“Community Health Workers should be a part of any first class health program trying to improve the health of a defined population. They are essential for achieving high quality results.”—Henry Perry, MD, PhD, MPH, Senior Scientist, the Johns Hopkins Bloomberg School of Public Health

“They can transform the health care system, diversify it, not just fit into the existing system.”—Gail Hirsch, Director, Office of Community Health Workers in the Massachusetts Department of Public Health

“CHWs could function like the Avon lady giving health advice, selling you vitamins, but also asking do you smoke or drink—a model where the health system doesn’t bear the cost.”—Kate Tulenko, MD, MPH, MPhil, Vice President, Health Systems Innovation at IntraHealth International

Community Health Workers and Population Health: Lessons from U.S. and Global Models
A Learning Report

Published: October 17, 2016
Community Health Workers and Population Health: Lessons from U.S. and Global Models

Table of Contents

Executive Summary 4
   About This Report
   Highlights and Recommendations

Who Are Community Health Workers? 7
   Global and U.S. Roots of the Community Health Worker Movement
   Defining CHW Roles
   A Push to Scale Up CHW Programs in the 21st Century
   CHWs as Advocates for Social Justice

The Evidence Base 11
   Evidence from Low and Middle Income Countries
   Evidence from High Income Countries
   Contribution of Community-Based Participatory Research (CBPR)

CHWs and Their Impact on Population Health—U.S. and Global Models 16
   Model Selection Criteria
   What are the Components of Effective CHW Programs?
   Learning From Global CHW Models: Multidirectional Knowledge Exchange
   Global Models: A Focus on Population
   U.S. Models: A Focus on Disparities

Strengthening the CHW Infrastructure: Policy Issues and Challenges 31
   Recruitment
   Training and Certification
   Paid vs. Volunteer CHW Models
   Role of CHWs, CHW Associations and States in Advancing the CHW Workforce
Funding and Sustaining CHWs

Obstacles to Investment in CHWs in the United States
Opportunities under the Affordable Care Act

Conclusion

Evidence
CHWs Potential—Are They Here to Stay?
CHWs and Building a Healthy Population
Challenges

Recommendations

Addressing Research Gaps and Opportunities
Participating in a Knowledge ExChange with Regard to Global and U.S. CHW models
Helping the CHW Workforce Reach its Potential

Learning Compendium

Key Resources
16 Global and U.S. Models: Sources of Information
Q&A: Interviewees’ Opinions on Key Topics
Annotated List of Those Interviewed

Executive Summary

About This Report
This Learning Report and Program Model Matrix provide a “deeper dive” into community health workers’ (CHW) role in population health improvements rather than disease-specific outcomes, along with identification of global as well as U.S. models that employed CHWs to achieve population health outcomes. It includes insights and recommendations gleaned from more than 20 interviews with U.S. and global experts in the field, including researchers, staff of state and federal agencies, CHW advocates, and program leaders, as well as three RWJF program officers. Interviews are supplemented by findings and observations in peer-reviewed articles and reports written by the interviewees, their colleagues, and other experts in the field. Also incorporated are findings from CHW presentations and discussions at the November 2015 American Public Health Association annual meeting in Chicago.

The report does not offer an extensive literature review; its focus is to understand the impact of CHWs on population health. Some 15 models are described in brief in the report; in the Learning Compendium, publications describing them in more depth are listed; and a Program Model Matrix describes their components in detail.

Highlights and Recommendations

Evidence
Henry Perry, MD, PhD, MPH, a senior scientist at the Johns Hopkins Bloomberg School of Public Health, spoke for many of our interviewees in affirming, based on a growing body of evidence, that CHWs have the potential to transform health systems around the world. “CHWs should be a part of any first class health program trying to improve the health of a defined population—whether defined by geographical location, enrollment in HMO, whatever it might be. They are essential for achieving high quality results.”

The Cochrane Collaboration—an independent network of researchers that prepares systematic reviews—found 82 studies among its library of randomized controlled trials (RCTs) that reviewed the effects of using lay health workers (LHWs). The authors concluded that the lay health workers “provide promising benefits in promoting immunization uptake and breastfeeding, improving TB treatment outcomes, and reducing child morbidity and
mortality when compared to usual care.” For other health issues, they found that the evidence was insufficient to draw conclusions about their effects.¹

**CHW Models**

We selected the four global and 11 U.S. CHW models described in this report based on their potential to impact population health through both system transformation and through attention to local conditions that influence health. To achieve health equity requires addressing these social determinants of health (SDOH). CHWs, embedded in their communities, sharing the life experiences of their neighbors, have the potential to advocate for policy and environmental changes to address these “upstream conditions”—poverty, education, housing, economic opportunity—that influence health and health equity.

Although the U.S. and global models look very different in terms of scale and organization, we have identified and explored opportunities for two-way “knowledge transfer.” While global models are national or regional in scope, each of the four selected models shows potential applicability to the United States, for example with regard to sustainability or “durability,” building local support for CHWs, or integrating them into primary care teams.

The 11 U.S. models target smaller vulnerable subpopulations experiencing disparities in health outcomes relative to the population at large. They are organized in different ways—integrated with hospitals, clinics or health departments; operating as independent management entities, or as part of academic-community partnerships; often taking a community-based participatory research approach. Though many of these models focus on chronic diseases, their holistic approach to addressing SDOH qualifies them as population health models. In addition, in the United States, the work of CHWs often cannot be paid for without a health care organization connection, so their population health work is often done in tandem with clinical work.

**Recommendations for RWJF**

We conclude the report with a set of recommendations for funders to consider if they want to further explore the potential of CHWs to accelerate progress toward greater health for all people. Among the key recommendations are:

Fund research to articulate CHWs’ impact on population health. Studies should ask, ‘What is the distinctive contribution, the incremental value that CHWs add to primary care teams that is not same as a medical professional or an addiction counselor?’

Conduct a further exploration into global CHW models and their applicability to the United States. Studies could build on prior funder-supported global health research, such as the 2015 AcademyHealth report (Global Public Health Systems: A Scan of Promising Practices), to analyze the four global models described in this report (or other models) in greater depth.

Explore CHWs’ potential as advocates for policy change. Investigations could examine organizational factors that facilitate or discourage CHW advocacy in order to enhance their capacity to address the SDOH within their communities and thus accelerate progress toward a population health.

Explore how CHWs in United States can make better use of technology as they do globally. Giving CHWs the ability to operate collectively by gathering and aggregating information with data support could be a powerful tool for advocacy. Research could also investigate potential new roles for CHWs as “curators” of web-based information and “communicators” within their communities about SDOH via social media, blogs, or listservs.

Continue the conversation with the 22 health experts who contributed to this report. Many of our interviewees provided insights and made recommendations of additional programs and people to contact regarding the effectiveness of global and U.S. work done by CHWs. Given the fairly limited scope of this report, we were unable to pursue these avenues of investigation.

—Jayme Hannay, MPH, PhD, and Janet Heroux, MPH, PhD, RWJF Learning Unit Consultants
Community Health Workers and Population Health: Lessons from U.S. and Global Models

Who Are Community Health Workers?

Global and U.S. Roots of the Community Health Worker Movement

The need for trusted, local people who can extend the reach of health professionals in low-resourced areas is universal and longstanding. From the “feldshers” of 17th century Russia to the “barefoot doctors” of early 20th century China, lay people with minimal medical training have demonstrated their capacity to bring basic care to underserved regions.2

In the 1960s and 1970s, lay or community health worker (CHW) programs in India and Latin America began producing positive health outcomes, challenging the notion that a transference of the Western medical model, with its focus on technology and acute care, was the best way to improve health in developing countries.

Carl Taylor, MD, DrPH, founding chair of the Department of International Health at the Johns Hopkins Bloomberg School of Public Health, found that children who received preventive care from Indian village women trained as family health workers had increased height and weight and reduced mortality compared with those in a control group.3 “What makes a difference in improving health is not so much what physicians do, but what communities do,” Taylor said in a 2005 interview published by the Johns Hopkins Bloomberg School of Public Health.

Taylor’s findings, combined with similar results from programs in Guatemala and Bangladesh, created pressure for a new model of basic or primary health care. That pressure

---


culminated in the 1978 Alma-Ata conference and its declaration that “primary health care forms an integral part both of the country’s health system and of the overall social and economic development of the community.” It should be delivered “as close as possible to where people live and work” by teams of providers that include “suitably trained community workers as well as professionals.”

In linking health and development, the conference was espousing a concept of health, “not as an isolated and short-lived intervention but as part of a process of improving living conditions” by addressing the upstream conditions of education, housing, safe water, and other factors that influence health, known today as SDOH. “Primary health care was designed as the new center of the public health system, requiring an intersectorial approach—several public and private institutions working together on common issues.”

In the United States, CHWs were deployed as outreach workers in the 1960s and 1970s in categorically-funded grant projects that addressed targeted areas of disparity, such as HIV/AIDS and infant mortality, according to Laura Leviton, PhD, senior adviser for evaluation at the Robert Wood Johnson Foundation (RWJF), and Russell Schuh, EdD, visiting research instructor in the Office of Medical Education at the University of Pittsburgh, School of Medicine. Programmatic focus and funding shifted to chronic disease prevention in the 1980s and 1990s but CHWs’ overall mission in the United States has been consistent: to reduce disparities in access to primary care services that affect a significant percentage of the population.

Defining CHW Roles

As evidence of their contribution to population health has grown, CHWs and their advocates have recognized the importance of defining their roles in order to increase awareness of their value by the public and by the medical community—and to legitimize their place within health care systems, and make the case for sustained reimbursement for their work. Some of the important role definition projects are:


5 Ibid. Cueto.
Foster School of Medicine and founding member of the Project on CHW Policy and Practice at the University of Texas, and Nell Brownstein, PhD, a retired senior scientist at the Centers for Disease Control and Prevention (CDC), led the study, along with Noelle Wiggins. The study, supported by the Annie E. Casey Foundation, examined four key areas. One core component looked at open-ended data from CHWs and other stakeholders from throughout the United States about their roles, skills, and qualities. Wiggins took the lead on this topic that identified seven core roles for CHWs:

1. Cultural mediation between communities and the health system
2. Informal counseling and social support
3. Providing culturally appropriate health education
4. Advocating for individual and community needs
5. Assuring people get the services they need
6. Building community and individual capacity
7. Providing direct services

In 2014, Rosenthal and her colleagues, including a majority-CHW advisory committee, launched the national CHW Core Consensus (C3) Project to update the 1998 study. Funded by the Amgen Foundation and Sanofi-US, the project aims for a greater common understanding of the CHW scope of practice and skills. While core roles are largely unchanged, says Rosenthal, some important new roles and skills have been identified. Among them are roles for CHWs in evaluation and research and also in implementing individual and community assessments. New skills include expanding areas of their knowledge base in health disparities and public health principles—and outreach. “We are recommending that they can be adapted depending on the organization where CHWs are.”

**Community Health Worker National Workforce Study (2007).** Noting that health care planners and administrators were giving increasing attention to CHWs as members of health care teams, the federal Department of Health and Human Services decided to take a look at factors that affected utilization and development of the workforce (estimated at 120,000 in 2005). Carl H. Rush, MRP, founding member and research affiliate for the Project on Community Health Worker Policy and Practice at the University of Texas School of Public Health.

---

7 Rosenthal is currently assistant director in the Department of Medical Education at the Paul L. Foster School of Medicine at Texas Tech University Health Sciences Center El Paso.
8 Brownstein is currently an adjunct associate professor at Rollins Emory School of Public Health.
Health was the lead author on the Workforce Study, which identified five models of care, not necessarily exclusive:

1. Member of care delivery team
2. Navigator
3. Screening and health education provider
4. Outreach-enrolling-informing agent
5. Organizer

American Public Health Association (APHA). In 2009, the CHW Member Section was established within APHA to share best practices and develop national, state, and local policies to support CHWs. The section’s 2009 policy, Support for CHWs to Increase Health Access and Reduce Health Inequities, formulated the commonly-used definition of CHW as “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/intermediary between health/social services and the community . . .”

Trust is key, according to Rosenthal and her colleagues including Brownstein, Gail Hirsch, Med, director of the Office of Community Health Workers in the Massachusetts Department of Public Health, and Carl Rush. The ability to “develop peer-to-peer relationships of trust with patients, rather than provider-client relationships” defines the CHW, they state in an article in Health Affairs. It is these relationships, rather than clinical expertise, that contribute most importantly to the CHW’s ability to communicate openly with patients on issues related to health, and ultimately to improve health care access and outcomes, according to these authors.

Joan Cleary, MM, executive director of the Minnesota Community Health Worker Alliance, a non-profit partnership committed to equitable and optimal health outcomes for all communities, underscores Rush’s comments on the importance of trust. “CHWs are knowledgeable and trusted members of the communities they serve and trust is among the many strengths they bring to a care team. Trust that comes from shared life experience is often under recognized and undervalued in a medical culture that views trust as a function of professional licensure and years of specialized education. Research and program experience demonstrate that low-income patients are more likely to discuss basic needs and

---

psychosocial issues with CHWs who share the same background and speak the same language. CHWs help build patient engagement and capacity-building for better health, drawing on their understanding of the cultural beliefs, traditions and histories of those they serve and who may distrust the health system for a variety of reasons. We need to make a stronger case for the value of CHWs around creating trust and why that is so critical to better outcomes, especially working with communities facing health inequities.

“For more insights from interviewees on the unique role of CHWs, see the Q&A in the Learning Compendium.

**CHWs as Advocates for Social Justice**

One of the global trends noted in the *New England Journal of Medicine* article is the push for social justice in health and health care. Equity, essential for achieving a Culture of Health, requires addressing SDOH. CHWs, embedded in their communities, sharing the life experiences of their neighbors, have the potential to advocate for policy and environmental changes to address these upstream conditions that influence health.

However, a number of barriers have prevented CHWs from realizing this potential. “As interest in CHWs has waxed and waned over the years,” says *E. Lee Rosenthal*, of Texas Tech and the Project on CHW Policy and Practice at the University of Texas, “the focus on advocacy, on public policy, will get lost first. It’s the canary in the coal mine for CHWs.” One problem, says Rosenthal, is that “advocacy often gets pushed to the side because of over medicalization of CHW roles.”

*Eugenia Eng* of the Gillings School of Global Public Health saw this happen among the “navegantes” recruited for HoMBREs, an HIV/STD prevention intervention for Latino migrant workers in rural North Carolina. Although they were trained to advocate for policy changes that benefitted the workers, such as longer health department hours, the demand for other core CHW functions—information, referrals, education in prevention skills—prevented them from fulfilling this role.

“CHWs do really well as advocates on an individual level, but we want them to think about the collective impact of their work,” says *Samantha Sabo*, DrPh, MPH, assistant professor at the Mel & Enid Zuckerman College of Public Health at the University of Arizona. “As they listen to stories from the community, they should ask themselves ‘What do you help people with over and over?’ and think of solutions on a population level, not put out mini fires.”

While recognizing the potential of CHWs to advocate for community-level change to reduce the structural underpinnings of health disparities, Sabo and other interviewees also noted, “They are not a panacea for structural issues in society. CHWs are effective in strengthening
the system as long as the system understands who they are, and doesn’t use them for purposes they shouldn’t be used for. CEOs must recognize that the health care system is broken.”

For more opinions on CHWs’ advocacy role, see the Q&A in the Learning Compendium.

The Evidence Base
To build the political will for scaling up the CHW workforce, a strong evidence base of their effectiveness is essential—and that has been growing, according to Henry Perry and others interviewed for this report. Perry acknowledged in a 2014 article in the Annual Review of Public Health: “the difficult nature of measuring population health also complicates the assessment of CHW effectiveness.” Nonetheless, he cites a large body of data demonstrating the impact CHWs have had in low-, middle-, and high-income countries.

The library of randomized controlled trials (RCTs) at the Cochrane Collaboration includes 82 studies that reviewed the effect of using lay health workers (LHWs) to improve mother and child health and to help people with infectious diseases. The LHWs studied worked among people with low incomes living in wealthy countries, or among people living in poor countries. The Collaboration’s review of these RCTs concluded that the lay health workers “provide promising benefits in promoting immunization uptake and breastfeeding, improving TB treatment outcomes, and reducing child morbidity and mortality when compared to usual care.” For other health issues, they found that the evidence was insufficient to draw conclusions about the effects of LHWs.

