Community Health Councils

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The Role of Community Health Workers in Health Systems: A Multisectoral Exploration

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Community Health Councils (CHC) is a non-profit, community-based health education and policy organization. Established in 1992, our mission is to promote social justice and achieve equity in community and environmental resources to improve the health and well-being of underserved populations.

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Table of Contents

Executive Summary

Breaking the cycle of poor health outcomes demands intensive efforts, commitment, and creativity. While healthcare access challenges continue to exist in the United States, there is a push across the nation toward a coordinated care system that integrates strategies to improve social determinants of health. The integration of Community Health Workers (CHWs) into the healthcare delivery workforce is gaining greater attention as a viable solution, especially given the ongoing healthcare workforce shortage and the need to focus on issues impacting patients, outside the clinic walls.

Throughout history, although often under a different name, CHWs have been instrumental in providing communities with education about a myriad of issues and connections to various social services and healthcare resources. A fundamental characteristic exuded by CHWs is their capacity to bring cultural relevance and sensitivity to each interaction. Because CHWs tend to come from the same communities they serve, they play a key role in insular settings where communities may experience fear and lack of trust. CHWs have the unique ability to distill the complexities for community members as they attempt to enter the healthcare system.

In this report, Community Health Councils (CHC) seeks to inform the current and ongoing dialogue about the impact CHWs have had, and will continue to have on the healthcare system, particularly among vulnerable communities who experience disproportionate health disparities, such as South Los Angeles. As such this report:

- Provides an overview of the role Community Health Workers (CHW) play in the healthcare system;
- Highlights evidence-based research and expert opinions on how the functions of CHWs are an added value to the healthcare system;
- Explores the limitations and barriers in the healthcare system to fully integrate, support and sustain CHWs in a coordinated care model; and
- Identifies a set of recommendations to sustain and uplift the CHW workforce.

To inform a thorough analysis of the role CHWs play in the safety net, the following activities were undertaken: a **literature review** incorporating and updating knowledge centered on policy, evaluation and investment pertaining to CHWs; **in-depth interviews with stakeholders** among a cross-section of CHW experts; **community dialogue with users of the safety net system** to offer perspectives on their use and understanding of the healthcare system; and **participation in policy-related CHW workforce roundtables and other coalitions** where the role of CHWs was addressed contextually with stakeholders representing labor, colleges, apprenticeships and the broader healthcare system.

Throughout the process of preparing this report, Community Health Councils sought inclusivity by incorporating input from relevant cross-sector stakeholders to ensure findings and recommendations provide a multilayered perspective on current CHW roles in healthcare to support intersectoral recommendations to inform the safety net.

A summary of recommendations are listed below and they are detailed in the recommendations section of this report:

I. California must continue to build upon the work of the California Healthcare Innovation Plan Workforce Work Group, California Health Work Alliance, and the CHW Core Consensus Project (C3) to support and build awareness of CHWs as a valued member of team-based care in the healthcare workforce.

II. The healthcare infrastructure can better address the intersection between care coordination and strategies to address social determinants of health through the use of CHWs by:

    1) Developing a statewide financing and reimbursement mechanism for clinics and other healthcare providers that fully supports the services provided by CHWs;

    2) Supporting hospitals, clinics, and other healthcare systems to incorporate CHWs in team-based care medical education and system delivery models;

    3) Creating funding opportunities to continually evaluate the return on investment (ROI) for using CHWs from a financial aspect and their impact on social determinants of health;

    4) Tracking the role of the CHW through data at the various levels, locally, County and Statewide, to address progress in collecting data and disseminating information about California's healthcare infrastructure; and

    5) Continuing to strengthen the role of the CHWs supporting and evaluating her/his professional development and capacity building opportunities.

Community Health Workers Historical Timeline

During the 1990's	•The role of CHWs was more of a lay health advisor conducting community outreach in rural settings (popular with agricultural workers due to the lack of access to health centers and other barriers faced by farm working communities). •African Village Health Workers formed to alleviate shortage of trained health professionals. •CHWs join research teams where health outcomes in chronic disease prevention such as cardiovascular disease pick-up momentum and population health among Latino and African-American groups, and people of color in general.
During the 2000's	•Prior to the implementation of the Affordable Care Act (ACA), there had been a push for the healthcare system to improve health outcomes, elevating the need for CHWs. •Continuitiy of CHWs in research teams where health outcomes in chronic disease preventions such as cardiovascular disease and population health are studied and comparison groups evaluated. •CHWs begin to join healthcare systems.
During the 2010's	•Implementation of the ACA. •US Department of Labor establishes Standard Occupational Classification code for CHWs. •CHW focus shifts to urban and population health, as supported by community-based research and greater awareness for CHWs in the clinical settings rises. •Competenicies of CHWs are becoming more defined and trainings are expanded. •Return on investment studies and CHW impact gain popularity.
By 2016	•CHW role continues to support research, outreach, and advocacy, driven by the social determinants of heatlh. •CHWs serve as links between healthcare and individuals. •CHWs become specialty-based. •Budget cuts affect CHW role. •Home Care Worker model -patients at home receive support, education, medication guidance, and other services for which a CHW is trained. •CHW identity and awareness of importance of role in the health care system continues.

I. Introduction

Globally, multisectoral (i.e., within and across health sectors)[i] programs and policies are being implemented to reduce disparities in a myriad of health, social, and economic factors with the goal of eliminating poor health outcomes and improving well-being.[1,2] However, in the U.S. such approaches have largely remained siloed[3] resulting in certain racial/ethnic and geographic populations continuing to be disproportionately impacted by diabetes, obesity, cardiovascular disease (CVD) and the lack of access to basic resources, such as a primary source of healthcare. Broadly, the U.S. healthcare system ranks the lowest in the areas of access, efficiency and health outcomes when compared to other wealthy nations.[4] Despite expansions provided by the launch of the Affordable Care Act (ACA) which increased access to health coverage, improvements in healthcare access and health outcomes are still needed.[5,6,7]

> Increasing access to both routine medical care and medical insurance are vital steps in improving the health of all Americans.
> (Healthy People 2020)

Seven Principles of the Triple Aim:

1. Design the care delivery system with the whole person at the center.
2. Empower people and the care delivery system itself with information, technology and transparency to promote health.
3. Build care management and coordination systems.
4. Integrate behavioral health and social determinants of health with physical health.
5. Develop collaborative leadership.
6. Integrate care delivery into the community.
7. Create safe and highly reliable health care organizations.

In response, the U.S. government tracks health disparities through its Healthy People 2020 framework and makes recommendations for efforts to reduce them.[8] For nearly a decade, healthcare systems in the United States have begun to partially address this problem by developing programs and systems that meet the Triple Aim framework developed by the Institute for Healthcare Improvement (IHI) which seeks to optimize health system performance by 1) Improving the patient experience of care (including quality and satisfaction); 2) Improving the health of populations; and 3) Reducing the per capita cost of healthcare.[9] The Triple Aim has seven principles shown in the box to the left.[10,11]

[i] Multisectoral coordination refers to deliberate collaboration among various stakeholder groups (e.g., government, civil society, and private sector) and sectors (e.g., health, environment, economy) to jointly achieve a policy outcome. By engaging multiple sectors, partners can leverage knowledge, expertise, reach, and resources, benefiting from their combined and varied strengths as they work toward the shared goal of producing better health outcomes. Public health problems are complex, and in many cases, a single health issue may be influenced by interrelated social, environmental, and economic factors that can best be addressed with a holistic, multisectoral approach.

While the Triple Aim Framework has been widely adopted and many states and organizations aspire to meet these principles, health disparities continue to persist. One such challenge, in spite of the fact that the number of uninsured has decreased, is having a primary source of care. According to the National Health Interview Survey, in 2015 nearly 15% of adults over the age of 18 did not have a usual source of care. This rate is higher for some groups, depending on age, race and income bracket. Additionally, healthcare remains costly where approximately 50% of healthcare costs are mainly associated with hospitals and physicians and less going to preventive services.[12] This is especially true in places like South Los Angeles (SLA), an under-resourced community where individuals and families experience low health literacy, disproportionate access barriers to preventative care, have difficulty navigating a complex health system, and lack trust in a system that has not served them well. A serious look at the system itself and the extraordinary efforts needed to achieve acceptable progress for satisfactory results in 2020 must rise to the forefront. Therefore, augmented approaches to help communities navigate, build trust, and subsequently increase access to prevention, treatment, and care is needed.

