Community Health Workers & *Promotores*
in the Future of Medi-Cal

Resource Package #3: The *CHW/P Role in Data Collection and Outcome Measurement*

A Project of the California Health Care Foundation

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Introduction

About the Project and Resource Package

As California aims to improve the quality of life and health outcomes for its residents, particularly Medi-Cal members, one strategy is to better integrate community health workers and *promotores* (CHW/Ps) into health care coordinated by managed care plans (MCPs) and providers. Medi-Cal MCPs, Federally Qualified Health Centers (FQHCs), hospitals, or community-based organizations (CBOs) can partner to deploy effective, evidence-based CHW/P programs to advance health equity and improve outcomes overall. To do this successfully, it is important to have a common understanding of the various roles of CHW/Ps, such as how CHW/Ps can be used in data collection and the impact CHW/Ps have on member outcomes.

The California Health Care Foundation's Community Health Workers & *Promotores* in the Future of Medi-Cal project aims to promote the role of CHW/Ps, within the context of the California Advancing and Innovating Medi-Cal (CalAIM) initiative.[1] The project seeks to enhance Medi-Cal MCPs' readiness to use CHW/P programs to advance health equity. To accomplish this goal, the project is developing a series of resource packages — informed by stakeholders with a broad knowledge of the field and best practices — containing information to support the integration of CHW/Ps into programs for Medi-Cal members. The resource packages will address the following topics:

- Roles of CHW/Ps in improving care delivery for Medi-Cal members[2]
- Training for CHW/Ps and their employers
- CHW/P's role in data collection and outcome measurement
- Program financing and sustainability

The resource packages will be released between February and July 2021. In September 2021, the four resource packages will be adapted into a comprehensive toolkit with updates related to the CalAIM initiative. The resource package development occurs within a larger stakeholder engagement process, with recommendations and input provided from a health plan council, an advisory council, and a stakeholder group. Insights from CHW/Ps are shared throughout this resource package. A list of the individuals participating in the process is included in the Acknowledgments section.

The resource packages are designed to align with CalAIM objectives and to help MCPs more effectively meet the needs of California residents, including acknowledging the important role nonclinical interventions play in addressing health-related social needs and reducing health inequities. Two CalAIM components are particularly relevant for CHW/P programs: (1) a requirement for MCPs to provide an enhanced care management benefit to address clinical and nonclinical needs for people with complex health and social needs; and (2) authorization for MCPs to deliver in-lieu of services (ILOS), which are cost-effective alternatives to covered services that improve health, such as housing navigation services. As the CalAIM proposal is finalized and MCPs develop their plans for these services, MCPs are uniquely positioned to lead the integration of this valuable workforce by including CHW/P programs in their strategies.

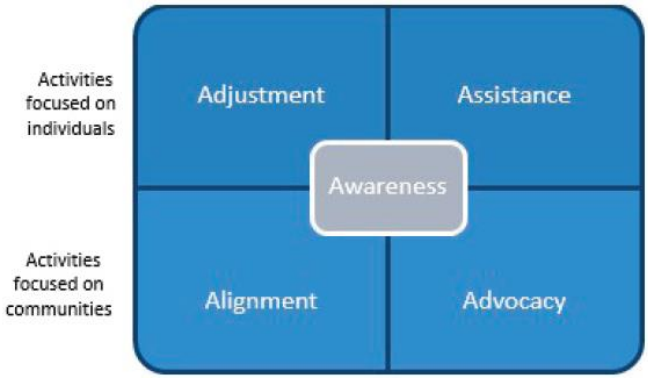
This third resource package, *The CHW/P Role in Data Collection and Outcome Measurement*, highlights these topics:

- CHW/P roles in data collection and information sharing between MCPs, health systems, and CBOs
- Strong evidence on the efficacy of CHW/P interventions and the return on investment (ROI) in such programs
- Strategies for MCPs to align quality metrics with CHW/P program functions
- Considerations for designing methods to measure the impact of CHW/P programs
- Considerations for partnering with health systems, CBOs, or training organizations
- Infrastructure barriers and challenges in measuring the impact of CHW/P programs on member health outcomes
- Curated resources and sample tools from established CHW/P programs to guide the data collection and outcome measurement process

Key Concepts

Considerations for Plans under CalAIM. To improve health outcomes for members with complex health and social needs, California — in the context of CalAIM's ECM and ILOS services — is embarking upon a system redesign that requires constructing integrated health and social sectors and retooling how MCPs and other health care entities provide care. This integration will require new models that harness existing community connected workforces and brings new importance to leveraging roles that already bridge health systems and social service entities. CHW/Ps are well suited to connect health care and social care, and the data and digital tools they use will help bridge the divide.

Framework for MCPs to Integrate Health and Social Sectors. One framework, developed by the National Academies of Sciences, Engineering, and Medicine (the National Academies), provides the context for facilitating integration between health and social sectors. The National Academies brought together a coalition of foundations, social work associations, educational institutions, and other organizations to study options for integrating social needs and social determinants of health (SDOH) data into health care delivery to improve individual and community health.[3] The coalition identified five activities (5As) — awareness, adjustment, assistance, alignment, and advocacy — which are systems-level changes that can facilitate social and health care services integration. The 5As can be a useful framework for MCPs as they explore the CHW/P role in integrated care delivery systems and innovations through ECM and ILOS services.



Health care system activities that strengthen social care integration[4]
The National Academies

Within these systems-level changes, it is important to note that CHW/Ps *already* serve as a bridge between the health care system, social service agencies, and CBOs for members with complex health and social needs.

- *Adjustment* and *assistance* focus on improving care delivery provided specifically to individual members based on information about their social risks and protective factors (conditions or attributes that may mitigate or eliminate risk).
- *Alignment* and *advocacy* relate to roles the health care sector can play in influencing and investing in social care resources at the community level.
- All delivery and community-level activities are informed by efforts that increase *awareness* (the fifth category) of individual or community-level socioeconomic risks and assets relevant to a health system's geographic region or served population.[5]

Health care stakeholders — including MCPs, providers, and health care delivery organizations — that are exploring opportunities to integrate health and social service systems should consider that "each of the five categories (awareness, adjustment, assistance, alignment, and advocacy) depends on systems-level changes to implement and sustain integration — including a defined and well-trained workforce, data and digital tool innovations, and new financing models."[6] As CHW/Ps are further integrated in health care delivery systems, it is important to outline and clarify the multiple roles CHW/Ps have in transferring information between various health and social services entities.