Evidence from Low and Middle Income Countries
Henry Perry cites findings from randomized controlled trials (RCTs) and other rigorously designed studies that demonstrate that CHWs have helped low-resourced countries in Africa, South America, and Asia make significant progress toward Millennium Development Goals in priority areas such as childhood undernutrition, maternal and child health, access to family-planning services, and control of HIV, malaria, and tuberculosis infections. Among the many examples cited in the article are the following:

---


- Of 45 different interventions identified as effective for reducing under age five mortality in low-income settings, nearly three-quarters (32 interventions) can be provided by CHWs.

- A 2010 review of studies of community case management for pneumonia carried out by CHWs concluded that their reduction in mortality from pneumonia could be as high as 70 percent.

**Evidence from High Income Countries**

CHWs also have an impact in high-income countries where large disparities in health outcomes persist between selected subpopulations and the population at large despite the presence of well-developed health systems, according to a 2015 Commonwealth Fund Report.\(^\text{13}\) Building on prior studies, such as the 2009 AHRQ evidence report,\(^\text{14}\) a 2015 CDC report states that the “unique roles 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”—while also reducing costs.\(^\text{15}\)

Examples include:

- A review of 18 studies of CHWs involved in the care of patients with diabetes found improved knowledge and lifestyle and self-management behaviors among participants, as well as decreases in the use of the emergency department.

- 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).

- Asthma control (i.e., symptom frequency) was reduced by 35 percent among adolescents who received individualized asthma education during three to four home visits over six

---

\(^{13}\) Hostetter M and Klein S. *In Focus: Integrating Community Health Workers into Care Teams.* Commonwealth Fund, December 2015.


\(^{15}\) *Addressing Chronic Disease through Community Health Workers: A Policy and Systems-Level Approach.* Atlanta: Centers for Disease Control and Prevention, page 5, April 2015.
months; the CHWs also served as liaisons between families and the medical system. This work resulted in a savings of $5.58 per dollar spent on the intervention.\(^\text{16}\)

In addition to the CDC report, the Community Preventive Services Task Force published a finding in March 2015 recommending CHW interventions to prevent cardiovascular disease citing “strong evidence of their effectiveness when engaged in a team-based care model to improve blood pressure and cholesterol in patients at increased risk for heart disease.”\(^\text{17}\)

**Contribution of Community-Based Participatory Research (CBPR)**

Five of the U.S. models selected for this Learning Report and Matrix use a CBPR approach in the development, implementation, and evaluation of their CHW-led interventions. This work generated a rich body of research on the effectiveness of CHWs’ work, particularly with respect to their capacity to address SDOH through their advocacy role. (Research articles for each of these projects\(^\text{18}\) are listed in the Learning Compendium.)

The book, *Community-based Participatory Research for Health: From Process to Outcomes*, states that CBPR is “a collaborative process that equitably involves all partners (academics, community-based organizations, and residents) in the research process and recognizes the unique strengths that each brings.”\(^\text{19}\) The book also asserts that CBPR is a powerful mechanism for exploring CHWs potential impact on population health because it is simultaneously a research framework and a capacity-building mechanism that trains and empowers CHWs by engaging them in both assessing and taking action to improve their communities.

Since the 1990s, the Arizona Prevention Research Center, lead academic partner for two of the models selected for this report, has collaborated with border communities on CBPR projects. According to center staff, “using CBPR rather than traditional research design will be more likely to result in a policy intervention (that is, promotores doing community advocacy) that results in changes in community health.”

---

\(^{16}\) The article describing these results was abstracted in the CDC report and is available at http://www.sinai.org/sites/default/files/imprvbg%20asth%20mgmt%20among%20AA%20children.pdf


\(^{18}\) Accion Para La Salud, Mariposa Community Health Center Si Salud!, Mi Corazon Mi Comunidad, HoMBRes, and PACT

As Samantha Sabo at the Mel & Enid Zuckerman College of Public Health at the University of Arizona puts it, CBPR has an “important role to play in improving population health because it engages communities—and CHWs as community leaders—in advocating for policy change.”

Organizations like the Arizona Prevention Research Center and the University of Texas School of Public Health, that have adopted the CBPR framework have long utilized community members, including CHWs, as members of the research and evaluation team. E. Lee Rosenthal who is a research affiliate of the CHW Project on Policy and Practice at the University of Texas sees new emphasis on the research role, with “big emerging roles for CHWs in evaluation, community assessment as well as advocacy—all instrumental in community-based participatory research.”

---

Number of Community Health Workers per country

---

**Shannon Cosgrove**, the director of health policy for Cure Violence, agrees. She directed REACH (Racial and Ethnic Approaches to Community Health), CDC’s cornerstone effort to address health disparities. She notes that a review of REACH programs that employed CHWs demonstrated the “large potential for CHWs to assist in the evaluation of programs, policy, systems, and environmental changes to promote health equity in racial and ethnic communities.” However, she also recommends that the research role be optional. “Not all CHWs want to take on an evaluation role.”

For additional CHW research, see the Learning Compendium, Useful General Sources; also see the references with each model.

**CHWs and Their Impact on Population Health—U.S. and Global Models**

This section examines 15 CHW-led programs—11 located in the United States and four in low and middle income countries—that we selected because of their promising results or demonstrated impact on population health, and because they show an array of ways to deploy different types of CHWs to approach population health in a range of settings. Although the U.S. and global models look very different in terms of scale and organization, we’ve identified and explored opportunities for two-way “knowledge transfer.”

**Selection Criteria**

We selected these models based on recommendations from interviewees, a targeted scan of the literature, and an assessment of how well the program met a definition of population health:22

- **Does it serve a defined population?** A defined group of individuals can be a geographic population such as a nation or a subgroup such as employees, ethnic groups, disabled persons, veterans, prisoners, et c. Our four global models are national in scope while the U.S. models focus on smaller defined groups (e.g., Latino immigrants, U.S.-Mexico border populations, people with HIV/AIDS, high utilizers of hospital services).

- **Does it address disparities within a population?** Population health, according to David A. Kindig, MD, PhD, emeritus professor of Population Health Sciences at the University of Wisconsin-Madison, is defined as “the health status of a population including the distribution of health within the population.”

---


of Wisconsin-Madison, is not just the overall health of a population but also the
distribution of health. Overall health could be quite high even though a minority of the
population is much less healthy. The U.S. models we chose for this report fit the latter
definition of population health with their focus on eliminating disparities.

The focus on disparities and on disease-specific outcomes has led to questions about the
population health impact of U.S. CHW models. However, as Heidi Behforouz, MD, who
ran the CHW-led Boston PACT (Prevention and Access to Care and Treatment) from
1997 to 2013, points out, “The reason why many CHW models in the United States focus
on a chronic condition like diabetes or HIV/AIDS, is simply the way they are funded”—a
problem noted by many other interviewees.

“CHWs originally were population health focused but funding initiatives require a
disease focus. Community health centers that employ CHWs can only do so through
disease-focused grants,” Behforouz said. To maintain their funding, programs must report
outcomes in the specific disease area that is the focus of the funder, rather than the
broader population health impact that CHWs may have on their community.

The Triple Aim+ explicitly links population health improvement to disparities reduction
and is the framework that several of our U.S. CHW models use to define and measure
their multi-level impact. The goals of the Institute of Healthcare Improvement’s Triple
Aim are to simultaneously improve population health, improve the patient experience of
care, and reduce per capita cost. Triple Aim+ adds a fourth outcome to emphasize
CHWs’ focus on reducing disparities.

---

23 The “aspirational Triple Aim framework is now at the heart of America’s healthcare reform efforts
and NACHC has adapted the framework for health centers,” as stated on the NACHC (National
Association of Community Health Centers) website.

24 Achieving the Triple Aim: Success with Community Health Workers, Massachusetts Department of
• **Does it take an integrated, holistic approach to health?** The inherent value of a population health perspective is that it facilitates integration of knowledge across the many factors that influence health and health outcomes. CHW models that focus on a single factor or outcome measure, as many in the United States do, qualify as population health models as long as they are able to “integrate the many factors that influence health and health outcomes” (e.g., SDOH) and are “translatable” for a range of chronic conditions.

In addition to the model’s fit with the definition of population health, we asked:

• Does the program demonstrate measurable population health outcomes?

• Is the program replicable and sustainable?

• Is the program spreading (scaling up)?

**What Are the Components of Effective CHW Programs?**

The CDC and USAID have produced reports that identify core components of effective U.S. and global CHW programs. These provide a useful framework for analyzing the strengths and weaknesses of existing CHW programs as well as policies to guide the building of this field.

In its Policy Evidence Assessment Report, the CDC identified and rated 14 policy components of effective U.S. CHW interventions. Each of these policy components is discrete, and evidence for each is presently separately in the CDC report, though it notes that
“sometimes related activities could be part of a public health policy.” The report does not distinguish between population and individual health outcomes.

The eight policies with the best quality evidence and public health impact were:

1. CHWs provide chronic disease management.
2. CHWs are included in a team-based care model.
3. There is core competency CHW certification.
4. There is a standardized core CHW curriculum.
5. There is Medicaid payment for core services.
6. There is specialty area certification for CHWs.
7. CHWs are included in the development of their certification requirements.
8. CHWs are supervised by health care professionals.

In its Community Health Worker Assessment and Improvement Matrix (CHW AIM), the USAID identified 15 components of functional global CHW models. While recognizing the importance of training and supervision, the CHW AIM also stresses multi-level health system integration, which is central in global models:

- **Community involvement.** Extent to which village councils and similar local structures are actively engaged in helping to recruit, support, and sustain CHWs.
- **Linkages to Health Systems.** Extent to which CHWs and communities are linked to the larger health system through involvement in recruitment, training, incentives, supervision, evaluation, use of data, and referrals.
- **Country ownership.** Extent to which the ministry of health has policies in place that integrate and include CHWs in health system planning and budgeting and provide logistical support to sustain district, regional, and/or national CHW programs.

**Learning from Global CHW Models: Multi-Directional Knowledge Exchange**

Increasingly, global advocates for CHWs stress the benefit of a multi-directional knowledge transfer. As Henry Perry of the Johns Hopkins Bloomberg School of Public Health notes, “high-income countries should, and some have already begun to, consider CHWs as a key domestic strategy for the long-term management of chronic and other diseases. As they develop plans to incorporate CHWs in their own health systems, they should look to the
experiences of low- and middle-income countries for important lessons learned and success factors.”

In the preface to his book, *Turning the World Upside Down: The Search for Global Health in the 21st Century*, Nigel Crisp, former permanent secretary of the United Kingdom’s Department of Health and chief executive of the United Kingdom’s National Health Service (NHS) writes: “Rich countries can learn a great deal about health and health services from poorer ones, and combining the learning from rich and poor countries can give us new insights into how to improve health.”

Two of our U.S. CHW models illustrate the potential of knowledge exchange:

- **Boston-based PACT** is an example of “reverse innovation—the flow of ideas from lower to higher income settings” in its use of *accompagnateurs*, trained community health promoters who deliver home-based medical and social support services to high-risk HIV-positive patients. The accompagnateur model was first used in Haiti to provide home visit services and support to HIV/AIDS patients and link them to the CHWs’ clinic.

- **Seattle-based Global to Local (G2L)** is a partnership between HealthPoint, Public Health-Seattle & King County, Swedish Health Services, and the Washington Global Health Alliance. It builds on the expertise of the state’s global health institutions to bring strategies that have proven effective in developing countries to underserved U.S. communities. David Fleming, MD, vice president for Public Health Impact at the PATH program in Seattle, who is also vice president of the G2L board, learned from his work with the Bill & Melinda Gates Foundation and with PATH, a leader in global health innovation, how strategies “to improve health in low resource areas abroad can be introduced to our poorest communities.”

CHWs are one proven strategy that G2L has used from its inception, along with technology-enriched health and economic development. CHWs serve SeaTac and Tukwila, areas where residents experience much higher mortality and poverty rates than adjacent affluent Seattle communities. But, notes Fleming, “there is learning going on everywhere in the world. G2L is not just about importing learning here, but as we move

---


forward, it’s a live two-way street, as we figure out how to export what we know elsewhere.”

In 2015, AcademyHealth\textsuperscript{28} investigated and shared their findings about what global CHW models can teach. The researchers found that global innovations that held “great promise for replication” or adaption:

\begin{itemize}
  \item Were anchored in public-private partnerships that build data and communications infrastructure
  \item Engaged communities in co-creating solutions
  \item Drew on diverse perspectives
  \item Made crucial data and knowledge publicly accessible
\end{itemize}

See the Q&A section of the Learning Compendium for more views on global knowledge transfer.

**Global Models: A Focus on Populations**

The four models noted below are typical of CHW models in low- to moderate-income countries in that they are national in scope, with strategies for scaling up to cover entire regions or even the whole population. In contrast to U.S. models, they employ much larger CHW workforces per person, ranging from 184 (Nepal) to over 250,000 (Brazil). Their primary focus is on access to basic services for all, rather than on disparities among subpopulations.

Also, as is typical globally but not in the United States, these four models are integrated into the national health system. They are supported and sustained by national ministries of health that oversee public health services and systems, working with international donors and other NGOs on projects to improve population health.

In Brazil and Ghana, for example, CHWs have become an essential and foundational member of the primary health care team, and therefore funding support comes, not as a separate package but as a part of the overall governmental and societal support for primary health care. In Nepal and Bangladesh, the governments are also committed to providing support for CHWs but do so through innovative public-private partnerships with NGOs rather than directly.

\textsuperscript{28} Global Public Health Systems: A Scan of Promising Practices. AcademyHealth, March 2015. RWJF funded this research.
Finally, these programs, like many global models in low- and moderate-income countries, were, until 2015, part of a national strategy for achieving Millennium Development Goals. These have been replaced by post-2015 Sustainable Development Goals, which include universal health care. The WHO Global Health Workforce Alliance with initiatives such as its 1 Million CHW Campaign, formerly directed by Prabhjot Singh, MD, PhD, director of the Arnhold Institute for Global Health at the Icahn School of Medicine at the Mount Sinai Health System, provide support and technical assistance for attaining these goals, including development of national CHW roadmaps.

Despite these differences (or to some extent because of them), all four models offer insights for the United States with regard to more fully integrating CHWs within the health system, planning for scalability and “durability,” and multi-level community and system engagement.

For brief summaries of each of these models, see the Program Model Matrix.

**Bangladesh BRAC Shasthya Shebika CHW Program**

CHWs are integral to BRAC (Bangladesh Rural Advancement Committee), a global NGO created in 1972 to empower people and communities in situations of poverty, illiteracy, disease, and social injustice. Some 100,000 female CHWs make home visits to families throughout the country providing health promotion sessions on topics such as nutrition and safe childbirth. A study found that CHWs managed childhood pneumonia as well as physicians implementing the same protocol.29

The program is self-sustaining with government support supplemented with BRAC’s revenue generating activities. The CHWs are not salaried but earn an income from selling supplies such as oral contraceptives, birthing kits, iodized salt, condoms, essential medications, sanitary napkins, and vegetable seeds at cost plus a small markup.

Though this self-employment model has not been tested in the United States, there is a high level of interest, according to Kate Tulenko, MD, MPH, MPhil, vice president, Health Systems Innovation at IntraHealth International. “CHWs could function like the Avon lady giving health advice, selling you vitamins, but also asking do you smoke or drink—a model where the health system doesn’t bear the cost.” For a list of publications about this model, see the Learning Compendium.

---

Brazil’s Community Health Agent (CHA) Program

As an upper middle income country, Brazil faces many of the same problems as the United States—high rates of obesity, non-communicable diseases, and one of the fastest growing older populations in the world—as well as basic access-related problems common in low-income countries.

The 265,000 Community Health Agents in Brazil’s Programa Saude da Familia (Family Health Strategy) operate as members of family health care teams managed by municipalities. The teams comprise one doctor, one nurse, one auxiliary nurse, and a minimum of four CHAs. Each CHA is responsible for home visits to 150 families. They serve 120 million people (62% of the population). The program has been an integral component in achievement of population health improvements, including the Millennium Health Goal of a two-thirds reduction in under-age-five child mortality between 1990 and 2015.30

This model may serve as a source of insights for the United States, according to Henry Perry of Johns Hopkins Bloomberg School of Public Health, especially for programs like one sponsored by Johns Hopkins Community Health Partnership, which assigns CHWs to conduct block-by-block surveillance and routine home visiting to residents living in three East Baltimore target zip codes.31

Karen LeBan, MS, former executive director of the CORE Group, sees the potential for U.S. programs to integrate more than one CHW into its primary care teams as Brazil does—one CHW could take on medical and social worker functions of linkage and referrals while another focuses more on community organizing and mobilizing around the SDOH.

