

Advancing
COMMUNITY
HEALTH WORKER
Practice and Utilization:
The Focus on Financing



National Fund for
Medical Education

UCSF Center for
the Health Professions

Catherine Dower, JD

Melissa Knox, RD

Vanessa Lindler, MA

Edward O'Neil, MPA, PhD, FAAN



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The Center for the Health Professions
University of California, San Francisco

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Commissioned by the
Blue Cross and Blue Shield
of Minnesota Foundation

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Suggested citation style: Dower C, Knox M, Lindler V, O'Neil E. *Advancing Community Health Worker Practice and Utilization: The Focus on Financing*. San Francisco, CA: National Fund for Medical Education. 2006.

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The Center is committed to the idea that the nation's health will be improved if the public is better informed about the work of health professionals.



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Acknowledgements

This report was made possible by a grant from the Blue Cross and Blue Shield of Minnesota Foundation to the National Fund for Medical Education, which is administered at the Center for the Health Professions, University of California, San Francisco.

The authors are grateful to the key informants and individuals who participated in interviews or contributed information, data and perspectives. The authors also thank Christine Nielsen for research and analysis in the project's preliminary stages.

The findings and views contained in this document do not necessarily reflect the views of the National Fund for Medical Education, the UCSF Center for the Health Professions, or the Blue Cross and Blue Shield of Minnesota Foundation.

Design: John Malmquist Design / Berkeley, California

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Preface

As the US health care system moves toward a different and, we all hope, more rational future it will be essential to create new ways of organizing and delivering health care services. Some of these new ways will involve the exciting new possibilities afforded by information and biomedical technologies. Other approaches will engage health care institutions in the process of realigning their strategies to meet the demands of performance. Existing professions such as nursing, dentistry and medicine will examine their practice patterns and competencies to determine how they fit with the shifting demands of health care markets and consumers.

In addition to these developments, new professions and workers will emerge to serve the changing needs of the US public. The community health worker (CHW) represents an emerging resource to assist in addressing the questions of how to deliver quality care which is affordable, accessible, and culturally competent.

This study which follows examines many of the elements related to how the community health worker will be utilized by the health care system and consumer alike. It rightly points to the reality that if we cannot establish standard ways of compensating this valued worker, then we face the real possibility of losing their potential contributions. The study also points to some of the inevitable growing pains which the CHW community must address as it moves more and more into mainstream health care.

Our belief at the Center for the Health Professions is that this community and the people whom it serves should be the strongest voice in these discussions about finance, education, professional credentials, and oversight. But to have such a voice they will need to be articulate about the issues and be prepared to bring consensus positions from the field. Those who will be pushing for more definition will include health plans, public health agencies, practice groups, purchasers and the consuming public. How these questions are addressed will profoundly shape the future of community health workers. They will also inform our collective health experience.



Edward H. O'Neil, MPA, PhD, FAAN
Director, UCSF Center for the Health Professions

Executive Summary

Today the US health care system faces an unprecedented number of external challenges and demands including growth in the cost of the system; uneven quality of service; lower satisfaction rates among consumers; demographic realities of an aging and more racially diverse population; and growth in technology. All these trends point to an emergent health care system that has the following general characteristics:

- more focused on consumer needs and interests;
- more often located in the home and community;
- welcoming to non-traditional providers;
- more culturally sensitive and aware;
- better able to delegate care management technology to midlevel and paraprofessional providers;
- more aware of costs;
- sensitive to a broader array of health outcomes; and
- more attuned to chronic care management than acute treatment.

How each of these will finally manifest and how they will integrate into a responsive and efficient system of care remains to be seen, but it is possible in each of these dimensions to see how a well-trained and compensated community health worker could provide a vital missing link to an improved system.

There is a growing interest in the use of community health workers in various roles in the US health care system. These workers go by various titles and names — including *promotora* and community health advisor — but all assist members of the communities they serve. As the role of these workers becomes more accepted and desirable in the overall system of care, they face the challenges of moving from being an exceptional add-on to the system to being more a part of the mainstream. Issues such as educational preparation, formal credentialing, licensure and compensation are all part of this process. In particular, various organizations are interested in but challenged by the need for sustainable financing of the CHW position. It is time to explore and develop viable financing arrangements that go beyond short-term grants.

To address these concerns, this research was undertaken to study sustainable financing mechanisms for community health workers. The focus is on existing and emerging funding, reimbursement and payment policies for community health workers. The study seeks to

identify promising examples and models of payment programs for community health workers generally in the United States. To the authors' knowledge, this is the first national project with this exclusive focus.

The audiences for this report include community health workers, directors of programs that employ or work with community health workers, and administrators of public and private coverage programs such as health plans, insurance companies and state Medicaid programs seeking options for improving health care access and quality at the same or lower costs. Businesses, non-profit organizations and consumers exploring the possibilities of using the services community health workers could provide might also be interested in the findings.

AUDIENCE	AREAS OF INTEREST
Community Health Workers	<ul style="list-style-type: none"> • Range of funding models available • Research status and agenda
CHW program directors	<ul style="list-style-type: none"> • Range of funding models available • Opportunities for developing new funding models • Research status and agenda • CHW workforce opportunities and challenges
Public and private insurance program administrators	<ul style="list-style-type: none"> • Opportunities for expanding coverage to high quality/low cost care • Status of research • Benefits CHW programs may offer
Employers, purchasers and consumers	<ul style="list-style-type: none"> • Services CHWs may offer • Benefits CHW programs may offer

The research

In addition to a comprehensive literature review, the research methodology included interviewing 25 key individuals. While the number of interviews represents only a small fraction of the total number of CHW programs in the US, the authors feel confident that a significant number of programs that have secured sustainable financing were contacted. With these 25 interviews, 14 states plus the District of Columbia were represented. About half of the respondents directly employed CHWs. Others held various roles as directors of CHW training programs, CHW association leaders, directors of umbrella organizations that managed sub-programs or projects that employed CHWs or researchers focusing on issues of educating, training, financing or managing CHWs.

Current projects on the CHW workforce include the Health Resources and Services Administration Manpower Study and the Center for Sustainable Health Outreach CHW Inventory Project, both of which will conclude in 2007. These projects will provide information on CHW funding as well as estimates of workforce size. At present, it is estimated that three-quarters of the nation's community health workers are in paid positions.

However, qualitative and quantitative research on exactly how these CHW positions are — or could be — funded, is limited.

Despite the lack of quantitative and qualitative data on financing, a review of the literature on community health workers reveals that the importance and challenge of permanent funding for their services has been raised consistently for many years. Many critiques of the lack of permanent, long-term, “hard money” or sustainable funding can be found. For the most part, CHW programs rely heavily on short-term (3 years or less) and/or condition-specific grants and contracts. The limited stability over time and focus on conditions that change due to foundation or agency interest can result in CHW job loss, can undermine the evolution of the CHW workforce and can limit or spell the end of programs that employ CHWs. Many authors, commentators and study interviewees have noted the need to expand state, federal — especially Medicaid — and third party payments, to cover CHW services.

Despite all the interest, probably only a small number of all the US CHW programs have implemented arrangements that have resulted in permanent—or relatively permanent—funding.

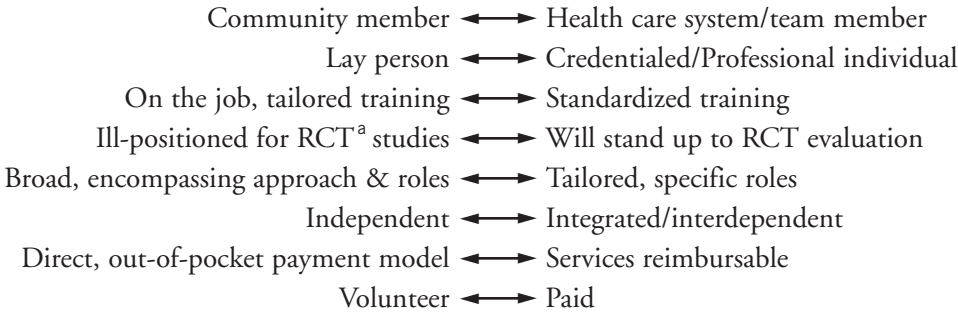
Based on the study research, several key findings are offered:

- **Four major funding models** for community health worker programs were identified: **charitable foundation/government agency; Medicaid; government general fund; and private company**, with four corresponding categories of mechanisms for implementation. By far the most common funding model is reliance on short-term, categorical grants and contracts from charitable foundations and government agencies. However, all four of these models have examples and best practices that can be explored; each also has its strengths and weaknesses. Many programs rely on multiple sources of funding and a combination of funding models.
- **Published research on the outcomes effectiveness of CHW interventions is limited and vulnerable to criticism.** A small number of well-designed studies have found significant, positive impacts of CHW services for very specific interventions in targeted populations.
- **Research on the cost-effectiveness of CHW services and programs is extremely limited and of mixed results.** One recent, solid research study found a CHW program to be much less costly than alternatives. Additional evidence from numerous sources, though of weaker research design, indicates significant savings and cost-effectiveness of CHW programs and services.
- CHW program directors, commentators and payers point to some **value in CHW education and training that is standardized** through post-secondary programs and

internships for example. At the same time, it is imperative that CHWs be **specifically trained, likely through on-the-job training, and/or competent to perform the targeted interventions** or services they are providing.

- Although there is no clear evidence of a correlation between CHW certification and sustainable financing of CHW positions (with the unique exception of Alaska), **many commentators agree that state certification would bolster efforts to obtain third-party payment and strengthen the research into outcomes- and cost-effectiveness of CHWs.**
- Elements of “successfully” funded, sustainable CHW programs include having:
 - A **mandate or mission** to provide services to a specific or targeted population with insufficient resources to do so in the traditional manner.
 - Identification of a **specific healthcare need** that was not being met in a particular population or community and a clear articulation of the role CHWs might play in meeting that need.
 - The **big picture** in view and/or responsibility for a population’s, or group of enrollees’ entire health care.
 - An individual or small group of **champions** who believe in the value of the CHW role and who can find ways to successfully win support.
 - Solid **outcomes** data indicating positive impact on access, costs or health status.
 - **Targeted training** of the CHWs that focuses on the services and populations being served.
- A series of tensions both characterize and challenge the CHW workforce at this time. Most of these tensions are associated with CHWs’ attributes of wanting to remain somewhat independent from the health care system (and closely connected to the community as lay people) while at the same time interested in health care system acceptance and reimbursement. The tensions can be viewed as lines or continua between a series of divergent end points as illustrated below. At present, CHW programs and commentators find themselves at various points on these continua; there is no obvious direction that all interested parties are taking. It is also clear that, for this workforce, one end of each continuum need not exclude the other end. However, these tensions often frame or are embedded in the discussions related to CHW financing, payment and reimbursement. Being aware of and informed about these tensions might help further the integration of community health workers into more settings, organizations and local communities.

THE CHW TENSIONS



Highlights of Best Practices and Promising Examples

A number of promising models and examples in the US have addressed the various challenges of financing community health worker programs. These include developments in funding arrangements, compensation models, research and certification. Some of these are highlighted here and explored in more detail in the following sections:

CHW program funding source models

- **Latino Health Access**, in Santa Ana, California, which offers a range of programs that are all based on the promotora model, has diversified its funding, paying for its programs through a combination of government and charitable foundation contracts and grants, fundraising, and private sector contracts with a local health plan.
- The **Coordinated Systems of Care Community Access Program of New Mexico (CSC-CAPNM)** has negotiated a contract with Molina HealthCare Inc., which covers the New Mexico Medicaid population, for Molina to make monthly capitated (per member per month) payments to cover the salaries of two CHWs who work at the sites of the CAP member hospitals, clinics and other health agencies and departments.

Best Practice Themes

- Collaboration and inclusiveness in development and decision-making
- Targeted training for the roles and interventions the CHW will perform/provide
- Educational standardization and/or certification for third-party reimbursement
- Targeted interventions; specifically defined activities that the CHW is competent to provide
- On-going, high quality research on outcomes and cost-effectiveness
- Diversified funding sources if not fully funded by sustainable/permanent source
- Understanding of and partnerships with other health workers, health and social service providers and government agencies
- Champions and visionaries to move forward

^a Randomized controlled trial

- The **California** Department of Health Services has secured a Medicaid Section 1115 Demonstration Program waiver to expand family planning services, including CHW and promotora services, to low-income women.
- **James Madison University/Blue Ridge Area Health Education Center — Virginia** (AHEC) provides health care interpreters (who are also bilingual CHWs/promotores) for Medicaid patients at local medical practices and a regional hospital. While promotores generally serve on a voluntary basis after education and training through the AHEC, they may receive payment for interpreting services (upon completion of additional training) from local health care providers through contracts with AHEC. Forty percent (40%) of the administrative costs of providing interpreting services are reimbursed to the AHEC by Medicaid.
- The State of **Alaska, in collaboration with tribal authorities and the federal government**, has developed a comprehensive training, certification and regulation program for community health aides/practitioners, who are recognized as billable providers for Medicaid reimbursement.
- **Health Plus, Inc.** is a large Medicaid managed care organization in New York City that employs 35 CHWs (known as community health education associates) to conduct targeted outreach and education to its members.
- The **City of Fort Worth, Texas**, has permanently budgeted for 12 CHW positions. Based in neighborhood police stations, the CHWs work on teams with nurses and social workers to respond to non-urgent health and social issues fielded by the police, fire and code compliance departments and requests from the community at large.
- **Christus Spohn Hospital Corpus Christi — Memorial** has placed CHWs in the emergency department to help patients navigate the system and make better use of health services with the goal of reducing inappropriate use of the ER.

CHW compensation models

- The **San Francisco Department of Public Health** has developed a career ladder for community health workers that has defined salary grades and goes from entry level/training through practice, supervisor and specialized positions.
- The **Community Health Access Project in Ohio** bases up to one-third of the salaries of its CHWs on meeting benchmark interventions and outcomes outlined in the program's "Pathways", which are tailored plans for the health conditions addressed.

CHW Research

- **Gary, Bone *et al.*'s 2003** study used a randomized, controlled trial design and set up three intervention arms that provided the researchers the ability to compare CHW interventions with interventions done by other health care professions and teams.
- At the **Men's Health Initiative in Denver, CO, Whitley *et al.*** (2006), used a well-designed study to compare health care costs prior to a CHW intervention for individuals in the study group with costs incurred after the intervention and found significant cost savings and a return on investment.
- The **Community Health Access Project in Ohio** has reduced low birth weight rates, which are associated with significant hospital costs during a LBW baby's first year of life, among its clients (likely resulting in cost-savings to hospitals, and public and private insurers) by linking CHW activities to the production of health outcomes using its "Pathways" accountability model.

CHW certification

- Three states — **Alaska, Texas and Ohio** — have active state-level CHW certification programs. Each of these states followed a unique approach and took time to develop and implement their programs. Each program has elements worth exploring.

Closing Observations: Five Issues to Address

As community health worker programs and the organizations that might use and fund their services learn about each other, a number of questions and topics of discussion will arise. Based on the research, and in light of the CHW tensions, five specific issue areas are presented. The questions within each of these areas have not yet been fully addressed or answered by the CHW community and will likely be issues to resolve for funding contracts or agreements and points to detail should related legislation or regulation be sought.

1. **Role in health care** — Community health workers can be effective and valuable individuals working to improve the health of people and their communities. CHWs may be members of structured, clinical health care teams or may work within communities and relatively autonomously from the health care system. Their roles and activities may vary considerably. As third-party reimbursement is increasingly sought for these workers, payers and purchasers may demand finer articulation of exactly what CHWs do and do not do. The CHW community will be called upon to clarify and define roles, responsibilities and competencies.

2. **Fair payment** — Compensation for community health worker services should be commensurate with the value they bring to the organization for which they work and to their clients' or communities' understanding of how to access and use health care as well as their health status. Determination of payment and reimbursement amounts will vary by geographic setting, program type, and funding stream agreement or arrangement. To date, only a very few efforts have been made to detail such policies, particularly for CHW reimbursement purposes. CHWs and CHW programs would benefit by developing reimbursement templates and formulas to reflect the value of their services in a format that can be understood and feasibly adopted by potential purchasers and payers. In some cases, it might be necessary to think innovatively about reimbursement and payment models to fit with the work that CHWs do. CHW work sometimes does not fit traditional US health care reimbursement models that rely on one payment per provider, per service. A menu of options by type might include:
 - a. **Capitated arrangements** — Payments might be contracted between, for example, a public or private insurance program or company and a provider (such as a community clinic or hospital that employs CHWs) on a dollar amount per covered individual per unit of time. The insurer, plan or purchaser of the plan might require CHW services be included in the offered benefits or be silent on what is required, thus permitting providers to pay CHWs for their services.
 - b. **Payment by service** — Payments might be made per service or intervention offered. Such payment structures need to address several elements:
 - **Units of service:** Will the CHW be paid and services be reimbursed in quantities of time (by the minute/hour/day), intervention (contacting a client; visiting a client; scheduling an appointment), outcome/"pay for performance" (healthy baby; smoking cessation; lowered blood pressure), other unit, or a combination?
 - **Cost per unit:** Will the reimbursable cost per unit be based on actual costs to deliver the service, standard rates used to reimburse the same or similar services by other health care workers, a percentage of the costs that are reimbursed for the services provided by other health care workers, or a combination?
 - **Dose:** What will be the minimum and maximum of unit frequency that can be reimbursed?
3. **Preparation** — Both CHWs and their employers have expectations regarding training and preparation for work. Whether obtained through standardized academic courses, specific on-the-job training or a combination of these, community health workers' training must be adequate and appropriate for the work they do; it also must be ongoing throughout their work lives. CHW employers and payers, as well as states

and the federal government, may have the right and responsibility to ask for demonstration of competence, which could be in the form of standardized education, training or certification that validates competence.

4. **Supervision** — Community health workers must have adequate and appropriate supervision for the work they do. The qualifications of the supervisor may depend on the program, the intervention, and the CHW, among other factors, but payers have the right to hold CHWs and their supervisors accountable. CHWs have the right and responsibility to know to whom they should turn for referrals and questions beyond their competence.
5. **Evaluation** — Published research focused on the outcomes and cost effectiveness of CHW programs and services could be expanded and improved. Current and potential funders, payers and purchasers may demand more data for analysis, stronger evidence of impact and return on investment, and pursuit of a research agenda that would answer their questions. Government agencies and charitable foundations may continue or expand funding opportunities in this arena. CHW programs and CHWs may seek to partner with the health services research community and share the CHW data for objective analysis.

By thinking through these five issue areas, addressing the questions posed, and using the innovative and successful models and practices identified throughout this report as starting points, the US may well benefit from a thoughtful integration of community health worker services into the nation's health care system.

Introduction

Background and context

Today the US health care system faces an unprecedented number of external challenges and demands. Perhaps most pressing is its seeming inability to control the rate of *growth in the cost* of the system. The US health care system is already the largest and most expensive per capita system in the world, having consumed over 15% of the nation's productive effort in 2004. This compares unfavorably to every other industrialized market economy country with the most expensive of all others costing no more than 11.6% (Switzerland) and as little as 7.7% (United Kingdom) and 7.1% (Ireland).¹ The fact that health care continues to grow at rates two to three times faster than the rest of the economy^{2,3} has become destabilizing for other sectors in the US. Large employers with their tradition of employer-funded health insurance are finding the burden of a costly health system too expensive to maintain in the competitive global economy. Likewise the nation's entrepreneurship and innovation are stifled as many individuals see the high price of individual health policies and choose to remain employees rather than taking their chances on creative new start-ups. In a similar vein, older workers hang on to employment because of the coverage gap they would face between retirement and Medicare eligibility.