Impact on Health Equity. Data collection and stratification is an important strategy to advance health equity as it allows for MCPs to identify what the disparities are and work with CHW/Ps to address these issues. CHW/Ps, with their lived experience and unique context of the communities they serve, can play a vital role in data collection, especially SDOH data collection. CHW/Ps already have the rapport and trust of the members, so can fully explain to members the reason for collecting certain information while addressing member concerns and barriers around data sharing. CHW/Ps should also be integrally involved in the design and implementation of appropriate outcome measures that not only demonstrate improved health and well-being for individuals with a myriad of needs, but also acknowledge the role and impact that CHW/Ps have in moving the needle on these metrics.

Key Implementation Approaches

As MCPs explore opportunities to incorporate CHW/Ps into the overall workforce addressing ECM and ILOS, they should consider the impact the workforce can make on data collection and quality measurement. This section will: (1) provide background information on the role of CHW/Ps in collecting data on patient health and social factors with clarification on how technology infrastructure can support this; (2) summarize current evidence of CHW/P program efficacy in improving health outcomes and ROI; and (3) detail important metrics for CHW/P programs.

Role of Community Health Workers and *Promotores* in Data Collection

CHW/Ps are a hub of information and provide a "finger on the pulse" on a given community's health and social needs. At the same time, the data collected and documented by CHW/Ps have the potential to improve access to health services and utilization of primary care supports.

CHW/Ps collect data, transfer information between health and social service systems, and serve a key function in informing MCPs, FQHCs, and hospital systems about community needs. CHW/Ps can also play an important role in providing the most up-to-date information on elements such as member housing status, member contact information, and any immediate or emergent health risks. Some CHW/Ps coordinate care as part of an interdisciplinary primary care team in an office-based setting while others engage community members in the field, thereby providing the MCP and provider entities with information that may not be collected in traditional settings.

Considerations for MCPs on CHW/Ps Collecting Data. Successful integration of CHW/Ps in health care and social service delivery requires MCPs, providers, and health systems to equip CHW/Ps with the appropriate tools to collect and analyze data, track improvements, and participate in the design and redesign of program measures. Research suggests that this level of integration leads to CHW/Ps' full participation on the care team, better job satisfaction, and more effective systems to best serve patients.[7] Put more simply, when CHW/Ps feel empowered to inform what data are being collected, help map data collection protocols, and lend their expertise in member screening processes, not only do they experience better job satisfaction, but such input from them leads to systems that better serve members.

MCPs have the option to either adopt their own CHW/P program, or contract directly with CHW/Ps, or partner with community-based organizations. Regardless, MCPs will need to assess what data are needed for the CHW/P role to be effective. Some questions to use when conducting this assessment include:

- What is the best method of data collection?
- What data are most important to support care coordination?

- How can effective data sharing from the health care setting back to the MCPs be facilitated via health information technology (HIT) or electronic health records (EHRs) systems?

First, MCPs should evaluate if there is sufficient infrastructure and resources to enable successful data collection and information sharing. MCPs also should determine which types of tools and resources are needed to support CHW/P programs. There are significant considerations for a statewide health and social data exchange, infrastructure, and tools to support the level of data collection and integration needed to achieve seamless information sharing between sectors. For CHW/Ps employed by CBOs, MCPs should develop protocols for data collection and reporting, such as using tablets or an app to feed this data back into the MCP reporting systems. For CHW/Ps who are embedded in a primary care setting and recording information through a patient portal, MCPs will need to consider how to extract the data from the primary care setting. MCPs will need to adopt health information exchange applications, discussed in detail later, to provide for successful data extraction and exchange. If an MCP is contracting with CHW/Ps, consider authorizing "read-only" access to EHRs to accelerate care coordination, highlight any red flags, and inform care delivery. In addition, MCPs should enable CHW/P feedback to influence the approach to risk management and seamless care coordination. CHW/Ps will have valuable information on data collection methods and tools — and MCPs should design a process to capture this feedback.

Because building trust is a critical component of the CHW/P–client relationship, CHW/Ps may want to know how the information they are collecting will be used by the member's care team. If a CHW/P is employed by an MCP or CBO, there are different considerations to maintain trust between CHW/Ps and those they serve. MCPs, CBOs, and other entities will need to develop privacy protocols about what is collected, to what extent, and how the information will be shared among the care team.

> *"Build the rapport [with the client] before you start asking questions. The quality of the information is going to depend on how much the patient trusts you."*
>
> *- CHW/P*

Information CHW/Ps Need to Engage Members. The most important consideration for CHW/Ps and the care team is meeting member's health and social needs by focusing on member-centered goals. MCPs and organizations that employ CHW/Ps should develop the role in a carefully planned manner to ensure that the right information is shared and available to meet the member's needs. If too little information is made available — often due to misunderstood HIPAA concerns — then the care team may miss out on CHW/P insights and feedback. If too much information is shared, there is a risk of "information overload" whereby CHW/Ps spend valuable time sifting through paperwork. The key marker for information that CHW/Ps need is related to the purpose of the interaction. If the purpose is to engage members, then accurate demographic information such as current address and phone number is most important. As referenced in the 5As framework, CHW/Ps can create a feedback loop and provide the MCP, CBO, and health care provider with data about community health.

In addition to research and input from project contributors, some of whom are CHW/Ps, a meeting was held in February 2021 to gather insights from a broader group of CHW/Ps on a range of topics. The following list was generated based on what CHW/Ps themselves indicated is useful in their work with members:

- **Results of the client's health assessment and their identified health goals.** The client's goals are of top priority to CHW/Ps, who frame the prioritization of their education and support around what is important to their clients. Results from health assessments, care planning with providers, or other resources that help to shape this picture are useful to the CHW/P in their interactions with clients. Similarly, information that they learn around a client's priorities and health goals, if not captured in previous assessments, can be useful to the rest of the integrated care team.
- **Demographic and health information about the client's community.** In many instances, CHW/Ps are from the communities they serve. While CHW/Ps have strong community ties, MCPs have access to sophisticated and highly informative data sets on the health of a given community. MCPs can contribute to CHW/P effectiveness by using this data to help target what type of interventions a CHW/P may want to offer their clients in that community.
- **Client history.** CHW/Ps want to be aware of what has been tried in the past and what worked or did not work with clients. CHW/Ps rely on MCPs and providers to share this information and other relevant claims/diagnosis-level information to support their work. For example, CHW/Ps may ask an individual with behavioral health needs questions about what medications they may take, if they have had any inpatient hospitalizations, and what outcomes or lessons they have learned. This helps CHW/Ps have background context while still letting the story come from the client themselves.
- **Client's access to resources.** While CHW/Ps are often in the best position to refer clients to resources and help them navigate these resources, it is also valuable to have advanced understanding of the resources, services, and needs that are already being accessed and hopefully met. While this type of social data is also difficult to capture, MCPs can provide tools, resources, and training to support the collection and upkeep of this information for all involved in a member's care.

