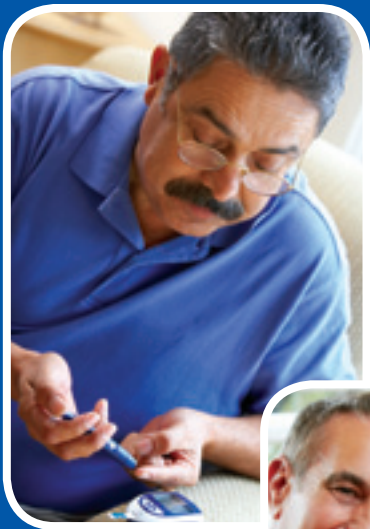




Addressing Chronic Disease through Community Health Workers

A POLICY AND SYSTEMS-LEVEL APPROACH

Second Edition

April 2015

A POLICY BRIEF ON COMMUNITY HEALTH WORKERS

National Center for Chronic Disease Prevention and Health Promotion
Division for Heart Disease and Stroke Prevention



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A POLICY BRIEF ON COMMUNITY HEALTH WORKERS

This document provides guidance and resources for implementing recommendations to integrate community health workers (CHWs) into community-based efforts to prevent chronic disease. After providing general information on CHWs in the United States, this document sets forth evidence demonstrating the value and impact of CHWs in preventing and managing a variety of chronic diseases, including heart disease and stroke, diabetes, and cancer. In addition, descriptions of chronic disease programs that are engaging CHWs are offered, examples of state legislative action are provided, recommendations for comprehensive policies to build capacity for an integrated and sustainable CHW workforce in the public health arena are made, and resources that can assist state health departments and others in making progress with CHWs are described.

Background

In the United States, CHWs help us meet our national health goals by conducting community-level activities and interventions that promote health and prevent diseases and disability.

Who Are CHWs?

CHWs are known by a variety of names, including community health advisor, outreach worker, community health representative (CHR), promotora/promotores de salud (health promoter/promoters), patient navigator, navigator promotores (navegadores para pacientes), peer counselor, lay health advisor, peer health advisor, and peer leader.^{1,2}

As expressed by the CHWs section of the American Public Health Association, CHWs are frontline public health workers

who are trusted members of and/or have an unusually close understanding of the community served. This trusting relationship enables CHWs to serve as a liaison, link, or intermediary between health/social services and the community to facilitate access to services and improve the quality and cultural competence of service delivery. CHWs also build individual and community capacity by increasing health knowledge and self-sufficiency through a range of activities such as outreach, community education, informal counseling, social support, and advocacy.³

One of the most important features of programs that engage CHWs is that these women and men strengthen already existing ties with community networks.^{4,5} This is not surprising, since CHWs are uniquely qualified as connectors (to the community), because they generally live in the communities where they work and understand the social context of community members' lives.^{6,7}

In addition, CHWs educate health care providers and administrators about the community's health needs and the cultural relevancy of interventions by helping these providers and the managers of health care systems build their cultural competence and strengthen communication skills.^{5,8} Using their unique position, skills, and an expanded knowledge base, CHWs can help reduce system costs for health care by linking patients to community resources and helping patients avoid unnecessary hospitalizations and other forms of more expensive care as they help improve outcomes for community members.^{6,9,10}

An evidentiary report for the Centers for Medicare & Medicaid Services from Brandeis University on cancer prevention and treatment among minority populations states that “CHWs...can offer linguistic and cultural translation while helping beneficiaries get coverage, develop continuous relationships with a usual source of care, understand current risk behaviors, motivate them to engage in risk management, and receive support and encouragement for maintaining these efforts.”¹¹

What Evidence Supports the Unique Role of CHWs as Health Brokers?

The unique role of CHWs as culturally competent mediators (health brokers) between providers of health services and the members of diverse communities, as well as CHWs' effectiveness in promoting the use of primary and follow-up care for preventing and managing disease, have been extensively documented and recognized for a variety of health care concerns, including asthma, hypertension, diabetes, cancer, immunizations, maternal and child health, nutrition, tuberculosis, and HIV and AIDS.

Evidence supporting the involvement of CHWs in the prevention and control of chronic disease continues to grow:

- Integrating CHWs into multidisciplinary health teams has emerged as an effective strategy for improving the control of hypertension among high-risk populations.^{12,13}
- The Community Outreach and Cardiovascular Health (COACH) trial, which paired nurse practitioners and CHWs together to manage cardiovascular disease, demonstrated a \$157 reduction per patient in cost for every 1% drop in systolic blood pressure and \$190 reduction in cost for every 1% drop in diastolic blood pressure.¹⁴
- A recent review that examined CHWs' effectiveness in providing care for hypertension noted improvements in keeping appointments, compliance with prescribed regimens, risk reduction, blood pressure control, and related mortality.¹³

- After two years, African American patients with diabetes who had been randomized to an integrated care group consisting of a CHW and a nurse case manager had greater declines in A1C (glycosylated hemoglobin) values, cholesterol triglycerides, and diastolic blood pressure than did a group receiving routine care or those led solely by CHWs or nurse case managers.^{6,15}
- The three-year Patient Navigation Research Program demonstrated a moderate benefit in improving timely cancer care for diagnosis and treatment of breast, cervical, colorectal, and prostate cancers.¹⁶
- A Colorectal Cancer Male Navigation Program designed for Hispanic men showed an increase in life expectancy by six months for participant as compared to non-participants with a health care savings of \$1,148 per program participant.¹⁷
- In reviewing 18 studies of CHWs involved in the care of patients with diabetes, Norris and colleagues found improved knowledge and lifestyle and self-management behaviors among participants, as well as decreases in the use of the emergency department.¹⁸
- Interventions incorporating CHWs have been found to be effective for improving knowledge about cancer screening, as well as screening outcomes for both cervical and breast cancer (mammography).¹⁹
- Asthma control (i.e., symptom frequency) was reduced by 35% among adolescents working with CHWs, resulting in a savings of \$5.58 per dollar spent on the intervention.²⁰

This evidence has been further strengthened by two Institute of Medicine reports. One of the reports, *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*, recommends including CHWs in multidisciplinary teams to better serve the diverse United States population and improve the health of underserved communities as part of “a strategy for improving health care delivery, implementing secondary prevention strategies, and enhancing risk reduction.”²⁵ The more recent report, *A Population-based Approach to Prevent and Control Hypertension* (published in 2010), recommends that the Centers for Disease Control and Prevention (CDC) Division for Heart Disease and Stroke Prevention work with state partners to bring about policy and systems changes that will result in trained CHWs “who would be deployed in high-risk communities to help support healthy living strategies that include a focus on hypertension.”²¹



What Is the Burden of Chronic Disease?

Hypertension

Hypertension is a major risk factor for heart disease, stroke, and renal disease.²² Hypertension affects almost one-third of the United States adults aged 18 and over (systolic blood pressure ≥ 140 mmHg or diastolic ≥ 90 mmHg). In 2009–2010, over 80% of adults with hypertension were aware of their status and 76% were taking medications for hypertension.²³ Among hypertensive adults, 70% were using antihypertensive medications, and 46% of those treated had their hypertension controlled.²⁴ National Health and Nutrition Examination Survey (NHANES) data for 1999 to 2006 estimate that 30% of adults have prehypertension (blood pressure ≥ 120 – $139/80$ – 89 mmHg).²⁵ Not surprisingly, hypertension affects certain subpopulations more than others.^{24,25} The prevalence of hypertension increases with age and is highest among older adults. Hypertension is also highest among non-Hispanic black adults, at approximately 42%.^{21,23}

Diabetes

Over 29 million people, or 9.3% of the adult population in the United States, have diagnosed or undiagnosed diabetes.²⁶ Another 86 million people, or 37%, have prediabetes.²⁷ Without lifestyle changes to improve their health, 15% to 30% of people with prediabetes will develop type 2 diabetes within five years.²⁷ Many people with diabetes also have other chronic conditions, including 71% who have high blood pressure. There is a disproportionate burden of diabetes among racial and ethnic minorities including American

Indian/Alaska Natives (15.9%), Non-Hispanic Blacks (13.2%) and Hispanics (12.8%).²⁶ CHWs have unique and important roles to play in programs to prevent and control diabetes and other chronic conditions.

Cancer

According to *United States Cancer Statistics: 1999–2011 Incidence and Mortality Web-based Report*, which tracks incidence for about 96% of the United States population and mortality for the entire country, in 2011 more than 576,000 Americans died of cancer and more than 1.53 million were diagnosed with that disease. Cancer does not affect all races and ethnicities equally; for example, African Americans are more likely to die of cancer than members of any other racial or ethnic group. In 2011, the age-adjusted death rate for both sexes per 100,000 people for all cancers combined was 199 for African Americans, 169 for whites, 112 for American Indians/Alaska Natives, 118 for Hispanics, and 106 for Asians/Pacific Islanders.²⁸

Asthma

Asthma is a common, chronic disorder of the airways characterized by wheezing, breathlessness, chest tightness, and coughing at night or early in the morning; these episodes are known as asthma exacerbations or attacks. Airflow is obstructed by factors that narrow the airways in the lungs in reaction to certain exposures or “triggers,” making it hard to breathe. Asthma continues to be a major public health concern. The number of reported cases has steadily increased since 1980. In 2001, 20 million people (1 in 14) in the United States had asthma. By 2011, that number had grown to 26 million (1 in 12). The highest rates of asthma occur among children, women, multi-race and black Americans, and American Indians and Alaska Natives. In 2009 alone, there were over two million asthma-related emergency department visits and almost half a million hospitalizations; in 2010, 156 children and 3,248 adults died from asthma.²⁹

What Are the Barriers to Controlling Chronic Disease?