A report on the Triple Aim Framework noted that for it to be successful, three elements were essential: "creating the right foundation for population management, managing services at scale for the population, and establishing a learning system to drive and sustain the work over time."[13] Community Health Workers (CHWs) are the link between the healthcare system and the community, as they are instrumental in providing communities with a safe and trusted lifeline—particularly because they are from the communities they serve. The CHW distills the complexities of the healthcare system, provides information in a language that is understood, and creates connections to other systems and resources that are needed to improve health and well-being.

As noted, this report elicits multi-disciplinary input from stakeholders in South LA so that recommendations are relevant across different components of the safety net healthcare system model. The content that follows delivers context for the recommendations including: 1) provides an overview of the role Community Health Workers (CHW) play in the healthcare system; 2) highlights evidence-based research and expert opinion on how the functions of a CHW are an added benefit to the healthcare system; 3) explores the limitations and barriers in the healthcare system to fully integrate, support and sustain CHWs in a coordinated care model; and 4) identifies a set of recommendations to sustain and uplift the CHW workforce. With this report, we initiate the process for a policy dialogue that aims to provide recommendations drawing from lessons learned from those responsive to the unique challenges of South LA to provide broader recommendations for policymakers and system leaders in other communities that share similar inequities.

II. Context and Background

South Los Angeles as a Focal Point

South Los Angeles (SLA) is a community that is culturally diverse and, as noted in Table 1, in comparison to LA County SLA ranks higher on a multitude of health outcomes;[14] where the poverty rate is more than twice that of the County (36% of residents live below the federal poverty level compared to 17% in LA County); and the per capita income is $13,243 compared to $27,260 for the County.[15] Food access and neighborhood safety are also prominent concerns for SLA residents.

Table 1: Health Outcomes for South Los Angeles and Los Angeles County

	South Los Angeles	Los Angeles County
Obesity Amongst Children[a]	30%	22%
Low Birth Weight (less than 2,500 grams)[b]	8.1%	7.1%
Teen Birth Rate (per 100,000)[c]	51.5	28.1
Adults with Hypertension[d]	24.5%	23.5%
Adults with Diabetes[e]	14.4%	9.8%
Adults with Obesity[f]	34.1%	23.5%
Age-Adjusted Mortality Due to Coronary Heart Disease (per 100,000)[g]	147.5	116.7
Age-Adjusted Mortality Due to Diabetes (per 100,000)[h]	37.6	21.9
Age-Adjusted Mortality Due to Stroke (per 100,000)[i]	40.4	32.8

Source: Data in Table 1 retrieved from various sources as listed in Appendix B.

The impact of these social determinants of health on SLA residents not only make prevention a low priority but builds barriers for adhering to lifestyle measures that prevent and control chronic disease such as healthy eating and being physically active. Compared to LA County, households in SLA experience lower food security (53.9% vs. 44.2%).[16] In addition, only 40.3% of residents in SLA perceive their neighborhood to be safe from crime compared to 84% in LA County, overall.[17] Regarding health insurance and access to care, the Affordable Care Act (ACA) has successfully reduced the uninsured rates, however in California and in SLA challenges still exist. Uninsured residents are the highest in LA County, and access to primary care is frequently sought on an episodic or emergency basis. Even with the ACA in place, 14% of Los Angeles County residents (approximately 1 million) are expected to remain without health insurance by 2019,[18] of which the majority will be Latino. Additionally, if the ACA is repealed, almost 1.5 million residents will lose access to coverage.[19]

- 32.5% of adults reported difficulty accessing medical care in SLA versus 23.6% in LA County overall.[20]
- 55.8% of adults in SLA compared to 50.5% of adults in LA County delayed care due to cost or lack of insurance.[21]
- 18.7% of SLA adults did not see a doctor when needed in the past year because they could not afford it.[22]

Healthcare Workforce Landscape

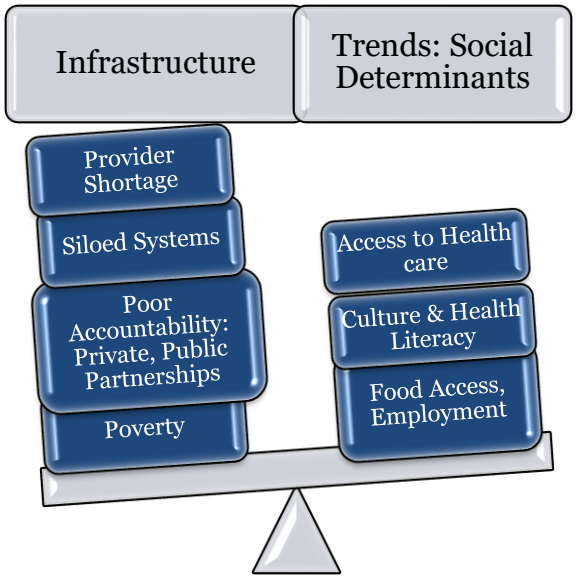
As nationwide trends show a lack of adequate distribution of primary care practitioners, it is projected that California will need 60 to 80 primary care physicians per 100,000 patients to adequately meet population demands.[23] However, with only 16 of 58 counties meeting the supply range requirement for primary care physicians, California is experiencing a healthcare workforce shortage.[24] To look at the workforce shortage issue at a smaller scale, the California Office of Statewide Health Planning and Development (OSHPD) designates Primary Care Shortage Areas throughout the state based on 1) the percent of the population below 100% FPL, and 2) the physician to population ratio. As of January 2017, the Medical Service Study Areas (MSSAs) in South Los Angeles were all listed for continued designation as Primary Care Shortage Areas.[25] South LA's healthcare workforce shortage is longstanding and exacerbates the challenge residents face in obtaining overall good health and well-being. This shortage could worsen should the Affordable Care Act (ACA) be dismantled as threatened by the current administration. It is estimated that Los Angeles County will suffer an estimated 63,000 job losses under an ACA repeal; the majority of these jobs falling in the healthcare industry.[26]

Primary care health centers across California, which include Federally Qualified Health Centers (FQHCs),[ii] face a myriad of challenges in attracting and retaining physicians and other clinicians. According to a recent analysis by the California Health Care Foundation these challenges include their inability to provide competitive salaries and other benefits such as sufficient loan forgiveness programs; and an increased workload, which now, because of the ACA, includes more complex patients and the implementation of electronic health records.[27] FQHCs located in SLA have been disproportionately impacted with this workforce shortage. In 2015, South LA had only 13 primary care physicians per 100,000 people.[28] While the ACA provided funding for health centers to open new sites or renovate and expand existing ones (funding that South LA clinics took advantage of), the same type of investment was not made to strengthen the healthcare workforce. This lack of investment in strengthening the healthcare workforce is most felt by SLA community clinics that have struggled to offer competitive salaries and still serve an under-resourced population dealing with some of the worst health outcomes and socio-economic factors in the County.

[ii] The FQHC benefit under Medicare was added effective October 1, 1991, when Section 1861(aa) of the Social Security Act (the Act) was amended by Section 4161 of the Omnibus Budget Reconciliation Act of 1990. FQHCs are safety net providers that primarily provide services typically furnished in an outpatient clinic. FQHCs include community health centers, migrant health centers, health care for the homeless health centers, public housing primary care centers, and health center program "lookalikes." They also include outpatient health programs or facilities operated by a tribe 2 Federally Qualified Health Center or tribal organization or by an urban Indian organization. FQHCs are paid based on the FQHC Prospective Payment System (PPS) for medically-necessary primary health services and qualified preventive health services furnished by a FQHC practitioner.

Community Health Workers and Healthcare: Although there is a conversion of strategies attempting to counter the impact of social determinants and improve population health, the infrastructure in its current form, weighs down efforts. Specifically, in communities with an excess burden of diseases that are exacerbated by negative social determinants of health and lower access to care, the opportunities for CHWs to serve as an intervention and resources to reduce the burden of the factors on community health are deserving of exploration and where beneficial, of support.

