examples of HRSA support were found.

Centro Familiar de Salud San Vicente in El Paso, Texas, was a Federally Qualified Health Center supporting promotor(a) de salud (CHW) services in part from its Public Health Service Act (PHSA) Section 330 funding. San Vicente’s “Puente de Salud”

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19 Ibid (p.7).
(Bridge of Health) program received a 2003 Border Models of Excellence award from the U.S.-Mexico Border Health Commission. Promotoras served primarily Hispanic residents who were economically disadvantaged and uninsured by providing community outreach education, access to referral services, counseling, and group presentations.22

Three Healthy Start grantees (HRSA/MCHB) in Texas provided examples of how the same funding source could support different locally determined objectives and approaches.23 In Dallas, the objectives included reduction of infant mortality, low birth-weight and teen pregnancy. “Outreach Care Workers” (another term for CHWs) were used for case-finding, enrollment and follow-up visits. Fort Worth’s objectives involved improving care coordination, increasing rates of early prenatal care, and increasing rates of immunization and screening for post-partum depression; there, the role of Outreach Workers was limited to case-finding and enrollment in informal community settings. In San Antonio, the objectives included those adopted by Dallas and Fort Worth, plus maintenance of participants in interconceptional care for up to 24 months post-delivery.

The New York State Department of Health managed several streams of HRSA funding including maternal and child health services grants and maternal and child health community-integrated services funds.25 The programs employed CHWs for outreach to pregnant and parenting women, to newborns, and to young children. The New York State “Community Health Worker Program,” addressing maternal and child health, was perhaps the most widely recognized CHW program in the State. This may have been due to the fact that the program had long-term funding.26

The AIDS Institute of the New York State Department of Health (NYS DOH) managed Federal funds from the Ryan White CARE Act through contracts with community agencies throughout the State. The Finger Lakes Migrant Health Project in Rushville, New York, employed CHWs in a promotor(a) model, recruited from migrant camps. The program was originally funded by the March of Dimes and later by a Medical Expansion Grant administered by HRSA. CHWs worked in prenatal clinics to provide education on infant and women’s health issues and assisted in outreach services to migrant camps.27

Community health centers of Franklin County, Massachusetts, received a Health Center Cluster grant under the Section 330 Healthy Communities Access Program (HCAP) from HRSA. The health center employed two full-time “outreach representatives,” both of

24 This refers to the care or services provided to women between a birth/infant death/fetal loss and a next pregnancy to address various health and social conditions.
26 Ibid.
27 Ibid.
whom were bilingual.\textsuperscript{28} One of the CHWs worked with seasonal migrant farmworkers for half of the year, dedicating the other half to the general population of the health center. The outreach worker assisted migrant workers by providing transportation to health care appointments. Outreach to the community was conducted to inform residents about multiple issues including insurance enrollment, housing, nutrition, and other social and health service needs.\textsuperscript{29}

Community health centers in Arizona received funding from HRSA for services that included CHWs. The Mariposa Community Health Center’s Women’s Health Program was partially funded by HRSA/MCHB. Its CHWs provided linguistically and culturally appropriate health information, education, and referral, and led activities with community members, especially new community members, aimed at changing health behaviors.\textsuperscript{30} The CHW programs at Chiricahua Community Health Center and other community health centers in Arizona provided health education and home visitation.\textsuperscript{31}

\textit{The Office of Family Planning of the Office of Population Affairs (OPA), United States Department of Health and Human Services (USDHHS)}\textsuperscript{32}

The Family Planning Program is administered within the OPA, although its budget line is located within HRSA. In addition to family planning services and related counseling, Title X\textsuperscript{33} supported clinics and provided preventive health services. For many clients, Title X clinics were the only continuing source of care and health education. The program supported a nationwide network of approximately 4,600 clinics delivering reproductive health services to approximately 5 million persons each year.\textsuperscript{34} Planned Parenthood was an example of a Title X Family Planning Delegate that received funds and employed CHWs at clinics throughout the country, including California, New York, and Texas.

\textit{Community Health Representative (CHR) Program of the Indian Health Service (IHS)}

This program is the largest and the longest standing in the United States. The CHR Program was initially funded by the Office of Economic Opportunity (OEO) in 1967 as the Community Health Aide Program, and was transferred to IHS gradually from 1969 to

\textsuperscript{28} Ibid.
\textsuperscript{29} Ibid.
\textsuperscript{33} According to the Office of Family Planning (OFP), Title X is a Federal program solely dedicated to family planning and reproductive health with a mandate to provide a broad range of acceptable and effective family planning methods and services.
1972. The original intent of IHS, modified somewhat through the years but retaining its general goal, was for the community health representatives (the term used for CHWs) to become community health promoters, educators, advocates, and health paraprofessionals who would regularly visit the homes of clients, conduct health assessments, and provide transportation when needed. Today, the CHR Program has grown to more than 1,400 CHRs representing more than 250 tribes in 12 service areas.\(^{35}\)

**Annual State Appropriations**

A few programs were found to be supported by annual State appropriations. The largest of them were the Kentucky Homeplace/SKYCAP\(^{36}\) and the Arizona Health Start Program.\(^{37}\) Few local health departments employed CHWs paid from ongoing revenue streams.\(^{38}\)

**Medicaid, State Children’s Health Insurance Program (SCHIP), and Medicare**

While some outreach programs have been supported by Medicaid *administrative* dollars, only a few programs involving CHWs were established under Medicaid *services* funding, generally under waivers or under Medicaid-managed care plans. Of those employers responding to the Inventory, 18.0 percent included reimbursement by Medicaid and/or SCHIP.\(^{39}\) Perhaps the largest identified CHW programs funded under Medicaid waivers have been California’s Family PACT Program, which provided, among other services, family planning under a waiver,\(^{40}\) and Alaska’s Community Health Aide/Practitioner (CHA/P) Program, primarily funded by the Indian Health Service CHR Program and authorized to bill Alaska Medicaid for CHA/P services.\(^{41}\)

Many community-based programs had contracts with Medicaid and SCHIP managed care organizations (MCOs) to provide CHW services. Some specific programs were identified in rural New Mexico\(^{42}\) and Rochester, New York.\(^{43}\) Medicaid and SCHIP MCOs typically have wide latitude in the use of funding received as capitation payments. At least one Medicaid MCO had directly hired 50 CHWs on the basis of internal return


\(^{38}\) Fort Worth, TX; San Francisco and Berkeley, CA.

\(^{39}\) CHW National Employer Inventory (CHW/NEI) (2006).


\(^{42}\) NFME (2006).

\(^{43}\) CHW/NWSI (2006).
Another (CareFirst) received recognition in 2006 from the National Committee for Quality Assurance (NCQA) for its “Closing the Gaps” program, which utilizes CHWs, as an example of innovation in serving linguistically and culturally diverse populations. A 1997 study by Seedco for the Annie E. Casey Foundation suggested that Medicaid-managed care organizations (MCOs) would be amenable to contracting for CHW services with community-based agencies if agency capacity and CHW skills standards were sufficiently high and, further, that this “could provide substantial revenues to support” CHW positions.

Other Medicaid support of CHW services has followed different paths. For example, the New York State Department of Health funded local CHW services in 41 sites in 2006 under its Prenatal Care Assistance Program, which is part of the Medicaid Program. Billing guidelines for HIV case management programs funded by the State of New York, as in other States, were specific in requiring that only the services of the case manager and the case management technician on the service team were directly billable to Medicaid. However, program guidelines allowed the services of a community follow-up worker (the equivalent of a CHW).

Pilot projects for CHW Medicaid services in Texas were authorized under House Bill 1864 in 1999, and the State Department of Health committed $1 million per year in combined Federal and State support for five sites in 2001. The State sought and obtained approval from the Centers for Medicare and Medicaid Services (CMS) in 2003 to use private matching funds for one pilot site in Houston, but none of the other sites received funding. A similar situation arose for the “Community Connectors” program serving mainly the African-American elderly in rural Southeastern Arkansas; the pilot program was initially supported under Medicaid administrative funding with private foundation matching funds used for the Federal share of funding.

In 2006, the CMS funded six Cancer Patient Navigator demonstration sites for assistance to minority cancer patients on Medicare fee-for-service benefits, although navigator
services were not a regular feature of fee-for-service Medicare. No other examples of Medicaid, SCHIP, and Medicare financing of services were found.

For-Profit Firms

A growing area of support for CHWs was found to be for-profit firms, both through outsourcing and direct employment. The increasingly large chronic disease management industry has changed both the structure of health care finance and the practice of medicine. In 2005, two for-profit disease management firms known to be actively pursuing the use of CHWs were among seven firms receiving annual excellence awards from the Disease Management Association of America. It is also conceivable that for-profit health insurers in the Medicaid, Medicare, and SCHIP programs may follow the lead of non-profit insurers in utilizing CHWs. However, most of the information on the utilization of CHWs by for-profit organizations has been treated as proprietary, sensitive from a competitive viewpoint, and has not been available for public dissemination.

Finally, private insurers may be considering utilizing CHWs. They are already investing heavily in wellness incentives, care management, and the use of paraprofessionals. It is likely that, as CHW capabilities and potential become better known and documented, models of CHW utilization may be considered for health benefit plans for industries with a high percentage of low-wage jobs. However, no current examples of this type of CHW employment could be located.

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Chapter 6. CHW Workforce Research and Evaluations

This study marks the first research effort that utilized a survey of verified employers in all 50 States to draw a profile of the community health workers (CHWs) workforce. Also, for this study, it was possible to use recent refinements in occupational and industry data,\textsuperscript{1} new reviews of the relevant literature, and collaborations with four concurrent, independently funded initiatives in CHW support,\textsuperscript{2} education,\textsuperscript{3} and research promotion.\textsuperscript{4}

Extent and Nature of Current Research

An indicator of the degree of involvement of the research community in any one topic is the number of published journal articles addressing that topic. Figure 6.1 compares journal publications since 1965 in five-year intervals.\textsuperscript{5} The increase in volume is significant: from 62 articles in the 1970s to nearly 400 in the 1990s.

\textbf{Figure 6.1 Publications on CHWs in Academic and Professional Journals, 1965-2005}

![Figure 6.1](image)


\textsuperscript{1} Appendix B.

\textsuperscript{2} The CHW Programs Inventory initiated by the Center for Sustainable Health Outreach (CSHO) of The University of Southern Mississippi under a grant from the W. K. Kellogg Foundation (WKKF) became the starting point for the CHW National Employer Inventory (CHW/NEI) through a partnership agreement with CSHO. Also, the Albuquerque, Miami, Northern Manhattan, Oakland, and FirstHealth (North Carolina) Community Voices sites provided feedback to develop contacts for the CHW/NEI in their respective States.

\textsuperscript{3} The Community Health Worker National Education Collaborative (CHW-NEC) initiative explored, under a grant from the U.S. Department of Education's Fund for the Improvement of Postsecondary Education, best practices for CHW education and training and provided a taxonomy of key areas for developing employable CHWs (discussed in Chapter 4).

\textsuperscript{4} The preparatory work for a forthcoming invitational conference to set a National research agenda on CHWs, supported by the California Endowment, The Northwest Area Foundation, The California Health Care Foundation, The Health Care Education-Industry Partnership of Minnesota, and The California Wellness Foundation, enhanced the material used in this chapter.

\textsuperscript{5} The list of journal articles was obtained from the bibliographic database of 1,068 entries compiled for this study. The 2005+ year group in Figure 6.1 includes nine articles from 2006.
The quality and the scope of research within this pool of sources varied from few rigorous evaluations of specific medical interventions utilizing CHWs to many descriptive reports of CHW programs. Many studies suffered from small sample sizes, poor research designs, and lack of control groups. Rigorous longitudinal studies were needed to clearly isolate the CHW interventions and measure outcomes and cost effectiveness.

**Findings From Literature Reviews**

Nine literature reviews were published between 2002 and 2006 to evaluate the use of community health workers in specific primary care and medical specialty interventions. These reviews represent the best available assessments of findings from research on health interventions that included the use of CHWs. No peer-reviewed journal exists with a specific focus on CHW practice. All of the articles reviewed represent contributions to other fields such as pediatrics and health education. Most reported findings were statistically significant, but not all of them had clinical significance. Due to the variety of topics, methodologies, and results, the collective research did not provide a systematic evaluation of CHW effectiveness and best practices. It did present, however, valid—if fragmented—evidence of CHW contributions to the delivery of health care, prevention, and health education for underserved communities. Also, these literature reviews could provide a useful framework on which to base future research.

No well-documented differences were found between outcomes from programs involving paid CHWs and volunteers. And, there were no reports on the utilization of CHWs in the private sector, as competitive considerations kept the evaluation of proprietary projects from being made public.

Table 6.1 displays the number and dates of the studies examined, topics addressed, and populations served by the interventions reviewed. Then, each review is briefly described and followed by a summary of findings on cost effectiveness (Table 6.2).

Three of the nine reviews were limited to the involvement of CHWs in interventions addressing diabetes, heart disease/stroke, and pregnancy in minority women. They covered a total of 98 studies, of which 23 were included in more than one review. Two reviews included only randomized controlled trials (RCTs), and one excluded studies measuring only changes in knowledge or attitudes.

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6 Appendix F contains a table that shows selected articles by author, date of publication, and health issue addressed, which were included in the nine reviews.
Table 6.1 Literature Reviews of CHW Research Studies, 2002-2006

<table>
<thead>
<tr>
<th>Author, Year</th>
<th>Search limited to</th>
<th>Years Covered</th>
<th>Number of studies reviewed</th>
<th>Number of studies with reported results in terms of:</th>
<th>Location and Population Served: Number of Studies Specifying Each Characteristic†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andrews 2004</td>
<td>Minority women</td>
<td>1974, 1989-2002</td>
<td>24</td>
<td>15, 7, 11, 2</td>
<td>17, 7, 0, 24, 15, 5, 1, 4</td>
</tr>
<tr>
<td>Brownstein 2005</td>
<td>Heart Disease and Stroke</td>
<td>1989-2003</td>
<td>6</td>
<td>4, 0, 0, 4</td>
<td>6, 0, 3, 0, 6, 1, 0, 0</td>
</tr>
<tr>
<td>HRSA 2002</td>
<td>All</td>
<td>1991-1999</td>
<td>19*</td>
<td>18, 6, 5, 2</td>
<td>12, 7, 1, 7, 9, 10, 1, 0</td>
</tr>
<tr>
<td>Lewin 2005</td>
<td>All</td>
<td>1972-2001</td>
<td>21*</td>
<td>9, 1, 7, 13</td>
<td>20, 1, 1, 13, 4, 1, 0, 0</td>
</tr>
<tr>
<td>NFME** 2006</td>
<td>All</td>
<td>2002-2005</td>
<td>7</td>
<td>2, 0, 2, 5</td>
<td>5, 0, 1, 1, 3, 3, 0, 0</td>
</tr>
<tr>
<td>Nemcek 2003</td>
<td>All</td>
<td>1974-1999</td>
<td>18***</td>
<td>9, 2, 2, 5</td>
<td>13, 5, 2, 4, 6, 8, 0, 0</td>
</tr>
<tr>
<td>Norris 2006</td>
<td>Diabetes</td>
<td>1987-2003</td>
<td>15*</td>
<td>4, 6, 9, 11</td>
<td>7, 5, 0, 6, 3, 7, 0, 2</td>
</tr>
<tr>
<td>Persily 2003</td>
<td>Prenatal home visiting</td>
<td>1987-2000</td>
<td>12*</td>
<td>9, 3, 1, 5</td>
<td>3, 1, 0, 12, 0, 2, 0, 0</td>
</tr>
<tr>
<td>Swider 2002</td>
<td>All</td>
<td>1981-1999</td>
<td>19</td>
<td>14, 2, 8, 3</td>
<td>15, 0, 1, 9, 3, 4, 1, 0</td>
</tr>
</tbody>
</table>

† A study was not counted if the characteristic shown was not specifically mentioned in the review.
* HRSA (2002): 19 of 20 studies reviewed were in the U.S.; Lewin (2005): Of 24 U.S. studies, 21 were included and three were excluded because they primarily referred to the provision of paraprofessional clinical care; Norris (2006): 15 of 18 articles reviewed were in the U.S.; Persily (2003): 12 of 14 studies reviewed were in the U.S.
** National Fund for Medical Education.
*** Nine of the 18 studies included were program profiles in one report.⁷

Andrews 2004

The evaluation, limited to research studies involving ethnic minority women, found that “[CHWs] are effective in increasing access to health services, increasing knowledge and promoting behavior change….” Only two of the cited studies described clinical outcomes (reduction in low birth weight (LBW) deliveries and weight loss). The remaining 12 lacked a clear reference to the theoretical framework supporting the methods employed; 10 were descriptive; 6 were quasi-experimental; seven were experimental; and one was a cross-sectional pre-post design.

Andrews found that most of the studies reported significant results for increasing access to services, but that the investigators differed in the definition of CHW roles and responsibilities and in the retention of participants, whose attrition ranged from 16 to 60 percent. Andrews concluded that CHW involvement in case management was more successful for retention than the more limited outreach role. Five of the seven studies on increasing knowledge on health behavior showed significant results; the validity of findings in the remaining two was limited by “high attrition rates, small sample size and lack of standardized instruments.”

Two of the reviewed studies had positive results in breastfeeding behavior, and favorable reviews were given to single studies on weight loss, drug use, high-risk sexual behavior, and physical activity. A study on diabetes self-care did not show a measurable impact from the CHW intervention. Two studies showed both improved outcomes and reduced costs.

Brownstein 2005

Brownstein’s review of six studies related to heart disease and stroke concluded that CHW interventions were associated with “significant improvements in participants’ blood pressure care and control.”

Home visits by outreach workers “to mobilize the patient’s support system” were more effective in hypertension control than group education sessions.

CHWs providing blood pressure (BP) monitoring, education and follow-up (working with nurse practitioners) produced significant increases in appointment keeping and continuity of care.

CHWs teaming with a nurse and a physician increased entry to care and reduced blood pressure; a follow-up RCT combining hypertension (HTN) care and medications with CHW

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9 Ibid. (p.358)
11 Ibid. (p.132).
visits for education and for mobilizing family support led, over a 3-year period, to better care and better BP control than a “usual-care” control group.\textsuperscript{15}

A related Community-Based Participatory Research (CBPR) project provided further levels of training to CHWs, and compared more- and less-intensive CHW interventions. Both groups experienced significant increase in BP control with no significant differences in degree of improvement between the two intervention groups.\textsuperscript{16}

In a Medicaid population with diabetes and hypertension, CHW care management produced significant reductions in ER visits, hospital admissions, and total patient costs to the Medicaid program.\textsuperscript{17}

HRSA 2002\textsuperscript{18}

This review was developed for the Maternal and Child Health Bureau (MCHB) as an exploratory exercise in preparation for a national cost-effectiveness study on the use of CHWs in MCH programs. The evaluation studies reviewed were selected for their relevance to the design of the study, and the coverage was not meant to be comprehensive.\textsuperscript{19} The principal relevance of this review rests in identifying key considerations for research on CHWs.

Lewin 2005\textsuperscript{20}

This review of 43 RCTs excluded studies measuring only changes in knowledge, attitudes, or intentions, which “were not considered useful indicators of the effectiveness of [CHW] interventions.”

The investigators concluded that CHWs “show promising benefits” in a limited range of health issues, including childhood immunizations.

National Fund for Medical Education 2006\textsuperscript{21}

This review was conducted to accompany a study on financing and sustainability of CHW services. It summarized findings of earlier literature reviews and examined seven RCTs

\textsuperscript{15} Dennison CR, Hill MN, Bone LR et al. Comprehensive hypertension care in underserved urban black men: high follow-up rates and blood pressure improvement over 60 months. Circulation 2003; 108:381.
\textsuperscript{17} Fedder DO, Chang RJ, Curry S et al. The effectiveness of a community health worker outreach program on healthcare utilization of West Baltimore City Medicaid patients with diabetes, with or without hypertension. Ethn Dis 2003; 13 (1):22-7.
\textsuperscript{18} Health Resources and Services Administration. A literature review and discussion of research studies and evaluations of the roles and responsibilities of community health workers (CHWs). Maternal and Child Health Bureau, Health Resources and Services Administration, U.S. Department of Health and Human Services July 5, 2002.
\textsuperscript{19} Ibid. (p.19).
\textsuperscript{21} National Fund for Medical Education. Advancing Community Health Worker Practice and Utilization: The Focus on Financing. San Francisco (CA): Center for the Health Professions, University of California at San Francisco, 2006.
published from 2002 to 2005. Of these, one reported no positive effect in measuring the role of CHWs in reduction of exposure of children to tobacco smoke. Two suggested positive effects but were included with reservations over “shortcomings in the design of the CHW role.” The four remaining RCTs showed impact on blood glucose in African-American men with diabetes, on the participation by Hispanic women in an annual comprehensive clinical exam, on smoking cessation by adult Latinos, and on blood pressure control in urban African-Americans.

Nemcek 2003

Nemcek, writing from a nursing standpoint, concluded that “the rationale is strong for using CHWs to improve delivery of community-based preventive care” and that findings suggest roles for CHWs in three domains: (1) developing a “therapeutic alliance” between patient, provider, and family/community support systems; (2) risk reduction; and (3) improving patterns of health care utilization.

Of 18 programs reported in 10 articles, Nemcek found nine acceptable process and outcome evaluations, two with only outcome descriptions, and the remaining seven with process evaluations only. Improved utilization of services, including medical appointment-keeping and less frequent ER visits, were the most commonly reported types of outcomes. Clinical outcomes included reduction of low birth weight deliveries and changes in blood pressure and sugar levels. Changes in health-related knowledge, treatment compliance, and lifestyles were also included.

Nemcek found no useful information for evaluating the structure of CHW programs “because programs have lacked a standard structure” and noted there was “a dearth of CHW process and outcome evaluation evidence in the literature… most reports are not research studies and the use of rigorous controls was not documented.”

Norris 2006

Norris et al. reviewed 18 articles evaluating CHW interventions focusing on adults with diabetes and showing client outcomes, including eight RCTs. Multiple CHW roles and activities were identified, and the investigators concluded that there were “some preliminary data demonstrating

27 Levine DM et al. (2003).
improvements in participant knowledge and behavior.” Other research designs included six before/after designs, three non-randomized comparison studies, and one with post-intervention measures only.

**Persily 2003**

This review encompassed 14 studies, of which one was not from the United States and one was purely descriptive, limited to programs intended to improve pregnancy outcomes. Persily found that, although “home visiting by lay workers may be more accepted by pregnant women,” published studies showed “mixed results.” Among the 14 studies on “lay home visiting programs,” eight showed positive impact on use of prenatal care; three of five, examining low birth weight delivery, showed impact; and one study showed impact on pre-term delivery. Three studies reported impact on “social support.” Only one study (on child abuse) showed no significant impact. However, the review described weaknesses in the studies such as the use of descriptive or quasi-experimental designs, poorly specified interventions, and lack of cost analyses.

**Swider 2002**

This review covered 19 CHW effectiveness studies of various design from 1981 through 1999. Swider concluded that there was some evidence for supporting CHWs in increasing access to care, particularly for underserved populations, but “inconclusive results” regarding knowledge acquisition, clinical outcomes, and behavioral changes. In most of the studies reviewed, the CHWs’ “primary role expectations were not reported, nor were details of the intervention they provided.” Therefore, only one of four studies with a primary CHW role of “outreach and case finding” had positive outcomes.

**Cost Effectiveness**

Ten published studies were found that dealt with cost effectiveness of, or return on investment (ROI) from, CHW activities. In only two of these studies did cost considerations constitute the main topic of the published article. The limited number of studies and the variety of measures used did not allow meaningful conclusions overall.

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32 Published studies in Table 6.2 are referenced in Appendix I.
In Table 6.2, the articles’ health-related objectives, outcome measures, and cost-effectiveness results are displayed by author in alphabetical order.