Measuring Member Engagement In interviews with representatives from Inland Empire Health Plan (IEHP), a key outcome that relates directly to the CHW/P is the plan's engagement rate. Recent data show that IEHP's health home-eligible members who received a CHW visit in the hospital have a 38 percent engagement rate, which is significantly higher than the plan's traditional telephonic outreach.

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Collecting Social Determinants of Health Data. SDOH are the conditions in which people are born, grow, live, work, and age.[9] Research indicates that social, environmental, and behavioral factors have a bigger impact on health outcomes than medical intervention or genetics combined.[10] It is increasingly important for health care entities to document the SDOH in the communities they serve to provide better care for people with complex health and social needs. Addressing social determinants requires cross-sector collaboration in which partnerships extend beyond the health care system. Under an SDOH framework, care for members may involve linking them to services that are not delivered by health care providers. For example, while blood pressure screenings and medication management are critical factors to control high blood pressure, access to fresh foods and a walkable environment are other important factors. These types of coordinated efforts are critical to promoting health equity for vulnerable populations.

Standardized data collection on SDOH factors help health care entities identify the root causes of poor health in the community and target resources and interventions to address those needs. CHW/Ps can have a significant impact on addressing SDOH by helping vulnerable groups navigate complex health and social services programs and collecting SDOH data for use by MCPs, CBOs, and other human service organizations.

A host of tools and screenings are used to assess health-related social needs.[11] For example, the Patient Health Questionnaire-Anxiety and Depression Scale screening combines the PHQ-9 and Generalized Anxiety Disorders

surveys into a depression and anxiety screening tool.[12] The Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences (PRAPARE) screens for a range of social risk factors including income and housing instability[13]; the Hunger Vital Sign assesses food insecurity and hunger[14]; and the Hurt, Insult, Threaten, and Scream (HITS) instrument screens for interpersonal violence.[15] The Centers for Medicare & Medicaid Services (CMS) has also developed a comprehensive Standardized Screening for Health-Related Social Needs in Clinical Settings, which combines and adapts questions from the other screenings in one tool.[16]

MCPs conducting health risk screenings can utilize the CHW/P workforce either by direct contract or through an established CBO or human service agency to collect these data for both the plan and the provider — with the goal of addressing gaps in care and improving member health outcomes. These screening tools typically look at a variety of factors related to SDOH and health-related social needs, including language, housing status, education, employment, transportation, exposure to violence, and social integration, among other factors. However, regardless of the tool used, screening tools provide population data that can be used to inform the growth of CHW/P programs, population health programs, targeted community investments, new collaborations, and planning with payers and the state. Further, it is important for MCPs to collect Z-codes so that SDOH assessments can be used as part of risk adjustment and, ultimately, rate setting. Many SDOH screening tools "cross-walk" to Z-codes that are important for documentation.

Training on Data Collection. Before program implementation, CHW/Ps and stakeholders should identify the knowledge, skills, and abilities that would enable CHW/Ps to be successful at data collection and reporting. Through a series of CHW/P stakeholder convenings and interviews for this resource package, CHW/Ps expressed the need for adequate training and support in their data collection efforts while balancing any requirements for lengthy screenings with the other important roles they play in establishing trust and building relationships with their clients. In other words, while collecting member data is a crucial component of their work, it is one facet of a multidimensional role and should not interfere with the trust necessary for the CHW/P–client relationship. More information on training for both CHW/Ps and other members of the interdisciplinary team is addressed in a companion publication, *Resource Package #2: Training Approaches for Community Health Workers and Promotores to Support Medi-Cal Members.*

Technology Considerations. In considering how health care systems adapt to the changing dynamics of health and social service delivery, and the ongoing need to integrate health and social sectors, several important questions arise, including what kind of infrastructure is needed to facilitate such integration. The HIT and health information exchange infrastructure in California, as in most states, relies on a patchwork of disconnected systems

IMPaCT Model

The Penn Center for Community Health Workers is a national center of excellence with the mission to advance health equity through effective, sustainable community health worker programs. This center developed IMPaCT, a standardized, scalable program to implement CHW/P program and interventions across the country. The IMPaCT model uses HOMEBASE, a secure, cloud-based technology platform designed for CHW workflow and evaluation. This technology integrates with EHRs to pull real-time patient data such as hospital admissions. It also provides patient updates to other members of the care team and allows CHW/Ps to document patient interactions in an easy-to-use format. HOMEBASE includes automated reports that allow supervisors and directors to track Triple Aim metrics such as chronic disease control, patient satisfaction, and hospital admissions. Reports also include CHW caseload, frequency of contacts, and achievement of patient-centered goals.

and platforms, which impede meaningful, real-time data exchange between health entities and among health and social sectors.

Important efforts are underway in California to help state and regional stakeholders address the regulatory, policy, and technical challenges to create seamless data transfer between health and social sectors.[17] For the purposes of this resource package, this section will discuss at a high level how MCPs can integrate a CHW/P workforce into their HIT infrastructure. At a minimum, MCPs should consider using standardized tools and data collection methods, as well as platforms to connect CHW/P encounter data with members' EHRs. MCPs should consider how the CHW/P program tracks referrals to food assistance or housing services and the extent to which it has a process to document when members have received services to care to which they were referred to. The "closed-loop referral" process refers to the ability to send referrals to community organizations and to track referral outcomes. The ability of CHW/P programs to indicate when a referral has been "closed" is an important component of the technology infrastructure, tools, and platforms needed to integrate social care into the health care delivery system. Two examples for different integration technologies, HOMEBASE and Pathways Hub Model, can be found in the corresponding call out boxes.

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The Pathways Approach

One such model that integrates health and social sectors in "hubs" across the country is the Pathways Hub Model. The Pathways Community HUB 2.0 Model helps communities work together to support their vulnerable populations. This certified methodology has been endorsed for and utilized by MCPs to standardize quality measures for CHWs and to standardize outcomes for CHWs related to risk mitigation across clinical and social categories. The HUB acts as a community care coordination system focused on reducing modifiable risk factors for high-risk individuals and populations through the use of a community connected workforce including CHW/Ps, to connect members to needed health and social services—through an emphasis on closed loop referrals (ensuring members receive services to which they are referred) and through streamlined data collection, communication, and information exchange.