But cost might not be such a great concern if the *quality* of the service and outcomes derived were more apparent. Although the US spends more per person than other nations, it is not proportionately healthier. In addition, another concern has arisen. A decade ago there was growing concern over the quality of health care in the US. There were questions of whether or not the best evidence-based treatments had been deployed, the most effective preventive regimens pursued, or if choices about treatment options were clearly explained. Rather than making significant headway on this topic, or perhaps because quality began to get objective empirical attention, the dialogue has shifted away from enhancing quality to addressing a crisis in patient safety. Beginning with the Institute of Medicine's *Crossing the Quality Chasm* report in 2001, a flood of studies and investigations has pointed out the alarming level of avoidable deaths associated with poor quality care.

In the context of growing costs and fears for safety the healthcare consumer is growing *less satisfied with the service*. For example, based on surveys in six countries of patients' perspectives on dimensions of their health care (patient safety, effectiveness, patient-centeredness, timeliness, efficiency and equity), a 2006 Commonwealth Fund report ranked the US last overall.⁴ The arrangements for care delivery have never been consumer or patient centric, often bending hours, financing, and accountability to serve the institution and professional incumbents. But now the long assumed trust that the public has had in the health care

establishment is quickly eroding. As it does, dissatisfaction increasingly boils over into frustration and anger, leaving the consumer more motivated to pursue non-traditional providers outside of the mainstream.

Alone and certainly together, these three issues would challenge any nation. But the US is faced with a few additional challenges that, though external to health care, will load directly on to the challenges to be addressed in health care. The first two are demographic: an aging and increasingly racially and ethnically diverse population. The US, like many nations will grow older over the next thirty years. As the population ages it will have more health care needs, need more chronic care services and move on to the only universal health plan in the US: Medicare. These individuals will undoubtedly generate increased demand for health care services. The US population is also more diverse and in this diversity there is a growing recognition of a disparity in health care outcomes across ethnic groups. These inequities will be drivers for more innovation to address their root causes. In addition, immigration trends indicate the need to address language and cultural differences as well as a lack of familiarity with the US health care system.

A final challenge is the growth of technology. The proliferation of health care technology adds tremendously to health care expense, but it also promises better outcomes and more effective use of resources. As biomedical technology grows so does the information and communications technology that has changed so much of the rest of the economy and how people work. As these two tech trends merge into care management technology they will create tools that bring highly specialized knowledge and procedures both to the individual at home and to the frontline practitioner working in community and home settings. This will broaden what can be done by entry- and mid-level health care workers and in settings outside of clinics, hospitals, long term care facilities and other health institutions.

All of these trends point to an emergent health care system that has the following general characteristics:

- more focused on consumer needs and interests;
- more often located in the home and community;
- welcoming to non-traditional providers;
- more culturally sensitive and aware;
- better able to delegate care management technology to midlevel and paraprofessional providers;
- more aware of costs;
- sensitive to a broader array of health outcomes; and
- more attuned to chronic care management than acute treatment.

How each of these will finally manifest and how they will integrate into a responsive and efficient system of care remains to be seen, but it is possible in each of these dimensions to see how a well-trained and compensated community health worker could provide a vital missing link to an improved system.

There is a growing interest in the use of community health workers in various roles in the US health care system. These workers go by various titles and names — including *promotores* and community health advisors — but all assist members of the communities they serve. Their activities at different times involve education, problem-solving, direct assistance, advocacy and organization. While an accurate count of this workforce is elusive at this point due to lack of a common definition and any official workforce registries, the US is likely home to thousands of sites where tens of thousands of community health workers and *promotores* are employed or provide services.^b

Community health workers have provided services throughout the US for decades. The past ten years have seen increased attention to these workers and the value they may bring. Many programs have been started or expanded; policy and research papers have been published;⁵⁻⁷ and state and federal legislation has been considered⁸⁻¹⁰ and, in some cases, enacted.^{11, 12}

As the role of these workers becomes more accepted and desirable in the overall system of care, they face the challenges of moving from being an exceptional add-on to the system to being more a part of the mainstream. Issues such as educational preparation, formal credentialing, licensure, competition^c and compensation are all part of this process. In particular, various organizations are interested in but challenged by the need for sustainable funding sources for the CHW position. It is time to explore and develop viable financing arrangements that go beyond short-term grants.

Funded by a grant from the Blue Cross and Blue Shield of Minnesota Foundation, the National Fund for Medical Education, housed at the UCSF Center for the Health Professions, undertook this study of sustainable financing mechanisms for community health workers. The focus is on existing and emerging funding, reimbursement and payment policies for community health workers. To the authors' knowledge, this is the first national project with this exclusive focus. The study seeks to identify and develop best practice guidelines for constructing future payment programs for community health workers generally in the United States.

^b The National Community Health Worker (CHW) Programs Inventory Project, being conducted by the Center for Sustainable Health Outreach (CSHO) at The University of Southern Mississippi, is funded by the W.K. Kellogg Foundation, with technical assistance from the Regional Center for Health Workforce Studies (RCHWS) at the University of Texas Health Sciences Center at San Antonio (UTHSC-SA). The project will be completed by December, 2007, with data available by Spring 2007. This will provide a description of over 1,000 CHW programs across the U.S. Further, the CHW National Workforce Study conducted by RCHWS-UTHSC-SA, under contract with the US Department of Health and Human Services/Health Resources and Services Administration, Bureau of Health Professions, in collaboration with CSHO, will be concluded in 2006, with results released in 2007. This study will provide a comprehensive national picture of the CHW workforce.¹³⁻¹⁴

^c CHWs generally do not have the clinical training of nurses and other health professionals. However, they may provide non-clinical aspects of care provided by these other professionals. For example, CHWs may provide some services that are similar to or overlap with those of public health nurses, social workers and case managers. As has happened as other professions evolved, established professions may protest CHWs taking on roles traditionally considered in their own legal and professional scope of practice.

Defining Community Health Workers

This study used a very broad definition of community health worker. While the researchers are aware of various definitions and descriptions of CHWs and the wide scope of tasks they might perform (see sidebars for a small sample of the different

“CHWs perform a wide range of tasks — information and referral, education, informal counseling and emotional support, advocacy, provision of some basic services, and cultural brokerage between providers and recipients.”¹⁵

descriptions and roles CHWs may have), a quick review of the field confirms that there is no standard definition upon which all agree. For purposes of this study, we accepted interviewee assertions that they were working with CHWs (or *promotores/as*, community health advisors, patient navigators, etc.). The common understanding was that we were talking about lay workers (not having completed formal post-secondary degree programs or clinical health care training for the job they were doing) providing any of a number of services to members of a community toward the ultimate goal of improving health care or health.

SEVEN COMMUNITY HEALTH ADVISOR ROLES ⁷	OHIO CHW CERTIFICATION MAJOR AREAS ¹⁶	TEXAS CHW CERTIFICATION CORE COMPETENCES ¹⁷
1. Cultural mediation between communities and health and human services systems	1. Health care	1. Communication skills
2. Informal counseling and social support	2. Community resources	2. Interpersonal skills
3. Providing culturally appropriate health education	3. Communication skills	3. Service coordination skills
4. Advocating for individual and community needs	4. Individual and community advocacy	4. Capacity-building skills
5. Assuring people get the services they need	5. Health education	5. Advocacy skills
6. Building individual and community capacity	6. Service skills and responsibilities	6. Teaching skills
7. Providing direct services	7. Lifespan specific needs	7. Organizational skills
		8. Knowledge base on specific health issues

Methods

Research methodology for this project included literature review, key informant interviews, review and comment by national experts, and face-to-face discussion among experts.

The literature review focused on published studies and meta-analyses of the issues of financing and funding community health worker positions and the services they provide. In addition, published information on issues relevant to financing, such as cost-effectiveness, clinical effectiveness, and licensing and credentialing were reviewed.

The interviews were conducted in accordance with UCSF Committee on Human Research guidelines and interview questions are included in Appendix A. Twenty-five formal interviews were scheduled and took place. With these 25 interviews, 14 states plus the District of Columbia were represented. About half of the respondents directly employed CHWs. Others held various roles as directors of CHW training programs, CHW association leaders, directors of umbrella organizations that managed sub-programs or projects that employed CHWs or researchers focusing on the education, training, financing or management of CHWs. A list of the interviewees and their affiliations is attached in Appendix B.

In addition to the formal interviews, dozens of email and telephone inquiries and internet searches were made to fill in research question areas.

Organization of this report

Following this introductory section, the authors outline the challenge of financing community health workers and their programs. Findings from the qualitative research are next, with descriptions and examples of the four major financing models identified. The next part of the report covers two CHW issues closely related to financing: A) the role of evaluation (outcomes and costs) and B) preparation (addressing questions surrounding education, training and certification). A brief conclusion wraps up the body of the report. Appendices are included at the end. The authors note that, while several examples, models and case studies are presented, none of these lists are meant to be exclusive. Unless otherwise noted, other examples likely exist in the US. The ones highlighted in this report are meant to be illustrative and informative but do not imply that other examples, including outstanding or “best” practices cannot be found.

“The term community health worker refers to a paraprofessional who fulfills certain roles (for example, providing street outreach and education to homeless people about HIV prevention) for a health-related organization. Outreach workers, lay health advisors and health advocates are other terms to describe similar positions. Typically, people employed as CHWs are selected because they are members of the community they are intended to serve. They are also hired for qualities such as leadership and caring rather than specific education and training. Most CHWs receive training for their specific job responsibilities after they are hired.”¹⁸

Geographic distribution of formal interviews conducted, 2006



Geographic distribution of case studies and examples referenced in report (not including Alaska)



The Financing Challenge

The National Community Health Advisor Study of 1998 estimated that three-quarters of US CHWs are paid.⁷ Some of the published research has described program settings, from which inferences regarding associated funding could be made, and provided examples or case studies.⁷ However, quantitative research on exactly how these CHW positions are—or could be—funded, is limited and varied in definitions and categories making comparisons difficult. At the national level, the CHW Program Inventory Project, funded by the W.K. Kellogg Foundation and conducted at The Center for Sustainable Health Outreach at The University of Southern Mississippi includes collection of funding data and information from thousands of US programs and will shed considerable light on this topic. A parallel study being funded by the Health Resources and Services Administration will also contribute to the body of knowledge on the funding of CHW positions.

At the state and local levels, several studies have been completed. Studies done in Minnesota found that government agencies employ more CHWs than any other type of organization¹⁹ and government grants are the primary funding source for CHW positions across all agencies.¹⁸ Specifically, in 2002, more than 80 percent of Minnesota organizations that participated in a survey on CHW employment and training reported using government grants to pay their CHWs and less than half received funding from foundations or insurance programs.¹⁸ In 2005, over 75 percent of CHW employers surveyed in the Minneapolis/St. Paul area reported that government grants are their primary source of funding for CHW positions.¹⁹

A 1996 regional survey of the San Francisco Bay Area in California found that 55% of local CHWs were paid from ongoing funding sources (county/city funding (29%), federal funding (15%) and state funding (11%)), compared to 42% being paid from grants of three years or less (federal grant (17%), county/city grant (11%), state grant (7%) and private foundation grant (7%)). Three percent reported “other” sources such as profits or fundraising.²⁰

Despite the lack of quantitative data on financing, a review of the literature on community health workers reveals that the importance and challenge of obtaining permanent funding for their services has been raised consistently for many years.⁵⁻⁷ Literature on the topic of CHW funding includes many critiques of the lack of permanent, long-term, “hard money” or sustainable funding.^{21, 22} For the most part, CHW programs rely heavily on short-term (3 years or less) and/or condition-specific grants and contracts. The limited stability over time and

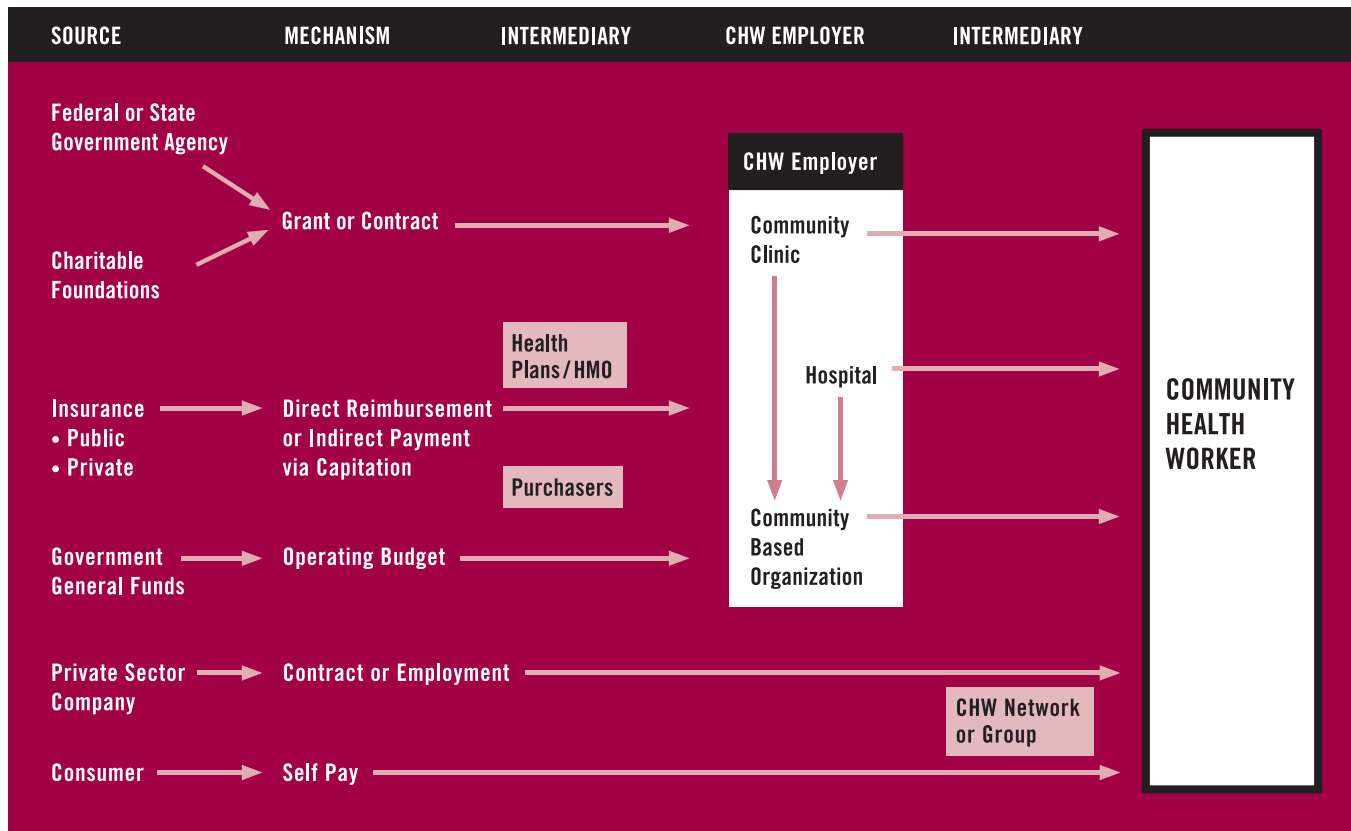
focus on conditions that change due to foundation or agency interest can result in CHW job loss, can undermine the evolution of the CHW workforce and can limit or spell the end of programs that employ CHWs. For example, 35% of the CHW employers participating in the 2005 Minnesota survey indicated that they will not hire additional CHWs due to a lack of funding.¹⁹

Many authors, commentators and study interviewees have noted the need to expand state, federal and third party payments as potential sources of funding that go beyond short term grants and contracts to cover CHW services.²³ In particular, several studies from sources including the University of Arizona Community Health Advisor Study funded by the Annie E. Casey Foundation, the Family Strengthening Policy Center initiative of the National Human Services Assembly, the James Madison University's report to the Governor and General Assembly of Virginia, and the Community Voices project of the W.K. Kellogg Foundation have recommended exploring the use of Medicaid reimbursement as a promising source of permanent funding.^{7, 22, 24, 25}

Only a few publications and organizational efforts appear to have taken the next step to offering concrete suggestions toward sustainability. For example, Nichols et al., in their 2005 review of Texas' efforts to integrate community health workers into the health care system, note that the sixth charge to the Promotor(a) Program Development Committee was to "evaluate the feasibility of seeking a federal waiver so that promotor(a) or CHW services would be included as reimbursable services provided under the state Medicaid program."²⁶ Likewise, as will be explored below, probably only a fraction of all the US CHW programs were started with relatively permanent funding streams in place. Even fewer appear to have moved from unstable to more stable funding mechanisms.

At the start of this project, the researchers sketched out potential funding streams for paying community health workers. Some of these mechanisms were known to be in place at many sites; others models were hypothetical yet considered likely or possible to be in place somewhere in the US. As research and interviewing progressed, the chart was modified, rearranged and detailed several times. The resulting graphic offers an overview of how funding for CHW salaries or services might flow. The authors believe it includes most of the existing models, as well as a few that are still considered likely but not yet implemented. The diagram below and the text that follows provide a summary of the various models. In the findings and discussion that make up the remainder of this report, the four main existing funding models are described and explored.

Flow Chart of Potential Funding Streams for CHW Positions



A. Government agency and charitable foundation grants and contracts. Under this model, which appears to be the most common US arrangement for CHW services, government agencies and charitable foundations award grants and contracts to CHW employers, which are most likely community clinics or community based organizations (CBOs). The clinics and CBOs in turn pay the salaries or administer the programs where CHWs work.

B. Public or private insurance. Under this model, an insurance program or company might fund CHW positions in several ways. It might reimburse a provider such as a clinic, or a consumer paying out of pocket, for costs incurred purchasing CHW services. A public insurance program might provide capitated payments to an intermediary such as a health plan, which could then employ or contract for CHW services through a clinic or CBO. Findings indicate that a few examples of the Medicaid program reimbursing or contracting through capitated arrangements exist. No other public or private insurance programs paying for CHW services were identified. While purchasers (such as employers negotiating coverage for their employees with a health plan) were identified as another possible intermediary playing a role in the decision to use CHW services, no such arrangements were located for this study.

C. Government general funds. Federal, state or local governments may choose to employ or pay directly for CHW services. Although paid for ultimately by tax dollars, as with the government agency grants and the public insurance models above, this model is neither a grant program nor an insurance program. It is characterized by dedicated line item budgets that include CHW services, positions or programs. County hospitals or health departments appear to be the most common example under this category.

D. Private sector organizations. Under this model, non-governmental entities such as hospitals, health plans and other businesses (which may or may not be healthcare-related), either employ CHWs directly as part of their operating budget payroll or contract with clinics or CBOs for CHW services. CHW networks or groups were hypothesized to serve as intermediaries between purchasers and individual workers, but none were identified for this project.

E. Consumers. One hypothetical model included consumers, in the form of patients and clients, paying out of pocket for CHW services. In this model, the consumer might pay the CHW directly or might pay a provider such as a clinic or CBO, which in turn, pays the CHW salary.

