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Mansoorah Kermani  
mansoorah.kermani@yale.edu

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**Exploring Health Equity in Global Community Health Worker Compensation with CFIR analysis**

Mansoorah Kermani

A Thesis Submitted in Partial Fulfillment of the Requirements  
for the Degree of Master of Public Health  
2024

Department of Social and Behavioral Sciences  
Yale School of Public Health

Primary Advisor: Dr. Debbie Humphries  
Secondary Advisor: Dr. Katie Wang

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## **Abstract**

### *Introduction*

Equitable compensation of community health workers (CHWs) is fundamental to sustaining and maximizing the impact of CHW interventions worldwide. Despite their pivotal role in promoting health equity especially among underserved populations, CHWs often encounter inadequate and inconsistent compensation, undermining the sustainability and effectiveness of their efforts. This review delves into various CHW compensation models and implications that may improve CHW compensation and performance across diverse patient populations.

### *Methods*

Employing the Consolidated Framework for Implementation Research (CFIR), this review systematically examines empirical literature to examine six different compensation models: alternative payment methods (value-based, capitation, and shared savings), grant-based, public sector or governmental, volunteer-based, and Medicaid. Through comparative analysis and the CFIR framework constructs, the study assesses factors influencing CHW effectiveness under each compensation model and their potential impacts on global health equity. The analysis focuses on understanding the dynamics between compensation mechanisms, community needs, health system infrastructure, and funding sources to identify actionable insights.

### *Results*

The impacts of CHWs on health equity is heavily contingent upon context-specific elements such as community needs, health infrastructure, and funding mechanisms. While grant-based models exhibit promise in increasing access and outcomes in underserved regions, their efficacy is impeded by sustainability issues, consistently affecting CHW retention and service delivery. Volunteer models, though beneficial for community engagement and operate on intrinsic motivation, often result in CHW burnout and inconsistent participation. This study identifies financial security, motivation, public recognition of work, and community trust as critical mediators between CHW compensation models and CHW sustainability.

### *Conclusions*

The compensation of CHWs is an important global issue for advancing health equity across all populations. Policymakers and program designers must consider the intersectional impacts of different compensation strategies to effectively support CHWs, ensuring their ability to contribute to the sustainable and equitable delivery of health services.

## Introduction

### *Community Health Workers (CHWs) in a Global Setting: Universal Health Coverage and Financing CHWs*

The definition of a community health worker as well as name of the role varies widely globally across different healthcare systems that employ community health worker programs with different community needs, priorities, and niches that can be addressed by trained local health workers that have been labeled as community health workers.<sup>1,2</sup> These differences in CHW roles play a large role in their financing across global health systems. The American Public Health Association (APHA) as frontline health workers that connect people with needed health and social services in their communities and address the social determinants of health and inequities experienced by their clients.<sup>3</sup> CHWs, although thought to be cost-effective solutions to problems in low-resource settings, are relevant to higher-resource setting and are making important contributions to health needs, particularly for chronic disease management and psychosocial support.<sup>4-6</sup> CHWs are a foundation for health systems in all countries regardless of socioeconomic status and health system sophistication to fully meet the health needs of populations they serve.

The global health community is guided by goals of achieving Universal Health Coverage (UHC) and ending preventable child and maternal deaths by 2030.<sup>6</sup> Achieving these goals requires strengthened primary health care (PHC) which requires well-supported CHWs.<sup>6</sup> In 2019, the World Health Assembly urged member states to integrate CHWs within health systems and provide necessary support to deliver safe and high quality care.<sup>6,7</sup> In Pakistan, their version of community health workers (CHWs) are lady health workers (LHWs), who support Pakistan's primary health concerns of maternal mortality and women's health issues.<sup>8</sup> In India, trained volunteer female CHWs called ASHAs play a large role in health promotion in rural areas of India.<sup>9</sup> Uganda utilizes village health workers (VHWs), volunteer CHWs that deliver broad primary care throughout Uganda.<sup>10-13</sup> Volunteer programs in these countries, in addition to Afghanistan, Ethiopia, Indonesia, Kenya, and Nepal, may not provide any salary but volunteers usually receive other incentives such as social recognition to daily monetary or non-monetary rewards.<sup>13</sup> For example, India pays its 1 million ASHA workers US\$ 42-56 per month in addition to performance incentives.<sup>13,14</sup> The most highly paid CHWs outside of the US are Nigeria's community health extension workers (CHEWs) who receive \$281 per month and Iran's Behvarzs who receive US\$ 350 per month.<sup>13</sup> Evaluating these different programs is important to be able to analyze their effectiveness in relation to CHW compensation, identify areas of improvement, and inform future policy decisions.

Despite the work that CHWs and other similar, yet diverse health worker roles perform across global health systems, CHWs have long been subject to global debate about their compensation that threatens their performance and sustainability.<sup>15</sup> In low-to-middle income countries, there is a belief that CHWs are cheap solutions to temporary problems, such as infectious disease epidemics, that will not be needed once there are more health services available in the region.<sup>6</sup> CHWs are not only helpful in closing temporary disease gaps but also in maternal and child health, HIV management, TB, and chronic diseases including hypertension, diabetes, mental illness, palliative care, and support for the elderly.<sup>6</sup> Additionally, CHWs are useful in rural areas where infectious disease is extremely prevalent and there is a lack of healthcare providers, making task-shifting to CHWs a valuable opportunity.<sup>16,17</sup> However, effective CHW programs are those that are scaled, which requires continuous funding for CHW payments, something that is currently lacking.<sup>6</sup>

Some argue that CHW programs in these settings are particularly unsustainable due to the fact that a large majority of them rely on foreign aid, crowding out domestic investment.<sup>18</sup> However, there is also evidence that developmental assistance helps contain the rise in out-of-pocket expenditures for clients, and that it actually crowds in domestic investment, indicating that developmental assistance is complementary to domestic investment.<sup>19</sup> Between 2007 and 2017, total developmental assistance targeting CHW projects was around 298.02 million USD, accounting for 2.5% of the \$209,277.99 million USD total developmental assistance for health.<sup>18,20</sup> Most of this assistance was prioritized to infectious diseases and child and maternal health.<sup>18</sup> The top three donors (82.1%) were the Global Fund to Fight AIDS, Tuberculosis and Malaria, the government of Canada, and the government of the United States of America.<sup>18</sup> Sub-Saharan Africa received a total US \$3 million, the largest per capita assistance over 11 years.<sup>18</sup> A study has estimated that deploying CHWs in rural areas of sub-Saharan African countries requires at least 2.6 billion United States dollars (US\$), funded either by national governments or donor partners or both (Lu et al., 2020).<sup>18</sup>

There is substantial evidence that CHWs can deliver a range of preventive, promotive, and curative health services that has been found to have a return impact of 10:1 due to reductions in morbidity and mortality, increase access to care, avoid high costs in high crises, and improved economic impact of increased employment.<sup>1,3,11,15,17,33-38</sup> A lack of adequate financing is one of the major stumbling blocks that keeps national CHW programs from reaching their full potential.<sup>34</sup> In 29 recently described national CHW programs, lack of financing, in addition to lack of supplies were the most common challenges.<sup>34</sup> Much existing funding supports vertical, disease-specific CHW programs despite strong evidence for the efficacy and cost-effectiveness of horizontal platforms that prevent work silos from forming.<sup>34</sup> Additionally, despite substantial evidence of limited funding available for CHWs globally, there is limited research on comparisons between payment models for CHWs and the underlying contextual factors influencing their successes and failures.

### *Community Health Workers (CHWs) in the United States: Challenges and Paths to Equity*

The United States is the only country where UHC, or a goal for UHC, does not exist.<sup>1,2</sup> Rather, there is a goal for health equity where every individual has a fair and just opportunity to attain their highest level of health.<sup>3</sup> Preventable differences in burden of disease or opportunities to achieve optimal health creates health disparities that threaten health equity.<sup>3</sup> Evidence shows that CHWs can remedy this, providing culturally tailored care to individuals within established healthcare service organizations and connecting them to resources that encourage continuity of care.<sup>13,20</sup> The utility of CHWs within the American health system include chronic disease management such as hypertension, diabetes, and obesity, but they are rising in relevance among all health sectors for their ability to strengthen connections between patients, their community, providers, and the overall health system.<sup>21</sup> In recent years, their utility in HIV care management has been of particular importance, due to HIV-related stigma impacting individuals willingness to seek care and CHWs ability to help people living with HIV (PLWH) and those vulnerable to HIV navigate the complexities of HIV care and offer psychosocial support.<sup>22,23</sup> The number of CHWs in the US is expected to increase 13% in the next decade, from 127,100 to 144,100 by 2029, a rate of growth much faster than the average for all US occupations (7.7%).<sup>4</sup>

Despite the high demand for CHWs across health sectors in the US, high employment turnover threatens the workforce. A 2021 estimate found that 12% of estimated CHW hired that years left CHW jobs, a rate higher than the 9.3% turnover for all other occupation in the US.<sup>4,5</sup> Turnover in the CHW workforce has been linked to short-term funding for CHW programs, low wages, and lack of recognition professionally and organizationally for work contributions.<sup>4</sup> CHW programs in the US have been traditionally funded through project grants, and as grant funding has decreased, the employment of CHWs is becoming unsustainable.<sup>4</sup> The median annual wage for CHWs is approximately \$42,000, which is almost \$10,000 less than the median wage for all other occupations.<sup>6</sup> Moderately higher wages have been found to improve worker satisfaction and retention whereas dissatisfaction, primarily driven by low wages, leads to higher turnover.<sup>4,7,8</sup> CHW turnover is a primary barrier to the continuous provision of services to populations with health disparities and access issues.<sup>9,10</sup>

CHW compensation has historically been below the national average salary, but after CHWs were designated in 2010 by the US Department of Labor Standard Occupational Classification (21-094) as a health profession in the Affordable Care Act, there has been more serious attention to their utility and to financing them sustainably, transitioning from temporary short-term project grant funding and fee-for-service (FFS) payments, to long-term, governmental models, primarily federal social insurances including Medicaid provided through the 11-15 waiver that utilize alternative payment models (APMs) which include value-based payment, capitation payments, and shared savings.<sup>24-26</sup> However, the CHW profession is not reimbursable under Medicaid, just the services they provide.<sup>24</sup> Some states provide CHW services through Medicaid managed care arrangements, including by adding requirements related to CHWs in Managed Care Organization (MCO) contracts.<sup>27</sup> Managed care refers to a health insurance approach that integrates financing of health care and the delivery of care to keep the costs of the purchaser to a minimum while delivering appropriate care for the population.<sup>28-30</sup> MCOs may choose to provide CHW services as value-added services even when they are not covered under the state plan or factored into the capitation rate.<sup>27,31</sup> Although there is a priority to increase the CHW workforce by 150,000 nationally per President Biden in 2021, there

is still continued reliance on grant funding as President Biden pledged to provide additional grant funding in addition to CHW services as optional benefits for states through Medicaid.<sup>32</sup>

Current literature reveals limited examination of health equity issues in the compensation of CHWs using evidence-based strategies. While there is recognition of the inherent problem in labeling CHWs as a ‘cost-effective’ solution, a label that may perpetuate inadequate compensation, this acknowledgement has not substantially progressed into deeper inquiry.<sup>6</sup> Although they have been developed to propose appropriate compensation rates for CHWs, there remains a significant gap in the analysis of health system factors.<sup>6</sup> Both upstream and downstream elements, often shaped by unavoidable resource limitations, are crucial as they can impede CHWs from achieving their full potential and utility within health systems.<sup>6</sup> Identifying system-wide factors that impact CHW compensation models universally can uncover patterns and inconsistencies that are vital for policymakers. This type of approach can facilitate a deeper understanding of the contextual elements and specific needs across countries but also highlights the necessity for varying payment structures. By learning from these analyses, policymakers can better design interventions that are tailored to the unique challenges and resources of each system, bridging the gap towards creating more optimized and equitable health systems.

### *The Consolidated Framework for Implementation Research (CFIR)*

The Consolidated Framework for Implementation Research (CFIR) is an equity-focused implementation theory used for evaluating the impact of health equity research in efforts to explore underlying disparities that exist within implementation of interventions.<sup>39,40</sup> The CFIR describes 39 constructs across five domains that determine implementation success: Intervention Characteristics, Outer Setting, Inner Setting, Characteristics of Individuals, and Process.<sup>39,41</sup> These characteristics can be used to evaluate the success of implementation of different interventions, including financial compensation models for CHWs. To analyze the implementation context of CHW compensation models, the Outer Setting, Inner Setting, and Intervention Characteristics are most relevant. The Outer Setting domain refers to the external factors that can influence the implementation of CHW compensation models, such as community norms and resources. The Inner Setting domain focuses on the organizational factors, such as leadership support and available resources within the healthcare setting. Lastly, the Intervention Characteristics domain examines the specific features of the compensation model itself, such as the amount and structure of the financial incentives provided to CHWs.