Brazil, like many other countries with CHW models, places a priority on engaging civil society in health decision-making, with some 5,500 health councils, composed of CHAs, patients, and professional providers, operating at the local, state, and national level with conferences held every four years to “propose directives for health policies.” Similar local councils adapted to the U.S. context could advance population health by stimulating conversations about health, helping to make it a “shared value.” For a list of publications about this model, see the Learning Compendium.

Ghana Community Health Planning Services

In this program, mid-level providers—Community Health Officers—supported by Community Health Volunteers deliver basic “doorstep” services to every region of the
country. CHWs contributed to progress toward Millennium Development Goals: some program service areas experienced a decline in the under age 5 mortality rate from 108 per 1,000 live births in 1998 to 80 per 1,000 live births in 2008.32

The scaling up of this program provides lessons about the importance of a long-term commitment by funders. Beginning as a pilot program in three villages in 1994, the program underwent a more rigorous test in the same district, followed by a replication in another area of the country, and finally a national scale-up beginning in 2000.

The Ghana roadmap, endorsed by the Ministry of Health in 2014, details a phased scale up strategy through 2023 that would add almost 32,000 CHWs to the workforce. Roadmaps could provide some insights to U.S. organizations seeking to scale up pilot programs. For a list of publications about this model, see the Learning Compendium.

**Nepal Possible Health**

Possible Health is an NGO whose durable health care framework envisions delivering high-quality, low-cost healthcare to the world’s poor. Its CHWs currently provide home visits, triage, and follow-up care in the western region of Nepal via a public-private partnership with the government (a replicable model according to the AcademyHealth report).

“Durability” is the hallmark of the NGO and a concept that U.S. programs could draw from in designing sustainable business plans. Possible Health’s designed-for-scale approach focuses on:

- Cost effectiveness
- A leveraged infrastructure (with in-kind contributions from the government to cover training costs of CHWs)
- A “durable” flow of revenue from diverse sources including core government investment, local community funding, individual and institutional philanthropy, crowdfunding, and research partnerships

This scaling up approach led to an increase in patient population from 31,776 to 56,106 between 2012 and 2014. For a list of publications about this model, see the Learning Compendium.

---

U.S. Models: A Focus on Disparities

Unlike global models, CHW models in the United States and other high-income countries tend to target vulnerable subpopulations experiencing disparities in health outcomes relative to the population at large. These populations tend to cluster in rural or urban areas marked by poverty, poor education, low employment, and inadequate housing. Urban “hot spots” are often adjacent to affluent communities and state-of-the-art medical facilities.

Our selected models fall into five organizational categories. Some of the 11 models are used as examples in this section; all are summarized briefly in the Program Model Matrix; a list of articles and other publications on each model are provided in its section of the Learning Compendium.

Models Integrated with Health Care Systems (Hospitals or Clinics)

Models in this category are the most system-integrated and therefore the most readily sustainable. CHWs are members of disease management or care teams. Their services benefit not only patients but also the organizational bottom line through decreased hospital admissions and emergency room use by high utilizers.

Because of this focus, some experts in the field, such as Prabhjot Singh of the Arnhold Institute for Global Health question whether the model is an extension of a hospital or clinic rather than truly population focused. On the other hand, considering the way the U.S. payment system for health care has worked up to the implementation of the Affordable Care Act (ACA), if a clinical focus was not part of CHWs’ work, there was no payment mechanism to support them—or their work on population health.

IMPaCT (Individualized Management for Patient-Centered Targets)

IMPACT is a sustainable program of the Penn Center for CHWs, a community-academic-health system partnership in the University of Pennsylvania Health System. CHWs work with patients to create individualized action plans for achieving their stated health goals. A randomized controlled trial found that CHWs improved patients’ timely access to post-hospital primary care and quality of communication about discharge planning, while

33 Singh P and Chokshi DA. “Community Health Workers—A Local Solution to a Global Problem.” New England Journal of Medicine. 369(10), September 5, 2013. The authors describe three organizational models in this article: hospital extensions, community based non-profits, and management entities.
controlling recurrent readmissions among “high utilizers” of the medical center. These outcomes translate to an annual return on investment of $2 for every $1 invested by healthcare organizations. This ROI has helped IMPaCT to scale rapidly, serving nearly 6,000 patients since its creation in 2010.

But, noted Penn Center Director, Shreya Kangovi, MD, “IMPaCT isn’t just focused on post-hospital transitions. We started in 2010 with ‘hot spots,’ five zip codes with low-income communities at risk for a variety of poor outcomes like infant mortality, chronic disease, as well as hospital readmission. It’s not a disease-specific, setting-specific program. It was always meant to be a population-level, standardized, scalable approach. The model has now been expanded to new patient types (e.g. chronically-ill outpatients and high-risk pregnant women) and settings (e.g. Veteran’s Affairs and federally qualified health centers).” IMPaCT’s toolkit has been disseminated to over 800 organizations across the country and the program is being replicated nationally with the help of a cloud-based documentation and training platform. For a list of publications about this model, see the Learning Compendium.

**PACT**

This program, a partnership with Brigham and Women’s Hospital in Boston, served a population of people with HIV/AIDS and multiple concurrent mental health and other challenges related to SDOH. Patients served by accompagnateurs saw a 78 percent drop in the concentration of HIV in their bloodstream and a 50 percent drop in hospital stays and costs.

Although not sustained in its original form, its former director, Heidi Behforouz, has ensured that it “lives on” through evolution into a new nonprofit management organization, Anansi Health. Anansi provides training and technical assistance to spread the PACT model and is grounded in a “belief in the power of CHWs to improve health care delivery and address social and structural determinants of health,” according to the Anansi website. For a list of publications about this model, see the Learning Compendium.

---


38 Website of Anansi Health
Models Integrated with a Local Health Department

Health departments are preparing for health care reform by involving CHWs in leadership roles (for example, the Massachusetts health department worked with the state CHW association to ensure CHW input in the state CHW certification process)—and increasing the number of CHW-like positions to integrate care across prevention, behavioral health, and primary care services.39 Examples cited in the Rush study40 include health departments in Baltimore; Boston; Portland-Multnomah County, Ore.; San Francisco; San Antonio; and Chicago. Below are additional examples:

Los Angeles County Department of Health Services Care Connections Program

Two Los Angeles county supervisors championed an investment in CHWs to reduce health care costs among complex high users and develop the workforce in their districts by funding 50 permanent CHW positions. As of March 2016, the Department of Health Services has recruited 25 CHWs from East and South LA neighborhoods who have similar life experiences as people in their communities. The department has trained them in coaching, motivational interviewing, and SDOHs.

Team leader Clemens Hong, MD, MPH, and team members presented preliminary data on the program’s impact on reducing emergency room and hospital use and improving patient outcomes at the 2015 American Public Health Association conference.41 For a list of publications about this model, see the Learning Compendium.

Seattle-King County Healthy Homes Program

CHWs employed by the county department of public health provide home visits to reduce exposure to indoor asthma triggers. A randomized controlled trial found the addition of CHW home visits to clinic-based asthma education yielded a clinically important increase in symptom-free days and modest improvement in caretaker quality of life.42 See the Learning Compendium for a list of publications on this model.


40 Rush CH et al. Project on Community Health Worker Policy and Practice Occasional Paper No. 1: Community Health Workers in Local Health Departments. Available online.


**Academic-Community Partnerships**

Many universities, research institutes, and academic medical centers have established long-standing partnerships with surrounding community organizations and residents. With support from grants and institutional sponsors, these partnerships, particularly those that have adopted a community-based participatory research (CBPR) framework, have trained and employed CHWs as co-researchers and members of project teams.

Of the 26 Prevention Research Centers funded by CDC, 16 are working with CHWs to fulfill research goals in areas such as cancer, heart health, HIV, nutrition, obesity, and physical activity. The interventions developed through these partnerships have not only produced research about CHWs, they have also resulted in sustainable change within the community, including through the ongoing employment of CHWs by partner organizations.

**Accion Para La Salud**

The University of Arizona Prevention Research Center collaborated with five health-focused organizations to develop and implement this CBPR intervention. To nurture CHWs’ advocacy and leadership potential, the partners first developed the 13- to 18-month community advocacy *Accion Para La Salud* curriculum consisting of four participatory and reflective workshops for CHWs and their supervisors.

After being trained in the curriculum, CHWs selected and implemented real world projects to address the social and environmental conditions that influence health, such addressing deficits in the transportation system by championing the establishment of a local bus route or lack of safe outdoor recreation space by organizing the cleanup and maintenance of a local park. Research found that advocacy training also had a positive impact on the organizations employing the CHWs. For a list of publications about this model, see the Learning Compendium.

**Mi Corazon, Mi Comunidad (MiCMiC)**

This program was a CHW (*promotora*)-led intervention promoting use of community physical activity and nutrition resources. The CBPR project was led by the University of Texas El Paso School of Public Health, in partnership with lead institution, the University of Texas, El Paso. The School of Public Health has been supporting CHW research, training, and advocacy since the 1990s. A federally-funded cohort study showed MiCMiC led to

---

substantial improvements in health behaviors and modest improvements in cardiovascular disease risk factors. Greater utilization of community resources was associated with more favorable changes.\textsuperscript{44} For a list of publications about this model, see the Learning Compendium.

\textbf{Community-Based Nonprofit Organizations}

These organizations, often rooted in activism or faith, provide a host of services for the community, both health-related and non-health-related. Nonprofit advocacy groups, such as the NAACP and La Raza, can serve as “homes” for CHW programs and bases for community activism and mobilization, according to \textit{Kate Tulenko} of IntraHealth International.

\textbf{Cure Violence}

\textit{Cure Violence} uses a multispecialty cadre of CHWs—violence interrupters, outreach workers, and hospital responders—who work to stop the spread of violence by employing the methods and strategies associated with disease control. The organization, founded in Chicago in 2000 as CeaseFire, has spread to 50 U.S. cities and eight countries, and is supported by federal, state, private foundation, and individual donations.

Cure Violence programs in Baltimore, New York, and Chicago have been the subjects of rigorous outside evaluations, including one being conducted with support from RWJF.\textsuperscript{45} An evaluation of the Chicago program showed statistically significant results across seven communities served by interrupters, with reductions in shootings and killings of 41 to 73 percent.\textsuperscript{46} For a list of publications about this model, see the Learning Compendium.

\textbf{Management Entities}

These are organizations dedicated to CHWs that are integrated with clinical and community organizations. They are oriented around financial sustainability, population and environmental health goals, and local workforce development.


\textsuperscript{45} RWJF is funding an evaluation of many of the Cure Violence sites. See a Progress Report online.

\textsuperscript{46} Skogan WG. \textit{Evaluation of CeaseFire-Chicago}. March 2009.
City Health Works
This Harlem, New York-based program is developing a balance of financial support from insurers, hospital systems, and local businesses to sustain a paid network of CHWs. A program with global and U.S. roots, it integrates lessons learned from the WHO Millennium Villages Project and One Million CHW Campaign augmented by experiences of U.S.-based groups. The goal, according to Prabhjot Singh of the Arnhold Institute for Global Health, is a “sustainable business model that is not just aspirational.” For a list of publications about this model, see the Learning Compendium.

Pathways Community HUB
Recognized by the federal Agency for Healthcare Research and Quality as well as other national health authorities, this evidence-based regional care coordination model effectively utilizes CHWs workers to find and engage with at risk clients, connect them to care and track the results, using proven tools and pay for performance financing.

Co-developed by Sarah Redding, MD, MPH and Mark Redding, MD, following their exposure to the work of Alaska CHWs called community health aides, the Pathways model was founded in Ohio where there are now six community hubs. Results show improved birth outcomes—60 percent reduction in low birth weight and 500 percent return on investment (ROI)—as well as better management of patients’ chronic conditions. The Pathways model has been replicated in Michigan, New Mexico, and other states. For a list of publications about this model, see the Learning Compendium.

Adaptation/Extension of Existing Cadres
Apart from the six CHW-led models described above, a model that is getting “lots of attention,” according to Kate Tulenko, is the adaptation or extension of existing cadres of health professionals—emergency medical technicians (EMTs), medical assistants, home health aides, for example—to include the roles of CHWs. An “advantage is that they are recognized; the training, infrastructure, and equipment are already there, [for example] in the firehouse and ambulance. It would be extending their scope of practice a little bit.”

Tulenko cites the work of Jeff Beeson, DO, RN, a former EMT, now an emergency room physician and Texas Medical Director at Acadian Ambulance Service. Beeson saw that “EMTs were underutilized on the job.” So he had the idea of sending them into homes to problem solve. “They can respond to 911 calls in a way physicians in a hospital never could,” he says Beeson is an advocate for the mobile health care and community paramedicine concept of “providing the right patient with the right care in the right setting with the right outcome.”
Joan Cleary of the Minnesota Community Health Worker Alliance begs to differ with Beeson. She notes that CHWs are a distinct emerging profession—not a hybrid or add-on role to a licensed or certified health professional. “A hyphenated CHW role could lead to a lot of confusion around scope of practice,” she says. “As for community paramedicine (CP), it is also an emerging profession which builds onto the existing paramedic occupation and is a clinical role, unlike the CHW profession. The CP role, if properly targeted, it is very complementary to and not duplicative of the CHW role.

“It’s important to keep in mind the key characteristic of a CHW—shared life experience—which is not part of the definition of other health-related occupations.” She emphasizes the “opportunity for CHWs to team with other professions such as community paramedics and community pharmacists—which is starting to happen in Minnesota.”

**Strengthening the CHW Infrastructure: Policy Issues and Challenges**

After strong growth in the 1970s, many CHW programs throughout the world struggled and failed in the 1980s and 90s due in part to political circumstances (e.g., a worldwide recession) but also to avoidable infrastructure and implementation problems.

Many interviewees, including Henry Perry of the Johns Hopkins Bloomberg School of Public Health[47] and the Penn Center for CHWs’ Shreya Kangovi,[48] stressed the importance of taking steps to avoid repeating history with the current generation of CHW programs by ensuring that training, supervision, and other essential supports are in place.

The following is a discussion of core infrastructure issues and challenges with insights drawn from our interviewees and illustrations from the models in our CHW Matrix.

**Recruitment**

Clear, well-defined candidate selection guidelines are essential, according to Kangovi. In the Penn Center’s IMPaCT program, CHWs are recruited through structured job interviews that assess personality traits such as listening skills, empathy, and a nonjudgmental nature. These help interviewers predict a candidate’s likely future performance and reduce high turnover

---


and variable performance of the workforce. (Additional insights from RWJF grantees about recruiting CHWs have been summarized in a research brief.49)

Globally, many CHW programs have local councils—Ghana’s health committees and Bangladesh’s village organizations are examples—that not only identify and recruit but also provide ongoing support to CHWs.

**Training and Certification**

Noting that “many options for stable funding for CHWs depend on documentation of training and certification,” the APHA outlines key policy issues and barriers, and makes recommendations related to these core areas in its 2009 policy statement and a 2014 update, which underscores the importance of CHW leadership in determining standards for CHW training and credentialing.

**Core Training**

CHW training varies widely from state to state with no national standards. Historically, many CHWs received on-the-job training, which might be formal or informal, comprehensive or narrowly focused on the skills needed for a single project. Increasingly, CHW courses are offered by community colleges, area health education centers (AHECs), proprietary training institutions, or community-based agencies.

As the role of these institutions increases, the APHA recommends development of standardized core competencies with input from CHWs. These would help define a clear CHW scope of practice distinct from other health and social service professions and help integrate CHWs into the mainstream health care workforce.

U.S. training programs have typically focused on disease-specific education, reflecting the requirements of grant-funded programs and health care institutions, but many experts now see “a generalized approach as more valuable. An ideal program will offer skill development in areas such as leadership, communication, public health, patient advocacy, and outreach education. Once trained in these core competencies, CHWs may develop advanced skills in disease-specific areas,” according to An Action Guide on CHWs.50

---

49 *Integrating Community Health Workers into Health Care Teams to Improve Equity and Quality of Care*. Finding Answers: Disparities Research for Change. RWJF Brief.