Financing and Funding Models

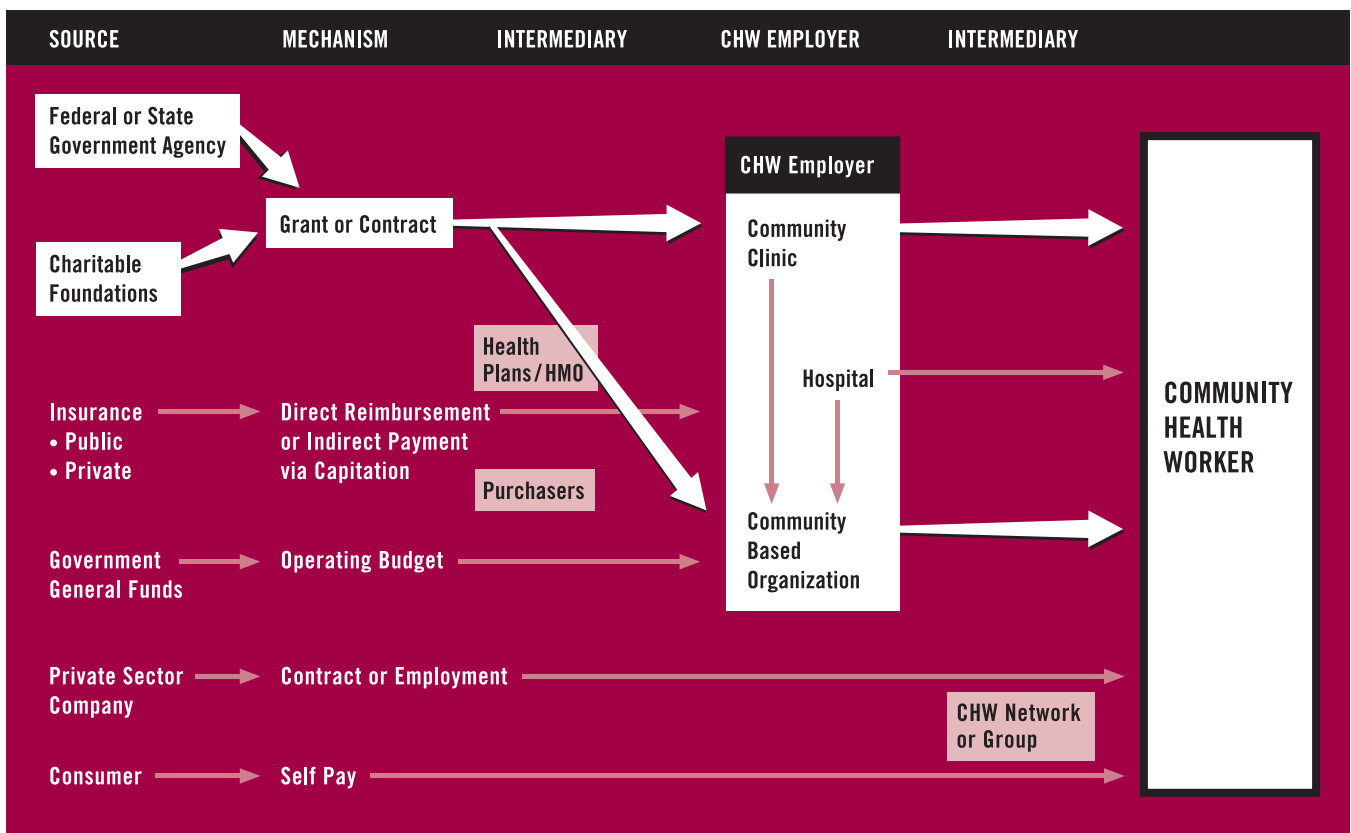
From the research conducted for this study, four major funding source models for community health worker programs were identified as being in place — charitable foundation/government agency, Medicaid, government general fund, and private organization — with four corresponding categories of mechanisms for implementation. These are summarized in the table below and discussed on the following pages. The source models and funding streams are presented independently for analysis and discussion. In real practice, many CHW programs rely on multiple funding sources and blended funding models.

SOURCE	MECHANISM	BENEFITS	CHALLENGES
1. Charitable foundations and government agencies	<ul style="list-style-type: none"> • Contract • Grant 	Most common; known option; evaluations required	Short-term; categorical
2. Medicaid	<ul style="list-style-type: none"> • Reimbursement <ul style="list-style-type: none"> i. Administrative <ul style="list-style-type: none"> — Medicaid outreach — other ii. § 1115 Waiver iii. Direct • Managed care contract 	Relative stability	Very rare so few models; time-consuming to establish; cost data required; opposition from competing providers
3. Federal, state or local government general fund	<ul style="list-style-type: none"> • General fund budget 	Relative stability; data collection conducted	Time-consuming political negotiations to establish
4. Private organizations – hospitals, managed care organizations, insurance companies, and employers	<ul style="list-style-type: none"> • Operating budget 	Decisions to establish can be made quickly; cost and quality data collection conducted; potential stability	Stability tied to business success

1 Grants and contracts from foundations or government agencies.

Although an accurate and complete tally of the sources of funding for all the thousands of programs that employ CHWs in the US is not yet available, we can safely say that the vast majority of CHW programs in this country are funded by private foundations and government agencies through grants and contracts. Government agency funding in this category includes grants from such entities as the National Institutes for Health (NIH) and Health Resources and Services Administration (HRSA), federal programs such as Temporary Assistance for Needy Families (TANF), and state- and locally-administered programs for various conditions or diseases; it does not include Medicaid or Medicare reimbursement. The national proportion of the total covered by private funding relative to government funding is unknown. However, a Minnesota study found that over 80% of the surveyed organizations in that state employing community health workers use government grants to pay their CHWs while over 40% of those organizations relied on funding from foundations.¹⁸

Funding of CHW positions through grants and contracts from federal or state government agencies or charitable foundations



In this model, a government agency (e.g. NIH, CDC, HRSA) or charitable foundation awards a grant or contract to a CHW employer such as a community clinic or community based organization, which in turn, employs and pays the CHW.

Government and foundation grants and contracts are typically for relatively short time periods (1-3 years) although many are renewable and funding through some government programs can be quite reliable. Grant and contract funds are often tied to specific categories of patients or conditions. Categorical monies may target, for example, HIV/AIDS, asthma, family planning, prenatal care and maternal and child health. The cyclical and categorical nature of grant funding makes for rather unstable financing situations. However, many organizations — probably the vast majority of programs in the US numbering in the thousands — have found these sources, either individually or in combination, to be reliable enough to keep operating. We highlight here two programs, out of countless across the country, that have successfully depended on grants and contracts for financing.

BEST PRACTICE

- **LATINO HEALTH ACCESS** — Located in Orange County, California, Latino Health Access (LHA) has run successful community health programs based on the Promotores^d model for over a decade. Currently employing over 30 promotores, LHA sustains its programs through various funding sources, including private foundation grants, government funds, fee-for-service contracts with local hospitals, and fundraising.

“All of the Latino Health Access programs rely on the Promotores model for their fresh, effective, in-culture and practical approach. Promotores de Salud are highly trained community health workers. They are recruited and hired from the communities where they live. They are educators and role models, who are highly skilled at leading their peers toward wellness. Latino Health Access has been on the cutting edge of the Promotores movement for the past ten years. LHA assists other groups across the nation develop Promotores programs by offering a two-day Basic Promotores Training.”²⁷

For more information about Latino Health Access, see the case study on the following page.

ADDITIONAL EXAMPLE

- **COMMUNITY HEALTH ACCESS PROJECT** — The Community Health Access Project (CHAP) in Ohio employs approximately nine CHWs at three clinic sites using a comprehensive model of care that focuses on outcomes (for more information about the Pathways model and cost savings associated with the CHAP program, see page 33). Funding comes primarily via the Temporary Assistance for Needy Families program and private foundation sources.

^d The terms “promotore/a” and “promotore/a de salud” are often used in Latino communities in the United States to refer to lay or community health workers. In Texas, the term has been legislatively defined: “In this chapter, “promotora” means a person who, with or without compensation, provides a bilingual liaison between health care providers and patients through activities that include assisting in case conferences, providing patient education, making referrals to health and social services, conducting needs assessments, distributing surveys to identify barriers to health care delivery, making home visits, and providing language services.”²⁸

Name: LATINO HEALTH ACCESS

Location: Santa Ana, California

Population served: Latinos in Orange County, primarily medically uninsured

Website: www.latinohhealthaccess.org

Latino Health Access is a non-profit organization committed to “improving the quality of life and health of uninsured, under-served people through quality preventive services and educational programs, emphasizing full participation in decisions affecting health.” In all nineteen programs currently active at Latino Health Access, promotores educate and support community members in all types of health issues. The programs offered range from general health promotion, to chronic disease management, to creating an environment friendly to positive health choices. The promotores themselves, 32 in all, are trained and supported through Latino Health Access, and a reputation for successful programs has led to partnerships with government agencies, academic centers, health maintenance organizations and community organizations.

Funding:

Latino Health Access sustains its programs by piecing together a combination of grants, private contracts, and private donations. As its grant-funded demonstration programs (both governmentally and privately funded) are shown to be successful, the goal is to develop them into fee-for-service programs in contract with local institutions and health care organizations.

Latino Health Access does not intend to pursue Medicaid reimbursement of promotores due to a target population that includes many who are ineligible for Medicaid, the lack of a necessary data system, and the likely need to hire more accountants.

Latino Health Access has had some success with this model, and has recently contracted to provide a version of its highly successful diabetes management program with Kaiser Permanente. Fundraising activities have also brought in corporate donors that support particular programs or aspects of a group of programs. Latino Health Access anticipates they will still be writing grants and exploring fee-for-service opportunities over the next several years.

A few years ago, Latino Health Access experienced a budget crisis after losing several large grants. As a result, all staff members, including promotores, were required to reduce their hours. Not wanting to be faced with the same situation again, the organization refocused its efforts to develop a diversified funding base and to cross-train its promotores so they have multiple

competencies, intending to establish itself as a reliable service provider and employer in the community. Even as it sees greater opportunities for community involvement, Latino Health Access has chosen to only seek grants that allow it to utilize its existing workforce and that fund programs capable of being continued in some form, perhaps funded by non-grant sources, after the initial grant period ends. In fact, America Bracho, the Executive Director of Latino Health Access believes that, “As an organization we need to move toward fee-for-service opportunities.” Latino Health Access intends to grow carefully using diversified funding sources so that new programs can be supported and thrive.

Grants and contracts from charitable foundations and government agencies: benefits and challenges as sustainable funding sources

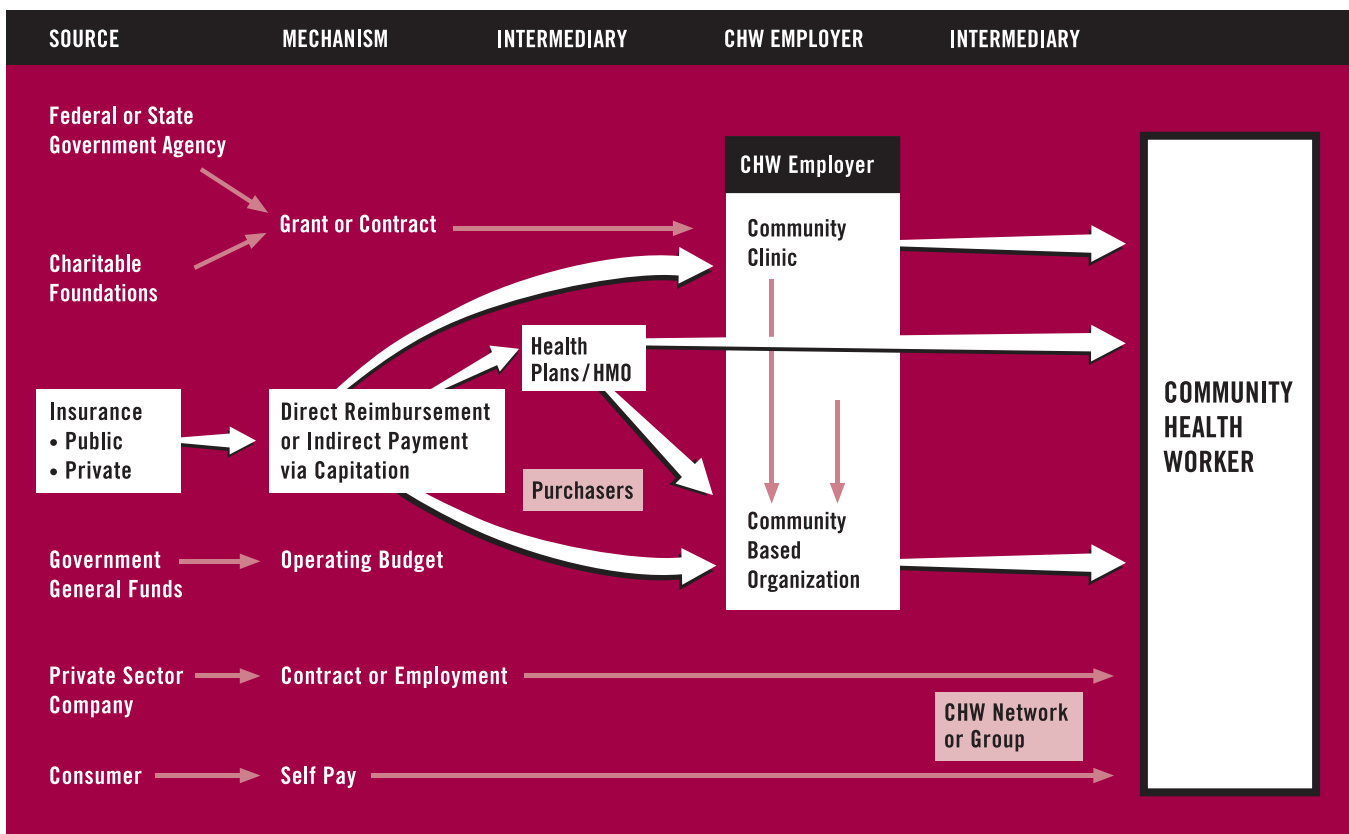
Benefits: Perhaps the strongest reason to pursue this category of funds is that it is a known factor for virtually all CHW program directors. Over the years, thousands of CHW programs have been started and continue to operate by relying on grants and contracts based on strong relationships between the CHW program and the foundation and on successful track records of the programs. Another potential benefit for the CHW field is the usual requirement that grant-funded programs be evaluated. Although not as rigorous as they could be, these evaluations often form the basis of the only outcomes evidence available regarding particular CHW interventions or services.

Challenges: Foundation and government grants and contracts are often short-term (three years or less). This means that program directors may spend inordinate amounts of time writing proposals and filling out progress reports. The funds are often also tied to a particular disease or condition, of interest to the foundation or agency but which may not be the local community's greatest need. When funding interests shift, programs find that they need to seek alternative funding or discontinue CHW services in one area and adopt a different focus in order to qualify for funding.

2 Public Insurance: Medicaid^e

Medicaid, the health care insurance program primarily for low-income individuals in the US, is funded and administered jointly by the federal and state governments. With CHW programs historically dedicated to helping meet the needs of underserved populations, CHWs might be of significant help to Medicaid enrollees and those eligible for Medicaid. However, federal codes and regulations do not recognize community health workers as a category of provider that can bill the program directly for reimbursement. At the same time, federal parameters do not prohibit the employment of community health workers. States are permitted within federal parameters to explore and implement their own programs.

Funding CHW positions through payments from the Medicaid public insurance program



This model has four categories: 1) a state Medicaid office pays a capitated amount to a health plan, which may employ CHWs directly or pay a contracted amount to a community based organization, which employs the CHWs; 2) Under a § 1115 waiver, a clinic, which employs CHWs, receives Medicaid reimbursement for CHW services; 3) Federal Medicaid funds reimburse clinic or CBO, which employs CHWs, for Medicaid administrative costs; 4) state Medicaid office directly reimburses community (tribal) organization for CHW services.

^e While research conducted for this study identified a few examples of Medicaid payments funding CHWs, no other public or any private insurance programs funding CHW services were identified.

While far from ubiquitous, several examples exist in the US where Medicaid funds have been tapped as a source to pay for the services that community health workers provide. These have been organized into four categories: Medicaid Managed Care; Medicaid Section 1115 Demonstration Waiver; Medicaid Administrative Costs (including outreach costs); and direct reimbursement.

A. MEDICAID MANAGED CARE

As of December 31, 2004, all but three US states offered Medicaid Managed Care plans designed to lower costs while maintaining quality of services to enrollees. Sixty-one percent of all US Medicaid enrollees are in managed care plans but the percentages vary by state. A handful of states have low percentages of Medicaid managed care participants but over 40 states have 50% or more of their Medicaid populations in managed care. At the upper end, 80% or more of 12 states' Medicaid enrollees are in managed care.²⁹

A health plan participating as a Medicaid managed care organization receives a capitated amount from the state for the number of enrollees it covers. After meeting mandated care requirements, and within federal, state and local regulations and terms of the state contract, plans may generally make their own decisions as to how to spend the funds. This may be particularly relevant if the managed care organization employs its own CHWs. If the plan contracts with a provider site or community organization to provide CHW services, a billing code approved by the state Medicaid office must be used by the provider to receive approved payment from the health plan for the services provided.

BEST PRACTICE CASE STUDY

- **HEALTH PLUS** is a Medicaid managed care plan in New York City that employs approximately 35 CHWs. See case study on following page for more information.

ADDITIONAL EXAMPLE

- **COORDINATED SYSTEMS OF CARE COMMUNITY ACCESS PROGRAM OF NEW MEXICO** (CSC-CAPNM) aims to achieve access to a primary care home for all uninsured in Central New Mexico through collaboration and integration among six safety net providers in the four-county target area. One of the five major components of the CSC-CAPNM consortium is its Coordinated Systems of Care approach, which integrates primary care and behavioral/social services. This model “reduces costs and improves care by creating special, high intensity teams (case managers, community health advocates, primary care providers, mental health, substance abuse providers) and links health and social services to home, work site and community.”³⁰ CSC-CAPNM has negotiated with Molina HealthCare, Inc. (a managed health care company focusing on underserved populations, with corporate headquarters in California and state health plans in five states) to cover the salaries of two CHWs who work at the sites of the CSC-CAPNM provider members. In addition to setting up the CHW program, several steps were required to

make this arrangement work. Through a process that took a few months, Molina negotiated with the New Mexico state Medicaid office to establish a billing code for the CSC-CAPNM program (which uses CHWs as part of its program). CSC-CAPNM and Molina negotiated a standard 2-year, renewable contract under which the CSC-CAPNM administrators may invoice Molina on a capitated basis for the services CSC-CAPNM CHWs provide to a specified enrollee population.

Name: HEALTH PLUS

Location: Brooklyn, New York

Population served: Public health insurance recipients in all 5 boroughs of New York City

Website: www.healthplus-ny.org

Health Plus, with 280,000 members, is one of the largest managed care organizations in New York City providing care to Medicaid and Child Health Plus recipients and participants in New York state's affordable health insurance program. It employs approximately 35 CHWs, known as community health education associates.

New York State Medicaid regulations require that managed care organizations attempt to reach new enrollees in order to offer assistance in navigating health plan services. Additionally, a set of seven health education classes must be made available to members. The community health education associates support meeting these requirements by Health Plus, though they provide far more than the minimum required by law.