There are numerous barriers to controlling chronic disease, including inadequate intensity of treatment and failure of providers to follow evidence-based guidelines,^{5, 12, 13, 30–32} lack of family support,^{32, 33} failure to adhere to treatment,^{31, 32, 34–37} lack of support for self-management,^{12, 36, 38, 39} lack of access to care and being uninsured,^{12, 36} differences in perceptions of health that are culturally based, the complexity of treatment,^{40, 41} costs of transportation and other expenses,⁴² and an insufficient focus in the United States on prevention and on support from social and health care systems.^{34, 40}



How Can CHWs Support the Prevention and Control of Chronic Disease and Assist in Self-Management by Patients?

Clearly, CHWs can help overcome barriers to controlling chronic disease. In 1998, the National Community Health Advisor Study, conducted by the University of Arizona and funded by the Annie E. Casey Foundation,^{43, 44} identified the core roles, competencies, and qualities of CHWs after contacting almost 400 of these workers. Seven core roles were identified and continue to guide the field:

- Bridging cultural mediation between communities and the health care system.
- Providing culturally appropriate and accessible health education and information, often by using popular education methods.
- Ensuring that people get the services they need.
- Providing informal counseling and social support.
- Advocating for individuals and communities.
- Providing direct services (such as basic first aid) and administering health screening tests.
- Building individual and community capacity.⁴⁴

In addition to these general roles, CHWs can provide support to multidisciplinary health care teams in the prevention and control of chronic disease through the following functions:

- Providing outreach to individuals in the community setting.
- Measuring and monitoring blood pressure.
- Educating patients and their families on the importance of lifestyle changes and on adherence to their medication regimens and recommended treatments, and finding ways to increase compliance with medications.
- Helping patients navigate health care systems (e.g., by providing assistance with enrollment, appointments, referrals, and transportation to and from appointments; promoting continuity of health services; arranging for child care or rides and arranging for bilingual providers or translators).
- Providing social support by listening to the concerns of patients and their family members and helping them solve problems.
- Creating community-clinical linkages to help create a team based approach through supporting and enhancing the work of healthcare team.
- Assessing how well a self-management plan is helping patients to meet their goals.
- Supporting patient self-management plans and long term self-management support.⁴⁵
- Supporting work of the chronic care team and increasing the team's cultural competence when serving as an integrated member of a health care team.
- Supporting individualized goal-setting.⁴⁶⁻⁴⁸
- Playing a role in self-management program administration by leading or supporting self-management programs. More recent literature confirms these roles.⁴⁹⁻⁵⁷

Recognition of the CHW Workforce

The Patient Protection and Affordable Care Act of 2010 includes provisions relevant to CHWs. Section 5313, Grants to Promote the Community Health Workforce, amends Part P of Title III of the Public Health Service Act (42 U.S.C. 280g et seq.) to authorize CDC, in collaboration with the Secretary of Health and Human Services, to award grants to "eligible entities to promote positive health behaviors and outcomes for populations in medically underserved communities through the use of CHWs" using evidence-based interventions to educate, guide, and provide outreach in community settings

regarding health problems prevalent in medically underserved communities; effective strategies to promote positive health behaviors and discourage risky health behaviors; enrollment in health insurance; enrollment and referral to appropriate health care agencies; and maternal health and prenatal care.



The Act states that a CHW is “an individual who promotes health or nutrition within the community in which the individual resides: (a) by serving as a liaison between communities and health care agencies; (b) by providing guidance and social assistance to community residents; (c) by enhancing community residents’ ability to effectively communicate with health care providers; (d) by providing culturally and linguistically appropriate health and nutrition education; (e) by advocating for individual and community health; (f) by providing referral and follow-up services or otherwise coordinating; and g) by proactively identifying and enrolling eligible individuals in Federal, State, and local private or non-profit health and human services programs.”⁵⁸ The evidence shows that CHWs are well positioned for success because they already serve in these roles.

Effective January 2014, the Centers for Medicaid & Medicare (CMS) has created a final rule (CMS-2334-F), “Medicaid and Children’s Health Insurance Programs: Essential Health Benefits in Alternative Benefit Plans, Eligible Notices, Fair Hearings and Appeal Process, and Premiums and Cost Sharing, Exchange: Eligibility and Enrollment,” which opens up payment opportunities for preventive services by nonlicensed

individuals. The rule changes earlier language to state that “services must be recommended by physicians or other licensed practitioners of the healing arts within the scope of their practice under State law.” The new ruling helps improve access to preventive services, facilitates partnerships between health care providers and promotes the engagement of CHWs, increases access to CHWs, broadens the scope of providers as an approach to reducing program expenditures, and offers the potential for having CHWs be reimbursed under Medicaid.⁵⁹

Selected Examples of CDC Programs in Chronic Disease Promoting the Integration of CHWs into the Public Health Workforce

State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity, and Associated Risk factors and Promote School Health

Under [State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health](#), 23 state grantees are currently implementing CHW interventions. Grantee activities include training CHWs, developing and disseminating educational and promotional materials, and educating providers on CHWs’ effectiveness in creating community-clinic linkages. State grantees are also engaged with other stakeholders on critical issues such as certification and sustainability of the CHW workforce. Grantees build support for lifestyle improvements for the general population and particularly for people at high risk of developing type 2 diabetes and people with uncontrolled high blood pressure. They report annually on performance measures related to these interventions in both funded programs.

One example of grantee efforts is in Indiana, which has conducted a pilot study with eight federally qualified health centers (FQHCs) to assess the use of CHWs in blood pressure monitoring, use of self-measured blood pressure management, referrals, identifying resources, and patient follow-up. As part of the CHWs’ involvement with the FQHC pilot, a workshop is being provided on blood pressure and diabetes management, and webinar trainings will be posted to the state health department Web site. Lessons learned from the evaluation will be used to encourage the engagement of CHWs, support continued efforts to obtain standardized curricula and state-level certification for CHWs, and provide data to help align current efforts to amend the state Medicaid reimbursement options for CHWs. In addition, pending leg-

isolation will add a reimbursement component beyond CHWs employed as Recovery Specialist and Mental/Behavioral Health Specialist. The new law will include General Specialist services provided for hypertension, diabetes, and other chronic diseases under this umbrella.

Minnesota is facilitating a collaborative work group between pharmacy, CHW, and Certified Diabetes Educator® (CDE) organizations charged with identifying appropriate connections and roles for pharmacists, CHWs, and CDEs within community pharmacy sites. The roles include serving as health care extenders, assisting patients with resource access in association with screening for high blood pressure and hemoglobin A1C, ongoing monitoring of blood pressure and hemoglobin A1C, medication management and adherence, insurance issues, nutrition tours, and other lifestyle strategies incorporated into patients' self-management plans.

WISEWOMAN Program

The [Well-Integrated Screening and Evaluation for Women Across the Nation](#) (WISEWOMAN) program in the CDC's Division for Heart Disease and Stroke Prevention provides low-income, underinsured, and uninsured women with lifestyle programs, screening for chronic disease risk factors, and referral services in an effort to prevent cardiovascular disease. The priority age group is women ages 40 to 64. CDC funds 22 WISEWOMAN programs, which operate on the local level in states and tribal organizations. WISEWOMAN programs provide heart health screening services, including body mass index (BMI) screening, blood pressure monitoring, blood sugar testing, and cholesterol testing. In addition to receiving screening, women are offered individualized risk reduction counseling and referred to lifestyle programs. Lifestyle programs include health coaching and nationally known programs such as the [Diabetes Prevention Program \(DPP\)](#), [Taking Off Pounds Sensibly](#) (TOPS), and [Weight Watchers](#). WISEWOMAN aligns with the expanded chronic care model and supports programs that include CHWs in their team-based care approaches.

In Nebraska, the [WISEWOMAN Program](#) is supporting CHW training and certification, as well as special modules that focus on cardiovascular health and screening, including blood pressure monitoring in the community. CHWs are involved in participant recruitment and risk reduction counseling, and they serve as bridges between clinical providers and WISEWOMAN participants. CHWs also provide individual coaching to support lifestyle change.

In Michigan, CHWs working in the [WISEWOMAN program](#) help women understand the results of their screening and help identify community-based resources. Each WISE-

WOMAN participant is encouraged to set goals, and CHWs actively provide one-on-one coaching, referral to community resources or evidence-based structured programs, and tobacco cessation services. Michigan WISEWOMAN also works to help participants assess their medication adherence and find free or low-cost medications. WISEWOMAN Entrepreneurial Gardening enables participants to improve their knowledge about nutrition, save money by growing their own fruits and vegetables, and supplement their income by selling their extra produce at local farmers markets.



The Mississippi Delta Health Collaborative

The Mississippi Delta is a rural 18-county area in the northwest region of the state, and its residents experience persistent poverty and a higher proportion of chronic diseases and related risk factors than those in the rest of the state.

The [Mississippi Delta Health Collaborative](#) (MDHC), an initiative of the state's Department of Health, provides leadership and guidance in the Delta region to improve the cardiovascular health of the population by promoting the ABCS: appropriate Aspirin use and A1C (hemoglobin control), Blood pressure control, Cholesterol management, and Smoking cessation. In collaboration with a diverse group of partners, MDHC works to achieve these goals by implementing heart disease and stroke prevention strategies that include community-clinical linkages and policy, environmental, and systems changes.

Started in 2011, the CHW Initiative is an MDHC initiative that promotes community-clinical linkages in the region. All participating CHWs are from the Delta region, are full-time state health department employees, and are classified as Medical Aide II, which enables them to conduct limited clinical services, such as taking blood pressure under the supervision of a nurse. Each CHW receives robust initial and ongoing competency- and clinic- based training. In addition to getting 244 hours of training shortly after being hired, they are trained in medical record and electronic data entry, as well as receiving the Stanford Chronic Disease Self-Management/ Diabetes Self-Management Program (CDSMP/DSMP) Leaders Training.