The following are two examples of core training programs: one developed as foundational education by a statewide multi-disciplinary partnership with input from CHWs, the second an on-the-job course developed by an employer with input from patients.

- **The Minnesota standardized curriculum** covers CHW core competencies, health promotion competencies, and an internship in a 14-credit program offered through a network of post-secondary schools. CHWs receive a certificate on completion that is needed to enroll as a provider under the state’s Medicaid program. Minnesota was the first state to secure Medicaid reimbursement for CHWs and to offer a statewide CHW curriculum in higher education, says Joan Cleary, of the Minnesota Community Health Worker Alliance, which was formed from the project that developed the curriculum. “Our model is intentionally designed to provide an educational pathway. CHWs are attaining foundational education for service in multiple settings and in addition, if they choose, they can apply credits towards an associate’s or bachelor’s degree or preparation for other health or social service careers. Also, we have found that CHWs provide inspiration and know-how to family and community members to pursue higher education—and that has health co-benefits because individuals with higher levels of education tend to be healthier and live longer,” says Cleary.

- **The IMPaCT CHW Training Course** is a month-long college accredited on-the-job training curriculum developed by Shreya Kangovi and staff of the Penn CHW Center (including CHWs). The five modules cover CHW core competencies; knowledge and skills needed to implement the IMPaCT model; the settings—hospital, home, and outpatient practice—of patient care; and barriers that high-risk patients encounter. An open source toolkit allows for nationwide replication of the model.

**Specialized Training**

The CDC is a major resource for disease specific training programs and curricula for CHWs addressing chronic diseases. Nell Brownstein, who wrote or contributed to many of these resources over a 25-year career as a CDC Senior Scientist, cites two recent examples:

- **The Road to Health Toolkit** developed for CHWs working with African-American or Latino populations at risk for type 2 diabetes with a flipchart that tells the story of an adult brother and sister with diabetes

- **A toolkit developed for the Division for Heart Disease and Stroke Prevention** with specialized training materials geared for state health departments and health professionals as well as for CHWs (e.g., fotonovelas and the Promotora Guide: How to Control Your Hypertension)
An example of specialized training in the advocacy area, which is especially relevant to CHWs’ potential role in building a Culture of Health, is the Arizona Prevention Research Center’s Acción Para La Salud curriculum.

**Certification**

Expansion of CHW training opportunities provides a framework to support the certification process. As of March 2015, ASTHO (Association of State and Territorial Health Officials) reported that five states (Texas, Ohio, Oregon, New Mexico, and Massachusetts) have enacted laws to establish certification programs while many others are in the process of doing so. Certification is required in only two states—Texas and Ohio, where it falls under the state Board of Nursing; it is voluntary in the other three.

Proponents of certification regard it as vital for the future of the profession, noting that it allows better recognition of CHWs among physicians, health system administrators, and Medicaid; provides transferrable skills; increases expectations for wages; and can improve quality of care.

Others voice the concern that “professionalizing” CHWs risks loss of their core identity and unique strengths as the “pulse” of the local community. “When we say ‘certification,’ what we are often talking about is trying to legislate uniform skills,” says Russell Schuh. “I think until you know what you’ve got [with CHWs], you shouldn’t certify—it leaves out sparks of innovation … and is counterproductive if done prematurely. You certify minimal skills for surgeons, but shouldn’t try to make them exactly alike.”

Shreya Kangovi of the Penn Center IMPaCT project argues that “unless we address program-level implementation barriers, standardized training and employee-level certification are unlikely to be effective. Certification should not be individual, but at the agency level, like The Joint Commission [formerly the Joint Commission on Accreditation of Healthcare Organizations] to determine if there is an effective infrastructure with supervision, [and] ongoing training to support CHWs.”

Geoffrey Wilkinson, MSW, clinical associate professor, Boston University, School of Social Work, sees an “emerging consensus on the strategic value of certification with CHWs leading

---

the way. Having CHW leadership develop certification programs is a way to mitigate the perceived threats of certification,” such as the loss of autonomy over job definition.\(^{52}\)

**Gail Hirsch**, who directs the Office of Community Health Workers in the Massachusetts Department of Public Health, saw firsthand how CHW engagement and leadership affected acceptance of certification in her state. “For half of its 16-year existence, the Massachusetts Association of Community Health Workers (MACHW), the statewide professional association for CHWs, was cautious about certification, based on experiences of other states, like Texas and Ohio, which they saw as top-down regulation.

“The landscape changed with the Massachusetts health reform law and awareness that certification would promote the field. Once MACHW’s CHWs were able to partner with other stakeholders and have a voice, they were more confident that it would serve the workforce. Now CHWs are in favor.” CHWs drafted a bill and were successful in advocacy efforts to pass legislation in 2010 that created a CHW Board of Certification in the state.\(^{53}\)

For more interviewees’ opinions on this key issue, see Q&A in the Learning Compendium.

### Career Development

- **Career Ladders. Kate Tulenko** of IntraHealth International, stressed the importance of building career ladders for CHWs. She cited the Philippines Barangay Health Workers career ladder program as a model that could be replicated in U.S. nursing or public health programs.\(^{54}\) The five-rung program allows students from depressed and underserved areas who are nominated by their communities to progress from village Health Worker to Community Health Worker and then potentially on to a BS in nursing, community medicine, or finally an MD. Another example is Minnesota’s statewide CHW curriculum, which is designed to articulate with other health professions preparation programs and serves as a domestic model that provides an educational pathway that supports a career ladder.

---


53 The 11-member board, which must include no fewer than four CHWs, has been meeting since 2012 and has developed standards for training and certification (described in a MACHW policy brief). The draft regulations, says Hirsch, “are still stuck in final review awaiting approval, but we are doing everything we can in the meantime to build awareness, create user-friendly applications, and training programs.”

54 The Effect of streamlined educational pathways, or ladder programmes, for the advancement of practicing health professionals. WHO International.
**Apprenticeship Programs for CHWs.** In 2010, the Department of Labor approved CHWs as an “apprenticeable trade.” Apprenticeship programs are gaining recognition as an avenue for preparing workers for higher education and creating a basis for career advancement and an upgraded wage scale. *Cheryl Feldman*, executive director, District 1199c, National Union of Hospital and Health Care Employees, outlined benefits for CHWs and employers of an apprenticeship program, based on the Triple Aim population health model in a September 2015 report.55

**Paid vs. Volunteer CHW Models**

*E. Lee Rosenthal*, director of the CHW Core Consensus Project, and other interviewees endorsed the APHA recommendation that “employers and funders recognize CHWs’ contribution to the public health and healthcare infrastructure by compensating them at competitive wage levels at or above a locally determined living wage and providing employee benefits comparable to those received by other health professionals.” At the same time Rosenthal says “creating strategic links between paid CHWs and other community leaders can extend their reach and lead to a powerful network of CHWs who can collaboratively serve to improve community health.” Research models, that incorporate this continuum of paid and volunteer CHWs, she says, could help to provide a way forward for the field to more deeply understand and ultimately tap the power of CHWs to promote social change and create a more just environment.

*Eugenia Eng* of the Gillings School of Public Health sees a role for volunteer lay health workers who can be “recognized and rewarded in a different way, a way that builds the capacity of community not just of the individual.” These volunteers or ‘natural helpers’ are often leaders with high status in their own community but low status in mainstream culture. For example, the volunteer ‘navegantes’ in the HoMBReS program in North Carolina were leaders in their immigrant community—captains of Latino soccer teams—who received equipment and uniforms for their team instead of financial reimbursement.

Others are adamant that such recognition does not offset the need to pay CHWs a living wage. “CHWs can contribute to healthier more equitable communities but only if they are paid a living wage. If you don’t pay a living wage, you are exporting poverty, deepening cycles of underinvestment in labor,” according to *Prabhjot Singh* of the Arnhold Institute for Global Health.

---

55 *Feldman C*. Community Health Worker Apprenticeship Program. September 3, 2015
Role of CHWs, CHW Associations, and States in Advancing the CHW Workforce

CHWs can be strong advocates not only for their communities but also for the advancement of the field itself. Two surveys by the Arizona Prevention Research Center led researchers to the conclusion that “CHW professional advocacy is imperative to advancement of the field.”

- The National Community Health Worker Advocacy Survey (2014) asked some 1,767 CHWs from 45 states and four U.S. territories about their advocacy work. Approximately 30 percent of respondents to the online survey reported that they advocated for professional advancement or collaborated with other CHWs to advance the workforce, calling for greater recognition of the field, appropriate training and compensation, and sustainable funding. The survey also found that advocacy was more prevalent among CHWs affiliated with a professional network.

- A second survey was conducted in partnership with the Arizona Community Health Outreach Worker Network, a CHW-led advocacy group. Of the 86 CHWs affiliated with the network who responded to the survey, over half considered themselves community leaders and almost two thirds had engaged in some form of community advocacy. Organizational characteristics associated with these skills included provision of flexible hours, leadership training, and autonomy to conduct new projects.

Role of CHW Associations

Statewide or local associations are key to nurturing CHWs advocacy potential as these two surveys demonstrated. CHW associations also enable members to make their voices heard by disseminating information about the value of their services to policymakers and the public and by providing direct input into the development of CHW policy and practice.

The CDC, APHA, and the National Academy for State Health Policy (NASHP)/State Community Health Worker Models report that as of May 2015 some 25 state or local/city

---


wide associations and networks are active, with more states reporting they are in the process of organizing a group.

Despite this high level of interest and activity, CHW associations and coalitions are undercapitalized, according to Joan Cleary of the Minnesota Community Health Work Alliance. Foundation support (including a 2004 to 2009 grant from RWJF58) has been critical to Minnesota’s CHW field-building and integration efforts and helped launch the alliance. Cleary argues for sustainable funding “to build the capacity of CHW associations and alliances to help advance policy changes on multiple levels that are critical to full integration of CHW services, leading to better health for underserved populations.”

The Role of State Offices of Community Health Workers

Only two states have Offices of Community Health Workers dedicated to providing support for CHWs—Massachusetts and New Mexico. Other states support CHWs, said Gail Hirsch of Massachusetts’s Office of Community Health Workers, but having a dedicated office enables better coordination of services within the state as well opportunities for national networking.

Lack of coordination among states brings up the “obvious policy need for a national CHW association,” says Hirsch. A previous effort, the American Association of CHWs, received support from funders in 2009 but the volunteer-run association was not able to sustain itself.59 Some of the “original players” are trying to revive the notion, says Hirsch, first trying to gauge whether the field is ready. “To spawn a national association, state associations need to be stronger.”

Funding and Sustaining CHWs

Interviewees and others in the field make the case for multi-level benefits accruing from countries’ investment in CHWs. “Strong, formalized CHW systems can save lives, increase access to care, contain health crises, and keep healthcare affordable, all while delivering a positive economic return, reducing unemployment, and empowering women,” according to a report from the Office of the UN Secretary-General Special Enjoy for Financing the Health

58 More information on this grant is in Promoting Community Health Workers to Reduce Health Disparities in Minnesota. RWJF Program Results Report, December 2012.
59 Raising the Flag for Community Health Workers, RWJF Program Results Report, January 2010.
Millennium Development Goals and for Malaria. Yet there are obstacles to creating and sustaining these systems.

**Obstacles to Investment in CHWs in the United States**

**Grant Dependence**

Sustainability of CHW models has been undermined by their reliance on short-term, categorical grants and contracts from foundations and government agencies, a situation that may change under the ACA (see Opportunities Under the Affordable Care Act [ACA]). Interviewees provided numerous examples of rigorously evaluated programs that were not funded past the pilot or early replication stage.

- **REACH:** Although the CDC’s REACH program did not prescribe use of CHWs, over half of grantees (23/40) integrated them as an evidence-based strategy for reducing disparities. Although many of these programs showed evidence of individual and community/population health impact, funding ended before they achieved sustainability, said former director Shannon Cosgrove.

- **Mi Corazon Mi Comunidad (MiCMiC):** Despite positive outcomes from two randomized control trials, the program was not sustained after grant funding ended. CHWs played an important role in advocating for policy, systems, and environmental change. But as program developers pointed out, implementation of these strategies is a long-term process that demands long-term support from funders and continued investment by host organizations in the professional development of CHWs.

  The problem in this case was not only the lack of government support but also local buy-in. The program was “not successful in getting community-based organizations on board to incorporate CHWs even after a positive demonstration of their ability. Community-based organizations and the City Parks Department supported them, but in the long run, the funding was not identified to sustain them after the grant dollars were gone,” said E. Lee Rosenthal, and Project Originator Hector G. Balcazar, PhD, both active throughout the University of Texas Project on CHW Policy and Practice.

- **Seattle’s Healthy Home Project:** According to Program Director James Krieger, MD, MPH, in an article in *Pediatric Allergy, Immunology, and Pulmonology*, the “evidence for multi-trigger, multi-component home visits by CHWs to manage asthma is strong, the

---

costs reasonable, and the feasibility of implementation clear. The next task is to overcome barriers to widespread dissemination. Healthcare payers need to reimburse for home visits, just as they do for asthma medications. Federal, state, and local governments and health plans should fund home visits through public-private partnerships.

“Overcoming these barriers will not be easy given the orientation of our health system toward high-tech, biomedical, and profit-generating disease control strategies. Home visits cannot be patented and are high-touch. However, health care reform does include support for CHWs and for health education.”  

Limited Medicaid Reimbursement

As Joan Cleary of the Minnesota CHW Alliance noted, her state set a precedent by becoming the first state to secure Medicaid coverage for patient education and self-management services provided by CHWs in home, clinical and community settings, under both fee-for-service programs and managed care. But as Gail Hirsch of the Massachusetts CHW office points out, that coverage was limited in what it will pay for. Under the ACA, the hope is that instead of fee-for-service reimbursement, Medicaid will provide bundled payments and global fees for a team-based model of care that will include CHWs. “People are more optimistic that providers will be more willing to take on CHWs if that happens, but we don’t know,” said Hirsch.

Lack of Political Willpower

Heidi Behforouz whose Boston-based PACT program was not sustained despite evidence of its positive outcomes for clients with HIV/AIDS reflected in a Health Affairs article on why “many CHW programs are struggling for financial support. We are still in the ‘show me it works better than what I know’ phase. And even with the positive results we’ve seen so far, we lack the finances, willpower, or courage to provide care in this way.”

The challenge of building political will for a sustainable, equitable health system is not limited to high-income countries, as a series of Lancet articles on Brazil makes clear. “The challenge,” according to the editors of the series, “is ultimately political, requiring continuous engagement by Brazilian society as a whole to secure the right to health for all Brazilian people. A strong emphasis on health as a political right, together with a high level of


engagement by civil society in that quest, might also mean that other countries can look to Brazil for inspiration (and evidence) to solve their own health predicaments."

**Challenges in Integrating CHWs into Primary Care Teams**

To scale up the CHW contribution under the ACA, health systems need to make structural and cultural readjustments to integrate CHWs as valuable members of primary care teams. Thoughtful workflow redesign is essential, according to a *Health Affairs* blog.64

“CHWs have not traditionally been included as providers in most delivery systems, so physician response to CHW integration varies depending on their level of familiarity with the workforce and the value they see CHWs bringing to patient care. Additionally, social workers, nurses, case managers, and other medical professionals could perceive some overlap with CHW duties and their own, which may lead to anxiety over job security.”

The Penn Center’s Shreya Kangovi has addressed these hurdles by focusing on relationship-building, organizing regularly scheduled meetings and “huddles” between CHWs and others, educating managers to know when and how to delegate work to CHWs, and emphasizing two-way communication between CHWs and other team members. For example, CHWs participate in hospital grand rounds, updating patient status as equal members of the team.

Heidi Behforouz stresses the “need to spend time thinking about how to create evidence-based protocols to support CHWs in field. But when you ask, ‘what do CHWs do,’ you have to recognize their unique value from their perspective and learn from it. They say, ‘we walk side by side with the patient, and teach her to love herself.’ Ultimately, CHWs are about love and caring, making the difference for a person, engaging them in a meaningful way to improve health.”

In addition to relational adjustments among team members, technological adjustments are also essential to capture the unique contributions of CHWs. Electronic health records have not been structured to document social determinants of health and interventions to overcome them. Health systems need to invest in health information technology and analytic support to better capture data collected by CHWs, as well as identifying high-risk patients who need to be connected to a CHW, and tracking patients’ progress and care plans.