Thirty of these deliver targeted outreach to their enrollees. The rest provide general community education services. Some of the services provided by the community health education associates are health risk assessments, case management referrals, appointment scheduling, targeted clinical interventions, follow-up with users of emergency departments, prenatal and well-child visit facilitation, and in-home visits. In addition, they provide health information programs to the community through partnerships with churches and other community-based organizations. The associates are hired (requirements include a high school diploma and preferably community representation) and trained in-house by Health Plus.

Funding

All of the health plans offered by Health Plus are government-funded. For the Medicaid program, a capitated rate comes from the state for each enrollee in their plan. As long as a prescribed set of regulations are followed, this money can be spent however the plan chooses. The executive team at Health Plus has chosen to employ community health education associates to

meet and exceed state Medicaid requirements and demonstrated a commitment to this workforce by expanding the program from a staff of two in 1998 to the current level of 35 associates.

To this point the community health education associates have not been threatened with a loss of funding. However, Margie Bowen, the Director of Health Education and Community Outreach, sensing the need to demonstrate quantifiable benefits to bolster these workers' value in the organization, is moving Health Plus toward better tracking of the outcomes associated with the community health education associates' work.

B. MEDICAID SECTION 1115 WAIVER

Section 1115 waivers can permit states to use federal funds in ways that do not conform to federal standards. They are intended for use in research and demonstration projects that further the objectives of the Medicaid program. Some section 1115 waivers are very broad and others are narrowly drawn, focusing for example on family planning or services for people with HIV.

EXAMPLE

- In 1999, California secured a federal Medicaid “Section 1115 Demonstration Program” waiver to expand services statewide to low-income women and adolescents in need of family planning services. Known as the Family PACT (Planning, Access, Care and Treatment) Program, the number of clients receiving services more than doubled between fiscal years 97/98 and 02/03.³¹ Through Family PACT, the costs of some counseling and technical services (e.g. running a pregnancy test) provided by appropriately trained and supervised health educators, CHWs and *promotoras* can be reimbursed on a per-unit basis (e.g. per test). At the time of writing, an extension had been granted to the program through July 31, 2006.³²

C. ADMINISTRATIVE COSTS

While Medicaid administrative costs are among the lowest of any health care payer in the US, they are significant nonetheless. As of 2005, the federal government matches most state Medicaid administrative expenses at the 50 percent rate but the rate may go as high as 75 percent for some expenses. Administrative costs can include the staffing and operation of state Medicaid offices, cost control activities, improvement of information technology, and activities related to interpreter services. Community based programs may obtain federal administrative match money for outreach and coordination activities.³³

EXAMPLES

- Outreach — **Ingham County (MI) Health Department** relies in part on federal reimbursement for Medicaid outreach to cover the costs of its PITCH (People Improving the Community’s Health) program, which uses teams of community health workers to conduct targeted outreach and help enroll eligible people in health coverage plans, among other things. PITCH contracts with three community-based organizations that serve neighborhoods where the population below the poverty line ranges from 27% to 59%.³⁴
- Interpretation — **Blue Ridge AHEC** employs health care interpreters (who are also bilingual CHWs). The workers’ salaries attributable to interpreting services are paid by providers. Up to 40% of the administrative costs (not the interpreter costs) of providing these services can be reimbursed by Medicaid. The remainder of administrative costs of the program must be covered by other sources.

D. DIRECT REIMBURSEMENT^f

Under a direct reimbursement arrangement, a state Medicaid office would recognize community health workers as billable providers. Generally, requirements would be specific as to the education, training and certification of recognized workers and fee charts would detail allowable reimbursement rates. Provider institutions such as clinics could bill Medicaid for the services CHWs had provided and payment would be made to the institution, which would in turn pay the salaries of the CHWs.

EXAMPLES

- The State of Alaska has recognized community health aides/practitioners as billable providers for Medicaid reimbursement. This arrangement is largely due to the unique situation of the extreme isolation of rural communities and the Native American population in frontier areas that have long relied (since the 1950s) on community health aides to provide health education and care. It is built around numerous contracts and agreements among and between the state government, the federal government, and dozens of tribal authorities. While the details are complex, a Health Resources and Services Administration-prepared summary of the reimbursement model can be reviewed in the sidebar below.

Excerpted from *The Alaska Community Health Aide Program: An Integrative Literature Review and Visions for Future Research* (2003). US Department of Health and Human Services, Health Resources and Services Administration's Office of Rural Health Policy in partnership with the Alaska Center for Rural Health.

The Alaska State Division of Medical Assistance, which operates the State's Medicaid program, began reimbursing tribal organizations for services provided by eligible CHA/Ps beginning in 1998. In order to be eligible for reimbursement, CHA/Ps must meet the following guidelines:

- a) Retain current certification as a level III or IV CHA or CHP by the Community Health Aide Certification Board.
- b) Be employed by the Indian Health Service (IHS) or a tribal organization who is operating a community health aide program under the auspices of a contract or compact with the IHS...
- c) Be supervised by a currently enrolled Medicaid physician who assumes professional responsibility for the services provided by the CHA/P and assures that services are medically necessary.

(continued)

^f Although evidence indicates that the Indiana Office of Medicaid can reimburse community health workers,^{15,35} the authors were unable to confirm that this program is currently active in Indiana.

CHA/P services are billed in a manner similar to other medical professional services. Tribal organizations are authorized to submit a CMW-1500 billing form using the Provider Identification number of the CHA/P's supervising physician, who must be an enrolled Medicaid provider. A list of authorized services is provided within a published CHA/P fee schedule. For each service provided by an eligible CHA/P, the Current Procedural Terminology (CPT) code on the bill must show an appropriate modifier. Separate modifiers are required for services provided by a level III or IV CHA or for services provided by a credentialed CHP. Once submitted, services are generally reimbursed at 85 percent of the physician fee schedule amount, or billed charges, whichever is lower. There are several exceptions to this rule. Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) services, lab services, and supplies not incidental to the visit are reimbursed at 100 percent of the physician fee schedule.

- With the ultimate goal of seeking Medicaid reimbursement but currently funded under a \$500,000 grant from the Robert Wood Johnson Foundation that is administered through the state Medicaid office so that federal matching administrative funds can be drawn down, a program is being piloted at the Tri-County Rural Health Network in Arkansas to demonstrate the cost and clinical effectiveness of using CHWs to help elderly individuals. The CHWs, known as Community Connectors, connect seniors who need long-term care to home and community-based health and social services, helping them avoid institutionalization if they so desire. (see page 48 for more information about the evaluation of this program).³⁶

Medicaid funding: benefits and challenges as sustainable funding sources

Benefits: Once a Medicaid stream of funding is in place, it is relatively stable. CHW program directors can focus on delivering services and evaluating and improving their programs.

Challenges:⁸ Hurdles to expanding or dramatically changing the Medicaid program through a state plan amendment or demonstration waiver to include workers and services not historically covered can be challenging and time-consuming. The requirements for securing a

⁸ We identified only one state (AK) where Medicaid reimburses for CHW services (this unique arrangement took many years to complete and many contracts between federal, state and tribal governments). We spoke with 3 CHW program representatives who have been involved with seeking a way to reimburse CHWs through state Medicaid office (OH, NM, AR). Talks are still ongoing in OH. In NM, after a year of discussion with the state Medicaid office, a CHW program responded to a request from a capitated Medicaid managed care company to contract for services so it would not need state office approval except to approve the billing code (this took several months of negotiation on part of Molina, Inc. with state Medicaid office). In AR, after lengthy talks with state Medicaid office regarding a waiver or state plan amendment, CHW program administrators are using grant money to do a demonstration project, hoping results will help answer state Medicaid office's questions.

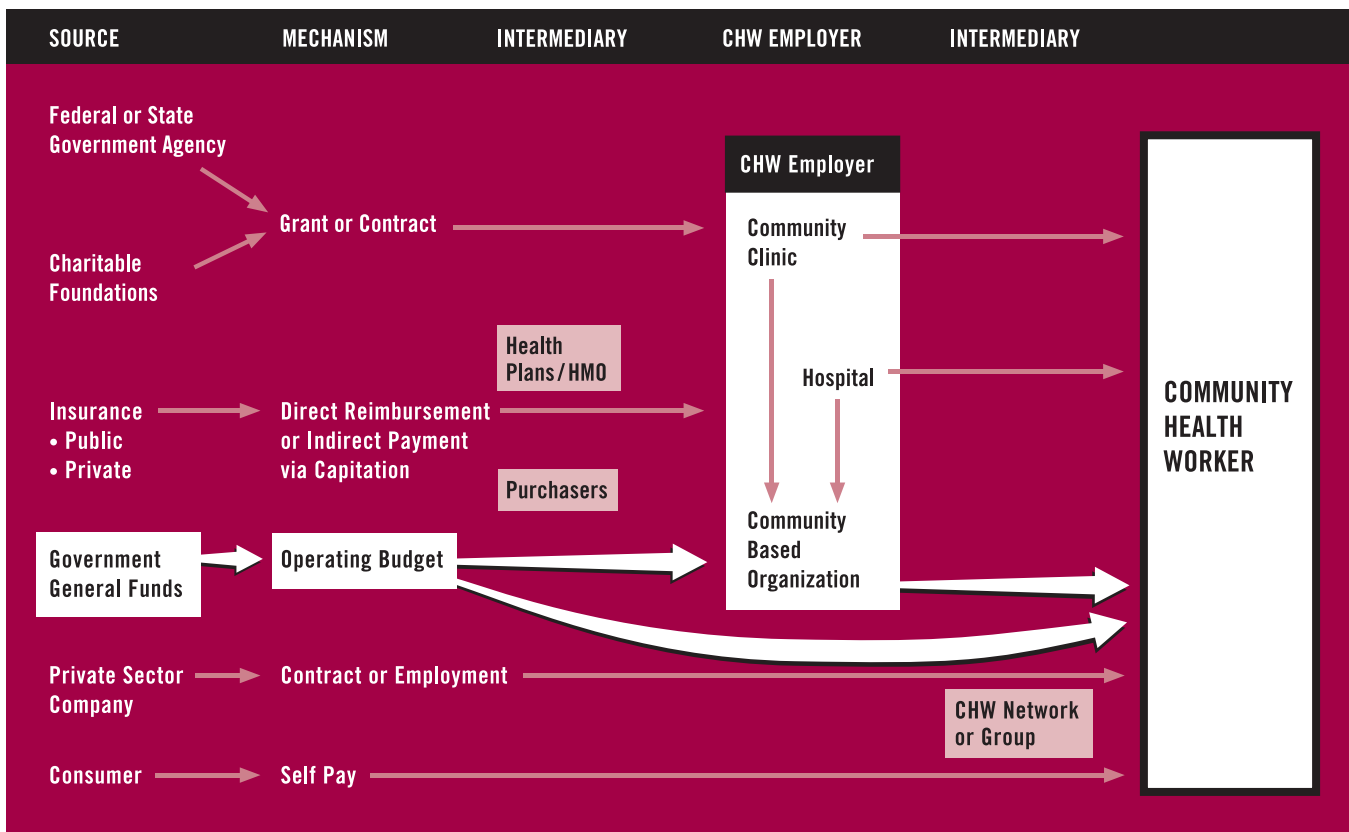
waiver to conduct demonstration projects or amending a state Medicaid program^h usually include, among other things, cost- or budget-neutrality (necessitating solid data on the costs and cost-effectiveness of the CHW intervention or program), and clear descriptions of the services that are to be provided and the workers who will provide those services. Opposition can come from established professions seeing their share of reimbursement potentially reduced. CHW programs that partner with Medicaid managed care organizations may be well-positioned, as they may secure relatively stable funding, assuming they have the capacity to negotiate the contract with the managed care plan and the administrative infrastructure to handle ongoing billing, accounting and reporting requirements. Finally, some individuals interviewed noted that many of the CHW programs in the US serve populations who would not qualify for Medicaid based on income or other criteria, or who are otherwise excluded from the system, such as immigrants without legal US status.

^h The Deficit Reduction Act of 2005 allows states to make some changes to their state Medicaid plans that would have previously required a Section 1115 waiver. States may still have constraints based on their own state laws, however, which vary considerably. For a summary of the relevant state laws, see *Role of State law in limiting Medicaid changes*.³⁷

3 Government general funds

Another potential source of funding for community health workers and the services they provide is federal, state, county or city general funds. In these cases, governmental leaders have ensured that budgets include line item coverage of community health worker positions. These arrangements differ from government agency contracts or grants to organizations as there is no intermediary with the general fund model. The budget clearly makes funding directly available for salaries to the CHWs. Such decisions may be long in the making and usually have necessitated a particular champion to spearhead the move. While the CHW positions may be vulnerable to hiring freezes and extreme budget crises, these arrangements are relatively stable. At the same time, their replicability is hard to predict given the wide range of variability in local political situations.

Funding CHW positions through payments from government general funds



In this model, city, county, state or federal general funds are used to pay the salaries of CHWs, who may be employed directly by the government body, or work for a CBO.

BEST PRACTICE OF CHW PROGRAM SUPPORTED BY GOVERNMENT GENERAL FUNDS

- Fort Worth, Texas — At one time, the City of Fort Worth shared public health responsibilities with Tarrant County. Community health aides had long been part of the public health system. In the late 1990’s, the two entities split their responsibilities, with the county taking over the clinical elements and the city taking charge of public health. Fort Worth has permanently budgeted for 12 CHW positions. An assistant city manager at the time of the split believed strongly in the value of the community health aides that had been working in the city for many years. She was instrumental in making sure that Fort Worth would continue to enjoy the benefits that CHWs were bringing to the city’s public health efforts. See case study below for more information.

Name: FORT WORTH DEPARTMENT OF PUBLIC HEALTH, OUTREACH DIVISION

Location: Fort Worth, Texas

Population served: Residents of the city of Fort Worth, Texas

Website: www.fortworthgov.org/health/OR

The Fort Worth Department of Public Health’s Outreach Division has six neighborhood-based Outreach Teams. Each team has three members: one nurse or social worker team leader and two community health workers. The Outreach Teams work in collaboration with the local

Although the community health worker positions have permanent places in the city budget, the Outreach Division is still subject to citywide hiring freezes and cuts in funding. Over the past four years, budget cuts in the Outreach Division have led to reductions in the printing budget and the elimination of sponsorship for division employees, including community health workers, to attend conferences and to take continuing education courses.

police, and respond to the immediate needs of individuals and the community in real-time. Outreach Team offices are located in local police stations, and police responding to calls will refer non-urgent health or social issues to the Outreach Teams. Team referrals may come from police, fire or code compliance departments or from the community at large. The teams are available to anyone in the city of Fort Worth, regardless of income. However, most of their work is focused on low-income, underserved clients. In addition to responding to referrals, community health workers also deliver health education programs in their assigned areas of the city.

Funding:

Salaries for twelve community health workers have been in the personnel budget for the Department of Public Health since 1997. At that time the public health program changed from a jointly run program between Tarrant County and the city of Fort Worth into separate Departments of Public Health for each. The county maintained control of health clinics, while Fort Worth’s focus shifted to neighborhood based care. As part of the

departmental restructuring, Assistant City Manager Libby Watson sold the idea of neighborhood outreach teams to the City Council, and a permanent place in the budget was made for community health workers.

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In the aftermath of Hurricanes Katrina and Rita in Fall of 2005, neighborhood outreach teams were a vital link between disaster refugees in Fort Worth and city services. City-employed community health workers helped provide much needed services, such as obtaining prescriptions from pharmacies for the victims. “Our response to the hurricanes was a feather in our cap,” notes Barbara Murph, Manager of the Fort Worth Public Health Department’s Outreach Division.

With increased visibility for its work, the Outreach Division hopes to gain support for the expansion of the CHW program to include more targeted outreach focusing on health disparities and to meet the needs of a growing community. However, because new positions must be added to the city’s budget to expand the program, the Outreach Division must once again engage the political process and convince the city’s political leaders that public health services at the community level should be a priority.

ADDITIONAL EXAMPLES

- Kentucky Homeplace—The State of Kentucky, through its Cabinet for Health Services, dedicates about \$2 million annually in general funds to pay for Kentucky Homeplace. Kentucky Homeplace relies substantially on approximately 40 community health workers to deliver services to rural, underserved people in 58 counties. Championed by state Representative Paul Mason, the program was established in 1994 by the Kentucky General Assembly as a demonstration project at the University of Kentucky Center for Excellence in Rural Health. The CHWs, known as Family Healthcare Advisors, are trained community members who provide health information; provide notification of services available; make referrals to agencies or providers; make appointments; speak to agencies or providers on the behalf of clients; and help arrange transportation.³⁸
- San Francisco, CA — San Francisco’s Department of Public Health (DPH), which is run by the City and County of San Francisco, employs community health workers and has created a career ladder for CHWs with positions ranging from Health Worker (HW) I to IV. While the DPH has declined to date to hire at the HWI (extremely inexperienced) or HWIV (place holder position for future jobs) levels, costs for HWII and HWIII positions are permanent features in the city’s budget. In fiscal year 2005–06, approximately 34 FTE Health Worker II and 6 FTE Health Worker III positions were approved. While some positions are generalists, others are specific to a condition such as asthma. See table below for summary information. Over the years, several individuals from community organizations, the Health Commission, the Board of Supervisors and CHW education and training programs played roles in negotiating the budget to include these positions.

San Francisco Department of Public Health — Health Service Career Ladder³⁹

HEALTH WORKER LEVEL	TRAINING/EXPERIENCE*	ESSENTIAL DUTIES	ANNUAL SALARY
I	Completion of 9th grade + 1 yr community health exp	Go through intensive training Registers patients May interpret Makes appointments; visits patients	\$36,200–\$43,900
II	Completion of high school + 1 yr exp as HWI or equivalent	Advises patients re services Liaison between professional staff & community Assists with data collection May interpret & transport	\$40,500–\$49,100
III	Completion of high school + 2 yrs exp as HWII or equivalent.	Supervises lower level HWs Interviews, screens patients Assists in treatment planning May conduct activity groups	\$44,200–53,700
IV	Completion of high school + 2 yrs exp as HWIII or equivalent.	Supervises & trains lower level HWs May supervise program or project component Meets with community reps Interviews, screens patients Provides social counseling activities	\$51,700–\$62,800

* Some specific positions require additional training, experience or competence

- Indian Health Service — Under Title 25 of the US Code, Indian Health Service (IHS) is the Federal health program for American Indians and Alaska Natives. The IHS provides health services to approximately 1.4 million American Indians and Alaska Natives who are members of more than 545 federally recognized tribes in 34 states. One of the programs IHS runs as a component of health care services for American Indian people is the Community Health Representative (CHR) program. It is an “IHS funded, tribally contracted/granted and directed program of well-trained, community-based health care providers, designed to integrate the unique helping of tribal life with the practices of health promotion and disease prevention.” CHRs, which number over 1400 representing over 250 tribes, are defined by IHS as “Indians selected, employed, and supervised by their Tribes and trained by IHS to provide specific health care services at the community level.”⁴⁰ Although IHS may play a role in training some CHRs and in providing minimal centralized standards and information through its headquarters, local offices and website, tribes that have elected to be partially or totally self-governing under the Indian Self-Determination and Education Assistance Act of 1975, have control over their health-related programs and significant control over the training and employment of CHRs and administration of CHR programs on tribal lands.