CHWs are integrated into and receive referrals of patients with elevated blood pressure from health care providers at FQHCs and rural clinics. Each of the participating clinical sites formalized its commitment to and support for the initiative by signing a Memorandum of Agreement that includes a flowchart detailing information related to accountability, processes, communication, and tracking systems.



CHWs also receive referrals of clients with elevated blood pressure from barbers and congregational health nurses, with whom MDHC partners to conduct blood pressure screenings. Once referrals are made by health care providers, barbers, or congregational health nurses, CHWs follow a two-pronged approach designed to establish and maintain links to health care, adherence to treatment protocol, and eventual control of blood pressure. During home visits, they conduct several tasks:

- Monitoring and improving cardiovascular risk factors (e.g., conducting blood pressure and cholesterol screenings; addressing medication adherence; promoting healthy diet, physical activity, and tobacco cessation).
- Reducing barriers to accessing medical services (e.g., helping patients schedule appointments).
- Using a community resource inventory to link patients with services that support access to health care (e.g., transportation).
- Using an online Web-based portal to collect quantitative and qualitative information that can be used as part of MDHC's ongoing evaluation.

CHWs also help link patients to community programs, including the state Health Department's Tobacco Quitline and culturally appropriate chronic disease self-management program/diabetes self-management program group sessions that focus on self-management skills, such as lifestyle modification, goal-setting, creating action plans, and problem-solving techniques.

Division of Diabetes Translation

The [National Diabetes Prevention Program](#) (National DPP) collaborates with federal agencies, community-based organizations, employers, insurers, health care professionals, academic, and other stakeholders to prevent or delay the onset of type 2 diabetes among people with prediabetes in the United States. Across the country, CHWs are being trained as lifestyle coaches to work with participants in year-long lifestyle change interventions to prevent or delay type 2 diabetes among those at high risk.

Since 1997, the [National Diabetes Education Program](#) (NDEP) has collaborated with community, public health, business, and government stakeholders to address the unique language and cultural needs of a wide spectrum of ethnic minority communities, especially for diabetes-related educational resources. NDEP and its Hispanic/Latino and African American partners have developed and disseminated a range of culturally sensitive toolkits, messages, and materials in English and Spanish. Resources include the [Road to Health Toolkit](#) and the fotonovela "[Do it for them! But for you too.](#)"

Several other programs in the [CDC Division of Diabetes Translation](#) (DDT) are implementing CHW interventions:

- As a part of the National Program to Eliminate Diabetes Related Disparities in Vulnerable Populations project, 40 CHWs sponsored by the National Kidney Foundation of Michigan and trained to support diabetes self-management and education (DSME) are delivering the Diabetes Personal Action Toward

Health (PATH) program, an 8-week course for residents in three African American communities in Michigan: Inkster, Flint, and Detroit.

- The National Alliance on Hispanic Health has focused on increasing access to DSME by training 42 promotores to facilitate and deliver DSME for community members in Phoenix, Arizona; Rio Rancho, New Mexico; and Watsonville, California.
- Under the Traditional Foods Program, which operated from 2008 to 2014, the Southeast Alaska Regional Health Consortium (SEARHC) employed CHWs to coordinate activities to preserve traditional foods in the Kake and Wrangell communities, reaching over 80% of the Alaska Native/American Indian population in these communities.
- The Confederated Tribes of Siletz Indians in Oregon report that community health advocates/representatives help increase the amount of programming offered to members and make it possible to serve distant communities throughout their service area.
- As part of the Appalachian Diabetes Control and Translation Project, the DDT works with the Appalachian Regional Commission to support Mingo County Clinic and the Mingo County Coalition in West Virginia, where CHWs assist patients with medication adherence, social support, and coaching.

Division of Cancer Prevention and Control

Efforts at the state, territory, and tribal levels include CHWs and patient navigators (PNs) as part of an overall strategy to control cancer through developing, implementing, and promoting effective cancer prevention and control practices. The Division of Cancer Prevention and Control's (DCPC's) [National Comprehensive Cancer Control Program](#) (NCCCP) provides funds to help states, tribes/tribal organizations, and territories establish coalitions, assess the burden of cancer, determine priorities, and develop and implement comprehensive cancer control (CCC) programs. DCPC reports that 61 of the 65 CCC plans include references to CHWs, PNs, outreach workers, community health representatives, promotores, community health advisors, lay health educators, lay health advisors, or peer educators. With funding from DCPC NCCCP, the Vermont Department of Health and community foundations developed Kindred Connections, a peer-to-peer support program for cancer survivors. In this program, CHWs who are cancer survivors provide support and encouragement to community members who have cancer. Kindred Connections has successfully met the complex needs of cancer survivors looking for support in rural Vermont.

The Florida Department of Health's CCC program was among 13 programs that received additional funding in 2010 to promote strategies that reduce health disparities and improve health outcomes through supporting policy, systems, and environmental change efforts. To that end, the Access to Care Committee identified CHWs and PNs as key players. In 2011, the Florida CHW Coalition, facilitated by the Florida Department of Health, launched a statewide partnership dedicated to the support and promotion of the CHW workforce in Florida. The coalition helped establish a legislatively mandated statewide task force that would make recommendations about CHWs' involvement in the health care team, CHW credentialing, and overall CHW workforce development in Florida.

DCPC's National Breast and Cervical Cancer Early Detection Program (NBCCEDP) helps low-income, uninsured, and underinsured women gain access to breast and cervical cancer screening and diagnostic services. A 2013 survey of NBCCEDP grantees found that 63% of grantee programs engage CHWs to conduct outreach, connect women to health care facilities, and provide one-on-one education. Grantees use PNs to assist clients through screening and diagnostic testing. Navigation activities conducted by PNs include providing community-based education (Alabama), assisting with tracking and follow-up of women who have abnormal screens for either breast or cervical cancer (Georgia), helping women navigate program services and providing outreach (Connecticut), and scheduling women for exams (Southeast Alaska Regional Health Consortium).

DCPC's Colorectal Cancer Control Program supports population-based screening efforts and provides colorectal cancer screening services to low-income men and women ages 50 to 64 who are underinsured or uninsured. Grantees are encouraged to use the patient navigation model to assist patients through screening and diagnostic follow-up. In New York City, PNs at 18 hospitals educate patients about colon cancer and encourage them to get screening. With the help of the PNs, the hospitals have seen the patient no-show rate for colonoscopies drop more than 45%; the number of screened adults increased by 24% between 2003 and 2009.

In the Massachusetts Care Coordination Program (CCP), the patient navigator role has evolved as the program has restructured in response to state health care reform. Recently, Massachusetts began the Community-Based Outreach, Education, and Linkages to the Health Care System Pilot, which incorporates new community-level navigation activities to support linkages between cancer screening services and individuals in the community. The pilot project is implemented by three community-based organizations that use CHWs to provide outreach to underserved and at-risk populations;

educate community members about breast, cervical, and colorectal cancers using the Helping You Take Care of Yourself curriculum; link clients to community-based resources; and help clients get to a CCP clinical site for appropriate cancer screening services and primary care.

Division of Community Health

CDC's Community Transformation Grants (CTG) program enabled awardees to design and implement sustainable, community-level programs that prevent chronic diseases. CTG programs funded state and local government agencies, tribes and territories, and nonprofit organizations to build a solid foundation for community prevention efforts, engage community members, and implement proven programs and strategies through several types of grants. CTG programs also found that engaging CHWs was critical to addressing community needs.

As of March 2014, approximately 32,000 residents of rural counties in Oregon had access to 45 certified CHWs for assistance with self-management of chronic disease. The Northeast Oregon Network supported a series of training sessions to certify the CHWs, work in the counties to improve health outcomes and healthy behaviors among underserved residents.

- The University of Rochester in Monroe County, New York, delivered educational trainings to the Blood Pressure Advocate CHW Program. The advocates received educational trainings on cholesterol and the new cardiovascular risk calculator. To date, 270 blood pressure ambassadors have been trained, surpassing the goal of 150 by 80%. The goal was to develop partnerships with 20 organizations. To date, 78 unique venues have been the site of a speaking presentation about blood pressure, a screening, or a community project.
- The Oklahoma City-County Health Department trained CHWs to work with 600 clients across six clinics in Oklahoma County with one CHW integrated into each hospital. Existing partnerships with the Health Alliance for the Uninsured allowed the Oklahoma City-County Health Department to increase access to clinical service opportunities for over 31,000 uninsured clients in Oklahoma County.

Division of Nutrition, Physical Activity, and Obesity

Childhood obesity is a health challenge that requires prevention and treatment interventions across multiple settings and systems. The [Childhood Obesity Research Demonstra-](#)

[tion](#) (CORD) project, a four-year community-based research project overseen by CDC's [Division of Nutrition, Physical Activity, and Nutrition](#) (DNPAO), focuses on underserved children 2 to 12 years old and builds on existing community efforts to support children's healthy eating and active living, as well as obesity prevention.¹⁶ CORD includes three demonstration sites that use innovative approaches, including combining changes in preventive care at doctor visits with supportive changes in child care centers, schools, and community venues. The CORD CHWs work in different ways at each site, but all provide a bridge between primary care and public health by coordinating patient education and referral (including nutrition, physical activity, screen time and parenting practices, and recipe planning) and linking families to community resources such as physical activity options at local parks and YMCAs and referrals to Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) offices. The CORD CHWs use iPad applications to help track interventions and activities.^{60,62}

REACH

[Racial and Ethnic Approaches to Community Health](#) (REACH) is a national, multilevel program that serves as the cornerstone of CDC's efforts to eliminate racial and ethnic disparities in health.