For more from interviewees on barriers to CHW integration, see the Q&A.

---

Opportunities Under the Affordable Care Act (ACA)
The focus on population health and prevention under the ACA is creating new opportunities
to better integrate CHWs into the health care system. Carl Rush of the CHW project at the
University of Texas School of Public Health has identified numerous strategies for increased
integration and funding support.65

- **Patient-centered medical homes and Medicaid medical homes.** There is a ‘natural
role’ for CHWs as an integral part of these new models of care which target populations
who are affected by disparities and who require integrated and coordinated services
across a continuum of medical, behavioral, and social services, as well as access to
supportive community resources, such as housing. The Centers for Medicare & Medicaid
Services (CMS) requirements for health homes overlap with several of the roles and tasks
commonly performed by CHWs, according to a report from the New York State Health
Foundation.66

- **Medicaid reimbursement for preventive services.** In January 2014, CMS issued new
guidance that allows for reimbursement of preventive services offered by an array of
unlicensed professionals such as CHWs, thus opening the doors for CHW services to be
reimbursable under Medicaid managed care plans. These provide for the delivery
of Medicaid health benefits and additional services through contracted arrangements
between state Medicaid agencies and managed care organizations (MCOs) that accept a
set per member per month (capitation) payment for these services. CHWs could be
covered within the capitation rate.

States will have to submit a State Plan Amendment (SPA) if they want to take up this
option. It needs to describe: what services will be covered; who will provide them and
“any required education, training, experience, credentialing or registration” of these
providers; the state’s process for qualifying providers; and the reimbursement
methodology. No states had completed an SPA as of November 2015 according to Gail
Hirsch of the CHW office in Massachusetts.

- **1155 Waivers to allow for alternative or global payments.** Section 1115 of the Social
Security Act provides for pilot or demonstration projects that promote the objectives of
Medicaid and the Children’s Health Insurance Program (CHIP). The waivers give states

---

66 Zahn D et al. Making the Connection: The Role of Community Health Workers in Health Homes.
New York State Health Foundation, 2012.
additional flexibility to design and evaluate policy approaches that could allow for the incorporation of CHWs into service delivery systems such as:

- Providing services not typically covered by Medicaid; or
- Using innovative service delivery systems that improve care, increase efficiency, and reduce costs.

- **State Innovation Models (SIM).** CMS is providing financial and technical support to states for the development and testing of state-led, multi-payer health care payment and service delivery models that will improve health system performance, increase quality of care, and decrease costs for Medicare, Medicaid, and CHIP beneficiaries. There are some examples of CHW services in several state programs but CHWs could be a far more significant, cross-cutting health equity strategy within SIM.

## Conclusion

### The Evidence

There is clear evidence demonstrating the value and impact of CHWs on individuals’ health, particularly in preventing and managing a variety of chronic diseases, including heart disease and stroke, diabetes, and cancer, as pointed out by the CDC report.

In addition, the U.S. Preventive Services Task Force notes enough evidence concerning the effectiveness of CHWs in preventing and managing cardiovascular disease (CVD) specifically to recommend their involvement. The Community Preventive Services Task Force also recommends interventions that engage CHWs to prevent cardiovascular disease. Further, there is strong evidence of effectiveness for interventions that engage community health workers in a team-based care model to improve blood pressure and cholesterol in patients at increased risk for CVD.

Evidence for population health impact is building with measurement of global impact of CHWs in the Millennium Development goals. *Henry Perry* of Johns Hopkins acknowledges in a 2014 article in the *Annual Review of Public Health* that “the difficult nature of measuring population health also complicates the assessment of CHW effectiveness.” Nonetheless, he cites a large body of data demonstrating the impact CHWs have had in low-, middle-, and high-income countries.⁶⁷

---

⁶⁷ Perry, op. cit. “Community Health Workers …”
CHWs’ Potential—Are They Here to Stay?

Henry Perry spoke for many of our interviewees in affirming, based on a growing body of evidence, that CHWs have the potential to transform health systems around the world.

“CHWs should be a part of any first class health program trying to improve the health of a defined population—whether defined by geographical location, enrollment in HMOs, or whatever it might be. They are essential for achieving high quality results.”—Henry Perry

The growing consensus about the potential impact of CHWs has prompted global health experts such as Prabhjot Singh of the Arnhold Institute for Global Health to recommend a scaling up of the workforce as a way of improving population health outcomes, reducing health care costs, and creating jobs in the United States and around the world.68

Kate Tulenko of IntraHealth International agrees, seeing CHWs as “essential to both high- and low-income countries to reduce health disparities and achieve universal health coverage.”

Global transitions, shared by all nations, are driving the demand for a larger, more diversified health workforce, with CHWs as an integral component, according to an article in the New England Journal of Medicine.69 The drivers of demand cited include:

• **An aging, more urban population.** “Potential growth is astronomical, especially with the increase in the senior population. CHWs are not a ‘poor’ solution for poor people. It’s about a service in the community, people spending time building a quality relationship,” says Tulenko.

• **Non-communicable diseases are displacing infectious disease,** as the leading cause of death, in low- and especially middle-income countries. At the same time, all people worldwide are threatened by risks such as global infectious disease epidemics and climate change.

• **Technology empowers lay workers and patients** by increasing access to information and shared medical decision-making. “We are all moving in the direction of getting

---


medical information from the Internet, not in hospitals or clinics,” said RWJF’s Karabi Acharya. She sees a “curator role for CHWs, sorting through information, finding the legitimate websites. In India, CHWs have been used in a similar way in telemedicine. They are the ‘human in the room’ who helps facilitate interaction with a distant MD.”

- Rising health care costs will continue to threaten health and economic progress.
  “Investing in the CHW workforce is about not bankrupting ourselves, which will happen if we insist on everything being done by an RN or physician,” says Tulenko.

These trends will have a profound impact on all health professionals, but especially CHWs. As health systems and health professionals in the United States recognize the need to reach beyond the hospital or clinic, into homes and communities, teamwork involving nonprofessionals and lay people will become even more important.

In this context, CHWs have an integral role to play, says Laura Levitón of RWJF. “Properly supervised and trained, they can deliver very well”—even on tasks ordinarily performed by much more highly trained professionals.

**CHWs and Building a Healthy Population**

David Fleming of PATH and GL2 sees CHW roles falling along a spectrum. “The definition of what a CHW does directly relate to their relevance to Culture of Health activities. Different places and different people define CHWs in different ways.

“In some settings, they are defined as extensions of the health care system. Their primary responsibility is to better organize and deliver aspects of individual care to people. That’s important, but internal to and driven by the health care delivery system. At other end of spectrum, a CHW doesn’t have responsibility for health related services; [they are] community organizers and are engaging in prevention activities.”

**Challenges**

In the United States, for CHWs to be paid, they need to be employed by some sector of the health care system, whether health centers or hospital systems, because CHWs can connect people to the health care system. This is not population health work, but it can be combined with CHWs’ health education and neighborhood-wide prevention activities. And since the passage of the ACA, with its emphasis on prevention, CHWs role in population has an opportunity to expand.

Despite these opportunities, interviewees could point to very little uptake on the part of either public or private insurers to expand or integrate CHWs into new payment and delivery models.
Carl Rush, a lifelong CHW advocate, was quite clear-eyed and eloquent about the challenges to the uptake of CHWs in the United States, even with ACA. They include:

- Most providers and policymakers still do not understand or even know what CHWs are and what they can and cannot do
- CHWs’ unique capabilities (building trust, bridging culture, reducing disparities) do not conform to traditional “clinical” roles, making the case for CHWs even more challenging
- Because of this lack of awareness and understanding, the main levers of major systems change—including Medicaid Managed Care Organizations (MCOs), state Medicaid offices, and major provider systems—do not have the impetus for change specifically with respect to CHWs.

**Recommendations**

The following are recommendations for how health funders can use the potential of CHWs to accelerate progress in building healthy communities.

**Addressing Research Gaps and Opportunities**

- **Fund research to articulate CHWs’ impact on population health.** The U.S. Preventive Services Task Force findings point to the need for additional research assessing the incremental value of having CHWs on primary care teams.
- **Investigate what makes for effective CHW programs and CHWs.** Although much research has been done in this area, a 2012 research agenda published in the *AJPH* identifies additional opportunities, e.g., probing complex qualities such as “shared culture” or life experiences that may be unique to CHWs, as well as ongoing issues such as the pros and cons of certification.
- **Explore how to integrate CHWs into the health system on a larger scale.** The *Journal of Health Care for the Poor and Underserved* makes recommendations including further research, evaluation, and implementation of replicable CHW-led programs like IMPaCT that reduce hospital readmissions and improve care transitions while also addressing SDOH in “hot spots.”

---


• Apply a community based participatory research (CBPR) framework to explore CHWs potential as advocates for policy change. Samantha Sabo and colleagues at the Arizona Prevention Research Center in the Journal of Primary Prevention call for investigations of “organizational factors that facilitate or discourage CHW advocacy and determine optimal conditions for successful CHW public health advocacy activities” as a condition for their ability to address the SDOH within their communities.

• Explore how CHWs in the United States can make better use of technology as they do globally. “Give CHWs the ability to operate not just one by one, but collectively by gathering and aggregating information with data support. That would make a powerful tool for advocacy because CHWs are in a position to see more than one circumstance, more than one anecdote,” says RWJF’s Laura Leviton.

• Fund qualitative research to deepen understanding of the CHW role from the CHW perspective. CHWs are often spoken about or spoken for, but there is little evidence of CHWs’ own characterization of their practice, hindering the integration or alignment of CHWs to the formal health care system at the community level. (Source: Martin Oliver and others in an article in Global Health Action72)

• Explore CHWs’ role as co-designers or co-creators of programs such as CBPR. Programs co-designed with CHWs will be stronger because of their relevance to community practices and experiences, whereas those who seek to use CHWs as an instrument to implement external priorities are likely to disrupt their work. (Sources: Samantha Sabo and Martin Oliver and others in an article73)

Participating in a Knowledge Exchange With Regard to Global and U.S. CHW Models

• Support research to conduct a “deeper dive” into global CHW models and their applicability to the United States. Each of the four global health models selected for this report showed potential applicability to U.S. CHW models—for example with regard

---


73 Oliver M, Geniets A, Winters N, Rega I, and Mbai SM. “What do community health workers have to say about their work, and how can this inform improved programme design? A case study with CHWs within Kenya,” Global Health Action. 8, 2015. DOI:10.3402/gha.v8.27168. Available online.

74 Ibid. Oliver et al.
to sustainability or “durability” (Nepal), building local support for CHWs (Ghana), integrating CHWs into primary care teams (Brazil), etc.

They could each be analyzed in greater depth through the lens of global innovation findings from the 2015 AcademyHealth report or by applying the Adaptation Framework for Global Exchange of Information found in Identifying the Active Ingredient: Promoting Adaptation and Global Exchange of Innovation.

- **Continue the conversation with the 22 health experts who contributed to this report.** Many of our interviewees provided insights and made recommendations of additional programs and people to contact regarding the effectiveness global and U.S. work of CHWs. Given the scope of this report, we were unable to pursue these avenues of investigation.

- **Select “reverse innovation” strategies, study them in depth, and assess their feasibility for replication/spread among U.S. CHW models.** The accompagnateur model and routine systematic home visiting and surveillance were among the strategies used both in the United States and globally that our interviewees (*Heidi Behforouz* and *Henry Perry*) identified as having potential for scaling up in the United States.

- **Conduct further research into the “hot spots” model.** In addition to the Penn Center for CHWs (IMPaCT), *Perry* identified several academic medical centers (e.g., Duke, Johns Hopkins) that are using CHWs as part of this approach to addressing disparities. A possible research project would be looking at several of these programs in different cities.

- **Analyze global strategies for building local community and system support for CHWs and test their applicability to U.S. CHW programs.** Local support for CHWs through community-based organizations is key for long-term sustainability and expansion of the CHW workforce. That support, which is limited in the United States, is a core component of global models (e.g. Ghana’s health committees, composed of traditional and opinion leaders at the village level). Relevant features of such models could be tested in U.S. CHW programs, particularly those developed through CBPR projects. (*Source: David Fleming*)

- **Do a deeper dive into global workforce development organizations** like IntraHealth’s Capacity Plus Model, the 1 Million CHW Campaign, and the WHO Global Health Workforce Alliance as possible models for how to provide technical assistance and support to the U.S. CHW workforce. The goal of these groups is to accelerate progress toward national health goals by having the right health worker in the right place with the right skills and support. (*Sources: Kate Tulenko and Prabhjot Singh*)
Helping the CHW Workforce Reach its Potential

- Get the word out about the CHW Core Consensus (C3) Project in order raise awareness about the value of CHWs. The C3 Project initiated in 2014, released its full consensus report in the summer of 2016 following a review by more than 20 local, state, and regional CHW networks, according to E. Lee Rosenthal, director of the project, now based at the Paul L. Foster School of Medicine at Texas Tech University Health Sciences Center El Paso. The report contains findings on core CHW roles, skills, and qualities, which are being used by CHW educators and employers to better plan for training and job roles for CHWs—and by a number of states as part of their efforts to establish guidelines for CHW practice. Funders could take advantage of the release to launch a dialogue about the value of CHWs, particularly with regard to their advocacy role in addressing the SDOH. (Sources: Nell Brownstein, E. Lee Rosenthal, Carl Rush)

- Explore the feasibility of a national CHW association and/or state agencies. Without a national association, efforts to advance the workforce through policies on reimbursement or training are “scattershot,” according to Rosenthal and others interviewed for this report. Sanofi US is supporting a convening for this purpose, as well as the C3 project described in the bullet above.

Alternatively, state-based CHW offices, like the one Hirsch leads in Massachusetts, could play a role in coordinating activities across states. Rosenthal would like to see more states with CHW offices: “It would be an interesting way to build infrastructure to support the field across the nation, looking at common approaches, [providing] support for evaluation challenges.” (Sources: Nell Brownstein, E. Lee Rosenthal, Gail Hirsch, Joan Cleary)

- Increase awareness and utilization of existing CDC curricula and training resources. With all the CDC resources available at no cost, Nell Brownstein, who authored or produced many of them, finds it “frustrating” when states request technical assistance to develop their own curricula. “Reinventing the wheel is not the way to move forward. We need to get everyone on the same page.” Funders could support an investigation of commonalities and resource sharing between CDC and developers of other curricula, such as the Penn Center’s IMPaCT. (Source: Nell Brownstein)

---

75 Copies can be requested at info@c3Project.org or by visiting https://sph.uth.edu/research/centers/ihp/community-health-workers/.

76 In fall 2016, the C3 Project Team entered a second phase of work with funding from Sanofi US. This phase has three core areas of focus: (1) differentiating the roles, skills, and qualities CHWs need in clinical and community settings; (2) the development of guidelines and tools to help facilitate the assessment of core-skills proficiency of CHWs in training and employment settings; and (3) outreach to generate national consensus and recognition of the C3 Project recommendations by stakeholders in the health and human services and community development fields.
• **Explore opportunities to strengthen state and local CHW associations and coalitions.** Associations like the Massachusetts Association of CHWs and the Arizona Community Health Outreach Workers Network are essential in empowering CHWs themselves to advocate for the advancement of the field. Alliances in states like Michigan and Minnesota bring CHWs and stakeholders together to drive change. However, these groups are underfunded and lack a coordinating mechanism. Health funders could convene a meeting of association leaders and coalition representatives, to share ideas about moving forward. *(Source: Joan Cleary, Samantha Sabo)*

• **Start a discussion about the CHW career ladder.** Since CHWs are often from marginalized communities with historically limited education and employment opportunities, providing them with a clear path to advance their careers (and increase their incomes) is essential.

  “Having a dialogue with the nursing or public health community or both to see which was willing to build CHWs into a career ladder would be a first step. And then if one or both agreed, pilot programs could be set up in a state that has had some successes, building on the Camden or Texas EMT program and scaling it up. Very few organizations could lead that kind of national dialogue, but funders could.” *(Source: Kate Tulenko)*

• **Look for diverse funding partners, beyond the health sector.** “As you are expanding the work of CHWs to better attack the social determinants of health, we potentially need to recognize other beneficiaries of their work and ask who should be financing them in addition to the health care sector. We should look to housing, social services, and other government agencies, like the Department of Justice, as our partners.” *(Source: David Fleming)*
Learning Compendium

For readers who want a “deeper dive,” this section provides key overall resources: a list of publications about the specific global and U.S. CHW models we identified, some of which were briefly introduced in the report; a Q&A section providing additional perspectives of those interviewed about issues raised in the report; and an annotated list of those interviewed.