Figure 1



The allocation of resources for enhanced services and strategies to make them available thereafter requires challenging the culture and practices of current systems. In urban settings, like South LA, where cultural norms are deeply rooted and behavior change is much harder to achieve,[29] not all barriers may be confronted in unison, which delay the impact of targeted interventions and ability to demonstrate success. The need for sustained behavioral changes among families and systems is vital in places like SLA and other under-resourced communities. Increasingly, a coordinated system of care has called for the exploration of various approaches inclusive of necessary roles, traditionally and not typically found in the health system. The role of Community Health Workers (CHWs) has garnered visibility and is highly regarded as an effective evidenced-based model addressing prevention, behavior change, excess costs of care, and ultimately influencing community norms.[30,31,32,33]

In the 2015 Policy Brief, *Addressing Chronic Disease through Community Health Workers, A Policy and Systems-level Approach*, the evidence that supports the role CHWs play is centralized.[34] Most health outcomes and studies depict the CHW as educating, providing resources, and distilling information in an understandable and culturally relevant manner. Moreover, the CHW is key to recruiting hard to reach populations. In the same year, a report was prepared on behalf of the California Health Care Innovation Plan Workforce Work Group, *Advancing Community Health Workers to Improve Health Outcomes and*

Reduce Costs, which offers a comprehensive summary of functions, roles, and initiatives with CHWs as well as recommendations on role and functions, employment settings, and core competencies.[35]

However, sentiments around certification and preciseness of the CHW role in the healthcare system remain inconsistent. Discussions around these perceptions and inconsistencies have continued throughout the various ad-hoc meetings across California. Moreover, the accuracy of CHW's return on investment (ROI), financially or otherwise on the healthcare system as they are formally integrated into the clinic operations, also remain inconsistent. A report by the Centers for Disease Control and Prevention (CDC), *Technical Assistance Guide for States Implementing Community Health Worker Strategies* (January 2014), provides an overview of the CHW role and functions as well as recommendations for incorporating CHWs as part of the healthcare system.[36] However, it does not provide specific tools and processes that enable implementation of these recommendations. While the report highlights the work of many states, California was not among those featured. In 2016, Snyder brings to the forefront several key areas that warrant continuity: CHW certification, training, and licensure, and establishing strong economic evidence for their use and sustainability.[37] Although the issue of sustainability is recurring, pragmatic approaches to addressing and operationalizing are not yet determined. In fact, if evidence shows that CHWs can be an integral part of access to care, albeit in most instances informally, then why has the role not been formalized so that we can begin to understand how it can also be financially sustainable?

The California Healthcare Innovation Plan Workforce Work Group was created to address one of the six building blocks of the state's 2013 innovation plan; specifically CHWs, as a critical workforce component. The innovation plan serves as a foundation for implementing significant health system and payment reforms addressing the *Let's All Get Healthy California Framework* for assessing Californians' health across the lifespan, focused on healthy beginnings, living well, and end of life.[38] In its essence, it is a plan for how California can meet the Triple Aim.[39] Since then, the state has attempted to incorporate the use of CHWs in several plans. The original version of the state's 1115(a) Medicaid Waiver Renewal included a provision of "incentives to managed care plans to support non-physician community providers including Community Health Workers and Peer Support Specialist."[40] However, this provision did not move forward in the final approved Medicaid Waiver.

Instead, the state included CHWs in the final 2020 Medi-Cal Waiver through the Whole Person Care (WPC) Project, which is being implemented in 18 counties throughout California. WPC aims to improve health outcomes by providing comprehensive coordinated care including behavioral health and social services. The collective efforts of WPC are slated to have an individual and population focus, with timely coordinated care, evaluation of progress at the individual and population level, and sharing of data between systems. With a focus on high-risk consumers (i.e., high utilizers of Medi-Cal in their geographic areas), WPC will incorporate CHWs. The high-risk consumers, as identified by WPC, include: individuals with repeated incidents of avoidable emergency use, hospital admissions, or nursing facility placement; individuals with

two or more chronic conditions; individuals with mental health and/or substance use disorders; individuals who are currently experiencing homelessness; and/or who are at risk of homelessness, including individuals who will experience homelessness upon release from institutions (e.g., hospital, skilled nursing facility, rehabilitation facility, jail/prison). The CHW role in WPC is to connect with these targeted communities to impact population health and eventually create sustainable cost savings. The CHW is incorporated into Domain 1: Outpatient Delivery System Transformation and Prevention. Under this Domain, front line workforce (i.e., hiring and training) includes CHWs as well as medical assistants, promotoras,[41] health navigators, and other non-licensed members of the care team. They will be responsible for coordination of non-clinical services and elements of the care plan. CHWs are also part of Domain 2: Targeted High-Risk or High-Cost Populations.[42]

Threats to Healthcare Gains

With the current federal administration threatening to repeal the ACA, a huge economic burden could fall on California, which will greatly impact SLA. Under the ACA repeal, California would lose $160.2 billion in federal funding between 2019-2028 and pay more in uncompensated care costs.[43] The lost funding will mostly be from the termination of marketplace subsidies and Medicaid expansion. Additionally, any gains made toward healthier and more productive workers will be halted. Already, associated benefits of the ACA suggest that health coverage can have important benefits for long-term labor market outcomes because healthy people live longer, miss fewer days of work, are less likely to become disabled, and spend more years in the workforce. Other gains include:

- People feeling comfortable seeking job opportunities because they will not need to forgo health insurance and thereby reducing "job lock";
- Reducing the severity of any future recessions by safeguarding access to healthcare and cushioning household budgets;[44]
- Slower growth in health costs – there has been a slower growth in per-enrollee healthcare spending across public and private sectors; and
- From 2010-2016, 240,000 jobs were created, nationally, in the healthcare sector alone.[45] With the potential loss of the ACA, the projected job loss for Los Angeles County is 63,000.[46]

The CHW role rises to the forefront, especially when human rights are threatened and healthcare jobs are lost. With less capacity for personnel to address consumers' fears and concerns, CHWs are called upon to mitigate those fears, thus reducing any negative impact such as consumers no longer accessing care.

III. Literature Review

Community Health Workers (CHWs) are the individuals whose inherent leadership appeals to and draws affinity among community members who may need guidance and advice around pertinent and timely issues. For decades, CHWs have been engaged in healthcare and in events that have community relevance, which makes them knowledgeable on the issues affecting their community. With the changing healthcare trends, the CHW role has grown to be more complex. Now CHWs are being integrated into healthcare teams to decrease health disparities because they can play a key role in addressing the cultural, linguistic, and health literacy gaps between patients and healthcare providers.[47,48]

Roles and Models

Throughout history, CHWs have carried various designations. In the mid 1950's the Chinese Barefoot Doctor,[49,50,51] the equivalent of a CHW at that time, infused western and traditional medicine to educate people, which provided access to basic healthcare with a focus on prevention. By the 1960's the program was recognized nationwide.[iii] In Africa, the Ministry of Health in Ghana enforced a 10-year plan from 1965 to 1974 to set out principles for governing the training of village health workers and traditional birth attendants. Consequently, CHWs sprung up in other developing African countries due to shortages of trained health professionals to meet the increasing demands for healthcare services; as well as address the growing mortality rates, population growth, and low workforce productivity. In 2016, Ghana launched its 1 Million Community Healthcare Workers Campaign (1mCHW),[52] which is comprised of stakeholders in the Ghana Health Service (GHS), Youth Employment Agency (YEA), Ministry of Employment and Labour Relations (MELR), Ministry of Health (MoH), and the Savannah Accelerated Development Authority (SADA). The goal is to recruit, train, and deploy 20,000 CHWs and 500 eHealth technical assistants across the country for the next two years. The campaign started in February of 2016 and uses the CHW curriculum and implementation guidelines. The guidelines were finalized by the MoH and GHS, World Vision International, Ghana and the 1mCHW Campaign respectively. The initiative is slated to place Ghana on track to achieve its Sustainable Development Goals (SDG) targets, SDG3.8: universal health coverage, health financing and the development of a health workforce and, SDG 8: decent work and economic growth.[53]

In 1973, *Donde no Hay Doctor* became a popular handbook in Spanish (also available in English) for health workers and educators to provide access to care among agricultural workers in the U.S. due to the lack of access to health centers and other access barriers faced by the farm working communities. Revisions have

[iii] The name "Barefoot doctor" was coined because farmers in the south of Shanghai were often barefoot working in the paddy field and the scheme for the programme was for rural health workers to be educated more on medicine and health by going through short term training before returning to their communities to practice medicine.

been made to reflect content for the 21st Century establishing the continuing need for a bridge to health among the agricultural community.

In 2010 the U.S. Department of Labor established a Standard Occupational Classification code for CHWs. However, the American Public Health Association embraces a CHW definition that most closely reflects the connection to health disparities, social determinants, and improved health outcomes:

> A community health worker is a frontline public health worker who is a trusted member of and/or has an unusually close understanding of the community served. This trusting relationship enables the worker to serve as a liaison/link/intermediary between health/social services and the community to facilitate access to services and improve the quality and cultural competence of service delivery. A community health worker also builds individual and community capacity by increasing health knowledge and self-sufficiency through a range of activities such as outreach, community education, informal counseling, social support and advocacy.[54]

By May 2015, there were over 48,000 estimated CHWs the U.S. with about 11% in California.[55] However, even prior to the implementation of the ACA there was a push for the healthcare system to improve health outcomes, which drew attention to the potential role for CHWs as an intervention. Fully understanding how CHWs can truly impact social determinants of health is an ongoing theme even among those who understand the importance of her/his role in the system. Furthermore, because not all share the same view about the role CHWs can play within a team or organization, and ultimately, the healthcare system, resistance and lack of buy-in are pervasive. Different CHW models have been depicted in the U.S. ranging from hospitals and clinical systems to ongoing grass-roots efforts.