Communities participating in REACH develop action plans using the principles of the community-based participatory approach to identify evidence-based strategies that will affect all levels of the socio-ecological model. Eighteen of the 40 REACH coalitions rely on CHWs as a grassroots empowerment strategy to reduce health inequities among various populations and to improve health outcomes. CHW services consist of not only education and disease and case management (for heart disease and stroke, diabetes, prenatal care, immunizations, breast and cervical cancer, diabetes, and asthma) but also the promotion of change in three areas: the social environment, systems, and policy (e.g., school wellness programs, access to healthy foods, and reimbursement for CHWs' services). REACH programs have found that engaging CHWs is critical to addressing community needs. At the University of Colorado's Fit Friendly Program, CHWs earned community trust, enabling them to effectively educate community members and foster the adoption of school and worksite wellness initiatives. At the University of South Carolina, CHWs collaborated with the South Carolina Department of Health and health care providers to educate decision makers about health care reimbursement policies. Through the University of Alabama, CHWs contributed to efforts resulting in expanded treatment through Medicaid for eligible women diagnosed with breast/cervical cancer.⁶³

From 2007 to 2010, CHW home visitors in the Children's Hospital of Boston Community Asthma Initiative performed 206 home visits without an asthma nurse case manager and 59 visits with such a manager. A comparison of parental reports at 12 months and at pre-enrollment revealed significant reductions in visits to the emergency department (reduction of 65%, $p < 0.001$), hospitalizations (81%, $p < 0.001$), missed school days (39%, $p < 0.001$), and missed workdays for parents/guardians (49%, $p < 0.001$) and an increase in having a current action plan for asthma (71%, $p < 0.001$).

Division for Reproductive Health

For many years, New Mexico [Pregnancy Risk Assessment Monitoring System](#) (PRAMS) has worked with the Southern New Mexico Promotora Committee, New Mexico CHW Association, and Navajo Health Representatives (CHRs) to help locate and encourage PRAMS-sampled women to complete the survey.

From 1997 to 1999, New Mexico PRAMS implemented an outreach protocol with Navajo Nation WIC workers and field contractors to hand-deliver PRAMS surveys. In 2012, the program initiated a process of survey delivery through the Albuquerque Area Southwest Epidemiology Center (AASTEC) to identify CHWs and community health representatives in Pueblo and Apache tribes to hand-deliver the PRAMS survey to women selected from those communities.

This process was expanded to the Navajo Epidemiology Center (NEC) starting with 2014 birth sampling. CHRs and four Navajo WIC sites are included in this process. The NEC PRAMS coordinator and field outreach worker collaborated with New Mexico PRAMS to locate Navajo women selected for PRAMS, update and share the women's contact information, set up appointments for survey completion/delivery, and document the outreach for evaluation purposes. In December 2014, NEC staff began offering ACASI (Audio Computer-Assisted Self-Interview) data collection as an alternative to using paper surveys. The NEC, AASTEC, and New Mexico PRAMS are working on shared analysis of data collection efforts and mutually identified survey topics. In addition, the shared work in Navajo areas includes radio advertising to raise awareness about PRAMS and a video that began production in November 2014 and which is expected to be available by June 2015.

National Asthma Control Program

Part of CDC's National Center for Environmental Health, the [National Asthma Control Program](#) (NACP) has been funding state asthma programs since 1999. The current funding opportunity announcement (effective September 1, 2014) lists "team-based care" as one of four health system strategies

and specifically directs awardees to (1) work with medical homes and other health care delivery models to ensure that non-physician professionals (including CHWs) are used to provide education, case management, and care coordination for individuals with asthma; (2) ensure that non-physician providers have the skills and capacity to provide asthma education and coordination of care; and (3) help develop a system for training these professionals as needed. NACP currently funds 23 state asthma programs through this mechanism.

The 23 funded state asthma programs vary in their involvement in CHW policy-related efforts and in how they engage CHWs in asthma care. Some programs are involved in developing and implementing curricula for training CHWs to provide self-management education, conduct home environmental assessments, and provide linkages to social and other community services. Other programs are working to encourage integration of CHWs into patient-centered medical homes in high-burden communities. Most states are exploring options to obtain reimbursement for CHW services through different Medicaid mechanisms and through health plans; many are developing state-specific business case briefs to support reimbursement. A few states are piloting mechanisms to share information between clinicians and CHWs to ensure coordination of care. NACP has helped state programs share resources and experiences about this aspect of workforce development and strengthen the evidence to support coverage and reimbursement for the valuable services provided by CHWs.

Prevention Research Centers

The [Prevention Research Centers](#) (PRC) Program supports a network of 26 academic research centers located at accredited schools of public health or schools of medicine with a preventive medicine residency across the United States. Each center conducts at least one applied public health prevention research project with an underserved population that has high rates of disease and disability. All centers share a common goal of addressing behaviors and environmental factors that affect chronic diseases such as cancer, heart disease, and diabetes. Several centers also address injury, infectious disease, mental health, and global health. Sixteen of the centers are working with CHWs to fulfill their research goals focusing on health topics such as cancer, heart health, HIV, nutrition, obesity, and physical activity.

One example of PRC research working with CHWs, is the Pasos Adelante study conducted by the [University of Arizona Prevention Research Center](#) (AzPRC). During the 2009-2014 funding cycle, researchers identified guidelines for CHW best practices in primary care settings to address chronic

disease and mental health needs. They used that information to establish an effective CHW program model that links primary care settings with community health services. This study found that CHWs could motivate Latinos to reduce their risk of cardiovascular disease, diabetes, and other chronic diseases related to diet and physical activity. The results showed significant improvements in body mass index, blood pressure, total cholesterol, and glucose levels. Pasos Adelante (i.e., “Steps Forward”) is a 12-week program delivered by CHWs that focuses on healthy food choices, physical activity, and chronic disease risk.

What Policy Actions Are States Taking to Strengthen the Role and Sustainability of CHWs’ Occupation?

While several states have passed limited legislation on CHWs, a narrow policy focus (e.g., occupational regulation) has had only a limited to modest impact.⁶⁴

In 2013, the CDC identified 15 states and the District of Columbia that had CHW laws addressing CHW infrastructure, professional identity, workforce development, and financing. Of these 15 states, six had advisory boards working to investigate the impact of CHWs on health care savings and health disparities, eight had created a CHW scope of practice (with three specifically utilizing CHWs in chronic disease prevention), seven had laws authorizing Medicaid reimbursement for some CHW services, and seven had created laws that encouraged the integration of CHWs into team-based care models for select health care organizations and services.⁶⁵ Alaska, Minnesota, and, most recently, New Mexico provide Medicaid reimbursement for CHW services.^{66, 67}

As of October 2014, three states (New Mexico, Maryland, and Illinois) had newly passed legislation and organized task forces to create CHW policy. New Mexico passed [Senate Bill 58](#), which allows for voluntary CHW certification. In Maryland, [Senate Bill 592](#) describes a Workgroup on Workforce Development for CHWs, which requires that 50% of membership be composed of nonclinical health care providers or represent an institution or organization that is directly involved in providing nonclinical health care. In Illinois, [House Bill 5412](#) defines CHWs’ core competencies and roles and focuses on developing a certification process for CHWs.

Minnesota and Massachusetts have taken comprehensive approaches to the development of policy regarding CHWs; the two states’ implementations of systems changes to build capacity for an integrated and sustainable CHW workforce can serve as models.³⁴

Minnesota

The [Minnesota Community Health Worker Alliance](#), a stakeholder consortium that includes state agencies, government officials, academic institutions, nonprofit organizations, health care providers, and CHWs, has worked collaboratively to develop a statewide standardized curriculum for CHWs that is based in core competencies, professional standards that define the roles of CHWs in the health care delivery system (scope of practice), and competencies related to protocols for reimbursing providers. In addition, the Alliance has laid the groundwork for ways to reimburse CHWs. Support from a diverse group of stakeholders, coupled with widespread recognition of the cost-effective care provided by CHWs, culminated in the development of state legislation in 2008 (State Statute 256B.0625.Subd 49 and 256D.03.Subd 4) that authorizes hourly reimbursement for CHWs.⁶⁸ Under the 2008 law, CHWs who have graduated from the standardized curriculum and received a certificate are eligible to enroll under the Minnesota Health Care Plans and can provide services—supervised by a physician, advanced practice nurse, dentist, or public health nurse—that are billable to Medicaid. In 2009, additional legislation (HF599 SF890) was passed to allow for payment for CHW services through the CHW Medicaid reimbursement bill when the CHWs are working under the supervision of mental health professionals. The categories of supervising providers have been expanded over time and now include dentists, mental health providers, and local public health departments.⁶⁹ Providers are able to bill electronically using hospitals, clinics, physicians, or Advanced Practice Registered Nurse (APRN) National Provider Identifier (NPI) as billing provider; they may bill using for self-management education and training. The billing occurs in 30-minute units with a limit of four units per 24 hours and no more than eight units per calendar month per recipient. For more information please see the CHW page on the [Department of Human Services](#) website.