Key Resources

Websites

ASTHO (Association of State and Territorial Health Officials) provides updated state-by-state information about CHW policies related to certification and training standards.

CHW Central is an online community of practice that brings together program managers, experts, practitioners, researchers, and supporters of CHW programs. The website is a virtual meeting place to share resources and experiences and to discuss and develop questions and ideas on CHW programs and policy. This site is available to all, however to participate actively in the conversations, users need to register for a free membership.

CDC Community Health Worker Toolkit is an online collection of evidence-based research that supports the effectiveness of CHWs in the United States. The toolkit includes resources that CHWs can use within their communities as well as information that state health departments can use to train and further build capacity for CHWs in their communities.

Project on CHW Policy and Practice, University of Texas. This project was launched in 2011 to serve as a statewide and national leadership resource for advancement of the CHW workforce through the provision of research, policy analysis and stakeholder education. The website contains information about policy initiatives around the country and publications by core team members, who include E. Lee Rosenthal and Carl Rush.

1 Million Health Care Workers Campaign. The website of the campaign to increase the CHW workforce in sub-Saharan Africa contains extensive resource, reports, and videos on global efforts to support, train, and sustain CHWs around the world.

Articles

Useful General Sources
Sources for the evidence of impact for each model are noted with the model description. See that section.

Evidence Base: Global Research
Henry Perry compiled the following list of resource on the effectiveness of CHWs around the world (October 2015).


**Additional Resources Cited in the Learning Report**


Evidence Base: U.S. Research

Addressing Chronic Disease through Community Health Workers: A Policy and Systems-Level Approach. Atlanta: Centers for Disease Control and Prevention, April 2015. Available online.


Major U.S. Studies of the CHW Workforce


Wiggins N, Borbon A, Core Roles and Competencies of Community Health Workers. In the Final Report of the National Community Health Advisor Study (pp. 15-49) Baltimore, MD, Annie E. Casey Foundation, 1998.


Additional Articles Cited on the Role of CHWs

Achieving the Triple Aim: Success with Community Health Workers, Massachusetts Department of Public Health, May 2015. Available online.


**Information on Population Health**


**Additional Resources**

*Introducing Success with CHWs.* These web-based tools for busy providers were funded by RWJF’s program, *Aligning Forces for Quality* and the St. Paul Foundation:

- [www.successwithchws.org/asthma](http://www.successwithchws.org/asthma)
- [www.successwithchws.org/mental-health](http://www.successwithchws.org/mental-health)

**16 Global and U.S. Models: Sources of Information**

This section provides published articles, reports, websites, and social media products from which we have gathered information on the four global and 11 U.S. CHW population health models; the sources show evidence of their promising results or demonstrated impact.

**Global Models**

**Bangladesh BRAC SHASTHYA SHEBIKA CHW Program**

Unpaid female CHWs make monthly visits to families, providing health promotion sessions, making referrals to BRAC clinics, and selling health products to provide themselves with an income. The program is a part of BRAC (Bangladesh Rural Advancement Committee), a global NGO created in 1972 to empower people and communities.
Sources


Contact: Henry Perry, MD, PhD, MPH at hperry2@jhu.edu

**Community Health Agent (CHA) Program of Brazil**

CHAs are closely integrated into formal health services as part of this national program. They operate as members of family health care teams that are managed by municipalities. The teams comprise one doctor, one nurse, one auxiliary nurse, and a minimum of four CHAs. Each CHA is responsible for 150 families. Some teams also include a dentist and a social worker.

Sources


*Lancet Series on Brazil*. Series of six papers that critically examine what the country’s policies have achieved regarding the goal of universal, sustainable, accessible health care and what the challenges are. Available online.


Contact: Henry Perry, MD, PhD, MPH at hperry2@jhu.edu
Ghana Community-Based Health Planning and Service (CHPS)
Supported by the Ghana Ministry of Health and international donors, CHPS is a CHW service delivery model that is national in scope to improve basic health care access for the nation’s rural communities. Mid-level providers called Community Health Officers work with Community Health Volunteers to provide basic health care and public health services at the “doorstep” in this dual cadre model.

Sources


Case Studies


Roadmap

Contact: Prabhjot Singh, MD, PhD; prabhjot.singh@mssm.edu
Possible Health Nepal

This non-governmental organization is based on a “durable health” model, a public-private partnership that enables a nonprofit healthcare company to be paid by the government to deliver healthcare within the government’s infrastructure. The model brings together the quality of private sector, the access of public sector, and innovation enabled by philanthropy. The program’s 184 CHWs provide home visits to families in Far Western Nepal.

Sources

2015 Annual Impact Report

“Access, Excess, and Medical Transformation, Delivering Durable Health Care in Rural Nepal.” Health Affairs blog, May 21, 2015

TED Talk by CEO Mark Arnoldy on the difference between sustainable health and durable health model

Contact: Duncan Maru, MD, PhD; dmaru@partners.org

U.S. Models

Accion Para La Salud

Accion exemplifies the CHW-led, Community-Based Participatory Research (CBPR) projects conducted by the Arizona Prevention Research Center in partnership with community organizations. Pasos Adelantes is another important example of the Center’s CBPR work. Listed below are articles specific to both projects.

Sources


Contact: Samantha Sabo DrPH, MPH; sabo@email.arizona.edu

**City Health Works**

City Health Works is a management model that integrates teams of clinically-supervised, local Health Coaches into clinics and social service providers to support population health management in New York City neighborhoods with vulnerable populations. A new organization in the process of developing a sustainable business plan, it has not conducted rigorous evaluations of its work to date. These social media products profile the work of founder Manmeet Kaur and staff.

**Sources**


Closing the Gap Between Hospital + Communities: An Interview with Manmeet Kaur, The Feast blog. August, 2014

Contact: Manmeet Kaur, mkaur@cityhealthworks.com
**Cure Violence**

Founded in 2000 as Cease Fire in Chicago, Cure Violence now a model used by more than 50 cities and organizations in the United States and in eight countries. A multispecialty cadre of CHWs—violence interrupters, outreach workers, and hospital responders—work to stop the spread of violence by using the methods and strategies associated with disease control.

Cure Violence is an evidence-based program that has had multiple evaluations demonstrating its impact. For summaries and full reports on evaluations in Baltimore, Chicago, and New York, see the program website.

**Sources**

The Interrupters, 2011, PBS Frontline documentary


Contact: Shannon Cosgrove, skcl@uic.edu

**Global to Local (G2L)**

Founded in 2010 through a partnership of Swedish Health Services, HealthPoint, Public Health Seattle & King County, and the Washington Global Health Alliance, Global to Local’s goal is to bring strategies that have proven effective in developing countries, such as the use of CHWs, to underserved communities in the United States. G2L’s five community health promoters focus on access to care, health education, and increasing community leadership among the culturally and ethnically diverse residents of SeaTac and Tukwila, two communities where rates of poverty and chronic conditions like diabetes are significantly higher than in nearby affluent areas of Seattle.

According to David Fleming, MD, Vice President of the G2L board, the model is replicable, scalable, and sustainable thanks to a mixed financing base with $2 million in initial support from founding partners and an array of corporate and foundation sponsors.

**Sources**

Global to Local brochure provides a summary of program results to date.

“Seattle’s Global Health Powerhouses Turn Their Attention to South King County,” March 7, 2012. Available online. Article describing the founding of G2L and the network of local support.

Contact: David Fleming, MD, dfleming@path.org
HoMBRes—HoMBRes Manteniendo Bienestar y Relaciones Saludables (Men Maintaining Wellness and Healthy Relationships)—is a sexual risk reduction intervention designed to reduce HIV and STD infection among recently arrived, non-English speaking Latino men in rural central North Carolina. It was developed through an academic-community partnership between Wake Forest University and community-based groups.

Sources

HoMBRes case study, June 2014. Available online.


Contact: Eugenia Eng, DrPH, MPH, eugenia_eng@unc.edu; or Scott D. Rhodes, PhD, MPH, srhodes@wfubmc.edu

Los Angeles County Care Connections Program

The Care Connections Program aims to improve care for a subset of the sickest, highest-risk primary care patients in the Los Angeles County Department of Health Services by integrating CHWs into the patient-centered medical-model. Launched in 2014 with two-year funding from the LA County Board of Supervisors, the program is still in the early implementation process.

Sources

Preliminary data have been reported in:

Hong C. “Implementing Care Management for Complex Patients in Primary care.” 2014
Shah A et al. Year One Experience in the Los Angeles County Care Connections Program: Redesigning Primary Care Delivery to the Sickest and Most Vulnerable Patients Through Community Health Worker Integration. APHA conference, November 3, 2015. Conference abstract.


Contact: Clemens Hong, MD, MPH, cshong@partners.org

**Mariposa Community Health Centre Salud Si!**

Salud Si! Is a *promotora*-driven health promotion program designed to encourage physical activity, fruit and vegetable consumption, and stress reduction among Mexican-American women along the New Mexico/Mexico border. The program was developed as a partnership between the Arizona Prevention Research Center and the Mariposa Community Health Center.

**Sources**


Contact: Maia Ingham, MPH, maiai@email.arizona.edu

**Mi Corazón Mi Comunidad (MiMic)**

MiCMiC was a CHW (promotora) led CBPR intervention promoting use of community physical activity and nutrition resources among Latinos in US/Mexico border communities, implemented as part of a federally-funded randomized controlled trial, Health Education Awareness Research Team HEART project, led by the University of Texas El Paso in partnerships with community organizations.

**Sources**


**Contact:** Hector Balcazar, PhD, hector.g.balcazar@uth.tmc.edu

**PACT (Prevention and Access to Care and Treatment)**

This intervention integrated CHWs into primary care and mental health teams, serving vulnerable people with HIV/AIDS in Dorchester area of Boston. PACT partnered with clinics to develop the infrastructure, culture, quality improvement tools, and skills necessary to support effective CHW interventions for the most vulnerable patients. It was a partnership between Partners in Health and Brigham and Women’s Hospital and ran from 1997-2013.

**Sources**


PACT: Health and Hope for Boston’s Sickest AIDS Patients. Brochure.

**Contact:** Heidi Behforouz, MD, heidib@anansihealth.org

**Pathways Community Hub**

This regional care coordination model effectively utilizes CHW workers to find and engage with at-risk clients, connect them to care, and track the results using pay for performance financing. The Pathways model was founded in Ohio where there are now six community hubs. It has been replicated in Michigan, New Mexico, and other states. Results show improved birth outcomes as well as better management of patients’ chronic conditions.

**Sources**


Contact: Sarah Redding, MD, MPH, sarah.redding@ccspathways.com

**Penn Center for CHWs IMPaCT**

IMPaCT (Individualized Management Toward Patient-Centered Targets) is a sustainable CHW led program to provide tailored support to help high-risk patients achieve individualized health goals and reduce preventable hospital admissions.

**Sources**


Kangovi et al. “The Use of Participatory Action Research to Design a Patient-Centered Community Health Worker Care Transitions Intervention.”


For a full list of publications, see the Penn Center for CHWs website.

Contact: Shreya Kangovi, MD, MS, kangovi@upenn.edu

**Seattle-King County Healthy Homes Program**

Healthy Homes is a CHW led home visit program to reduce exposure to indoor asthma triggers among children living in ethnically diverse, low-income households. Seattle King County Department of Public Health supports Healthy Homes on a sustained basis.

**Sources**


**Contact:** James Krieger, MD, MPH, Jameskrieger@kingcounty.gov

**Q&A: Interviewees’ Opinions on Key Topics**

In addition to the information contained in the Learning Report proper, we’ve included here answers from interviewees to key questions about who CHWs are and how they can help improve population health and reduce disparities in health access and outcomes in the United States.

**Can CHWs Accelerate Progress Toward a Healthy Population?**

“CHWs can talk to citizens on their own terms about health, about concepts relevant to their own lives; that’s where you can start a shared conversation. CHWs know how to navigate bureaucracy and alleviate less conventionally defined health issues—housing, transportation, and so on. They are the glue that make collaborations work. A key issue is the potential for CHWs to bring back information, to speak truth to power.”—Laura Leviton, RWJF

“We can’t build a true social movement that will have health impact and bring about cultural change just with professionals or academics focused on health and health policy. You have to engage everyday people, and that’s a foundational characteristic of CHWs, engaging lay people from a variety of walks of life around the value of health.”—Paul Kuehnert, RWJF assistant vice president-program

Strengthening integration of health services and systems is where CHWs can contribute in a unique way, according to Gail Hirsch. “They can transform the health care system, diversify it, not just fit into the existing system. Providers, physicians say that CHWs are my ‘eyes and ears.’ They know the barriers because they live the barriers.”

**David Fleming** of PATH and GL2 sees CHW roles falling along a spectrum. “Different places and different people define CHWs in different ways. In some settings, they are defined as extensions of the health care system. Their primary responsibility is to better organize and deliver aspects of individual care to people. That’s important, but internal to and driven by the health care delivery system.

“At other end of spectrum, a CHW doesn’t have responsibility for health-related services; [they are] community organizers and are engaging in prevention activities.”
What is the Role of CHWs? What Makes Them Unique?

“A CHW brings to the table tools of personal knowledge about a community. They are the experts that we often lean on most heavily. Other health care providers may be connected to a community, but being a member of the community isn’t a requirement for their job. For CHWs, it is. Defining community membership is hard, but it is a necessary quality of CHWs—their connection to the community served—that gives them power and ultimately to their success.”—E. Lee Rosenthal

“We need to carve out what’s unique about CHWs. What can they do that no one else can?”—Gail Hirsch

“CHWs properly supervised and trained can deliver very well,” even on tasks ordinarily performed by much more highly trained professionals, says Laura Leviton, who cites Milton Wainberg’s research in Brazil with a “population vastly underserved for mental health.” Wainberg found that “psychiatrists can do more, but the basics can be done by CHWs,” she says.

“The digital divide in the United States is nowhere as severe as in other countries. People can access the web so they are making use of these technologies. You can get information but you still need people to walk you through it—peer counseling. A CHW could almost be more of a patient advocate to help you understand what you learn through technology and use that to help you understand instructions from doctors and nurses, who often don’t have the time to explain.”—Karen LeBan.

What is the Potential for CHWs to Serve as Advocates for Change?

In the City of San Antonio Metropolitan Health District, CHWs are working in 10 neighborhoods to identify resident leaders and build a Resident Leadership Council. Paul Kuehnert sees this as an example of CHWs’ advocacy potential: “San Antonio is using CHWs in a role that connects people with health care around diabetes, but goes beyond to a community organizing role in terms of safe neighborhoods and physical activity.”

For RWJF’s Karabi Acharya, it is important to “distinguish the two buckets” that CHW roles fall into. In some countries, CHWs are viewed as “extensions of health care system, rounding up kids for immunizations, providing prenatal care and so on. Among NGOs like Save the Children, it’s more around the social determinants of health, trying to position CHWs to advocate for clean water, education, really basic things. There is tremendous tension in the global health community as in the United States around that dichotomy.”
Achary also sees funding as an issue. “WHO likes to stay within the box in terms of training and funding. If health dollars are for family planning, they can’t pay for school access. NGOs have found ways to help CHWs tackle SDOH, for example by training a half time volunteer CHW on digging a well. But can one person do that and immunization as well? When you have a successful CHW program, the temptation is to pile on tasks.”

For Karen LeBan, CHWs could be used in “some purposeful ways” to address the “loss of social capital in the United States”—the decline in “natural integration” that is occurring as a result of “housing policies, gated communities, and increasing disparities … A CHW could be the moderator of a community listserv for example, addressing the SDOH. If crime and violence are an issue, the CHW could be a trusted source for information about events in the community. That would be a way to rebuild social capital.”

What Can the U.S. Learn From Other Countries and How Can U.S. Health Funders Participate in Knowledge Exchange?

“We are latecomers to the game, and have much to learn from others,” says RWJF’s Laura Leviton. As an example she cites Medical education cooperation with Cuba (MEDICC), an NGO founded in 1997, to enhance cooperation among the U.S., Cuban, and global health communities aimed at better health outcomes and equity.