**Table 6.2 Studies**

<table>
<thead>
<tr>
<th>Lead author</th>
<th>Year</th>
<th>Health issue</th>
<th>Outcome measures</th>
<th>Cost-effectiveness results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barnes-Boyd</td>
<td>2001</td>
<td>Infant mortality reduction</td>
<td>Mortality rates, program retention, health problems identified, immunization rates</td>
<td>Implied cost-saving potential in that outcomes with nurse-CHW team were at least equal to those of nurse-only team (no computation of cost savings)</td>
</tr>
<tr>
<td>Beckham</td>
<td>2004</td>
<td>Asthma management</td>
<td>Reported symptoms, doctor visits, emergency department (ED) visits</td>
<td>Total per capita costs reduced from $310 to $129; ED costs reduced from $1,119 per participant to $188</td>
</tr>
<tr>
<td>Black</td>
<td>1995</td>
<td>Non-Organic Failure to Thrive (NOFTT)</td>
<td>Child development measures, parent-child interaction scores</td>
<td>Costs of intervention “generally consistent with” other home-visiting programs ($1,709 to $6,200 per year)</td>
</tr>
<tr>
<td>Fedder</td>
<td>2003</td>
<td>Diabetes management</td>
<td>ED visits, hospital admissions, quality-of-life indicators</td>
<td>Cost to Medicaid reduced an average of $2,245 per patient per year</td>
</tr>
<tr>
<td>Krieger</td>
<td>2000</td>
<td>Older adult flu and pneumonia prevention</td>
<td>Immunization rates</td>
<td>Marginal cost per additional vaccine administered = $117; options for lower cost discussed</td>
</tr>
<tr>
<td>Krieger</td>
<td>2005</td>
<td>Asthma (indoor triggers)</td>
<td>Caregiver quality of life; use of urgent health services; symptom days</td>
<td>Projected four-year net savings $189 to $721 per participant</td>
</tr>
<tr>
<td>Sox</td>
<td>1999</td>
<td>Cancer screenings for women</td>
<td>Effectiveness of trained Community Health Aides performing clinical exams and Pap smears (Alaska)</td>
<td>Implied cost saving in reduced travel of clinical personnel to remote villages (no estimates)</td>
</tr>
<tr>
<td>Weber</td>
<td>1997</td>
<td>Mammography</td>
<td>Rates of mammography use</td>
<td>Marginal cost of CHW activity per additional mammography performed = $375, equivalent to $11,591 per year of life saved</td>
</tr>
<tr>
<td>Whitley</td>
<td>2006</td>
<td>Primary care utilization</td>
<td>Utilization, charges and reimbursements</td>
<td>Cost reduction of $14,244 per month, program cost of $6,229 per month = ROI ratio of 2.28:1</td>
</tr>
<tr>
<td>Wolff</td>
<td>1997</td>
<td>Mental illness</td>
<td>Treatment contact, psychiatric symptoms, satisfaction with treatment</td>
<td>Total cost of treatment less with CHW but not statistically significant: treatment only, $49,510; treatment with CHW team, $39,913; brokered case management, $45,076</td>
</tr>
</tbody>
</table>

Chapter 7. Current Trends

There are suggestive indications, but no statistical evidence, of the size and direction of change in the community health worker (CHW) workforce. Studies in Minnesota\(^1\) and California\(^2\) suggested the growth of the CHW workforce but could not be used to accurately predict a growth trend. The absence of an official definition of the CHW occupation and the erratic, short-term funding of CHW programs have hampered the collection of CHW data and made estimates difficult. However, two sources of information offer some evidence that the CHW workforce is likely to increase in the forthcoming years: the Bureau of Labor Statistics (BLS) projections of occupations that include CHWs and the interviews of CHW employers conducted for this study. The BLS data can be used to make a very rough estimate of the growth of the CHW workforce from 2000 to 2005.

Estimates of Growth for the Community Health Worker Workforce from BLS Data

The method used in this study to arrive at national and State estimates of community health workers\(^3\) employed data from the Census Bureau and the Bureau of Labor Statistics for two Standard Occupational Classification (SOC) codes:\(^4\) SOC code 21-1010, Counselors, and SOC code 21-1090, Miscellaneous Community and Social Service Specialists. The “Social and Human Service Assistants” (SOC 21-1093), a subgroup of Miscellaneous Community and Social Service Specialists, was “projected to grow much faster than the average for all occupations between 2004 and 2014 and was ranked among the most rapidly growing lines of work.”\(^5\)

Current estimates from the Bureau of Labor Statistics for these two occupations, 21-1010 and 21-1090, are shown in Table 7.1.\(^6\) BLS expected that the number of individuals working in these two SOC occupation codes will increase between 2000 and 2005 by 22 and 44 percent, respectively.

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\(^3\) See Chapter 3 and detailed methodology in Appendix B.


\(^5\) Ibid.

Table 7.1  Percent Change in Selected SOC Codes

<table>
<thead>
<tr>
<th>SOC</th>
<th>2000</th>
<th>2005</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-1010</td>
<td>434,130</td>
<td>530,710</td>
<td>22.2</td>
</tr>
<tr>
<td>21-1090</td>
<td>385,080</td>
<td>555,640</td>
<td>44.3</td>
</tr>
<tr>
<td>Total</td>
<td>819,210</td>
<td>1,086,350</td>
<td>32.6</td>
</tr>
</tbody>
</table>


Using the estimated proportions of CHWs in SOC 21-1010 and 21-1090 in 2000 (1.8 and 12.4 percent, respectively) and assuming no changes in the proportions over time, an estimate of 9,758 (530,710 x 1.8 / 100) and 68,938 (555,640 x 12.4 / 100) can be made to represent the total of CHWs in these occupations in 2005. The change in those totals from 2000 to 2005 was applied to the CHW total for 2000 (85,879) to arrive at the 2005 figure of 121,206.

Table 7.2  Estimated Number of CHWs in 2000 and 2005

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2005</th>
<th>Change</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>85,879</td>
<td>121,206</td>
<td>35,327</td>
<td>41.1</td>
</tr>
</tbody>
</table>


CHW National Workforce Study Interviews (CHW/NWSI)\(^7\)

During “best-informant” interviews with 36 employers in two large and two small Northern and Southern States,\(^8\) a routine question was asked on future plans relative to continuing or increasing CHW personnel.

The majority of employers in Texas and Arizona who participated in the interviews were optimistic about continuing the employment of CHWs and expanding their utilization into health care services addressing diabetes, mental health, and oral health. Also, a few employers mentioned plans of involving CHWs in future clinics, emergency rooms, and additional geographic areas. All employers interviewed in the four States indicated that continued funding was the key determinant of continued CHW employment.

\(^7\) Interviews with selected candidates in the four in-depth study States were carried out from May to July 2006 to learn more about issues unattainable from extant data, including contributions CHWs have made, demand for CHWs, and future utilization of CHWs. See Appendices E1 and E2 for “workbooks” used by the research team during the interviews.

\(^8\) Arizona, Massachusetts, New York, and Texas were selected as “in-depth” studies for this report.
Chapter 8. The CHW Workforce in Selected States

This chapter describes community health workers’ activities in Arizona, Massachusetts, New York, and Texas. These regional workforce profiles were assembled with data gathered from published and unpublished studies and reports, special tabulations of the CHW National Employer Inventory (CHW/NEI), and 48 unstructured interviews with employers and CHWs, elsewhere in the study referred to as the CHW National Workforce Study Interviews (CHW/NWSI). The results of the interviews from the larger States of New York and Texas were compared to the findings from the CHW/NEI and were found to reinforce those findings. The Inventory responses from the smaller States of Arizona and Massachusetts were often too few to allow meaningful comparisons.

The Population of the Selected States

In 2004, Texas and Arizona had higher percentages of Hispanics in their populations (35 and 28 percent, respectively) than did New York (16.1 percent), Massachusetts (7.7 percent), or the Nation (14.2 percent). In New York, the proportion of Blacks/African-Americans (14.7 percent) was greater than that in each of the other three States (3.0 percent in Arizona, 5.6 percent in Massachusetts, and 10.9 percent in Texas) and in the U.S. (12.0 percent). The population of Arizona had the largest percent of American Indian/Alaska Natives (4.2 percent) and Massachusetts the smallest (0.1 percent). Non-Hispanic Whites were half of the population of Texas, 80 percent of the population of Massachusetts, and 61 percent of the populations of New York and Arizona. Median household income was highest and above the U.S. value ($44,684) in Massachusetts ($55,658) and New York ($47,349); lowest, and below the national average, in Arizona ($41,995) and Texas ($41,759). The proportion of individuals without health insurance was 29 percent in Texas, 21 percent in Arizona, 13.7 percent in New York, and 10.3 percent in Massachusetts. In 2004, 14.5 percent of the country’s population was uninsured.

CHW Demographics

The demographic characteristics of community health workers usually mirrored those of the communities they served. This finding was to be expected given the nature of their occupation and the fact that some employers required that they actually live in the communities they assisted, sharing language, culture, and socioeconomic status with the residents. In Arizona, CHWs were primarily American Indians/Alaska Natives, most of them tribal Community Health Representatives (CHRs), and Hispanics, mostly engaged in U.S.-Mexico Border or farmworker programs. In Massachusetts, they were mostly White (80 percent). In New York, 37 percent

1 U.S. Census Bureau, 2004 American Community Survey Data Profile Highlights.
2 Behavioral Risk Factor Surveillance System (BRFSS). Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2005. In the BRFSS, respondents were asked “Do you have any kind of health care coverage?”
of CHW personnel were Black/African-American, 35 percent Non-Hispanic White, and one-fourth (25 percent) were Hispanic/Latino(a). In Texas, the CHW workforce was 68 percent Hispanic/Latino(a), 18.5 percent Non-Hispanic White, and 10.7 percent Black/African-American. A similar predominance of Hispanics/Latinos (77 percent) was found among the State-certified CHWs in Texas, more than twice the proportion of Hispanics/Latinos in the State population (35 percent), a result of the pressing health issues among underserved Latinos and of the cultural acceptance of the role of promotor(a).

In the selected States, as in the Nation, CHWs were mostly female between the ages of 30 and 50. Again, the predominance of women in this workforce was partly due to the focus of many programs on underserved children and their mothers as well as to clients’ greater acceptance of female caregivers in their homes. Exceptions were found in certain programs such as Arizona nutrition programs, or fatherhood, HIV case management, and some youth programs in New York, which maintained a predominance of male workers.

Socioeconomic Characteristics of the CHWs

Most CHWs in Arizona had a high school diploma, and it was a requirement for CHRs in the Indian Health Service (IHS) program who were asked to be community health promoters, educators, and, when needed, health paraprofessionals. CHRs received wages comparable to those of an entry-level health aide at the county health department (less than $10 per hour) with incentives ranging from full fringe benefits to flexible work hours and reimbursement for training and education.

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5 Massachusetts Department of Public Health. Community Health Workers: Essential to Improving Health in Massachusetts, Findings from the Massachusetts Community Health Worker Survey. Boston (MA): Division of Primary Care and Health Access, Bureau of Family and Community Health, Center for Community Health, March 2005. Note: Race and ethnicity were reported separately in this report. In the CHW/NEI, race/ethnicity were reported as Non-Hispanic White or Hispanic/Latino(a).


7 Community Health Workers in Texas Demographic Data. Austin (TX): Texas Department of State Health Services, March 2006; reflects 545 certified CHWs in Texas.

8 Despite subtle differences, the terms promotores and promotoras, defined in Chapter 1, have been used interchangeably with the term community health worker in Mexico, Latin America, and Latino communities in the U.S.


11 Ibid.

12 Staten LK et al. (2004); Buller D et al. (2000).


14 Buller D et al. (2000); Ingram M et al. (2004).


In Massachusetts, the CHW/NEI confirmed the finding, from an earlier survey,\(^{18}\) that the majority of CHWs had some college training, a higher level of education than the national average. Only 4 percent did not have the equivalent of a high school diploma.\(^{19}\) Most CHW supervisors had a college degree (88 percent).\(^{20}\) Organizations operating in the Boston metropolitan area and in unionized shops (i.e. hospital systems) paid the highest wages.\(^{21}\) The Massachusetts State Department of Public Health has been the main funding source of programs employing CHWs, a unique feature of that State. In large organizations, the outreach workers experienced some wage parity issues, and due to the definitional difficulties of the CHW occupation, they had to be classified by human resource departments in similar but not always comparable occupations that required fewer skills and paid lower wages.\(^{22}\)

Some employers interviewed in New York expressed preference for a college education (either associate or bachelor’s level) but indicated flexibility in those requirements when the candidate had substantial community involvement and work experience.\(^{23}\) In the CHW/NEI, 30 percent of CHWs working in New York had a college degree, 22 percent had some college education, and 22 percent had a GED or a high school diploma.

In New York, the models of care delivery determined CHW wages. In hospitals, wages were based on pay equity scales for similar workers in the institutions.\(^{24}\) In municipal agencies, CHWs were provided with salaries and benefits commensurate to the county, city, or town pay scales.\(^{25}\) Providers with a unionized workforce were subject to union pay scales. Programs with appealing union or municipal benefit packages were able to attract workers from other programs without offering competitive wages.\(^{26}\) New York employers responding to the CHW/NEI indicated that 21 percent of new hires earned between $9 and $11 per hour and 35 percent between $11 and $13 per hour. The majority of experienced CHWs (62 percent) earned at least $15 per hour. A 1994 study reported that, in the New York metropolitan area, annual salaries for CHWs were between $18,000 and $25,000.\(^{27}\)

The educational attainment of Texas CHWs was lower than the national average. Graduation from high school or a GED was the highest level of education for 43 percent of CHWs. One-fourth of this workforce (24 percent) had obtained a 4-year degree. Of the CHWs certified by the Texas Department of State Health Services, only 8 percent had not graduated from high school, 40 percent had a high school diploma or a GED, and 21 percent had obtained a 4-year degree or higher.\(^{28}\) Newly hired CHWs in Texas were paid less than the U.S. average. The majority (66 percent) of them earned less than $11 per hour (13 percent earned less than $7 per hour) and only 9 percent earned $15 or more. Of the more experienced CHWs, 43 percent

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\(^{18}\) Massachusetts Department of Public Health. Community Health Workers: Essential to Improving Health in Massachusetts, Findings from the Massachusetts Community Health Worker Survey. Boston (MA): Division of Primary Care and Health Access, Bureau of Family and Community Health, Center for Community Health, March 2005.

\(^{19}\) Ibid.

\(^{20}\) Ibid.

\(^{21}\) CHW/NWSI (2006).

\(^{22}\) Ibid.

\(^{23}\) Ibid.

\(^{24}\) Ibid.

\(^{25}\) Ibid.

\(^{26}\) Ibid.

\(^{27}\) Walker MH (1994).

\(^{28}\) TDSHS (2006); reflects 545 certified CHWs in Texas.
received less than $11 per hour and about one-third (29 percent) were paid an hourly wage of $15 or more.\textsuperscript{29} Most employers reported providing employee benefits and few mentioned non-monetary rewards such as participation in agency decision-making.\textsuperscript{30} Twenty-two percent of Texas employers offered tuition assistance.

\textbf{Institutional Framework}

In Arizona and New York, there were no specific State directives or legislative actions naming community health workers. However, one categorical CHW program, Arizona Healthy Start, after several years of sporadic support, in 1999 received funding by State legislation with the requirement that program sites were to provide a graduated in-kind contribution to match State dollars.\textsuperscript{31}

Massachusetts, unique among all other States, funded public health care services at the regional, local, municipal, and community level through the Massachusetts Department of Public Health (MDPH). Also, the State facilitated the formation of a CHW network as well as investigation into the training, education, and certification of CHWs.\textsuperscript{32} In 1995, the MDPH convened an internal cross-departmental task force to better understand the current and potential impact of the CHW workforce on health care delivery.\textsuperscript{33} In 1997, the task force developed guidelines for organizations receiving funds to support CHW activities.

Following the guidelines, in 2000, with the support of a grant from the Health Resources and Services Administration (HRSA), the MDPH began a 3-year project to implement the recommended goals. In 2000, the Massachusetts Community Health Workers (MACHW) network was established and, the MDPH, in collaboration with the MACHW, produced policy recommendations, a CHW definition, description of best practices, and operational measures for funded programs.\textsuperscript{34}

In March 2006, the Massachusetts Legislature passed a health care reform bill\textsuperscript{35} to provide access to quality, accountable, and affordable universal health care for the citizens of the Commonwealth, eliminate health disparities, increase the use of primary care, and reduce the use of emergency room services.\textsuperscript{36} The law mandated CHW representation on the Massachusetts Public Health Council and required the MDPH to convene a statewide advisory board including the Commissioner of Public Health or designee and representatives of the Office of Medicaid, the Department of Labor, the Massachusetts Community Health Worker Network (MACHW), the Outreach Worker Training Initiative (OTWI) of Central Massachusetts AHEC, the Community Partners’ Health Access Network, the Massachusetts Public Health Association, the

\begin{footnotesize}
\begin{itemize}
  \item \textsuperscript{29} CHW/NEI (2006).
  \item \textsuperscript{30} CHW/NWSI (2006).
  \item \textsuperscript{31} Bridge M, Iden S, Cunniff C et al. Improving access to and utilization of genetic services in Arizona's Hispanic population. Community Genetics 1998; 1 (3):166-8; Meister JS et al. (2000).
  \item \textsuperscript{32} CHW/NWSI (2006).
  \item \textsuperscript{33} MDPH (2005).
  \item \textsuperscript{34} Ibid.
  \item \textsuperscript{35} Chapter 58 of the Acts of 2006, called an Act Providing Access to Affordable Quality Accountable Health Care.
\end{itemize}
\end{footnotesize}
Massachusetts Center for Nursing, Blue Cross Blue Shield of Massachusetts, the Massachusetts Medical Society, the Massachusetts Hospital Association, the Massachusetts League of Community Health Centers, and the MassHealth Technical Forum to develop recommendations for a sustainable CHW program involving public and private partnerships.37

Another State legislation that influenced some aspects of CHW employment in Massachusetts was the implementation of a 2001 emergency room interpreter law requiring all acute care hospitals and psychiatric inpatient hospitals to provide translator services, refundable by the State, without charge to patients.38 Fifty of the 80 hospitals in the State addressed the requirement.39

In 1999, Texas was the first State to adopt substantive legislation directly affecting the utilization of CHWs.40 House Bill 1864, enacted by the 76th Texas Legislature, directed the Texas Department of Health (TDH)41 to design education programs for promotoras42 or community health workers. Two years later, the Promotora Program Development Committee (PPDC) recommended a system of credentialing based on the eight areas of “core competencies” identified in the 1998 National Community Health Advisor Study (NCHAS) sponsored by the Annie E. Casey Foundation.43 In 2001, Senate Bill 75144 directed the implementation of a promotor(a) or community health worker (CHW) training and certification program. The program has been voluntary for CHWs who do not receive compensation for their services and mandatory for paid CHWs. Also, the Bill required health and human services agencies to use certified CHWs/promotores(as) in performing health outreach and education programs for recipients of medical assistance under Chapter 32 of the Human Resources Code. For the first time, directives for Medicaid claims’ administration and primary care case management services included the requirement of using certified CHWs in outreach and education activities.45

Models of Care

The following State examples have been chosen as illustrations of the five models of care described in Chapter 3.

37 Ibid.
39 Ibid.
40 Family Care Coordination [Internet]. Indianapolis (IN): Indiana State Department of Health; 2006 [updated 2001 Oct 02/cited 2006 Jun 19]. Available from http://www.state.in.us/isdh/programs/mch/fcc.htm. Note: Indiana implemented “Family Care Coordination” services for pregnant women and infants receiving Medicaid under provisions of an Omnibus Reconciliation Act of 1989 and of 1990, which includes home visiting for pregnant women and/or children, although the original legislation did not provide for CHWs as a class of workers in home visiting. In addition, a 1998 Bill in Maryland (House Bill 650) was aimed at requiring HMOs to employ CHWs to educate Medicaid recipients.
41 Relevant functions of TDH became part of the Texas Department of State Health Services (TDSHS) in 2004.
42 The term common in Hispanic communities is used in Texas and other U.S./Mexico Border States as a synonym for CHWs despite subtle differences in meaning -- in Spanish the term promotores(as) emphasizes “health promotion” involving activities not always strictly defined as health services.
44 Enacted by the 77th Texas Legislature.
Members of care delivery teams

HIV programs in New York State used a comprehensive case management strategy employing a team approach that included a case manager, case management technician, and community health worker for follow-up visits to clients at their homes and for escorting them, when necessary, to access needed care.46

CHRISTUS Spohn Health Care Hospital System in Corpus Christi, Texas, has assigned CHWs to emergency departments, primary care centers, and hospital floors. The CHWs in the emergency department teamed with clinical staff and followed patients from the emergency department through admission after discharge and visits with primary care physicians to ensure continuity of care. The emergency department found the program beneficial and requested its expansion.47 Hospital floor CHWs acted as resident patient advocates linking patients to appropriate problem solvers. The workers based in the primary care center spent part of each day taking vital signs but focused mainly on medication compliance.48

Navigator

The African Services Committee in New York City used indigenous outreach workers to facilitate legal and immigration counseling, culturally and linguistically appropriate health care, linkages to food pantries, access to housing, and employment opportunities for a largely immigrant and refugee community.49

Gateway to Care, a collaborative of 170 safety net health care systems and other organizations serving 1.09 million uninsured and underinsured individuals in Houston, Texas, employed community health workers as “Navigators” to establish cultural linkages between communities and health care providers and to facilitate outreach, eligibility determination, health promotion, referral, patient advocacy, and service coordination.50 Goals set for the CHW navigators included encouraging the utilization of primary and preventive care, improving patient-provider communication, and reducing inappropriate emergency room visits. Gateway was selected for a State-sponsored demonstration of navigator services to Medicaid recipients.51

Screening and education provider

In Arizona, the Mariposa Community Health Center (MCHC) -- the largest provider of medical, dental, public health, and social services in the rural and low-income Santa Cruz County -- used a large group of CHWs (64 in 2004) for outreach programs aimed at informing communities of health care options and encouraging enrollment into available services. MCHC was designated

47 Rush CH. Conversation with: Bert Ramos (Director, CHRISTUS Spohn Family Health Center- Westside). 2006 May 01.
48 Ramos B. Best Practice Entry Form: Community Health Workers in a Primary Care Setting. Corpus Christi (TX): CHRISTUS Spohn Hospital Corpus Christi-Memorial, Nueces County Hospital District, March 2005.
in 2002 by the U.S. Department of Health and Human Services, Office on Women’s Health, as a Community Center of Excellence in Women’s Health.\textsuperscript{52}

CHW education and screening services were utilized by a dozen sites of the statewide perinatal health promotion program, Arizona Health Start, supported by annual State government appropriations.\textsuperscript{53}

**Outreach/enrolling/informing agent**

The Boston HIV Adolescent Provider and Peer Education Network (HAPPENS), housed at Children’s Hospital in Boston, addressed case finding, case management, and outreach to adolescents between the ages of 12 and 20 who were lost to the health care system and were diagnosed with HIV. The program combined the CHW outreach role with the role of patient liaison to the clinical staff.\textsuperscript{54} The HealthFirst Family Care Center, a Federally Qualified Health Center (FQHC) in Fall River, Massachusetts, employed CHWs to promote the health center and its programs through attendance at community events such as health fairs and educational presentations.\textsuperscript{55}

**Organizer**

North End Outreach Network (NEON) of Springfield, Massachusetts, has been operating as a social service community advocacy organization with the Baystate Medical Center, also of Springfield, acting as its fiscal agent. NEON used a multi-intervention approach aimed at reaching every household in its geographic area. Seven community health advocates (CHAs) were responsible for door-to-door outreach in one of 10 geographic zones encompassing the targeted area. Also, CHAs were assigned to neighborhood schools where they worked with students and families in projects especially designed for young people, such as a digital storytelling program for hand-held devices with stories and music created by local youth. NEON maintained a database on the area’s residents and addressed, when needed, other issues indirectly related to the health status of the residents such as education, literacy, employment, housing, and public safety.\textsuperscript{56}

The role of CHWs (*promotores*) in the Texas *colonias*\textsuperscript{57} has been that of connecting residents to health services available outside the community. This assistance has been critical since these communities lack not only health services but also some basic living necessities. *Promotores* developed environmental health community education seminars and facilitated outside groups in


\textsuperscript{54} CHW/NWSI (2006).

\textsuperscript{55} Ibid.

\textsuperscript{56} Ibid.

\textsuperscript{57} The term *colonia* and its plural, *colonias*, mean, in Spanish, community(ies) or neighborhood(s). In the U.S., these terms are being used to describe low-income or economically distressed residential areas along the United States/Mexico Border and in other regions of the country that may lack some of the most basic living necessities, such as potable water and sewer systems, electricity, paved roads, and safe and sanitary housing.
conducting research to bring some relief to the many high-risk health conditions of colonias’ residents.58

**CHW Activities**

Table 8.1 compares the percentages of New York and Texas employers reporting each type of service provided by their CHW employees relative to the percentage of employers nationwide reporting the same services. The regional differences were minor and suggest that CHWs have been engaged throughout the United States with similar frequency in the same group of health care activities. Emerging duties for CHWs, as reported during State interviews, included providing assistance in organizing and managing care, in investigating clients’ concerns, and articulating clients’ needs.59

The special populations served are shown in Figure 8.1, the health issues addressed by CHWs are in Table 8.2, and the skills required by employers are in Figure 8.2. The State profiles closely shadowed the Nation except for bilingualism which, predictably, was more frequently selected by Texas respondents as an important skill. The description of education requirements, the importance of cultural competence, recruitment methods, training, education, certification, and funding streams presented in Chapters 3 and 5 apply to these selected States as well. Interesting regional examples are included in Appendix G.