Massachusetts

Efforts to address health disparities in Massachusetts have increasingly relied on the work of CHWs to improve enrollment in health care programs and increase the use of health care among underserved groups. Long-time collaboration among the Massachusetts Department of Public Health, CHWs, community-based health care providers, and health policy advocates resulted in the formation of the Massachusetts Association of CHWs (MACHW) in 2000 and the inclusion of CHWs in Massachusetts health care reform (in Section 110, Chapter 58, the Acts of 2006). Within the reform language, which was included as a provision for reducing health disparities, the Massachusetts Department of Public Health was charged with conducting a study of the CHW workforce and developing a legislative report with recommendations for

increasing that workforce's sustainability within the state.⁷⁰ In addition, through MACHW, CHWs were able to secure a seat on the state's Public Health Council.⁶⁴ CHWs have since been included in the State CHW Certification Act (H4130), which was introduced in June 2009. In January 2010, the Massachusetts Department of Public Health released the findings of the study in a report that showed that the state's nearly 3,000 CHWs have improved access to health care and the quality of that care. The report also provides 34 recommendations for further integrating CHWs into health care and public health services in the state and sustaining their involvement in those areas.^{71,72} CHWs have also been included in the State CHW Certification Act (Chapter 322, Acts of 2010), and a regulatory process for certifying individual CHWs and approving CHW training programs is being developed at the state's Department of Public Health. CHWs are part of a priority program strategy in Massachusetts for strengthening clinical-community linkages to improve chronic disease outcomes.

Guidance to Stimulate Comprehensive Policy Change

1. Policy Development

State health departments should be aware that both Minnesota and Massachusetts took a multipronged, comprehensive approach to incorporating CHWs into the states' health care systems. With the exception of legislation dealing with research and evaluation, both states have implemented the legislation and actions listed in the box below. To support the integration of CHWs at the state level, state health departments can collaborate with a variety of partners to develop a comprehensive approach to developing policy for CHWs that includes the components delineated in the box on page 13.⁷³

2. Forming Partnerships

Many internal partners within state health departments, including programs in heart disease and stroke, diabetes, cancer, asthma, maternal and child health, and HIV/AIDS, can collaborate with CHWs to build state capacity for implementing policy on these valuable health workers. Additional partners, such as health plans, insurers, health providers, CHW associations and leaders, community-based health agencies, organizations, and colleges can play important roles as well. To foster an environment supportive of integrating CHWs at a systems level, state health departments and their partners may consider the following approaches:

- Educate advocates at the state and local levels on the beneficial outcomes for the public's health of integrating CHWs into the health care system and the necessary components for comprehensive policies that support such integration.
- Educate groups of health care providers (privately or publicly funded) on the roles that CHWs can play, how CHWs fit into the Medical Home Model, and how to engage community-based organizations that employ CHWs.⁷³
- Partner with nonprofit agencies (e.g., area health education centers, community-based organizations that employ CHWs, and academic institutions, such as state and community colleges) to develop certification standards and provide training. These partners can also work together to develop strategies for training CHWs and their supervisors, and they can work on a plan for related research and evaluation.⁷³
- Develop templates for memoranda of understanding on the engagement of CHWs that can be distributed for use among health care organizations, academic institutions, and community-based organizations.⁷³
- Develop training or certification programs on managing blood pressure within state departments of health, like the CHW certification in blood pressure offered by the Maryland Department of Health.¹²
- Incorporate CHWs into the planning, implementation, and leadership of the processes described above.⁷³

Comprehensive Policy Components

Key Comprehensive Policies	Policy Components
Financing mechanisms for sustainable employment	CHW services are • reimbursable by public payers (e.g., Medicaid, Medicare, SCHIP) and private payers, including fee-for-service and managed care models • reimbursable in specific domains (e.g., federally qualified health centers, community health centers) • reimbursable to public health and to community-based organizations • reimbursable on levels that are commensurate with a living wage
Workforce development	CHW training • allocates specific resources for the CHW workforce • focuses on core skills and competency-based education⁴⁴ • includes core training and disease-specific training needed by CHWs for the jobs for which they are hired⁷⁴ • includes continuing education to increase knowledge and improve skills and practices • includes programs for supervisors of CHWs as well as the CHWs themselves
Occupational regulation	The parameters of the CHW workforce • develop competency-based standards for CHWs that are compatible with a set of “core competency skills” recognized statewide • include state-level standards for certification that are determined by practitioners (CHWs) and employers • include a defined “scope of practice” • recognize the CHW Standard Occupational Classification⁷⁴
Standards/guidelines for publicly funded research and program evaluation on CHWs	CHW research • incorporates common metrics to improve its comparability and generalizability • incorporates program evaluation and community involvement • contributes to the evidence base⁷⁵⁻⁷⁷

3. Evaluation

State health departments and their partners can look at effects on multiple levels when evaluating the success of initiatives involving CHWs:

- Individuals and families;
- Community health workers;
- Program performance; and
- Community and systems changes.

Information and valid tools for evaluating initiatives involving CHWs, including a guide to cost-benefit analysis, forms for needs assessment, and appraisals of health status, can be found on the [University of Arizona's Evaluating CHA Services](#) Web page.

4. Training, Capacity Building, Policy, and Integration Resources

The tools below are compatible training companions that have been used by state partners in health care, academic, work-site, and community-based settings.

4a. Resources for Training and Capacity Building A Community Health Worker Training Resource for Preventing Heart Disease and Stroke

This is a plain-language [training curriculum](#) that health educators, nurses, and other instructors can use to train CHWs and is also a resource and reference for CHWs. It has 15 chapters that cover heart disease and stroke; lifestyle risk factors, high blood pressure (with photo-guided instructions on taking blood pressure measurements) and cholesterol, diabetes, depression and stress, talking to your doctor, taking medicines, heart attack, heart failure, atrial fibrillation, tobacco control, and children and teens. It is an appropriate resource for training CHWs who are being integrated into health care teams. CDC evidence-based resources predominate in the curriculum. An extensive collection of relevant online products are included with content within the chapters and in an appendix, as are a number of hands-on activities for CHWs. A Spanish version will be available later in 2015. Contact [CDC Division for Heart Disease and Stroke Prevention](#) to find out more or to order copies.

Fotonovelas

"[Como Controlar Su Hipertension \(How to Control Your Hypertension\)](#)" is a Spanish fotonovela about how the Ramirez family tries to help the family's father control his high blood pressure by controlling stress, visiting the doctor, and using diet, exercise, and prescribed medicines. The fotonovela also contains information and learning activities to help anyone prevent or manage high blood pressure.

["Como Controlar su Hipertension: Aprenda a controlar su](#)

[consume de sodio](#) (Controlling Hypertension by Learning to Control Sodium Intake)," which builds on the characters and storyline established in the preceding fotonovela, revisits the Ramirez family, with a focus on sodium and blood pressure, including reading Nutrition Facts Panel labels to identify the amount of sodium in foods. The Ramirez family works together to reduce their dietary sodium by following the DASH (Dietary Approaches to Stop Hypertension) diet, using the MyPlate method for making healthy food choices, and incorporating physical activity into their lives. Promotors and other CHWs are encouraged to read the sodium fotonovela with participants. A promotora/CHW guide that accompanies the fotonovela gives a brief summary of objectives, tips, additional activities, reviews, and reminders for CHWs.

Both [fotonovelas](#), which are available in English and Spanish, were developed in collaboration with the University of Texas Health Science Center at El Paso.

Another fotonovela, [Como controlar la grasa y el colesterol: Aprenda a controlar su niveles de colesterol \(How to Control Your Fat and Cholesterol: How to Control Your Cholesterol Numbers\)](#), available in English and Spanish, focuses on educating the Ramirez family about cholesterol, reducing high blood cholesterol through diet and physical activity, and how to read a food nutrition label and select lower-fat foods. A promotora/CHW guide that accompanies the fotonovela gives a brief summary of objectives, tips, additional activities, reviews, and reminders for CHWs.

"¡Hazlo por ellos! Pero por ti también ([Do it for them! But for you too](#))" is a bilingual (Spanish/English) fotonovela featuring dramatic stories of Latinas talking to Latinas about preventing or delaying type 2 diabetes and being healthy for their children and themselves. The stories use three women's challenges in maintaining a healthy lifestyle to convey an important message: Increasing physical activity, making healthy food choices, and losing weight (if you are overweight) decreases or delays your risk of developing type 2 diabetes. The fotonovela can be ordered [online](#). For more information, contact [Betsy Rodriguez](#).

CHWs and Million Hearts®

Million Hearts® is a national program to prevent one million heart attacks and strokes in the United States by 2017. CHWs can work together with CDC and CMS to help reach the program's goal. This [document](#) describes the Millions Hearts initiative and how CHWs can help reach Million Hearts' goal.

The Native Diabetes Wellness Program of DDT

"The In-Between People: Community Health Workers in the Circle of Care" is a dynamic, educational DVD (22 minutes) that shares firsthand accounts of the integral roles that CHWs serve in the Native American and Latino communities.

Information and resources for training, education, research, and evaluation (for CHWs) are also included. The program also offers the [Eagle Books](#), a series of stories for children. To obtain a copy of the DVD, contact [Dawn Satterfield](#).

The Road to Health Toolkit

The [Road to Health Toolkit](#) (available in English and Spanish) provides CHWs/promotores de salud, nurses, health educators, and dietitians a full set of resources to help them support diabetes prevention activities. The resources include interactive tools that can be used to counsel and motivate those at high risk for type 2 diabetes, training and evaluation resources, and online communities of practice in [English](#) and [Spanish](#) to help CHWs using the toolkit to ask questions, learn about best practices, and share successes and lessons learned. For more information, contact [Betsy Rodriguez](#).

Handbook for Enhancing Community Health Worker Programs: Guidance for the National Breast and Cervical Cancer Early Detection Program Part I

This [handbook](#) synthesizes the most current information available for developing and managing effective programs for CHWs. Key components of effective CHW programs are provided, and action templates to develop tools for applying what is learned are included. Upon completing this manual, readers will have built skills in community assessment; program planning; recruiting, training, managing, and maintaining CHWs; and evaluating CHW programs.