Applying the CFIR to analyze CHW compensation could provide a structured way to examine how these domains interact to influence CHW roles and efficacy within health systems utilizing different compensation mechanisms. For example, the Outer Setting may include the political and economic climate of a country which influences funding priorities and perceptions of CHW value, while the inner setting could address organizational structures and resources that directly affect CHW workflow.<sup>39</sup> The CFIR framework can help pinpoint critical areas for policy intervention and provide insight on how to sustainably integrate CHWs into health systems, ensuring they are not only recognized for their essential contributions but also are fairly compensated. This approach could encourage the design or revision of compensation models that align with both motivational needs and well-being of CHWs and also operational realities of global health systems, to inform more equitable CHW compensation models and payment systems overall.

There are different qualifications and barriers to reimbursement for CHW services in the United States.<sup>24</sup> Qualifications include tangible and intangible skills, context-specific skills, and certification and training.<sup>24</sup> Barriers to reimbursement include role confusion for CHWs, and this lack of understanding puts third party payers in a position where they decide to fund a profession within a role that is not clearly defined.<sup>24</sup> Another barrier is the undervaluation of CHWs; CHWs possess intangible skills that are not always recognized, which reduces their apparent value and unique role to members within the health system.<sup>24</sup> Furthermore, clashing with other health professions contributes to limited funding sources for CHWs.<sup>24</sup> The CFIR model can analyze these barriers more closely in the context of different health systems to study implementation success and points that can be improved. This has not been done before for global CHW compensation models and will glean insight into the functionality of the different ways CHWs are compensated.

## CHW Compensation Models

### **Grant-based model**

#### *Temporary nature and sustainability challenges*

Grant-based funding, which has traditionally supported many CHW programs, often lacks long-term viability, posing significant risks to the continuity of these initiatives.<sup>42</sup> The nature of such funding is evident in the experiences of CHW programs nationwide. Despite demonstrating positive outcomes, CHWs face potential termination due to the finite nature of grant allocations.<sup>43,44</sup> The transition of the Washington Heights/Inwood network for Asthma (WIN) program from grant dependence to sustainable funding via the operating budget of New York Presbyterian Hospital illustrates a successful shift towards more reliable support mechanisms after initial grant funding demonstrated substantial cost savings and improved care outcomes.<sup>43</sup>

#### *Federal and State Funding Mechanisms*

While federal block grants, such as those from the Department of Housing and Urban Development and the Administration of Children and Families, offer temporary support for CHW programs, they are not considered sustainable due to their dependence on continuous proposal submissions and Congressional appropriations.<sup>43</sup> However, the integration of CHW services into Medicaid 1115 waivers and demonstration programs signifies a progressive shift towards embedding CHW compensation within Medicaid funding streams, potentially offering a more stable financial framework.<sup>27,42</sup> This is supported by data from the Kaiser Family Foundation, which indicates that over half of the states have adopted Medicaid payment schemes for CHW services, showcasing a broader acceptance and institutionalization of CHWs in healthcare delivery models.<sup>27</sup>

#### *Diverse and Strategic Funding Approaches*

Adopting a blended funding strategy, as seen in FQHCs, can mitigate the financial instability typically associated with grant-dependent funding for CHWs.<sup>43</sup> These centers incorporate CHW costs into their total cost proposals for Medicaid, categorizing these expenses as part of “enabling services” under HRSA 330 grant funding, which includes additional support services like transportation and language assistance.<sup>43</sup> This funding approach diminishes the vulnerability of CHW programs to the whims of single-source funding, promoting a diversified and resilient financial base.<sup>43</sup>

### **Public sector model**

CHWs in some regions of the United States are compensated via Medicaid reimbursements as an alternative to grant-funded CHWs that pose a threat to sustainability of the workforce.<sup>45</sup> Medicaid is a specific program within the public sector. CHW programs funded by Medicaid financing are either paid for by fee-for-service (FFS) for visits between CHWs and patients, or capitation per-member-per-month (PMPM) payments to CHWs as part of a Medicaid managed organization for healthcare practice that has entered value-based payment models.<sup>42</sup> Many states now have Medicaid laws relating to CHW and payment, except for Florida, Louisiana, Tennessee, and Nebraska.<sup>3,42</sup> Laws provide workforce development funding for CHW training (Alaska, California, Illinois, Louisiana, Minnesota, Nebraska), supervision (Alaska), recruiting (California), and loan forgiveness (Louisiana).<sup>3</sup> Sixteen states had laws that provided funding mechanisms for CHWs engaged in specific activities, including mental and behavioral health, clinical trial recruitment, school-based services, maternal–child health, HIV/AIDS services, and education and health promotion.<sup>3</sup>

The public sector or models with public sector wage floors are noted to institutionalize CHW compensation within low-to-middle income countries.<sup>15</sup> Public sector models are more likely to be regulated under and benefit from minimum wage legislation and union-negotiated compensation agreements.<sup>15</sup> Countries that employ public sector models include China, Pakistan, Brazil, Rwanda, Swaziland, Kenya, and.<sup>15,46,47</sup>

## **Volunteer-based model**

The primary concern for the volunteer-based compensation scheme for CHWs is balancing the volunteer nature of the role with the need for sustainable support.<sup>48–51</sup> Typically, the CHWs are not salaried under the volunteer model but they may receive stipends, incentives, or reimbursements to cover operational costs such as travel and communication.<sup>12,48–52</sup> This approach both acknowledges their contributions and supports their expenses without establishing a formal salary structure, which makes the volunteer model complicated.<sup>20</sup>

Although it can enhance community engagement and lower costs, it often leads to burnout and inconsistent participation among CHWs. This model relies heavily on intrinsic motivation of volunteers, which can be compromised without proper incentives, leading to high turnover rates and less effective service provision.<sup>33,53,54</sup> Additionally, there is attrition associated with volunteerism that requires continuous recruitment and capacity building and may lead to impaired quality of care, which is something to consider before implementation.<sup>11,50,53,55,56</sup>

Incentive models are often performance-based for volunteer CHWs, linked to specific health outcomes or the number of activities performed. This method not only encourages CHWs to stay engaged but also aims to enhance the overall effectiveness of health initiatives.<sup>13,57</sup> Additionally, providing non-monetary benefits like training, certification opportunities, and pathways for career progression can further motivate CHWs and help them grow professionally.<sup>49–51,58,59</sup> Many low-to-middle income countries employ volunteer payment models for CHWs, causing dissatisfaction and threatening retention within CHW programs.<sup>3,9,11,13,15,33,46,49,50,53,60,61</sup> A shift towards incentive-based models and salaries is occurring in these regions with suggestions towards improving CHW livelihood as a mutually beneficial effort for health systems.<sup>11–13,15,20,50,52,53,55,61–64</sup>

## **Performance-Incentive Based (PBI) model**

Performance-Based Incentive (PBI) schemes for CHWs have shown varied effectiveness across different contexts. After the withdrawal of stipends in Kenya, CHWs faced increased financial burdens under a new pooled-group incentive model, which required personal contributions, exacerbating financial strain.<sup>65</sup> Effective incentives are categorized into financial, non-financial, health system, and community-level rewards, with discrete incentives such as payments, salaries, and promotions being central.<sup>13</sup>

Non-monetary incentives like public recognition and practical items (e.g., clothing) have been successful in India and Uganda, improving motivation and performance.<sup>63,66</sup> However, competitive social awards in Uganda led to poorer performance due to issues like favoritism and lack of transparency.<sup>67</sup> Delayed and irregular incentive disbursement further demotivates CHWs, negatively impacting care quality.<sup>33</sup>

Financial incentives are crucial for retaining healthcare workers in remote areas and significantly impacts job satisfaction and retention.<sup>52</sup> Additional benefits, such as health insurance and priority disease testing, improve job satisfaction and health outcomes.<sup>68</sup> Promoting community awareness of CHWs' roles can also enhance performance and retention.<sup>64</sup>

A well-structured and transparent incentive system that balances financial and non-financial rewards is critical for motivation and reducing attrition, as seen in studies indicating the importance of aligning incentives with CHWs' needs and context.<sup>11,55</sup> These insights underscore the need for careful design and management of incentive schemes to ensure they effectively motivate and retain CHWs, tailored to the specific needs and conditions of the workforce and community needs.

## **Alternative payment models**

*Value-based or Pay-for-performance (P4P) models*

These models link CHW compensation to achieving specific health targets and improving care quality, which encourages a focus on effective service delivery. For instance, some regions implement incentive payments that reward providers, and by extension CHWs, for meeting pre-established care and quality metrics, such as obtaining Patient-Centered Medical Home (PCMH) recognition.<sup>69</sup> However, in Tanzania, CHWs have shown a lack of preference for P4P over flat-rate schemes due to unfamiliarity with the P4P concept and inadequate performance appraisal systems, which often rely too heavily on referral counts as the sole measure of performance.<sup>56</sup>

#### *Capitation Payment Models*

These models involve a set fee per patient per period, covering all necessary services provided by CHWs. This approach simplifies funding streams and encourages the efficient allocation of resources by linking payment to patient outcomes rather than specific services rendered.<sup>70</sup> Molina Healthcare, for example, employs this model effectively, reporting a substantial return investment from CHW services and planning expansions into additional states.<sup>44</sup> This model also supports non-clinical functions such as care coordination across different settings, which is critical in managing care for patients with complex health needs.<sup>69</sup>

#### *Shared Savings Model*

Under the shared savings model, providers are rewarded for reduction in overall healthcare costs achieved through efficient care practices, which can include the work of CHWs.<sup>70</sup> Providers receive payments based on the savings generated, which can then be used to compensate HCWs, aligning their interests with those of the healthcare provider and incentivizing cost-effective care practices.<sup>70</sup> This model not only promotes financial sustainability but also supports equitable compensation for CHWs as they help achieve better health outcomes and reduce unnecessary healthcare utilization.<sup>69</sup>

## **Methods**

We employed a scoping review methodology integrated with the Consolidated Framework for Implementation Research (CFIR) to examine and categorize compensation models for CHWs as reported in the literature. This approach enabled a structured synthesis of the data to identify thematic patterns across different CHW interventions employing different payment models. A comprehensive literature search was conducted across Scopus, PubMed, Global Public Health, and Lancet Global Health. Our search strategy was designed to capture a broad range of articles discussing CHW compensation, focusing on details that focused on the implementation context and health outcomes of the various payment models.

The search yielded 176 articles, which were screened, and 67 full-texts were carefully reviewed for relevance based on inclusion criteria of including information on CHW compensation for a specific payment model and its implementation context. 51 studies were selected for inclusion within the analysis. Data from the selected studies were extracted and organized using an Excel matrix, which was designed to facilitate thematic synthesis of information according to CFIR constructs.

For the analysis, we selected specific CFIR constructs that were most informative for understanding the CHW compensation models: Relative Advantage within Intervention Characteristics, Implementation Climate within Inner Setting, and External Policy Incentives within Outer Setting. Key questions driving data collection are found below in Figure 1. Extracted data was synthesized to identify patterns and themes across the studies, to highlight critical factors impacting effectiveness and sustainability of global CHW compensation models. The full list of CFIR constructs, along with the detailed coding scheme, is provided in the appendix for reference.