<table>
<thead>
<tr>
<th>Services</th>
<th>New York (N=44)</th>
<th>Texas (N=91)</th>
<th>U.S. (N=596)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assisting in gaining access to medical services and programs</td>
<td>90.9</td>
<td>81.3</td>
<td>84.4</td>
</tr>
<tr>
<td>Providing culturally appropriate health promotion and education</td>
<td>81.8</td>
<td>87.9</td>
<td>81.7</td>
</tr>
<tr>
<td>Assisting in gaining access to non-medical services/programs</td>
<td>77.3</td>
<td>68.1</td>
<td>71.6</td>
</tr>
<tr>
<td>Community advocacy</td>
<td>61.4</td>
<td>53.8</td>
<td>53.0</td>
</tr>
<tr>
<td>Social support</td>
<td>61.4</td>
<td>42.9</td>
<td>45.8</td>
</tr>
<tr>
<td>Case management</td>
<td>65.9</td>
<td>41.8</td>
<td>45.0</td>
</tr>
<tr>
<td>Risk identification</td>
<td>68.2</td>
<td>30.8</td>
<td>40.9</td>
</tr>
<tr>
<td>Building individual capacity</td>
<td>52.3</td>
<td>39.6</td>
<td>38.8</td>
</tr>
<tr>
<td>Providing direct services</td>
<td>34.1</td>
<td>35.2</td>
<td>37.4</td>
</tr>
<tr>
<td>Translation</td>
<td>38.6</td>
<td>49.5</td>
<td>35.6</td>
</tr>
<tr>
<td>Transportation</td>
<td>40.9</td>
<td>37.4</td>
<td>35.6</td>
</tr>
<tr>
<td>Building community capacity</td>
<td>25.0</td>
<td>40.7</td>
<td>34.9</td>
</tr>
<tr>
<td>Interpretation</td>
<td>34.1</td>
<td>44.0</td>
<td>33.6</td>
</tr>
<tr>
<td>Counseling</td>
<td>36.4</td>
<td>31.9</td>
<td>30.5</td>
</tr>
<tr>
<td>Mentoring</td>
<td>22.7</td>
<td>24.2</td>
<td>20.6</td>
</tr>
<tr>
<td>Cultural mediation</td>
<td>11.4</td>
<td>24.2</td>
<td>18.0</td>
</tr>
<tr>
<td>Patient navigation</td>
<td>22.7</td>
<td>15.4</td>
<td>17.8</td>
</tr>
<tr>
<td>Other</td>
<td>15.9</td>
<td>8.8</td>
<td>10.6</td>
</tr>
</tbody>
</table>

Source: CHW National Employer Inventory (CHW/NEI) (2006); multiple responses permitted.

Figure 8.1 Percent of Employers Reporting CHW Services to Special Populations

Table 8.2 Health Problems Addressed by Programs, Percent of Respondents

<table>
<thead>
<tr>
<th>Health Problem or Issue</th>
<th>New York (N=43)</th>
<th>Texas (N=88)</th>
<th>U.S. (N=587)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrition</td>
<td>55.8</td>
<td>52.3</td>
<td>50.3</td>
</tr>
<tr>
<td>Women’s health</td>
<td>62.8</td>
<td>47.7</td>
<td>48.6</td>
</tr>
<tr>
<td>Pregnancy, prenatal care</td>
<td>55.8</td>
<td>33.0</td>
<td>43.4</td>
</tr>
<tr>
<td>Child health</td>
<td>53.5</td>
<td>42.0</td>
<td>42.9</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>76.7</td>
<td>29.5</td>
<td>41.6</td>
</tr>
<tr>
<td>Diabetes</td>
<td>30.2</td>
<td>59.1</td>
<td>40.0</td>
</tr>
<tr>
<td>Infant health</td>
<td>55.8</td>
<td>34.1</td>
<td>40.0</td>
</tr>
<tr>
<td>Immunizations</td>
<td>53.5</td>
<td>38.6</td>
<td>39.0</td>
</tr>
<tr>
<td>Sexual behavior</td>
<td>48.8</td>
<td>37.5</td>
<td>35.9</td>
</tr>
<tr>
<td>Obesity</td>
<td>30.2</td>
<td>40.9</td>
<td>34.9</td>
</tr>
<tr>
<td>Family planning</td>
<td>53.5</td>
<td>33.0</td>
<td>33.7</td>
</tr>
<tr>
<td>High blood pressure</td>
<td>23.3</td>
<td>46.6</td>
<td>33.2</td>
</tr>
<tr>
<td>Breastfeeding</td>
<td>53.5</td>
<td>28.4</td>
<td>31.9</td>
</tr>
<tr>
<td>Tobacco control</td>
<td>44.2</td>
<td>22.7</td>
<td>31.3</td>
</tr>
<tr>
<td>Physical activity</td>
<td>20.9</td>
<td>33.0</td>
<td>30.0</td>
</tr>
<tr>
<td>Low birth weight prevention, follow-up</td>
<td>48.8</td>
<td>18.2</td>
<td>29.8</td>
</tr>
<tr>
<td>Premature birth prevention, follow-up</td>
<td>51.2</td>
<td>22.7</td>
<td>29.1</td>
</tr>
<tr>
<td>Substance abuse</td>
<td>48.8</td>
<td>25.0</td>
<td>29.0</td>
</tr>
<tr>
<td>Cancer</td>
<td>16.3</td>
<td>34.1</td>
<td>28.3</td>
</tr>
<tr>
<td>Cardiovascular disease</td>
<td>18.6</td>
<td>38.6</td>
<td>27.3</td>
</tr>
<tr>
<td>Mental health</td>
<td>44.2</td>
<td>26.1</td>
<td>27.3</td>
</tr>
<tr>
<td>Heart disease</td>
<td>14.0</td>
<td>27.3</td>
<td>24.4</td>
</tr>
<tr>
<td>Men's health</td>
<td>18.6</td>
<td>20.5</td>
<td>23.0</td>
</tr>
<tr>
<td>Children w/special health care needs</td>
<td>39.5</td>
<td>22.7</td>
<td>22.8</td>
</tr>
<tr>
<td>Asthma</td>
<td>16.3</td>
<td>23.9</td>
<td>19.4</td>
</tr>
<tr>
<td>Violence</td>
<td>30.2</td>
<td>23.9</td>
<td>19.4</td>
</tr>
<tr>
<td>Lead poisoning</td>
<td>46.5</td>
<td>13.6</td>
<td>19.1</td>
</tr>
<tr>
<td>Other</td>
<td>20.9</td>
<td>29.5</td>
<td>18.7</td>
</tr>
<tr>
<td>Stroke</td>
<td>9.3</td>
<td>12.5</td>
<td>14.3</td>
</tr>
<tr>
<td>Injuries</td>
<td>14.0</td>
<td>10.2</td>
<td>11.8</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>18.6</td>
<td>13.6</td>
<td>11.4</td>
</tr>
<tr>
<td>Gay, lesbian, bisexual, transgendered issues</td>
<td>9.3</td>
<td>8.0</td>
<td>11.1</td>
</tr>
<tr>
<td>Emergency response</td>
<td>11.6</td>
<td>11.4</td>
<td>10.6</td>
</tr>
<tr>
<td>Osteoporosis</td>
<td>7.0</td>
<td>8.0</td>
<td>8.5</td>
</tr>
<tr>
<td>Arthritis</td>
<td>2.3</td>
<td>6.8</td>
<td>8.2</td>
</tr>
<tr>
<td>Alzheimer’s disease, dementia</td>
<td>4.7</td>
<td>5.7</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Source: CHW/NEI (2006); multiple responses permitted.
Figure 8.2  CHW Required Skills at Hire for New York, Texas, and the United States

Selected Examples of HRSA-supported Programs in Arizona, Massachusetts, New York and Texas.

- Border VISION Fronteriza (BVF) was funded by HRSA from 1995 to 1998 through the University of Arizona Rural Health Office to conduct a U.S.-Mexico Border Health Collaborative Outreach Demonstration Initiative. It produced a model training curriculum for promotores or CHWs in a “Promotora Academy.” The services of this academy remained with the Health Education Training Centers Alliance of Texas (HETCAT), with some components absorbed in other educational programs including the Community Health Advocate Program at El Paso Community College. The emphasis of a second phase of BVF has been on improving access to health care for low-income children by expanding enrollment in publicly funded insurance programs.

- Under the Western (Arizona) Area Health Education Center (WAHEC), beginning in March 2001, the Community Access Program of Arizona (CAPAZ) project utilized CHWs to support Yuma County’s medical “safety net.” CHWs assisted in recruiting people in public health insurance programs, providing information about available medical and social services, and making referrals.

- The New England AIDS Education and Training Center (NEAETC) at the University of Massachusetts was established in 1988 as one of 11 regional HIV education centers funded through the Ryan White Act, Part F, across the United States. The center offered training programs for health care providers in the six New England States including training opportunities for CHWs.

- HRSA supported community health centers in New York through Title III (330) funding; these included the Charles B. Wang Community Health Center, a Federally Qualified Community Health Center that began in 1971 as the Chinatown Clinic. The Center had extensive outreach, education, and navigator services provided by 140 outreach workers to the Asian community in Manhattan and Queens. The frontline health care workers were not called community health workers but had titles indicating similar roles, such as patient service representatives, social work assistants, care managers, and lay health educators.

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64 CHW/NWSI (2006).
65 Ibid.
The Buffalo Prenatal-Perinatal Network was the beneficiary of a $1.5 million grant from HRSA that ended in 2002. The grant permitted the expansion of the Network’s home visiting program, enabled recruitment of specific kinds of needed workers, and provided funding for consortia, forums, and conferences to educate providers and clients about CHWs.  

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66 Ibid.  
67 Ibid.
Appendix A: The Technical Advisory Group
Appendix A. Technical Advisory Group

**J. Nell Brownstein**, Ph.D., M.A. – Health scientist, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Atlanta, Georgia.

**Susan A. Chapman**, Ph.D, R.N. – Assistant Professor, Department of Social and Behavioral Sciences; School of Nursing, The University of California at San Francisco (UCSF), and Director, Allied Health Care Workforce Studies at the UCSF Center for the Health Professions.

**Frederick Ming Chen**, M.D., M.P.H. – Family physician, Acting Assistant Professor, Department of Family Medicine, University of Washington, Seattle.


**Eugenia Eng**, Dr.PH., M.P.H. – Professor and Director, MPH Degree Program, Department of Health Behavior and Health Education and the Community Health Scholars Program, University of North Carolina’s School of Public Health, Chapel Hill, North Carolina.

**Zeida L. Estrada** – Community Health Worker, President, Community Health Workers National Network Association, Inc., Houston, Texas.

**Durrell Fox**, B.S. – Project Director, New England HIV Education Consortium, Boston, Massachusetts; Immediate Past Chair, Community Health Worker Special Primary Interest Group, American Public Health Association.

**Antonio Furino**, Ph.D. – Professor of Economics, Associate Director, Regional Center for Health Workforce Studies, Department of Epidemiology and Biostatistics, The University of Texas Health Science Center at San Antonio.

**Robert B. Giffin**, Ph.D. – Senior Program Officer, Institute of Medicine of the National Academies, Washington, D.C.

**Teresa Hines**, M.P.H. – Program Director, Health Education Training Centers Alliance of Texas (HETCAT), El Paso, Texas.

**Joel Meister**, Ph.D. – Professor of Public Health, Director, Concentration in Public Health Policy and Management, Mel and Enid Zuckerman College of Public Health, University of Arizona in Tucson and an affiliated faculty of the Center for Latin American Studies at the University of Arizona.
Steve H. Murdock, Ph.D. – Professor and Director, Regional Center for Health Workforce Studies, Department of Epidemiology and Biostatistics, The University of Texas Health Science Center at San Antonio; The Lutcher Brown Distinguished Chair in Management Science and Statistics and Director, Institute for Demographic and Socioeconomic Research and the Texas State Data Center at The University of Texas at San Antonio; State Demographer of Texas.

Donald E. Proulx, M.Ed. – Principal Investigator / Project Director, Community Health Worker National Education Collaborative, Arizona Area Health Education Training Centers Program, University of Arizona, Tucson.


Jacqueline R. Scott, J.D., M.L. – Co-Director, Center for Sustainable Health Outreach, a part of the Harrison Institute for Public Law, Senior Fellow/Adjunct Professor, The Georgetown University Law Center, Washington, D.C.

Lisa Renee Siciliano, L.S.W.A. – Director, Massachusetts Community Health Worker (MACHW) Network, Shrewsbury, Massachusetts.

Henrie Treadwell, Ph.D. – Senior Social Scientist, Director, Community Voices, and Associate Director of Development, National Center for Primary Care, Morehouse School of Medicine, Atlanta, Georgia.
Appendix B: The National and State Estimates
Appendix B. National and State Estimates

Estimates of Paid Community Health Workers

The Standard Occupational Classification (SOC) System used by occupational data collection entities, including the Census Bureau and the Bureau of Labor Statistics, does not contain a code that clearly identifies the occupation of community health worker (CHW). Until now, CHWs have been counted in official reports under existing occupation codes with job descriptions that are similar, but not equivalent to, the activities performed by CHWs. The method used in this study to estimate the number of paid CHWs is described in the following section.

Despite best efforts, the estimates of the number of paid CHWs are tentative since assumptions had to be made about which occupational codes had been used by individuals and human resource managers to report CHW activities. The assumptions employed were reviewed by scientists knowledgeable about the methods and designs of the Census and BLS surveys, as well as by researchers and specialists who had experience in studying and working with CHWs. All technical advisors expressed the opinion that the estimates, while not ideal, were useful indicators and the best effort possible within the budget constraints of the study.

Data Sources

Two sources of data were available to provide information about employed CHWs: (1) The 2000 Census data collected by the Census Bureau and released to the public in de-identified format as the Public Use Microdata Sample (PUMS) and (2) The Staffing Patterns data, used to calculate occupational estimates, collected by the Bureau of Labor Statistics (BLS). Both of these data sets contain information about workers by occupational title code (from the SOC System) and industry codes (from the North American Industry Classification System – NAICS). The codes used for the estimates were selected through a multistage process that began with a review of the available literature on CHWs.

Even though the coding system is the same, the Bureau of Labor Statistics collects more detailed occupation and industry data than the Census Bureau. This results in some discrepancy in the information available from each of the sources. For example, individuals responding to the Census “long form” may incorrectly identify either the industry in which they are employed or the occupational title used by their employer. Also, the PUMS industry and occupational categories are broader than the BLS categories and may overestimate the number of workers. Table B.1 shows a comparison of the two data sources.
Table B.1  Brief Comparison of Data Used for Computing Estimates of Paid CHWs

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>PUMS</th>
<th>Staffing Patterns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal Agency</td>
<td>Census Bureau</td>
<td>Bureau of Labor Statistics</td>
</tr>
<tr>
<td>Collected from</td>
<td>Individuals</td>
<td>Employers</td>
</tr>
<tr>
<td>Reflects</td>
<td>Place of residence</td>
<td>Place of employment</td>
</tr>
<tr>
<td>Collection schedule</td>
<td>Every 10 years*</td>
<td>Every 3 years**</td>
</tr>
<tr>
<td>Occupation codes</td>
<td>Broader categories</td>
<td>Detailed categories</td>
</tr>
<tr>
<td>Industry codes</td>
<td>Broader categories</td>
<td>Detailed categories</td>
</tr>
<tr>
<td>Unit reported</td>
<td>Persons</td>
<td>Full-time employees</td>
</tr>
<tr>
<td>Employee demographics</td>
<td>Available</td>
<td>Not available</td>
</tr>
</tbody>
</table>

* PUMS data from the American Community Survey will be available on a yearly basis, as it will replace the “long form” of the decennial Census.
** Each employer is surveyed every 3 years.

Census Bureau’s Decennial PUMS Data

The U.S. Census Bureau makes data collected from the “long form” questionnaires completed by individuals during the decennial Census available to researchers. Sampled persons are identified in PUMS areas of 100,000 or more to protect confidentiality. The PUMS files contain records representing 5 percent of the occupied and vacant housing units in the United States and the people in the occupied units. People living in group quarters are also included in the sample. The records include a large amount of data about persons and the housing units in which they live. The file contains individual weights for each person and housing unit, which, when applied to the individual records, expand the sample to the relevant total.

The person records provide a number of items useful for identifying CHWs, and codes for occupations and the industries in which persons work. A crosswalk between Census codes for industry/NAICS and occupation/SOC, where NAICS is based on the 2002 North American Industry Classification System and SOC is based upon the 2000 Standard Occupational Classification System, is available and described later in this appendix.

While there is no specific occupation code for CHWs, there were a limited number of occupations in which CHWs may be classified. By selecting these and the industries in which CHWs were most likely to be employed, it was reasonable to expect that this set of workers could be identified.

Bureau of Labor Statistics “Staffing Patterns” Data

The U.S. Department of Labor, Bureau of Labor Statistics (BLS), has rigorous guidelines in each State to survey firms in order to collect detailed SOC occupational content in each type of NAICS-based industry category. The resulting statistics are called the “staffing patterns” for each industry. Every year, each State surveys one-third of all of its industries under strict sampling guidelines set forth by the statistical sampling techniques based on employment concentrations. After 3 years, an entire round of all industries has
been updated. Considerable effort is made by each State to deliver survey results that meet these specified criteria, and follow-up activity is utilized to overcome any shortfalls in sampling.

The percentages from these patterns are used to calculate occupational estimates for State and sub-State areas. Since each State must cooperate in these efforts set forth by BLS, the staffing patterns represent a common methodologically collected series of statistical base ranges upon which to calculate estimates and – even more importantly – projections.

Selection of Data Sources for the Estimates

Prior to calculating any estimates of paid CHWs from existing data sources, the Institute for Demographic and Socioeconomic Research (IDSER) at the University of Texas at San Antonio, collaborating with the research team for this component of the study, reviewed possible sources of data to determine which would be used to produce the estimates. This list included the 2000 Census, 2000 Public Use Microdata Sample (5 percent sample), and the 2004 American Community Survey.

Given the NAICS codes identified in the CHW report for inclusion in the estimates, the data sources were reviewed to determine the industry coding or NAICS equivalencies as used by each of the data sources. This process helped identify which data set included the most detailed information for the NAICS categories of interest.

Prior to finalizing this decision, IDSER reviewed the unweighted numbers for the NAICS codes of interest using the 2000 PUMS data. The results were evaluated to ensure sufficient numbers of cases within each industry code to proceed with the CHW estimates. After review, it was determined that the numbers were sufficient to proceed as planned. The PUMS data were then weighted.

Based on the review of the data, it was determined that the 2000 PUMS (5 percent sample) from the decennial Census would be the most appropriate data source for the CHW estimates. Because earlier discussions had also suggested the use of estimates based on BLS data, it was decided that such estimates would be prepared and compared to the PUMS-based estimates.

Standard Occupation Classification (SOC)

According to the Bureau of Labor Statistics, the 2000 SOC System is used by Federal statistical agencies to classify workers into occupational categories for the purpose of collecting, calculating, or disseminating data. Workers are classified into one of more than 820 occupations according to their occupational definition. These occupations are then combined to form 23 major groups, 96 minor groups, and 449 broad occupations. The broader occupation includes detailed occupation(s) requiring similar job duties, skills,

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education, or experience. As per the American Community Survey, another survey conducted by the Census Bureau, Census occupation codes are classified into 23 major occupational groups based on the Standard Occupational Classification (SOC) Manual: 2000, published by the Executive Office of the President, Office of Management and Budget.

While the Census Bureau uses its own classification system for occupations, that is, Census Occupational Categories, the Census makes available a crosswalk to show how occupation codes used by the Census correspond to the SOC. The following is an example from a previous Census Bureau crosswalk:

<table>
<thead>
<tr>
<th>2000 Code</th>
<th>Category Title</th>
<th>SOC Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>200</td>
<td>Counselors</td>
<td>21-1010</td>
</tr>
<tr>
<td>201</td>
<td>Social Workers</td>
<td>21-1020</td>
</tr>
<tr>
<td>202</td>
<td>Misc Community and Social Service Specialists</td>
<td>21-1090</td>
</tr>
</tbody>
</table>

In addition, the Census Bureau makes available descriptions for each SOC code when it is linked to occupation codes used by the Census. For instance, Social and Human Service Assistants (SOC 21-1093) corresponds to code 202 where the following SOC description is provided:

Assistant professionals from a wide variety of fields, such as psychology, rehabilitation, or social work, to provide client services, as well as support for families. May assist clients in identifying available benefits and social and community services and help clients obtain them. May assist social workers with developing, organizing, and conducting programs to prevent and resolve problems relevant to substance abuse, human relationships, rehabilitation, or adult day care. Exclude "Rehabilitation Counselors" (21-1015), "Personal and Home Care Aides" (39-9021), "Eligibility Interviewers, Government Programs" (43-4061), and "Psychiatric Technicians" (29-2053).

A useful tool for viewing occupational descriptions was available from the Occupational Information Network (O-Net). O-Net, available online, allows users to select specific SOC codes containing descriptions and classifications of job requirements and worker

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2 The American Community Survey is expected to replace the decennial Census “long form” questionnaire beginning in 2010.
5 In 2002, industry and occupation codes used by the Census Bureau underwent a major renovation from three-digit to four-digit codes in order to accommodate the possible additions of new industries and occupations.
6 O-Net, administered and sponsored by the U.S. Department of Labor’s Employment and Training Administration, is a comprehensive database system that replaced the Dictionary of Occupational Titles as the primary source of occupational information.
competencies. In addition, O-Net makes available crosswalks, enabling users to “convert” several widely used occupation coding systems to current SOC codes. The descriptions used by Census, BLS, and O-Net regarding occupations were the same.

**Identification of Occupations for Estimates of Paid CHWs**

Since the current SOC System did not have a job title or an occupational category specifically named, or designated for, community health workers, using descriptions of the work performed by CHWs and the tools provided by O-Net, Census Bureau, and BLS, it was possible to identify occupational titles in which CHWs were most likely to be classified in the current data collection systems. It was assumed that information collected by both the Census Bureau and BLS about CHWs was stored in existing SOC categories for workers with job duties that were similar to or overlapped with those of CHWs.

Using the descriptions provided in the literature of the roles and functions fulfilled by working CHWs, as well as the titles used to identify CHWs, the research team identified an initial set of occupational classifications (SOC codes). In addition, skills outlined in the National Community Health Advisor Study and other studies provided guidance in identification of CHWs within SOC codes. These skills included:

- **Advocacy skills** – Ability to "speak up" for patients and communities to overcome barriers; ability to act as an intermediary with bureaucracy
- **Bilingual skills** – Fluency in the preferred language of clients and ability to translate technical terms
- **Capacity-building skills** – Empowerment skills; leadership skills; ability to influence communities and individuals to change behavior and take more control of their own health
- **Communication skills** – Ability to listen and use oral and written language confidently
- **Computer skills** – Performing data entry and using the Internet to locate health information
- **Confidentiality skills** – Ability to keep matters private, comply with HIPAA laws
- **Interpersonal skills** – Friendliness, sociability, counseling and relationship building skills; ability to provide support and set appropriate boundaries
- **Organizational skills** – Ability to set goals and develop an action plan, manage time, keep records
- **Service coordination skills** – Ability to identify and access resources; ability to network and build coalitions; ability to make and follow up on referrals
- **Teaching skills** – Ability to share information, respond to questions, and reinforce ideas; ability to adapt methods to various audiences

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From all available occupational titles, those that best fit the CHW tasks described in the literature were those of persons employed in health and social services occupations (SOC codes 21-, 29-, 31-). These categories included:

<table>
<thead>
<tr>
<th>SOC Code</th>
<th>Occupational Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-0000</td>
<td>Community and Social Services Occupations</td>
</tr>
<tr>
<td>21-1011</td>
<td>Substance Abuse and Behavioral Disorder Counselors</td>
</tr>
<tr>
<td>21-1012</td>
<td>Educational, Vocational, and School Counselors</td>
</tr>
<tr>
<td>21-1013</td>
<td>Marriage and Family Therapists</td>
</tr>
<tr>
<td>21-1014</td>
<td>Mental Health Counselors</td>
</tr>
<tr>
<td>21-1015</td>
<td>Rehabilitation Counselors</td>
</tr>
<tr>
<td>21-1019</td>
<td>Counselors, All Other</td>
</tr>
<tr>
<td>21-1090</td>
<td>Miscellaneous Community and Social Service Specialists</td>
</tr>
<tr>
<td>21-1091</td>
<td>Health Educators</td>
</tr>
<tr>
<td>21-1092</td>
<td>Probation Officers and Correctional Treatment Specialists</td>
</tr>
<tr>
<td>21-1093</td>
<td>Social and Human Service Assistants</td>
</tr>
<tr>
<td>21-1099</td>
<td>Community and Social Service Specialists, All Other</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOC Code</th>
<th>Occupational Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>29-0000</td>
<td>Healthcare Practitioners and Technical Occupations</td>
</tr>
<tr>
<td>29-1000</td>
<td>Health Diagnosing and Treating Practitioners</td>
</tr>
<tr>
<td>29-1010</td>
<td>Chiropractors</td>
</tr>
<tr>
<td>29-1020</td>
<td>Dentists</td>
</tr>
<tr>
<td>29-1030</td>
<td>Dietitians and Nutritionists</td>
</tr>
<tr>
<td>29-1040</td>
<td>Optometrists</td>
</tr>
<tr>
<td>29-1050</td>
<td>Pharmacists</td>
</tr>
<tr>
<td>29-1060</td>
<td>Physicians and Surgeons</td>
</tr>
<tr>
<td>29-1070</td>
<td>Physician Assistants</td>
</tr>
<tr>
<td>29-1080</td>
<td>Podiatrists</td>
</tr>
<tr>
<td>29-1110</td>
<td>Registered Nurses</td>
</tr>
<tr>
<td>29-1120</td>
<td>Therapists</td>
</tr>
<tr>
<td>29-1130</td>
<td>Veterinarians</td>
</tr>
<tr>
<td>29-1190</td>
<td>Miscellaneous Health Diagnosing and Treating Practitioners</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOC Code</th>
<th>Occupational Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>29-2000</td>
<td>Health Technologists and Technicians</td>
</tr>
<tr>
<td>29-2010</td>
<td>Clinical Laboratory Technologists and Technicians</td>
</tr>
<tr>
<td>29-2020</td>
<td>Dental Hygienists</td>
</tr>
<tr>
<td>29-2030</td>
<td>Diagnostic-Related Technologists and Technicians</td>
</tr>
<tr>
<td>29-2040</td>
<td>Emergency Medical Technicians and Paramedics</td>
</tr>
<tr>
<td>29-2050</td>
<td>Health Diagnosing and Treating Practitioner Support Technicians</td>
</tr>
<tr>
<td>29-2060</td>
<td>Licensed Practical and Licensed Vocational Nurses</td>
</tr>
<tr>
<td>29-2070</td>
<td>Medical Records and Health Information Technicians</td>
</tr>
<tr>
<td>29-2080</td>
<td>Opticians, Dispensing</td>
</tr>
<tr>
<td>29-2090</td>
<td>Miscellaneous Health Technologists and Technicians</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SOC Code</th>
<th>Occupational Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>29-9000</td>
<td>Other Healthcare Practitioners and Technical Occupations</td>
</tr>
<tr>
<td>29-9010</td>
<td>Occupational Health and Safety Specialists and Technicians</td>
</tr>
<tr>
<td>29-9090</td>
<td>Miscellaneous Health Practitioners and Technical Workers</td>
</tr>
</tbody>
</table>
31-0000  **Healthcare Support Occupations**

31-1010  Nursing, Psychiatric, and Home Health Aides
31-2000  Occupational and Physical Therapist Assistants and Aides
31-2010  Occupational Therapist Assistants and Aides
31-2020  Physical Therapist Assistants and Aides

31-9000  **Other Healthcare Support Occupations**

31-9090  Miscellaneous Healthcare Support Occupations

The review found that the occupations associated with health care required that the persons have specific professional training or technical skills or be associated with providing direct personal services. Therefore, two occupations categories that initially appeared to hold potential as CHW occupations were eliminated when job descriptions from O-Net were examined. These occupations were: Other Healthcare Practitioners and Technical Occupations (29-9000) and Healthcare Support Occupations (31-0000).