Breast and Cervical Cancer Messages for Community Health Worker Programs: A Training Packet Part 2

This [packet](#) provides an introduction to interactive methods for training CHWs, and it offers three lesson plans designed to train CHWs to include messages about breast and cervical cancer in their work. The lesson plans are (a) key facts about finding breast and cervical cancer early, (b) barriers to screening for breast and cervical cancer, and (c) encouraging women to get screened for these two types of cancer. Resources for trainers, handouts of additional information for participants, and transparencies are also included in the packet.

Honoring the Gift of Heart Health: A Heart Health Educator's Manual for Alaska Natives

These culturally appropriate, user-friendly, 10-lesson courses provide heart health education for the American Indian/Alaska Native communities. The courses are filled with skill-building activities, reproducible handouts, and idea starters. Appendices cover activities for training heart health educators to implement the programs, and American Indian and Alaska Native families' journeys to heart health are told with heart-healthy recipes for each family member's favorite foods.

Your Heart, Your Life: A Community Health Worker's Manual and Picture Cards for the Latino/Hispanic Community

This manual is designed to help promotores teach an 11-lesson course on heart health education created specifically for the Latino community. Lessons provide information for understanding, skill building, self-assessment, and goal-setting for healthy lifestyle changes. The manual includes culturally appropriate teaching scripts, learning activities, and reproducible handouts. Interactive activities use telenovelas, fotonovelas, role play, problem-solving, and discussion. Latino role models and family contexts appear throughout. It is available in [Spanish](#) and [English](#). Healthy Hearts, Healthy Homes booklets are available on various topics.

With Every Heartbeat Is Life: A Community Health Worker's Manual for the African American Community

This [educator's manual](#), which contains culturally competent and user-friendly information on multiple risk factors for cardiovascular disease, was created specifically for the African American community and includes activities, ideas for group activities, and reproducible handouts.

Healthy Heart, Healthy Family: A Community Health Worker's Manual and Picture Cards for the Filipino Community

This [manual](#), which is designed for community health educators and outreach organizations, provides tips and checklists on how to organize, market, implement, and evaluate a community-based program in any setting. Included in the guide are handouts, a 30-minute slide presentation, and questions for discussion on heart disease, its risk factors, and how to prevent it.

States Implementing Community Health Worker Strategies

This new [technical assistance guide](#) summarizes the successful work of organizations as it relates to Domains 3 and 4 (Health Systems Interventions and Community-Clinical Linkages, respectively) of CDC's State Public Health Actions program (CDC-RFA-DP13-1305). It also offers insights for states that are implementing CHW strategies. Recommendations were developed by compiling interviews with nine organizations experienced in integrating CHWs into health care teams and engaging CHWs in promoting linkages between the health care system and community resources. The guide also includes findings from a review of evidence-based literature.

The Minnesota Health Worker Alliance

The [Alliance's](#) curriculum is based on the competencies required for CHWs' scope of practice. In addition, it incorporates an internship that provides an opportunity for CHW

students to apply and integrate what they have learned and to ensure that they can make an effective transition to the CHW role. Contact [Joan Cleary](#) at (612) 250-0902 for more information.

4b. Resources for Policy and State Legislation Promoting Policy and Systems Change to Expand Employment of Community Health Workers

This 6-session, self-paced [course](#) is designed to provide state program staff and other stakeholders with basic knowledge about CHWs, such as official definitions and workforce development. In addition, the course covers how states can become engaged in comprehensive systems change efforts to establish sustainability for the work of CHWs, including examples of states that have been successful in this arena. Updates include the latest advances made by states and a significant CMS ruling that will make it easier to pay for CHW preventive services.

Community Health Worker Evidence Assessment Report: Community Health Worker Policy Components

The [Community Health Worker Policy Evidence Assessment Report](#) summarizes the evidence bases for community health worker policies to inform researchers, evaluators, and practitioners.

A Summary of State Community Health Worker Laws

This resource includes state [CHW laws](#) through December 2012.

Improving Cancer Prevention and Control: How State Health Agencies Can Support Patient Navigators and Community Health Workers

This [document](#) describes how state health agencies and state health officials can bolster the sustainability of patient navigation program and CHW programs to support health reform and improve health outcomes for all populations.

APHA Resolution Supporting CHWs. 2010.

This updated [policy statement](#) by the American Public Health Association includes definitions of CHWs, their roles, training and certification, impact on health outcomes, and integration in the health care system. It also has recommendations for public health, policy makers, health care advocates, and other interested parties.

Goodwin K, Tobler L. Community Health Workers: Expanding the Scope of the Health Care Delivery System. 2008.

This [legislative brief](#) covers initiatives by various states in the areas of policy and legislation.

Ro MJ, Treadwell HM, Northridge M. Community Health Workers and Community Voices: Promoting Good Health. 2003.

This [report](#) highlights the roles and functions of CHWs, what is effective, and the challenges and policy options for the expansion of CHW programs.

APHA Support for Community Health Worker Leadership in Determining Standards for Training and Credentialing.

This [APHA CHW Policy Statement](#) calls on local and state CHW professional groups to consider creating policies regarding CHW training standards and credentialing, if appropriate for local conditions, in collaboration with CHW advocates and other stakeholders. It urges state governments and other entities considering creating policies to address CHW training standards and credentialing to engage in collaborative CHW-led efforts with local CHWs and/or CHW professional groups. If CHWs and other entities partner to pursue policy development on these topics, a working group composed of at least 50% self-identified CHWs should be established. Furthermore, state governments and any other entities drafting new policy regarding CHW training standards and credentialing should include in the policy the creation of a governing board composed of at least half CHWs. This board should, to the extent possible, minimize barriers to participation and ensure a representation of CHWs that is diverse in terms of language preference, disability status volunteer versus paid status, past sources of training received, and CHW roles.

National Academy for State Health Policy

A report from [National Academy for State Health Policy](#) highlights the various types of non-licensed health care workers who may benefit from the CMS rule change and how they may be sustainably financed and incorporated into the changing health system.

Community Health Workers in Massachusetts: Improv- ing Health Care and Public Health. January 2010.

This [Web site](#) has a wealth of information on comprehensive policy changes and legislation. For example, it has a resource Web page that links to key national CHW reports and publications related to workforce, financing, credentialing, research, health disparities, national CHW organizations, and state resources.

Minnesota Health Worker Alliance Website

This [Web site](#) contains many tools for both CHWs and their employers, and it lists current work by the Alliance in the areas of workforce, policy, research, education, and the Minnesota CHW Association. It also lists state legislation, partners, and employers and provides information on how CHWs can enroll as Medicaid providers.

Dower C, Know M, Lindler C, O’Neil E. Advancing Community Health Worker Practice and Utilization: The Focus on Financing. San Francisco, CA: National Fund for Medical Education; 2006.

The focus of this report, which identifies sustainable financing mechanisms for CHWs, is on existing and emerging funding, reimbursement, and payment policies for CHWs.

Joshu CE, Rangel L, Garcia O, Brownson CA, O’Toole ML. Integration of a promotora-led self-management program into a system of care. Diabetes Educ 2007;33 (Suppl 6):151S–158S.

This publication describes the integration of promotores into a Federally Qualified Health Center to support patient self-management strategies and evaluates the impact of this program on metabolic control.

**4c. Resources for Integration
A Sustainable Model of Diabetes Self-Management Education/Training Involves a Multi-Level Team That Can Include Community Health Workers**

This [paper](#) is designed to help diabetes educators understand how to meet the ever-increasing needs of people with diabetes while ensuring the future viability of their own program in diabetes education by expanding their educational team. Building upon the AADE ([American Association of Diabetes Educators](#)) Guidelines and Competencies, the paper offers practical ways to involve CHWs on the diabetes educational team. Scenarios present sample concepts as well as examples from real-world situations, focusing on specific activities in diabetes self-management education or training that involve CHWs and relate to behavior change.

Guide to Integrating Community Health Workers into Health Disparities Collaborative

[Migrant Clinicians Network and Migrant Health Promotion](#) have developed a new resource that is specifically tailored to the needs and objectives of teams participating in the Health Disparities Collaborative. This document should help participants to maximize the benefits of integrating CHWs. The first section of the document is tailored to each Collaborative topic with suggestions for how CHWs can promote significant outcomes within a variety of measures. The second section includes a grid that describes roles for CHWs in five of the six components of the Chronic Care Model.

Summary

CHWs can play an important role in a variety of populations, especially those that have disparities in health, in facilitating the prevention and control of chronic diseases. CHW stakeholders should consider partnering with groups or programs around the United States to facilitate the inclusion of CHWs as sustainable members of health care teams, supporters of

self-management, and links between health care systems and communities. Various guidance and resource documents exist to promote this effort.