Evidence of CHW/P Programs in Improving Health Outcomes and Reducing Costs

CHW/P's Role in Improving Health Outcomes. CHW/Ps play an integral role in providing the care and resources needed to improve health outcomes for patients with complex health and social needs. MCPs may want to consider how to use CHW/Ps to improve measurement on existing quality metrics. For example, an MCP may want to focus on increasing well-child visits and rates of developmental screenings and engage the CHW/P program to work toward this aim. Because this goal is well defined, CHW/Ps are clear about what is being

measured and can direct their efforts toward this goal. In one example from Health Share, a coordinated care organization in Colorado, the plan analyzed data stratified by race, ethnicity, and language preference, and found that their rates of well-child visits plummeted after five years of age for culturally specific communities. To improve these rates, the plan collaborated with a culturally specific CHW/P to do outreach in the targeted community, specifically to engage adolescent girls and young women and reestablish their links to a primary care provider. After this outreach was piloted, well visits improved as a direct result of the CHW/P intervention.[19]

The previous example illustrates just one role CHW/Ps play — making connections to primary care. However, CHW/Ps can be employed in countless ways: to conduct outreach to individuals at high risk for poor outcomes, to support patient engagement in chronic disease management, to facilitate improved birth outcomes, to support behavioral health connections for individuals reentering the community following incarceration, and to conduct outreach to people experiencing homelessness.

Behavioral Health Integration Of the types of work that CHW/Ps are engaged in, it is useful to highlight their role in bridging the behavioral health sector with primary care delivery systems. The CalAIM members who will receive ECM and ILOS services are likely to have co-occurring behavioral health issues and chronic disease, making the support from a CHW/P even more crucial and invaluable.

"Patients with chronic multiple comorbidities [high blood pressure, diabetes] …we kind of want to monitor them just to make sure that they're managing and staying stable."

- CHW/P

Key Research Studies. A decisive body of research details the effectiveness of CHW/Ps in improving health outcomes and quality of care.[20] CHW/Ps' ability to build trusting relationships within the communities they serve and translate those needs to health care practices and systems is a critical component of their role in improving health outcomes. Findings from multiple studies clearly demonstrate that CHW/Ps can contribute significantly to improvements in members' access to and continuity of care; screening and other prevention activities; and adherence to treatment for various conditions and diseases.[21]

Lessons from the Field

LA Care found that when readmission rates at 6- and 12-month intervals from initial emergency department (ED) visits were examined, there was a statistically significant decrease in outpatient ED visits. At the same time, the plan found differences in the ED visits that result in hospital admissions. As the plan is looking further into the data, program leaders suspect that part of the progress is the work of CHW/Ps educating patients on ED decision making.

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There is continued interest in demonstrating that CHW/P programs generate cost-savings and an ROI. Exhibit 1 is a snapshot of key research studies confirming the value of CHW/P programs, their cost savings, and the associated ROI. This research spans decades of inquiry to measure and quantify CHW/P programs, and these efforts have resulted in improvements in study design and methods of evaluation, as noted by the Association of

State and Territorial Health Officials.[23] While not an exhaustive list, these studies are meant to provide MCPs information on the scope and types of research on CHW/Ps in improving health outcomes, reducing health care costs, and advancing health equity.[24] Further, MCPs, health providers, and CBOs can use this snapshot in the context of designing specific CHW/P interventions and programs and to address questions from chief financial officers or other stakeholders who may be unfamiliar with the widespread and continued evidence of CHW/Ps improving health outcomes and advancing health equity.

Exhibit 1. Key Research Studies Demonstrating the Value of CHW/P Programs
Prevention
Several studies of CHW/P programs have shown significant improvements in patients' use of prevention services, such as mammography and cervical cancer screenings among low-income and immigrant women.[25]
Chronic Disease Management
An evaluation by the Centers for Disease Control and Prevention (CDC) found strong evidence that integrating CHW/Ps as part of multidisciplinary teams improved health-related outcomes in people with chronic diseases.[26]
CHW/Ps also have had positive effects on chronic disease management and treatment adherence, including significant impacts on healthy food choices and increased physical activity among patients with diabetes, and clinical outcomes for diabetes, such as decreased hemoglobin A1C levels.[27]
A randomized control trial demonstrated that a standardized CHW/P intervention improved chronic disease control, mental health, quality of care, and hospitalizations for patients in underserved communities.[28]
In New York's childhood asthma program, over a 12-month period of care coordination, CHWs reduced asthma-related emergency room visits and hospitalization rates by more than 50%.[29]
Reduced Costs
A meta-analysis conducted by the Centers for Medicare & Medicaid Services (CMS) and Center for Medicare and Medicaid Innovation (CMMI) in partnership with RTI International found that CHW/Ps lowered total costs by $138 per beneficiary per quarter. Of six types of innovation components that researchers evaluated (i.e., used HIT, used CHWs, medical home intervention, focus on behavioral health, used telemedicine, workflow/process redesign intervention), only innovations using CHWs were found to lower total costs. [30]
Return on Investment (ROI)
Estimates from Molina Healthcare of New Mexico found that their CHW/P program saved an estimated $2 million in health care costs in one year across 448 patients, suggesting close to a 4:1 ROI.[31]
In Baltimore, African American Medicaid patients with diabetes who participated in a CHW intervention had a 40% decrease in ER visits, a 33% decrease in ER admissions, a 33% decrease in total hospital admissions, and a 27% decrease in Medicaid reimbursements.[32]
Workflow and Care Coordination
In delivery systems that utilized CHW/Ps, researchers found quantifiable impacts on workflow, with clinicians spending between 30% and 50% less time arranging and coordinating social services and referrals.[33]
Cultural Shifts in Provider Attitudes
The same analysis found a shift in provider attitudes and increased respect for the CHW/P role. Providers noticed CHW/Ps' ability to build trust and identify and respond to patient needs, amounting not only to many providers becoming champions for CHW/Ps, but to a widespread cultural shift within some organizations.[34]
Advancing Health Equity

A report by Families USA analyzed nine Patient-Centered Outcomes Research Institute (PCORI) studies of CHW/Ps and found that, across health care settings and conditions, CHW/Ps advanced health equity in diverse communities by empowering clients to increase their self-efficacy and by building trust in health care system, and.[35]

CHW programs for which the return on investment has been calculated fall in the range of savings or returns of $2.28 to $4.80 for every dollar spent on CHWs.[36]

Metrics for CHW/P Programs

While there are currently no standard clinical quality measures specific to CHW/P activities, conducting a program evaluation can aid in measuring the impact of CHW/P programs and help improve quality of care.[37] There are promising models, however, to create standard methodology. The Pathways HUB model standardizes quality measures and outcomes for CHWs related to risk mitigation across clinical and social categories.[38] The growing interest in developing standard quality metrics will help states, health systems, payers, providers, and CBOs measure the impact of CHW/P programs, not only at the health care system level or the member level, but at the community level.[39]

Lessons from Whole Person Care: Understanding Program Goals

As new state programs are rolled out, it is important to understand the underlying goals that the state will use to determine success. For example, the overarching intent of Whole Person Care (WPC) is the coordination of health, behavioral health, and social services in a person-centered approach, with the goals of improved beneficiary health and well-being through more efficient and effective use of resources. By including CHW/Ps in their approach, MCPs can demonstrate that the workforce selected will help achieve the programmatic goals set by the state. A report developed by UCLA indicates that 19 out of the 26 WPC counties incorporated CHWs in their approach to care.