The occupation category that held the most potential to identify community health workers was Community and Social Services Occupations (21-0000). The specific occupations category that seemed likely to be useful in identifying CHWs in PUMS data was Miscellaneous Community and Social Service Specialists (21-1090). Three of the four occupations in this category seemed best suited as occupations most closely related to work CHWs do:

21-1091 Health Educators
21-1093 Social and Human Service Assistants
21-1099 Community and Social Service Specialists, All Other

The selected set was reviewed again by members of the research team and some of their advisors for further assessment of occupational titles. A second set of codes was identified as possible occupational categories in which CHWs might be classified:

21-1010 Counselors
21-1090 Miscellaneous Community and Social Service Specialists
29-1129 Therapists, All Other
29-2090 Miscellaneous Health Technologists and Technicians
29-9000 Other Health Care Practitioners and Technical Occupations
31-909X Medical Assistants and Other Health Care Support Occupations

The list of classified positions was then reviewed by a task force of individuals identified by the office of the State of Texas Regional and Local Services Division. This office oversees CHW accreditations in Texas. The individuals of the task force were chosen because of their knowledge about CHWs and professional interest in this emerging workforce. This review task force included representatives from:

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9 At the time, Texas was the only State in the country that required certification of CHWs when CHWs were compensated for their work.
In comparing the descriptions of specific subgroups for specific occupational categories to the work that CHWs perform, members of the Texas task force identified the following categories as those most likely to include CHWs:

21-1011 Substance Abuse and Behavioral Disorder Counselors
21-1012 Educational, Vocational, and School Counselors
21-1014 Mental Health Counselors
21-1019 Counselors, All Other
21-1091 Health Educators
21-1093 Social and Human Service Assistants
21-1099 Community and Social Service Specialists, All Other

The review by the Texas task force was followed by an informal review by the research team of the Center for Health Workforce Studies (CHWS) at the State University of New York at Albany, which had been engaged as a subcontractor for another component of the study. The Albany research team had past experience using data from the BLS and agreed with the SOC codes identified by the Texas task force.

In conclusion, the SOC codes in Table B.2 were those found most likely to include employed CHWs.

### Table B.2 Standard Occupational Classification (SOC) Code Included in Methodology for Estimates of Paid CHWs

<table>
<thead>
<tr>
<th>SOC Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>21-1010*</td>
<td>Counselors</td>
</tr>
<tr>
<td>21-1011</td>
<td>Substance Abuse and Behavioral Disorder Counselors</td>
</tr>
<tr>
<td>21-1012</td>
<td>Educational, Vocational, and School Counselors</td>
</tr>
<tr>
<td>21-1014</td>
<td>Mental Health Counselors</td>
</tr>
<tr>
<td>21-1090*</td>
<td>Miscellaneous Community and Social Service Specialists</td>
</tr>
<tr>
<td>21-1091</td>
<td>Health Educators</td>
</tr>
<tr>
<td>21-1093</td>
<td>Social and Human Service Assistants</td>
</tr>
<tr>
<td>21-1099</td>
<td>Community and Social Service Specialists, All Other</td>
</tr>
</tbody>
</table>

*Broad categories reported in PUMS data.

### North American Industry Classification System (NAICS)

According to the Census Bureau,¹⁰ “Federal statistical data published for reference years beginning on or after January 1, 2002, should be published using the 2002 NAICS United States codes. Agencies may adopt the 2002 NAICS earlier at their discretion.

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Publication of a 2002 *NAICS United States Manual* is planned for January 2002. Some of the new features of NAICS 2002 include: (1) Relevance: new, emerging, and advanced industries are included; (2) International comparability: Canada and Mexico both cooperated in development of the latest industry classification; and (3) Consistency: businesses that use similar production processes are grouped together.\(^{11}\)

Similar to a crosswalk provided by O-Net for occupational categories, a crosswalk was available from the Census Bureau to assist in converting current NAICS to previous versions of NAICS and to Standard Industrial Classification (SIC).\(^{12}\)

**Identification of Industries for Estimates of Paid CHWs**

Since the SOC code 21-1090, Miscellaneous Community and Social Service Specialists, was found to be the one most promising for identifying CHWs, after selecting only individuals with SOC code 21-1090, a list of industries was produced using PUMS data:

<table>
<thead>
<tr>
<th>Industry Code</th>
<th>Industry Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5241</td>
<td>Insurance Carriers</td>
</tr>
<tr>
<td>6112</td>
<td>Junior Colleges</td>
</tr>
<tr>
<td>6113</td>
<td>Colleges, Universities, and Professional Schools</td>
</tr>
<tr>
<td>6213ZM</td>
<td>Offices of Other Health Practitioners</td>
</tr>
<tr>
<td>621M</td>
<td>Other Health Care Services</td>
</tr>
<tr>
<td>622</td>
<td>Hospitals</td>
</tr>
<tr>
<td>623M</td>
<td>Residential Care Facilities, Without Nursing</td>
</tr>
<tr>
<td>6242</td>
<td>Community Food and Housing, and Emergency Service</td>
</tr>
<tr>
<td>6244</td>
<td>Child Day Care Services</td>
</tr>
<tr>
<td>6243</td>
<td>Vocational Rehabilitation Services</td>
</tr>
<tr>
<td>711</td>
<td>Independent Artists, Performing Arts, Spectator Sports</td>
</tr>
<tr>
<td>712</td>
<td>Museums, Art Galleries, Historical Sites, and Similar Institutions</td>
</tr>
<tr>
<td>713Z</td>
<td>Other Amusement, Gambling, and Recreation Industries</td>
</tr>
<tr>
<td>721M</td>
<td>Recreational Vehicle Parks and Camps, and Rooming and Boarding Houses</td>
</tr>
<tr>
<td>8121M</td>
<td>Nail Salons and Other Personal Care Services</td>
</tr>
<tr>
<td>8129</td>
<td>Other Personal Services</td>
</tr>
<tr>
<td>8132</td>
<td>Grant Making and Giving Services</td>
</tr>
<tr>
<td>8133</td>
<td>Social Advocacy Organizations</td>
</tr>
<tr>
<td>81393</td>
<td>Labor Unions</td>
</tr>
<tr>
<td>813M</td>
<td>Civic, Social, Advocacy Organizations, and Grant-Making Institutions</td>
</tr>
<tr>
<td>814</td>
<td>Private Households</td>
</tr>
<tr>
<td>9292</td>
<td>State Government, Exclusive Education and Health</td>
</tr>
<tr>
<td>9393</td>
<td>Local Government, Exclusive Education and Health</td>
</tr>
</tbody>
</table>

While CHWs may work in these industries, it was found to be unlikely that hospitals, offices of health practitioners, other health care services, etc., were actually employing many persons who work in the community. The review reduced the list of industries

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\(^{11}\) Ibid.

likely to employ community health workers to the following: Community Food and Housing, and Emergency and Other Services (6242) and Civic, Social, Advocacy Organizations, and Grant-Making Institutions (Census NAICS 813M). The BLS provided sub-categories for NAICS 813M: Grant-Making and Giving Services (8132), Social Advocacy Organizations (8133), and Labor Unions (81393).

After the SOC codes were reviewed and the additional SOC of 21-1010 was identified, the research team repeated the process described earlier to identify another set of industries (NAICS codes) most likely to employ CHWs.

As with the SOC codes, the list of NAICS codes identified were reviewed by members from the Texas task force, the research team in New York, and members from the Center for Sustainable Health Outreach13 (CSHO) at the University of Southern Mississippi.

Matching of Verified Employers to State Employment Data Sets

Each State collects employer and their wage and salary employee records in order to collect payments on unemployment compensation. This information is collected for almost 97 percent of all persons working in the civilian labor force. Under special confidentiality agreement for this project, it was possible to use a selected number of records to match the names of organizations verified as employers of CHWs to the BLS list of employers.

The record of verified employers in 10 States14 (N=1,327) was used to locate the employer record in the American Labor Market Information System. The matching process started with searching one verified record at a time by telephone number, followed by address, city, and last by organization name.

Of the verified employers in these selected States, 57 percent (759 of 1,327) were successfully matched against the employer records database. For the successfully matched records, 92 percent (701 of 759) corresponded to the industries identified for inclusion in the estimates of paid CHWs. The industries with the most overlap included 6214 or Outpatient Care Centers, 6241 or Individual and Family Services, 8133 or Social Advocacy Organizations, and 9231 or Administration of Education Programs. The processes just described resulted in the identification of NAICS codes most likely to include employed CHWs. They are listed in Table B.3.

Table B.3  North American Industry Classification System (NAICS) Codes Included in Methodology for Estimates of Paid CHWs

<table>
<thead>
<tr>
<th>NAICS Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6111</td>
<td>Elementary and Secondary Schools</td>
</tr>
<tr>
<td>6113</td>
<td>Colleges and Universities</td>
</tr>
</tbody>
</table>

13 CSHO was the partner in the study.
<table>
<thead>
<tr>
<th>NAICS Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6211</td>
<td>Offices of Physicians</td>
</tr>
<tr>
<td>6214</td>
<td>Outpatient Care Centers</td>
</tr>
<tr>
<td>6219</td>
<td>Other Ambulatory Health Care Services</td>
</tr>
<tr>
<td>6221</td>
<td>General Medical and Surgical Hospitals</td>
</tr>
<tr>
<td>6241</td>
<td>Individual and Family Services</td>
</tr>
<tr>
<td>6244</td>
<td>Child Day Care Services</td>
</tr>
<tr>
<td>8131</td>
<td>Religious Organizations</td>
</tr>
<tr>
<td>8133</td>
<td>Social Advocacy Organizations</td>
</tr>
<tr>
<td>8134</td>
<td>Civic and Social Organizations</td>
</tr>
<tr>
<td>8139</td>
<td>Professional and Similar Organizations</td>
</tr>
<tr>
<td>9211/9992</td>
<td>Executive, Legislative, and General Government</td>
</tr>
<tr>
<td>9231/9993</td>
<td>Administration of Education Programs</td>
</tr>
</tbody>
</table>

BLS data contain two BLS-designated NAICS codes, 9992 – State Government sector and 9993 – Local Government sector, which are not found in the 2000 PUMS data. It was determined that these two BLS-designated NAICS categories are comparable to the NAICS categories 9211 – Executive, Legislative, and General Government and 9231 – Administration of Education Programs and will be used as counterparts in the State and national comparisons.

Data from the BLS were used to determine a proportion of individuals employed in each NAICS industry in cases where two or more NAICS codes were combined in the 2000 PUMS data. This assumed that the proportions of the combined NAICS industry codes represented in the BLS data were appropriate to use with the 2000 PUMS data.

**Adjustment factors**

The list of SOC and NAICS codes provided the occupational/industry categories within which employed CHWs were likely to be classified.

Next, it was determined that an adjustment factor should be employed to reflect the proportion of persons working as community health workers within the identified occupation and industry combinations.

As for the selection of the occupational codes, the adjustment factors were selected by the research team in consultation with their technical advisors and State task force. The agreed-upon proportions were used to adjust the estimate of persons working in each NAICS/SOC category obtained from PUMS or BLS.

The adjustment factors used in the final set of estimates are shown in Table B.4.
Table B.4  Adjustment Factors Applied to NAICS/SOC Categories for Final Estimates

<table>
<thead>
<tr>
<th>NAICS Code</th>
<th>Description</th>
<th>21-1010</th>
<th>21-1090</th>
</tr>
</thead>
<tbody>
<tr>
<td>6111</td>
<td>Elementary and Secondary Schools</td>
<td>0.00</td>
<td>0.05</td>
</tr>
<tr>
<td>6113</td>
<td>Colleges and Universities</td>
<td>0.00</td>
<td>0.05</td>
</tr>
<tr>
<td>6211</td>
<td>Offices of Physicians</td>
<td>0.10</td>
<td>0.20</td>
</tr>
<tr>
<td>6214</td>
<td>Outpatient Care Centers</td>
<td>0.05</td>
<td>0.50</td>
</tr>
<tr>
<td>6219</td>
<td>Other Ambulatory Health Care Services</td>
<td>0.05</td>
<td>0.30</td>
</tr>
<tr>
<td>6221</td>
<td>General Medical and Surgical Hospitals</td>
<td>0.03</td>
<td>0.20</td>
</tr>
<tr>
<td>6241</td>
<td>Individual and Family Services</td>
<td>0.05</td>
<td>0.30</td>
</tr>
<tr>
<td>6244</td>
<td>Child Day Care Services</td>
<td>0.05</td>
<td>0.20</td>
</tr>
<tr>
<td>8131</td>
<td>Religious Organizations</td>
<td>0.10</td>
<td>0.40</td>
</tr>
<tr>
<td>8133</td>
<td>Social Advocacy Organizations</td>
<td>0.10</td>
<td>0.40</td>
</tr>
<tr>
<td>8134</td>
<td>Civic and Social Organizations</td>
<td>0.10</td>
<td>0.40</td>
</tr>
<tr>
<td>8139</td>
<td>Professional and Similar Organizations</td>
<td>0.10</td>
<td>0.40</td>
</tr>
<tr>
<td>9211/9992</td>
<td>Executive, Legislative, &amp; Gen Government</td>
<td>0.05</td>
<td>0.05</td>
</tr>
<tr>
<td>9231/9993</td>
<td>Administration of Education Programs</td>
<td>0.10</td>
<td>0.25</td>
</tr>
</tbody>
</table>

Table B.4 reflects the fact that, as with SOC categories, the Census Bureau collapses some detailed NAICS codes into a single broad industry category. For the final estimates, the adjustment factor for the broad category of 813M as used by PUMS was assigned to all the specific NAICS categories provided in the BLS data.

Reviews of the Methodology

Several groups reviewed the entire methodology in different stages of completion before the final estimates were computed by the IDSER/UTSA group. Those who participated in the reviews included the Texas State task force, research team members from the CHWS in New York, and specialists at the CSHO from The University of Southern Mississippi.

The methodology was shared with the entire State task force at a meeting in January 2005. Since Texas was the only State in the Nation requiring the certification of CHWs, availability of that group was significant as it included very knowledgeable individuals about CHWs, researchers, statisticians, and CHWs. The State task force members are listed in Table B.5.
Table B.5 List of Texas State Task Force Members

<table>
<thead>
<tr>
<th>Name/title</th>
<th>Organization</th>
<th>Category</th>
<th>City</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cecilia Berrios, MA, Community Health Promotion Specialist</td>
<td>Regional and Local Services, DSHS</td>
<td>Workforce Development</td>
<td>Austin</td>
</tr>
<tr>
<td>Oscar J. Muñoz, Regional Director</td>
<td>TAMU Center for Housing and Urban Development</td>
<td>Employer/Workforce Development/DSHS Advisory Committee</td>
<td>Laredo</td>
</tr>
<tr>
<td>Graciela Camarena, CHW Promotions</td>
<td>Migrant Health Promotions</td>
<td>CHW/DSHS Advisory Committee</td>
<td>Mercedes</td>
</tr>
<tr>
<td>Lorenza Hernandez, CHW</td>
<td>Texas Tech University, Office of Border Health</td>
<td>CHW/DSHS Advisory Committee</td>
<td>El Paso</td>
</tr>
<tr>
<td>Elizabeth A. Kelly, PhD., Volunteer Consultant</td>
<td>De Madres a Madres</td>
<td>Workforce Development/DSHS Advisory Committee</td>
<td>Houston</td>
</tr>
<tr>
<td>Martha Quiroz-Romero, M.D.</td>
<td></td>
<td>DSHS Advisory Committee</td>
<td>Arlington</td>
</tr>
<tr>
<td>Larry Morningstar., PhD., MPH, Executive Director</td>
<td>Texas Tech Health Science Center</td>
<td>Employer/Workforce Development/DSHS Advisory Committee</td>
<td>El Paso</td>
</tr>
<tr>
<td>Frank Cantu, Field Director</td>
<td>Division of Border Health, Health Resources and Services Administration (HRSA)</td>
<td>Workforce Development</td>
<td>Dallas</td>
</tr>
<tr>
<td>Margarita Figueroa-Gonzalez, MD, Medical Officer</td>
<td>Office of Rural Health, Health Resources and Services Administration (HRSA)</td>
<td>Workforce Development</td>
<td>Dallas</td>
</tr>
<tr>
<td>Humberto (Bert) Ramos, Outreach Coordinator</td>
<td>CHRISTUS SPOHN Hospital</td>
<td>Employer</td>
<td>Corpus Christi</td>
</tr>
<tr>
<td>Catherine Gorham, MPA, LSW, CHES</td>
<td>Texas Workforce Commission</td>
<td>Workforce Development</td>
<td>Austin</td>
</tr>
<tr>
<td>Jeanette Chardon, MSA</td>
<td>East Austin Community Health Promoters Project, People’s Community Clinic</td>
<td>Employer</td>
<td>Austin</td>
</tr>
<tr>
<td>Donna C. Nichols, MSEd., CHES, Senior Prevention Policy Analyst</td>
<td>Center for Policy and Innovation, DSHS</td>
<td>Workforce Development</td>
<td>Austin</td>
</tr>
<tr>
<td>Edli Colberg, PhD.</td>
<td>Forecasting and Research, HHSC</td>
<td>Data/CHW Estimates</td>
<td>Austin</td>
</tr>
<tr>
<td>Kim Davis</td>
<td>Medicaid/CHIP, HHSC</td>
<td>Employer</td>
<td>Austin</td>
</tr>
<tr>
<td>Lee Lane, Executive Director</td>
<td>Texas Assoc. of Local Health Officials</td>
<td>Employer</td>
<td>Cedar Park</td>
</tr>
<tr>
<td>Sonia Lara</td>
<td>Texas Assoc. of Community Health Centers (TACHC)</td>
<td>Employer</td>
<td>Austin</td>
</tr>
<tr>
<td>R. J. Dutton, PhD., Director</td>
<td>Office of Border Health, DSHS</td>
<td>Workforce Development</td>
<td>Austin</td>
</tr>
</tbody>
</table>
The study advisory group reviewed the entire methodology for the first time on May 25, 2005. During the meeting, five individuals were selected to participate in a special task force. Members included: Ms. Theresa Cosca, Bureau of Labor Statistics; Dr. Susan Chapman, University of California at San Francisco; Dr. Frederick Chen, University of Washington at Seattle; Dr. Steve Murdock, University of Texas at San Antonio; and Dr. Robert Giffin, Institute of Medicine of the National Academies. Members of the Estimates Task Force were briefed twice in early 2006 on the progress made to date on the estimates. The final estimates were reviewed during a conference call held on August 29, 2006.
The Estimates

Table B.6 shows a comparison of the estimates of the total number of community health workers (CHWs) nationwide for each of the NAICS codes of interest for the 2000 PUMS and 2000 BLS data. Table B.7 shows the combined totals of CHWs for all NAICS categories by State. Summing the State estimates produced a national estimate of the number of paid CHWs.

Table B.6  CHW Estimates, National Comparison by NAICS Code, PUMS-Based and Staffing Patterns-Based

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6111</td>
<td>560</td>
<td>114</td>
</tr>
<tr>
<td>6113</td>
<td>188</td>
<td>144</td>
</tr>
<tr>
<td>6211</td>
<td>800</td>
<td>1,119</td>
</tr>
<tr>
<td>6214</td>
<td>4,545</td>
<td>9,272</td>
</tr>
<tr>
<td>6219</td>
<td>2,136</td>
<td>582</td>
</tr>
<tr>
<td>6221</td>
<td>2,501</td>
<td>2,504</td>
</tr>
<tr>
<td>6241</td>
<td>14,368</td>
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</tr>
<tr>
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<td>1,772</td>
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<td>8133</td>
<td>12,378</td>
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<tr>
<td>8134</td>
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<td>2,069</td>
</tr>
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<td>8139</td>
<td>3,579</td>
<td>806</td>
</tr>
<tr>
<td>9211/9992</td>
<td>1,099</td>
<td>3,467</td>
</tr>
<tr>
<td>9231/9993</td>
<td>7,887</td>
<td>7,925</td>
</tr>
<tr>
<td>All NAICS codes</td>
<td>59,382</td>
<td>55,759</td>
</tr>
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</table>

Table B.7  Estimates of Paid CHWs, PUMS-Based and Staffing Patterns-Based

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>566</td>
<td>669</td>
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<tr>
<td>Alaska</td>
<td>221</td>
<td>197</td>
</tr>
<tr>
<td>Arizona</td>
<td>980</td>
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</tr>
<tr>
<td>Arkansas</td>
<td>443</td>
<td>549</td>
</tr>
<tr>
<td>California</td>
<td>6,834</td>
<td>5,522</td>
</tr>
<tr>
<td>Colorado</td>
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<td>864</td>
</tr>
<tr>
<td>Connecticut</td>
<td>805</td>
<td>877</td>
</tr>
<tr>
<td>Delaware</td>
<td>164</td>
<td>149</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>450</td>
<td>370</td>
</tr>
<tr>
<td>Florida</td>
<td>2,745</td>
<td>2,554</td>
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<tr>
<td>Georgia</td>
<td>1,518</td>
<td>1,209</td>
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<tr>
<td>Hawaii</td>
<td>337</td>
<td>206</td>
</tr>
<tr>
<td>------------------</td>
<td>-------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Idaho</td>
<td>341</td>
<td>232</td>
</tr>
<tr>
<td>Illinois</td>
<td>2,632</td>
<td>2,423</td>
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<tr>
<td>Indiana</td>
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<td>924</td>
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<tr>
<td>Iowa</td>
<td>663</td>
<td>537</td>
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<tr>
<td>Kansas</td>
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<td>Kentucky</td>
<td>707</td>
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<td>Louisiana</td>
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<td>Maine</td>
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</tr>
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<td>Maryland</td>
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</tr>
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<td>Massachusetts</td>
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<td>1,820</td>
</tr>
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<td>Michigan</td>
<td>1,700</td>
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<tr>
<td>Mississippi</td>
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<td>418</td>
</tr>
<tr>
<td>Missouri</td>
<td>940</td>
<td>1,104</td>
</tr>
<tr>
<td>Montana</td>
<td>316</td>
<td>189</td>
</tr>
<tr>
<td>Nebraska</td>
<td>517</td>
<td>356</td>
</tr>
<tr>
<td>Nevada</td>
<td>224</td>
<td>243</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>420</td>
<td>325</td>
</tr>
<tr>
<td>New Jersey</td>
<td>1,587</td>
<td>1,410</td>
</tr>
<tr>
<td>New Mexico</td>
<td>511</td>
<td>482</td>
</tr>
<tr>
<td>New York</td>
<td>5,459</td>
<td>6,319</td>
</tr>
<tr>
<td>North Carolina</td>
<td>1,543</td>
<td>1,277</td>
</tr>
<tr>
<td>North Dakota</td>
<td>162</td>
<td>190</td>
</tr>
<tr>
<td>Ohio</td>
<td>2,018</td>
<td>2,419</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>626</td>
<td>585</td>
</tr>
<tr>
<td>Oregon</td>
<td>908</td>
<td>684</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>3,097</td>
<td>2,827</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>324</td>
<td>155</td>
</tr>
<tr>
<td>South Carolina</td>
<td>810</td>
<td>519</td>
</tr>
<tr>
<td>South Dakota</td>
<td>157</td>
<td>150</td>
</tr>
<tr>
<td>Tennessee</td>
<td>832</td>
<td>935</td>
</tr>
<tr>
<td>Texas</td>
<td>2,856</td>
<td>3,339</td>
</tr>
<tr>
<td>Utah</td>
<td>426</td>
<td>309</td>
</tr>
<tr>
<td>Vermont</td>
<td>271</td>
<td>220</td>
</tr>
<tr>
<td>Virginia</td>
<td>1,692</td>
<td>1,337</td>
</tr>
<tr>
<td>Washington</td>
<td>1,509</td>
<td>1,534</td>
</tr>
<tr>
<td>West Virginia</td>
<td>344</td>
<td>490</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>1,261</td>
<td>1,317</td>
</tr>
<tr>
<td>Wyoming</td>
<td>112</td>
<td>89</td>
</tr>
<tr>
<td>National Total</td>
<td>59,382</td>
<td>55,759</td>
</tr>
</tbody>
</table>

The difference between the estimates from the Census PUMS and the BLS Staffing Patterns Survey shown in Tables B.6 and B.7 provides an estimated range for the number
of CHWs working within a State. The results indicate that the aggregate estimates of CHWs based on BLS and PUMS Census data are similar at the national level (only a 6.1 percent difference between the two estimates), but they differ substantially for some States.