Figure 2

Models for Organizing Community Health Workers (CHWs) in the United States.

Model	Example
Extensions of hospital or clinic systems, with health care system as base of operations; CHWs are integrated with disease-management or care teams and are focused on clinical services.	New York–Presbyterian Hospital Washington Heights/Inwood Network (WIN) for Asthma Program, New York: CHWs serve as the single point of contact for families; in clinics, the hospital, and the community, they provide asthma education, support, and referrals for social services.
Community-based nonprofit organizations, rooted in community mobilization, activism, or faith; organizations often provide a host of other services for the community, both health-related and non–health-related.	Latino Health Access, Orange County, CA: CHWs educate their neighbors about a broad range of social and health issues, including nutrition, diabetes, mental health, domestic violence, parenting, and access to health care.
Management entities, organizations dedicated to CHWs that are integrated with clinical and community organizations; oriented around financial sustainability, population and environmental health goals, and local workforce development.	City Health Works, New York: A close-to-client network of CHWs who perform protocol-driven early risk detection, self-management support in community settings, and primary care coordination for chronic conditions.

Source: Sing and Chokshi, 2013 (reprinted with permission)

As illustrated in Figure 2, Singh and Chokshi (2013) posit that CHWs are an extension of hospital systems. In their three-layer approach, the first two layers depict the CHWs as the interface between community and hospitals. The third layer merges both approaches for scalability and for financial sustainability. They go on to recommend CHW programs for services in Medicaid Case Management with funding support from the Centers for Medicare and Medicaid Services.[56]

Integrating CHWs into a Healthcare Team

As previously stated, CHWs have been the bridge between communities and the health system.[57] Across California, community clinics have been engaged in several efforts that require them to be more connected to community support systems, such as becoming certified as Patient Centered Medical Homes or participating in the state's Health Home Program. Local and national initiatives such as the Whole Person Care Pilot and Accountable Communities for Health Initiatives include CHWs as integral components. Local FQHCs have been creating systems to fall in line with the state's vision for improving health outcomes and reducing health disparities which include CHWs. At various community meetings, stakeholders have stated anecdotally that the role of CHWs is varied and instrumental at everything from mediating the cultural relevance within clinics, assisting patients with understanding medication regimens, to building community social support. However, the ability to efficiently integrate CHWs into care delivery networks will be better informed when we have findings from real-world implementation projects such as the Whole Person Care Pilot.

Formally integrating CHWs in a system places higher demands on CHWs because they are managing community norms, challenges, and expectations with what could at times be incompatible processes.[58] In addition, the system may not be prepared to fully accept a CHW as a formal and essential team member. In a study conducted by Mobula et al. (2016), association among providers and staffs' cultural competence, preparedness, and perceptions regarding the usefulness of CHWs in reducing health disparities, 37% did not perceive CHWs as helpful.[59] However, it is the area of health disparities and moving towards value-based care where the CHWs can be most useful. In fact, hospital re-admissions have already shown to decrease when CHWs are involved in bridging clients with complex needs to care.[60] Healthcare costs and population health are intertwined and are among the reasons for shifting the focus to value-based care and revisiting the concerns of inequities in healthcare.[61,62] In order to establish a shared understanding of the invaluable service that CHWs bring, the Michigan Community Health Worker Alliance developed a roles and task description that health systems may use as benchmarks for role clarification.[63] Refer to Table 2 for the seven key roles with at least 40 total tasks/functions.

In various chronic disease management initiatives, CHWs are partnered with a primary care provider so they are part of the team and not isolated. Collingsworth et al. (2016), found CHWs successful in getting patients to effectively manage their diabetes. CHWs assisted patients who received referrals with other resources and linkages to care. CHWs provided diabetes education, social support, identified barriers to

care, and navigated care coordination for the patients. Prior studies have shown similar results and a number of them are listed in Appendix C.

Table 2: Community Health Worker Roles by Michigan Community Health Worker Alliance

Roles	Task Description	
1. **Case Management & Care Coordination**	• Promoting Health Literacy and addressing basic needs • Family Engagement • Coaching and Problem Solving	• Assessing individual strengths and needs • Developing goals and Action Plans • Coordinating referrals and follow-ups and providing feedback to medical providers
2. **Community-Cultural Liaison**	• Assessing community strengths and needs • Community Organizing	• Advocacy • Translation and interpretation of information
3. **Health Promotion & Health Coaching**	• Translating and interpreting health information • Teaching health promotion and prevention behavior • Coaching on problem solving • Modeling behavior change	• Promoting Health Literacy • Reducing Harm • Promoting Treatment Adherence • Leading Support Groups
4. **Home-Based Support**	• Engaging family members in care • Home visiting and assessment • Promoting Health literacy • Supportive Counseling	• Coaching and Problem Solving • Implementing Care Action Plans • Promoting Health Literacy Advocacy
5. **Outreach & Community Mobilization**	• Preparation and Dissemination of Materials • Case-finding and recruitment • Community Strengthening/needs assessment	• Home visiting • Promoting Health Literacy • Advocacy
6. **Participatory Research**	• Preparation and Dissemination of Materials • Engaging participatory Research Partners	• Facilitating translational research • Computerized data entry and web searches
7. **System Navigation**	• Translating and interpreting health information • Promoting health literacy • Patient Navigation	• Addressing basic needs like food and shelter • Coaching on problem solving • Coordinating referrals and follow-ups

Source: Adapted from the MichCHWA, 2015

Training & Certification

In clinical settings, certification and training are prominent and although CHW training programs vary, in most cases they tend to be issue-based.[64] For example, training can include HIV, CVD prevention, diabetes, and other health topics.[65,66] CHWs can be trained to use e-health tools, mobile technology, participate in online interventions, as well as usher medication and serve as a strong clinical link.[67,68] Researchers in a

health center in Detroit, MI tested an interactive diabetes medication decision aid (iDecide in English, or *iDecido* in Spanish) designed for CHWs to deliver on tablet computers with 3G access to African American and Latino adults with diabetes and low health literacy.[69] With the use of the web-based tool (iDecide), the participants reported satisfaction with the medication information (i.e., helpfulness and clarity) compared to print material. The use of web-based and electronic tools has increased the amount of training needed by CHWs compared to the earlier and less complex work performed by CHWs. In some research teams, the CHW may need specialized training, and in some of the literature it is cited as a requirement criteria, especially for those that deal with chronic disease management.[70,71]

Among additional tool and strategies are person-centered in-home care models, where CHWs play a role in working with patients at home and providing support navigating the healthcare system, ensuring adherence to medical regimens and offering up-to-date health education.[72] Additional useful activities performed by home care workers are supporting a patient's daily living challenges, infection control, and behavioral management. However, additional supervision is recommended for quality assurance purposes.[73] The added complexity to the role also means additional training needed. For instance, home care workers, not a reimbursed service by Medicare, leaves training up to the states, and out of 29 states that require a license for home care providers, 26 require orientation and 15 require in-service training. In these cases, the depth of the programs varies.

The California Health Workforce Alliance (CHWA 2015), with statewide assessment and three regional technical consultations, has made recommendations to develop **competency-based certification standards** for new and existing training programs and for individuals who complete the appropriate training. The CHWA has plans to advance these recommendations and develop a statewide health workforce master plan. Another group found in the context of this analysis is the Community Health Worker Core Consensus (C3) Project. The C3 Project has also offered recommendations for national consideration as an aggregate representation on the roles, skills and qualities to inform the CHW field. In a recent report, they reiterate that the recommendations are guidelines and not standards, recognizing the unique needs of communities and the organizations that serve them. The primary goals of the C3 Project are detailed in the box on the right.[74]

Goals of the C3 Project:

Short Term: Dissemination of C3 Project findings on roles, skills, and qualities or attributes for consideration and refinement by CHW network leaders, individual CHWs and other stakeholders leading to consensus on roles, skills, and qualities.

Medium Term: Building of national consensus on and wide distribution of C3 Project recommendations on roles and skills, and qualities and their use as a comparative guideline by states and others developing CHW policy, practice and educational resources.

Long Term: Endorsement and adoption of C3 Project recommended roles, skills, qualities by local, state, and national organizations and other entities seeking to start or strengthen CHW education, practice, and policies.