“In many ways, we have kept ourselves separate and apart from the global experience and knowledge base, from the hard work that’s going on,” says Paul Kuehnert. “Given challenges that we are facing in the United States around health equity, the widening income gap, and whole dynamic of race, I would be inclined to think that we can apply those models.”

Karabi Achary sees an “opening for a conversation between the United States and other countries around non-communicable disease. As developing countries start tackling these, they may come up with innovative, low cost approaches that we could learn from.” But she also cautions against creating what might be perceived as a “two-tier system, promoting CHWs for the poor, while the rich get tertiary-care hospitals, a critique that is being discussed in developing countries.”

The pre-2015 Millennium Development Goals (MDGs) involved one-way “donations by high income to low-income countries. The Sustainable Development Goals (SDGs) are 17 universal goals for all countries,” measured by progress on 500 indicators. “Going down the list of indicators, it’s clear that the United States needs to come in” because it is “going in the wrong direction in many indicators relative to other high-income countries.”—Karen LeBan
Volunteer Vs. Paid CHWs: Pros and Cons
“We find ourselves in camps. Are we for professionalizing CHWs, or we are holding the
ground steady for community, paid and not paid? We risk creating two models that we think
are different, but are really very similar. We ought to invest in projects that allow us to study
how to integrate paid and volunteer, like the volunteer and paid fire department model. We
can’t reach everyone with a fully paid model. We should be invested in leadership training
for CHWs, both paid and volunteer. We need each other.” —E. Lee Rosenthal

“When we’re talking about protecting the integrity of the profession, it is vital that we work
out the relationship between CHWs who are paid and those who are volunteers. There’s such
a wide spectrum of settings of CHWs who are more like community organizers or grassroots
volunteers. The ideal future would be one in which they are seen as peers of the folks who are
paid. There will always be a desire for grassroots activity.” —Carl Rush

What Are the Barriers to Scaling Up CHW programs and Integrating CHWs in the Health System?
The focus on chronic disease rather than broad populations in the United States stems from
the “categorical nature of CDC’s funding,” says Laura Leviton. “We encountered that with
HIV prevention programs. It’s not wrong per se, but it is not taking advantage of CHW
power. On other hand, there is so much cervical cancer around, if CHWs did nothing all day
but contact populations on that, millions of lives could be saved. If you have enough workers,
you can expand the CHW role to look at other things.”

“Fear is pervasive, health professionals are intent on keeping power and payment in the
guild.” —Laura Leviton

What Are the Pros and Cons of Certification?
“Part of me thinks that certifying organizations is more important than certifying individuals,
but you cannot get away from individual certification. CHWs are often better recognized
when they are certified; other stakeholders look for that individual accountability.” —E. Lee
Rosenthal

“Achieving health equity is the heart and soul of CHW work, but we must distinguish
between CHWs’ ability to link people with disparate health outcomes to the system and their
ability to address the deep upstream issues causing the disparities … Imprecise thinking leads
to several risks that limit CHWs’ potential to address the root causes of disparity. These
include medicalization of the CHW role, which marginalizes their work with health
determinants. On the other hand, outsized expectations for CHWs can distract the focus from
healthcare systems’ responsibility to work upstream, replace fee-for-service reimbursement, and correct lack of provider diversity.”—Geoffrey Wilkinson

To dig further into this issue, click here for comments from Mark Siemon, RN, APHN-BC, MPH, CPH, a fellow with the RWJF Nursing and Health Policy Collaborative at the University of New Mexico.

What Are the Opportunities for Integration/Funding Under the ACA?

“For a hospital reconsidering community benefit under the ACA, CHWs are a built-in cadre of assessment workers, in a position to see things that those embedded in the system cannot. CHWs have become more directly involved with issues like housing affordability, not necessarily a part of their role as formally conceived.”—Laura Leviton

Karabi Acharya sees CHWs’ potential to be a “phenomenal force, a natural cadre of people who could be tapped and trained to help people sign up for coverage and for other roles under the ACA. I feel the country is moving in the direction of mobile medicine, minute clinics, and CHWs are in a position to meet the expanding need for accessing them.”

To this point, Joan Cleary reports that many CHWs in Minnesota have been certified by the state’s health insurance exchange known as MnSURE to effectively serve as navigators to help low-income uninsured individuals, some with cultural and language barriers, understand how to qualify for, learn about and enroll in coverage options available to them.

Annotated List of Those Interviewed

Interviews Outside RWJF

Jeff Beeson, DO, RN, EMT-P
Texas Medical Director
Acadian Ambulance Service
Providing services in Texas and Louisiana
jbeeson@me.com

Beeson is Texas Medical Director for Acadian Ambulance Service with over 20 years of EMS experience, starting as an EMT and progressing to Paramedic, Flight Nurse, and EMS Physician. Formerly Medical Director for the MedStar Mobile Healthcare system of Fort Worth, Beeson pioneered the concept of expanding the roles of EMTs to include CHW-like support for high-utilizers of the 911 system. Beeson advocates for a model of mobile integrated health care to provide the right patient with the right care, in the right setting with the right outcome.

Heidi Louise Behforouz, MD
Assistant Professor at Harvard Medical School
Associate Physician in the Division of Global Health Equity at Brigham and Women’s Hospital
Boston, Mass.
heidib@anansihealth.org

Behfourouz is founder and past Executive Director of Partners of PACT Boston (described in the
Program Model Matrix), which employed CHWs to advocate for the health and wellbeing of inner
city residents infected with or at risk for HIV and other chronic diseases. In her current work with
Anansi Health, she is committed to the transformation of primary care to better serve the needs
of the most vulnerable patients in our communities and advocates for the integration of CHWs
into health homes to reduce disparities and improve outcomes among underserved populations.

Nell Brownstein, PhD
Adjunct Associate Professor at Rollins Emory School of Public Health
Senior Scientist (retired) at Centers for Disease Control and Prevention (CDC)
Atlanta, Ga.
nellbrowns@gmail.com

Brownstein was a Senior Scientist with the CDC for 25 years prior to her retirement in 2015.
With the Division of the Prevention of Heart Disease and Stroke, she was author or co-author of
many of the CDC’s training curricula, toolkits, and other resources for CHWs working on chronic
disease prevention in their communities. With E. Lee Rosenthal, Carl Rush, and others, she
worked on landmark efforts to define the role of CHWs, such as the 1998 Community Health
Advisor study.

Joan Cleary, MM
Executive Director
Minnesota Community Health Worker Alliance
St. Paul, Minn. www.mnchwalliance.org
joanicleary@gmail.com

Cleary provides consulting and transitional leadership services to nonprofits, foundations,
healthcare and government. Prior to 2010, Cleary led grantmaking, policy support, and
leadership development initiatives for the Blue Cross and Blue Shield of Minnesota Foundation
including its community health worker field-building efforts and upstream focus on social
determinants of health.

Shannon Cosgrove
Director, Health Initiatives
Cure Violence
Chicago, Ill.
skcl@uic.edu

Cosgrove is responsible for defining and promoting Cure Violence’s health approach to violence
prevention. Her projects include leading a research network, implementing best practices for
trauma prevention, promoting community healing, building partnerships and ensuring equity is
embedded in the work. Prior to her work with Cure Violence, Cosgrove was project officer for the
CDC’s REACH (Racial and Ethnic Approaches to Community Health) program.
Kathryn Pitkin Derose, PhD, MPH
Senior Policy Researcher
RAND Corporation
Santa Monica, Calif.
derose@rand.org

Derose is a senior policy researcher at the RAND Corporation and a professor of health policy at the Pardee RAND Graduate School. Derose's research focuses on understanding health care disparities. She has particular expertise regarding faith-based organizations and community-based participatory research (CBPR).

Eugenia Eng, DrPH, MPH
Professor
Department of Health Behavior & Health
Gillings School of Global Public Health
University of North Carolina
Chapel Hill, N.C.
eugenia_eng@unc.edu

Over the past 25 years, Eng has developed a body of community-based participatory research (CBPR) work that is recognized, both nationally and internationally. She directs demonstration research projects on the lay health advisor (LHA) intervention model, which is distinguished by its focus on the concept of natural helping. This model builds on the social support function of naturally occurring social networks in ethnic minority populations to address socially stigmatizing health problems.

David Fleming, MD
Vice President for Public Health Impact
PATH
Seattle, Wash.
dfleming@path.org

In 2014 Fleming joined PATH’s Public Health Impact division, which houses the organization’s reproductive health, maternal and child health and nutrition, non-communicable diseases, malaria control and elimination, and HIV/AIDS and tuberculosis programs. Before joining PATH, he served as the director and health officer for Public Health—Seattle and King County. Earlier, he was director of Global Health Strategies at the Bill & Melinda Gates Foundation.

Gail Hirsch, Med
Director
Office of Community Health Workers
Massachusetts Department of Public Health
Boston, Mass.
gail.hirsch@state.ma.us
Hirsch directs one of two states offices in the country that is dedicated to providing support for CHWs. With Carl Rush, Brownstein, and other leaders in the field, she authored or co-authored numerous articles defining the role and significance of CHWs in transforming the primary health care system in the United States. She also worked with the Massachusetts Association of CHWs to establish statewide CHW certification.

**Shrey Kangovi, MD, MS**  
Executive Director  
Penn Center for Community Health Workers  
Kangovi@upenn.edu

Kangovi is founding executive director of the Penn Center for CHWs, an assistant professor of Medicine in Perelman School of Medicine at the University of Pennsylvania, and a former RWJF Clinical Scholar. Her research examines patient perspectives on socioeconomic determinants of health and healthcare utilization, and the efficacy of community health workers in modifying these determinants. She led the community-academic-health system team that developed the IMPaCT™ (Individualized Management towards Patient-Centered Targets) model.

**Manmeet Kaur**  
Executive Director and Founder  
City Health Works  
New York, N.Y.  
mkaur@cityhealthworks.com

In launching City Health Works, Kaur saw the potential for reverse innovation from lower cost community health systems across the world applied to the United States. Since its founding in 2012, City Health Works has become recognized as a model for bridging the gap between health and healthcare. Before launching City Health Works, Kaur was an advisor to the Earth Institute’s One Million Community Health Worker Campaign across Sub-Saharan Africa.

**Karen LeBan, MS**  
Executive Director  
CORE Group  
Washington, DC  
kleban@coregroupdc.org

The CORE Group helps NGOs and governments effectively reach the community level and integrate community strategies into the national health plan. As CORE’s Executive Director until November 2015, LeBan was responsible for networking, partnering, and knowledge sharing to improve the global public health workforce. Karen has provided technical assistance in Sub-Saharan Africa, south Asia, and Latin America/Caribbean through various positions with the U.S. government and non-governmental organizations over the past 25 years.

**Laurie Lockert, MS**  
Manager  
Health Resilience Program™
CareOregon  
Portland, Ore.  
lockertl@careoregon.org

A Licensed Professional Counselor, Lockert’s work at CareOregon focuses on serving the highest risk/high cost population within primary care and has provided the opportunity to raise awareness of the trauma-informed model of care thereby increasing patient and provider satisfaction. She has collaborated with 18 Clinics to embed Health Resilience Specialists and develop new workflows to incorporate this unique workforce.

Henry Perry, MD, PhD, MPH
Senior Scientist  
Bloomberg School of Public Health  
Johns Hopkins University  
Baltimore, Md.  
hperry2@jhu.edu

Perry has three decades of experience in the management and evaluation of health programs in developing countries. He is the founder of the NGO Curamericas Global, now working in Bolivia, Guatemala, Haiti, and Liberia. He is the author or co-author of over 100 publications about primary health care, health work force, and community-based approaches to health improvement. He has a broad interest in primary health care and community-oriented public health, community participation, and equity and empowerment.

Dra. Susan Pick
Presidente  
IMIFAP  
Mixcoac, Mexico City, Mexico  
pick@imifap.org.mx

Pick is a social psychologist who has used her expertise to change the behavior of Mexico’s marginalized citizens. By teaching them what she calls “life skills,” she helps boost their feelings of self-worth and enhance their problem-solving abilities. Through its core program, Yo Quiero, Yo Puedo (I Want, I Can), IMIFAP serves population health needs in communities in over 14 countries by creating, implementing, and evaluating comprehensive, sustainable, and replicable programs, based on four fundamental pillars: education, health, citizenship, and productivity.

E. Lee Rosenthal, PhD, MS, MPH
Assistant Director  
Society, Community, and the Individual Course Director  
The Community Health Worker Core Consensus Project Texas Tech Medical School – Paul. L Foster School of Medicine  
El Paso, Texas  
lee.rosenthal@ttuhsc.edu
Rosenthal has led numerous key policy projects in the CHW field, including the National Community Health Advisor Study, the CHW Evaluation Toolkit Project, and the CHW National Education Collaborative. She is the current Director of the national Community Health Worker Core Consensus Project. Lee helped develop the American Public Health Association that became the CHW Section in 2009; she continues as a Section Special Advisor. She serves on various national and regional advisory groups aimed at improving health equity and integration of CHWs in the U.S. public health workforce. She is founding member of the Project on CHW Policy and Practice at the University of Texas, Institute for Health Policy.

**Samantha Sabo, DrPh, MPH**
Assistant Professor
Health Promotion Sciences Department
Mel & Enid Zuckerman College of Public Health*
University of Arizona
Tucson, Ariz.
sabo@email.arizona.edu

Sabo’s focus is the social and political context of chronic disease, maternal and child health, and the role of grassroots advocacy among immigrant and migrating communities, including Latino immigrants in the U.S.-Mexico borderlands. Through community-based participatory research (CBPR); the use of mixed, quantitative, and qualitative methods; and service-learning, she aims to build a "bottom-up" analysis of structural vulnerability and identify community-informed approaches to advance health equity among Latino and indigenous communities of the U.S. Southwest and beyond.

**Russell Schuh, EdD**
Visiting Research Instructor
Office of Medical Education
University of Pittsburgh, School of Medicine
Pittsburgh, Pa.
schu@pitt.edu

Schuh has in-depth experience in both program management and evaluation research. His program management includes responsibility for directing projects at the national, state and local levels as does his evaluation background. Describing himself as a "community worker all my life," Schuh rose from outreach worker to executive director of the University of Pittsburgh Medical Center’s Matilda H. Thiess Health Center.

**Prabhjot Singh, MD, PhD**
Director at Arnhold Institute for Global Health
Vice Chairman of the Department of Medicine for Population Health and Associate Professor of Medicine & Population Health Science and Policy at Icahn School of Medicine at Mount Sinai Health System
New York, N.Y.
prabhjot.singh@mssm.edu
A global health expert, Singh directs the Arnhold Institute, which is dedicated to improving health worldwide through research, education, and clinical care partnerships. He was the former co-chair of the 1 Million CHW Campaign, at the Earth Institute at Columbia University.

**Kate Tulenko, MD, MPH, MPhil**
Vice President, Health Systems Innovation at IntraHealth International Inc.
Director at CapacityPlus Project
Chapel Hill, N.C.
ktenko@capacityplus.org

Tulenko consults on workforce planning and management, health systems innovation, and universal access to care. She joined the World Bank in 2002, and also served as an advisor to national governments on health policy and reform and served on expert panels for WHO, APHA, the Global Health Workforce Alliance, and the American Hospital Association. She directs CapacityPlus, the USAID-funded global project uniquely focused on the health workforce needed to achieve global targets such as universal health care. Through service and partnership, CapacityPlus accelerates progress toward national goals by giving countries the tools they need to move closer to having the right health worker in the right place with the right skills and support.

**Milton Wainberg, MD, PhD**
Associate Clinical Professor of Psychiatry
Columbia University
New York, N.Y.
mlw35@columbia.edu

Wainberg has led numerous studies (funded by NIMH, NIAAA, NIDA and CDC) examining substance abuse, risk for HIV, and adherence to medications. He is currently testing the efficacy of an HIV-prevention intervention developed in an international, collaborative, NIMH-funded project. Applying the community-based participatory research paradigm, the project offers HIV prevention services to adults with severe mental illness throughout the municipal clinics of Rio de Janeiro, Brazil.