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Quantitative Measures to Evaluate CHW/P Programs. Metrics established before the launch of a program and adapted over time enable plans and providers to measure quality, evaluate the program, and identify and close gaps in care. Examples of outcome measures, as seen in Exhibit 2, include percentage of member engagement, completion of closed-loop referrals, and supervisor feedback.

Exhibit 2. Sample CHW/P Program Measures[41]	
Category	**Measures**

Health-Related Services	▶ # of clients enrolled ▶ # of patients served ▶ # of appointments made ▶ # of CHW visits
Referrals	▶ # from primary care providers ▶ # from hospital/discharge ▶ # from hospital/ED ▶ # to CBOs ▶ # to social service agencies
Education and Support	▶ # of group sessions ▶ # of individual sessions ▶ % patient completion rate in educational series on diet, smoking, exercise, etc. ▶ Behavioral health assessment and support
Satisfaction	▶ Patient satisfaction surveys ▶ Willingness to recommend family or friends
Clinical Indicators and Population Health	▶ Blood glucose levels ▶ Blood pressure ▶ BMI ▶ Increase in post-hospital primary care
Cost-savings	▶ Decreased ED visits ▶ Decreased admissions ▶ Decreased readmissions ▶ Total cost per member of the population served

Qualitative Measures to Evaluate CHW/P Programs. The principle of "no stories without data, and no data without stories" is well suited when evaluating CHW/P programs.[42] As experts in their field, CHW/Ps amass extensive qualitative data — clients' self-reported health status; stories from family members about how things are going with one of their clients who they have not been able to reach; stories from friends at a house of worship letting them know a client of theirs is isolated at home with a new baby; and countless other anecdotes culminating in a rich picture of a client's life and family circumstances. During interviews for this resource package, several current and former executives at MCPs indicated that while empirical evidence is important, many times, when making the case for investing in a CHW/P program, members' stories truly showed the value of the program and were a decisive factor in agreeing to invest.[43] MCPs can use focus groups with CHW/Ps to capture this qualitative data.

CHW/P program success largely depends on their ability to establish and maintain trusting relationships with members of the community. Therefore, qualitative metrics such as surveys and stories help provide a fuller picture of program impact.

Collaboration with Partner Organizations

Designing and implementing a CHW/P program will require MCPs to collaborate with multiple partners whether through CBOs, directly as employers, or through hybrid approaches. MCPs can identify opportunities to leverage the skills and assets of external organizations such as providers, health systems, CBOs, training organizations, and state and county authorities. Based on their unique experience, these organizations can lend specific expertise and enhance the MCP's efforts to collaborate with CHW/Ps on data collection and outcome measurement.

MCPs — along with partner organizations — should develop a shared agenda and shared goals. There should be a process to convene a diverse set of stakeholders in meaningful collaboration to set mutual goals about community health, data collection and program measurement, and sharing data transparently to support ongoing improvement.

Here are some key areas for MCPs to address as they collaborate with partners to develop CHW/P roles in data collection and outcome measurement:

- **Partnering with CBOs.** A host of organizations have tailored frameworks for working collaboratively with CHW/Ps to design effective program evaluation tools.
- **Coordinating across systems.** There will be a tremendous need to partner with new stakeholders and engage in new conversations about the need to support integrated care through data sharing and information exchange. These additional partnerships will require MCPs to develop trusting relationships with all the health and social service entities that interface with members.
- **Convening partners.** Bringing like-minded partners with similar goals together to collectively address member needs and determine a framework for standardized screening tools, assessments, and performance metrics may support even more detailed evidence of CHW/P efficacy.

Common Indicators Project

Based on the need to develop a common set of criteria to measure CHW/P programs, the Michigan CHW Alliance (MiCHWA) created a common set of evaluation indicators and measures to understand the unique contributions of CHWs to successful program outcomes and their added value to health care and human services systems. This initial goal led MiCHWA to combine efforts with Oregon and other states to establish the national CHW Common Indicators (CI) Project.

The goal of the Common Indicators Project is to develop and adopt — through a collaborative and informed process — a core set of common process and outcome constructs and indicators for CHW/P programs. Ancillary goals include raising awareness of CHW/P programs and functions, promoting sustainable funding models, maintaining CHW/P involvement in the integrity of the measurement process, and contributing to growing the grassroots CHW/P programs. Their early findings can be seen in the Resources and Tools section.

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Infrastructure Barriers and Solutions

Insufficient Health Information Exchange

Manatt Health Strategies developed the CalAIM Data Exchange Roadmap, which describes seven "use cases" that define information system requirements and data sharing activities that are necessary to enable ECM and ILOS.[45] Many ECM and ILOS participants including providers, human service agencies, county agencies, CBOs, and MCPs do not have information technology capabilities needed to support cross-sector data exchange.

Here are key considerations gleaned from the Data Exchange Roadmap in the context of CHW/P programs:

- There is a widespread need for data standards, data sharing specifications, and technology infrastructure especially for housing, justice, and other social sector data. CHW/Ps are involved in each of these domains and can inform the standards and practices needed to build an integrated system.
- There are major challenges of interoperability and data sharing between health care and social care because of a lack of infrastructure and data collecting and data sharing standards among organizations.
- There is a risk of increasing health disparities by "exacerbating the digital divide and by codifying bias within health systems."[46]
- Despite the need for standardization, there are no agreed upon best practices for data sharing to integrate social care with health care.

While fully integrated, interoperable data systems are the goal, MCPs need to identify what reasonably works for them and their partners to: (1) report to the state; (2) identify and share key data to support the program; and (3) simplify the effort at the provider and care team level when possible. As ECM and ILOS are implemented by MCPs, they have an opportunity to reflect on previous data reporting efforts and identify opportunities to improve and streamline the data sharing workflow. Further, MCPs can consider the role that different components of the workforce/care team, specifically CHW/Ps, can play to enhance both data collection and sharing.