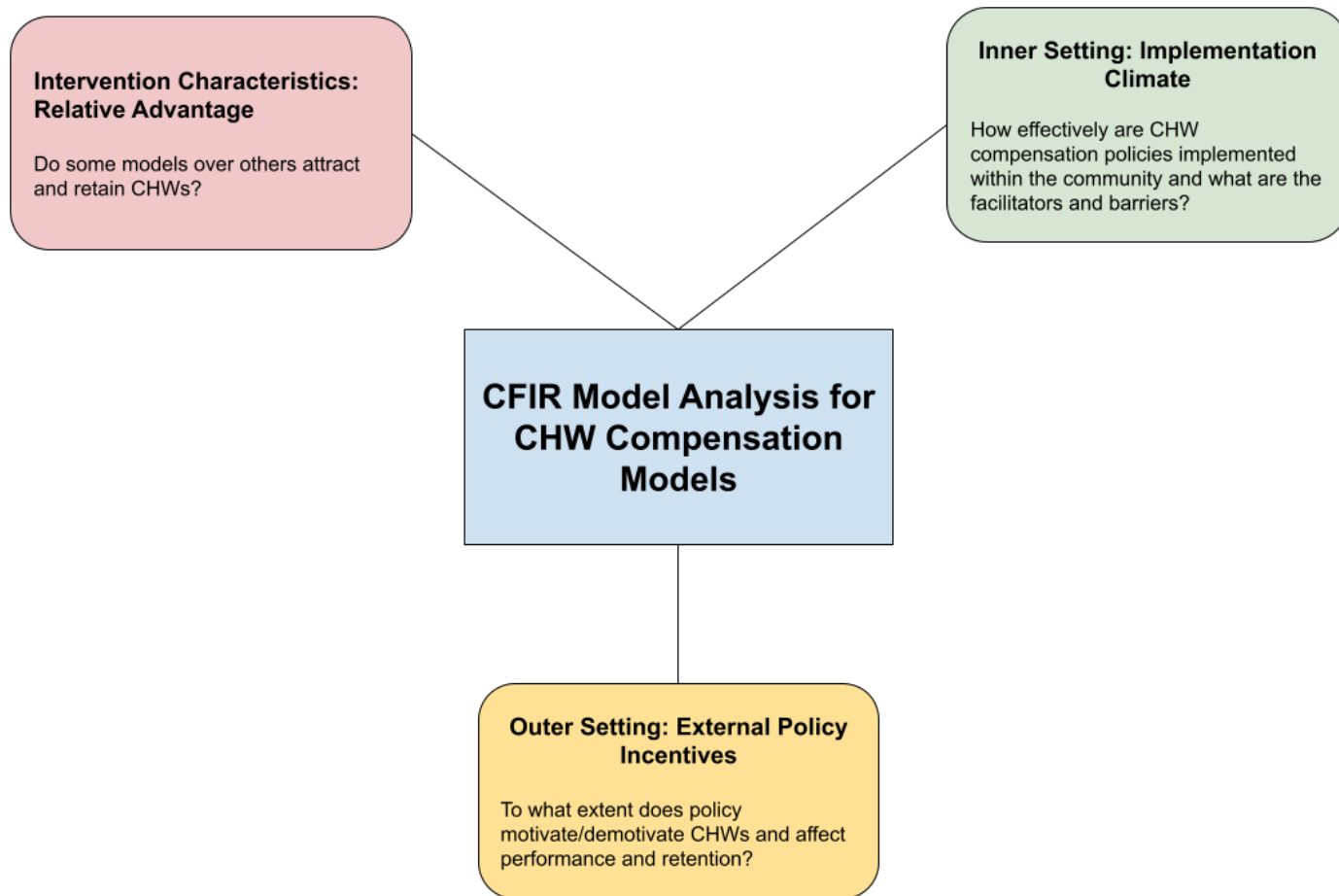


Figure 1. CFIR Model Analysis Questions for CHW Compensation Models.

## Results

The scoping review has identified diverse compensation models for CHWs, each with distinct impacts on healthcare delivery and CHW performance and retention. Constructs that yielded findings most relevant to health equity within CHW compensation were found within the following constructs: Relative Advantage within Intervention Characteristics, External Policy Incentives within Outer Setting, and Implementation Climate within Inner Setting.

CFIR construct	CHW Compensation Models					
	Alternative Payment Methods	Grant-based	Public sector or governmental	Volunteer-based	Performance-Based Incentive	Medicaid
Intervention Characteristics: Relative Advantage	<p>Value-based focuses more on quality than capitated does specifically or fee-for-service.<sup>4,2,69</sup></p> <p>Shared savings emphasizes saving money by maximizing quality of care, but not a focus on quality of care specifically as is the specific goal of value-based.<sup>25,26,69,70</sup></p> <p>Capitation models offer more flexibility than FFS models, allowing reimbursements for functions not yet defined as reimbursable for CHWs.<sup>24,69</sup></p>	<p>Allows establishment of CHW programs in early stages, but funding is temporary and unsustainable.<sup>3,2,4-26,42,45,51,71-73</sup></p>	<p>From 2007 to 2017, CHW projects received approximately \$5.3 billion in development assistance, primarily from the Global Fund, Canadian government, and the U.S. government.<sup>18</sup></p>	<p>Self-driven and usually want to work due to commitment to community, but salaried workers perform better overall and are more satisfied. However, it is attractive to authorities for a reduced fixed cost. Incentivized volunteers perform better than non-incentivized.<sup>13,60,61</sup></p>	<p>Data quality for health tracking is better for PBI as there is regular checking of work of CHWs, holding them accountable and allowed better way to identify community needs and impact of work; This allows flexibility in their work and stipend adjustments. Incentivized trainings allow continuous improvement of workforce.<sup>11-13,15,17,20,33,52,53,55-57,61,64,65,74,75</sup></p>	<p>States are increasingly incorporating CHW services into 11-15 waivers and demonstration programs, which helps direct Medicaid funds towards these services, offering a long-term funding source compared to temporary project grants.<sup>3,24,76</sup></p>
Outer Setting: External Policy Incentives	<p>Alternative payment models encourage lower costs and better quality and performance.<sup>69,76</sup></p>	<p>Government plan to increase CHW workforce by 150,000 and provide grant funding and CHW services benefit for states via Medicaid, states can</p>	<p>The majority (82.1%) of developmental assistance funding, or US\$ 4.35 billion, came from three primary donors: the Global Fund,</p>	<p>Govt. volunteer policies reviewed and accepted over years, need to be re-evaluated for equity for workers.<sup>53</sup></p>	<p>Policy makers recommended some form of context-specific compensation to retain CHWs. This could be in the form of regular pay, output-based reward, or</p>	<p>As of July 1, 2022, 29 of 48 states allow Medicaid payment for CHW services. Plans for FY 2023 include expanding coverage and collaborating</p>

		maximize the sustainability of CHWs by taking advantage of this and looking at revising regulations. <sup>32</sup>	the Canadian government, and the U.S. government. <sup>18</sup> Over the past decade, only 2.5% of this assistance has been directed to CHW programs and 2/3 of this is for controlling specific diseases. <sup>6</sup> Sub-Saharan Africa was the main recipient, receiving US\$ 3.72 billion, with the highest per capita assistance over the decade. <sup>18</sup> Funding primarily supported infectious diseases and maternal and child health projects. <sup>18</sup>		through community-based organizations; reduce dependency on outside /foreign. <sup>33,65</sup>	with stakeholders to increase CHW acceptance and numbers. <sup>27</sup>
Inner Setting: Implementation Climate	CHWs can help providers meet quality targets; providers can invest in CHWs and use the payments to sustain their positions. <sup>69</sup>	CHW services; grants are a <b>feasible</b> way to obtain funds. <sup>51</sup>	Perception that their salaries are <b>not sufficient</b> for the work that they do; work related expenses reduce net income. <sup>77</sup>	CHWs are happy to serve in their roles as volunteers but sometimes find it difficult to afford lifestyle and appreciate monetary and non-monetary incentives. <sup>15,33,53</sup>	High acceptance of monetary and non-monetary PBIs, motivating factor for CHWs, especially public recognition.	Sustainable option for CHWs, more incentives and professional recognition. However only in states where Medicaid is approved for CHW funding.

Table 1. CFIR analysis results for CHW compensation models for Intervention Characteristics: Relative Advantage, Outer Setting: External Policy Incentives, and Inner Setting: Implementation Climate

#### Intervention Characteristics: Relative Advantage

The Relative Advantage construct within the Intervention Characteristics domain of the CFIR describes stakeholder perceptions of the advantage of implementing the intervention versus an alternative solution.<sup>41,78</sup> Relative advantage must be recognized by all key stakeholders for effective implementation.<sup>78,79</sup> If users of an intervention perceive a clear advantage in effectiveness or efficiency of an intervention, the implementation is more likely to be successful (cfirguide).<sup>78</sup> In this context, Relative Advantage among different CHW compensation models can reveal facilitators

and disadvantages of the models in terms of adequate CHW compensation, which can highlight implications for health equity considerations.

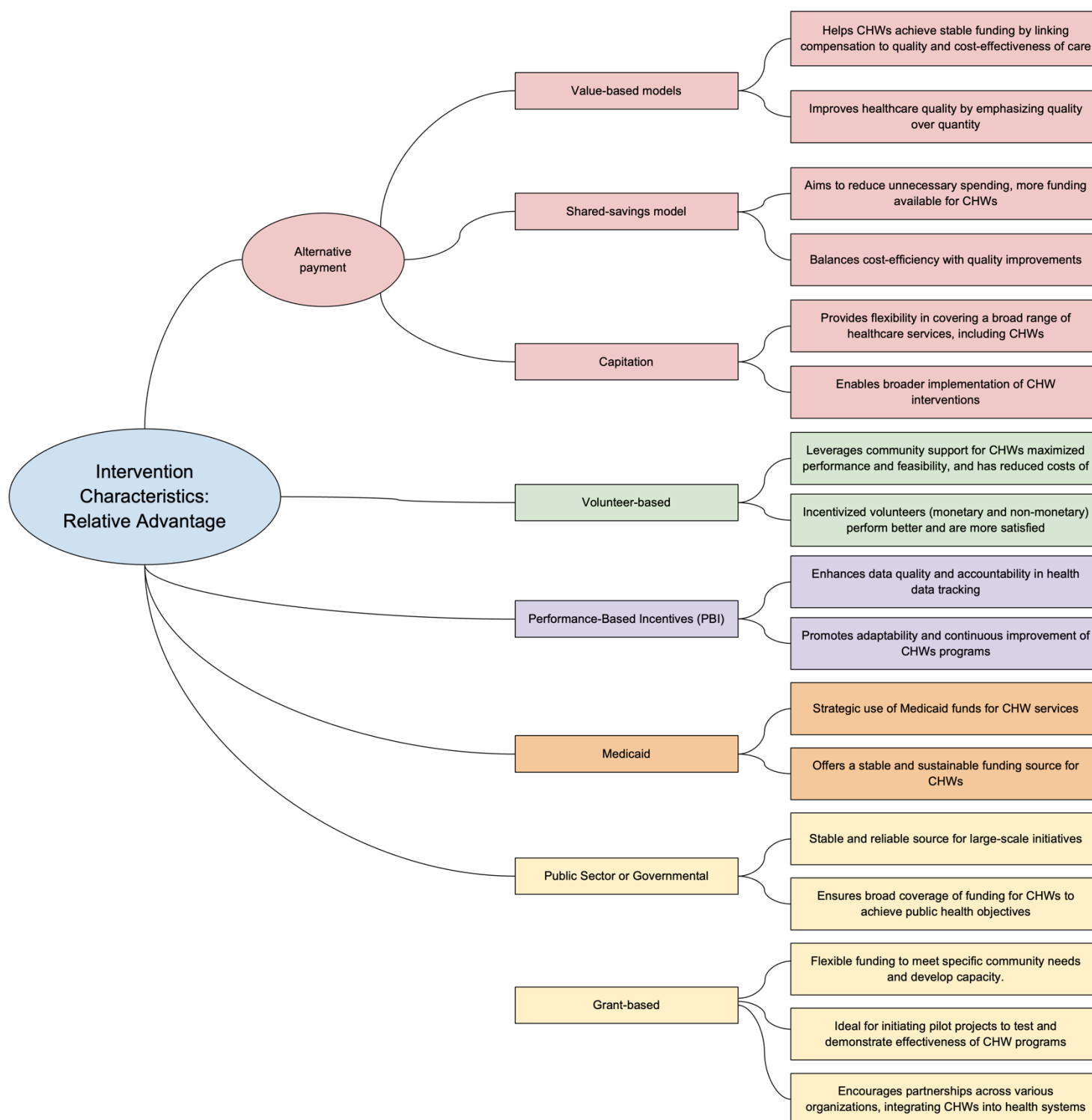


Figure 2. Comparative Mind Map of CFIR Component ‘Intervention Characteristic: Relative Advantage’ Across Six Different Compensation Models for CHWs

**Alternative payment models**

*Value-based models*

CHWs are well-accepted as they enhance care quality by improving patient adherence to care through community-based support. This is important for providers that want to improve patient outcomes and meet expectations of value-based criteria. Robust reporting and performance evaluations of value-based mechanisms for CHW compensation are needed to quantify impact.

*Shared-savings*

Shared savings models reward providers by allowing them to keep a portion of cost savings they generate for the system. CHWs contribute significantly to these savings through preventive care and patient education which reduces hospital visits and other medical costs. This model can motivate organizations to invest more in CHW programs as a cost-effective intervention.

*Capitation*

Capitation provides more flexibility compared to FFS by allowing payments to cover a broader range of healthcare services, potentially including innovative practices that are not traditionally reimbursable. This flexibility is advantageous for CHWs as it enables a broader implementation of health interventions.

**Grant-based**

Quick sources of funding that are flexible to community needs and capacity building, especially useful for pilot projects to demonstrate efficacy of CHW programs. Encourages collaboration between multiple organizations or sectors to integrate CHWs into broader health and social service networks

**Volunteer-based**

Volunteer systems leverage community involvement and reduced costs, making them attractive for budget-constrained environments. However, incentivized volunteers often perform better and are more satisfied than non-incentivized ones, suggesting that some form of compensation improves program effectiveness and CHW retention.