**Key Contacts From 2015 APHA Annual Meeting**

**Clemens Hong, MD, MPH**
Medical Director, Community Health Improvement
Los Angeles County Department of Health Services
Los Angeles, Calif.
Hong is Medical Director, Community Health Improvement, Los Angeles County Department of Health Services, where he leads the Care Connections Program and a number of other initiatives to improve population health for county residents with a special focus on high-risk and vulnerable populations. With Heidi Behforouz, MD, he is co-founder and Chief Science & Innovation Officer for Anansi Health. His research focuses on improving primary care delivery to vulnerable populations, with a specific focus on the integration of CHWs into primary care teams, the identification of complex, high-risk patients in primary care, and primary care integrated with complex care management of high-cost Medicaid patients.

**Carl Rush, MRP**  
Principal  
Community Resources LLC  
San Antonio, Texas  
carl.h.rush@uth.tmc.edu  

Rush was a lead author on the CHW National Workforce Study for the Health Resources and Services Administration, and has consulted with numerous organizations on CHW policy and education, including the Urban Institute, National Council on Aging, the American Dental Association, the CHW National Education Collaborative, and the National Cancer Institute Patient Navigator demonstration in San Antonio. He is founding member of the Project on CHW Policy and Practice at the University of Texas, Institute for Health Policy, and he serves as the research director for the CHW Core Consensus Project.

**Geoffrey Wilkinson, MSW**  
Clinical Associate Professor  
Boston University, School of Social Work  
Boston, Mass.  
gww@bu.edu  

Wilkinson was formerly director of policy and planning at the Massachusetts Department of Public Health (DPH). At DPH, he chairs the Massachusetts Board of Certification of Community Health Workers. He has been involved in supporting CHW workforce development for over 12 years at DPH and formerly as the director of the Massachusetts affiliate of the APHA.

**RWJF Staff**

**Karabi Acharya, ScD**  
Director, Global Health Group

**Paul Kuehnert, DNP, MS**  
Associate Vice President and Senior Adviser

**Laura C. Leviton, PhD**  
Senior Adviser on Evaluation
# A CHW Program Model Matrix: 15 U.S. and Global Population Health Models

<table>
<thead>
<tr>
<th>CHW Program</th>
<th>Defined Population</th>
<th>Organization and Level of Health System Integration</th>
<th>Outcomes</th>
<th>Funding Base Sustainability</th>
<th>Replicability and Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh Rural Advancement Committee (BRAC) CHW SHASTHYA SHEBIKA (SS)</td>
<td>Approximately 100,000 non-paid female CHWs (Shastya Shebika, or SS) make monthly visits to a caseload of 250-300 families, provide health promotion, educate families on a range of topics such as nutrition, sanitation, and safe childbirth, and make referrals to clinics.</td>
<td>BRAC is an NGO founded in 1972 to alleviate poverty especially among women. BRAC SSs link into the formal government health system in various ways. For example, according to Perry Reference Guide, they mobilize women and children to attend satellite clinic sessions when a mobile government team comes to give immunizations and provide Family Planning services, usually once a month. (BRAC is now also an international development organization.)</td>
<td>1997 <em>Lancet</em> study concluded the BRAC CHW tuberculosis-control program achieved high rates of case detection and treatment compliance. Progress in achieving Millennium Development Goals (MDG) for under age 5 mortality also attributed to BRAC CHWs. Perry H and Crigler L, Eds. <em>Developing and Strengthening Community Health Worker Programs at Scale</em>. Available online</td>
<td>Sustainable: SSs support themselves through sale of health related products to families. BRAC is 70-80% self-funded through a number of commercial enterprises that include a dairy and food project and a chain of retail handicraft stores (<a href="https://en.wikipedia.org">Wikipedia</a>).</td>
<td>According to a monograph from the BRAC research department. This program has been replicated in several countries including Uganda and Afghanistan.</td>
</tr>
<tr>
<td>CHW Program</td>
<td>Defined Population</td>
<td>Organization and Level of Health System Integration</td>
<td>Outcomes</td>
<td>Funding Base Sustainability</td>
<td>Replicability and Spread</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------</td>
<td>----------------------------------------------------------------</td>
</tr>
<tr>
<td>Ghana Community Health Planning Services (CHPS)</td>
<td>Underserved, primarily rural populations, with a focus on needs of women and children.</td>
<td>National CHW model, implemented by Ghana Health Service. Began in 1994 as pilot project of the Navrongo Health Research Centre and progressed into a national policy over 4 overlapping phases.</td>
<td>MDG progress: some CHPS service areas experienced a decline in the under age 5 mortality rate from 108 per 1,000 live births in 1998 to 80 per 1,000 live births in 2008, per Academy Health report.</td>
<td>Sustainability has been high but funding challenges remain despite national integration and international commitment; volunteers want to be paid.</td>
<td>Scale up plan to reach 100% of Ghana’s rural population by 2023 with approx. 32,000 CHWs, per Roadmap.</td>
</tr>
<tr>
<td>Brazil’s Community Health Agent Program of Programa Saúde da Família (PSF), or Family Health Program</td>
<td>39,000 family health care teams serving 120 million people (62% of population, as of 2014).</td>
<td>PSF is integrated into Brazil’s national health system, Sistema Único de Saúde.</td>
<td>Achieved MDGs for reduction in Infant Mortality Rate. Perry H and Crigler L., Eds. Developing and Strengthening Community Health Worker Programs at Scale. Available online.</td>
<td>Sustained in various forms since 1980s, but there are challenges—the program requires continued political will to sustain and expand.</td>
<td>Concept of family health teams began as a pilot in the state of Ceara in the early 1990s in 112 municipalities. Scaled up rapidly through national health system.</td>
</tr>
</tbody>
</table>
### Possible Health Nepal

**As of 2015, 184 CHWs are integrated within the Nepali Ministry of Health and Population system. The CHWs implement a home-visiting program conducting triage, referrals, and follow-up care.**

The CHW program is implemented by Possible Health, a Nepal-based nonprofit healthcare company paid by the Nepali government to deliver healthcare within the government’s infrastructure.

<table>
<thead>
<tr>
<th>CHW Program</th>
<th>Defined Population</th>
<th>Organization and Level of Health System Integration</th>
<th>Outcomes</th>
<th>Funding Base Sustainability</th>
<th>Replicability and Spread</th>
</tr>
</thead>
</table>
| **Possible Health Nepal** | People living in the Achham district in the Far Western region of Nepal. | Public private partnership: Possible Health implements health programs in partnership with the Nepali Ministry of Health and Population. (An international NGO provides technical assistance and fundraising for the Nepal NGO.) | 6 population health performance indicators are monitored. Outcomes reported in 2015 annual report, e.g. Safe birth: 76% of women gave birth in a healthcare facility with a trained clinician in the past year (target 95%). | Project funded with multiple, diverse sources that enables a nonprofit healthcare company to be paid per capita by the government to deliver healthcare within the government’s infrastructure. Project founders call this a durable healthcare model. For more see this Ted Talk. | Designed for scale, according to program founders: 3 key features:

1. Cost effectiveness (< $50 per capita, vs $8,000 in U.S.)
2. A leveraged infrastructure (with government supporting CHW training costs, for example)
3. A “durable” flow of revenue from diverse sources
Can be replicated through the government health system. |
### United States

#### Academic Community Partnerships

<table>
<thead>
<tr>
<th>CHW Program</th>
<th>Defined Population</th>
<th>Organization and Level of Health System Integration</th>
<th>Outcomes</th>
<th>Funding Base Sustainability</th>
<th>Replicability and Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mi Corazon Mi Comunidad (MiCMiC)</strong></td>
<td>Latinos in US/Mexico border communities.</td>
<td>Partnership with University of Texas El Paso and community-based organizations.</td>
<td><strong>Cohort study</strong> (CBPR) showed MiCMiC led to substantial improvements in health behaviors and modest improvements in cardiovascular risk factors. Greater utilization of community resources was associated with more favorable changes.</td>
<td>Grant funded from 2009-2013.</td>
<td>Non sustainable</td>
</tr>
<tr>
<td>3 CHWs (<em>promotoras</em>) hired by a local community-based organization promoted use of community physical activity and nutrition resources to enable behavior change to reduce cardiovascular risk factors.</td>
<td></td>
<td></td>
<td></td>
<td>Spread was dependent on hiring of CHWs by local agencies after grant ended but they declined to do so.</td>
<td></td>
</tr>
<tr>
<td><strong>HoMBReS Manteniendo Bienestar y Relaciones Saludables (Men Maintaining Wellness and Healthy Relationships)</strong></td>
<td>1600-1800 recently arrived, non-English-speaking Latino men in soccer leagues in rural central North Carolina.</td>
<td>Partnership between Wake Forest University and community organizations.</td>
<td><strong>CBPR</strong> study showed intervention participants reported more consistent condom use in the 30 days preceding follow-up than controls, at a statistically significant level.</td>
<td><strong>Evaluation</strong> found Navegantes continue in their roles as health advisors, opinion leaders, and community advocates after study support ended.</td>
<td><strong>Good sustainability</strong></td>
</tr>
<tr>
<td>15 volunteer soccer coaches/CHWs (<em>navegantes</em>) educated peers about HIV/STD risk and prevention.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Replication of model in Indiana.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>HoMBReS has been adapted</strong> for other populations, including men who have sex with men and transgender persons.</td>
<td></td>
</tr>
</tbody>
</table>
## CHW Program

<table>
<thead>
<tr>
<th>Models Integrated with Health System (Hospital or clinic)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mariposa Community Health Center Salud Si!</strong></td>
</tr>
<tr>
<td><strong>3 promotoras</strong> delivered health promotion to encourage physical activity, fruit and vegetable consumption, and stress reduction.</td>
</tr>
<tr>
<td>Mariposa Community Health Center Defined Population Mexican American women in Santa Cruz County along the New Mexico/Mexico border. Partnership between Arizona Prevention Research Center and Mariposa CHC, a federally qualified health center. CBPR project showed: Intake of fruits and vegetables increased from 7.5 to 10.6 and 4.6 to 7.2 servings per week, respectively. Soda consumption decreased significantly. A focus group to determine long-term outcomes indicated women had integrated nutrition changes. Grant funded, 2004-2008, Arizona Department of Health Services. Moderate to Good sustainability Long term evaluation results convinced health center to fund 2 CHWs to continue the program. No plans for replication.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IMPaCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 CHWs employed by the Penn Center for CHWs provide tailored support to help high-risk patients in the Penn Medicine Health System achieve individualized health goals to maintain their recovery once home and reduce readmissions. Residents of 5 Philadelphia zip codes in which &gt; 30% of residents were below the federal poverty level and which accounted for 35% of all readmissions to 2 urban hospitals. Hospital-based; CHWs fully integrated into health care teams. RCT of 446 hospitalized patients showed that a two-week “dose” of IMPaCT significantly improved access to primary care and mental health. It also reduced recurrent hospital readmissions (although not single readmissions). See <a href="#">Results on the Penn Center website</a>. High sustainability Penn Medicine fully funds the Penn Center for CHWs. Center pursues grant funding for program replication. Penn Center has developed replication guides for IMPaCT training and plans for spreading the model.</td>
</tr>
<tr>
<td>CHW Program</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td><strong>PACT: Program based on Haitian accompagnateur model.</strong></td>
</tr>
</tbody>
</table>

**Models Integrated with Health Department**

| Los Angeles County Care Connections Program (CCP) | Approximately 1,000 individuals with multiple chronic diseases in South and East Los Angeles who rely on emergency departments or hospitalizations for care. | Program of L.A. County Department of Health Services. | Goals are to reduce ER and hospital use, reduce costs and improve patient health. Early program data on acceptability and feasibility of the program presented at APHA 2015. | Funded by the L.A. County Supervisors for 2-year pilot demonstration. Potential sustainability Continued and expanded funding depends on results of a UCLA evaluation. | Potential for spread and replication but dependent on continued county and federal funding. |

**CHW Program Defined Population and Level of Health System Integration Outcomes Funding Base Sustainability Replicability and Spread**
<table>
<thead>
<tr>
<th>CHW Program</th>
<th>Defined Population</th>
<th>Organization and Level of Health System Integration</th>
<th>Outcomes</th>
<th>Funding Base Sustainability</th>
<th>Replicability and Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Global to Local: (G2L)</strong></td>
<td>Cities of SeaTac and Tukwila in King County Wash., diverse population with twice the rate of poverty and higher mortality rates than county.</td>
<td>Founded in 2010 through a partnership of Swedish Health Services, HealthPoint, Public Health Seattle &amp; King County, and the Washington Global Health Alliance with the goal to bring strategies that have proven effective in developing countries to underserved communities in the U.S.</td>
<td>Results reported in program brochure: Provided support to 7,000 people; identified, trained dozens of community leaders; secured support from 30 community organizations to complement G2L activities.</td>
<td>“Mixed financing” model per David Fleming, MD, Vice President of G2L. Board: Capitalized with $2 million from founding partners and an array of corporate and foundation sponsors, e.g., Aetna, Starbucks.</td>
<td>Replicable model for rural and urban areas. Replications in south King County, Spokane, Wash.; Portland, Ore.</td>
</tr>
<tr>
<td><strong>Seattle-King County Healthy Homes</strong></td>
<td>Children living in ethnically diverse, low-income households in Seattle.</td>
<td>A program of the environmental services section of Seattle-King County Department of Public Health.</td>
<td>RCT found addition of CHW home visits to clinic-based asthma education yielded clinically important increase in symptom-free days and modest improvements in caretaker quality of life.</td>
<td>County health department supports the program.</td>
<td>Replicable model.</td>
</tr>
</tbody>
</table>
### CHW Program Defined Population Organization and Level of Health System Integration Outcomes Funding Base Sustainability Replicability and Spread

#### Community-Based Nonprofit Organizations

<table>
<thead>
<tr>
<th>CHW Program</th>
<th>Defined Population</th>
<th>Organization and Level of Health System Integration</th>
<th>Outcomes</th>
<th>Funding Base Sustainability</th>
<th>Replicability and Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cure Violence</strong></td>
<td>Residents of urban areas with high rates of shootings and homicides.</td>
<td>NGO founded in 2000 as CeaseFire (Chicago) supported by federal, state, private foundation and individual donations.</td>
<td>Cities and organizations implementing the model regularly experience reductions in violence within the first year ranging from 40-70% and greater reductions in subsequent years, according to evaluations summarized on <a href="#">Web site</a>.</td>
<td>Grant funded; pursuing Medicaid reimbursement in U.S.</td>
<td>Replicable model is used by more than 50 cities and organizations in U.S and internationally. Cure Violence provides training and technical assistance.</td>
</tr>
</tbody>
</table>

#### Management Entities

| City Health Works           | Low-income residents with multiple chronic diseases in New York City.              | Management entity that partners with health systems, clinics, and managed care plans to provide population health management services. | Goal is management of diabetes, asthma, hypertension, depression, and reduction of hospital admissions. No outcomes reported. | Grant funded with support from hospital system (Mt. Sinai). Business model under development. | Replicable Payment models being co-developed with partners, including health insurers, plans and providers. |

RWJF Learning Report—Community Health Workers and Population Health: Lessons from U.S. and Global Models

85
<table>
<thead>
<tr>
<th>CHW Program</th>
<th>Defined Population</th>
<th>Organization and Level of Health System Integration</th>
<th>Outcomes</th>
<th>Funding Base Sustainability</th>
<th>Replicability and Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pathways Community HUB</strong></td>
<td>High-risk individuals as defined by HUB partners and identified in a specific region.</td>
<td>A HUB is an independent agency that contracts with care coordination funders. In turn, the HUB subcontracts with care coordination agencies.</td>
<td>2015 paper in <em>Maternal Child Health Journal</em> showed declines in low birth weights and savings in cost (1); AHRQ case studies reported declines in inappropriate ER use, declines in returns to prison, reduced medical debt, improved access to health and social services. <em>(AHRQ, 2016 [2])</em></td>
<td>Potentially sustainable because of HUB funding structure. Difficult to make a case to funders to support the HUB infrastructure without demonstrating improved outcomes and reduced costs. HUBs that focus on the national standards and enroll in certification demonstrate significantly better outcomes and sustainability. <em>(AHQR, 2016[3])</em></td>
<td>Replicated in several places across U.S. including OH, NM and MI. A community may encounter challenges to implementing the model because of extensive collaboration required to make HUB work. <em>(Zeigler, <em>Population Health Management</em>, 2014 [4])</em></td>
</tr>
</tbody>
</table>