Inconsistent Data Infrastructure Across CBOs

CHW/Ps are employed by providers such as FQHCs, directly by MCPs, and with CBOs.[47] Significant variation exists among the technical infrastructure and data collecting capabilities within CBOs. Many CBOs are unfamiliar with health system information platforms and use a different rubric to evaluate their programs. It will be important for MCPs to support community partners and stakeholders to assess their data collection and information exchange capabilities and leverage resources to address the gaps in infrastructure, tools, and platforms. Seamless data transfer between health and social sectors, including CBOs, will require new investments and resources. Few CBOs will have the ability to interface with various health system technology infrastructure, products, and tools. There will need to be deliberate considerations about how to create new opportunities for CBO and health sector collaboration.

Lack of Standard SDOH Data Collection Measures

In a systematic analysis of the types and tools used to measure SDOH factors, researchers found that while numerous SDOH measurement resources exist, there is wide variation on the SDOH categories being used and no consensus on a standard set of indicators.[48] Because ECM and ILOS services are rooted in the social and behavioral needs of members, it will be important for stakeholders to engage in a process to standardize SDOH. MCPs have expressed the need to standardize SDOH data collection and get these data into data sets MCPs can use. In thinking about the ECM target population, one plan expressed the need to match potentially eligible members to the right providers and programs: "…the more information MCPs have about their members [such as SDOH information] and the more successful we are in getting that data and using it to match members to the right program, the better likelihood that members will agree to engage in the program and services."[49] The

integrated care team, and CHW/P in particular, is a key component in assessing members' needs; it should be supported with tools and training to operationalize a better understanding of this aspect of member care along with standard screening tools and methods of data collection on health-related social needs.

Concerns Around Privacy and Consent

There are significant considerations concerning data integration and information sharing, and the underlying patchwork of federal and state laws governing privacy. The CalAIM initiative will require substantial abilities for various health and social service entities — housing, substance use programs, programs for justice-involved people — to share data seamlessly.

Existing Federal and State Privacy Regulations

Physical health information exchange is subject to HIPAA, which envisions disclosures of protected health information between "covered entities" that include health care providers and payers.

Federal rules including 42 C.F.R. Part 2 and state rules including the California Health & Safety Code 11845.5 regulate certain forms of behavioral health data with narrower allowances for data sharing that require more rigorous patient consent.

Homeless Management Information Systems (HMIS) data is subject to the Housing 2004 HMIS Data and Technical Standards, which permits disclosure of data only among housing agencies.

Integrated care and the need for data exchange among these entities will require a state effort to update privacy and consent laws and regulations. Many CBOs and social service organizations involved in data sharing will need technical assistance and training on informed consent for individual member interactions and larger data sharing arrangements and agreements that will support bi-direction flow of information. For example, 42 C.F.R. Part 2 protects patient information regarding health records as it pertains to substance use disorder . Under this rule, patient information cannot be exchanged without patient consent except in limited circumstances.[50] Therefore, there are specific challenges integrated health and social sectors with respect to the specific federal regulations governing the treatment of substance use disorder.

Findings from the Manatt Health Strategies, CalAIM Data Exchange Roadmap, policy makers and a range of stakeholders — MCPs, CBOs, health and social entities, justice-related entities — will need to participate in an overhaul of privacy and consent requirements within the context of ECM and ILOS and the transition to integrated health and social care.[51]

Lack of Standardized Evaluation Measures

While there has been tremendous progress documenting the numerous positive outcomes of CHW/P programs and interventions, the lack of standardized measures to assess CHW/P programs has made it challenging to aggregate data across health care entities, systems, and regions. The Patient-Centered Outcomes Research Institute indicates that "despite evidence of CHWs' effectiveness, three factors impede widespread engagement of CHWs in clinical care and research: (1) a lack of understanding of CHWs' unique contributions to clinical care; (2) a lack of common indicators to measure CHW program effectiveness; and (3) inconsistent involvement of CHWs in all phases of research." [52] In addition, because CHW/Ps perform multiple roles in tandem — educator, health coach, and health and social system liaison — it is challenging to disaggregate these roles and evaluate just one component of this complex and multidimensional role.

While measuring the impact of CHW/P programs is important, it is crucial to make the distinction between health system performance and community health performance; that is, while it is imperative that our health and social systems become fully integrated, and that data can drive the ability to track that performance, community health indicators have tremendous value to health systems in general and CHW/Ps more specifically. Further, health systems are designed to understand direct value of interventions; however, MCPs and other health entities should acknowledge that indirect value of improved community health. While it is difficult to isolate and measure, it is still a valuable consideration.[53]

Resources and Tools

This section of the resource package contains practical resources and tools provided by project contributors or collected from subject matter experts in the field and across other states. Please note that this is not inclusive of the resources cited throughout this resource package, which can be found in the endnotes. This section contains links to publicly available resources as well as internal documents that provide practical examples to inform other programs. The materials were shared by a variety of stakeholders; please cite materials appropriately if you use these tools in your own programs.

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CHW/P Program Design

RESOURCE	BRIEF DESCRIPTION
Integrating Community Health Workers on Quality Improvement Teams: Lessons from the Field	This report, created by Health Leads, demonstrates how to equip CHWs with the tools to collect and analyze data, design and track improvements, and ensure stronger integration onto care teams.
Community Resource Referral Platforms: A Guide for Health Care Organizations	This report, developed by Social Interventions Research and Evaluation Network (SIREN) researchers, is a guide to safety-net health care providers regarding the current landscape of these community resource referral technology platforms.
CHW Common Indicators Project: Proposed Indicators for Priority Constructs	This draft list, developed by the Common Indicators project, is a set of evaluation indicators and measures to understand the unique contributions of CHW/Ps to successful program outcomes.
CHW Common Indicators Project: Full List of Recommended Constructs with Definitions	This draft list, developed by the Common Indicators project, includes a list of process and outcome construct along with definitions for programs to use to evaluate CHW/Ps.
Addressing Health-Related Social Needs among Medicaid Beneficiaries: Mapping Cross-Sector Partnership Roles	This framework was developed to support managed care organizations, health care providers and community partners in mapping potential cross-sector partnership roles for addressing health-related social needs based on the relative strengths of each partner.

SDOH Screening Tools

RESOURCE	BRIEF DESCRIPTION
Standardized Screening for Health-Related Social Needs in Clinical Settings: The Accountable Health Communities Screening Tool	This paper from CMS describes the considerations and processes that shaped the screening tool, including the component questions.