National CHW Associations

American Association of Community Health Workers
Durrell Fox, Co-Chair, dfoxnehec@aol.com

APHA CHW Section

www.apha.org/member/groups/sections/aphasections/chw
Wandy Hernandez, Chair, (312) 878-7018
wandyhdz@healthconnectone.org

National Association of Community Health Representatives

www.nachr.net
Ramona Dillard, CHR/CHWD, (505) 552-6652
rdillard@lagunatribe.org

National Día de la Mujer Latina Promotores Network

www.diadelamujerlatina.org
Venus Ginés, (713) 798-5715, or toll-free, (877) 518-8889

State/Regional CHW Organizations

ALASKA

Alaska Community Health Aide Program
www.akchap.org/html/home-page.html
(907) 729-4492, akchap@anthc.org

ARIZONA

Arizona Community Health Outreach Workers Network
<http://azchow.org>
Kathleen Gilligan, Coordinator, (520) 705-8861
or (928) 627-1060, azchow.network@gmail.com

Arizona Department of Health Services
Yanitza Soto, (602) 542-8261, yanitza.soto@azdhs.gov

ARKANSAS

AR CHW Association
Naomi Cottoms, (870) 338-8900, ncottoms@aol.com

CALIFORNIA

Community Health Worker/Promotoras Network
www.visionycompromiso.org
Maria Lemus, Executive Director, (510) 232-7869,
chwpromotoras@aol.com or mholl67174@aol.com

Community Health Worker Initiative of Sonoma County
<http://chwisc.org>
Carol West, CHW, (707) 763-3260, carolwestchw@gmail.com

CONNECTICUT

Connecticut CHW Association
Millie Seguinot, (203) 372-5503, mseguinot@swctahec.org

DISTRICT OF COLUMBIA

CHW Professional Association of Washington
Rosalind Oden, r2aoden@gmail.com or chwpadc@gmail.com

FLORIDA

REACH-Workers—The Community Health Workers of Tampa Bay
Michelle Dublin, Chair, (404) 727-1645
michelle_dublin@doh.state.fl.us

Florida CHW Coalition
www.floridachw.org
Marion Bazhaf, (850) 245-444 ext. 2847
marion_banzhaf@doh.state.fl.us

Florida Community Health Worker Coalition
www.doh.state.fl.us/family/chronic disease/CHW_Coalition
Susan Fleming, susan_fleming@doh.state.fl.us

GEORGIA

Georgia Community Health Advisor Network
Gail McCray, (404) 752-1645, gmccray@msm.edu

ILLINOIS

Chicago Local Network
http://chwnetwork.wordpress.com
Leticia Boughton, Network Coordinator, (312) 878-7015,
lboughton@healthconnectone.org

INDIANA

Indiana Community Health Worker Coalition
www.in.gov/isdh/24842.htm
JoBeth McCarthy-Jean or Margarita Hart, (317) 370-8757,
jmccarthy-jean@isdh.in.gov, incommunityhealth@gmail.com, or esperanzaministries@gmail.com

IOWA

American Cancer Society
Roshan Paudel, roshan.paudel@cancer.org

LOUISIANA

Louisiana Community Health Outreach Network
www.facebook.com/pages/Louisiana-Community-Health-Outreach-Network-LACHON/198819210163056
Ashley Wennerstrom or Catherine Gray Haywood, (504) 988-4007 or (504) 523-6221 ext. 172, lachws@gmail.com

MAINE

Maine Community Health Worker Initiative
www.mechw.org/model.html
(207) 622-9252 or (800) 351-9634, mmhp@mainemigrant.org

MARYLAND

Community Outreach Workers Association of Maryland, Inc.
Carol Payne, (410) 664-6949, carol.b.payne@hud.gov

MASSACHUSETTS

Massachusetts Association of Community Health Workers
www.machw.org
Lisa Renee Holderby-Fox or Jackie Toledo, Executive Director,
(508) 756-6676 ext. 23, lrfox@machw.org or jtoledo@machw.org

COWNT Coalition
Brenda Evans, (413) 787-6756, bevans@springfieldcityhall.com

CHW Alliance of Berkshire County
Luci Leonard, (413) 358-5296, chwalliance@gmail.com

MICHIGAN

Michigan Community Health Worker Alliance
http://michwa.org
Katherine Mitchell, Project Coordinator, (734) 615-7972,
mitchelkl@umich.edu, or Marta Lugo Rodriguez
mlugo-rodriguez@chasscenter.org

MINNESOTA

Minnesota CHW Peer Network
www.wellshareinternational.org/chwpeernetwork.us
Anita Buel, Chair, (612) 293-3502, anita.dchw@gmail.com

The Minnesota CHW Alliance
Joan Cleary, (612) 250-0902, joanlcleary@gmail.com

Minnesota CHW Peer Network
www.wellshareinternational.org/chwpeernetwork.us
Comfort Dondo-Dewey, Chair, (612) 871-3759
cdondo@porticohealthnet.org, or Sophia London
(612) 871-3759, sophia.london@hcmcd.org

NEW MEXICO

New Mexico Community Health Workers Association
www.nmchwa.com
Bette Jo Ciesielski, (505) 255-1227, nmchwa@yahoo.com

NEW YORK

Community Health Workers Association of Rochester
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References

1. Health Resources and Services Administration. Community Health Worker National Workforce Study. U.S. Department of Health and Human Services. Available at: <http://bhpr.hrsa.gov/healthworkforce/reports/chwstudy2007.pdf>.
2. California Association of Community Health Workers. Community health workers – The workforce with many names – Diversity is our unity!. Available at: www.cachw.org/chw-job-titles.
3. Community Health Workers Section, American Public Health Association. Available at: <http://www.apha.org/apha-communities/member-sections/community-health-workers>.
4. Israel B. Social networks and social support: implications for natural helper and community level interventions. *Health Educ Q*. 1985;12(1):65–80.
5. Smedley B, Smith A, Nebo A. *Unequal treatment: confronting racial and ethnic disparities in health care*. Washington, DC: Institute of Medicine; 2002.
6. Centers for Disease Control and Prevention. CDC Diabetes Projects Web Site: Community Health Workers/Promotores de Salud: Critical Connections in Communities. Available at: www.cdc.gov/diabetes/projects/pdfs/comm.pdf.
7. Gilkey M, Garcia CC, Rush C. Professionalization and the experience-based expert: strengthening partnerships between health educators and community health workers. *Health Promot Pract*. 2011;12(2):178–182.
8. Witmer A, Seifer S, Finocchio L, Leslie J, O'Neil E. Community health workers: integral members of the health care work force. *Am J Public Health*. 1995;85:1055–1058.
9. Pencer MS, Gunter KE, Palmisano G. Community health workers and their value to social work. *Soc Work*. 2010;55(2):169–180.
10. Volkman K, Castanares T. Clinical community health workers: linchpin of the medical home. *J Ambul Care Manage*. 2011;34(3):221–233.
11. Brandeis University. *Evidence Report and Evidence-Based Recommendations: Cancer Prevention and Treatment Demonstration for Ethnic and Racial Minorities*. Waltham, MA: Brandeis University; 2003.
12. Brownstein J, Bone L, Dennison C, Hill M, Kim M, Levine D. Community health workers as interventionists in the prevention and control of heart disease and stroke. *Am J Prev Med*. 2005;29(5):128–133.
13. Brownstein J, Chowdhury F, Norris S, et al. Effectiveness of community health workers in the care of people with hypertension. *Am J Prev Med*. 2007;32(5):435–447.
14. Allen J, Dennison C, Himmelfarb D, Szanton S, Frick K. Cost-effectiveness of nurse practitioner/community health worker care to reduce cardiovascular health disparities. *J Cardiovasc Nurs*. 2013;29(4):1–7.
15. Gary TL, Bone LR, Hill MN, et al. Randomized controlled trial of the effects of nurse case manager and community health worker interventions on risk factors for diabetes-related complications in urban African Americans. *Prev Med*. 2003;37(1):23–32.
16. Freund KM, Battaglia TA, Calhoun E, Darnell JS, Dudley DJ, Fiscella K. Impact of patient navigation on timely cancer care: the Patient Navigation Research Program. *J Nat Cancer Inst*. 2014;106(6).
17. Wilson FA, Villarreal R, Stimpson JP, Pagan JA. Cost-effectiveness analysis of a colonoscopy screening navigator program designed for Hispanic men. *J Cancer Educ*. 2014. Epub 2014 Aug 30. doi: 10.1007/s13187-014-0718-7
18. Norris SL, Chowdhury FM, Van Le K, et al. Effectiveness of community health workers in the care of persons with diabetes. *Diabet Med*. 2006;23(5):544–556.
19. Viswanathan M, Kraschnewski J, Nishikawa B, et al. Outcomes of Community Health Worker Interventions. Evidence Report/Technology Assessment No. 181 (Prepared by the RTI International—University of North Carolina Evidence-based Practice Center under Contract No. 290 2007 10056 I) AHRQ Publication No. 09-E014. Rockville, MD; 2009.
20. Margellos-Anast H, Gutierrez MA, Whitman S. Improving asthma management among African-American children via a community health worker model: findings from a Chicago-based pilot intervention. *J Asthma*. 2012;49(4):380–389.
21. Institute of Medicine. A population-based policy and systems change approach to prevent and control hypertension. Washington, DC: National Academies Press; 2010.
22. Chobanian AV, Bakris GL, Black HR, et al. Seventh report of the joint national committee on prevention, detection, evaluation, and treatment of high blood pressure. *Hypertension*. 2003;42(6):1206–1252.
23. Nwankwo T, Yoo SS, Burt V, Gu Q. Hypertension among adults in the United States: National Health and Nutrition Examination Survey, 2011–2012. *NCHS Data Brief*. 2013;1–8.
24. CDC. Vital Signs: Awareness and treatment of uncontrolled hypertension among adults in the United States, 2003–2010. *MMWR*. 2012;65(35):703–709.
25. Ogundiyi MO, Croft JB, Greenlund KJ, Giles WH, Mensah GA. Racial/ethnic differences in microalbuminuria among adults with prehypertension and hypertension: National Health and Nutrition Examination Survey (NHANES), 1999–2006. *Am J Hypertens*. 2010;23:859–864.
26. CDC. National Diabetes Statistics Report, 2014: *Estimates of Diabetes and Its Burden in the United States*. U.S. Department of Health and Human Services. Available at: www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-web.pdf.
27. CDC. Prediabetes: Am I at risk? Available at: www.cdc.gov/diabetes/prevention/prediabetes.htm.
28. CDC. United States Cancer Statistics: 1999–2011 *Incidence and Mortality Web-based Report*. Available at: <http://apps.nccdc.cdc.gov/uscs>.
29. CDC. *CDC's National Asthma Control Program: An investment in America's health*. 2013. Available at: www.cdc.gov/asthma/pdfs/investment_americas_health.pdf.