State-Level Training

Some states require state-level certification including completion of an approved training program and acquiring specific skills. Credentialing and certification programs are often administered by a local health department or another agency at the state level. Several educational institutions (regardless of whether there is a state credential) offer courses, certificates, or degrees in the CHW field. Community college based training provides academic credit and career advancement opportunities through formal education. Certification at the state level, which recognizes and legitimizes the work of CHWs, could open potential reimbursement opportunities, however, that is not always the case. On-the-job training is offered to improve the capacities of CHWs and enhance their standards of practice. In 2013, the Centers for Disease Control and Prevention (CDC) compiled a review of states' regulations of CHWs, which included information on which states require certification, have specific curricula, and require reimbursement for services, among other related topics. In addition, the Association of State and Territorial Health Officials (ASTHO) tracks the status of states' CHW training and certification standards.

Examples of states with CHW programs and their certification approach	
Texas	Was the first state to develop legislation to govern CHW activities in 1999. Offers a Promotor(a) or CHW certification program and requires CHW programs in health and human services agencies to hire state-certified CHWs when possible.
Ohio	Developed a CHW certification program in 2003, administered by the State Board of Nursing and also maintains a list of approved community health worker programs
Alaska	Certification programs authorize CHWs to conduct specific activities, such as clinical service delivery and home visits, respectively.
Oregon, Nevada & Washington	Have implemented state-level standards for training and education for CHWs and provide training at the state level.
Arizona, California, Colorado, & Virginia	Curriculum and CHW programs are offered at community colleges; states may be moving towards certification.
Massachusetts	State established a Board of Certification of Community Health Workers, which is establishing education standards, training program curricula, and requirements for certification.
Kentucky, New Mexico, Minnesota, Mississippi, & Hawaii	Provide non-state-mandated certification programs and/or are exploring certification and utilization of CHWs.
New York, Wisconsin	Working on developing statewide alliances and networks for CHWs.
Illinois	Establishing an advisory board to develop a training and certification process.
Indiana	Working to establish the scope of community health workers' practice and integrate into the health system.

Certification & Financing

The methods of paying CHWs also carry broad inconsistencies across healthcare settings and organizations. In 2007, the National Uniform Claim Committee added a CHW classification for billing purposes. This billing code, along with the US Department of Labor CHW classification code, were thought to alleviate the funding and aid in the integration and legitimacy of CHWs in the healthcare system.[75] Minnesota is the only state that has added CHWs among its providers for Medicaid reimbursement as long as they meet certification requirements. Their state-standardized curriculum, offered through the postsecondary educational system, provides the CHWs with a certificate of completion, which qualifies them to enroll for reimbursement under the state Medicaid program. According to a CDC survey, there are 15 states that have laws (statutes, legislation, or regulations) that impact CHWs as of December 2012. Indiana, Ohio, and Texas have standard definitions and qualifications for CHWs.[76] California is lacking in multiple areas including, uniform CHW scope of practice, certification or training, standard core skills, and reimbursement. The results are shown in Figure 3 below.

Figure 3: Summary of State Community Health Worker Laws

State	Infrastructure	Professional Identity	Workforce Development		Financing	
	Establish CHW advisory body	CHW scope of practice	CHW certification or training process	Standard curriculum with core skills	State reimburses or creates incentives for CHW services	Integrates CHWs into team based care
AK		Yes			Required†	
CA						Authorized†
DC				Authorized†		
MD					Authorized	
MA	Yes	Yes	Authorized	Authorized	Authorized	Authorized
MN			Required†		Required†	
NM	Yes	Yes			Authorized	Authorized
NY					Authorized	Authorized
OH		Yes	Required*	Required*		
OR	Yes	Yes†	Required*	Required†	Required†	Required*
RI	Yes	Yes				
TX	Yes	Yes	Required*	Required†		
UT	Yes					
VA	Yes					
WA		Yes†		Authorized†	Required†	Authorized†
WV					Required†	Required†

Empty cells indicate that state law is silent on this issue or no law was identified.
Yes, indicates state law either authorizes or requires in full or in part the select recommendation.
*State has multiple enacted laws with varying degrees of authority.
†Law has exceptions or only applies in certain circumstances (i.e., tuberculosis control)

Source: CDC A Summary of state Community Health Worker Laws, July, 2013 (Reprinted with Permission)

Medicaid reimbursement for CHW services is currently possible through the Centers for Medicare and Medicaid Services (CMS) final rule (CMS-2334-F) titled *"Medicaid and Children's Health Insurance Programs: Essential Health Benefits in Alternative Benefit Plans, Eligible Notices, Fair Hearings and Appeal Process; and Premiums and Cost Sharing, Exchange: Eligibility and Enrollment."* This ruling opens payment opportunities for preventive services by unlicensed persons, and revised language states: "Services must be recommended by physicians or other licensed practitioners of the healing arts within the scope of their practice under State law…"[77] "Accordingly, we revised 42 CFR 440.130(c) to accurately reflect the statutory language that physicians or other licensed practitioners recommend these services but that preventive services may be provided, at state option, by practitioners other than physicians or other licensed practitioners. This rule change is effective January 1, 2014 and applies to preventive services, including preventive services furnished pursuant to section 4106 of the Affordable Care Act."[78] With this new ruling, people's access to preventive services could be improved and CHWs could potentially be reimbursed under Medicaid.

State Medicaid plans are required to provide comprehensive written statements fully describing the nature and scope of the state's Medicaid program for CMS to determine whether the plans can be approved to serve as the basis for federal financial participation. States are required to include a summary of the qualifications of practitioners that are not physicians or otherwise licensed. Credentialing of CHWs is not required by CMS. However, states should include required training, education, experience, and credentialing or registration in this summary of qualifications. [79]

CHWs and Return on Investment (ROI)

Research on *cost outcomes of CHW programs* is limited and restricted to being clinic-based because of the inherent difficulty of measuring total cost of care at the community level.[80] Nonetheless, there are specific examples of evidence regarding cost savings that include several health centers and hospitals as shown in Appendix C.

For example in a study conducted by Fedder et al. (2003), CHWs worked with patients to understand how to control diabetes and HTN by alternating home visits with telephone calls, and linking them to primary care providers. As a result, there was a decline in ER visits (40%), ER admissions to hospitals (33%), and Medicaid reimbursements (27%); resulting in average savings of $2,245 per patient per year ($262,080 for 117 patients), with improved quality of life (QOL) indicating cost effectiveness. The CHW program implementation and the six-month training were not factored into the results.[81] Mirambeau et al. (2013) addressed the personnel and operational cost. The purpose of that study was to provide an idea of the cost for implementing the program, therefore, they did not look at impact on health outcomes. The program cost was estimated at $420,348 with a cost *per* CHW at $140,116 (included in this figure were three CHWs as well as other personnel, a supervisor, and a hospital vice president). The CHWs provided services to 27,000

patients. CHWs met individually with each participant and linked him or her to community services (i.e., enrolled in health insurance and linked to primary care provider; arranged for transportation to medical appointments; and referred to food pantries, programs to provide heating assistance during the winter, or legal aid).[82] The researchers also added cost to in-kind support. It is very common that allocation costs often exclude in-kind support. However, the type of ROI that is connected to health outcomes is lacking consistently across CHW programs and in the system. At the very least, Mirambeau et al. (2013) included training costs, operational costs, and office space.

Formalization of the CHW role has brought upon discourse about how and what should be formalized. For programs where CHWs are volunteers, most of their work time is unpaid and there is a notion that if the CHW is formally compensated, he/she may exercise greater loyalty to the organization instead of the community;[83] in essence, perpetuating the perception that formal payment could take away from the informal and natural influencing effects of the CHW in the community. Generally, this perception of not paying by way of salary, and instead reverting to incentives, gift cards, and other such forms of reward, sustain the role as *informal* and indirectly sends a message that "community" efforts could be optional and consequently easily eradicated.[84] This is certainly a concern when CHWs remain informal and the continuity of a program is affected. In 2015, the median pay for Health Educators and Community Health Workers without benefits was $43, 610 per year or $20.97 per hour.[85] However, if only CHW salary is filtered, the median annual salary is $36,300 or $17.45 per hour.[86] Researchers who have explored the paid and non-paid models for CHWs have found supportive and countering points for each argument.

Evaluation

In response to the United States President's Emergency Plan for AIDS Relief's (PEFAR) and the Human Resources for Health Technical Working Group, O'Malley, Perdue, and Petraca (2013) initiated a project to develop an outcome-focused training evaluation framework involving CHWs. Evaluations were organized at three levels: individual, organizational, and health systems/population; then they were sub-categorized into nine outcome types as shown in Table 3. Some levels have more supporting studies than

Table: 3: Outcome-Focused Training Evaluation Framework

Level	*Sub-Categories*
Individual	Knowledge, Attitudes, Skills
	Performance
	Patient Health
Organizational	Systems
	Performance
	Organizational-level patient health
Health Systems/ Population	Health Systems
	Population-level Performance
	Population-level health

Source: Adapted from O'Malley, Perdue, and Petraca (2013)

others.[87] Many of the studies fall mainly in the individual level and patient health sub-category. Population level performance as well as health systems data take longer to prove and thus are less available.