Evaluation of CHW Job Performance

RESOURCE	BRIEF DESCRIPTION
Rubric for Assessing Community Health Workers Providing Direct Client Services (PDF)	This rubric was developed by City College of San Francisco's Community Health Worker Certificate Program.
Rubric for Evaluating Agency Support for CHWs (PDF)	This is a draft rubric for assessing how well organizations support the success of CHW employees developed by the City College of San Francisco.
Building a Community Health Worker Program: The Key to Better Care, Better Outcomes, & Lower Costs	This toolkit, developed by the American Health Association and the National Urban League, is intended to help administrative and clinical leaders across the United States evaluate CHW programs.

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-CHCS team

Evidence of CHW/Ps Improving Health Outcomes

RESOURCE	BRIEF DESCRIPTION
Community Health Workers Improve Mental Health Outcomes	This resource from MHP Salud explains how CHW/Ps improve mental health outcomes.
Community Health Workers: Key Partners in Improving Children's Health and Improving Inequities	This brief from Families USA highlights the value of integrating CHWs into maternal and child health care delivery to effectively address a range of health care concerns and conditions for children and families.

Return on Investment

RESOURCE	BRIEF DESCRIPTION
Community Health Worker Impacts Estimator Tools: Asthma and Diabetes	These Interactive CHW Impact Estimator Tools, developed by Families USA, are customizable and will provide estimates on a wide range of budget, quality, and impact measures, including ROI and social impact.
ROI Educational Tool	This toolkit, developed by MHP Salud, was designed to help you figure out the ROI of a CHW program unique to your organization.
Community Health Workers and Medicaid Managed Care in New Mexico	This study, conducted by the University of New Mexico, found that CHWs as part of Medicaid managed care that provided supportive services to high resource-consuming enrollees improved access to preventive and social services and reduced resource utilization and cost.

[1] *California Advancing and Innovating Medi-Cal*, Department of Health Care Services, 2021.

[2] https://www.chcf.org/wp-content/uploads/2021/02/CHWPsFutureMediCalRsrcPkg1RoleCHWPsHCDeliveryMembers.pdf

[3] National Academies of Sciences, Engineering, and Medicine. 2019. Integrating Social Care into the Delivery of Health Care: Moving Upstream to Improve the Nation's Health. Washington, DC: The National Academies Press. doi: 10.17226/25467. https://www.ncbi.nlm.nih.gov/books/NBK552593/#sec_005

[4] National Academies of Sciences, Engineering, and Medicine. 2019. Integrating Social Care into the Delivery of Health Care: Moving Upstream to Improve the Nation's Health. Washington, DC: The National Academies Press. doi: 10.17226/25467. https://www.ncbi.nlm.nih.gov/books/NBK552593/#sec_005

[5] National Academies of Sciences, Engineering, and Medicine. 2019. Integrating Social Care into the Delivery of Health Care: Moving Upstream to Improve the Nation's Health. Washington, DC: The National Academies Press. doi: 10.17226/25467. https://www.ncbi.nlm.nih.gov/books/NBK552593/#sec_005

[6] National Academies of Sciences, Engineering, and Medicine. 2019. Integrating Social Care into the Delivery of Health Care: Moving Upstream to Improve the Nation's Health. Washington, DC: The National Academies Press. doi: 10.17226/25467. https://www.ncbi.nlm.nih.gov/books/NBK552593/#sec_005

[7] Health Leads, Integrating Community Health Workers on Quality Improvement Teams: Lessons from the Field Accessed at: http://healthleadsusa.org/wp-content/uploads/2020/01/Integrating-Community-Health-Workers-on-Quality-Improvement-Teams-Final.pdf?pdf=Download-Report

[8] Jim Lloyd, Rachel Davis, and Kathy Moses, *Recognizing and Sustaining the Value of Community Health Workers and Promotores*, 2020 Accessed at: https://www.chcs.org/media/CHCS-CHCF-CHWP-Brief_010920_FINAL.pdf

[9] https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-health/interventions-resources

[10] http://files.kff.org/attachment/issue-brief-beyond-health-care

[11] Gottlieb LM, Wing H, Adler NE. A Systematic Review of Interventions on Patients' Social and Economic Needs. Am J Prev Med. 2017 Nov;53(5):719–729. doi: 10.1016/j.amepre.2017.05.011. Epub 2017 Jul 5. PMID: 28688725. Accessed at: https://pubmed.ncbi.nlm.nih.gov/28688725/

[12] https://www.ons.org/sites/default/files/PHQandGAD7_InstructionManual.pdf

[13] Developed by the National Association of Health Centers: https://www.nachc.org/research-and-data/prapare/prapare_one_pager_sept_2016-2/

[14] Hager, E. R., Quigg, A. M., Black, M. M., Coleman, S. M., Heeren, T., Rose-Jacobs, R., Cook, J. T., Ettinger de Cuba, S. E., Casey, P. H., Chilton, M., Cutts, D. B., Meyers A. F., Frank, D. A. (2010). Development and Validity of a 2-Item Screen to Identify Families at Risk for Food Insecurity. Pediatrics, 126(1), 26–32. doi:10.1542/peds.2009-3146. Accessed at: https://childrenshealthwatch.org/public-policy/hunger-vital-sign/

[15] https://www.ncbi.nlm.nih.gov/books/NBK533715/table/appf.tab1/

[16] https://nam.edu/wp-content/uploads/2017/05/Standardized-Screening-for-Health-Related-Social-Needs-in-Clinical-Settings.pdf

[17] Link to Manatt Roadmap when published

[18] https://pchi-hub.com/

[19] Interview with an MCP

[20] Kim K, Choi JS, Choi E, Nieman CL, Joo JH, Lin FR, Gitlin LN, Han HR. Effects of Community-Based Health Worker Interventions to Improve Chronic Disease Management and Care Among Vulnerable Populations: A Systematic Review. Am J Public Health. 2016 Apr;106(4):e3–e28. doi: 10.2105/AJPH.2015.302987. Epub 2016 Feb 18. PMID: 26890177; PMCID: PMC4785041.

[21] Viswanathan, M. et al. (2009). Outcomes of Community Health Worker Interventions. Evidence Report/Technology Assessment No. 181. AHRQ Publication No. 09-E014. Rockville, MD: Agency for Healthcare Research and Quality.