**Performance-Based Incentives (PBI)**

PBI enhances data quality and accountability in health data tracking by regularly evaluating the performance of CHWs. This model promotes adaptability and continuous improvement, offering a significant advantage in programs where ongoing assessment and responsive adjustments are crucial.

**Medicaid**

States are increasingly leveraging Medicaid 1115 waivers and demonstration programs to include services provided by CHWs. This strategic use of Medicaid funds not only directs more resources towards these essential services but also offers a more stable and sustainable funding source compared to more temporary nature of grant-based support. This approach enhances the feasibility of long-term health interventions, providing a reliable financial foundation that can promote broader implementation and potentially lead to systemic health improvements within underserved populations.

**Public Sector or Governmental Funding**

Public sector or governmental-led funding often provides a stable and reliable source of funding for CHW programs, particularly large-scale initiatives that require consistent support over long periods. The advantage of this model lies in its ability to sustain operations without the need for frequent re-negotiation of terms, unlike the grant-based or performance-based models that might depend on specific performance metrics or funding cycles. Also, government funding can mandate specific health services and ensure broad coverage, which is important in achieving widespread public health objectives particularly in low-resource settings. However, this type of funding may also come with more stringent bureaucratic requirements and less flexibility compared to models like capitation or value-based which could limit innovation in service delivery.

Outer Setting: External Policy Incentives

External Policy Incentives within the Outer Setting domain is a broad construct that includes external strategies to spread interventions including policy and regulations, external mandates, recommendations and guidelines, and collaboratives<sup>78,80</sup> Political directives are cited with strong evidence in increasing motivation, but not capacity, of organizations to implement interventions<sup>78,79</sup>



Figure 3. Comparative Mind Map of CFIR Component ‘Outer Setting: External Policy Incentives’ Across Six Different Compensation Models for CHWs

**Alternative payment models**

*Value-based models*

The policy incentives for integrating CHWs under value-based compensation models, such as those used by Medicare and increasingly favored in Accountable Care Organizations (ACOs). Benefits include improved

coordination and efficiency as well as financial alignment with broader healthcare goals that systems can incentivize CHWs for. Incorporating CHWs into ACOs can lead to more sustainable employment and career growth opportunities for CHWs.

#### *Shared-savings*

Under this model, providers receive payments on the basis of savings they have achieved or are expected to achieve. For example, under Centers for Medicare & Medicaid Services' Advance Payment Accountable Care organization Model, providers receive fixed and variable payments on the basis of expected costs. Under these models, providers can pay for CHWs with savings that CHWs can help achieve.

#### *Capitation*

Under capitation, healthcare providers receive a set amount of money per patient per period of time, regardless of how many services are provided, incentivizing cost-efficiency and preventive care. Capitation encourages providers to avoid costly interventions, which aligns with the preventive and community-focused role of CHWs. CHWs can help reduce the need for expensive healthcare services. Unlike fee-for-service models that depend on the quantity of care provided, capitation can offer more predictable revenue streams. This financial stability can support the sustainable employment of CHWs and encourage healthcare organizations to invest in the training and integration of CHWs into care teams.

#### **Grant-based**

A significant policy initiative by the Biden administration involves increasing the CHW workforce by 150,000 through grant funding and Medicaid benefits, which allows states to improve CHW sustainability by revising regulations.

#### **Public Sector or Governmental**

From 2007 to 2017, CHW projects received approximately \$5.3 billion in development assistance, primarily from the Global Fund, Canadian government, and the U.S. government. The aid focused on infectious disease

#### **Volunteer-based**

Government volunteer policies for CHWs have been in place for many years and require re-assessment continuously to ensure equity for workers.

#### **Performance-Based Incentives (PBI)**

Policymakers advocate for context-specific compensation strategies to retain CHWs, which could include regular salaries, output-based rewards, or support through community organizations, aiming to reduce dependence on foreign aid.

#### **Medicaid**

As of mid-2022, 29 of 48 states allowed CHW services to be covered by Medicaid. Plans for the following fiscal year of 2024 involve expanding this coverage and enhancing stakeholder collaboration to boost CHW acceptance and numbers.

Inner Setting: Implementation Climate

The Implementation Climate construct of the Inner Setting domain describes the capacity for change, shared receptivity of involved individuals to an intervention, and the extent that the intervention will be well-received within the organization<sup>78,79,81</sup> Climate can be assessed through tangible means such as policies, procedures, and reward systems<sup>76,77,79</sup> In the context of CHW compensation models, the implementation climate is most relevant in terms of acceptability and influencing factors of acceptability of the model by CHWs and payers within respective health systems.



Figure 4. Comparative Mind Map of CFIR Component ‘Inner Setting: Implementation Climate’ Across Six Different Compensation Models for CHWs

## **Alternative payment models**

CHWs can utilize APMs to sustain their positions by helping providers meet quality targets. This model supports direct investment in CHWs and can potentially provide a stable financial model where payment is aligned with performance and outcomes, enhancing job security and potentially leading to improved healthcare services.

### *Value-based models*

CHWs are well-accepted as they enhance care quality by improving patient adherence to care through community-based support. This is important for providers that want to improve patient outcomes and meet expectations of value-based criteria. Robust reporting and performance evaluations of value-based mechanisms for CHW compensation are needed to quantify impact.

### *Shared-savings*

Shared savings models reward providers by allowing them to keep a portion of cost savings they generate for system. CHWs contribute significantly to these savings through preventive care and patient education which reduces hospital visits and other medical costs. This model can motivate organizations to invest more in CHW programs as a cost-effective intervention.

### *Capitation*

Capitation models simplify billing and incentivize keeping the community healthy which aligns well with CHW preventive role. Capitation can provide stable funding for CHWs and encourages comprehensive patient care. Concerns of potentially reduced service provision may affect views on quality of care provided.

## **Grant-based**

Grants often fund pilot projects that establish the value of CHW services. These projects can lay the groundwork for negotiations on managed care organizations (MCO) rates, incorporating CHWs into more permanent and sustainable funding structures. However, the transient nature of grants may pose challenges for long-term stability unless successfully transitioned to more permanent funding sources.

## **Public Sector or Governmental**

The perception that CHW salaries are insufficient for their workload and that work-related expenses diminish net income indicates a potential misalignment between public sector pay structures and the needs of CHWs. This could hinder recruitment and retention, impacting the overall implementation climate negatively.

## **Volunteer-based**

While CHWs are generally willing to volunteer, the struggle to maintain a viable lifestyle on volunteer work alone is apparent. The implementation climate for volunteer models may benefit significantly from integrating both monetary and non-monetary incentives to enhance volunteer satisfaction and sustainability.

## **Performance-Based Incentives (PBI)**

This model has high acceptance among CHWs, particularly with the inclusion of public recognition alongside monetary rewards. PBIs can strongly motivate CHWs by directly linking compensation to specific achievements, which can boost morale and effectiveness but may also lead to disparities if not carefully managed to ensure fair and equitable distribution of incentives.

## **Medicaid**

Medicaid presents a sustainable option for funding CHW services, offering more incentives and professional recognition. However, its effectiveness is limited to states that approve Medicaid funding for CHWs, which

introduces variability in the implementation climate across different regions. Where available, it can provide a reliable and continuous funding stream that enhances job security and professional development opportunities for CH

## Discussion

This scoping review utilizing the CFIR framework has highlighted the complexities of compensation models utilized for CHWs, specifically in how these models impact healthcare delivery, CHW performance, and retention. The analysis of the CFIR constructs Relative Advantage, External Policy Incentives, and Implementation Climate within the respective domains of Intervention Characteristics, the Outer Setting, and the Inner setting have yielded important evaluations of implementation of CHW compensation models and suggestions for strategic incorporation of CHWs into health systems.

In the US, value-based systems are emerging as sustainable payment models for CHWs, linking quality to cost-effective care instead of service volume, unlike capitation or fee-for-service models that make quantity a priority for billing. Shared-savings models incentivize cost reduction while maintaining high care standards but their primary focus is not on quality improvement like value-based models. Capitation offers a flexible funding structure that covers a broad range of health services, potentially including those not traditionally reimbursable, thus providing a stable and predictable funding stream that encourages the integration of CHWs into broader healthcare roles.

The enactment of the Affordable Care Act (ACA) and subsequent policies support a strong framework supporting CHW integration into health systems. These policies leverage alternative payment models, such as those used by Medicare and Accountable Care Organizations (ACOs) which align financial incentives with healthcare outcomes. The policy-driven expansion of the CHW workforce in the United States, as advocated by recent federal initiatives, emphasizes the strategic role of CHWs in achieving public health goals, especially within underserved populations.

Grant-based funding is a temporary yet impactful source of funding for CHWs, providing key initial support for CHW programs, particularly in pilot phases aimed at demonstrating their efficacy. The flexibility of grant funding is important for adapting to community-specific needs and can establish a foundation for future sustainable funding through Medicaid, especially the 1115 waivers and demonstration programs which are pivotal in integrating CHW services into state Medicaid plans. However, the temporal nature of grant-based funding contributes to high rates of CHW turnover once the grant period ends, which ultimately makes grants unsustainable in the context of CHW employment. Additionally, grants are often project-based and focused on specific conditions or diseases which creates job siloes that limit CHW career trajectory which impacts their compensation.

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As far as implementation climate outside the United States, the volunteer and performance-based incentive (PBI) models illustrate different facets of CHW engagement. Volunteer models, while cost-effective, often lack the added factor of motivation for CHWs found within incentivized programs, which show improved performance and satisfaction among CHWs. Performance-based incentives, by promoting regular performance evaluations and adaptable compensation, foster an environment of continuous improvement and accountability, important for sustaining health service quality and CHW motivation.

## Conclusion

This scoping review details six compensation models for CHWs, each with distinct advantages and challenges. Sustainable integration of CHWs into health systems requires a comprehensive understanding of these models' impact on healthcare delivery and understanding in the context of CHW wellbeing. Policymakers must consider these dynamics when designing and implementing compensation strategies to ensure that CHWs are not only integrated effectively into healthcare systems but are also supported in a manner that promotes job satisfaction and retention. Future research could focus on longitudinal studies to further elucidate the long-term impacts of these compensation models on healthcare outcomes and CHW turnover, ensuring that investments in CHW programs translate into measurable health improvements across communities.

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## Appendix

This is a table of all CFIR constructs within the chosen domains. There was no information for some constructs for some of the models. Of important note, most descriptions within the appendix are direct quotes, despite the lack of quotation marks, from the sources and so this table serves as a type of rapid analysis sheet similar to qualitative interviews.

CFIR Domain	Compensation model					
Alternative payment models (Value-based or pay-for-performance, capitated (pay per pt), shared savings)	Grant-based (monthly, hourly, or yearly salary)	Public sector/government model	Volunteer-based	Performance incentive-based (monetary and non-monetary)	Medicaid	