- Hennepin County, MN — The 2005 Minnesota Community Health Worker Work Force Analysis found that Hennepin County was the largest single employer of CHWs of all the Twin Cities metropolitan area survey respondents, and possibly within the entire state. At the time of the study, Hennepin County employed over 60 CHWs, some at Hennepin County Medical Center (where they were required to have a bachelor's degree), and others through contracts with programs such as the federal Special Supplemental Nutrition Program for Women, Infants and Children (WIC) and Child and Teen Check-Up. While the CHW positions are partially funded by county tax funds, programmatic contracts and grants provide significant funds for the positions.^{19, 41}

Government general funds: benefits and challenges as sustainable funding sources

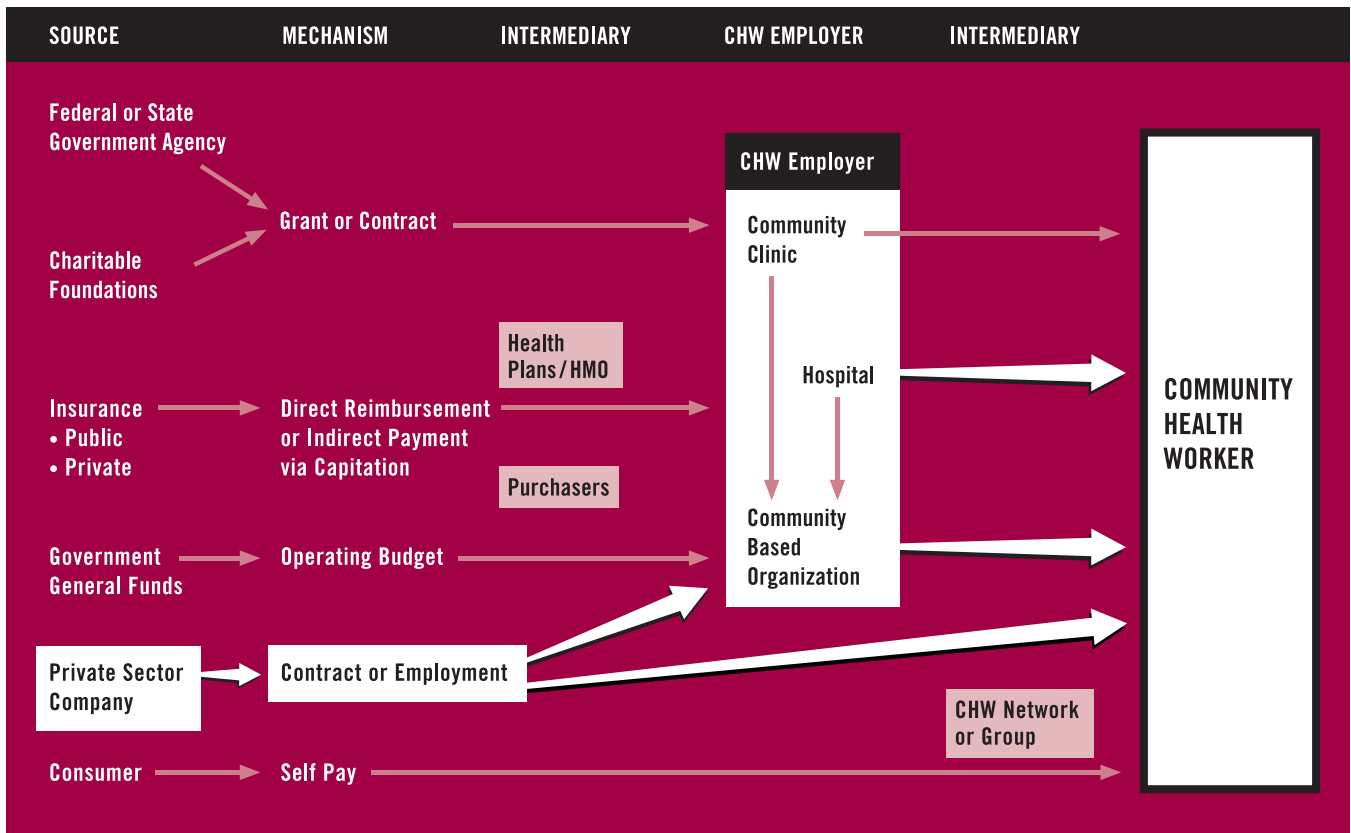
Benefits: Dedicated line items in government budgets can be a very stable source of funding. Unless the government in question faces a budget crisis, the funding stream is reliable. In addition, as with other government programs, there may be data collection and reporting requirements that could provide opportunities for analysis that could lead to improved care and expanded CHW programs.

Challenges: The political challenges and tradeoffs that must be made to secure this type of funding can be high and the timeline for attaining such funding can be very long. In addition, budget crises do happen and, even if the line item may be “permanent”, particular programs may face hiring or wage freezes, that are detrimental to the CHW program. As with Medicaid funding, data collection may be mandated but analytic research studies of the data, which could be used to improve the quality of the CHW services for example, are rarely required.

4 Hospitals, managed care organizations and employers

General operating budgets of organizations such as hospitals, managed care organizations and businesses are yet another source of sustainable CHW financing. Although relatively small in number, at least some of these organizations that have integrated CHWs into their operating budgets have seen dramatic results. Perhaps the prime example here is the potential to save considerably in the hospital emergency department by investing in personnel or technology that can target frequent users to reduce inappropriate emergency department visits.

Funding CHW positions by private sector companies



In this model, non-governmental companies or businesses, including hospitals and managed care companies, may directly employ CHWs, or may contract with CBOs for the services CHWs offer.

Additionally, some managed care companies have employed community health workers to provide health education and promotion that can help prevent costly diseases down the road. Both hospitals and managed care companies may have multiple revenue sources but the entities that use CHWs appear to be paying for them from general operating budgets, or through capitated payment arrangements, because CHW services are not generally billable to Medicaid, Medicare, or insurance plans for reimbursement.

Non-health care businesses seeking to help their employees stay healthy and better understand how to access and use health care services may be yet another source of funding for community health workers. As discussed below, the Blue Ridge Area Health Education Center relies in part on funding from a local employer for its CHW program.

BEST PRACTICE OF CHW PROGRAMS SUPPORTED BY ORGANIZATIONAL OPERATING BUDGETS

- **Christus Spohn Health System, Corpus Christi, Texas / Christus Spohn Hospital Corpus Christi — Memorial** contracted with the Nueces County Hospital District to take over responsibility for providing health services to the city's indigent population. With the contracted amount of money being significantly lower than what would be needed to cover the health care costs of this population based on historical usage rates, the hospital decided to invest heavily in community health workers. One project involved identifying patients with unusually high ER usage rates. CHWs worked with these patients to make sure they were getting appropriate primary care, and ER visits for these particular patients plummeted. See case study on following page for more information.

ADDITIONAL EXAMPLES OF CHW PROGRAMS SUPPORTED BY ORGANIZATIONAL OPERATING BUDGETS

- APS Healthcare Inc., with corporate headquarters in Silver Spring, Maryland, is a for-profit specialty healthcare company offering three product lines — health management, behavioral health and quality improvement — to both commercial and public sector entities. Its Public Sector Division provides care to over 25% of the nation's Medicaid population in 18 states. According to the president of the company's public programs, a large number of consumers, lay workers and community health workers provide many of its services in numerous programs across the states. Some of these are paid positions and others are volunteer. Each of these programs is tailored to fit the needs of the state and the population being served. For example, within the behavioral health focus area of the company, lay workers who have been mental health patients provide a number of peer education and counseling services.
- In Virginia, local poultry industry employers have provided limited funding to the Blue Ridge AHEC to help support the staffing of a booth at a health fair with promotores to help Hispanic employees understand and make better use of the health care system. The AHEC promotores work as volunteers and the business subsidies are not sufficient to fully cover the costs of the program but help defray administrative costs.

Private organizations: benefits and challenges as sustainable funding sources

Benefits: Without the regulatory and bureaucratic requirements associated with government funding options, private sector institutional leaders can often make decisions regarding the implementation or expansion of a CHW program much faster than most of the models explored above. A strong organization in a stable economic environment can be a relatively sustainable source of funding for CHW programs and positions. Depending on the institution, operating requirements may mandate data collection, which could contribute to the body of research on CHWs, particularly if the data were made public.

Challenges: Depending on the organization's location and fiscal strength, CHW jobs and programs in the private sector could be less stable than those funded by grants and contracts, which usually have terms of at least a year or two.

Name: CHRISTUS SPOHN HEALTH SYSTEM

Location: Corpus Christi, TX

Population served: Residents of Corpus Christi, primarily medically indigent individuals

Website: www.christusspohn.org

Community health worker activities at Christus Spohn have been linked to reductions in inappropriate emergency department usage and substantial cost-savings to the health system.

In one striking example, a patient came to the ER all 31 days one January, resulting in \$75,000–\$80,000 in costs for the month. A CHW was assigned to this patient and the next month, the patient came to the ER 6 times, reducing the costs to the hospital to only \$6000 for the month.

Even without such dramatic results, the average savings to the hospital per emergency department patient assigned to a CHW are estimated at \$56,000 over the course of a year.

Christus Spohn Health System is a non-profit, faith-based health care system with several locations throughout South Texas. The community health worker program started at the Christus Spohn Hospital Corpus Christi-Memorial and has since expanded to include three family health centers. Currently, Christus Spohn employs seven community health workers in Corpus Christi. At the hospital, two community health workers are available in the emergency department and two serve the inpatient floors. Their roles include helping eligible patients sign up for the county's indigent care program, attending to patient comfort needs by offering blankets and reading material, and linking patients to family health centers for follow-up care. Additionally, at each of three Christus Spohn family health centers one community health worker is available for health education home visits and to connect recently discharged patients to the clinic. In addition to their location-specific duties, each of the seven community health workers works to connect ten patients, who are identified as having accessed emergency care multiple times for non-urgent needs during the past 90 days, to appropriate primary care services.

(continued)

Funding:

The Christus Spohn Health System employs all of its community health workers on a full-time basis and their salaries are included as part of the operating expenses for the system. The Memorial Hospital campus holds a 30-year contract with Nueces County to administer the county's indigent program for a flat fee of \$24 million per year. However, this provision only covers about 50% of the actual operating costs for the program.

Seeing that a high number of costly emergency department visits occurred during hours when the hospital's affiliated primary care clinics are open, a team from the hospital convened to explore the issue. They found that barriers to appropriate care for many patients could be linked to language needs, apprehension in addressing all of their concerns with a physician, registered nurse, or social worker, and a lack of simple health care system navigation tools. Relying on research indicating the promising work of CHWs elsewhere in the US, Christus Spohn chose to pilot its community health worker program in 2004. With success from both a patient satisfaction and budgetary standpoint, support from hospital leaders led to the inclusion of community health workers in the budget in subsequent years.

Other funding source models

In addition to the four models identified as being in place somewhere in the US, we also heard recommendations from several interviewees about ideas yet to be implemented. These included:

- Medicare — We are unaware of any programs that are securing Medicare funds for CHW services. However, Medicare administrators' interest in exploring cost-effective alternatives to providing care may provide opportunities for CHWs. The Centers for Medicare & Medicaid Services, which administers the Medicare program, has funded pilot programs that rely in part on patient navigators and CHWs to deliver services.^{42, 43}
- Block grants and community development — Commentators and interviewees noted the need for communities to develop capacity to be healthy. State or federal health or community development block grants might well serve this purpose. Under this scenario, communities would decide how best to reach and sustain health while limiting disease. Depending on the community's needs and decisions CHWs may play roles in implementing and reaching the community's goals.^{44, 45}
- Integrating CHWs into homeland security through community preparedness — Funding may come from state or federal funds dedicated to these issues. CHWs may play a role in response and planning and may also play a role in creating cohesive, resilient communities through a strong CHW infrastructure.⁴⁴
- Direct hire by consumers — Consumers may seek to hire and pay directly for community health workers for the unique services they offer. Examples of likely areas of focus include prenatal, labor & delivery care (for example, doulas are being hired for these services) and assisting elderly patients to remain at home by helping them access appropriate health and social services.

Salary and compensation payment models

Although the primary focus of this project's research was on exploring sustainable funding sources for CHW services and positions, inquiry was also made into models and mechanisms for paying the workers. Community health workers in the US range from part-time volunteers to full-time, paid employees with benefits and everything in between. Community health workers are perhaps one of just a few active health worker groups that have significant numbers working as volunteers.

Because this study focused on identifying CHW programs with stable or sustainable funding sources, most of the programs we interviewed employed CHWs and provided them with salaries and benefits. However, some programs relied in part or in whole on volunteer CHWs.

Because third party reimbursement is so rare, we did not identify any CHW programs where salaries for CHWs were dependent on third party reimbursement rates or formulas.

While a full workforce analysis that would include a comprehensive review of the range of salaries, benefits and working conditions for CHWs was beyond the scope of this study, some of the study participants did note the value of attention to how CHWs were paid. Primary among the concerns was the need for stable funding to maintain payment for work done and to maximize retention rates. Although many informants highlighted the high levels of dedication and loyalty CHWs often demonstrate, insecure funding can lead to low employee morale and high turnover. At the same time, several informants noted the extremely valuable role that non-monetary compensation, such as community respect based on completion of a training program, may play in recognizing and retaining CHWs.

BEST PRACTICE EXAMPLE OF INNOVATIVE PAYMENT MODEL

- A unique and promising payment model has been implemented at the Ohio Community Health Access Project (CHAP), where significant portions of CHW salaries are tied to measurable outcomes, including numbers of interventions. All CHWs are paid a base salary. They can earn more on top of this by meeting benchmarks (related to intervention or outcome) in the Pathway guidelines for each condition or disease associated with individual patients. For example, the CHWs at the Mansfield CHAP clinic are paid a base rate of \$10.75 per hour (\$22,360 annually). They may earn up to an additional \$1.00 per hour based on a “productivity scorecard”; the average earned on the productivity scorecard is around \$.75 per hour. The scorecard is broken into four areas: 1) quality; 2) number of home visits; 3) number of active clients (pregnant clients count double); and 4) pathways (outcomes, which are weighted) completed. In addition to their base salaries and hourly productivity scorecard supplements, the CHWs also earn monthly bonuses that are tied to a schedule. The schedule assigns dollar amounts to particular actions, interventions or results. For example, a CHW may earn \$15 when her pregnant client goes to her first prenatal appointment and \$45 for the birth of a healthy baby to the CHW’s client. CHWs average around \$350 in monthly bonuses linked to the schedule. This link between compensation and achieving benchmarks parallels efforts to link CHW interventions generally with improved health outcomes, which is the basis of the CHAP program’s cost effectiveness and clinical effectiveness research agenda. Positive impacts of the CHAP incentive system include increased number of pregnant patients being cared for, improved compliance with quality indicators and better reports regarding progress and performance.

Conclusion: Funding and Financing

Based on the study research about the financing challenge, several key findings relevant to the four models identified are offered.

Elements of “successfully” funded, sustainable CHW programs include having:

- A **mandate or mission** to provide services to a specific or targeted population, with insufficient resources to do so in the traditional manner.
- Identification of a **specific need** for health care or services that was not being met in a particular population or community and a clear articulation of the role CHWs might play in meeting that need. This identification of need and link between the need and the CHW is a key factor in sustainable programs.
- The **big picture** in view and/or responsibility for a population’s, or group of enrollees’ entire health care — Leaders of organizations and systems who can see the bigger picture seem well-positioned to realize the benefits community health workers can offer. The managed health care company responsible for a group of enrollees or a hospital with responsibility for a named population and a limited budget can see the value of relying on CHWs to focus on education, health promotion, disease prevention and appropriate primary care with the goal of preventing high cost problems and high cost medical interventions in the future.
- Individual **champions** who believe in the benefits and value of the CHW — Most of the sites with sustainable funding in place for CHW positions appear to have reached their arrangements through the efforts of a particular individual champion for the work that CHWs do despite the limited data on the clinical or cost effectiveness of CHWs, particularly for the specific role the CHWs would be serving for a specific population. These people did not find it necessary to rely on published, randomized controlled trials to implement a CHW program. From their perspective, CHW programs “made sense” or were the best available option.
- **Outcomes** data indicating positive impact on access, services, costs and/or health status — In some cases, without substantial prior research suggesting future success, CHW programs were initiated as tests or pilots. However, in many cases, the collection and analysis of programmatic data regarding access, health status or costs played major roles in ensuring that the programs would become permanent features in operating or general fund budgets.
- **Targeted training** of CHWs that focuses on the services and populations being served — While the role of standardized CHW education and training continues to be debated, there is little argument over the need for CHW training that is tailored to the particular

tasks, roles and interventions the CHW will be doing on the job. The CHW programs with sustainable funding streams interviewed for this study stressed the importance of training specific to the functions performed and population served.

Potential vulnerability

It can be argued that Community Health Workers may be a workforce vulnerable to exploitation. By most descriptions, this workforce is made up largely of women without college or professional education, who may be foreign-born and/or living in underserved communities. They are not represented by unions or subject to regulation or oversight by regulatory boards. A national association or network of CHWs has yet to be formally convened and only a few states have state associations. Settings that exacerbate or exploit these vulnerabilities in any way could be seen as having a negative impact on the workforce and CHW programs.

The Key Issues

In an analysis of community health worker financing issues, it quickly becomes apparent that there is more to the topic than identifying best practice models and examples, teasing out the technicalities of actually securing funding from a particular source and implementing a model. In the course of research conducted for this report, two key issue areas were identified as relevant to whether and how community health worker programs can be sustained: evaluation and preparation. These issues are introduced here and explored in more detail in the following sections of the report.

KEY ISSUE A: EVALUATION

- Outcomes effectiveness
- Cost effectiveness

For community health workers, the concept of evaluation includes research, data and information on whether what the CHWs are doing is having a positive impact on the people and communities they are serving and whether their work is cost-effective or offers savings compared to services offered by other workers or through other modalities. These two aspects, health outcomes and costs, are closely intertwined and health care decisions may be made by trying to optimize both, by balancing them or compromising on one while pursuing the other.

KEY ISSUE B: PREPARATION

- Education
- Training
- Certification

Nationally, the emerging workforce of community health workers in the US does not have a standard education, training or certification program. Because of this reality, questions arise for employers, insurers, funders, third-party payers and consumers as to the competence of the CHWs and the value of their services. Whether and how academic education, training (internships and on-the-job), and certification can serve as proxies for CHW competence are critical questions with which states are grappling.

KEY ISSUE A: EVALUATION

Making the case for CHWs: Linking evaluation to funding opportunities

Interest in evaluating CHW programs and services can be found in many arenas. CHWs themselves are often looking to assess and improve the services they offer; program directors need to evaluate what is working and what is not; program funders often require evaluation as a condition of a contract or grant; and potential payers and purchasers would often like to see evidence of outcomes before agreeing to pay for a new worker or new service. As noted above, program directors, funders, purchasers and payers are at various points on a continuum regarding how much evaluation and research is required before implementing or continuing a CHW program. Nevertheless, calls from most interested sectors continue for ongoing and expanded efforts to evaluate the impact of CHW programs and services.

To meet these needs, evaluations of various levels of intensity and quality are performed. For example, funded primarily by a grant from the Annie E. Casey Foundation and with cooperation from numerous other organizations and agencies, the University of Arizona Rural Health Office and College of Public Health produced the Community Health Worker Evaluation Tool Kit in 2000.⁴⁶ With the current emphasis on evidence-based medicine in health care generally, more calls have been made to design CHW research as randomized controlled trials, the gold standard in health sciences research today, and researchers have pursued such studies. In some cases, as discussed below, programs have conducted evaluations and are linking outcomes to funding sources and to payment models.