The estimates shown in Chapter 3 of the report are averages of the BLS- and PUMS-based estimates.

**Estimates of Volunteer Community Health Workers**

There were no existing databases containing information on the number of CHWs who were serving the community in a volunteer capacity. The only information available was an estimate of all volunteer workers by State.\(^{15}\)

Two sources of data were used to calculate the estimates of volunteer CHWs: the percent of paid workers from the CHW National Employer Inventory (CHW/NEI) and the estimates of paid CHWs calculated using PUMS and BLS data (discussed above).

The number of CHWs by paid and volunteer status was extracted for every State from the CHW National Employer Inventory. The States were then clustered based on geographic location into four groups designated as “Census Regions”: Northeast, Midwest, South, and West.

Using the number of paid community health workers reported in the CHW/NEI, the proportion of paid workers was calculated for each Census Region and State.

The standard deviation for the four Census Regions was calculated, followed by a standardized score for every State. This process was carried out in order to identify those States with an extreme proportion of paid CHWs (either too large or too small) as compared to the regional average. According to the CHW/NEI Inventory, 67 percent of CHWs across the United States received compensation by an employer.

The proportion of paid community health workers using results from the CHW/NEI and estimates of paid CHWs were then used to calculate a total number of CHWs by Census Region and State using the following formula:

\[
\frac{\text{(Number of paid CHWs from estimates x 100)}}{\text{Proportion of paid CHWs from the CHW/NEI}}
\]

Adjustments for the proportion of paid workers were made for States that were at least 1.0 unit from the standard deviation; reported a proportion of 100 percent paid from the Inventory; or had no responses to the Inventory (only one State). Adjustments were made as follows:

• One standard deviation was added to the proportion of paid CHWs from the Inventory for a negative standard deviation of 1.0 or greater.
• One standard deviation was subtracted from the proportion of paid CHWs from the Inventory if a positive standard deviation of 1.0 or greater was reported.
• One standard deviation was subtracted from the proportion of paid CHWs for States reporting a workforce that was 100 percent paid.

The number of volunteer CHWs was then calculated by subtracting the number of paid CHWs from the total number of CHWs. Table B.8 shows the number of volunteer CHWs per State.

Table B.8  Estimates of Volunteer CHWs

<table>
<thead>
<tr>
<th>State</th>
<th>No. of Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>274</td>
</tr>
<tr>
<td>Alaska</td>
<td>89</td>
</tr>
<tr>
<td>Arizona</td>
<td>62</td>
</tr>
<tr>
<td>Arkansas</td>
<td>308</td>
</tr>
<tr>
<td>California</td>
<td>3,149</td>
</tr>
<tr>
<td>Colorado</td>
<td>551</td>
</tr>
<tr>
<td>Connecticut</td>
<td>36</td>
</tr>
<tr>
<td>Delaware</td>
<td>62</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>162</td>
</tr>
<tr>
<td>Florida</td>
<td>1,556</td>
</tr>
<tr>
<td>Georgia</td>
<td>1,886</td>
</tr>
<tr>
<td>Hawaii</td>
<td>30</td>
</tr>
<tr>
<td>Idaho</td>
<td>52</td>
</tr>
<tr>
<td>Illinois</td>
<td>993</td>
</tr>
<tr>
<td>Indiana</td>
<td>375</td>
</tr>
<tr>
<td>Iowa</td>
<td>338</td>
</tr>
<tr>
<td>Kansas</td>
<td>370</td>
</tr>
<tr>
<td>Kentucky</td>
<td>197</td>
</tr>
<tr>
<td>Louisiana</td>
<td>723</td>
</tr>
<tr>
<td>Maine</td>
<td>95</td>
</tr>
<tr>
<td>Maryland</td>
<td>544</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>440</td>
</tr>
<tr>
<td>Michigan</td>
<td>917</td>
</tr>
<tr>
<td>Minnesota</td>
<td>517</td>
</tr>
<tr>
<td>Mississippi</td>
<td>440</td>
</tr>
<tr>
<td>Missouri</td>
<td>774</td>
</tr>
<tr>
<td>Montana</td>
<td>28</td>
</tr>
<tr>
<td>Nebraska</td>
<td>437</td>
</tr>
<tr>
<td>Nevada</td>
<td>99</td>
</tr>
<tr>
<td>New Hampshire</td>
<td>293</td>
</tr>
<tr>
<td>New Jersey</td>
<td>45</td>
</tr>
<tr>
<td>New Mexico</td>
<td>74</td>
</tr>
<tr>
<td>State</td>
<td>No. of Volunteer CHWs</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>New York</td>
<td>2,350</td>
</tr>
<tr>
<td>North Carolina</td>
<td>557</td>
</tr>
<tr>
<td>North Dakota</td>
<td>360</td>
</tr>
<tr>
<td>Ohio</td>
<td>1,285</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>431</td>
</tr>
<tr>
<td>Oregon</td>
<td>433</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>658</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>303</td>
</tr>
<tr>
<td>South Carolina</td>
<td>429</td>
</tr>
<tr>
<td>South Dakota</td>
<td>60</td>
</tr>
<tr>
<td>Tennessee</td>
<td>349</td>
</tr>
<tr>
<td>Texas</td>
<td>1,879</td>
</tr>
<tr>
<td>Utah</td>
<td>56</td>
</tr>
<tr>
<td>Vermont</td>
<td>26</td>
</tr>
<tr>
<td>Virginia</td>
<td>210</td>
</tr>
<tr>
<td>Washington</td>
<td>500</td>
</tr>
<tr>
<td>West Virginia</td>
<td>214</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>504</td>
</tr>
<tr>
<td>Wyoming</td>
<td>43</td>
</tr>
<tr>
<td><strong>National Total</strong></td>
<td><strong>28,308</strong></td>
</tr>
</tbody>
</table>
Appendix C: The National Employer Inventory
Appendix C. The National Employer Inventory

The Community Health Worker National Employer Inventory (CHW/NEI) was conducted in partnership with the Center for Sustainable Health Outreach (CSHO) at The University of Southern Mississippi (USM, Hattiesburg).

Figure C.1 charts the process undertaken and indicates the number of employer contacts developed, verified, and invited to participate in this unprecedented national survey with all 50 States represented.

Figure C.1 The Inventory Process

1. Design of the Web-based Survey by RCHWS in partnership with CSHO

2. Original List of Contacts from CSHO (5,000)

3. Screening by RCHWS and CSHO reduces list to 3,700

4. Telephone Verification of Contacts after Additions of New Leads by RCHWS/UTHSCSA and CHWS/SUNY Produces a Final List of 2,495

5. Invitations by CSHO

6. Reminder Cards / Letters by CSHO

7. Follow-Up Phone Calls by CSHO

8. Response Rate of 36.2%

9. Validation of Inventory by RCHWS
Appendix D: The Inventory Questionnaire
Appendix D. The Community Health Worker (CHW) Programs Inventory

Center for Sustainable Health Outreach in collaboration with the Regional Center for Health Workforce Studies

Thank you for helping us gather information on community health worker programs and to quantify the impact of these programs in our health care system.

To learn more about the Regional Center for Health Workforce Studies (RCHWS), our partner, the Center for Sustainable Health Outreach (CSHO), and the Inventory, please see pages 21-22 of this survey.

If you need assistance in completing the instrument, please contact Paul Philpot at (601) 266-6709, or at Paul.Philpot@usm.edu.

Please fill in the information requested below.

Agency/organization: _____________________________________________________

Mailing address: _________________________________________________________

City: ____________________________ State:__________ Zip:__________

☐ Non-Profit or
☐ Profit

Contact Person

Name: _________________________________________________________________

Title: __________________________________________________________________

E-mail: _________________________________________________________________

Tel.: ____________________________ Ext.: _____________
Check all that apply and give your best estimate in blank spaces.

☐ We currently employ CHWs

   How many paid? ___

   How many volunteer? ___

   How many CHW programs? ___

Are programs: <Please Circle One>
   A. Nationwide
   B. Statewide
   C. Regional
   D. Local

How many HRSA-sponsored programs? ___

☐ We train CHWs   How many annually? ____

☐ We work with employers of CHWs  How many annually? ____

☐ We employed CHWs in the past, but do not currently train CHWs or work with their employers

☐ We may employ CHWs in the future, but do not currently train CHWs or work with their employers

☐ We are not likely to employ CHWs in the future, and do not currently train CHWs or work with their employers

What titles are used for CHWs in your program?  Check all that apply.
(For a basic description of CHWs, please see page 22 of the survey.)

☐ Case Manager
☐ Community Care Coordinator
☐ Community Health Advisor
☐ Community Health Advocate
☐ Community Health Aide
☐ Community Health Educator
☐ Community Health Promoter
☐ Community Health Representative
☐ Community Health Worker
☐ Community Worker
☐ Helper/Supporter
Based on the number of CHW programs you indicated as part of your organization on page 2, please list programs below starting with largest program.

<table>
<thead>
<tr>
<th>Program Name</th>
<th>Mailing Address</th>
<th>City</th>
<th>State</th>
<th>Zip Code</th>
<th>HRSA Sponsored?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Objectives

Please indicate your program’s primary purpose (select only one):

- [ ] Access to care/services
- [ ] Community development
- [ ] Direct care
- [ ] Intervention
- [ ] Primary prevention
- [ ] Secondary prevention
- [ ] Tertiary prevention
- [ ] Other (specify): ____________________________
Health problems and issues addressed by the CHW program (please mark all that apply):

☐ Alzheimer’s disease or Dementia
☐ Arthritis
☐ Asthma
☐ Breastfeeding
☐ Cancer (specify type):
  ○ All
  ○ Breast
  ○ Cervical
  ○ Colorectal
  ○ Leukemia/Lymphoma
  ○ Lung
  ○ Mouth/Throat
  ○ Ovarian/Uterine
  ○ Prostate
  ○ Skin
  ○ Stomach
☐ Cardiovascular disease
☐ Child health
☐ Children with special healthcare needs
☐ Diabetes
☐ Family planning
☐ Gay/Lesbian/Bisexual/ Transgendered issues
☐ Heart disease
☐ High blood pressure
☐ HIV/AIDS
☐ Immunizations
☐ Infant health
☐ Injuries
☐ Lead poisoning
☐ Low birth weight prevention/follow-up
☐ Men’s health
☐ Mental health
☐ Nutrition
☐ Obesity
☐ Osteoporosis
☐ Physical activity
☐ Pregnancy/Prenatal care
☐ Premature birth prevention/follow-up
☐ Sexual behavior
☐ Stroke
☐ Substance abuse
☐ Tobacco control
☐ Tuberculosis
☐ Violence
☐ Women’s health
☐ Emergency response
☐ Other problems or issues (specify): __________________________

*Groups with whom your program is formally affiliated (or partnered) to deliver services*
(please mark all that apply):
☐ Agency/organization’s location
☐ Community-based agency/organization
☐ Community college
☐ Faith-based group
☐ Hospital/medical clinic
☐ IHS/Tribal organization
☐ Local health department
☐ Local housing authority
☐ Non-profit organization
☐ School or School District
☐ State health department
☐ State Medicaid program
☐ University/medical School
☐ Other (specify): __________________________

In what year was your CHW program established? __________

2. Services

*Services provided by CHWs to clients* (please mark all that apply):
☐ Assistance in gaining access to medical services or programs
☐ Assistance in gaining access to non-medical services or programs
☐ Building community capacity
☐ Building individual capacity
☐ Case management
☐ Community advocacy
☐ Counseling
☐ Cultural mediation
☐ Interpretation
☐ Mentoring
☐ Patient navigation
☐ Provide culturally appropriate health promotion/education
Provide direct services:
  o Measure heights and weights
  o Perform lab tests
  o Take vital signs

Risk identification
Social support
Translation
Transportation
Other (specify): ____________________________________

3. Population Served

Service Area

List the county(ies) and state(s) or territory(ies) where the CHW program operates. If more than 5 counties, list the 5 largest counties/states or territories where this program operates.

<table>
<thead>
<tr>
<th>County</th>
<th>State/Territory</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The area served by the CHW program is (please mark all that apply):
  □ an urbanized area (an area or place with a population > 50,000)
  □ an urban area (an incorporated or unincorporated area or place with a population > 2,500)
  □ a rural area (an area or place with a population < 2,500 and low population density)
  □ both urban and rural areas (the program serves both types)
  □ a suburban area (a place that is adjacent to or included in an urbanized area)
The residents served by the CHW program come from (please mark one):

- a specific neighborhood or neighborhoods
- within the entire city
- the city and the vicinity
- one county
- a multicounty area or region
- anywhere in the state
- other (specify): _________________________________

Where do the CHWs work or deliver program services? (Please mark all that apply):

- Agency or organization’s location
- Client’s home
- Community events
- Community health center
- Faith-based organization
- Health maintenance organization
- Hospital
- Migrant camp
- Mobile unit
- Non-profit organization
- On the street
- Private clinic
- Public health clinic
- Public housing unit
- School
- Client’s work site
- CHW’s home
- Shelters
- Teen centers
- Other (specify): _________________________________

Number of clients served annually by the CHWs in your program (please mark one):

- 1-100
- 101-250
- 251-500
- 501-750
- 751-1,000
- 1,001-2,500
- 2,501-5,000
- 5,001 or more
Target population served (please mark all that apply to your program’s targeted population):

**Race/Ethnicity**

- [ ] American Indian/Alaskan Native (specify): _____________________
- [ ] Asian/Pacific Islander (specify): _____________________
- [ ] Black/African-American
- [ ] Hispanic/Latino(a) – any race (specify): _____________________
- [ ] Non-Hispanic White
- [ ] Other race/ethnicity (specify): _____________________

**Gender**

- [ ] Female
- [ ] Male
- [ ] Transgendered (cross dressers, transsexuals, transvestites)

**Age**

- [ ] Under 1 year
- [ ] 1-5
- [ ] 6-12
- [ ] 13-17
- [ ] 18-21
- [ ] 22-50
- [ ] 50-65
- [ ] 65+

**Special Populations**

- [ ] Immigrants
- [ ] Migrant workers
- [ ] Isolated rural residents
- [ ] Colonia residents
- [ ] Homeless
- [ ] Uninsured (SCHIP, Medicaid eligible)
- [ ] Other (specify): ________________________________
Client Recruitment Methods

What methods do you use to recruit clients? (Please mark all that apply):

☐ We have no formal recruitment effort
☐ We advertise using:
  (  ) Billboards
  (  ) Direct mail
  (  ) Newspapers
  (  ) Radio
  (  ) Television
  (  ) Other: ________________________________
☐ We ask for churches and other nonprofits to identify new clients
☐ We conduct outreach activities, such as health fairs, community events, etc.
☐ We conduct screening programs
☐ We mail or post flyers/posters/brochures
☐ We use a mobile unit
☐ We use referrals from clients
☐ We use referrals from other agencies/providers
☐ We use door-to-door inquires
☐ Word-of-mouth
☐ Other (specify): ________________________________

4. Funding Sources

Funding sources for your CHW program (Please mark all that apply):

<table>
<thead>
<tr>
<th>Percent Total Funding</th>
<th>Agency Type</th>
<th>Agency &lt;Please Circle or Specify&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>% □ Federal agency</td>
<td>- CDC - HRSA - NIH - USDA</td>
<td></td>
</tr>
<tr>
<td>% □ State agency</td>
<td>- Education - State health depts.</td>
<td></td>
</tr>
<tr>
<td>% □ Local agency/government</td>
<td>- Human/social services - Labor/workforce</td>
<td></td>
</tr>
<tr>
<td>% □ Private foundation</td>
<td>- Specify: __________________________</td>
<td></td>
</tr>
<tr>
<td>% □ Non-profit organizations</td>
<td>- Specify: ________________________</td>
<td></td>
</tr>
<tr>
<td>% □ Other public funding</td>
<td>- City - County - Multicounty - Parish - Regional group</td>
<td></td>
</tr>
<tr>
<td>% □ Other sources</td>
<td>- Specify: __________________________</td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Are services provided by CHWs eligible for reimbursement?

☐ Yes
☐ No

If yes, please mark all that apply:

☐ State Children’s Health Insurance Program (SCHIP)
☐ Medicaid
☐ Medicare
☐ (Private) Health insurance

5. Skills

Please mark skills that are required of CHWs prior to hire/volunteer with your organization/agency:

☐ Advocacy skills
☐ Bilingual skills
☐ Capacity building skills
☐ Communication skills
☐ Confidentiality skills
☐ Interpersonal skills
☐ Knowledge base
☐ Organizational skills
☐ Service coordination skills
☐ Teaching skills
☐ Other skills (specify): ____________________

6. Characteristics

Based on the number of paid and volunteer CHWs you indicated as part of your organization on page 2, please estimate the number of CHWs in each category below.

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Paid</th>
<th>Volunteer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Hispanic White</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic/Latino(a) -any race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black/African-American</td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Indian/Alaskan Native</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other race/ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>Paid</td>
<td>Volunteer</td>
</tr>
<tr>
<td>--------------</td>
<td>------</td>
<td>-----------</td>
</tr>
<tr>
<td>Less than 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30-50</td>
<td></td>
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</tr>
<tr>
<td>Over 50</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Gender</th>
<th>Paid</th>
<th>Volunteer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Highest Education</th>
<th>Paid</th>
<th>Volunteer</th>
</tr>
</thead>
<tbody>
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<td>Less than HS</td>
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<td></td>
</tr>
<tr>
<td>HS or GED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Some college</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelors Degree+</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associates Degree</td>
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<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other</th>
<th>Paid</th>
<th>Volunteer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certified</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employed less than 6 months?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Communication with clients**

Do your program's CHWs speak the languages of those they serve?
- [ ] Yes: (all some)
- [ ] No

Which languages do your program's CHWs use to communicate with clients?
- [ ] English (all some)
- [ ] French (all some)
- [ ] Chinese (all some)
- [ ] Sign (all some)
- [ ] Spanish (all some)
- [ ] Vietnamese (all some)
- [ ] Tribal (specify) (all some)
- [ ] Other (specify) (all some)
7. Compensation and Incentives

The next few questions ask for information on paid or volunteer workers who are part of your CHW program.

Number of CHWs working full-time: ___  Number of CHWs working part-time: ___

In the following section, please indicate starting wages for new hires and wages for experienced (paid) CHWs.

<table>
<thead>
<tr>
<th>CHW job title</th>
<th>Range of wages</th>
<th>new hires</th>
<th>top earners</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$ _____ per hr.</td>
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<td>$ _____ per hr.</td>
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<td></td>
<td></td>
<td>$ _____ per hr.</td>
<td>$ _____ per hr.</td>
</tr>
</tbody>
</table>

Number of CHWs who work:

<table>
<thead>
<tr>
<th>Hours/Week</th>
<th>Paid</th>
<th>Volunteer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 20</td>
<td></td>
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<tr>
<td>20-39</td>
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<td></td>
</tr>
<tr>
<td>40 or more</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Are volunteers' expenses reimbursed?

☐ Yes
☐ No

(If yes, specify allowable expenses):

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

109
Do any volunteers receive stipends from the program?
☐ Yes
☐ No
(If yes, what criteria are used?):
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Do workers (paid or volunteer) receive any of the following benefits? (Please mark all that apply):
☐ Child care
☐ Commuter subsidy
☐ Educational leave
☐ Health insurance
☐ Mileage reimbursement
☐ Parking
☐ Pension or retirement plan
☐ Personal leave
☐ Sick leave
☐ Tuition assistance
☐ Vacation accrual
☐ Other (specify): __________________

8. Recruitment and Training

What is the average number of years worked in your program by CHWs?
☐ Less than 1 year
☐ 1-2 years
☐ 3-4 years
☐ 5 years or more
**CHW Training Profile**

*Are CHWs required to have received any formal education or training prior to being hired or volunteering?*

- [ ] Yes
- [ ] No

(If yes, what type?):

- [ ] GED/High school diploma
- [ ] Vocational-technical training
- [ ] College certificate program
- [ ] College Associate’s degree
- [ ] College Bachelor’s degree
- [ ] Other (specify): ____________________________

*Once hired or having volunteered, does the new CHW receive additional training?*

- [ ] Yes
- [ ] No

(If yes, what type?):

- [ ] Case management meetings
- [ ] Classroom instruction
- [ ] Continuing education or training (classes, conferences, seminars, etc.)
- [ ] Initial orientation
- [ ] Mentoring
- [ ] On-site technical assistance
- [ ] Other (specify): ____________________________

*Please mark all of the skills for which your CHWs are trained:*

- [ ] Ability to access resources
- [ ] Being a CHW
- [ ] Client advocacy
- [ ] Coordination of services (medical and social)
- [ ] Cultural awareness
- [ ] Disease specific education
- [ ] Education/Training/Counseling
- [ ] First aid/CPR
- [ ] Home visiting
- [ ] Interpersonal communication skills
- [ ] Knowledge of health issues
- [ ] Knowledge of medical services
- [ ] Knowledge of social services
Leadership
Organizational skills
Patient navigation
Record keeping/data reporting skills
Other (specify): _____________________________________________

Please specify the name and sources of any specific curriculum or training materials used for CHW training:

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

Who conducts the training of your CHWs? (Please mark all that apply):

☐ CHW supervisor
☐ Doctor
☐ Health educator
☐ Nurse
☐ Nutritionist
☐ Other CHWs
☐ Outside contractor
☐ Psychologist
☐ Social worker
☐ Other (specify): _________________________

Methods used to recruit CHWs (Please mark all that apply):

☐ Advertising
☐ Word-of-mouth/Networking

Type of referrals (Please mark all that apply):

☐ CHW program staff
☐ Community members
☐ Healthcare providers
☐ Human services providers
☐ Other CHW programs
☐ Other community groups
☐ Other (specify): ________________
Methods used to retain or give recognition CHWs in your program (Please mark all that apply):

- Academic credit
- Adding fringe benefits
- Certificate from program
- Conference participation
- Graduation ceremony
- Program awards or other recognition
- Promotions
- Wage increase
- Other (specify): __________________

Please describe the career opportunities (how a CHW can advance) available to CHWs in your program:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

9. Effectiveness

Does your program conduct a formal evaluation to assess its success and/or progress in addressing the program's objectives?

- Yes
- No

Is formal evaluation mandated by your funding agency?

- Yes
- No

If your program is conducting or has conducted an evaluation, who is conducting or has conducted it?

- College or university personnel
- Program staff
- Private consultants
- Other (specify): ____________________________________________________________________
What do you collect data on (check all that apply):
- CHWs themselves
- Clients/Families served
- Community/system
- Outcomes
- Policy
- Services

Are findings of evaluations available?
- Yes
- No

If findings are available:
- Respondent can send a copy
- Please contact respondent to receive a copy

Describe your CHW program's major accomplishments, to date:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

In the space below, please describe the type of evaluation methodology being used and briefly discuss the results. We would also like to request copies, if you have them available, of the description of the program design, any data collection forms or other instruments that you use to gather information, and a summary of the program evaluation results. These materials can be mailed to the address shown on page 19 of the survey.
________________________________________________________________________
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Please mark all of the ways in which your evaluation results are utilized by the CHW program:

☐ Annual report
☐ Internal reports
☐ Peer-reviewed journal articles
☐ Program materials
☐ Program Web site
☐ Report to board or advisory committee
☐ Report to clients
☐ Report to funding agencies
☐ Report to legislative body
☐ Report to media
☐ Report to other external bodies
☐ Report to partners
☐ Report to the public
☐ Report to staff

The Center for Sustainable Health Outreach also intends to share information regarding evaluations with the Southwest Center for Community Health Promotion. They may contact you about being included in the University of Arizona Community Health Worker Evaluation Tool Kit project: (Please mark this space _____ if you want your evaluation data and instruments withheld.)