		<p>Humphry: Capitated payments arose as an alternative option to FFS to try to simplify process, create financial revenue, simplify billing, and focus on prevention by going by pt</p> <p>Humphry: Shared savings as a way to allow providers to be able to have savings to hire more CHWs</p>	<p><b>Majority of funding for CHWs is via grants that are temporary sources that rather payments as part of a predictable system, which means these funds end afer 3-5 years and leave CHWS in a vulnerable position to job loss.</b></p> <p>Ingram: The CHR Program is appropriated funding by <b>Congress every year and is administered by the federal Indian Health Service (IHS).</b></p> <p>Rahman, malcarney: The majority of funding for CHWs continues to be sourced via <b>temporary mechanisms (eg, grants) rather than payments that are built into health plans or core operating funds, meaning that once these grants end, which is 3 to 5 years long, CHWs are often likely to lose their employment</b></p> <p>Sustainability: In interviews, leaders of 7 organizations that employ CHWs all said they <b>worried about securing consistent</b></p>	<p><b>Most CHW developmental assistance for CHW projects in the US have come from Global Fund to Fight AIDS, Tuberculosis and Malaria, the government of Canada and the government of the United States of America, 2.5% of US total developmental assistance for health. In Pakistan, LHW program is federally funded, covering 65% of population mostly rural and urban slums, seeking to expand coverage fully in the next few years with aims to improve maternal and infant mortality and women's health overall which is poor. In China, government subsidy since 2009 for VHW income after moving from village collective economy to user fees.</b></p> <p>Haq: The Lady Health Workers Programme (LHWP) is a federally funded development programme working at the grass root level since 1994. The "Lady</p>	<p><b>In Ghana, a labor act led to volunteer CHW basis with no salary but incentives have been developed, not afforded same legal protection as other salaried workers. MOH working on providing monetary compensation. In Afghanistan, volunteer basis where monetary compensation people believe should be mandatory after periodic check-ins and worries about sustainability of workforce and health system it supports.</b></p> <p>Ballard: Ghana's Labor Act leads to volunteer-based model for CHWs, and defined them as non-salaried. Incentive schemes have been developed to r reward volunteers they are not considered workers and don't benefit from salary floor. Proposals from MOH to retool CHWs and regularise payment system by providing some monetary compensation. They aren't afforded same legal protections as</p>	<p><b>In Uganda, success is limited by reliance on volunteerism without standardized incentives. In Kenya, transition to pool-based incentive model designed to replace individual stipends, increased financial strains among CHWs despite fostering communal ties. In Rwanda, utulized performance-based funding model linked with income-generating cooperatives but lacks legal protection for volunteer CHWs. In India, features a highly complex incentive structure offering over 40 different payments for various tasks adaptable to regional needs. In Nepal, both financial and non-financial incentives like uniforms and community recognition to female community health volunteers illsurartibg comperhensive approach to supporting cHWs.</b></p> <p>Zheng: Zheng: Village health worker (VHW) programs in Uganda have achieved limited success, due in part to a reliance on</p>	<p><b>Many CHW programs were funanced under temporary grants which posed threats to long-term viability. 2010 ACA opened up funding opps including Medicaid 1115 waivers allowing flexible funding of various CHW services. 2013 rule change by CMS also allowed states under fee-for-service to file SPA for CHWs to be reimbursed for some preventative services when recommended by licensed practiotioner.</b></p> <p>George: The 2010 Affordable Care Act provided new impetus and funding opportunities for state Medicaid agencies to integrate community health workers (CHWs) into their health systems. Oregon, along with a few other states, were early adopters in using Medicaid 1115 waivers to allow them the scope and flexibility to fund a broad range of CHW services.(2) Under the once pervasive fee-for-service (FFS) payment model, a 2013 rule change by the Centers for Medicare &amp; Medicaid Services (CMS) also allows states to file a state plan amendment for CHWs to be reimbursed for limited types of preventive services when recommended</p>
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			<p>financing for CHWs because most interventions received time-limited grant funding through private foundations or state and federal government programs.</p>	<p>Health Worker" (LHW) of the National Programme for Family Planning and Primary Health Care in Pakistan broadly fits into the definition of community health worker, and is a crucial component of the health care delivery system of the country. They currently cover about 65% of the target population (rural and urban slums), and full coverage is planned in the next few years. Pakistan has high maternal and infant mortality [3], low women's access to health services [4,5] with less than one third going to health centres unescorted [6], and low contraceptive usage among the rural population [7,8].</p> <p>Dan Hu: China applied various mechanisms to compensate village doctors in different stages. During 1960s and 1970s, the main income source of barefoot doctors was from their villages' collective economy. After 1985 when the rural collective economy collapsed and barefoot</p>	<p>other classes of workers.</p> <p>Edward 2015: The government's volunteer policy for CHWs has been reviewed and reaffirmed periodically over the past ten years. Some key informants questioned the sustainability of volunteer services and believed that monetary compensation for CHWs should be mandatory in the future.</p>	<p>volunteerism and a lack of standardized incentive mechanisms.</p> <p>Kelly: In 2013, changes in funding in western Kenya left most CHVs without their individual monthly stipend. In this article, we explore how the implementation of a pooled incentive model had an impact on the lives of CHVs from two counties in western Kenya. Following withdrawal of the monthly stipend, we found that CHVs continued to take on roles and responsibilities of paid health workers, motivated by shared social identities and connections to their communities. However, replacing the stipend with a pooled-group incentive model seemingly exacerbated the financial burden already experienced by this vulnerable population.</p> <p>Kelly: In response to 2013 when western Kenya left most community health workers without individual monthly stipend, AMPATH introduced a pooled incentivized model called GISE (Group Integrated Savings and</p>	<p>by a licensed medical practitioner (3).</p> <p>Gunter: Minnesota is one of 21 states that authorize Medicaid payment for CHW services.</p> <p>Basu: Many CHW programs have been financed under temporary grants, which has posed challenges for their long-term viability [7]. Recently, CHW programs have been included among states' Medicaid 1115 waivers and related demonstration programs that aim to direct Medicaid dollars to CHW services [8].</p>
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				<p>doctors were transformed to village doctors, they depended on user fees, especially from drug sale revenues. In the new century, especially after the new round of health system reform in 2009, government subsidy has become an increasing source of village doctors' income.</p> <p>Lu C: Between 2007 and 2017, total development assistance targeting CHW projects was around United States dollars (US\$) 5 298.02 million, accounting for 2.5% of the US\$ 209 277.99 million total development assistance for health. The top three donors (Global Fund to Fight AIDS, Tuberculosis and Malaria, the government of Canada and the government of the United States of America) provided a total of US\$ 4 350.08 million (82.1%) of development assistance for these projects. Sub-Saharan Africa received a total US\$ 3 717.93 million, the</p>		<p>Empowerment) to provide CHWs with a way to pool resources and invest in each other income-generating activities to offset costs of unpaid health work. This policy shift was aimed at mitigating the effect of the removal of the stipend and reducing dependency on unpredictable donor funding. There was supposed to be a starter pool to let people take loans but due to funding constraints not feasible.</p> <p>Ballard: Rwanda is PBF model centered on cooperatives. CHWs are volunteers who receive some compensation according to performance-based system and income-generating cooperative model. Since CHWs have volunteer status, legal protection mostly don't apply and aren't factored into the model.</p> <p>Jain: ASHA incentive structure is complex with a national model that states can adopt. They can receive over 40 different incentives for a variety of tasks, with new incentives occasionally added.</p>	
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				<p>largest per capita assistance over 11 years (US\$ 0.39; total population: 9 426.25 million). Development assistance to projects that focused on infectious diseases and child and maternal health received most funds during the study period.</p>		<p>Schwarz: Nepal's Female Community Health Volunteer (FCHV) program has been described as an exemplary public-sector community health worker program. However, despite its merits, the program still struggles to provide high-quality, accessible services nation-wide. To overcome these barriers, financial and non-financial incentives are provided to FCHVs through this pilot program. FCHVs receive NR 200 (approximately USD \$2.25) for weekly responsibilities (8–12 hours of work per week). Non-financial incentives are provided in the form of weekly meeting lunches, uniforms, health equipment, supplies, and community recognition. CHWLs and the DCH receive salaries from Bayalpata Hospital.</p> <p>Colvin: The most common strategy for developing and sustaining motivation in CHW programmes centres on the use of discrete incentives, often framed in a fairly narrow fashion, as specific forms of reward—like payments,</p>	
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						<p><b>Challenges include lack of progress for doing well sometimes unless using a horizontal intervention here with VHWs when encouraged to work across disciplines to prevent siloes from forming.</b></p> <p>Zheng: challenges include punishments for doing job well usually in this model where incentives become discontinued, but here specifically this is a horizontal intervention where VHWs are encouraged to work across disciplines which prevents silos from forming.</p>	
Outer setting	Patient needs and resources		<p><b>CHWs may be least accessible to people most likely to experience adverse outcomes, cases need to be identified so people can be connected to care.</b></p> <p>Vo: People that may have TB and urban priority groups that need to be identified so that they can be connected to care</p> <p>Gomez: Doulas may be least accessible to pregnant people from</p>		Zheng: significant challenges in health services delivery, lower life expectancy for Ugandans, infectious disease accounts for top four causes of mortality.		

			communities most likely to experience adverse outcomes, despite high levels of interest, as evidenced by a representative survey of California women who had recently given birth that found that Black women were more likely to be interested in future doula use than women from other racial and ethnic groups (Sakala)				
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		<p>nachw: Value based/P4P is becoming the dominant payment mechanism for Medicare, offering the highest payments to providers who are members of ACOs. than to providers who use FFS. ACOs want to integrate entities like hospitals, pharmacies etc. to improve quality and decrease cost by reducing inefficiency.</p> <p>nachw: <b>funding from the Centers for Disease Control and Prevention Program 1815/1817 innovation awards to state and local health departments, often used for CHW pilots and infrastructure development, are not intended as long-term support.</b> CHWs have mainly been funded under “program” or “project” grants and contracts which are historically: 1) short-term (two to three years), 2) 2) subject to appropriations or private philanthropic decisions, and 3) 3) focused on narrow goals such as increasing job training</p>	<p><b>Government plan to increase CHW workforce by 150,000 and provide grant funding and CHW services benefit for states via Medicaid, states can maximize the sustainability of CHWs by taking advantage around this and looking at revising regulations.</b></p> <p>Rodriguez: President Biden’s plan included increasing the CHW workforce by 150,000 nationally and pledged to provide direct grant funding, as well as add CHW services as an optional benefit for states through Medicaid [37]. States can better maximize the sustainability of the workforce as funding opportunities arise to revise existing regulations around CHW reimbursement.</p> <p>KFF: In September 2022, the Biden Administration announced that it was awarding \$225 million in American Rescue Plan funding to train over 13,000 CHWs, the</p>		<p><b>Reliance on volunteerism is an implementation weakness in CHW workforce, and so is lack of standardized mechanisms for incentives, which leads to lack of retention due to economic hardships that also affect quality of their work. Services could be very important to community per CHWs but they need some type of incentive or compensation. Data collection tasks need to be compensated to ensure high quality of data, and health workers need transport.</b></p> <p>Zheng: A 2015 national assessment of VHT found many implementation weaknesses including a reliance on volunteerism and lack of standardized incentive mechanisms. MOH created CHEW program to offer incentives, which this study implements a PBI.</p>		<p>KFF’s 22nd annual Medicaid budget survey (conducted in 2022) asked states about CHW coverage policies in place as of July 1, 2022 (the beginning FY 2023 for most states)8 and planned for FY 2023. Key findings from the survey (supplemented by other available research) include:</p> <p>Medicaid payment for CHW services: As of July 1, 2022, over half of responding states (29 of 48) reported allowing Medicaid payment for services provided by CHWs.9 CHW coverage changes planned for FY 2023: A number of states reported plans to implement Medicaid coverage/payment of CHW services under state plan authority or through other coverage pathways, including under Section 1115 authority. Notably, a few states reported planning to target CHW interventions to pregnant and postpartum populations. Certification and training. Though the survey did not include questions about CHW certification and training programs, several states reported plans to introduce new certification and/or standardized training programs for CHWs in FY 2023.</p>
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		<p>participation, reducing infant mortality, or raising immunization rates). <b>Conversations among policymakers and CHW advocates in most states about financing CHWs focus heavily on Medicaid, since CHWs have historically been most effective at meeting the needs of low-income and minority populations. Medicaid is also a large and growing percentage of state budgets, and states are looking for ways to control costs and improve outcomes from the program.</b></p> <p>Islam: Another payment model that is being used, often in conjunction with other types of payment, is shared savings. Under this model, providers receive payments on the basis of savings they have achieved or are expected to achieve. <b>For example, under Centers for Medicare &amp; Medicaid Services' Advance Payment Accountable Care organization Model, providers</b></p>	<p>largest ever one-time federal investment in the CHW workforce. The Consolidated Appropriations Act of 2023 also authorized \$50 million annually to build CHW workforce capacity from state fiscal year (FY) 2023 through FY 2027.<sup>7</sup> These investments represent growing interest among federal and state policymakers in the potential role of CHWs in strengthening population health.</p>		<p>Ochieng: The policy makers recommended some form of context-specific compensation to retain CHWs. This could be in the form of regular pay, output-based reward, or through community-based organizations. Additionally, households could contribute regularly to the support fund. The peri-urban respondents reported that the hard economic realities in their context affect the quality of their work. The respondents stressed that services that were curative, but approved by authorities, needed some incentives or compensation. They also felt that data collection tasks that had been shifted to the community level needed some monetary compensation. They reported spending a lot of time in training, data collection, and the final analysis, not to mention dissemination during the dialogue process. From the discussion, it emerged that data collection tasks should be compensated in</p>		<p>Efforts to expand CHW workforce. States also reported working with stakeholders to identify best practices for expanding the number of CHWs and for supporting broader acceptance of CHWs by Medicaid providers, health plans, and enrollees.</p> <p>States can authorize Medicaid payment for CHW services under different state plan benefits including under the preventive services benefit<sup>20</sup> or outpatient services benefit. Requirements for authorizing coverage vary by specific state plan benefit.<sup>21</sup> Generally, Medicaid payment is authorized for a specific set of services, provided under the supervision of a physician or licensed provider. States may also define CHW certification and training requirements.<sup>22</sup> Federal Medicaid rules require services authorized under state plan to be available to all full benefit Medicaid beneficiaries (with certain exceptions).</p> <p>Managed care arrangements. Some states provide CHW services through Medicaid managed care arrangements, including by adding</p>
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		<p>receive fixed and variable payments on the basis of expected costs. Under these models, providers can pay for CHWs with savings that CHWs can help achieve.</p>			<p>order to maintain high quality of data. In the nomadic area, the health workers cited the need for transport and said that in order to cover their clients, at times they are forced to use their money.</p>	<p>requirements related to CHWs in MCO contracts. CHW services may be reflected in the medical component of the MCO capitation rate (e.g., if these services are specifically authorized under the state plan and the MCO is required to provide them, or if services fall under care coordination provisions<sup>25</sup>). MCOs may also choose to provide CHW services as “value-added” services even when they are not covered under the state plan (or factored into the capitation rate).<sup>26</sup> As of July 2022, 41 states (including DC) contract with comprehensive, risk-based managed care plans to provide care to at least some of their Medicaid beneficiaries.</p> <p>Section 1115 demonstration waivers. Under Section 1115 waiver authority certain Medicaid requirements can be waived and states can be permitted to use federal Medicaid funds in ways that federal rules do not otherwise allow. For example, states may cover CHW services under Section 1115 demonstration authority by allowing CHWs to provide services to Medicaid certain enrollees (e.g., as part of a pilot program), through</p>
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							authorizing incentive payments for CHW-related activities, or by providing funding for CHW infrastructure. Alternative delivery system models requiring team-based care may also allow for more flexibility in paying for CHW services. CHW provisions may be part of broader (and often complex) state Section 1115 waivers which usually involve a lengthy approval (and negotiation) process with the Centers for Medicare and Medicaid Services (CMS). Section 1115 waivers are generally approved for five years and are subject to transparency, public notice, evaluation, and other federal requirements.
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<p>Inner setting</p>	<p>Structural characteristics</p>		<p><b>Tailored, intensive support for clients and sharing culture and language often can help mitigate adverse health outcomes and allow more comprehensive services and referrals. By 2040, 1/3 older USA adults are going to be a racial/ethnic minority group and experience significant access to care. Right now limited resources make it difficult to implement EBIs in CBOs for long-term to benefit these groups.</b></p> <p>Gomez: Community doulas are typically trusted members of the communities they serve, sharing culture and language with their clients and often providing more comprehensive services and referrals. uch tailored, intensive support may be particularly effective in mitigating adverse birth outcomes experienced by people of color and those with low incomes. Notably, community doula care is often provided at low or no cost [6]; while this helps</p>		<p><b>Rural areas in Uganda exhibit lack of financial and human resources that impact ability for CHWs to improve health outcomes.</b></p> <p>Zheng: 75% of Ugandans are in rural areas with a lack of financial and human resources a barrier to improving health outcomes.</p>		
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			<p>increase access to these much-needed services, it also creates barriers for the sustainability of culturally congruent, community-based doula care.</p> <p>Porteny: By 2040, 1/3 older USA adults is going to belong to a racial/ethnic minority group which has increased risk of mental and physical disability and significant barriers to access care. Limited resources and other barriers like lack of trained staff make it difficult to implement EBIs in CBOs for long-term.</p>				
	Networks and communication						