[22] Interview with LA Care

[23] Association of State and Territorial Health Officials, Community Health Workers: Evidence of Their Effectiveness, Accessed at: https://www.astho.org/Programs/Clinical-to-Community-Connections/Documents/CHW-Evidence-of-Effectiveness

[24] Rosenthal EL, Brownstein JN, Rush CH, Hirsch GR, Willaert AM, Scott JR, Holderby LR, Fox DJ. Community health workers: part of the solution. Health Aff (Millwood). 2010 Jul;29(7):1338–42. doi: 10.1377/hlthaff.2010.0081. PMID: 20606185. Accessed at: https://pubmed.ncbi.nlm.nih.gov/20606185/

[25] Wells, K. J., Luque, J. S., Miladinovic, B., Vargas, N., Asvat, Y., Roetzheim, R. G., & Kumar, A. (2011). Do community health worker interventions improve rates of screening mammography in the United States? A systematic review. Cancer epidemiology, biomarkers & prevention: a publication of the American Association for Cancer Research, cosponsored by the American Society of Preventive Oncology, 20(8), 1580–1598. Accessed at: https://doi.org/10.1158/1055-9965.EPI-11-0276
[26] National Center for Chronic Disease Prevention and Health Promotion Division for Heart Disease and Stroke Prevention POLICY EVIDENCE ASSESSMENT REPORT | Community Health Worker Policy Components, Accessed at: https://www.cdc.gov/dhdsp/pubs/docs/chw_evidence_assessment_report.pdf
[27] National Center for Chronic Disease Prevention and Health Promotion Division for Heart Disease and Stroke Prevention, Addressing Chronic Disease through Community Health Workers Accessed at: https://www.cdc.gov/dhdsp/docs/chw_brief.pdf
[28] Shreya Kangovi, Nandita Mitra, David Grande, Hairong Huo, Robyn A. Smith, Judith A. Long, "Community Health Worker Support for Disadvantaged Patients With Multiple Chronic Diseases: A Randomized Clinical Trial," American Journal of Public Health 107, No. 10 (October 1, 2017): pp. 1660–1667. Accessed at: https://ajph.aphapublications.org/doi/10.2105/AJPH.2017.303985
[29] Paving a Path to Advance the Community Health Worker Workforce in New York State: A New Summary Report and Recommendation October 2011 Accessed at: https://nyshealthfoundation.org/wp-content/uploads/2017/12/paving-path-advance-community-health-worker-october-2011.pdf
[30] Health Care Innovation Awards (HCIA) Meta-Analysis and Evaluators Collaborative Annual Report Year 3 Prepared for Timothy Day Centers for Medicare & Medicaid Services Center for Medicare & Medicaid Innovation Accessed at: https://downloads.cms.gov/files/cmmi/hcia-metaanalysisthirdannualrpt.pdf
[31] D. Johnson; P. Saavedra; E. Sun; A. Stageman; D. Grovet; C. Alfero; C. Maynes; B. Skipper; W. Powell; and A. Kaufman. (2011). "Community Health Workers and Medicaid Managed Care in New Mexico." Journal of Community Health, 37:563–571. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3343233/pdf/10900_2011_Article_9484.pdf
[32] Fedder DO, Chang RJ, Curry S, Nichols G. The effectiveness of a community health worker outreach program on healthcare utilization of west Baltimore City Medicaid patients with diabetes, with or without hypertension. Ethn Dis. 2003 Winter;13(1):22–7. PMID: 12723008.
[33] Health Care Innovation Awards (HCIA) Meta-Analysis and Evaluators Collaborative Annual Report Year 3 Prepared for Timothy Day Centers for Medicare & Medicaid Services Center for Medicare & Medicaid Innovation Accessed at: https://downloads.cms.gov/files/cmmi/hcia-metaanalysisthirdannualrpt.pdf
[34] Health Care Innovation Awards (HCIA) Meta-Analysis and Evaluators Collaborative Annual Report Year 3 Prepared for Timothy Day Centers for Medicare & Medicaid Services Center for Medicare & Medicaid Innovation Accessed at: https://downloads.cms.gov/files/cmmi/hcia-metaanalysisthirdannualrpt.pdf
[35] Families USA, Advancing Health Equity Through Community Health Workers and Peer Providers: Mounting Evidence and Policy Recommendations November 2019 Accessed at: https://familiesusa.org/wp-content/uploads/2019/11/HEV_PCORI-CHW-Report_11-04-19.pdf
[36] Viswanathan, Meera, et al. "Outcomes and Costs of Community Health Worker Interventions: A Systematic Review." Medical Care, vol. 48, No. 9, 2010, pp. 792–808. JSTOR, www.jstor.org/stable/25750559. Accessed at: https://www.jstor.org/stable/25750559?seq=1
[37] *Community Health Worker Toolkit: A Guide for Employers*, Minnesota Department of Health Accessed at: https://www.health.state.mn.us/facilities/ruralhealth/emerging/chw//docs/2016chwtool.pdf
[38] Interview with Heidi Arthur. More information on Pathways Hub Model here: https://pchi-hub.com/
[39] Agarwal, S., Sripad, P., Johnson, C. et al. A conceptual framework for measuring community health workforce performance within primary health care systems. Hum Resource Health 17, 86 (2019). https://doi.org/10.1186/s12960-019-0422-0 Accessed at: https://human-resources-health.biomedcentral.com/articles/10.1186/s12960-019-0422-0#citeas
[40] https://healthpolicy.ucla.edu/publications/Documents/PDF/2019/wholepersoncare-policybrief-sep2019.pdf
[41] Adapted from: https://www.aha.org/system/files/2018-10/chw-program-manual-2018-toolkit-final.pdf
[42] https://catalyst.nejm.org/doi/full/10.1056/CAT.17.0364
[43] Interviews with MCPs in three states
[44] https://www.michwa.org/news/common-indicators-project
[45] file:///C:/Users/abenyo/Downloads/Manatt_Presentation___CalAIM_Data_Exchange_Roadmap_02.26.21%20(1).pdf
[46] file:///C:/Users/abenyo/Downloads/Manatt_Presentation___CalAIM_Data_Exchange_Roadmap_02.26.21%20(1).pdf
[47] The Role of Community Health Workers and *Promotores* in Health Care Delivery for Medi-Cal Members Accessed at: https://www.chcs.org/resource/the-role-of-chw-ps-in-health-care-delivery-for-medi-cal-members/
[48] Renee Roy Elias, Douglas P. Jutte, Alison Moore, "Exploring consensus across sectors for measuring the social determinants of health" SSM - Population Health Accessed at: https://www.sciencedirect.com/science/article/pii/S2352827319300394?via%3Dihub#
[49] Interview with LA Care
[50] 42 CFR Part 2
[51] Manatt
[52] https://www.pcori.org/research-results/2020/national-community-health-worker-patient-centered-outcomes-collaborative
[53] Interview with a former MCP executive from Oregon