10. Challenges

What barriers/obstacles have you encountered in trying to implement a CHW program? (Limit to three checkboxes):

☐ Lack of stable funding
☐ Inadequate skill/experience in supervising CHWs
☐ Hostility/competition from other health care workers
☐ CHW services not reimbursable
☐ Lack of solidarity among CHW programs
☐ Lack of training resources
☐ Turnover due to low wages
☐ Shortage of qualified applicants
☐ Lack of understanding about CHWs’ contributions to community
☐ Other (specify): __________________________________________
11. Reports

Program Materials and Resources

In order to gain increased knowledge about existing Community Health Worker programs, the Center for Sustainable Health Outreach requests that you share copies of any materials that are currently used in your program, such as the information you provide to clients or with CHWs; brochures or promotional material; copies of articles or reports; and, your evaluation plan, tools or instruments, and summary results.

Please mail a copy of these materials to:
Attn: The Community Health Worker Programs Inventory
The University of Southern Mississippi
Center for Sustainable Health Outreach
118 College Drive # 10015
Hattiesburg, MS 39406-0001

For those materials that you cannot send, please describe the items below. If you need additional space, please list the items on another sheet and mail it to us.

<table>
<thead>
<tr>
<th>Title</th>
<th>Author</th>
<th>Year</th>
<th>Type</th>
<th>Published (Y/N)?</th>
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Other Instructions

STATEMENT CONCERNING SHARING OF INFORMATION:

The Center for Sustainable Health Outreach intends to share parts of the information gathered by the Community Health Worker Programs Inventory with the Centers for Disease Control and Prevention (CDC) for inclusion in the Combined Health Information Database. (Please mark this space ____ if you want your information withheld.)

Submitting the Questionnaire

This concludes the Community Health Worker Inventory. We truly appreciate your time, participation and willingness to share information about your program. Thank you again for helping us gather information on community health worker programs and to quantify the impact of these programs in our health care system.

Please mail the questionnaire to the following address:
Attn: The Community Health Worker Programs Inventory
The University of Southern Mississippi
Center for Sustainable Health Outreach
118 College Drive # 10015
Hattiesburg, MS 39406-0001

Please use the following URL (http://chw.uthscsa.edu) to go to the CHW Inventory Login Page.
More About Us

The Center for Sustainable Health Outreach (CSHO -- www.usm.edu/csho) was formed in 1999 to provide support and technical assistance to CHWs and CHW programs. The Center is the result of collaboration between The University of Southern Mississippi (USM) in Hattiesburg and the Harrison Institute for Public Law at Georgetown University Law Center in Washington, D.C. It provides assistance to CHWs in the following areas: program development, funding and sustainability; public policy development and strategic planning; program evaluation; and education and training. CSHO also assists CHWs and CHW programs by facilitating partnerships with potential funding sources, policy makers, health systems, and community organizations. The Center serves as a national point of contact for CHWs and CHW programs and provides them with reliable up-to-date information on emerging trends in the field. The Center’s responsibilities are divided between the two collaborating institutions. The Georgetown staff of CSHO is responsible for policy development and sustainability information. The USM staff of CSHO is responsible for education, training and evaluation.

The Regional Center for Health Workforce Studies at CHEP (RCHWS -- www.uthscsa.edu/rchws) is one of six regional centers in the country operating under the oversight of the National Center for Health Workforce Analysis of the Bureau of Health Professions, Health Resources and Services Administration (HRSA), U.S. Department of Health and Human Services (DHHS). This specialized research facility is housed in the Center for Health Economics and Policy (CHEP) of The University of Texas Health Science Center at San Antonio. CHEP was founded in 1987 to address problems of efficiency, effectiveness, and equity in the delivery of adequate health care. Operating within the Medical School, Dental School, Graduate School of Biomedical Sciences, Nursing School, and School of Allied Health Sciences, CHEP draws expertise from a broad range of health care specialties as it conducts research on the supply and demand for health care in our changing social, economic, and industrial environments. RCHWS at CHEP serves the five-state region of Arkansas, Louisiana, New Mexico, Oklahoma, and Texas, has a special mandate to address the health workforce issues of the entire United States/Mexico border region, and participates in numerous national studies on the health workforce with a focus on access to care for underserved populations.

More on the Inventory

More on The Community Health Worker (CHW) Inventory
Community Health Workers have been contributing to the well being of communities for a very long time but, only recently, are being recognized as a significant component of the health workforce. Yet, information needed to guide policies that would support, promote and integrate CHWs in the health delivery system is scarce, fragmentary or altogether unavailable. This inventory is a first comprehensive and systematic assessment of CHWs in their working environment. A thorough response to this survey is vital to developing adequate data about this extraordinary community-based phenomenon for CHW voluntary organizations, employers, and policy makers.
"Community Health Worker*" (CHW) is an umbrella term covering a variety of job titles and responsibilities, both paid and unpaid. CHWs may be known in different communities as lay health advisors, community health aides, outreach workers, community health representatives, promotores(as), or peer educators (to name a few). One general condition is that CHWs rely for their effectiveness on membership in, or other close relationship to, the community served. Job duties include one or more of the following, generally for underserved communities: (1) Acting as a “bridge” or cultural mediator between communities and the health and social service systems; (2) Providing culturally appropriate and accessible health education and information; (3) Assuring that people get the services they need, including provision of referrals and follow-up; (4) Providing informal counseling and social support; (5) Advocating for individual and community needs; (6) Providing direct services which do not require other professional licensure (such as nursing); and, (7) Building individual and community capacity.


The Center for Sustainable Health Outreach (CSHO) and other organizations supporting CHWs have been working with the Health Resources and Services Administration (HRSA) of the Department of Health and Human Services (DHHS), including the Maternal Child Health Bureau (MCHB) and the Office of Rural Health Policy and other programs, to create a national CHW evaluation project, designed to show the impact of programs incorporating CHWs on the health of their communities.

While adequate funding for the national CHW evaluation project is being marshaled, an inventory of organizations employing or assisting community health workers is being developed by CSHO, with the support of the W.K. Kellogg Foundation. The inventory, a first basic step toward a national evaluation project, consists of a Web-based survey complemented, when necessary, by printed questionnaires and telephone interviews to reach as many organizations as possible. As CSHO was completing the testing of the inventory instrument, a complementary project - The Community Health Worker National Workforce Study -- was proposed by the Regional Center for Health Workforce Studies (RCHWS) at CHEP and funded by HRSA. The RCHWS project is aimed at producing a comprehensive national profile of the CHW workforce and in-depth studies of selected states to better describe models of care that employ CHWs, estimate their availability and potential, and identify facilitators and barriers to CHW demand and supply.

The work of the RCHWS and CSHO are obviously complementary to one another and the two centers decided to collaborate. Both projects are now benefiting from the unique strengths and resources of the two organizations. The list of potential respondents combines known CHWs' employers with a sample of those organizations fitting the profile of "possible" CHW employers. The survey asks for an accurate estimate of employed CHWs, their job title, descriptive information on the program engaging CHWs, the type of work they perform, the type of funding sources utilized and the expected long-term sustainability of the program.
Appendix E1: The Study Interviews - Employers
Appendix E1.
Regional Center for Health Workforce Studies
The University of Texas Health Science Center at San Antonio
The Community Health Worker (CHW) National Workforce Study
Employer-guided telephone interviews to complement
studies of the States of
Arizona, Massachusetts, New York, and Texas

Respondent’s Name: ____________________________________________

Agency/Organization: ____________________________________________

City: ______________________ Telephone Number: _______________________

Has respondent provided answers to the online survey?
☐ Yes, survey has been completed
☐ Yes, but survey is incomplete (some questions have not been answered)
☐ No response to survey (there are no answers)
☐ Other (specify): _____________________

Date of interview: May / June ____ , 2006

Time of interview: _____ am / pm to _____ am / pm

Interviewer: _______________________________________________________________
Introduction

Thank you for agreeing to participate in this interview.

You have been identified as one of a select group of individuals in Texas (Arizona, New York, Massachusetts) who has the opportunity to contribute to the first federally sponsored national workforce study of community health workers (CHWs). This unprecedented study will use information provided by you and other informants in the State to draw a profile of the community health worker workforce. An important part of this profile is learning about the experience of employers with CHWs.

During the interview, we will focus on four main areas: (1) the contributions that community health workers have made/can make to the organization, (2) what skills are in demand and what positions are available within the organization for CHWs, (3) the demand for CHWs in your organization and how easy or difficult it has been for your organization to employ CHWs, and (4) what is your experience and future expectations for the utilization of CHWs within your organization.

Before we begin, I'd like to reassure you that your identity and the information you provide during this interview will be kept strictly confidential. (If asked, state: All information provided by you in the interview will be reviewed and analyzed by the research team and is confidential.)

Do you have any questions at this point?

We estimate this interview will take approximately 45 minutes of your time. Have I called you at a good time?

(If not, what time do we need to end and when can we call you again? ______)

If respondent has questions, ask: Would you like to discuss your questions with me or would you prefer to speak to the Principal Investigator?

If he/she requests to speak to the PI, state: You can contact the project's Principal Investigator, Dr. Antonio Furino, at 210-567-3168.
Profile of the Respondent

What is your current position in the organization?

- CEO
- Director
- Program Director
- Program Coordinator
- Other (specify): _____________________

How many years have you worked in your current position? _____

Do you work directly with CHWs?

- Yes
- No

How many years have you worked with CHWs? _____

Did you work as a CHW in the past?

- Yes—If yes, how long did you work as a CHW? ___ (years)
- No

Additional comments:

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

_________________________________________________________________________

Profile of the Organization

Is your agency a __ (for) profit or __ non-profit?

- 501c3 entity
- State agency
- Umbrella agency
- Other (specify): _____________________
What is the primary industry of your organization?
- 6111 – Elementary, secondary school
- 6113 – College or university
- 6211 – Offices of physicians
- 6214 – Outpatient care centers
- 6219 – Other ambulatory health care services
- 6221 – General, medical, surgical hospitals
- 6241 – Individual family services
- 6244 – Child, daycare services
- 8131 – Religious organizations
- 8133 – Social advocacy organizations
- 8134 – Civic advocacy organizations
- 9190 – Federal government (excluding postal services)
- 9290 – State government (excluding health, education)
- 9390 – Local government (excluding health, education)
- Other (specify): _____________________

Is sustainability of the CHW program:
- Long-term (part of institution): __________
- Short-term (program only): __________

Does the Health Resources and Services Administration provide funding for the CHW program(s)?
- Yes
- No

Which population is targeted for services by CHWs in your program(s)?
- By health condition: __________
- By demographics: __________
- Other (specify): _____________________

When did your organization first hire paid, or recruit volunteer, CHWs? Year _____

Do you have paid CHWs in your organization?
- Yes, how many: __________
- No

Do you have volunteer CHWs in your organization?
- Yes, how many: __________
- No

Do you have certified CHWs in your organization? (NOTE: Only applicable to Texas.)
- Yes, how many: __________
- No
General - Profile of the CHW

Now I would like to talk about community health workers in your organization.

(NOTE FOR INTERVIEWERS: Interviewers will use the term "community health worker" throughout the interview to describe the workforce/employees. The employer may use any term that they would normally use to describe this workforce. For instance, lay health advisor; community health representative; and promotor(a) de salud would all be considered “community health workers” for the purposes of the National Workforce Study and for discussion during interviews.)

Is the term “community health worker” used in your organization to identify a certain type of employed personnel?

☐ Yes
☐ No

If not, what is the title used for positions filled by CHWs?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community health advocate</td>
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<tr>
<td>Community health liaison</td>
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<tr>
<td>Family support worker</td>
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<tr>
<td>Lay outreach worker</td>
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<td>Promotor(a)</td>
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<td>Other (specify):</td>
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<td>Other (specify):</td>
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</table>

Do you know what official titles are used for positions filled by CHWs (i.e. the titles used in reporting employment data to Bureau of Labor Statistics or to the State Employment Commission)?

☐ Yes, note title(s): ________________________________
☐ No
☐

Additional comments: ________________________________
PAID CHWs – Job description

Please describe the functions of paid or employed CHWs in your organization.

☐ I. Assistance in gaining access to medical services or programs
☐ I. Assistance in gaining access to social services or programs
☐ I. Building community capacity
☐ I. Building individual capacity
☐ I. Case management
☐ I. Community advocacy
☐ I. Counseling
☐ I. Cultural mediation
☐ I. Interpretation
☐ I. Mentoring
☐ I. Patient navigation
☐ I. Provide culturally appropriate health promotion/education
☐ I. Provide direct services
☐ I. Risk identification
☐ I. Social support
☐ I. Translation
☐ I. Transportation
☐ O. Conducting surveys of target population
☐ O. Enroll population into health insurance programs
☐ O. Determine eligibility for services
☐ O. Provide health screenings
☐ O. Refer population to health care system
☐ O. Refer population to social services system
☐ Other (specify): _____________________________________________

Additional comments:

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________

__________________________________________________________________
VOLUNTEER CHWs – Job description

Please describe the functions of volunteer CHWs serving in your organization.

☐ I. Assistance in gaining access to medical services or programs
☐ I. Assistance in gaining access to social services or programs
☐ I. Building community capacity
☐ I. Building individual capacity
☐ I. Case management
☐ I. Community advocacy
☐ I. Counseling
☐ I. Cultural mediation
☐ I. Interpretation
☐ I. Mentoring
☐ I. Patient navigation
☐ I. Provide culturally appropriate health promotion/education
☐ I. Provide direct services
☐ I. Risk identification
☐ I. Social support
☐ I. Translation
☐ I. Transportation
☐ O. Conducting surveys of target population
☐ O. Enroll population into health insurance programs
☐ O. Determine eligibility for services
☐ O. Provide health screenings
☐ O. Refer population to health care system
☐ O. Refer population to social services system
☐ Other (specify): _____________________________________________

Additional comments:

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

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_________________________________________________________________

_________________________________________________________________
Which departments, **programs or projects** in your organization utilize CHWs?

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<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
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<tbody>
<tr>
<td>Diabetes</td>
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<tr>
<td>Cancer</td>
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<td>Community Outreach</td>
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<td>Head Start</td>
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<td>Healthy Start</td>
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Additional comments:

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Do CHWs work **alone or as part of a team**? (Describe work settings as well).

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<thead>
<tr>
<th></th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part of team</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If the CHW is part of a team, who are the other **team members**?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health educator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutritionist</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other CHWs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:
Qualifications

Knowledge

What knowledge base do you seek when looking for CHWs?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHW roles and functions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health care system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health insurance coverage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicaid, Medicare, SCHIP</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social services system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific diseases/health issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________

_________________________________________________________________
**Skills**

What are the minimum skills you are seeking in CHWs at time of hire?

What are the desired skills you would like for paid CHWs to have at hire?

<table>
<thead>
<tr>
<th>Skills</th>
<th>Minimum</th>
<th>Desired</th>
<th>Minimum</th>
<th>Desired</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advocacy skills — ability to &quot;speak up&quot; for patients and communities</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>to overcome barriers, act as intermediary with bureaucracy</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Bilingual skills — be fluent in the preferred language of clients,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>translate technical terms</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity building skills — empowerment skills; leadership skills;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>influence communities and individuals to change behavior and</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>take more control of their own health</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication skills — ability to listen, use oral &amp; written language</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>confidentially</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidentiality skills — ability to keep matters private,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>comply with HIPAA laws</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpersonal skills — friendliness, sociability,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>counseling &amp; relationship building skills, ability to provide</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>support and set appropriate boundaries</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational skills — ability to set goals and develop an action</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>plan, manage time, keep records</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service coordination skills — ability to identify &amp; access</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>resources; network &amp; build coalitions; make and follow-up on</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>referrals</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching skills — ability to share information, respond to questions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&amp; reinforce ideas, adapt methods to various audiences</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:
Are the skills that you are seeking in CHWs, as an employer, easily found at hire? Can they be developed through training?

<table>
<thead>
<tr>
<th></th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>At hire</td>
<td>Training</td>
<td>At hire</td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

________________________________________________________________________________

Are the knowledge-bases that you are seeking in CHWs, as an employer, easily found at hire? Can they be developed through training?

<table>
<thead>
<tr>
<th></th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>At hire</td>
<td>Training</td>
<td>At hire</td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

________________________________________________________________________________

Are different positions available for different skills levels as a CHW in your organization?

<table>
<thead>
<tr>
<th></th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

________________________________________________________________________________
When seeking to fill a CHW position, is there a sufficient supply of workers with the minimum qualifications?

<table>
<thead>
<tr>
<th></th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

And, when seeking to fill a position, is there a sufficient supply of experienced CHWs?

<table>
<thead>
<tr>
<th></th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:
**Traits**

Are there any other traits that you look for in CHWs?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Membership in the community</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recognized community leader</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shared cultural experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shared health experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Similar demographics as target pop.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

__________________________________________________________________________

__________________________________________________________________________

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__________________________________________________________________________
**Cultural competence**

*(NOTE FOR INTERVIEWERS: Following is a description of “cultural competence” that can be used to describe the term to respondent.)* Now I would like to ask you about a quality that is often attributed to CHWs—that is, I’d like to talk about cultural competence. *Cultural competence may be defined as the ability of understanding and working within the context of the culture of the community being served.*

Do you agree with this general definition?
- ☐ Yes
- ☐ No

Would you define “cultural competence” differently?
- ☐ Yes
- ☐ No

If so, how would you define it?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>they live/have lived there for some time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>they grew up there</td>
<td></td>
<td></td>
</tr>
<tr>
<td>they are accepted as part of the community even if they are new here</td>
<td></td>
<td></td>
</tr>
<tr>
<td>they are already known and trusted by people in this community</td>
<td></td>
<td></td>
</tr>
<tr>
<td>they have had similar life experiences to people in this community</td>
<td></td>
<td></td>
</tr>
<tr>
<td>they come from a similar cultural background</td>
<td></td>
<td></td>
</tr>
<tr>
<td>they understand some aspect of the disease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:
How important is it that a CHW be culturally competent?

<table>
<thead>
<tr>
<th>Score</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-- Not important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-- Somewhat important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-- Important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-- Very important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-- Extremely important</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

Now, “cultural competence” is sometimes viewed of in terms of “membership” of CHWs in the community they are serving, that is, being “indigenous” to that community. How important is it that a CHW be from the community in which he/she works?

<table>
<thead>
<tr>
<th>Score</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-- Not important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-- Somewhat important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-- Important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-- Very important</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-- Extremely important</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:


In your opinion, if an experienced CHW, from a different community, applied for an available opening (in your organization) would you hire them and why? That is, how would you evaluate his/her suitability for hire if he/she is not from the target community?

**Possible answers:**

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>No—we only hire (agencies should only hire) actual community members</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes—if they are accepted or <em>seen</em> as part of the community, even if they are new</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes—if they are already known and trusted by people in the community</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes—if they come from a similar cultural background</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes—if they have already worked in the community for some time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

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__________________________________________________________________________________________________________________________________________
**Demand for CHWs (Why the organization uses CHWs)**

Why does your organization **employ** CHWs?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding source requirement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHWs are viewed as cost effective resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHWs are connected to/”know” the target population</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest by management to test the CHW/promotora model</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
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<td></td>
</tr>
</tbody>
</table>

Additional comments:

______________________________________________________________________________

______________________________________________________________________________

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______________________________________________________________________________
Why are CHWs important to your organization? (In other words, what do CHWs contribute that makes them different from other workers?) Which of these are the key factors?

<table>
<thead>
<tr>
<th>Possible answers</th>
<th>Paid CHWs</th>
<th>Key?</th>
<th>Volunteer CHWs</th>
<th>Key?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can help reach clients who couldn’t be reached before</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helped improve communication between providers and clients</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program/services are now more responsive to community’s needs</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
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<tr>
<td>Other (specify):</td>
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</tbody>
</table>

Additional comments:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________


What factors, external to your organization, appear to induce the hiring of CHWs?
Which of these are the key factors?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Key?</th>
<th>Volunteer CHWs</th>
<th>Key?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic conditions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funding streams</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Catchment areas</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Other (specify):</td>
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<tr>
<td>Other (specify):</td>
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</tbody>
</table>

Additional comments:

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
Have **effectiveness measures** suggested that CHWs are important to your program?

<table>
<thead>
<tr>
<th></th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

If **yes**: Have **any types of evaluations** been conducted which try to measure the effectiveness of CHWs?

<table>
<thead>
<tr>
<th></th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

If **yes**: What types of evaluations have been conducted?

**Possible answers:**

<table>
<thead>
<tr>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Formal evaluations
- Cost analysis (increased revenue)
- Surveys
- Collect output data
- Track outcomes
- Other (specify):
- Other (specify):
- Other (specify):
If no formal evaluations have been conducted how else does your organization know that CHWs are being effective?

- Patients state "they feel better about their health"
- Health care practitioners report improved compliance
- Social service representatives report improved compliance
- CHWs state "they feel they are making a contribution"
- Other (specify): _________________________________

Additional comments:

_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

How do you measure the productivity of CHWs?

<table>
<thead>
<tr>
<th>Output measure</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of clients served</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of services provided</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
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<tr>
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<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Are community health workers as productive as you expected?

<table>
<thead>
<tr>
<th>Score</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-- Not productive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-- Somewhat productive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3-- Productive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4-- Very productive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5-- Most productive</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
**Employers' Experience**

How does your organization locate (recruit) individuals who will be hired as CHWs?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment agencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Networking, word-of-mouth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Referrals from _______________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

__________________________________________________________________________________________

Have you encountered any obstacles to hiring CHWs?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of funding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of qualified applicants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not a legal resident</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

__________________________________________________________________________________________
What has **made possible (eased, facilitated)** the **hiring** of CHWs by your organization?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding by outside source</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reimbursement (Medicaid, Medicare, Private Insurance)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Support by upper management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

Does your organization use formal **incentives to attract** CHWs?

Does your organization use formal **incentives to retain** CHWs?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Attract</th>
<th>Retain</th>
<th>Attract</th>
<th>Retain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic credit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adding fringe benefits</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bonus (monetary)</td>
<td></td>
<td></td>
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<tr>
<td>Certificate from program</td>
<td></td>
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<tr>
<td>Company vehicle</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Conference participation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduation ceremony</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program awards or other recognition</td>
<td></td>
<td></td>
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<tr>
<td>Promotions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wage increase</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
What are the **minimum job performance** expectations of CHWs at hire?
**Career Ladders**

Are there formal career ladders available for CHWs within your organization? (NOTE FOR INTERVIEWER: By “formal” we mean sequential titles involving progressively higher responsibilities and compensation available)

<table>
<thead>
<tr>
<th></th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If yes, what advancements are available? ______________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________

In hiring personnel for CHW positions, do you consider previous on-the-job experience as a prerequisite for employment?

<table>
<thead>
<tr>
<th></th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
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</tr>
</tbody>
</table>

Additional comments:
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________

Have any **problems been encountered** in employing CHWs to accomplish your organization’s goals?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHW services are not reimbursable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHWs go beyond duties and fall behind on other assignments</td>
<td></td>
<td></td>
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<tr>
<td>CHWs need training in office etiquette</td>
<td></td>
<td></td>
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<tr>
<td>Hostility/competition from other health care workers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inadequate skill/experience in supervising CHWs</td>
<td></td>
<td></td>
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<tr>
<td>Lack of solidarity among CHW programs</td>
<td></td>
<td></td>
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<tr>
<td>Lack of stable funding</td>
<td></td>
<td></td>
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<tr>
<td>Lack of training resources</td>
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<tr>
<td>Lack of understanding about CHWs contributions to the community</td>
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<tr>
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<tr>
<td>Shortage of qualified applicants</td>
<td></td>
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<tr>
<td>Other (specify):</td>
<td></td>
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<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
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<tr>
<td>Other (specify):</td>
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</tr>
</tbody>
</table>

Additional comments:
Training

Is training provided within your organization or do you outsource it? Is it formal or informal training? (NOTE FOR INTERVIEWER: by “formal” we mean training has an objective, a variety of learning methods are used to reach the objective, and there is an evaluation component to determine if objective has been accomplished.)

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Formal</td>
<td>Informal</td>
</tr>
<tr>
<td></td>
<td>Formal</td>
<td>Informal</td>
</tr>
<tr>
<td>Internally (by your org./agency)</td>
<td></td>
<td></td>
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<tr>
<td>Externally (outsource)</td>
<td></td>
<td></td>
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<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
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<tr>
<td>Other (specify):</td>
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<td></td>
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<tr>
<td>Other (specify):</td>
<td></td>
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</tbody>
</table>

Additional comments:

What informal training methods are used?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentoring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ad hoc training sessions by staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group briefings/guest speakers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal communications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Web-based training and computer tutorials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Books and references</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
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<tr>
<td>Other (specify):</td>
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<tr>
<td>Other (specify):</td>
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</tbody>
</table>

Additional comments:
In what areas is **training** provided?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advocacy skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bilingual skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity building skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidentiality skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpersonal skills</td>
<td></td>
<td></td>
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<tr>
<td>Organizational</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service coordination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health care system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health insurance coverage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicaid, Medicare, SCHIP coverage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social services system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific diseases/health issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Does your organization participate in any *cooperative training sessions*? (That is, if a different organization hosts a training session, are CHWs from your organization invited to participate?)