			<p><b>Grant-funded initiatives serve as pilot projects to demonstrate value of CHW services and form foundation for MCO rate negotiation for CHW services, payers can then find ways to implement them sustainably potentially. Salaried CHWs should be scaled up as perform better than volunteers and utilized where resources permit for TB strategies.</b></p> <p>Vo: Salaried CHWs should be scaled up as they perform better than volunteers, and utilized where resources permit for TB strategies.</p> <p>Porteny: An EBI including 10 CBT sessions being delivered over 6 months by CHWs embedded within CBOs</p> <p>Gunter: Grant-funded initiatives provide a setting to engage CHW</p>	<p>In Swaziland, CHWs and managers from many programs felt that monthly salary insufficient for the work they were expected to accomplish, and they felt like volunteers rather than paid employees. They note concern with work-related expenses which really reduces their net income.</p> <p>Geldsetzer: With the exception of the community counselors (the most highly paid cadre), CHWs and managers from all CHW programs generally felt that the monthly salary was insufficient for the amount of work CHWs were expected to accomplish:</p> <p>In fact, several CHWs mentioned that, given their low salary, they consider themselves to be volunteers rather than paid employees. Of note, when asked about their salary, many CHWs expressed concern that they face work-related expenses, which substantially reduce their net income.</p>	<p><b>In Brazil, CHWs supported by public sector and are full-time 40h/week on minimum wage revisited annually. Temporary hiring prohibited unless emergencies like epidemics.</b></p> <p>Ballard: Brazil employs public sector model where CHWs defined as full-time 40h/week and qualify for minimum wage that is updated annually. Temporary or outsourced hiring is prohibited except when combating epidemic outbreaks. 40h training, they do disease surveillance, health promotion, home management of minor ailments, referrals, transportation, and community mobilization.</p>	<p>In Uganda, VHW is one of the only economic opportunities due to vast population living in rural areas and working as subsistence farmers. In Nepal, public-private partnership with NGO to bolster clinical and community services at hospitals in remote areas. In Kenya, they mostly prefer high levels of community appreciation, however equated this to a monthly transport allowance so basically incentive, which they valued more than appreciation from health facility staff of six trainings per year.</p> <p>Zheng: Kisoro district is in Southwest Uganda, population is 94% living in rural areas with 89% working as subsistence farmers and only 17% of adults have completed primary school (Uganda Bureau, Miller). Lack of economic opportunities other than VHWs. 53 VHWs cover population of 50,000 across 50 villages.</p> <p>Ballard: 480 hours training, do diagnosis and treat esp child illness, screening and referral,</p>	<p><b>CHW organization in MN delivered intergated medical and social care via HW Medicaid billing model that incorporates health education, self management skills, and community resources into billing for each CHW visit. Patients connecting to PCP and MCOs regardless of health system connections. Medicaid managed care involves states contracting with MCOs to deliver Medicaid benefits at a premium/capitation rate. 41 states have contracts with Medicaid MCOs and over 53 m people or 69% of all Medicaid members have received services via MCOs since July 2019. Two ways cHW programs funded with Medicaid which is FFS payments for visits or capitated per member per month to CHWs caring for a population of patients as part of MCO or practice entering value-based contracting. Unclear on how much financing from Medicaid to give to FFS or PMPM payments</b></p>
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			<p>provider organizations, payers, and public health organizations to address strategies to improve outcomes for shared populations. In this context, payers identify ways to implement CHW services with their members, including patients referred from FQHCs (e.g., closing care gaps, connecting members to community-based programs, addressing social determinants of health). Pilot projects demonstrate the value of CHW services, and provide a foundation for renegotiating MCO rates for CHW services.</p> <p>Sustainability: Uniform Data System (UDS) a reporting requirement for all grantees of HRSA primary care programs. Measures are used to review operation and performance of health centers that receive grants from HRSA, and to create a list ranking health systems for each clinical performance measure.</p>			<p>provision of contraceptives.</p> <p>Schwarz: Since 2009, the Ministry has been working in a formal public-private partnership with non-governmental organization Possible to bolster clinical and community health services at the Ministry's Bayalpata Hospital, in the remote western district of Achham, Nepal.</p> <p>Saran: CHWs' most preferred job characteristic was high levels of community appreciation for their work which was valued approximately equivalently to receiving a 2000 Kenya Shillings (~US \$20) monthly transport allowance. These incentives were valued more than appreciation from health facility staff or trainings six times per year.</p>	<p><b>to allow CHW programs to be financially sustainable. Different from standard medical care in clinics/hospitals, for CHWs need to consider high transport time, mobile equipment and supervision to ensure safety of CHWs and effectiveness in delivering community services.</b></p> <p>Gunter: CHW Solutions is a CHW service and technical assistance provider based in St. Paul, MN, that provides direct services through a dedicated CHW team. Additionally, CHW Solutions provides clinical oversight of CHW activities and billing support for organizations lacking internal expertise with billing for CHW services. CHW Solutions' team delivers integrated medical and social care via a CHW Medicaid billing model by combining health education, self-management skill building and community resource connection into each CHW visit. CHWs ensure patients are connected to their local care team, including primary care and managed care organization (MCO)-based coordinators,</p>
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			<p>Maes: applying for grants is a feasible way to obtain funds and suggested continuing to work with partnering organizations to develop those grants.</p>				<p>regardless of health system affiliation.</p> <p>Wennerstrom: Medicaid managed care provides for the delivery of Medicaid health benefits, and in some cases long-term services and support, through contracted arrangements between state Medicaid agencies and managed care organizations (MCOs). States provide MCOs a fixed monthly premium or “capitation rate” for each enrollee.<sup>1,2</sup> As of 2021, 41 states (including DC) have contracts with Medicaid MCOs to provide services for Medicaid enrollees.<sup>2</sup> Over 53 million people or 69% of all Medicaid members nationwide received services through MCOs as of July 2019.</p> <p>Basu: CHW programs funded by Medicaid financing are either paid through fee-for-service (FFS) payments for visits between CHWs and patients, or capitated per-member-per-month (PMPM) payments to CHWs caring for a population panel of patients as part of a Medicaid managed care organization or a healthcare practice that has entered into value-based contracting. What remains unclear is how</p>
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							<p>much financing should be allotted in FFS or PMPM payments to enable CHW programs to be financially sustainable. CHW programs, unlike standard medical care in clinics or hospitals, often require considerable transportation time, mobile equipment, and associated expenses, alongside flexible systems for supervision and support to ensure safety of CHWs and effectiveness in delivering roving, within-community services.</p> <p>nachw: Conversations among policymakers and CHW advocates in most states about financing CHWs focus heavily on Medicaid, since CHWs have historically been most effective at meeting the needs of low-income and minority populations. Medicaid is also a large and growing percentage of state budgets, and states are looking for ways to control costs and improve outcomes from the program.</p>
	Readiness for implementation				Vo: Attrition associated with volunteerism that requires continuous recruitment and capacity building and may lead to impaired quality of care, something to consider		