Two aspects of CHW services and programs evaluation are explored in more detail below:

1. Outcomes effectiveness — Does the intervention or service provided by the CHW have any impact on the health care or status (or some other measure) of the individual or community?
2. Cost effectiveness — Is the cost of the intervention or service provided by the CHW outweighed by the economic value or benefit provided to the individual or community? Related to this question is whether the CHW intervention saved the program or the system any money compared to having not done the CHW intervention.

1. Evaluation: the clinical case and intervention-effectiveness research

Advocates of CHWs argue that they can improve the access of the underserved to the health care system and increase healthy behavioral choices, and they seek to establish the role as integral to community-based health care. The outcomes efficacy of CHWs must be demonstrated if health care providers will commit to wide-scale funding of the role.ⁱ

To date, there are relatively few rigorous studies on the outcomes of health care interventions delivered by CHWs. For this research study, we focused on two major reviews of CHW outcomes studies that had already been completed (Nemcek & Sabatier's 2003 summary⁴⁷ of the evaluation literature, which found a "dearth of evaluation literature on CHWs", is not further reviewed here) and then compiled a summary of studies that have been published since these reviews.

Outcomes Research Findings

- Published research on the outcomes effectiveness of CHW interventions is limited and vulnerable to criticism.
- A small number of well-designed RCT studies have found significant, positive impacts of CHW services for very specific interventions in targeted populations.

Lewin, *et al.* published a comprehensive review of the literature on lay health workers (LHW).⁴⁸ A lay health worker was defined as any health worker carrying out functions related to health care delivery; trained in some way in the context of the intervention; and having no formal professional or paraprofessional certificated or degreed tertiary education. Focusing exclusively on randomized controlled trials, this Cochrane Collaboration publication included 43 studies from 14 countries through 2002, with the majority (24) from the United States. All were published in English language journals. Due to the limited number of qualified studies and the wide range of conditions, populations and interventions covered, meta-analysis on outcomes for only five sub-groups was permitted (LHW interventions to promote the uptake of breast cancer screening, immunization and breastfeeding promotion; and to improve diagnosis and treatment for selected infectious diseases), covering a total of 15 studies. Based on their analysis the authors noted that lay health worker

"interventions show promising benefits in promoting the uptake of immunization in children and adults and for improving outcomes for malaria and ARI (acute respiratory infection) in children, ...LHWs also appear promising for breastfeeding and may also reduce mortality in the elderly. They appear to have a small, and probably not

ⁱ To address the research gaps, a major conference is being organized that will bring together CHW advocates, researchers and potential payers of CHW services to discuss what questions need to be answered and how a research agenda should be prioritized and pursued.⁴⁹

clinically relevant, effect for breast cancer screening. For other health issues, evidence of the effectiveness of LHW interventions is so far insufficient to allow recommendations for policy and practice.”

Lewin *et al.* concluded that LHWs could be useful in a variety of settings and for various conditions and patient populations but that significantly more research needed to be conducted. In particular, policy makers, funders and researchers were “encouraged to use rigorous designs in evaluating” programs using LHWs for a range of health issues.⁴⁸

Another look at the research on clinical outcomes of community health workers was published in 2002 by Susan M. Swider.⁵⁰ Her review encompassed the years 1980 through 2002 and included all research in the United States that was listed in a reference database and measured or evaluated the health promotion and disease prevention outcomes of studies utilizing CHWs. Swider identified 19 studies falling into four categories; these are cross-sectional, retrospective, quasi-experimental, and randomized controlled trial studies. Swider also categorized the studies based on CHW roles that were directly tied to the outcome measures. She found that CHWs acted as health educators in 40% of the studies, as case managers in 40%, and as outreach workers in 25%. In one study, roles overlapped these categories.

The primary focus of Swider’s review was on the outcome measures: providing health education, increasing access to care, and decreasing costs of care. She found some positive outcomes associated with CHWs in 79% of the studies she reviewed, and concluded that their effectiveness was best shown in increasing access to care (including appropriate use of services), in part because most work was in this area. She found that CHW effectiveness as health educators and their cost-effectiveness were less well-supported. Few studies measured the effectiveness of CHWs as health educators, and only two studies measured the cost-effectiveness of CHWs.

CHWs need a Standard Occupational Classification Code

Among the research challenges associated with CHWs is the lack of a Standard Occupational Classification code. The US Bureau of Labor Statistics (BLS) tracks the various professions in the US to estimate workforce growth, anticipated demand, and changes in supply. To date, community health workers have not been assigned a code. Requirements for a new code include a common definition of the workforce in question and identification of the uniqueness of that group. The CHW workforce is hindered on both these elements. There is not a common, national definition of CHWs. *Moreover, it is very hard to articulate what is unique about CHWs.* Their tasks and responsibilities can be performed by other workers and professionals. One aspect that might be considered unique is their connection to the community; however, this characteristic is itself hard to define, is not required of all CHWs and is also a
(continued)

common characteristic among some members of other professions (i.e. some case managers, social workers, and nurses come from the communities they serve). At least one written request has been made to BLS to assign a code to CHWs so that better workforce data can be collected. So far, no action has been taken on this request. Members of the CHW community and interested stakeholders can respond to the Notice in the Federal Register regarding codes.⁵¹ However, without agreement in the CHW community on the definition of the workforce and an articulation of what CHWs do that is different from other professions, securing an SOC code may continue to elude this workforce.⁵²

Swider concluded that while the CHW model had promise for improving community health, there were several weaknesses in the research that needed to be addressed. First, there was an overall lack of published studies, in particular of clinical trials with randomly selected participants and random assignment to intervention or control groups. She also noted that then-existing studies tended to have high attrition, lack of standardized measures, overuse of self-reported data, and poorly defined interventions that would be difficult to replicate.

Swider recommended doing research on the specific content and process of CHW interventions to find out in what types of interventions they have the most effectiveness. Further, she noted that the best way to evaluate the effectiveness of CHWs would be to compare the effects of a single intervention model as delivered by both CHWs and other types of health care workers. Such comparisons could evaluate both the outcomes efficacy and cost-effectiveness of using CHWs.

Since Swider's review, several studies have been published on the clinical effectiveness of community health workers. The increase in number of published randomized controlled trials (RCT) permitted focus on these exclusively. A total of seven RCT studies published from 2002 to 2005 were reviewed during the course of this research project. These seven studies used CHWs primarily as health educators to teach and promote the use of disease prevention or management strategies, and as outreach workers. The studies, which are organized loosely by strength of design and their contribution to the science on CHW effectiveness, are discussed below and summarized in the table on page 44. More detailed descriptions of these studies and our inclusion criteria are included in Appendix C of this document.

These studies show that several of the concerns raised by Swider have been addressed in more recent research. Each was conducted at a higher level of rigor than most prior research in the field. Some gave details on CHW interventions; others supplemented standardized measures with self-reported outcomes. Not all studies had statistically significant outcomes, but several demonstrated that CHWs can effectively deliver health interventions to improve both health-related behaviors and clinical measures among minority groups.

BEST PRACTICE OF RESEARCH DESIGN

- Gary, Bone *et al.*'s 2003 study used a randomized, controlled trial design and set up multiple intervention arms that provided the researchers with the ability to compare CHW interventions with interventions done by other health care professionals or teams.⁵³

The distinct strength of one study (Gary, 2003) is its ability to make direct comparisons between types of diabetes management interventions in a randomized controlled trial. One intervention was delivered by a CHW and another by a nurse case manager (NCM). A third arm of the study featured both the CHW and NCM interventions. A control group receiving usual medical care only was also included.⁵³ While unadjusted between-group differences did not reach statistical significance, the combined NCM/CHW group had a statistically significant decline in blood glucose from baseline. After adjusting for baseline levels and follow-up time, the NCM/CHW interventions show significant declines in diastolic blood pressure and triglycerides. Both the CHW and the NCM/CHW interventions produced within group statistically significant increases in physical activity over baseline. The authors concluded that the combined NCM/CHW interventions produced greater effects than the NCM or CHW intervention alone and, surprisingly, the NCM and CHW individual groups produced similar effects.

Levine's 2003 hypertension study that examined the impact of two levels of intervention (one home visit vs. six home visits over 30 months) by CHWs had unexpected results.⁵⁴ Outcomes in this study were blood pressure and the percentage of participants with controlled blood pressure. The researchers found statistically significant decreases in blood pressure and increases in blood pressure control from baseline for both levels of intervention, concluding that CHWs can enhance the control of high blood pressure in the targeted population. The unexpected finding was that between-group differences (one visit compared to six visits) at study completion were not statistically significant. That is, patients receiving one CHW home visit and those receiving as many as six visits did equally well in achieving significant blood pressure control over a 40 month period.

Hunter's 2004 study (Hunter, 2004) used promotoras to increase compliance with routine disease prevention.⁵⁵ Participants receiving a promotora visit after an initial comprehensive screening exam were re-screened at a 35% higher rate than women receiving a postcard reminder only. Researchers concluded that use of promotoras is an effective strategy for increasing compliance with routine disease prevention.

A study of a smoking cessation intervention delivered by promotoras demonstrates that promotoras can successfully facilitate at least short-term abstinence from smoking.⁵⁶ Validated past week abstinence rates, as measured by a carbon monoxide breath test and self-report, were the study's outcome measures. Abstinence rates were two times higher for the intervention group versus the control group, a finding repeated in the self-report measure.

Krieger's 2005 study of household asthma triggers demonstrates that CHWs can provide effective education on reducing severe asthma symptoms.⁵⁷ However, households in the intervention arm of this study received greater physical resources, such as low-emission vacuums, in addition to CHW education, which may have made an independent contribution to their outcomes.

Two studies reviewed for this paper did not provide evidence for the effectiveness of CHWs. An intervention (Conway, 2004) to reduce children's exposure to environmental tobacco smoke used reduction strategies developed by the participants and CHWs.⁵⁸ This design element could be the weakness that accounts for the study's lack of statistically significant outcomes because the strategies might have been inadequate regardless of the type of health care worker used to deliver the intervention.

Finally, Hill's 2003 hypertension study, featuring a nurse practitioner/physician/CHW team, found statistically significant improvements in blood pressure control and heart damage among patients receiving the team intervention. However, the CHW effects are difficult to evaluate because the nurse practitioner had more patient contact and gave patients free medication, and CHW visits were not described.⁵⁹

Overall, recent research on CHW outcomes has provided some positive but limited evidence that CHWs can effectively deliver health care education, promote healthy behaviors and compliance with disease management and prevention strategies, and even have an influence on clinical outcomes. Research into CHW outcomes could continue to improve methodologically by clearly specifying the content of CHW interventions (in many cases, it still is not clear what the CHWs are doing and not doing), controlling for confounding factors that make the relative contributions of CHWs to overall interventions difficult to measure, and by designing protocols that compare interventions as delivered by CHWs versus other types of workers to make informed decisions about the quality and cost of care.

The challenges to conducting more CHW research are many and include the following:

- There is no CHW research agenda;
- Funding sources for randomized controlled trials of CHW services are limited;
- The CHW workforce is at the very early stages of defining and organizing itself;
- CHW roles and training experience vary making research extremely specific to one case at a time;
- Findings are hard to replicate or transfer to other settings; and
- CHWs are not usually affiliated with academic institutions that tie tenure, positions and salaries to publication, and therefore have little incentive to conduct academic level research.

Summary of CHW intervention outcomes studies U.S. 2002-2005

AUTHORS & PUB. DATES	INTERVENTION	STUDY PARTICIPANTS	RESEARCH DESIGN	# CHW CONTACTS	OUTCOME MEASURES	FINDINGS
Conway, et al 2004	Reduction in child environmental tobacco smoke exposure	143 Latino parent-child pairs	2-arm: intervention versus assessment only	6 home visits or telephone contacts over 12 months	Parent self-report, child hair samples (nicotine, cotinine), % confirmed reducers	No significant condition-by-time interactions; ineffective intervention
Gary, et al 2003	Diabetes management	186 urban African-Americans	4-arm: usual care, NCM, CHW, NCM/CHW	3 or more home visits annually for 2 years*	Diabetic control, diet, physical activity	NCM/CHW group: significant decline in blood glucose and increase in activity from baseline; significantly lower BP compared to controls
Hill, et al 2003	Hypertension control	309 urban African-American men	2 arm: NP/CHW/MD intervention v. resource referral	1 or more home visits annually for 3 years	BP control, degree of heart damage, degree of kidney damage	NP/CHW/MD intervention group: Significant decline in BP and decreased progression of heart damage from baseline
Hunter, et al 2004	Compliance with routine preventive care	456 Hispanic women	2 arm: follow up visit versus postcard reminder	1 follow up to comprehensive exam	Percent of women who received 2nd annual exam	35% higher re-screening among intervention group
Krieger, et al 2005	Reduction in household asthma triggers	274 low-income households with pediatric asthma case	2 arm: high-intensity v. low-intensity intervention	High intensity: 7 home visits over 12 months; low intensity: 1 visit	QoL score, asthma symptom days, asthma-related urgent health services use	Significant increase in QoL score; decrease in asthma-related urgent care use in high intensity intervention group
Levine, et al 2003	Hypertension control	789 African-Americans	2-arm: 1 versus 6 educational home visits	6 home visits over 30 months	Blood pressure, percent with controlled blood pressure	Significant decline in BP from baseline in both arms; no significant between-group difference
Woodruff, et al 2002	Smoking cessation	313 Latino smokers	2 arm: home visits v. referral to Spanish-language smokers' helpline	4 home visits and 3 phone calls over 78 days	Validated and self-report past-week abstinence rates	Significant between-group difference: abstinence 2+ times higher among intervention group

*Mid-point of 4 year study

2. Evaluation: the business case and cost-effectiveness research

The other aspect of evaluation linked to funding is research about cost effectiveness and cost savings. Leaders in the community health worker field note the need to conduct thorough and robust economic evaluations of CHW programs as a prerequisite to securing sustainable funding.^j Improved quality of and access to care continue to be of importance in all areas of health care delivery and policy. However, CHW program directors, advocates, and potential payers note that in a health care system where financial concerns are at the forefront, offering proof of organizational cost-savings as a result of CHW programs will be essential to establishing and maintaining funding in the long-term. CHWs may also offer unique and valuable benefits, not offered by other providers, which the health care system should explore. Where the goals of improved health outcomes and cost-savings align, the likelihood of securing long-term funding may increase.

The general consensus among those working with CHWs is that the value of CHW services is far greater than the cost of providing those services. Unfortunately, very few studies have been published with evidence to demonstrate cost-effectiveness and those that have been published have reported mixed results. When Swider conducted her literature review of CHW outcome effectiveness research in 2002, she found only two studies that measured cost outcomes. Neither of these studies found CHWs to be less costly although study researchers and the reviewer noted various challenges, including definitions and sample sizes, to accurately reflect the cost-savings CHWs actually might be providing. The Cochrane international review of research regarding lay health workers^k identified four studies reporting any cost data and all of them had limitations. The authors note that “LHWs could ... potentially reduce the costs of health care if substituted for professionals, by providing care at a level closer to consumers, but evidence for this is currently lacking.”⁴⁸

Cost Effectiveness Findings

- Generally, published research on the cost effectiveness of CHW interventions is very limited, has design flaws, and is ambivalent at best.
- One recently published, well-designed study describes a positive return-on-investment for a primary health care safety net as a result of CHW contact with a targeted population.
- Numerous programs and evaluations have found some evidence of cost savings from CHW interventions.

^j For example, Medicaid administrators usually place cost containment as a high priority and require new programs, waivers and demonstration projects to show that they will be at least cost neutral and preferably capable of demonstrating cost savings.⁶⁰

^k For purposes of the Cochrane review, a “lay health worker” was defined as any health worker carrying out functions related to health care delivery, trained in some way in the context of the intervention, and having no formal professional or paraprofessional certificated or degreed tertiary education.

Determining CHW cost-effectiveness:

- What outcomes do the community and health care organizations value?
- Can CHWs have a positive impact on those outcomes?
- Can other means be used to arrive at those outcomes (other health professions, methodology, technology)? What are the opportunity costs (not using social workers or public health nurses for example)?
- What is the cost of implementing each method?
- Which method is the most cost-effective for the outcome produced?
- How much are the community, health care organizations, or other potential funders willing to pay for the outcomes?
- Where do CHWs lie in this spectrum?

Acknowledging these research realities, the authors collected recently published studies and qualitative interview data to outline the areas where CHW services might have the greatest impact on health care costs.

Reducing costs

The literature review and interviews indicate that, by the very nature of their services and approach to care, the potential for cost savings and cost-effectiveness of CHWs lies primarily in their capacity to save on expensive future costs by investing in early interventions such as:

A. Improving appropriate access to and usage of health care services

B. Promoting healthy behavior; preventing disease

C. Managing diseases and chronic conditions

D. Helping organizations comply with care mandates

A. Improving appropriate access to and usage of health care services

CHWs have long been promoted as having the capacity to improve access to care and appropriate usage of care. Such competency can include a wide range of activities from finding a provider who speaks the patient's language to helping someone fill out insurance application forms. It also includes activities that lead relatively quickly to impressive cost savings: reducing inappropriate emergency department visits, averting inpatient hospital use, and delaying the movement of elderly persons from their homes to long term care facilities.

CHW programs that encourage a shift away from inappropriate emergency department use and towards health clinic use have had considerable success in showing significant cost-savings for health systems. Because a reduction in emergency department (ED) visits can be observed almost immediately once CHWs educate their clients on the appropriate use of the health care system, it is relatively easy to link the action of CHWs with a reduction in costs to hospitals. For example, Christus Spohn Health System in Corpus Christi, TX,

hired community health workers to perform targeted interventions with frequent users of the emergency department. The CHWs' focus was to ensure that the individuals made appropriate use of their primary care provider or clinic. After starting the program, the hospital has seen significant reductions in emergency department usage by those individuals and dramatic cost savings.^{61,1}

BEST PRACTICE OF RESEARCH DESIGN

- In Denver, CO, Whitley *et al.*, (2006), used a well-designed study to compare health care costs prior to a CHW intervention for individuals in the study group with costs incurred after the intervention and found significant cost savings and a return on investment.⁶²

The most robust analyses account for not only a reduction in ED visits but also any changes in primary care access, including the intervention's effect on the whole health care system. The Men's Health Initiative in Denver reported the effect of a CHW program on the use of various health access points by its clients and the costs associated with those shifts.⁶² Whitley *et al.* describe a positive return-on-investment for Denver's primary health care safety net (Denver Health) as a result of CHW contact with underserved adult men. Utilizing an integrated information system, the CHW program was able to track changes in health service use by individuals they targeted. Comparing the nine months prior to CHW contact with the nine months after CHW contact, the total number of primary care, urgent care, behavioral health, medical specialty, and dental visits increased, and the total number of inpatient visits decreased (pre-intervention: 219 visits; post-intervention: 165 visits). Although health care access instances by clients increased after the CHW intervention (pre-intervention: 5211 visits; post-intervention: 6630 visits), the cost-savings associated with decreased inpatient visits exceeded the additional cost of other types of visits. In addition, the gross cost-savings also exceeded the cost of administering and running the CHW program resulting in a return on investment of 2.28:1.00. The authors attribute the shifts in health care usage to "CHWs assisting clients with establishing a medical home, selecting a primary care provider, system navigation, and case management."