For example, Felix et al. (2007) studied the role of the CHW as "connector" to long-term care.[88] The primary objective of the study was to determine whether including CHWs reduces Medicaid spending by lowering the need for nursing home care. In this instance, the CHW Community Connectors successfully linked 686 insured adults to at least one type of service. Even if the population was insured, the evaluation suggests that efforts are attributed to the CHW as Community Connector.

IV. Key Informant Interviews

To address questions generated by the literature review, CHC conducted a series of interviews with local experts about the role of CHWs. Responses either confirmed or countered the recommendations found in the literature as well as offered new recommendations. The questions that CHC chose to delve into included:

1. What are the policies, processes, and systems in place for CHWs to remain sustainable?
2. What is the role of the CHW in the health system?
3. What is the role that the government/community-based organizations (CBO)/others can play in ensuring CHWs are trained and have the capacity to perform their role?
4. What are the training curricula available for CHWs?
5. Are there evaluation methods for assessing the work of CHWs?

Methodology

Over the course of 2 months, in-depth interviews were conducted with nine experts in the CHW field representing various types of organizations. A purposive, snowball sampling method was employed to recruit participants for informant interviews. The study necessitated respondents with vast knowledge and insights on the topic of CHWs and full understanding of health systems in Los Angeles County. In all sessions, CHC used a semi-structured interview guide addressing the questions with flexibility to ensure respondents' perspectives were being captured. All interviews were in English, conducted in-person (except for one conducted telephonically) and ranged from 30–90 minutes.

Results

The qualitative findings from the analysis offer a hopeful perspective and informed direction regarding training, evaluation, and CHW inclusion in care teams: a view shared among all key informants. CHC then reviewed the responses and developed thematic summaries, shown below. See Appendix E for additional details on the data collection, analysis and limitations:

- Need for federal or state CHW funding/reimbursement mechanisms.
- Elevate awareness of the CHW role among clinical and non-clinical teams.
- Broader acknowledgment of CHWs' diverse and expansive role and the multidisciplinary nature of their services.
- Community-based organizations may be training CHWs more than other sectors.
- Trainings are needed to focus on continuing education, linguistic skills, and professional development (including administrative skills to work internally).
- Need to create the competencies for the role CHWs will play in a care team.
- Evaluation Gaps: Funding is needed to enhance evaluation and generate better data on the different levels of impact CHWs have individually and on reducing health disparities.
- Standardization of role is not necessarily the answer because it could serve to exclude some members with capacity and expertise; however, competencies are important to raise awareness of the role at the organizational level and for sustainability.
- Distinguish the role of a genuine Promotor whose trust and knowledge engages community members with that of a CHW who can also have similar traits but plays a more formal role in the health system.

V. Community Perspectives

To add community perspective depth to this report and to the final recommendations, CHC sought to include the experiences and voices of South LA residents. As such, CHC convened a meeting of 15 community members. The goal of the meeting was to hear directly from consumers about how they perceived the CHW role in ensuring that local residents increased their ability to understand and navigate the healthcare system. Many residents expressed culturally driven practices (i.e. nutrition and food choices) as a barrier to health education, that in their home countries would not have been an issue; however, by living in the U.S., healthier practices may appear to be out of reach due to various reasons. This is critical in understanding how immigrant families interact with the safety net (i.e. accessing preventive services) and how CHWs can help bridge the gap while respecting cultural beliefs. The topic of access to and understanding of the system of care brought the issue of being uninsured to the forefront. The complicated application process and lack of consumer understanding, per their view, tends to push residents to use urgent care as their form of primary care—"it is much easier," was the consensus. They praised the role that a health worker (or someone similar) played in making it possible for himself or herself and family members to access care. Participants also unanimously agreed that without someone explaining the process to them,

they would not know what to do. Respondents named Certified Enrollment Counselors as being instrumental in identifying "solutions" to narrowing this gap in the health system. The meeting was facilitated in Spanish (the language of preference among the residents) and small and large group activities were used to engage them in dialogue. In summary, this group of SLA residents confirmed the importance of the role CHWs could play not only in the safety net, but also as educators among families that in turn enable family members to be active participants in the health system. If family members are knowledgeable, they will impart accurate information and encourage others to engage in the system of care.

VI. Recommendations

I. Build upon existing CHW research & efforts

Upon review of the literature, it became very clear that California must continue to build upon the work of the California Healthcare Innovation Plan Workforce Work Group, California Health Work Alliance and the CHW Core Consensus Project (C3) to lift, support, and build awareness of CHWs as a valued part of the workforce. These entities have provided well-vetted recommendations on role development (which includes standardization and customization for unique populations), certification processes that do not exclude certain populations, and ways to create support systems for CHWs and those who employ them. As such we highly encourage the state to re-establish the California Healthcare Innovation Plan Workforce Work Group to review these recommendations and develop an action plan that can effectively support, train, and evaluate the work of CHWs and the systems within which they work. Furthermore, the CDC can enhance its technical assistance report to provide specific tools and strategies on how to fully integrate CHWs into the healthcare system.

II. Improve the healthcare system by improving how it integrates and supports CHWs

The healthcare infrastructure must be improved to better address the intersection between care coordination and strategies to address social determinants of health. The use of CHWs is one component in the healthcare infrastructure that can help successfully meet the demands put upon the safety net.

Various state and county agencies have been working alongside clinics and advocacy groups to call attention to the role CHWs can play to better link this work. Beyond the Whole Person Care Pilot there are other models with population health in mind. In 2016 the Center for Medicare and Medicaid Services (CMS) launched the Accountable Communities for Health (ACHs) model to intentionally bring partners together from key sectors—including the community to the healthcare delivery system—to collectively advance a common health goal: to achieve personal and population health by linking activities that comprise a group of interventions that address particular health issues.[89] CHWs are called out as a component of the

workforce that can address the community linkage. The California Accountable Communities for Health Initiative (CACHI) aims to assess the feasibility, effectiveness, and potential value of comprehensive and prevention-oriented health systems. "CACHI was designed to implement a new population health model that would link together healthcare systems, community resources and social services with primary prevention approaches in a given geographic area to address a particular health need, such as chronic disease, on a community-wide basis."[90] Another example is the Patient Centered Medical Home (PCMH) model aimed at strengthening the healthcare system by reorganizing how primary care is provided. A patient centered approach takes into account a patient's "unique needs, culture, values, and preferences; support of the patient's self-care efforts; and involvement of the patient in care plans."[91] Many believe the PCMH model can achieve its objectives by fully engaging patients.[92] In addition, there is evidence that integration of CHWs into PCMHs is associated with improved outcomes.[93] To this end, we provide the following sub-recommendations for statewide policy, local healthcare entities, and foundations to improve the healthcare system by leveraging CHWs:

1) **Develop a statewide financing and reimbursement mechanisms for clinics and other healthcare providers that fully support the services provided by CHWs.** Sustainability and reimbursement through Medicare and Medicaid case management should not be an uphill battle for the scope of services rendered by a CHW—they are connecting families, schools comprised of communities of color, and vulnerable populations to a very complex system. The price tag for those efforts should at least have some recognition and be properly remunerated. It is understandable that reimbursement may bring about the need for some credentialing and/or certification and could create a paradox for non-profits and stakeholders watchful of exclusionary measures against CHWs that trickle to promotores and others who hold similar roles.

   While the door is still open, the California Department of Healthcare Services should move swiftly to create a State Plan Amendment (SPA) to access Medicaid reimbursement for CHW services through the CMS final rule (CMS-2334-F). Not doing so in this volatile federal landscape could result in a missed opportunity to provide greater flexibility for safety-net providers to benefit from integrating CHWs into their models of care. Additionally, given that these SPAs will be highly scrutinized, we urge DHCS to work with legal advocates and CHW associations to ensure the SPA will not be reversed. At the federal level, as the National Academy of Sciences Committee on Accounting for Socio-economic Status in Payment programs completes its work, there will be additional opportunities for assessing the value of CHWs in care delivery models.