					before implementation (Adejumo, Scott).		
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			<p><b>Doulas have better sense of financial security from being consistently paid for the time they work and for receiving benefits like health insurance and sick leave. Being paid to engage in work they love is still enough for them. In Kenya, recognition that their stipend was like a salary which navigates a blurred line between volunteerism and employment which has created financial confusions for them.</b></p> <p>Gomez: Doulas experienced a greater sense of financial security and wellbeing from receiving consistent pay, compensation for all time worked, and benefits such as health insurance and sick leave, allowing some to dedicate themselves to birth work. Despite challenges some doulas faced with contractor approach, they still were happy to receive any payment for doing doula work in their communities but</p>		<p><b>Volunteer CHWs defer higher commitment tasks to public health staff given lower remuneration and time commitment. Lack of remuneration from government from work, they felt that it was disrespectful on behalf of MOH Uganda which affected respect from community members in unpaid position, they had expectations due to previous experiences receiving various incentives that were non monetary like shirts and bicycles and some financial compensation for transport.</b></p> <p>Vo: Volunteers placed higher reliance on public health staff and neighborhood leaders to refer persons with suspected TB, which is intuitive given lower remuneration and time commitment to ACF activities.</p>	<p><b>PBI implementation led to high acceptance seen by 0% attrition rate but also low economic opps otherwise. Pooled incentives on CHVs in Kenya tolls the ones that don't have funds to contribute especially as volunteers, but still preference to CHW work as compared to other income-generating activities. In India, ASHAs have renewed sense of identity; CHWs across countries driven by intrinsic motivational factors and even consider nonmaterial incentives like community recog, prof development, and peer relations more impnt than financial incentives. Nonfinancial performance based like supportive supervision, resources, and community respect can increased CHW service delivery</b></p>	<p><b>CHWs indicated that they were more equitably compensated than their supervisors, interesting.</b></p> <p>Wennerstorm: Just under three quarters of CHWs (72.6%) and over half of supervisors (54.4%) indicated that CHWs are equitably compensated for their work.</p>
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			<p>being paid allowed to engage in work they love even if they had to work other jobs to make ends meet.</p> <p>Kelly: among the CHVs operating at the healthcare system level, there was widespread recognition that the stipend had been viewed as a salary. Navigating the blurred line between volunteerism and employment has produced financial concerns for CHVs.</p>		<p>Banek: respondents also reported feeling dissatisfied with the lack of remuneration from the government for their work. Some suggested lack of pay was a sign of disrespect from the MoH programme, affecting the level of respect they could accrue from community members in an unpaid position. The desire for compensation for their work as a CMD for the government-sponsored HBMF programme appeared to relate to expectations built up from experiences with other programmes or organizations that provided various incentives, such as T-shirts or bicycles, as well as some financial incentives such as generous transport refunds.</p>	<p><b>outcomes but otherwise demotivation can occur if incentive expectations go unmet. Volunteers although understanding position feel they deserve at least transport fund, feelings very prevalent in NGO-related programs. CHWs bring up opportunity cost of volunteer work and providing for families, and that some payment would make them feel more appreciated and boost morale which can improve performance. Older and less educated CHWs more likely to be motivated by altruism, intrinsic needs and skill utilization. Lower educated more satisfied with service and quality factors.</b></p> <p>Zheng: Data supports well acceptance of PBI implementation by VHVs as demonstrated by 0% attrition rate. However, low</p>	
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						<p>economic opportunity otherwise in the area may affect this.</p> <p>Kelly: pooled incentives take toll on CHVs that don't have the funds to contribute especially within a volunteer position. However there was still a preference for community health work rather than other income-generating activities. Had to borrow funds and pay back loans.</p> <p>Jain: ASHAs reported having a renewed sense of identity, feeling more self-confident, being less financially dependent on their spouse and family, sharing the household work burden with family, and having an increased say in decisions concerning household management and seeking health care. CHWs across countries are driven by intrinsic motivational factors. Some even consider nonmaterial incentives such as community recognition, professional development, and peer relations more important than financial incentives.<sup>4,26</sup> While nonfinancial performance-based incentives like supportive</p>	
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						<p>supervision, adequate resources, and community respect can increase CHW service delivery outcomes, when these are absent or when incentive expectations go unmet, they can lead to demotivation.</p> <p>Brunie: CHWs understood that their position was voluntary, but two-thirds felt they deserved some payment through an increased transport refund, or even a regular salary. These feelings were particularly prevalent in NGO-related programs. CHWs raised issues related to the opportunity cost of volunteer work and to buying necessities for their families. Some said money was important to ensure continued family support or to keep up with increased costs of living. a number of CHWs suggested that payment would make them feel appreciated and boost their morale. For a few CHWs, all from NGO-related programs, this was linked to feelings of deservingness in light of their efforts, and to equity in relation to health workers. One-fifth of IDI participants said that lack</p>	
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					<p>of salary or insufficient transport refund had caused them to think about dropping out, particularly when they had to encroach on their personal resources.</p> <p>Mpembeni: CHWs were satisfied by relationships with health workers and communities, job aids and the capacity to provide services. CHWs were dissatisfied with the lack of transportation, communication devices and financial incentives for carrying out their tasks. Factors influencing motivation and satisfaction did not differ across CHW socio-demographic characteristics. Nonetheless, older and less educated CHWs were more likely to be motivated by altruism, intrinsic needs and skill utilization, community respect and hope for employment. Less educated CHWs were more satisfied with service and quality factors and more wealthy CHWs satisfied with job aids.</p>	
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					<p><b>Self-efficacy lower among volunteers than those with salaries, require more supervisory efforts to improve performance and accurate reporting. Volunteers have lower value perception and value satisfaction.</b></p> <p>Vo: Lower among volunteers than salaried workers. Tend to require greater supervising effort to improve performance and accurate reporting. Volunteers noted to have lower value perception and job satisfaction (Sarin).</p>	<p><b>Performance based incentives reinforce self efficacy via non-monetary incentives like status in community, self-empowerment from knowledge gained, and the opportunity to climb a career ladder</b></p> <p>Zheng: PBI scheme reinforces self efficacy through non-monetary incentives like sense of status in the community, self-empowerment from acquired knowledge and skills, and opportunity for career advancement.</p>	
	Self-efficacy						
	Individual stage of change						

<p>Proce ss</p>	<p>Planning</p>					<p><b>In Uganda, payments evolved from per household to PBI. Low rate of events and accountability led to suspected forgery and data unreliable. In 2010, PBI but no base pay. In 2012-2016, insurance implemented via funding from families in exchange for transport to keep it financially independent from outside funding. Doctors for Global Health developed PBI to pay VHWs based on performance of tasks or target achievement. Funded by US-based NGO and US medical school partnership to contribute to funds to support opps for med students to establish collab model medication education that can serve sponsoring communtiirs and also keep VHW program sustainable financially.</b></p>	
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						<p>Zheng: Payment system has evolved from per household payments to PBI system with other activities. There was a low rate of clinical events and lack of accountability that led to suspected forgery of data and thus the data was deemed unreliable. In 2010, program switched to PBI but no base pay. 2012-2016, insurance program implemented to keep it financially independent from outside funding sources, funded by families in exchange for transport to hospital, led to 23% increase in payment per month. Doctors for Global Health developed a performance-based incentives (PBI) system to pay its VHWs in Kisoro, Uganda, based on performance of tasks or achievement of targets. Doctors for Global Health developed a PBI system to pay for its VHWs in Uganda based on performance of tasks. Funded by this US-based NGO and by partnerships with US medical schools that contribute funds to support global health opps for medical students to establish collab. model medical education that serves sponsoring</p>	
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						communities and keeps VHW program financially sustainable.	
Executing					<p><b>Volunteer model works in Vietnam where there is a lower cost of living for TB.</b></p> <p>Vo: Vietnam NTP has successfully replicated volunteer model in cities with lower TB burden and cost of living compared to HCMC, the economic center of Vietnam (UN). Ballard: payment of incentives dependent on CHWs meeting targets set for each assignment. Payment made directly to cooperatives which then divide 70% of money towards income-generating activities and 30% towards cooperative members.</p>	<p><b>Stipends based on clinical importance, incidence, and effort. REceiving bonuses for completing advanced trainings, doing village census, and performance perecntiles. Bonuses for certificates in wellness, women's health, chronic disease, env health, and acute illness.</b></p> <p>Zheng: In 2010, when program switched to PBI and payed VHWs on measurable health delivery outcomes, stipends for each activity were determined based on assessment of its public health or clinical importance, incidence, and effort required of VHWs. VHWs received monetary bonuses completing advanced training, doing census of village every 2-3 years, and on performance percentiles. Bonuses awarded for certifications in child wellness, women's health, chronic disease,</p>	

						env health, and acute illness.	
Reflecting and evaluating	<p><b>Providing some type of incentives help providers meet quality target and keep patients engaged in care, coordinating care and transition, allows providers to invest in CHWs and use payments to sustain positions. In Tanzania, no pref pay for performance over flat payment scheme. Some people didn't understand the schemes because no expereince with concept with pay for performance especially.</b></p> <p>Islam:  <b>Pay-for-performance payment models are often combined with the payment models indicated previously.</b>                      With these payment models, providers receive payments for meeting preestablished targets for care delivery and quality. For example, some states are providing incentive</p>	<p>Basu: Many CHW programs have been financed under temporary grants, which has posed challenges for their long-term viability [7]. Recently, CHW programs have been included among states' Medicaid 1115 waivers and related demonstration programs that aim to direct Medicaid dollars to CHW services [8].</p> <p>Porteny: Many staff believe that applying for grants is a feasible way to obtain funds and suggested continuing to work with partnering organization to develop those grants.</p> <p>Sustainable: While some CHW programs currently operate in Connecticut, they typically rely on grant funds or other temporary sources of</p>	<p><b>In India, since 2007, monthly financial incentives and salaries across all states for health workers in remote areas. Clinicians in Kenya say CHWs save clinicians on avg 2.5 hours of work per day and fair comepsation should be USD 110, CHWs say it should be 182 and clinicians should get 128. Further task shifting could reduce numnber clinicians needed and help maintain clinic productivity by increasing CHW number. In Pakistan, admin issues like irregular and inadequate dispersement of saalry in additin to other issues like irregular supply medicine, and communication and interpersonal issues. In China, they monitor public services since 2009s health reform. Financing of essential</b></p>	<p>Findings that PBI for CHWs can improve case findings for TB but others find that non-incentivized tasks were neglected. PBIs don't offer voluntary CHWs enough financial security and impede CHW rights (what are their rights?). Preference of flat amount/salary could add value of financial security in Tanzania. In Rwanda, PBI is sometimes offered by CHWs usually volunteer and don't receive regular compensation and so CHWs have to work other jobs to support family unlike other healthcare workers that don't have to do this as often. Compensation could promote well-beign and prevent burnout especially during periods of elevated workload like seen in the COVID-19 pandemic. There should be more</p>	<p>In Uganda, after 1 year PBI process evaluation indicates VHWs found this fairer than household visit system, but still complaints about low payments despite increases in average stipend but lower attrition and those with lower education could master scheme. Successes include better servcie delivery for chronic diseases, safer births, and minor ailment care. 42 VHWs were able to perform ~23,000 health actions in one year, 23% better income than previous system, 0% attrition compared to usual 3-77%. However income is unpredictable and recommend peer supervision to grow program cost-effectively. Need more research on health outcomes.</p> <p>In Kenya, after stipend withdrawn, CHVs continue roles due to <b>strong community ties but financial burden increased under new pooled-group</b></p>	<p>Many states now have Medicaid laws relating to CHW and payment, except for Florida, Louisiana, Tennessee, and Nebraska. Laws provide workforce development funding for CHW training (Alaska, California, Illinois, Louisiana, Minnesota, Nebraska), supervision (Alaska), recruiting (California), and loan forgiveness (Louisiana). Sixteen states had laws that provided funding mechanisms for CHWs engaged in specific activities, including mental and behavioral health, clinical trial recruitment, school-based services, maternal-child health, HIV/AIDS services, and education and health promotion. Equitable compensation for CHWs that reflects their ability to address SDOH and promote health equity should be considered an investment and this may help with power differential between CHWs and clinically trained providers. As Medicaid integrates CHWs, they need better funding for payment</p>	