To the extent that non-clinical services provided by CHWs can result in positive clinical outcomes, the value of placing CHWs in these roles can be high. This is especially true when a shortage of workers, such as nurses, may prevent the outcomes from being achieved otherwise.

¹ Rather than using CHWs for the task, the Community Access Program for Central New Mexico has redirected some low-acuity patients away from emergency departments by implementing an integrated technology system between New Mexico hospitals and health care clinics, providing patients who come to the emergency department with a printout of a health clinic near their home and setting up an appointment for the patient at the designated site. They have seen an increase in the number of patients who choose a local health clinic over the ED for primary care.⁶³ While CHW advocates may point to significant differences between CHWs and technology fixes in addressing connections among language access, understanding the health care system and ability to follow through without additional assistance, we are unaware of any studies comparing costs and clinical outcomes of the two approaches (CHW vs. technological intervention) to reducing inappropriate ED usage.

The hypothesis of one demonstration project currently underway is that CHW interventions will result in significant savings to a state Medicaid program by helping individuals stay safely in their homes a little longer before moving into long term care facilities.^m In a program being evaluated by researchers at the University of Arkansas Medical Sciences, College of Public Health, CHWs known as Community Connectors help elderly individuals navigate the social and health care systems to better access home and community services that will meet their needs while staying in their homes and avoiding entering long term care facilities. As was found in a pilot project that preceded this demonstration, keeping even a few individuals out of long term care facilities for a few months can result in significant savings to the state Medicaid program, which is coming under increasing financial pressure to meet the needs of enrollees.⁶⁴

B. Promoting healthy behavior; preventing illness and disease

Health promotion activities of CHWs, like other health care professionals, are often the most difficult to link to health outcomes or financial outcomes, as the time to onset of disease can be years in the future and many confounding factors may be present. One of the exceptions

To our knowledge, no studies have been published comparing the costs of CHW interventions with interventions by other health professionals. Since many health promotion programs are focused on achieving lifestyle changes for their clients, a CHW with a strong understanding of a community's culture may be especially adept at recognizing points where changes can be made that build on accepted cultural norms and adopt existing cultural practices.

may be prenatal care, which due to its easy linkage to newborn health, may be one of the easiest interventions to link to health outcomes. Some programs focusing on prenatal care have demonstrated fewer instances of low-birthweight among babies born to their clients. Since low-birthweight babies often require extended hospital stays and intensive clinical care, the programs can claim cost-savings.

In Ohio, the Community Health Access Project (CHAP) serves three Ohio counties, two urban and one rural. The program uses specific geomapping of health outcomes to identify areas with the greatest need for positive outcomes. Over 2000 African American, Appalachian, and Amish

people are receiving care coordination at CHAP urban and rural sites as of 2006. The program has seen success in reducing low birth weight (LBW) rates by linking CHW activities to the production of health outcomes using an accountability model they term "Pathways". CHAP clients enter the "Pregnancy Pathway" if they are confirmed to be

^m This demonstration project is being funded by a grant from the Robert Wood Johnson Foundation to the State of Arkansas Medicaid office contingent on an agreement that the funds go directly to the Tri-County Rural Health Network, which is the community based organization employing the Community Connectors and administering the program. This arrangement allows for matching Federal Medicaid funds to be drawn down for the project and at least temporarily moves the project ahead after other options such as securing a Medicaid waiver or state plan amendment were unsuccessfully explored at length.

pregnant by a pregnancy test. CHW case managers then perform a series of activities aimed at getting clients to attend prenatal visits regularly, seeking solutions to barriers to accessing care along the way. The goal, or intended health outcome in this Pathway is the delivery of a healthy baby weighing greater than 2500 grams. CHW success is tied to the positive achievement of these outcomes. In a census tract where a review of birth certificates from a five year period showed the rate of LBW to be at 24%, actual data from CHAP clients showed a decline from 22.7% of babies born at LBW in 1999 to 8% in 2002. Using cost estimates that LBW babies require on average \$18,000 worth of hospital costs in the first year, CHAP claims their efforts have likely resulted in cost-savings to hospitals, public and private insurers, and other payers. Although these results are not from a randomized, controlled study, the evaluation offers valuable information and CHAP is currently in the process of conducting more explicit cost analyses.

C. Disease management

CHW management of diseases and chronic conditions such as asthma or hypertension may also lead to reduced need for costly health services in the future by limiting the development of conditions into more acute problems. For example, some CHW programs have shown a reduction in the use of urgent care services as a result of getting patients to follow treatment protocol for their disease, limiting the likelihood it will escalate into a more serious condition.

In a retrospective study by Fedder *et al.*, emergency room visits and hospitalizations decreased in 117 African-American Medicaid patients with diabetes after an intervention using volunteer CHWs in West Baltimore City. Patients included in the intervention cohort were contacted by telephone or received an in-home visit from a CHW an average of 18.2 times over the course of one year. CHWs offered social support and performed case management roles, including helping patients set up appointments and monitoring for appropriate self-care behaviors and for complications related to diabetes. The study compared emergency room visits, hospitalizations, and length of stay in a hospital between the one-year period before and after first contact with a CHW. The number of ER visits declined by 40% and the number of hospitalizations declined by 33%, yielding an average cost-savings per patient of \$2245. Limited information is provided about the costs of administering this program that used volunteer CHWs.⁶⁵

D. Legislative or regulatory compliance

Finally, organizations may seek to reduce costs related to complying with legislative or regulatory mandates by using CHWs. Federal, state, and local laws may mandate that health care organizations provide a prescribed set of services to their clients. For those services that are not tied to a particular profession, and which CHWs could reasonably perform, health care

organizations may decide to use CHWs to meet the requirements. Examples include using bilingual CHWs for legally required interpretive services or using CHWs to conduct required Medicaid outreach activities. Whether using CHWs is the most cost-effective method has, in most cases, not been determined.

Health care organizations that are recipients of federal funds are required to provide language services to limited English proficient (LEP) individuals under Title VI of the Civil Rights Act of 1964. While federal law does not require the use of certified interpreters, it does indicate

CHW services may also be linked to increased revenue for organizations. Government entities and employers of targeted communities may benefit from increased productivity of their constituents and employees, respectively, related to health promotion activities by CHWs. Additionally, Medicaid managed-care organizations have used CHWs to enroll new participants, thereby increasing the number of enrollees they have when determining the capitated payment they receive from Medicaid.

that those who interpret should be competent to do so with quality and accuracy. Various state and local laws and regulations may also mandate that services be provided to patients in languages they can understand. Health care organizations have many options when it comes to providing interpretation and may choose to have bilingual CHWs provide this service.ⁿ

For example, the Blue Ridge AHEC contracts with a local hospital to provide interpretation service by CHWs who are also fully trained interpreters. When promoting the use of these CHWs, AHEC notes that one hour of in-person interpreter time costs less than ten minutes of a private telephonic interpretation service. The use of trained interpreters also has been shown to result in improved patient satisfaction when compared to use of telephone interpretation, and CHWs serving in this role may wish to emphasize this as an additional benefit to their service.⁶⁶

Acknowledging that it may cost additional money now to save money later, more research into the cost-effectiveness of CHW services would be a helpful addition.

ⁿ The authors note that health care interpreters comprise an emerging profession that is working towards standards in education and competence itself. Medical interpretation requires knowledge of an extensive set of technical terms, interpretation competence, and a high level of understanding of the ethical issues at stake; not all CHWs may be qualified to perform this service.

KEY ISSUE B: PREPARATION

Education, Training and Credentialing: The benefits and challenges of standards

After evaluation, the other key issue linked to sustainable financing for community health workers is whether to move toward standard education, training and certification programs. This topic becomes particularly important in discussions of third party payment or reimbursement. Usually government programs and insurers will require some evidence that an individual seeking payment for services has demonstrated to a credible entity that he or she possesses the competencies to provide those services.

A comprehensive 2004 study, funded by the Office of Rural Health Policy in the Health Resources and Services Administration, US Department of Health and Human Services and conducted by researchers at the Southwest Rural Health Research Center (SRHRC) at Texas A&M University, identified three major trends related to implementing CHW training and certification:¹⁵

1. Community college based training provides academic credit and career advancement opportunities through formal education;
2. On-the-job training is offered to improve the capacities of CHWs and enhance their standards of practice; and
3. Certification at the state level recognizes and legitimizes the work of CHWs, and opens up potential reimbursement opportunities for CHW services.

Training program components may be determined by employer needs, educational institutions' requirements, or government mandates. When CHW training occurs primarily at the employer level in a region it may, depending on the employer, be comprehensive and multi-faceted, or it may confer only the skills required to complete a single project. In regions where community colleges and other training centers design and provide training to CHWs, the goal is to offer programs that meet the needs of many CHW employers and that provide opportunities for CHWs to develop skills to further their careers. Individual employers continue to provide on-the-job training to align new CHWs with their organizational needs.

Efforts to standardize training for all CHWs in a particular region or state through persuasion or legislation are an attempt to create a common, transferable knowledge base that all CHWs who have gone through the training will share. Such training allows employers the

Certification Findings

- Three states (AK, TX, OH) have active CHW certification programs.
- Among this study's informants and in the published literature, there is no national consensus on whether CHWs should be certified.
- Many respondents see a link between certification and the likelihood of third party reimbursement.
- Certification could improve future standardized research of CHW outcomes- and cost-effectiveness but may limit the applicability of prior research.
- CHWs have roles to play in development of certification programs.

knowledge that a job candidate has a basic level of qualification, and it allows individual CHWs to develop skills that can transfer between several types of CHW positions for a variety of employers. Ideally, regionally standardized training will take into account best practices shared by employer training programs, educational institutions, and CHWs themselves.

The SRHRC researchers found that 17 states and regions have some form of state-sponsored or supported training or certification for CHWs. Most of these are training programs that specialize in a particular social or health problem. However, others are more comprehensive, such as Community Health Works, a partnership of San Francisco State University and City College of San Francisco, which has developed and refined its CHW curriculum over more than two decades of work in the area of CHW training.⁶⁷ Other partnerships between college systems, communities, and employers have emerged more recently, including Minnesota's Health Education Industry Partnership, profiled on the following page, which has come into being since the SRHRC national survey of training programs.

Most state-sponsored or supported programs provide standardized training for CHWs either regionally or statewide, but are not accompanied by state-conferred certification. However, the SRHRC researchers identified three states (Alaska, Indiana and Texas) as having systematic, state-sponsored certification programs. In updating this research, we were unable to confirm that Indiana's program is currently active.^o We also note that Ohio, which was moving toward certification at the time of the SRHRC national survey, has since implemented a voluntary certification program for CHWs.

The three active, state CHW certification programs in Alaska, Ohio, and Texas (summarized in the table at the end of this section) are distinct in their development and implementation. Certification in Alaska is especially unique as a federal program intended to reach rural Alaska Native populations and has developed over a period of decades. Although the Alaska CHA/P program has by many accounts proven successful, its generalizability to other locales and situations is limited. Elsewhere, the movement to certify CHWs at the state level is a recent development and essentially began in 1999 with the passage in Texas of HB 1864. Ohio's version of CHW certification passed through the Ohio Legislature in 2003. While both certification programs now have fully developed sets of regulations, certification is still being rolled out in each state, and it may be several more years before the full impact of their passage can be assessed.^p A timeline of certification events, as well as certification data for Texas as of May 31, 2006 are summarized in Appendix D.

^o Evidence indicates that Indiana has a state certification program for CHWs.^{15,35} However, interviews with key informants in Indiana (Medicaid office; Executive Director of the National Association of Social Workers, Indiana Branch—which certifies care coordinators eligible for Medicaid reimbursement)—could not confirm an active CHW certification program in Indiana.

^p Interviews with individuals involved in the CHW certification movement and M.L. May's unpublished manuscript, Final Report (DRAFT): Certification of Community Health Workers: A Texas Case Study, contributed significantly to our understanding of certification in Texas and Ohio.⁶⁸

Although certification in Texas and Ohio has taken distinctly different forms, the two states' programs share several factors in common. Certification, as implemented in Texas and Ohio, includes some form of standardized training, designates a board or committee to establish and recommend changes to regulations, and applies the same set of standards to all certified CHWs in the state. Also, as state-enacted certification, legislative support and approval is required for initial passage of and any significant changes to the law.

The movement toward standardization of CHW training has gained momentum in recent years, with curricular decisions made centrally and training opportunities concentrated at community colleges and designated training centers. While touted by some to bring greater job opportunities to CHWs by assuring employers and insurers that CHWs have a common foundational skill and knowledge set, this shift beyond employer, program-specific, and community-based training to a broader, uniform approach to CHW education might create challenges for CHWs. For instance, some people feel that a risk exists in the burden of cost shifting from employers to individual CHWs, who traditionally come from socioeconomically disadvantaged backgrounds. Costs in both time and money may be enough to keep otherwise qualified individuals from choosing to serve their communities as CHWs. In addition, the institutionalization of training may unintentionally alter the perspective of trained CHWs, either due to the training itself or via self-selection, such that health care system concerns are emphasized over those of the community.

Name: MINNESOTA HEALTH EDUCATION INDUSTRY PARTNERSHIP, CHW PROJECT

Location: Minnesota

Website: http://www.heip.org/community_health_worker.htm

In Minnesota, efforts to create a uniform knowledge base for CHWs are under way through the Healthcare Education Industry Partnership's (HEIP) CHW Project. HEIP, an affiliate of the Minnesota State Colleges and Universities (MnSCU) system, has embarked on establishing a standardized training curriculum for community health workers in the state. A grant from the Blue Cross and Blue Shield of Minnesota Foundation was the catalyst for the Minnesota CHW Project, which has built a statewide partnership and attracted a broad funding base to complete the implementation of the curriculum and address CHW workforce issues, including sustainable financing.

This eleven-credit curriculum was piloted at two MnSCU community college campuses in the spring and summer of 2005: one urban site and one rural site. It has since rolled out to six campuses including at least one non-MnSCU trade/vocational school. As of July 2006, 126 students have graduated from programs using the HEIP CHW curriculum.

(continued)

The basic CHW curriculum, developed by the CHW Project Advisory Committee in partnership with Dr. Sue Roe of the University of Arizona, consists of six courses and a culminating internship, at the completion of which individuals earn a CHW certificate. The curriculum offers generalist training for a broad range of CHW positions. The CHW Project is also developing specialty training tracks in cancer, heart disease/stroke, and oral health and plans to develop tracks in addiction/mental health, diabetes and obesity, maternal/child health and elder care.

In addition to providing students with the tools to be an effective community health worker, the program is designed to be a stepping-stone to other healthcare professions. It articulates with other post-secondary health occupations training to promote an educational pathway for career growth, help reduce shortages in other key disciplines, and increase the cultural competence and diversity of the health care workforce. Students wishing to enter the program must be proficient in English and have either a high school diploma or a GED. At community college sites, prospective students must also take a placement test and score within a designated range to be allowed in the program.

The Minnesota CHW Project, in addition to creating a standard definition and training curriculum, is tasked to advocate for CHWs as a profession. The group hopes to standardize the CHW knowledge base through the common curriculum, legitimize the CHW role to other health professionals, and increase the community's awareness of CHWs. The focus on the advancement of CHWs as a whole is based on the belief that by including CHWs as part of the health care system, the health care workforce will see more diversity, patient-provider trust will be enhanced, and patients will be better able to navigate the health care system. Ultimately, the members of the CHW Project hope that a well-trained, well-utilized workforce of CHWs will lead to fewer health disparities for disadvantaged groups in Minnesota.

Conclusion: Lack of national consensus regarding certification and standardized education

In our own interviews, we did not hear national consensus on whether CHWs should be trained to a standard curriculum or required to be certified to work; strong voices were heard from both ends of the continuum and everywhere in between. While we spoke with only a very limited sample that was comprised primarily of CHW program directors, but also included third-party payers, we expect that this is true across the larger field. While some think that CHWs must move toward standard education and certification, others feel strongly that CHWs can only continue to provide excellent services without such an evolution. The opposition to standardized education and certification generally was related to the concern that CHWs would lose their relevance to their community by having completed programs

that are linked to, if not grounded in, the academic world, the health care system, and/or the needs of public insurance programs and other government entities. Several interviewees declined to take a position on the question and/or expressed interest in allowing two or more paths to develop: one for certified (or paid, or reimbursed) CHWs and the other for those who choose not to seek standardized, post-secondary education or certification.

While no national consensus regarding standards for the education and certification for CHWs was evident, several themes emerged over the course of our interviews:

• **Relationship between education, certification and third party reimbursement**

The lack of standardized training and/or certification is often cited as a limiting factor in acquiring reimbursement status for the services provided by CHWs. However, third party reimbursement has yet to come to fruition in Texas or Ohio subsequent to the passage and implementation of CHW certification. Exploring the possibility for direct coverage of CHW services via Medicaid was included in the initial CHW certification legislation in Texas. However, movement toward such reimbursement in Texas seems to have lost traction at this time.

• **Effect of certification on quality of effectiveness research**

Due to the diversity of backgrounds CHWs bring to their work, academic research seeking to determine the effectiveness of CHWs in aggregate proves difficult. Standardized education and certification are attempts to create a baseline of knowledge and experience among all CHWs, which may enhance the applicability of research across this group. In doing so, however, there is a risk that the pool of individuals who choose to become CHWs may be altered due to actual or perceived barriers to entry, and there is also the possibility that the nature of work performed by CHWs will change in subtle ways. In addition, previous research, such as that compiled by the Cochrane Collaboration, where lay health workers are defined as “any health worker carrying out functions related to health care delivery; trained in some way in the context of the intervention; and having no formal professional or paraprofessional certified or degreed tertiary education,”⁴⁸ may not be applicable to CHWs who have undergone standardized training or certification.

• **Role of CHWs in certification decisions**

Most respondents made clear the need for CHWs to play a part in the decision to pursue certification, whether regionally, statewide, or nationally, and that if pursued, CHWs should be involved in deciding what form certification should take. The degree to which CHWs should be involved was not openly debated, yet conflicting views about the nature of CHW work between some non-CHWs and CHWs, as well as within the CHW community itself dictate the need to have a broad array of backgrounds represented at the decision-making table, especially in cases where the livelihoods of these

individuals with disparate views may be impacted. In addition, because groups interested in supporting the work of CHWs come from a variety of educational, socioeconomic, geographic, and cultural backgrounds, it is important to realistically address the potential benefits and barriers, whether actual or perceived, arising from the implementation of certification. Most importantly, these issues should be communicated in ways that each stakeholder group can understand. In particular, the benefits and challenges of a move to state-based certification must be clear to the people and organizations that will be affected directly by such a step.

Active State Certification Programs for Community Health Workers, US, 2006

ALASKA	OHIO	TEXAS
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Legislation	Snyder Act of 1921 Indian Self-Determination and Education Assistance Act of 1975; Indian Health Care Improvement Act of 1976	H 95 (125th General Assembly, 2003)	HB 1864 (76th Legislature, 1999); SB 751, SB 1051 (77th Legislature, 2001)
Law	25 U.S.C. § 13; 25 U.S.C. § 1616l; P.L. 93-638; P.L. 94-437 § 121	Ohio Revised Code (ORC) § 4723.81 to 4723.99	Title 2, Texas Health and Safety Code § 48.001 to 48.003
Regulations	Community Health Aide Program Certification Board (CHAPCB) Standards and Procedures	Ohio Administrative Code (OAC) 4723-26-01 through 4723-26-14	Title 25, Texas Administrative Code 146.1-146.10
Certifying body	Indian Health Service, Community Health Aide Program Certification Board (Federal certification administered by Alaska Native Tribal Health Consortium)	Ohio Board of Nursing	Texas Department of State Health Services
Reach of law	Defines scope of practice, training, and certification requirements for four levels of "Community Health Aides" and for "Community Health Practitioners" employed by IHS, tribes, or tribal organizations in Alaska. Additional certification paths are in place for dental health services.	Anyone who uses the title "Certified Community Health Worker" or "Community Health Worker" must be certified. Certain nursing related tasks and activities require delegation by a registered nurse. No protected scope of practice.	Anyone who is compensated under the title "Promotor(a)" or "Community Health Worker" must be certified; Anyone who volunteers as a "Promotor(a)" or "Community Health Worker" has the option to be certified. No protected scope of practice.