2) **Support hospitals, clinics, and healthcare systems to include CHWs into the team-based care workforce.** CHWs should be part of the medical team (i.e., clinician, nurse, social workers, medical assistants, and pharmacists). The CHW in the health system should not work in isolation and the clinical team should be aware of the CHWs competencies and added value, specifically:

- Clearly define the role of CHWs and/or grassroots promotores in team care goals.
- Develop clinic/organizational policies and protocols to incorporate CHWs in the care plans that support continuity of care and connections between the patient's home environment and the healthcare system.
- Training should remain contextually-based (including knowledge from community sources) and supplement existing CHW trainings while also utilizing standardized competencies relevant to patient care.
- Develop processes to evaluate the impact that CHWs have on health outcomes.
- Support Medicaid/health plan reimbursement or prospective payment commensurate with demonstrated competencies and processes.
- Raise awareness of the scope of services delivered by CHWs so their value on multi-disciplinary teams can be recognized and compensated equitably.

3) **Create funding opportunities to continually evaluate the return on investment (ROI) of CHWs, including their impact on social determinants of health.** Nationally, the healthcare system is moving away from the traditional fee-for-service payments to a value-based reimbursement that rewards improved quality outcomes and costs. This shift to value-based reimbursement models invites care to be delivered by an entire coordinated care community. It also provides a role for CHWs who can help build a better link to the community, reduce costs, and improve health outcomes. To support this work, we recommend private and public partnerships with foundations providing the financial backing for such an endeavor. Federal and state Accountable Health Communities, such as CACHI initiatives, will provide some insights in the coming years. Private funding has often supported evaluation research in this arena that public agencies have not been able to support. Foundations can play a stronger role in bringing together the right mix of researchers, community agencies, healthcare providers, and public agencies to ensure that a comprehensive ROI assessment is conducted. To this end, we encourage foundations to not only rely on traditional research institutions, such as universities, but to engage community-based organizations with a history of conducting community-based participatory research that have a pulse on the communities they serve.

4) **Track the role of the CHW through data at various levels: locally, County, and Statewide, to address progress in collecting data and disseminating information about California's healthcare infrastructure.** This will be important to address progress in collecting data and disseminating information about California's healthcare infrastructure inclusive of the CHW. Current data tracks Primary Care Providers (PCPs) and no information about CHW is identified. Therefore, the Office of Statewide Health Planning and Development (OSHPD) should work with clinics and others

who are integrating CHWs into healthcare delivery models to develop tools to track the services offered by CHWs and methods to aggregate that data.

5) **Continue to strengthen the role of CHWs by supporting and evaluating their professional development and capacity building opportunities.** Current evidence-based evaluations focus on the impact that the CHW brings to patient/client and populations, as well as the care teams. However, more information is needed on the impact of CHW integration into delivery systems on the workers, their profession, and their learning opportunities and how this will affect the personal and economic development of CHWs.

VII. Conclusion

The healthcare system must adapt to address the changing workforce needs and current shortages that may negatively affect healthcare and outcomes. In this report, we found that while there is agreement that the CHW can play a vital role in the delivery of care, especially in the safety net, there are still barriers to realizing their full potential in real world practice. Creating an environment where clinical staff understand the contributions that this workforce brings to care teams, inadequate reimbursement mechanisms for CHWs, and need for additional CHW ROI assessments all limit the ability of most healthcare systems to sustain and fully integrate CHWs.

However, given the growing complexity of our healthcare system, the accepted importance of addressing social determinants of health in ensuring good outcomes, and increasing diversity of the patient population, the recommendations above deserve the support and attention of policymakers and health system leadership. Moreover, the volatile nature of our political landscape and the potential for wide fluctuations in government financing models for care highlight the importance of ongoing research and dialogue with CHW experts, the agencies representing them, and the growing CHW workforce to ensure that these recommendations can be effectively advanced. CHC will continue to work through our partners to identify the proper channels to promote these recommendations, including engaging key decision makers.

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Appendix A: Definitions

Value-based care: A model of healthcare delivery focused on reimbursing providers based on the quality of care provided, rather than the quantity. This model requires providers to utilize cost-effective, evidence-based healthcare practices that ensure that the needs of the patients are met and their health is a priority.[i]

Triple aim: A broad system of linked goals, focused on improving:

1. An individual's experience of care;
2. The health of whole populations; and
3. Decreasing per capita costs of care for populations. [ii]

Whole person care: A comprehensive model in which healthcare, behavioral health and social services are coordinated, as applicable, in a patient-centered manner. The overall outcomes of whole person care include improved beneficiary health and well-being achieved through a more efficient and effective use of resources available. [iii]

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Appendix B: Sources for Health Outcomes

Source for Table 1: Health Outcomes for South Los Angeles and Los Angeles County

a. Health Atlas for the City of Los Angeles (June 2013). Plan for A Healthy Los Angeles. Available at: http://healthyplan.la/wordpress/wp-content/uploads/2013/10/Health-Atlas-for-the-City-of-Los-Angeles-July-2013-FINAL-SMALL.pdf
b. Los Angeles County Infant Mortality, Preterm Births, and Birthweight 2011 Fact Sheet, Los Angeles County Department of Public Health, Maternal, Child, & Adolescent Health, January 2014.
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g. Mortality in Los Angeles County 2013 Leading causes of death and premature death with trends for 2004-2013. Los Angeles County Department of Public Health, Office of Health Assessment and Epidemiology October 2016
h. Mortality in Los Angeles County 2013 Leading causes of death and premature death with trends for 2004-2013. Los Angeles County Department of Public Health, Office of Health Assessment and Epidemiology October 2016
i. Mortality in Los Angeles County 2013 Leading causes of death and premature death with trends for 2004-2013. Los Angeles County Department of Public Health, Office of Health Assessment and Epidemiology October 2016

Appendix C: Evaluation and Return on Investment Studies

Interventions with Analysis on Return on Investment (ROI)

Organization	Population	Cost	Services/Impact	Duration	Source
Denver Health	Patients assigned to CHW's	• CHW-MHI total cost including the salary of two CHW's was $112,129 • At post CHW-MHI program intervention, a $2.28 savings for every $1.00 invested in the program was calculated • The annual savings approximately $96,000 Note: Researches cost were mentioned in the cost analysis	• Utilization • Payer charges • Reimbursements • Co-payments for primary care visits • Patient contacts	2006 18 month period	Whitely et al (2006)
Care Oregon*	Patients Individual clients	Internal data shows notable downward cost trends	• Showing a decrease among those who completed the intervention • Inpatient & Emergency utilization	2012 6 month period	Davis (2013)
Inland Empire Health Plan*	Intervention families	Unpublished data shows that the program is cost neutral l(saves as much as the cost of implementation) while improving performance on quality metrics;	• Reduction in Emergency Department Use among intervention families	2012 6 month period	Davis (2013)
New Mexico Medicaid	Individual beneficiaries with high resource utilization	The total cost differential from before and after CHW intervention was $1.5 million (among 448 individual beneficiaries) after accounting for program implementation costs.	• Education • Advocacy • Social support • Emergency room • Inpatient services	2012 6 month period	Davis (2013)
Vermont Hospital	The 27,000 residents in the hospitals service area	• Personnel and operational costs was $420,348 67% personnel, 37% operational • Cost of program per CHW is $140,116	• Emergency room care • Inpatient services • Prescription drugs • Outpatient primary • Specialty care	October 2010-September 2011	Mirambeau et al (2013)
University of Maryland Medical System[i]*	Black/African-American Medicaid patients with diabetes with/without hypertension used CHWs as volunteers	• An average savings of $2,245 per person • And a total savings of $262,080 for 117 patients • CHW's were not included in cost s	• Emergency Room visits • Hospitalizations • Length of stay in Hospitals	2003 Two year period (1992-1994)	Fedder et al (2003)

***Select Studies Showing Impact on Health Outcomes**

Appendix D: Key Informant Interviews

Methodology: The study first involved several layers of literature review whereby the researchers reviewed existing publications including, reviews of reviews and additional ones that included pertinent scan of the literature on trainings, evaluations, and return on investment. Findings were analyzed to inform the in-depth interviews. The in-depth interviews (N = 9) explored possible linkages between the CHW, the role s/he plays in the system, and sought recommendations for trainings and sustainability. In the interviews, researchers used a semi-structured interview guide. The guide was comprised of ten open-ended questions about the role CHWs play, the role organizations can and should play to support CHWs, and the policy and financial needs to continue to support the work of CHWs with flexibility to ensure respondents' perspectives were being captured. The guide was used in all interviews. All interviews were conducted in-person, except for one which had to be conducted telephonically. Interviews ranged from 30 – 90 minutes and they were all conducted in English. The qualitative interviews were conducted in October-November 2016. A purposive, snowball sampling method was employed to recruit participants for informant interviews. The study necessitated respondents with vast knowledge and insights on the topic of CHWs and full understanding of health systems in Los Angeles County.

Content Analysis: A codebook was developed for the semi-structured interviews. Thematic summaries were developed from the coded content to address the questions. Additional themes were included in the codebook after pilot coding a selection of interviews. Two team members independently coded interview notes in Microsoft Word based on the final codebook. Themes were carefully tracked and reviewed by coders and coding differences were resolved by consensus and the summaries were reviewed by the team.