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Host</td>
<td>Attend</td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Does your organization pay for trainings or do you require the CHWs to pay for their training?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paid for by the employer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paid for by the CHW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reimbursed to the CHW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

How often is *training* provided?

- [ ] Monthly
- [ ] Quarterly
- [ ] Annually
- [ ] Other (specify): _____________________

Have any problems been encountered in providing *training* for CHWs?

- [ ] Availability of trainers
- [ ] Cost of training
- [ ] Location of training sites (inaccessible, too far)
- [ ] Training offered in language that CHWs not comfortable with
- [ ] Other (specify): _____________________

Additional comments:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Certification

Are you aware of activity within your State regarding certification or licensing of CHWs?

☐ Yes, licensing
☐ Yes, certification
☐ Yes, other (specify): ______________________
☐ No

What are your thoughts about the values of certification to employers such as yourself?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

In TEXAS: Do you prefer hiring certified CHWs versus non-certified CHWs?

☐ Certified
☐ Non-certified
☐ Other (specify): ______________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

In TEXAS: Is it easy to find certified CHWs?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
In TEXAS: Are you aware of any obstacles to certification or re-certification?
Future – Goals and Sustainability

Now I would like to talk about your thoughts and concerns about the future utilization of CHWs in your organization. Please describe whether you believe that your organization will continue to employ CHWs in its programs as CHWs.

Does your organization plan to continue employing CHWs as part of its workforce?

☐ Yes
☐ No

Does your organization plan to expand the use of CHWs into other programs or departments within the organization?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes – expand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No – maintain at current level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No – decrease</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
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<td></td>
</tr>
</tbody>
</table>

Additional comments:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
If plan to expand, ask:
What programs or departments will CHWs be utilized in? (Compare these answers to prior answers on page 10—flip back to this section; show respondent that you are paying attention.)

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cancer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Outreach</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head Start</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Healthy Families</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Healthy Start</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypertension</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternal and Child Health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregnancy Prevention</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prevention</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WIC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Women's Health</td>
<td></td>
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<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
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<tr>
<td>Other (specify):</td>
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<td></td>
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<tr>
<td>Other (specify):</td>
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</tbody>
</table>

Additional comments:
____________________________________________________
____________________________________________________
____________________________________________________

155
Does your organization see any changes in roles/functions for CHWs over the next few years?

☐ Yes
☐ No

Additional comments:

Of the ways CHWs are utilized in your organization, which, in your estimation, are the most appropriate and productive assignments for CHW personnel?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient navigator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provider: services, screening, education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outreach/enroll/inform</td>
<td></td>
<td></td>
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<tr>
<td>Organizer/advocate</td>
<td></td>
<td></td>
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<tr>
<td>Part of a care team (extender)</td>
<td></td>
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<tr>
<td>Other (specify):</td>
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<tr>
<td>Other (specify):</td>
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<tr>
<td>Other (specify):</td>
<td></td>
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</tr>
</tbody>
</table>

Why? (Please explain):
What challenges or issues does your organization face in maintaining CHWs as part of its workforce? (Compare these answers to prior answers on page 30—flip back to this section; show respondent that you are paying attention.)

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
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</thead>
<tbody>
<tr>
<td>CHW services are not reimbursable</td>
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<tr>
<td>Lack of solidarity among CHW programs</td>
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<td>Lack of stable funding</td>
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<td>Lack of understanding about CHWs contributions to the community</td>
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<tr>
<td>Turnover due to low wages</td>
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<tr>
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<tr>
<td>Other (specify):</td>
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<tr>
<td>Other (specify):</td>
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<tr>
<td>Other (specify):</td>
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</tbody>
</table>

**Funding Sources, Reimbursement**

Based on current funding sources, how many more years of funding do you have available at this time for the program(s) which employ CHWs?

- □ Less than one year
- □ 1 year
- □ 2 years
- □ 3 years
- □ 4 years
- □ Other (specify): ___________________
What are your current funding sources for CHW programs?

Will current funding sources provide future funding?
- [ ] Yes
- [ ] No

If not, where will funding be sought?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th></th>
<th>Current</th>
<th>Future</th>
<th>Volunteer CHWs</th>
<th></th>
<th>Current</th>
<th>Future</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRSA/BPHC (comm. health centers)</td>
<td></td>
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<td></td>
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<tr>
<td>HRSA/ORH (rural health)</td>
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<td></td>
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<tr>
<td>HRSA/MCHB (maternal &amp; child health)</td>
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<td></td>
<td></td>
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<tr>
<td>HRSA/HIV-AIDS</td>
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<td></td>
</tr>
<tr>
<td>Other HRSA</td>
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<td>CHIP</td>
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<td>Medicaid</td>
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<td>Medicare</td>
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<tr>
<td>Block Grants</td>
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<td>State: ____________________________</td>
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<td>Local: _____________________________</td>
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<td>Other (specify):</td>
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<td>Other (specify):</td>
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<td>Other (specify):</td>
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</tbody>
</table>

Other Federal Categorical:
- Other HIV/AIDS
- WIC
- NIH
- EPA
- CDC
- Food stamps
- Head Start
- Child welfare
- Family planning
Has CHIP, Medicaid, or Medicare been considered (explored) as a funding source? What about private or public health insurance?

☐ Yes, CHIP (Children’s Health Insurance Program)
☐ Yes, Medicaid
☐ Yes, Medicare
☐ Yes, private health insurance
☐ Yes, public health insurance
☐ Other (specify): ___________________
☐ No

What was the outcome?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Summary

Ask question 1 if we know that respondent has not participated in survey:

1. You should have received an invitation to participate in the current CHW Programs Inventory…we are showing that you have not had a chance to participate (or complete it). Would you like to have an opportunity to complete it? I can have someone contact you about this, would that be okay? (If yes) Would you like to be contacted by phone or e-mail?

   Phone: (____) _____________     e-mail: ______________________

   One of the staff will contact you soon so that you are able to complete the online survey.

2. Do you have any other comments you would like to make about anything we have discussed today? If yes, note comments.

_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
**Closing Statement**

Thank you very much for participating in this interview. You are one of a select group of individuals from your state who have been asked to participate in this manner and to contribute to the national workforce study of community health workers. This study will use information provided by you and other informants in the State to draw a profile of the community health worker workforce. As with any workforce, an important part of this profile is learning about the experience that employers have had with CHWs. We truly thank you for taking the time out of your busy schedule to speak with me about your experience with CHWs.

If you have any questions following the conclusion of this interview, please feel free to contact the project's Principal Investigator, Dr. Antonio Furino at 210-567-3168.

Have a great day and thank you again for your time and participation.
Appendix E2: The Study Interviews - CHWs
Respondent’s Name: ____________________________________________

Agency/Organization: ___________________________________________

City: _______________________  Telephone Number: ________________

Is respondent:

☐ Paid employee

☐ Volunteer

☐ Other (specify): _____________________

Date of interview: May _____, 2006

Time of interview: _____ am / pm  to  _____ am / pm

Interviewer: ____________________________________________________
Introduction

Thank you for agreeing to participate in this interview.

You have been identified as one of a select group of individuals in Texas (Arizona, New York, Massachusetts) who has the opportunity to contribute to the first federally sponsored national workforce study of community health workers (CHWs). This unprecedented study will use information provided by you and other informants in the State to draw a profile of the community health worker workforce. An important part of this profile is learning about the experience of employers with CHWs.

During the interview, we will focus on four main areas: (1) the contributions that you, as a community health worker, have made/can make to the organization, (2) what skills are in demand and what positions are available within the organization for CHWs, (3) the demand for CHWs in your organization and any difficulties finding employment as a CHW, and (4) what is your experience and future expectation as a CHW within your organization.

Before we begin, I'd like to reassure you that your identity and the information you provide during this interview will be kept strictly confidential. (If asked, state: All information provided by you in the interview will be reviewed and analyzed by the research team and is confidential.)

Do you have any questions at this point?

We estimate this interview will take approximately 45 minutes of your time. Have I called you at a good time?

(If not, what time do we need to end and when can we call you again? ______)

If respondent has questions, ask: Would you like to discuss your questions with me or would you prefer to speak to the Principal Investigator?

If he/she requests to speak to the PI, state: You can contact the project's Principal Investigator, Dr. Antonio Furino, at 210-567-3168.
Profile of the Respondent

What is your current position in the organization?
☐ Community health representative
☐ Community health worker
☐ Lay outreach worker
☐ Promotor(a)
☐ Other (specify): _____________________

How many years have you worked in your current position? _____

Can you briefly describe your background working as a community health worker?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

NOTE TO INTERVIEWER: The following are questions that should be answered during the discussion. If he/she does not include this information, please ask the respondent:

How many years have you worked as a CHW? _____

How many programs have you worked for as a CHW? _____

Were these programs within the same organization? _____

________________________________________________________________________

Profile of the Organization

Is your agency a ___ (for) profit or ___ non-profit?
☐ 501c3 entity
☐ State agency
☐ Umbrella agency
☐ Other (specify): _____________________
What is the primary industry of your organization? (NOTE TO INTERVIEWER: CHW may not know the answer to this question.)

- 6111 – Elementary, secondary school
- 6113 – College or university
- 6211 – Offices of physicians
- 6214 – Outpatient care centers
- 6219 – Other ambulatory health care services
- 6221 – General, medical, surgical hospitals
- 6241 – Individual family services
- 6244 – Child, daycare services
- 8131 – Religious organizations
- 8133 – Social advocacy organizations
- 8134 – Civic advocacy organizations
- 9190 – Federal government (excluding postal services)
- 9290 – State government (excluding health, education)
- 9390 – Local government (excluding health, education)
- Other (specify): _____________________

Does the Health Resources and Services Administration provide funding for the CHW program(s)?

- Yes
- No

Which population is targeted for services by CHWs in your program?

- By health condition: _________
- By demographics: ___________
- Other (specify): _____________________

When did your organization first hire paid, or recruit volunteer, CHWs? Year _____

Do you have paid CHWs in your organization?

- Yes, how many: _________
- No

Do you have volunteer CHWs in your organization?

- Yes, how many: _________
- No

Do you have certified CHWs in your organization? (NOTE: Only applicable to Texas.)

- Yes, how many: _________
- No
**General - Profile of the CHW**

Now I would like to talk about community health workers in your organization. (NOTE FOR INTERVIEWERS: Interviewers will use the term "community health worker" throughout the interview to describe the workforce/employees. The employer may use any term that they would normally use to describe this workforce. For instance, lay health advisor; community health representative; and *promotor(a) de salud* would all be considered “community health workers” for the purposes of the National Workforce Study and for discussion during interviews.)

Is the term “community health worker” used in your organization to identify a certain type of employed personnel?

- [ ] Yes
- [ ] No

If not, what is the title used for positions filled by CHWs?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community health advocate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community health liaison</td>
<td></td>
<td></td>
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<tr>
<td>Family support worker</td>
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<tr>
<td>Lay outreach worker</td>
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<td></td>
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<tr>
<td><em>Promotor(a)</em></td>
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<tr>
<td>Other (specify):</td>
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<td></td>
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<tr>
<td>Other (specify):</td>
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<td></td>
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<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:


Job description

Please describe the work you perform as a CHW.

☐ I. Assistance in gaining access to medical services or programs
☐ I. Assistance in gaining access to social services or programs
☐ I. Building community capacity
☐ I. Building individual capacity
☐ I. Case management
☐ I. Community advocacy
☐ I. Counseling
☐ I. Cultural mediation
☐ I. Interpretation
☐ I. Mentoring
☐ I. Patient navigation
☐ I. Provide culturally appropriate health promotion/education
☐ I. Provide direct services
☐ I. Risk identification
☐ I. Social support
☐ I. Translation
☐ I. Transportation
☐ O. Conducting surveys of target population
☐ O. Enroll population into health insurance programs
☐ O. Determine eligibility for services
☐ O. Provide health screenings
☐ O. Refer population to health care system
☐ O. Refer population to social services system
☐ Other (specify): ____________________________________________________

Additional comments:

____________________________________________________________________

____________________________________________________________________

____________________________________________________________________

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____________________________________________________________________
Which departments, programs or projects in your organization have been employing you or fellow CHWs?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Self</th>
<th>Other CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetes</td>
<td></td>
<td></td>
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<tr>
<td>Cancer _________</td>
<td></td>
<td></td>
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<tr>
<td>Community Outreach</td>
<td></td>
<td></td>
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<tr>
<td>Head Start</td>
<td></td>
<td></td>
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<tr>
<td>Health education</td>
<td></td>
<td></td>
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<tr>
<td>Healthy Families</td>
<td></td>
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<tr>
<td>Healthy Start</td>
<td></td>
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<tr>
<td>HIV/AIDS</td>
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<tr>
<td>Hypertension</td>
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<tr>
<td>Maternal and Child Health</td>
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<tr>
<td>Pregnancy Prevention</td>
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<tr>
<td>Prevention</td>
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<tr>
<td>WIC</td>
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<tr>
<td>Women's Health</td>
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<tr>
<td>Other (specify):</td>
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<tr>
<td>Other (specify):</td>
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<tr>
<td>Other (specify):</td>
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</table>

Additional comments:

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________________________________________________________________________
Have you worked **alone or as part of a team**? (Describe work settings as well).

Do you know if fellow (other) CHWs work **alone or as part of a team**?

<table>
<thead>
<tr>
<th></th>
<th>Self</th>
<th>Other CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part of team</td>
<td></td>
<td></td>
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<tr>
<td>Other (specify):</td>
<td></td>
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</tbody>
</table>

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If you have worked as part of a team, who are the other **team members**?

What about **other CHWs** that you know of?

<table>
<thead>
<tr>
<th><strong>Possible answers:</strong></th>
<th>Self</th>
<th>Other CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case manager</td>
<td></td>
<td></td>
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<tr>
<td>Health educator</td>
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<td></td>
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<tr>
<td>Nurses</td>
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<tr>
<td>Nutritionist</td>
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<tr>
<td>Other CHWs</td>
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<td>Other (specify):</td>
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<td>Other (specify):</td>
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<tr>
<td>Other (specify):</td>
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</table>

Additional comments:

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Qualifications

Knowledge

What knowledge base did your employer require when you were hired as a CHW? What do other employers that you know about require?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Current Employer</th>
<th>Other Employers</th>
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</thead>
<tbody>
<tr>
<td>CHW roles and functions</td>
<td></td>
<td></td>
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<tr>
<td>Community</td>
<td></td>
<td></td>
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<tr>
<td>General health</td>
<td></td>
<td></td>
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<tr>
<td>Health care system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health insurance coverage</td>
<td></td>
<td></td>
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<tr>
<td>Medicaid, Medicare, SCHIP</td>
<td></td>
<td></td>
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<tr>
<td>Social services system</td>
<td></td>
<td></td>
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<tr>
<td>Specific diseases/health issues</td>
<td></td>
<td></td>
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<tr>
<td>Other (specify):</td>
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<td>Other (specify):</td>
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<tr>
<td>Other (specify):</td>
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Additional comments:

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Skills

What skills did your employer, or others you know about, require when you were hired as a CHW? Is there a minimum set of skills that employers are looking for?

<table>
<thead>
<tr>
<th>Skills</th>
<th>Paid CHWs</th>
<th></th>
<th>Volunteer CHWs</th>
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</thead>
<tbody>
<tr>
<td>Advocacy skills – ability to &quot;speak up&quot; for patients and communities to overcome barriers, act as intermediary with bureaucracy</td>
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<tr>
<td>Bilingual skills – be fluent in the preferred language of clients, translate technical terms</td>
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<tr>
<td>Capacity building skills – empowerment skills; leadership skills; influence communities and individuals to change behavior and take more control of their own health</td>
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<tr>
<td>Communication skills – ability to listen, use oral &amp; written language confidently</td>
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<tr>
<td>Computer skills</td>
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<tr>
<td>Confidentiality skills – ability to keep matters private, comply with HIPAA laws</td>
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<tr>
<td>Interpersonal skills – friendliness, sociability, counseling &amp; relationship building skills, ability to provide support and set appropriate boundaries</td>
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<tr>
<td>Organizational skills – ability to set goals and develop an action plan, manage time, keep records</td>
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<tr>
<td>Service coordination skills – ability to identify &amp; access resources; network &amp; build coalitions; make and follow-up on referrals</td>
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<tr>
<td>Teaching skills – ability to share information, respond to questions &amp; reinforce ideas, adapt methods to various audiences</td>
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<tr>
<td>Other (specify):</td>
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<tr>
<td>Other (specify):</td>
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</tbody>
</table>
Are different positions available for different skills levels as a CHW in your organization?

<table>
<thead>
<tr>
<th></th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
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<tr>
<td>No</td>
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</table>

Do you believe there are sufficient openings/opportunities for CHWs who have the minimum qualifications?

<table>
<thead>
<tr>
<th></th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
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<tr>
<td>No</td>
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</tbody>
</table>

Additional comments:
Do you believe there are sufficient openings/opportunities for experienced CHWs?

<table>
<thead>
<tr>
<th></th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
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</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
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<tr>
<td>No</td>
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</table>

Additional comments:

______________________________________________________________________

Cultural competence

(NOTE FOR INTERVIEWERS: Following is a description of “cultural competence” that can be used to describe the term to respondent.) Now I would like to ask you about a quality that is often attributed to CHWs—that is, I’d like to talk about cultural competence. *Cultural competence may be defined as the ability of understanding and working within the context of the culture of the community being served.*

Do you agree with this general definition?

☐ Yes

☐ No

Would you define “cultural competence” differently?

☐ Yes

☐ No
If so, how would you define it?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>they live/have lived there for some time</td>
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<tr>
<td>they grew up there</td>
<td></td>
</tr>
<tr>
<td>they are accepted as part of the community even if they are new here</td>
<td></td>
</tr>
<tr>
<td>they are already known and trusted by people in this community</td>
<td></td>
</tr>
<tr>
<td>they have had similar life experiences to people in this community</td>
<td></td>
</tr>
<tr>
<td>they come from a similar cultural background</td>
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<tr>
<td>they understand some aspect of the disease</td>
<td></td>
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<tr>
<td>Other (specify):</td>
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<tr>
<td>Other (specify):</td>
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<tr>
<td>Other (specify):</td>
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Additional comments:

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How important is it that a CHW **be culturally competent**?

<table>
<thead>
<tr>
<th>Score</th>
<th>Culturally competent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-- Not important</td>
<td></td>
</tr>
<tr>
<td>2-- Somewhat important</td>
<td></td>
</tr>
<tr>
<td>3-- Important</td>
<td></td>
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<tr>
<td>4-- Very important</td>
<td></td>
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<tr>
<td>5-- Extremely important</td>
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</tbody>
</table>
Now, “cultural competence” is sometimes viewed in terms of “membership” of CHWs in the community they are serving. How important is it that a CHW be from the **community** in which he/she works?

<table>
<thead>
<tr>
<th>Score</th>
<th>From community</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-- Not important</td>
<td></td>
</tr>
<tr>
<td>2-- Somewhat important</td>
<td></td>
</tr>
<tr>
<td>3-- Important</td>
<td></td>
</tr>
<tr>
<td>4-- Very important</td>
<td></td>
</tr>
<tr>
<td>5-- Extremely important</td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:
In your opinion, if an experienced CHW, from a different community, applied for an available opening, should he/she be hired and why? That is, how would his/her suitability for hire be evaluated if he/she is not from the target community?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Suitability</th>
</tr>
</thead>
<tbody>
<tr>
<td>No—we only hire (agencies should only hire) actual community members</td>
<td></td>
</tr>
<tr>
<td>Yes—if they are accepted or seen as part of the community, even if they are new</td>
<td></td>
</tr>
<tr>
<td>Yes—if they are already known and trusted by people in the community</td>
<td></td>
</tr>
<tr>
<td>Yes—if they come from a similar cultural background</td>
<td></td>
</tr>
<tr>
<td>Yes—if they have already worked in the community for some time</td>
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<tr>
<td>Other (specify):</td>
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<tr>
<td>Other (specify):</td>
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<tr>
<td>Other (specify):</td>
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</tbody>
</table>

Additional comments:

__________________________________________________________________________

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__________________________________________________________________________
**Demand for CHWs (Why the organization uses CHWs)**

Why does your organization, or other organizations you know of, **employ** CHWs?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Current Employer</th>
<th>Other Employers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding source requirement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHWs are viewed as cost effective resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CHWs are connected to/”know” the target population</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest by management to test the CHW/promotora model</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

178
Why are CHWs important to your organization or other organizations you know of? (In other words, what do CHWs contribute that makes them different from other workers?) Which of these are the key factors?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Current Employer</th>
<th>Key?</th>
<th>Other Employers</th>
<th>Key?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can help reach clients who couldn’t be reached before</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helped improve communication between providers and clients</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program/services are now more responsive to community’s needs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________
What factors, external to your organization, appear to induce the hiring of CHWs? Which of these are the key factors?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Current Employer</th>
<th>Key?</th>
<th>Other Employers</th>
<th>Key?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic conditions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Funding streams</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catchment areas</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

In your opinion, are there different external or factors that induce the employment of paid versus volunteer CHWs? Please describe.

☐ Yes
☐ No
Do volunteer CHWs perform the same duties as paid CHWs in organizations where volunteer and paid workers are employed?

☐ Yes
☐ No

What motivates you or you fellow CHWs to seek a paid or a volunteer position?

__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
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__________________________________________________________________________
__________________________________________________________________________

Given the availability of both, which position would you or other CHWs prefer most often and why?

☐ Paid
☐ Volunteer
**Employment Experience**

Which **strategies** have you or other CHWs used to locate paid or volunteer positions?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Self</th>
<th>Other CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment agencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Networking, word-of-mouth</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Referrals from ________________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

Are you aware of any **obstacles** to finding CHW positions?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Self</th>
<th>Other CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of funding</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lack of positions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not a legal resident</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:
Does your organization (others you know of) use formal incentives to attract CHWs?

Does your organization (others you know of) use formal incentives to retain CHWs?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Current Employer</th>
<th>Other Employers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Attract</td>
<td>Retain</td>
</tr>
<tr>
<td>Academic credit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adding fringe benefits</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bonus (monetary)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Certificate from program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company vehicle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conference participation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Graduation ceremony</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Program awards or other recognition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promotions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wage increase</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
During your career as a CHW, have you ever worked as a volunteer CHW rather than as a paid employee?
- ☐ Yes, for how long? _________. If yes, go to next question.
- ☐ No. If no, skip next question.

If yes, ask:
Is there any difference between the work you have performed as a volunteer CHW and the work you have performed as a paid employee? (If yes, ask for explanation.)
- ☐ Yes
- ☐ No

If yes, note explanation
_____________________________________________________________
_____________________________________________________________
_____________________________________________________________
_____________________________________________________________
_____________________________________________________________
_____________________________________________________________
_____________________________________________________________
In which assignments have you worked as a CHW?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>As Paid CHW</th>
<th>As Volunteer CHW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient navigator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provider: services, screening, education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outreach/enroll/inform</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizer/advocate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part of a care team (extender)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Why? (Please explain):

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Do you think you were sufficiently prepared to carry out these assignments?

☐ Yes
☐ No

Additional comments:
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Do you think you were underutilized in these assignments?

☐ Yes
☐ No

Additional comments:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

What minimum job performance requirements are usually expected of you or other CHWs by your employer?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
Career Ladders

Are there formal career ladders available for CHWs within your organization? (NOTE FOR INTERVIEWER: By “formal” we mean sequential titles involving progressively higher responsibilities and compensation available)

<table>
<thead>
<tr>
<th></th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If yes, what advancements are available? ______________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
Training

Are trainings held by your employer for CHWs? Do you receive trainings from outside your organization? Do you receive formal or informal training for your job as a CHW? (NOTE FOR INTERVIEWER: by “formal” we mean training has an objective, a variety of learning methods are used to reach the objective, and there is an evaluation component to determine if objective has been accomplished.)

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internally (by your org./agency)</td>
<td>Formal</td>
<td>Informal</td>
</tr>
<tr>
<td>Externally (outsourc_e)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

What informal training methods are used?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentoring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ad hoc training sessions by staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group briefings/guest speakers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internal communications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Web-based training and computer tutorials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Books and references</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
In which areas are trainings available?

What training have you actually received?

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Available</th>
<th>Received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advocacy skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bilingual skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capacity building skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Confidentiality skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpersonal skills</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizational</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service coordination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General health</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health care system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health insurance coverage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicaid, Medicare, SCHIP coverage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social services system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specific diseases/health issues</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify):</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
How did this training help you?
- □ Helped CHW obtain a better job (advancement)
- □ Helped CHW obtain better pay (increase in wages)
- □ Helped CHW feel more comfortable in performing duties as a CHW
- □ Other (specify): ____________________

Does your organization participate in any cooperative training sessions? (That is, if a different organization hosts a training session, are CHWs from your organization invited to participate?)

<table>
<thead>
<tr>
<th>Possible answers:</th>
<th>Paid CHWs</th>
<th>Volunteer CHWs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Host</td>
<td>Attend</td>
</tr>
<tr>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional comments:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Certification

Are you aware of activity within your State regarding certification or licensing of CHWs?