30. Larme AC, Pugh JA. Evidence-based guidelines meet the real world: the case of diabetes care. *Diabetes Care*. 2001;24(10):1728–1733.
31. Morisky D, DeMuth N, Field-Fass M, Green L, Levine D. Evaluation of family health education to build social support for long-term control of high blood pressure. *Health Educ Q*. 1985(12):35–50.
32. Morisky D, Lees N, Sharif C, Liu K, Ward H. Reducing disparities in hypertension control: Community-based hypertension control project (CHIP) for an ethnically diverse population. *Health Promot Pract*. 2002;3:264–275.
33. Morisky D, Ang A, Krousel-Wood M, Ward H. Predictive validity of medication adherence measure in outpatient setting. *J Clin Hypertens*. 2008;10(5):348–354.
34. Hajjar I, Kotchen JM, Kotchen TA. Hypertension: trends in prevalence, incidence, and control. *Annu Rev Public Health*. 2006;27:465–490.
35. Levine DM, Bone LR, Steinwachs DM, Parry RE, Morisky DM, Sadler J. The physician's role in improving patient outcome in high blood pressure control. *Md State Med J*. 1983;32(4):291–293.
36. Levine DM, Green LW, Deeds SG, Chwalow J, Russell RP, Finlay J. Health education for hypertensive patients. *JAMA*. 1979;241(16):1700–1703.
37. Flynn S, Ameling J, Wolff J, et al. Facilitators and barriers to hypertension self-management in urban African Americans: perspectives of patients and family members. *Patient Prefer Adherence*. 2013;7:741–749.
38. Magid D, Farmer S. Hypertension self-management: A home run for patients and payers. *Circulation*. 2014;7:205–206.
39. Funnell M. Peer-based behavioural strategies to improve chronic disease self-management and clinical outcomes: evidence, logistics, evaluation considerations and needs for future research. *Fam Pract*. 2009;27:i17–i22.
40. Chin MH, Walters AE, Cook SC, Huang ES. Interventions to reduce racial and ethnic disparities in health care. *Med Care Res Rev*. 2007;64(5 Suppl):7S–28S.
41. Delamater AM. Improving patient adherence. *Clin Diabet*. 2006;24:71–77.
42. Guidry JJ. A qualitative analysis of barriers to cancer treatment. *AHSR FHSR Annu Meet Abstr Book*. 1994;11:158–159.
43. Rosenthal EL, Wiggins N, Brownstein JN, Johnson S, Borbon IA, Rael R. The final report of the National Community Health Advisor Study: Weaving the future. 1998. Available at: www.chw-nec.org/pdf/CAH-summaryALL.pdf.
44. Wiggins N, Borbon A. Core roles and competencies of community health advisors in the final full report of the National Community Health Advisor Study: Weaving the future. University of Arizona. Available at: www.chw-nec.org/pdf/CAHsummaryALL.pdf.
45. Baumann L, Dang T. Helping patients with chronic conditions overcome barriers to self-care. *Nurse Pract*. 2012;37(3):32–38.
46. Brownson CA, Heisler M. The role of peer support in diabetes care and self-management. *Patient*. 2009;2(1):5–17.
47. Brownson CA, Hoerger TJ, Fisher EB, Kilpatrick KE. Cost-effectiveness of diabetes self-management programs in community primary care settings. *Diabetes Educ*. 2009;35(5):761–769.
48. Migrant Health Promotion & Migrant Clinicians Network. *A Guide to Integrating Community Health Workers into Health Disparity Collaboratives*. 2007. Available at: www.migrantclinician.org/files/resourcebox/Guide_For_Health_Disparities_Collaboratives-2007.pdf.
49. Wiggins N, Kaan S, Rios-Campos T, Gaonkar R, Morgan ER, Robinson J. Preparing community health workers for their role as agents of social change: Experience of the Community Capacitation Center. *J Community Pract*. 2013;21(3):186–202.
50. Ingram M, Sabo S, Rothers J, Wennerstrom A, de Zapien JG. Community health workers and community addressing health disparities. *J Community Health*. 2008;33(6):417–424.
51. Kieffer EC, Welmerink DB, Sinco BR, Welch KB, Rees EM, Schumann CY. Dietary outcomes in a Spanish-language randomized controlled diabetes prevention trial with pregnant Latinas. *Am J Pub Health*. 2014;104(3):526–533.
52. Spencer M, Rosland A, Kieffer E, Sinco B, Valerio M, Palmisano G. Effectiveness of a community health worker intervention among African American and Latino adults with type 2 diabetes: a randomized controlled trial. *Am J Pub Health*. 2011;101(12):2253–2260.
53. Arshad S, Williams KP, Mabiso A, Dey S, Soliman AS. Evaluating the knowledge of breast cancer screening and prevention among Arab-American women in Michigan. *J Canc Educ*. 2011;26:135–138.
54. Williams KP, Mabiso A, Todem D, Hammad A, Hill-Ashford Y, Hamade H. Differences in knowledge of breast cancer screening among African American, Arab American, and Latina women. *Prev Chronic Dis*. 2011;8(1):A20.
55. Roman LA, Raffo JE, Meghea CI. Maternal perceptions of help from home visits by nurse-community health worker teams. *Am J Public Health*. 2012;102:643–645.
56. Zahn D, Matos S, Findley S, Hicks A. *Making the connection: The role of community health workers in health homes*. NYS Health Foundation; 2012. Available at: <http://nyshealthfoundation.org/uploads/resources/making-the-connection-community-health-workers-sept-2012.pdf>.
57. Office of the Surgeon General. Clinical and Preventive Services. Available at: www.surgeongeneral.gov/initiatives/prevention/strategy/clinical-and-community-preventive-services.html.
58. The Patient Protection and Affordable Care Act of 2010, PLN 111-148, Secs. 5101, 5102, 5313, 5403, and 3509.
59. Centers for Medicare & Medicaid Services. Update on preventive services initiatives. 2013. Available at: www.medicare.gov/Federal-Policy-Guidance/Downloads/CIB-11-27-2013-Prevention.pdf.
60. Lewin S, Dick J, Pond P, et al. Lay health workers in primary and community health care. *Cochrane Database Syst Rev*. 2003;4(1).
61. CDC. Childhood Obesity Research Demonstration Project (CORD). 2014. Available at: www.cdc.gov/obesity/childhood/researchproject.html.

62. Institute of Medicine. Bridging the evidence gap in obesity prevention: A framework to inform decision making. Washington, DC: National Academies Press; 2010.
63. Cosgrove S, Moore-Monroy M, Jenkins C, Castillo SR, Williams C, Parris E. Community health workers as an integral strategy in the REACH U.S. program to eliminate health inequities. *Health Promot Pract*. 2014;15(6):795–802.
64. American Public Health Association. Policy Number 20091: Support for community health workers to increase health access and to reduce health inequities [online]. 2009. Available at: www.apha.org/policies-and-advocacy/public-health-policy-statements/policy-database/2014/07/09/14/19/support-for-community-health-workers-to-increase-health-access-and-to-reduce-health-inequities.
65. CDC. A summary of state community health worker laws. Atlanta, GA: CDC; 2013. Available at: www.cdc.gov/dhds/pubs/docs/chw_state_laws.pdf.
66. Katzen A, Morgan M. Affordable Care Act opportunities for community health workers: how Medicaid preventive services, Medicaid health homes, and state innovation models are including community health workers. Cambridge, MA: Center for Health Law and Policy Innovation and Harvard Law School; 2014. Available at: www.chlpi.org/wp-content/uploads/2013/12/ACA-Opportunities-for-CHWsFINAL-8-12.pdf.
67. Goodwin K, Tobler L. Community health workers: Expanding the scope of the health care delivery system. Washington, DC: National Conference of State Legislatures; 2008. Available at: www.ncsl.org/print/health/chwbrief.pdf.
68. Minnesota Healthcare Education Industry Partnership. Available at: <http://dx.confex.com/dx/8/webprogram/Paper1236.html>
69. Minnesota Statutes. Supplement Section 256B.0625, Subdivision 492007.
70. Massachusetts Legislation Chapter 58 of the Acts of 2006. An Act Providing Access to Affordable, Quality, Accountable Health Care, Section 110, Section 104. Available at: <http://www2.gtlaw.com/pub/alerts/2006/0404.pdf>.
71. Ballester G. Community health workers: Essential to improving health in Massachusetts. Boston, MA: Massachusetts Department of Public Health. Available at: www.mass.gov/eohhs/docs/dph/com-health/com-health-workers/comm-health-workers-narrative.pdf.
72. Office of Community Health Workers. *Community Health Workers in Massachusetts: Improving Health Care and Public Health*. Boston, MA: Massachusetts Department of Public Health; 2009.
73. Babamoto KS, Sey KA, Camilleri AJ, Karlan VJ, Catalasan J, Morisky DE. Improving diabetes care and health measures among Hispanics using community health workers: results from a randomized controlled trial. *Health Educ Behav*. 2009;36(1):113–126.
74. Rosenthal EL, Brownstein JN, Rush CH, et al. Community health workers: part of the solution. *Health Aff*. 2010;29(7):1338–1342.
75. Bureau of Labor Statistics. Standard Occupational Classification (SOC)—21–1094 Community Health Workers. 2010.
76. Rosenthal EL, de Heer H, Rush CH, Holderby L-R. Focus on the future: A community health worker research agenda by and for the field. *Prog Community Health Partnersh*. 2008;2(3):225–235.
77. Brownstein JN, Rosenthal EL. Evaluating CHA services in the final full report of the National Community Health Advisor Study: weaving the future. Tucson, AZ: University of Arizona; 1998.



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