CHW CERTIFICATION

Methods for meeting certification requirements	Board-certified training and employment by IHS, tribe, or tribal organization operating a community health aide program in Alaska; Credential equivalency can substitute for parts of training	State-approved training; Experience; Endorsement	State-certified training; Experience
Application process	Submit application form; \$400 fee	Submit completed application form; \$35 fee; Complete criminal records check	Submit completed application form
Length of certification	2 years	2 years	2 years
U.S. citizenship, alien registration card, or visa required?	No	Yes	No

Active State Certification Programs for Community Health Workers, US, 2006 (continued)

ALASKA

OHIO

TEXAS

CHW CERTIFICATION (continued)

Requirements for certification by experience	N/A	Must have "worked in a capacity that is substantially similar to a community health worker at some point within the three years immediately prior to February 1, 2005."	Must have "performed promotor(a) or community health worker services for not less than 1000 cumulative hours between July 1997 to January 2005."
Requirements for certification by endorsement	N/A	Must have a "current valid certificate, license, or other authorization to practice as a community health worker issued by another jurisdiction that has standards...substantially similar to the board's standards."	N/A
Renewal requirements	48 hours of continuing education over two years (No more than 24 hours can be regarding emergency care and a minimum of 24 hours must be in the competencies required for certification.);	15 hours of continuing education over two years (includes one hour related to OAC 4723-1 through 4723-23 and one hour related to establishing and maintaining professional boundaries); \$35 renewal fee	20 hours of continuing education over two years (at least 10 hours must be in the form of attendance and participation in instructor-directed activities through a state-certified training site)
Curriculum components	<p>Prerequisite: Emergency Trauma Technician (ETT) or Emergency Medical Technician (EMT) training; Pre-session training</p> <p>There is a common curriculum for all training sites, the Community Health Aide Basic Training Curriculum, 1993, revised as of May 1997.</p> <p>For each certification level, Community Health Aide I-IV and Community Health Practitioner, the CHAPCB has outlined comprehensive, specific, and progressively advanced competencies for the provision of preventative, primary, chronic, and acute care services for rural villages in Alaska, which do not have ready access to traditional primary or emergency care. Trainees are taught how to provide routine care, to identify and treat minor illnesses and to stabilize patients who require higher-level care until they can be referred or transferred.</p>	<p>Major areas:</p> <ol style="list-style-type: none"> 1. Health care 2. Community resources 3. Communication skills 4. Individual and community advocacy 5. Health education 6. Service skills and responsibilities 7. Lifespan specific needs 	<p>Core competencies:</p> <ol style="list-style-type: none"> 1. Communication skills 2. Interpersonal skills 3. Service coordination skills 4. Capacity-building skills 5. Advocacy skills 6. Teaching skills 7. Organizational skills 8. Knowledge base on specific health issues

Active State Certification Programs for Community Health Workers, US, 2006 (continued)

ALASKA

OHIO

TEXAS

CHW CERTIFICATION (continued)

Training and Education requirements

5 phases:
To become a Community Health Aide I, II, III, or IV, must complete board-certified 3-4 week intensive training course, perform a designated number of practice hours and/or patient encounters, and complete both Post Session Learning Needs (PSLN) and a Post Session Practice Checklist

Additionally, 200 hours of village clinical experience must be complete prior to moving on to the next training session.

To complete the final phase and become a Community Health Practitioner, must complete an approved preceptorship, achieve a score of 80% or higher on the statewide written CHA certification Examination, achieve a score of 100% on the statewide Medical Math Exam, and be evaluated on clinical performance and judgment by direct supervisor or other approved evaluator

Minimum: 100 hours of didactic classroom instruction; 130 hours of clinical experience

Minimum: 160 hours, including a minimum of 20 hours in each core competency area

Instructors

“(M)ust consist of a majority of full-time equivalent mid-level practitioner or physician instructors who are employees of the federal government or licensed by the State of Alaska. Additional instructors should be certified or licensed and have formal training in the knowledge and skills that they are teaching.”

Nursing tasks and activities to be taught by registered nurses licensed in Ohio for at least two (2) years who have experience working with CHWs for at least six (6) months;
Other licensed health care professionals should be used to teach relevant areas related to their education and scope of practice

Must be state-certified CHW instructors

Training site application process

Submit completed application;
Adhere to board requirements

Submit completed application;
\$300 fee

Submit completed application

Conclusion—Closing observations

In this snapshot of sustainable financing models for community health workers, a number of examples, best practices and promising directions have been identified and described. Many public and private sector organizations have taken the lead on committing support to community health workers and the services they provide. While community health workers face several challenges and hurdles, this emerging workforce appears to have tremendous potential to improve access to and quality of health care while maintaining or decreasing costs.

As community health worker programs and the organizations that might use and fund their services learn about each other, a number of questions and topics of discussion will arise. Based on the research, and in light of the CHW tensions, five specific issue areas are presented. The questions within each of these areas have not yet been fully addressed or answered by the CHW community and will likely be issues to resolve for funding contracts or agreements and points to detail should related legislation or regulation be sought.

1. **Role in health care**—Community health workers can be effective and valuable individuals working to improve the health of people and their communities. CHWs may be members of structured, clinical health care teams or may work within communities and relatively autonomously from the health care system. Their roles and activities may vary considerably. As third-party reimbursement is increasingly sought for these workers, payers and purchasers may demand finer articulation of exactly what CHWs do and do not do. The CHW community will be called upon to clarify and define roles, responsibilities and competencies.
2. **Fair payment**—Compensation for community health worker services should be commensurate with the value they bring to the organization for which they work and to their clients' or communities' understanding of how to access and use health care as well as their health status. Determination of payment and reimbursement amounts will vary by geographic setting, program type, and funding stream agreement or arrangement. To date, only a very few efforts have been made to detail such policies, particularly for CHW reimbursement purposes. CHWs and CHW programs would benefit by developing reimbursement templates and formulas to reflect the value of their services in a format that can be understood and feasibly adopted by potential purchasers and payers. In some cases, it might be necessary to think innovatively about reimbursement and payment models to fit with the work that CHWs do. CHW work sometimes does

not fit traditional US health care reimbursement models that rely on the one payment per provider per service per patient structure. A menu of options by type might include:

- a. **Capitated arrangements**— Payments might be contracted between, for example, a public or private insurance program or company and a provider (such as a community clinic or hospital that employs CHWs) on a dollar amount per covered individual per unit of time. The insurer, plan or purchaser of the plan might require CHW services be included in the offered benefits or be silent on what is required, thus permitting providers to pay CHWs for their services.
- b. **Payment by service**— Payments might be made per service or intervention offered. Such payment structures need to address several elements:
 - **Units of service:** Will the CHW be paid and services be reimbursed in quantities of time (by the minute/hour/day), intervention (contacting a client; visiting a client; scheduling an appointment), outcome/“pay for performance” (healthy baby; smoking cessation; lowered blood pressure), other unit or a combination?
 - **Cost per unit:** Will the reimbursable cost per unit be based on actual costs to deliver the service, standard rates used to reimburse the same or similar services by other health care workers, a percentage of the costs that are reimbursed for the services provided by other health care workers, or a combination?
 - **Dose:** What will be the minimum and maximum of unit frequency that can be reimbursed?
3. **Preparation**— Both CHWs and their employers have expectations regarding training and preparation for work. Whether obtained through standardized academic courses, specific on-the-job training or a combination of these, community health workers’ training must be adequate and appropriate for the work they do; it also must be ongoing throughout their work lives. CHW employers and payers, as well as states and the federal government, may have the right and responsibility to ask for demonstration of competence, which could be in the form of standardized education, training or certification that validates competence.
4. **Supervision**— Community health workers must have adequate and appropriate supervision for the work they do. The qualifications of the supervisor may depend on the program, the intervention, and the CHW among other factors but payers have the right to hold CHWs and their supervisors accountable. CHWs have the right and responsibility to know to whom they should turn for questions and referrals beyond their competence.

5. **Evaluation**—Published research focused on the outcomes and cost effectiveness of CHW programs and services could be expanded and improved. Current and potential funders, payers and purchasers may demand more data for analysis, stronger evidence of impact and return on investment, and pursuit of a research agenda that would answer their questions. Government agencies and charitable foundations may continue or expand funding opportunities in this arena. CHW programs and CHWs may seek to partner with the health services research community and share their data for objective analysis.

By thinking through these five issue areas, addressing the questions posed, and using the innovative and successful models and practices identified throughout this report as starting points, the US may well benefit from a thoughtful integration of community health worker services into the nation's health care system.

Appendix A — Key Informant Interview Questions

Advancing Community Health Worker Practice and Utilization

1. Do community health workers work at your organization? (note: community health workers may be known by other titles including *promotore/as*, community health advisors...)
2. Do the community health workers work at your site as volunteers?
3. If they are not volunteers, how are the community health workers compensated?
 - Prompts: salary, stipend, contract, reimbursed, patient out-of-pocket, other — including non-monetary compensation and benefits
4. Where do funds come from to pay the community health workers at your site?
 - Prompts: grants (church, private foundation), general operating funds, patient payments, insurance reimbursements, government insurance (Medicare, Medicaid), other
5. How has the financing model changed over time? What's been your experience with the evolution of how community health worker programs are funded?
6. What are the benefits and challenges of the current funding stream/financing arrangement for community health workers?
7. Are you aware of any (other) sustainable payment models that go beyond grant funding to pay for the services of community health workers?
8. Are you aware of any long-term publicly-funded models; how successful have they been?
9. What are the components of, process for, and likelihood of expanding federal or state programs including Medicare and Medicaid to include community health workers and their services as billable items?
10. Community health workers are often promoted as “cost-effective”; what has been the experience of plans and hospitals that employ or otherwise utilize community health workers? Has a business case been made?
11. Do you plan to keep working with community health workers?
12. What are your organization's long-term plans regarding the funding and financing of community health workers?

Appendix B — Project Key Informants / Interviewees

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Education and Training Centers (HETC) Program
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In addition, several individuals offered considerable insight into the issues of CHW financing. Although formal, structured interviews were not conducted of these individuals, we acknowledge their significant contributions:

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Appendix C

Community Health Worker Intervention Studies Randomized Controlled Trials 2002 – 2005

To bring the summary of community health workers outcomes research up to date, a review of outcomes effectiveness studies published between 2002 and 2005 was conducted. The review was limited to publications based on randomized, controlled trials of CHW-delivered interventions, conducted in the United States. Sources for the literature included the PubMed online database, using the search terms “CHW outcomes,” “CHW clinical trial,” and “CHW intervention”; publications recommended in key informant interviews; and references in the bibliographies of other outcomes studies.

The searches netted seven randomized, controlled studies of CHW outcomes. Discussion of these studies, and their implications for the outcomes effectiveness of CHW interventions, are included in pages 39–44 of the body of this report. Included here is a brief description of each of these studies. The studies are organized into three categories: positive effect found; positive effect noted but with serious study design shortcomings regarding the CHW role; no positive effect found.

Positive Effect of CHW Intervention

Gary, et al. employed a complex design in a study of African-Americans with diabetes.⁵³ In addition to a control “usual medical care” group, there were three intervention groups: one received usual care plus the guidance of a nurse case manager (NCM), another received usual care plus the guidance of a CHW, and the third received usual care plus a NCM/CHW team. The CHW facilitated preventive strategies, provided education, and supported compliance with treatment recommendations. While unadjusted between-group differences did not reach statistical significance, the combined NCM/CHW group had a statistically significant decline in blood glucose from baseline after two years. After adjusting for baseline levels and follow-up time, the NCM/CHW interventions show significant declines in diastolic blood pressure and triglycerides. Both the CHW and the NCM/CHW interventions produced within group statistically significant increases in physical activity over baseline. The authors concluded that the combined NCM/CHW interventions produced greater effects than the NCM or CHW intervention alone and, surprisingly, the NCM and CHW individual groups produced effects similar to each other.

Hunter, et al conducted a cross-sectional, population-based survey of Hispanic women aged 40 and older, and invited uninsured women to receive a free, comprehensive clinical exam.⁵⁵ Promotoras provided outreach and follow up to the exam. Researchers found that participants

receiving a promotora visit after an initial screening were re-screened one year later at a 35% higher rate than women receiving a postcard reminder only.

A study by Woodruff, et al. involved a 3-month smoking cessation intervention delivered by promotoras in home visits to Latino participants.⁵⁶ Outcomes in the study were validated past week abstinence rates as measured by a carbon monoxide breath test, and self-report. Participants were evaluated one week after the intervention's end. The study found that abstinence rates were 2 times higher for the intervention group versus the control group, and this pattern was repeated in the self-report measure. The primary predictor was number of cigarettes smoked per day at baseline, noted as a common measure of addiction in smoking cessation research.

Levine, et al. conducted a randomized, controlled study of hypertension among a population of urban, African-American women and men.⁵⁴ For this 48-month study, CHWs delivered a high-intensity intervention to an experimental group and a low-intensity intervention to a control group. CHWs provided outreach, counseling, and education, and were certified in blood pressure management for this study. The outcome measures in this study were blood pressure levels and the percentage of participants with controlled blood pressure. Findings included statistically significant decreases in blood pressure and increases in the percentage of participants with controlled blood pressure between baseline and study completion. Interestingly, the differences in all outcome measures were larger for the low-intensity group, and the between group differences at study completion were not statistically significant.

Positive effect; serious design shortcomings regarding CHW role

Krieger, et al. conducted a CHW intervention on household asthma triggers among low-income families including a child with diagnosed persistent asthma.⁵⁷ This study was 36 months in length. CHWs assessed participants' homes for asthma triggers and provided resources and education for controlling environmental triggers. Participants in a low-intensity group received one CHW home assessment and resources including bedding encasements. Participants in the high-intensity group received up to 8 additional home visits and resources including bedding encasements, cleaning kits, commercial quality doormats, roach bait, rodent traps, low-emission vacuums, allergy testing, and referral to a smoking cessation program. Three outcomes were measured in this study. These include a pediatric asthma caregiver quality-of-life score, frequency of asthma-related urgent care use, and number of asthma symptom days. Researchers found that the quality-of-life scores and frequency of asthma-related urgent care visits improved significantly from baseline to study completion among the high- versus the low-intensity group.

A study by Hill, et al. evaluated the effectiveness of a less versus a more intensive intervention on managing hypertension among a population of urban African-American men.⁵⁹

In this 36-month study, participants were randomly assigned to receive either a high-intensity intervention by a team composed of a nurse practitioner (NP), a CHW, and a physician (MD), or a low-intensity intervention. Participants in the high-intensity group received an individualized intervention, including visits to an NP every 1 to 3 months, and free medication directly from the NP. CHW visits occurred at least once annually but were not described in the study. Low-intensity intervention participants received referral to community hypertension resources. The researchers found statistically significant differences between the two groups in blood pressure control, degree of heart damage, and degree of renal insufficiency at 36 months. The effect of the CHW intervention, aside from the CHW's inclusion on the intervention team, is unknown

No positive CHW effect found

A smoking-related study by Conway, et al., evaluated the effects of an intervention to reduce the exposure of Latino children to environmental tobacco smoke (ETS).⁵⁸ Participants in this study consisted of parent-child pairs in individual households. Promotoras delivered six at-home or telephone interventions with an emphasis on strategies to reduce child ETS. Strategies were self-developed by the participants and promotoras. Outcome measures were taken at three and twelve months, and included parent self-reports of their child's past month exposure and analysis of the child's hair samples for past month nicotine and cotinine concentrations. Findings indicated no differential effect of the intervention on the experimental group. The experimental and control groups both had declines in each of the three outcome measures, with no statistically significant between-group differences.

Appendix D

Texas promotor(a) and community health worker certification timeline and data

DATE	EVENT
May 1999	<p><i>76th Legislature of the State of Texas</i> HB 1864 passed</p> <ul style="list-style-type: none"> • Established Promotora Program Development Committee (PPDC) • Amended Health and Safety Code to include training and regulation of promotoras • Required Texas Department of Health to establish the promotora training and certification program by January 1, 2000 • Required Texas Board of Health to adopt necessary rules by December 1, 1999
September 1999	HB 1864 Effective
July 2000	Texas Board of Health adopted the “Rules Regarding Training and Certification of Promotores(as) or CHWs” (Title 25, TX Administrative Code 146.1-146.10)
December 2000	<p>PPDC published reports</p> <ul style="list-style-type: none"> • Feasibility of Voluntary Training and Certification of Promotores(as) or Community Health Workers • Barriers Encountered by Medicaid Recipients in Assessing Prenatal and Neonatal Health Care Services
May 2001	<p><i>77th Legislature of the State of Texas</i> SB 751 Passed</p> <ul style="list-style-type: none"> • “The Health and Human Services Commission shall require health and human services agencies to use certified promotoras to the extent possible in health outreach and education programs for recipients of medical assistance” <p>SB 1051 Passed</p> <ul style="list-style-type: none"> • Changed the Health and Safety Code such that the state-sponsored certification and training program “is voluntary for a promotora or community health worker who provides services without receiving any compensation and mandatory for a promotora or community health worker who provides services for compensation.” • Directed the Board of Health to consider and “implement any applicable recommendations of the Promotora Program Development Committee.”
September 2001	SB 751 and SB 1051 Effective
March 2002–Present	Promotor(a) or Community Health Worker Training & Certification Advisory Committee (CHWTCAC) meets regularly
December 2002	1st CHWs certified (total: 6)
January 2004	1st CHW Instructor recommended by CHWTCAC and approved by DSHS
August 2004	1st Sponsoring institution/Training program recommended by CHWTCAC and approved by DSHS

**Texas Promotor(a) or Community Health Worker Training and Certification Program
(2006 data as of May 31, 2006)**

CHWs newly certified:

2002: 6

2003: 218

2004: 153

2005: 248

2006: 113 (4 re-apply after original certification expired)

CHWs recertified (expired)

2005: 96 (89) (52% renewed)

2006: 13 (61) (18% renewed)

Total number of certified CHWs:

2002: 6

2003: 224

2004: 377

2005: 537

2006: 589

Graduates of DSHS-Certified

Training Sites:

2004: 9

2005: 80

2006: 16

Instructors newly approved:

2004: 23

2005: 6

2006: 15

Total number of Certified instructors:

2004: 23

2005: 29

2006: 44

Training Programs newly certified:

2004: 3

2005: 3

2006: 2

Total number of Certified Training Programs:

2004: 3

2005: 6

2006: 8

Number of counties (out of 254)

with certified training sites:

2004: 3

2005: 4

2006: 6

Number of counties (out of 254)

with certified CHWs:

2002: 3

2003: 13

2004: 23

2005: 68

2006: 71



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