Limitations: Participants in the semi-structured interview were invited to participate as respondents due to their key role and expertise in the health systems. There is a recall bias embedded in the study because at times participants recalled how things "were" with no time parameters, and compared to how times are now. This varies of course, because participants had different time frames of which we do not know and could not measure. To a certain degree, the situation may have proven more demanding for the CHW now and there is still a longing to preserve the role as "natural" by many of the respondents. For a few respondents who were promotoras, themselves, early in their careers, this lag time may have influenced their views and thus indirectly influenced their recommendations. In addition, it was not possible to involve more participants from other sectors (like labor or the private industry) in the qualitative study, and only a cross-section participated.

Questions: The following reflects the list of questions among our key informants with the themes and responses associated with each question.

Q #1: What are the policies in place for CHWs?

Key informants leaned towards offering policy recommendations or changes needed instead of identifying policies in place. Two broad policy themes emerged:

a. Health Systems - inadequate funding or reimbursement mechanisms: All agreed that there are not enough financial resources available to support the work that CHWs are doing. CHW services are not reimbursable under current policies, and when CHWs are paid, the organization/clinic cannot always offer them a fair wage or provide them with the same level of benefits that other professional staff receive. This is likely due, in part, to the limited amount of formal and consistent evaluation of the full and extensive value that CHWs provide to the healthcare system and its consumers which is often needed by decision makers who determine the clinical reimbursement models. CHW salaries are not commensurate with the work s/he may undertake and while clinics and organizations understand the value that CHWs offer, in may of these setting it is still associated with volunteerism and the prevailing belief is that tokens and gift cards will suffice as payment for services. On the other hand, there are those who are concerned that a paid CHW may prioritize their alliance to an organization and not the community.

***b. Organizational - creating greater synergy between CHWs and other clinic staff*:** Key informants noted that unfortunately, a barrier exists between staff willingness to utilize and support CHWs in some clinic settings and this is often associated with lack of clarity about the role. Organizations have been working with healthcare settings to increase staff understanding of the value CHWs bring to them and their patients. Some have started scheduling one-on-one or team meetings that incorporate CHWs to increase their visibility and legitimacy in the healthcare setting.

Q #2: What is the role of the CHW in the healthcare system?

Elevate the awareness of the CHW role among clinical and non-clinical teams*:* Key informants noted that CHWs have several skills and competencies that allow them to exist in the unique space between the healthcare system and vulnerable communities. These include personal qualities such as a cultural connection, motivation, and a strong local knowledge; interpersonal and relatable skills such as listening and communicating; and healthcare specific skills ranging from specific disease/issue areas to knowing the ins and outs of hospital and clinic settings. CHWs are well-versed in the social determinants of health, whether they have formal education or not, because they have a lived-experience that many healthcare professionals are lacking.

There are concerns about diffusing the informal style often exercised in the community and although this role is attributed more to a *Promotor* it does interface with the CHW role. The health system is still trying to fully understand the role of CHWs, however, organizations that work with CHWs have begun to define this role for the healthcare system. As highlighted in the literature, CHWs have a diverse and expansive role, which includes everything from administrative tasks, education, advocacy & organizing, linking &

navigating, and care support & prevention. Key informants highlighted education, advocacy & organizing, and linking & navigating as the most prominent roles that CHWs play; and because CHWs almost always come from the communities they serve, they have a demonstrated ability to connect with residents on a level that other health professionals cannot. Additionally, by providing CHWs with adequate training, they will have the increased ability to connect social determinants of health with health conditions and access to care. As noted by several interview participants, as social determinants of health take a more prominent position in healthcare, healthcare providers will come to better understand the added value CHWs bring to patient experiences and care.

Q #3: What is the role government/CBOs/others can play in ensuring CHWs are equipped?

Community-Based Organizations offer More to Equip/Train CHWs*:* Community-based organizations play a major support role supporting CHWs, which includes providing trainings, advocating on their behalf, and assisting with integrating CHWs into the healthcare system. Healthcare settings are increasingly understanding the value CHWs bring to healthcare and have been looking for ways to hire them. Participants noted that CHWs need buy-in from clinic staff to succeed; and others believe that hospitals and other healthcare settings should be 1) educating themselves about the value of CHWs; 2) finding ways to fund CHWs; and 3) creating ongoing training opportunities for CHWs. The role of government was not mentioned and when probed, respondents expressed lack of knowledge on the government's role.

Q #4: What are the existing curricula available for CHWs?

a. Training Needs are Contingent Upon Place and Time: Historically, CHW trainings have been sometimes conducted through the state health department. An interviewee who had undergone this training in the 1970s shared that a large portion of their sessions focused on outreach and safety. Currently, although local health departments still provide CHW trainings, community-based organizations also have their own CHW curricula.

The current healthcare landscape calls for a formalization of existing CHW trainings that incorporates clinical care. CHW certification programs exist in other parts of the country, however, there is a divide between certified CHWs and lay-trained CHWs who may lack a formal education. These trainings include formal trainings that help an individual become a CHW as well as continuing education trainings and skills-based trainings based on the field and organization in which they work. Although certifications are becoming more prominent in the CHW field, many feel that the certifications are unnecessary.

b. Multi-Culturalism and Linguistics: Linguistic skills are extremely important for CHWs as there is a need for CHWs to be bilingual. Consequently, there is a strong push for trainings centered on professional

development and language; however, minimal trainings to help with language skills are offered or supported. Additionally, organizations see the need for trainings on transferrable skills related to the job, such as communication, leadership, community relations, community health and conflict management. Interviewees articulated the need for continuous training on content knowledge, since the healthcare field is dynamic, in addition to more advanced education on patient support, for those needing medication review and complex medical care. In Los Angeles, Esperanza Community Housing Corporation, Vision y Compromiso, Planned Parenthood Los Angeles, the Worker Education Resource Center, CD Tech, the East Los Angeles Women's Center, just to name a few, have existing training curricula. Clinics are welcome to utilize these resources to help train their CHWs. Some individuals find that it may be excessive to create additional trainings if these resources already exist; however, many agree that these trainings provide only the foundation and there is more to build on. Despite having these trainings available, one community health worker key informant felt that in-depth trainings were lacking in the field. Another interviewee mentioned that proper training prevents CHWs from being fully leveraged to go through the systems they work in. The healthcare system, as mentioned previously, is dynamic and can be difficult to navigate without sufficient training.

In developing future trainings to help CHWs, key informants also stated that it is important to include safety and emergency preparedness. CHWs work in a variety of settings, often unpredictable and unknown. To better facilitate their work without compromising their safety, it is imperative that CHWs are trained to better assess and handle dangerous situations. Additionally, future trainings should incorporate a care ambassador perspective as CHWs provide significant support to patients navigating the healthcare system. Scenario trainings were suggested by an interviewee to better prepare CHWs for situations that may arise on the job. Lastly, given the undocumented immigrant documentation status of many CHWs, it was recommended that trainings on obtaining legal status or navigating the workforce as an undocumented CHW also be provided. From an organizational perspective, internal trainings were encouraged to help staff better understand the role of CHWs.

Q#5: Are there evaluation methods for assessing the work of CHWs?

Evaluation Gaps Persist: Organizations understand the importance of collecting data to evaluate the work of their CHWs and do so to the best of their ability. However, funding for evaluation is often limited and therefore analyses, that can offer insights into how meaningful changes or impact were achieved, are frequently not done. Interviewees mentioned lack of processes to truly evaluate the scope of CHWs especially across programs. Even when data is collected, the CHW's scope of work is sometimes hard to measure because there is still limited agreement on the role and formality of their duties. An interviewee, representing a hospital promotora program, provided an example that brings home the point of how difficult it is to evaluate the CHW role: she shared that a CHW went above and beyond her responsibilities by collecting maternity clothes for a young, pregnant woman. Initiative and empathy cannot be captured

with numbers; this kind of qualitative impact is often lost when conducting formal evaluations. Several informants noted that many times, even though they do their best to conduct evaluations, they lack the capacity to follow through and incorporate the results into their programs. However, programs that utilize internal evaluations to better understand the inter-relationships between the CHWs and their teams find that information gleaned strengthens their internal processes. In other words, when evaluations are applied, the results facilitate a work environment that is conducive to the success of the CHWs' work.

Furthermore, many key informants noted that evaluations are not conducted to understand the impact or benefit on the CHW as a result of performing this role. Several informants shared how they witnessed CHWs become more proactive in finishing school themselves, purchasing a home, and being able to guide their children to pursue higher goals.