☐ Yes, licensing
☐ Yes, certification
☐ Yes, other (specify):____________________
☐ No

What are your thoughts about the values of certification to CHWs such as yourself?

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

In TEXAS: Have CHWs encountered any obstacles in obtaining certification (or re-certification)?

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

Additional comments:

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________

________________________________________________________________________________
Future – Goals and Sustainability

Do you plan to continue your work as a CHW with your current employer?
☐ Yes
☐ No

Additional comments:
________________________________________________________
________________________________________________________

Is there a good chance that the program you are working in will continue?
☐ Yes
☐ No

Additional comments:
________________________________________________________
________________________________________________________

How long do you think the program will continue to operate?
☐ Less than one year
☐ 1 year
☐ 2 years
☐ 3 years
☐ 4 years
☐ Other (specify): _____________________
Summary

Do you have any other comments you would like to make about anything we have discussed today? If yes, note comments.

_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________
Closing Statement

Thank you very much for participating in this interview. You are one of a select group of individuals from your state who have been asked to participate in this manner and to contribute to the national workforce study of community health workers. This study will use information provided by you and other informants in the State to draw a profile of the community health worker workforce. As with any workforce, an important part of this profile is learning about the experience that the workers themselves have had. We truly thank you for taking the time out of your busy schedule to speak with me about your experience as a CHW.

If you have any questions following the conclusion of this interview, please feel free to contact the project's Principal Investigator, Dr. Antonio Furino at 210-567-3168.

Have a great day and thank you again for your time and participation.
Appendix F: Health Issues in Literature Reviews
Appendix F. Health Issues Addressed in Selected Articles in Published Literature Reviews

Table F.1 organizes a selection of articles from the nine reviews included in Chapter 6 by author, date of publication, and health issue addressed.

Table F.1 Published Literature Included by Author and Content

<table>
<thead>
<tr>
<th>Author, Year</th>
<th>Authors of Literature Reviews</th>
<th>Diabetes</th>
<th>Heart</th>
<th>MCH</th>
<th>Women - Cancer</th>
<th>Other Health Issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andersen 2000</td>
<td>L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Arlotti 1998</td>
<td>A</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td>Breastfeeding</td>
</tr>
<tr>
<td>Barnes 1999</td>
<td>L</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td>Immunizations</td>
</tr>
<tr>
<td>Barnes-Boyd 2001</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barth 1991</td>
<td>L, P</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Child abuse prevention</td>
</tr>
<tr>
<td>Batts 2001</td>
<td>A</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bird 1998</td>
<td>A, S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Birkel 1993</td>
<td>H, S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>HIV</td>
</tr>
<tr>
<td>Black 1995</td>
<td>L, S</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bone 1989</td>
<td>B, S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Child development (NOFTT)</td>
</tr>
<tr>
<td>Bradley 1994</td>
<td>P, S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bray 1994</td>
<td>A</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bridges 2000</td>
<td>H</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>ER follow-up</td>
</tr>
<tr>
<td>Brooks-Gunn 1989</td>
<td>S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brown 1995, 2002</td>
<td>H, No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burhansstipanov 2000</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butz 1994</td>
<td>Ne, S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Asthma</td>
</tr>
<tr>
<td>Caulfield 1998</td>
<td>A,L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CDC 1999</td>
<td>S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>HIV</td>
</tr>
<tr>
<td>Ctr for Future of Children 1999</td>
<td>H</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Child development</td>
</tr>
<tr>
<td>Conway 2004</td>
<td>Na</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Smoking</td>
</tr>
<tr>
<td>Corkery 1997</td>
<td>A, Ne, No, S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Daaleman 1997</td>
<td>P</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dennison 2003</td>
<td>B</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dignan 1996, 1998</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Duan 2000</td>
<td>L</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Earp 2002</td>
<td>A</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fedder 2003</td>
<td>B, No</td>
<td>Yes</td>
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(1) A=Andrews; B=Brownstein; H=HRSA; L=Lewin; Na=National Fund for Medical Education; Ne=Nemcek; No=Norris; P=Persily; S=Swider
Appendix G: Selected Profiles
Appendix G. Additional Program Profiles in Arizona, Massachusetts, New York, and Texas

Arizona

Mariposa Community Health Center, Center of Excellence in Women’s Health

Location: Santa Cruz County, Arizona

Services provided by CHWs: Goal is to improve the health and social well-being of women. Strategy for achieving the goal and objectives is a strong linkage between clinic services and health promotion efforts. CHWs deliver health education, and work on community mobilization through neighborhood-based outreach to engage women, in partnerships and collaborative efforts in order to reduce health disparities and increase access to care. Information is available in Spanish and services are free. Baby-sitting and transportation assistance are also provided to decrease barriers of access to care. Plans for the replication of some programs developed in the Center of Excellence in Women’s Health are under way at the El Rio Community Health Center in Tucson, Arizona.

Arizona Health Start

Location: Statewide

Services provided by CHWs: Lay health workers provide education, support, and advocacy services to pregnant and postpartum women and their families. Nurses and social workers provide oversight as families receive home visits and case management services. Families are monitored through the enrolled child’s second year of life. Goals of the program are to prevent low birth weights in infants, to increase care for high-risk pregnant women, to ensure that every child in the program is appropriately immunized and has a medical home, to provide health education to women and their families on topics ranging from prenatal care to proper child care and safety, and, finally, to screen for early identification of developmental delays and make appropriate referrals. According to the Web site, 39 community health workers completed 9,718 visits during 2004 (average of 4.5 visits per client) and documented that 94 percent of two-year old children had been properly immunized.

Luchando Contra el SIDA, Campesinos Sin Fronteras (CSF)

Location: Yuma County, Arizona

Services provided by CHWs: Volunteer promotores provide information, counseling, and referrals on HIV/AIDS and other sexually transmitted diseases. Promotores go into the fields with the farmworkers, facilitate the community’s linkage with local social service and health programs, and perform follow-up for the services provided. All


outreach and education, including content of presentations, literacy level, and language, is sensitive to farmworkers’ working conditions and culture. Promotores have also been able to mediate for the health care system to assist farmworkers with HIV counseling and testing services, scheduling appointments, facilitating transportation, as well as translation and buffering costs. In addition, they contact and refer farmworkers at high risk for HIV infection for HIV counseling and testing. Promotores have developed innovative ways to educate the community, including a play on HIV/AIDS, two fotonovelas that discuss the importance of condom use, and an appealing distribution of condoms inside of paper flowers.

Massachusetts

Action for Boston Community Development, Inc. (ABCD, Inc.); 4 two programs highlighted: Entre Nosotras (Between Us) and Boston Family Planning

Location: Boston, Massachusetts

Services provided by CHWs:

Entre Nosotras: A community-based peer educator program takes place in locations like beauty salons and private homes; provides risk reduction education about reproductive and sexual health, domestic partner violence, and healthy relationships to Latina women between the ages of 18 and 45. The program used both paid and volunteer staff as part of the peer network. 5

Boston Family Planning: Trained reproductive health and sexuality educators hold workshops and programs for women, teens, men, and parents in community settings. They provide sexual health education and counseling as well as promote informed sexual and reproductive choices. The family planning community outreach initiatives included outreach education in schools, faith-based programs, prisons and pre-release programs, community agencies, and after-school programs.

The Bowdoin Street Health Center

Location: Dorchester, Massachusetts

Services provided by CHWs: In the past, CHWs worked as generalists, acting as links for the neighborhood population to various city services. A change from the generalist model occurred when funding streams changed roles and functions (grants were now issue-oriented). Several of the CHWs worked in individual specialty health areas: a childhood obesity program with an objective of involving youth in sports and increasing their physical activity; an environmental justice and safety program, visiting auto shops in the area and working with employers on workplace safety; and an initiative involving local schools to reach at-risk children and families. In addition, some of the workers at the Bowdoin Street Clinic were called CHWs, outreach workers, or family advocates. The Bowdoin Street Clinic had five CHWs, a family advocate for domestic abuse clients, a family planning/tobacco outreach worker, and two other outreach workers funded through a recent diabetes prevention and management grant. Clients served by the diabetes outreach workers were identified through the clinic as either having diabetes or


being at risk for developing diabetes. CHWs made home visits to these patients.\textsuperscript{6} Two of the CHWs at the clinic remained in generalist roles working on a range of issues from public safety to community organizing. A main objective of CHWs at the clinic was to assure that each client had a primary care medical provider who was accessed regularly either at the Bowdoin Street Clinic or elsewhere. Outreach workers participated in family outreach days and health fairs.

\textbf{The Boston Housing Authority (BHA)}

\textbf{Location:} Boston, Massachusetts

\textbf{Services provided by CHWs:} Residents from housing developments throughout the city were able to take part in the Resident Health Advocate (RHA) program. Objectives of the program were to provide intensive training\textsuperscript{7} for health advocates, to create linkage between residents and the health resources in the community, and to foster both individual and public health prevention and wellness. RHAs created and distributed health materials, scheduled meetings with community organizations and tenant groups, accomplished some surveying of tenants for needs assessments, and participated in information sharing and referrals for individual residents in their assigned housing development.\textsuperscript{8} RHAs also attended appointments for social or health services with residents,\textsuperscript{9} and assisted families in obtaining appropriate health resources through health education and referrals during their six- to eight-month commitment.\textsuperscript{10} The outreach activities of the RHAs included participation and planning for community events (similar to block parties), which were scheduled throughout the summer, and traveling community health fairs. This provided the RHAs with visibility in their communities of interest.\textsuperscript{11}

\textbf{Massachusetts Department of Public Health (MDPH), program highlighted:} Refugee and Immigrant Health Program\textsuperscript{12}

\textbf{Location:} Statewide

\textbf{Services provided by CHWs:} The current refugee program was based in the Massachusetts Bureau of Communicable Disease Control. The program continued to utilize an international model using indigenous health workers whose focus included management of tuberculosis (TB) and Hepatitis B, and HIV and STD education, management, and prevention. After screening and identification of newly arrived immigrant and refugee populations, community outreach educators (COEs) employed by the program worked with local public health nurses from the city or town in which the case was managed to assure that identified refugees were treated. The nurse provided

\textsuperscript{6} Ibid.

\textsuperscript{7} Resident Health Advocate Program [Internet]. Boston (MA): Boston Housing Authority; 2000 [cited 2006 Nov 08]. Available from http://www.bostonhousing.org/detpages/deptinfo139.html. Note: Participants in the program train on many topics, including: health assessment models, leadership skills, cultural competence, outreach education, navigating the health care system, asthma, first aid, nutrition for life, mental health, depression, stress, and STDs.

\textsuperscript{8} CHW/NWSI (2006).

\textsuperscript{9} Ibid.


\textsuperscript{11} CHW/NWSI (2006).

needed clinical services and the COEs offered education, translation, and other needed services. COEs followed those who were served until the prescribed course of treatment was completed. Services provided by the COEs in the immigrant and refugee program were generally health focused. COEs acted as both navigator and interpreter. Community outreach educators in the program including workers who spoke Vietnamese, Cambodian, Laotian, Haitian Creole, Spanish, Arabic, Somali, French Swahili, Liberian, Russian, Ukrainian, Bosnian, and Moldavian.

**North End Outreach Network (NEON)**

**Location:** Springfield, Massachusetts

**Services provided by CHWs:** Community health advocates (CHAs) performed door-to-door outreach in one or two assigned geographic zones. Each CHA was also assigned a school in the neighborhood and worked with the youth and families from that school. If a child was truant, the school would make a referral to NEON. The CHA would then visit the family to discover if any assistance was needed and to address the importance of school attendance. Although the original purpose of the organization was to improve health outcomes in the neighborhood, the organization had taken a wraparound approach to its mission. NEON was interested in all elements that made a family healthy, strong, and secure including education and literacy, employment, housing, public safety, and anything that would stabilize the neighborhood. Until recently, CHAs worked alone, but they were now required to work in pairs. CHAs were expected to be in the field at least four hours each day making connections with families, building trust, doing informal assessments, and discussing services available in the community. Once the connection with NEON had been made, CHAs followed families to assure appropriate referrals to agencies were made and services were provided. CHWs developed caseloads of families that were visited repeatedly. Most clients were found through community outreach, but some were walk-ins to the NEON offices. Many patients referred to the health clinic and became the outreach arm for a wide variety of community agencies.

**HealthFirst Family Care Center**

**Location:** Fall River, Massachusetts

**Services provided by CHWs:** Each CHW was employed to promote the health center and its programs through attendance at community events such as health fairs. These workers also made educational presentations about the clinic and its services to church groups, other clinics, and to hospitals. In addition to providing community outreach, the interpreter/outreach worker also worked as a patient navigator for some clients, accompanying them to medical appointments. The outreach workers were liaisons between the clinic and the community whose primary function was advocacy and education about the health clinic so that community residents would come to the center. The WIC community coordinator in the clinic was trilingual in Spanish, Portuguese, and English and recruited women from the community to the WIC program.

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13 Ibid.
Beth Israel Deaconess Hospital\textsuperscript{17}

\textbf{Location:} Boston, Massachusetts

\textbf{Services provided by CHWs:} Community resource specialists were employed as patient navigators, targeting breast cancer and prostate cancer patients, to help clients navigate the health care system through all stages of care.\textsuperscript{18} Community outreach at public events such as health fairs was also a strategy for recruiting patients to the program. Community resource specialists were hospital-based and traveled to patient homes only on rare occasions. Resource specialists acted as liaisons between the community and the hospital linking patients to both health and community services. They negotiated transportation, housing, insurance, food stamps, and clothing for patients. There was no time limit on length of service, and a patient received help from the resource specialist as long as required. Resource specialists carried caseloads of 20 to 25 patients at any time and touched on every kind of health issue. Although their work was primarily one on one, the resource specialists worked as part of clinical teams that included physicians, nurse practitioners, and nurses as well as social workers, physical therapists, and occupational therapists.

New York Health Plus\textsuperscript{19}

\textbf{Location:} Brooklyn, New York

\textbf{Services provided by CHWs:} Patients were helped through the health care system and were provided community education and target information about immunization and prenatal care. There was a focus on advocacy, patient empowerment, and health translation services. CHWs represented 23 different cultures and spoke 16 different languages (all were fully bilingual) including Creole, Russian, Chinese, Spanish, Albanian, Polish, Urdu, Nepalese, Arabic, and Korean, among others.

Community Action for Prenatal Care Initiative (CAPCI or CAPC), programs highlighted: CAPCI programs in the South Bronx and Buffalo

\textbf{Location:} Vary, see below

\textbf{Services provided by CHWs:} Model of delivery varies with each coalition.\textsuperscript{20} **CAPCI Program in the South Bronx:** Bronx Lebanon Hospital manages the CAPCI program in the South Bronx and contracts with 15 local community-based organizations to provide intervention, education, and referral services in a seven ZIP Code area for pregnant women at high risk for HIV and HIV transmission to their newborns. The 38 outreach workers in the program are employed by the various contracting community organizations. Clients are often women with histories of substance abuse, mental illness, incarceration, prostitution, or developmental disabilities who are provided with intensive intake, referral, and follow-up services. The program works with 11 hospitals and health centers in the Bronx. **CAPCI Program in Buffalo, New York:** Is housed with other member programs of the Buffalo Prenatal-Perinatal Network, sharing office and administrative resources with the Community Health Worker Program, the Healthy

\textsuperscript{17} Ibid.


\textsuperscript{19} CHW/NWSI (2006).

\textsuperscript{20} Ibid.
Families America Program, the Buffalo Home Visiting Program, and the Lead Safe Interim Housing Program. The program targets at-risk women in specific ZIP Codes for street outreach and home visiting. Outreach workers were employed directly by the Buffalo CAPCI Program, although referrals were made after intake to a number of community provider organizations. The CAPCI Program collaborates with the Erie County Department of Health, Hispanics United, the Women’s Health Peer Initiative, Group Ministries, Kaleida Health, and other local agencies and health providers to link at-risk women to prenatal care. The program operates a 24-hour hotline and completes intakes on more than 200 women each year. There is a large Latino population in the catchment area as well as some refugee settlements including Somalian immigrants. The program also has a 12-member consumer advisory group.

**Church Avenue Merchants Block Association (CAMBA)**

**Location:** Brooklyn, New York

**Services provided by CHWs:** Provided health education and outreach services to improve residents’ access to primary care. Currently, CAMBA has two home visiting programs with a maternal and child health focus (MCH); one is a Healthy Families America Program and the other is a Community Health Worker Program funded by the New York State Department of Health. Both employ home visitors focused on better health outcomes for families. CHWs do street outreach in local businesses such as beauty salons. Once identified, clients complete an assessment and intake process, and help build action plans for their families. Workers accompany clients as needed to obtain public assistance or food stamps, etc. Home visiting is an important part of the MCH programs as it permits the client to share problems with the workers. Depending on the program in which they are enrolled, clients receive services prior to birth and for a year or longer after birth.

**Oak Orchard Community Health Center**

**Location:** Brockport, New York

**Services provided by CHWs:** Bilingual, bicultural health promoters were recruited from a migrant community to work with migrant Mexican farmworkers in three counties designated as Health Professional Shortage Areas in upstate New York. With funding from the New York State Department of Health, the program used a mobile van to transport health providers and promoters to migrant camps. Workers were trained over a two-month period in basic health management, screening, and treatment. The curriculum also covered issues such as domestic violence, parenting skills, lead screening, nutrition, substance abuse, prenatal care, as well as Medicaid eligibility and application. The success of health promoters with respect to a TB program in the mid-1990s was attributed to the good relationships of the health promoters with the target community, their

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concerted efforts to reach all migrant workers, and the ability of the promotors to work with the clinical health care team.25

**Texas**

**Gateway to Care** (also a certified CHW training institution)

**Location:** Houston, Texas

**Services provided by CHWs:** Navigators were responsible for helping people find and understand how to use a “Health Home.” They performed a combination of services associated with case management, such as outreach, eligibility determination, health promotion, referral, advocacy, and facilitation of service coordination. Navigators provided “cultural linkages between communities and health care providers.” Explicit goals were to encourage individuals to seek services “at the lowest level of care,” utilize services that “promote health and prevent disease,” and improve patient-provider communication, as well as reduce inappropriate emergency room visits. Navigators were also responsible for assisting individuals in obtaining non-health care services and development of family preventive care plans.

**Migrant Health Promotion, REACH 2010 Promotora Community Coalition Model**26

**Location:** Rio Grande Valley (Cameron and Hidalgo Counties), Texas

**Services provided by CHWs:** REACH 2010 Promotora Community Coalition Model: Promotores supported changes in physical activity as well as improved nutrition that helps to control or prevent Type 2 diabetes. Three settings in which promotores performed their work were: schools, clinics, and colonias. School-based promotores conducted group education sessions and one-on-one encounters regarding diabetes, nutrition, and physical activity. They also met regularly with school-based teams to assess and implement changes with respect to physical activity, nutrition, and diabetes education among students. Clinic-based promotores conducted periodic home visits with current diabetic patients and educated the patients’ family/friends with respect to diabetes, nutrition, and physical activity. Community-based promotores, those working in the colonias, conducted home visits to educate the community about diabetes, nutrition, physical activity, and health/social services; provided training to residents about healthy cooking; and organized monthly community meetings to identify and implement system changes that supported healthy lifestyles.

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De Madres a Madres

Location: Houston, Texas

Services provided by CHWs: The focus was on perinatal health and facilitating the application process for Medicaid eligibility. CHWs promoted mother-to-mother support for at-risk, predominantly Hispanic women, children, and families through education and self-empowerment. CHWs encouraged women to seek prenatal care, and home visits to pregnant mothers occurred at least once per month. Infants and children were followed by CHWs until the age of three on a monthly basis.

CHRISTUS Spohn Health System

Location: Nueces County, Texas

Services provided by CHWs: CHWs were assigned to one of three settings: the emergency department (ED), hospital floor, and primary care center. The emergency department-based worker used “patient satisfaction techniques” to establish a relationship with patients and arrange a follow-up visit to educate them about alternative options to the emergency room. Program descriptions noted that follow-up care was generally needed after an ED visit and that this intervention promoted continuity of care. Benefits to Spohn were evident in that emergency department staff requested expansion of the program. Hospital floor CHWs again focused primarily on patient satisfaction and seeing that all patient needs were met. The CHW linked the patient to the "appropriate problem solver," which was equivalent to becoming an internal advocate (as other CHWs are advocates with agencies outside of their own). The CHW offered "a theoretical companion from the emergency room to the unit and on to the family health center, their source of primary care." The workers based in the primary care center had some home visiting roles, but mainly focused on medication compliance. Center-based workers also spent the first hour of each morning and afternoon taking vital signs in order to help the care team get the center’s workflow started efficiently. There was a core of common tasks for each of the three CHW models. All were expected to make phone contacts with certain groups of patients: the previous day’s patients in the emergency room, no-shows, and frequent fliers. Part of the common role of all three types of worker was internal referrals. All three settings for the community health workers placed relatively low emphasis on home visits as a technique.

City of Fort Worth Public Health Department (also a certified CHW training institution)

Location: Fort Worth, Texas

Services provided by CHWs: CHW duties included home visits, data collection, assistance in planning, investigation of resident concerns, articulation of community needs, and increasing collaboration between the department and community agencies. According to the City’s Web site, the benefits of CHWs were not isolated from those of

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28 Rush CH. Conversation with: Bert Ramos (Director CHRISTUS Spohn Family Health Center- Westside). 2006 May 01.


30 As of June 2006.
the rest of the team, but included "determining the impact of health care activities on the overall health status of the community by collecting statistical data and helping to assure the quality of services." Examples of other CHW activities were social service evaluations, following up on elevated blood lead levels, assisting families in obtaining preventive services, arranging for interpreters and transportation, assisting in planning programs and interventions, and serving as a voice for residents and acting to decrease health disparities. A more recent initiative of the Outreach Teams was the Congregational Health Promoter Program, which educated residents to be volunteer "health promoters" based in faith communities. Following standardized training, volunteers worked to identify health needs of their communities and find resources to meet those needs, which might involve setting up a health screening through the local hospital district or an immunization event for seniors to receive flu shots.
Appendix H: Associations
Appendix H. Selected CHW Associations and Networks

The associations and networks included in this Appendix are those that were identified during the research for this study and are not intended to be comprehensive of all the associations and networks currently in existence.

A. National CHW Networks and Organizations

1. The Community Health Worker Special Primary Interest Group
   The American Public Health Association
   Washington, D.C.
   http://www.apha.org
   Phone: (202) 777-2742

2. The Center for Sustainable Health Outreach, The University of Southern Mississippi
   Hattiesburg, Mississippi
   http://www.usm.edu/csho/
   Phone: (601) 266-5903

3. Harrison Institute for Public Law
   Georgetown University Law Center
   Washington, D.C.
   http://www.law.georgetown.edu/clinics/hi/ClientsProjects-HealthPolicy.htm
   Phone: (202) 662-4229
   Contact person: Jackie Scott

4. Community Health Worker National Network Association
   Western Area Health Education Center System
   Yuma, Arizona
   http://www.chwnna.org/
   Phone: (877) 743-1500

5. National Association of Community Health Representatives
   http://chrtriennial.com/index.htm
   Phone: (520) 383-6200
   Contact person: Cynthia Norris

B. State CHW Networks and Organizations

Arizona
Arizona Community Health Outreach Workers Network (AzCHOW)
http://www.publichealth.arizona.edu/azchow/
Phone: (928) 627-1060
Contact person: Flor Redondo
California
Community Health Worker/Promotoras Network
Vision y Compromiso
El Cerrito, California
Phone: (510) 232-7869

Florida
REACH-Workers – the Community Health Workers of Tampa Bay
Tampa, Florida
Phone: (727) 588-4018

Maryland
Community Outreach Workers Association of Maryland, Inc. (COWAM)
Baltimore, Maryland

Massachusetts
Massachusetts Community Health Worker (MACHW) Network
University of Massachusetts Office of Community Programs
Shrewsbury, Massachusetts
http://www.mphaweb.org
Phone: (508) 856-3255

Michigan
Michigan Community Advocate Association (MICAA)
Grand Rapids, Michigan
Phone: (616) 356-6205
Contact person: Lisa Marie Fisher

Minnesota
Minnesota CHW Peer Network
Minnesota International Health Volunteers
Minneapolis, Minnesota
http://www.heip.org/chw_peer_networking.htm
http://www.mihv.org/chwnetwork
Phone: (612) 871-3759

New Mexico
New Mexico Community Health Workers Association (NMCHWA)
Alburquerque, New Mexico
Phone: (505) 272-4741
Contact person: B.J. Ciesielki
New York
Community Health Worker Network of NYC
New York, New York
http://chwnetwork.org/
Phone: (212) 481-7667

Rochester Outreach Workers Association (ROWA)
Rochester, New York
Phone: (585) 274-8490

Oregon
Oregon Community Health Worker Network
Portland, Oregon
Phone: (503) 988-3366

Texas
South Texas Promotora Association
Weslaco, Texas
Phone: (956) 783-9293
Contact person: Ramona Casas
Appendix I: Bibliography
Appendix I. Bibliography


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