		<p>payments after providers achieve recognition as PCMHs. Because CHWs can help providers meet quality targets, especially by helping patients access and engage in care, coordinating care and care transitions, and supporting healthy lifestyle choices, <b>providers can invest in CHWs and use the payments to sustain their positions.</b></p> <p>Kok: This study found that CBMs did not prefer a pay-for-performance option over a flat rate payment scheme. This could be because systems of <b>performance appraisal were found to be weak, and performance was currently measured only in the number of referrals made, possibly ignoring other important elements of the work of a CBM [23, 33].</b> It could also be that despite a recommendation for a pay-for-performance option was made by a few CBMs in the first phase of this study, some CBMs did not</p>	<p>money, and even programs that demonstrate positive results are often at risk of elimination because of a lack of sustainable funding.</p> <p>NY presbyterian hospital in NYC integrated CHWs as team members in 5 medical homes through Washington Heights/Inwood network for Asthma (WIN). It was an initially grant-funded program that generated cost savings from reduced health care utilization over 5 years. Hospital leadership then agreed to support WIN through the hospital's operating budget and later expanded the program.</p> <p>nachw: There is some potential for CHW support in federal block grant programs, such as Community Development Block Grants from the Department of Housing and Urban Development<sup>1</sup> ; and Community Service Block Grants<sup>2</sup> and Social Service Block Grants<sup>3</sup> from the</p>	<p><b>services are capitation based. Performance based system to allocate budget to village doctors and quantity and quality of village doctors closely monitored on monthly basis.</b></p> <p>Sundararaman: Since 2007, monthly financial incentives in addition to salaries have been widely introduced across all the states for doctors, nurses and midwives working in remote areas. The incentive amount depends on the cadre of the worker and on the way each state grades difficult areas.</p> <p>Sander: Clinicians estimated that CHWs save the clinicians an average of 2.5 hours of work per day (SD 1.1 hours). The average monthly salary estimated by interviewees to be fair compensation for the CHWs' current work was US\$ 160 (SD US\$ 110); CHWs provided a higher estimate than clinicians (US\$ 182 for</p>	<p><b>investment in CHW training and supervision and supply chain management to improve operations of program and support preparedness for future emergencies. Also work ladder career is important as an incentive in Uganda for volunteers.</b></p> <p>Kok: Although a few studies have shown that performance-based incentives for CHWs could improve case finding for tuberculosis [34, 35], other studies found that non-incentivized tasks got neglected [23] and one study argues that performance-based incentives do not provide voluntary CHWs enough financial security and impede CHWs' rights [36]. Therefore, the preference of the "flat amount" could also be related to the value of having financial security.</p>	<p><b>incentive model adding financial strain as they had to contribute personally to the scheme.</b></p> <p>To develop and sustain motivation in CHWs, using <b>incentives like payments, salaries, promotions for specific tasks can lead to improvement.</b> Incentives organization into <b>financial, nonfinancial, health system, and community level.</b></p> <p>Grant and Musoke: In India, a RCT looking at non-monetary found that <b>public recognition via ceremony and certificate resulted in better CHW motivation than other non monetary incentives.</b> In Uganda same finding of non financial incentives but also <b>clothes resulted in better performance and motivation.</b> Perhaps slight variations with needs in communities.</p> <p>Gadsen and Chowdury: PBIs with <b>public recognition</b> CHWs efforts and in Uganda <b>competitive social award for public recognition led to worse performance,</b> probably because favoritism infrequent award provision, and lack of</p>	<p><b>mechanisms including research and monitoring to address barriers to payment mechanism uptake. In Minnesota reimbursement obtaining is challenging due to unclear policies and procedures, electronic billing system disclarity, medicaid fee reimbursement rates that are not sufficient to cover costs of CHW services, and administrative hurdles like expertise and capacity of organizations. As MCOs invest in cHWs leaders need to learn full range of CHW roles and how they can be applied cost effectively Higher medicaid fee for service and capitated rates needed to support viability of CHWs, minimum payments needed to sustain are much higher than disclosed by Medicaid officials and future research needs to include full disclosure of payments and accuracy from states.</b></p> <p>MACPAC: A review of publicly available information conducted by MACPAC in 2021 identified at least 21 states that authorize Medicaid payment for certain CHW services, in their state plan or under managed care arrangements. In most cases, state Medicaid programs</p>
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		<p>understand the pay-for-performance option, because they did not have experience with the concept.</p> <p>Sustainability: Molina healthcare of NM, a Medicaid managed care organization, partnered with the community access to resources and education in NM to employ CHWs to help patients with complex and unmet health needs. Molina pays providers a <b>monthly per-patient fee for CHW services. Reports a 4\$ return on \$1 CHW services. Expanding model to 10 states in this network.</b></p> <p>Hennepin Health in MN covers CHW services via <b>per-member, per-month and fee-for-service payment arrangements. Expanded role of CHWs by reinvesting savings generated by accountable care organizations.</b></p> <p>Several employers indicated a <b>per-person,</b></p>	<p>Administration on Children and Families. However, these technically are not considered “sustainable” sources, since they require grant proposals for each project period and are subject to Congressional appropriation.</p> <p>encourage MCO policy contracts, have chw expenditures covered voluntary by insurance contracts, internal financial by providers for return on investment, fqhc: incorporates the cost of employing CHWs into the total cost proposal on which they negotiate per visit rates with Medicaid. • Expenses may be treated as part of FQHC “enabling services” under HRSA 330 grant funding, along with transportation and language services.</p> <p>blended funding: Combines multiple funding resources can reduce dependence on any one source (such as Medicaid) and allows for integration of</p>	<p>CHWs, US\$ 128 for clinicians). The modeling exercise demonstrated that further task shifting would reduce the number of clinicians needed while maintaining clinic productivity by significantly increasing the number of CHWs. While compensation is just one component of the CHW programs that exist within complex parent health systems, it is important to appropriately address it upfront as these programs are designed, implemented, and scaled up.</p> <p>Haq: In addition to the administrative issues like inadequate amount and irregular disbursement of salary, and inadequate and irregular supply of medicine and other supplies, the rest of the 'causes for concern' are related to communication and interpersonal skills.</p> <p>Dan Hu; Monitoring of public services provision has been developed since 2009's</p>	<p>Niyigena: Although performance-based financing is provided in some instances, CHWs currently work as volunteers and do not receive regular financial compensation.<sup>20</sup> Consequently, CHWs engage in other activities to support their family's livelihood. Unlike most other healthcare workers, CHWs in Rwanda work as volunteers and do not routinely receive financial compensation. Providing CHWs with financial compensation may be an important way to promote well-being and prevent burn-out, particularly during periods of elevated workload. Increased investment should be placed in continued training and supervision of CHWs and effective supply chain management. These actions would improve the day-to-day operations of the CHW programme and also support national preparedness to respond to future outbreaks or other emergencies.</p>	<p>transparency in selection process.</p> <p>Jain and Glenn: Issues with <b>incentive distribution like delays and transparency, leading to demotivation among CHWs.</b> Removal of incentives leads to <b>less quality care and less motivation.</b></p> <p>Sundararaman and Mpenbeni: Financial incentives crucial to retaining healthcare workers in <b>remote areas,</b> significantly impacts <b>job satisfaction and retention.</b></p> <p>Dam: Offering CHWs additional benefits like <b>health insurance and priority disease testing</b> can lead to <b>better satisfaction and healthcare outcomes.</b></p> <p>Saran: improving community awareness of CHW contribution can positively impact performance and retention.</p> <p>Critical role of well-structured and transparent incentive systems in motivating and retaining CHWs with <b>balance of financial</b></p>	<p>allow coverage of a limited range of CHW- provided services or limit CHW services to specific populations.</p> <p>Schmit: We identified laws that provided a <b>CHW funding mechanism in 24 states and the District of Columbia</b> (Figure 1). Of these jurisdictions, 20 states and the District of Columbia had a Medicaid law that related to CHWs. <b>Florida, Louisiana, Tennessee, and Nebraska were the only states with laws that described a funding mechanism that did not have a state Medicaid law governing CHW payment.</b> Six states had laws that provided funding mechanisms for CHW workforce development (Figure 2). <b>These laws provided workforce development funding for CHW training (Alaska, California, Illinois, Louisiana, Minnesota, Nebraska), supervision (Alaska), recruiting (California), and loan forgiveness (Louisiana).</b> Sixteen states had laws that provided funding mechanisms for CHWs engaged in specific activities, including mental and behavioral health, clinical trial recruitment, school-based services, maternal-child health, HIV/AIDS services, and</p>
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		<p><b>per-month payment would be the best way to sustain CHWs in value-based insurance payment landscape.</b></p> <p>Humphry: CHWs can provide support for value-based care principles by helping to reduce utilization by addressing social determinants of health and increasing patient engagement</p> <p>Capitated payment models can allow staff to pay CHWs for things that haven't been defined by ffs as reimbursable. Can also incentivize containing cost with CHWs preventing avoidable utilization and CHWs can perform roles that don't require clinicians to reduce unnecessary personnel costs. These bundled payments make providers want to deliver care lower than their payment which supports CHW nonclinical functions, however this is a lot for care across settings which prompts need for</p>	<p>resources that are not associated with provision of clinical services, diversity of CHW activities despite restrictions imposed by anyone funding source. Grants can continue to play a role, because the program as a whole is not highly dependent on their continuation.</p> <p>kff: As of July 1, 2022, over half of responding states (29 of 48) reported allowing Medicaid payment for services provided by CHWs (Figure 1).<sup>27,28</sup> Coverage approaches vary and may include payment authorized under state plan, CHWs included as part of a Health Home program care team, CHWs included as members of interdisciplinary teams or networks under a Section 1115 demonstration waiver, or CHW services provided by MCOs.<sup>29</sup></p>	<p>health reform. The essential package of public health services was one of the main reform components. Financing of essential public health services are capitation based. Village doctors are main providers of essential public health services. A performance based payment system was implemented in order to allocate the budget to village doctors. The quantity and quality of public service provision of village doctors were closely monitored within the system on a monthly basis</p>	<p>Banek: The possibility of further opportunities after working as a volunteer for the HBMF programme formed an important incentive to be a CMD</p> <p><b>Salaried CHWs perform better than volunteers. Many more notifications for TB among salaried, and better community engagement. Salaried require less supervisory efforts for performance and accurate reporting, and attrition is reported lower compared to volunteers. Benefits for doulas payed on a salary models for quality of life outside of job that makes their careers more sustainable and allows them to commit to their work more instead of seeking other part time jobs.</b></p> <p>Vo: Many similarities between volunteers and salaried CHWs, but Salaried CHWs perform better, should be prioritized for scale up where resources permit</p>	<p><b>and non-financial rewards tailored to needs and context of workers.</b></p> <p>Zheng: After 1 year PBI implementation, process evaluation indicated <b>VHWs found system more fair than prior household visit-based system.</b> Still complaints about <b>low payments despite increases in average stipend.</b> However, <b>attrition was low and VHWs with limited education were able to master PBI scheme.</b> Successes are <b>improved health services delivery for chronic disease, safe birth, and minor ailments.</b> 42 VHWs performed 23,703 health actions in one year. For VHW incme, 23% more than under previous system. <b>0% attrition compared to usual 3-77% (Bhattacharyya)</b> Challenges are <b>unpredictable income.</b> Recommending <b>peer supervision</b> as future growth of program to <b>cost-effectively need of short supply of professionals.</b> Need further study on impact on health outcomes.</p> <p>Kelly: Following <b>withdrawal of the monthly</b></p>	<p>education and health promotion</p> <p>Despite some states having Medicaid laws or other funding mechanisms for CHWs, <b>the lack of uniform terminology and stable funding sources hampers long-term sustainability and integration</b> of CHWs into the healthcare workforce. Need for sufficient funding mechanisms including <b>Medicaid billing authorization</b> to ensuer CHWs properly compensated and can continue theri critical work in advancing public health adn addressing health inequities.</p> <p>Wennerstorm: As <b>health financing reform shifts risk to providers and drives care "upstream,"</b> equitable compensation for CHWs, reflecting their value in <b>addressing social determinants of health and promoting health equity, should be considered a prudent investment.</b> Fair compensation may also be an important step toward addressing the <b>inherent power differential between CHWs and clinically trained providers.</b></p> <p>George: Based on our findings, we conclude that as state Medicaid programs</p>
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		<p>care coordination which CHWs can also do.</p> <p>Islam: Capitated payment models can give providers more flexibility to use CHWs because, unlike fee-for-service payments, they can pay for staff and functions that have not been defined as reimbursable. Capitation also incentivizes containing cost, which CHWs can help achieve by assisting patients to improve their health outcomes and prevent avoidable utilization. Using CHWs for roles that do not require clinicians can also reduce unnecessary personnel costs.</p> <p>As with other capitated models, these types (bundled) of payment incentivize providers to deliver care at a cost that is lower than their payment, which supports the use of CHWs for nonclinical functions. In addition, these types of payment often are for care that is provided across care settings, which</p>			<p>and can be used for End TB Strategies. More individuals screened verbally by salaried, 121% higher. However less people screened by salaried than volunteer, 19% lower, and much higher rate of needing to screen, 2.7 times. Still much more notifications among salaried. Greater population coverage by full time CHWs, and better community engagement noted as possible reason why (Singh, Blokh). Salaried require less supervisory efforts for performance and accurate reporting. Attrition lower in salaried employee districts compared to volunteers (bhutta, bhattach).</p>	<p>stipend, we found that CHVs continued to take on roles and responsibilities of paid health workers, motivated by shared social identities and connections to their communities. However, replacing the stipend with a pooled-group incentive model seemingly exacerbated the financial burden already experienced by this vulnerable population. CHVs had to contribute their own money to the pool. For CHVs living in poverty, finding the money to contribute to a table-banking scheme as a condition of being a volunteer created additional financial and social burdens that came to light following implementation.</p> <p>Colvin: The most common strategy for developing and sustaining motivation in CHW programmes centres on the use of discrete incentives, often framed in a fairly narrow fashion, as specific forms of reward—like payments, salaries, promotions, or awards for specific tasks or levels of performance. Incentives provided to CHWs, which are</p>	<p>further integrate CHWs into health services, they should provide more funding and technical assistance for setting up payment mechanisms, conducting education and research, monitoring implementation, and addressing barriers to uptake of payment mechanisms.</p> <p>Gunter: Despite available Medicaid reimbursement for CHW services since 2007, the actual experience of many Minnesota health care organizations in obtaining reimbursement for CHW services has been challenging due to barriers at multiple levels (e.g., clarifying and operationalizing regulation, navigating complexity of billing, building organizational capacity to reach key stakeholders at state agencies and health plans).</p> <p>Barriers include the following: (1) lack of clarity around Medicaid reimbursement policies and procedures; (2) electronic billing system barriers and complexities; (3) Medicaid fee schedule reimbursement rates that are insufficient to cover the costs of delivering CHW services; and (4) factors such as the expertise and capacity of</p>
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		<p>supports the need for care coordination, including co</p> <p>Shared savings where providers receive payments on basis of savings achieved. Under these models, providers can pay CHWs with savings that CHWs can help them with to achieve quality care and equitable for CHWs.</p>				<p>organized under 4 categories: <b>financial, nonfinancial, health system, and community level.</b></p> <p>Grant: A cluster randomized controlled trial (RCT) which evaluated a <b>non-monetary incentives intervention</b> in India found that the provision of <b>public recognition (through a ceremony and certificate) resulted in greater CHW motivation than the other non-monetary incentives provided</b></p> <p>Musoke: In Uganda, one study found that the provision of <b>non-financial incentives to CHWs—t-shirts, umbrellas, gumboots, and certificates, which were provided to all CHWs—resulted in improved CHW performance and motivation</b></p> <p>Gadsen: A 2021 systematic review on performance-based incentives reported that <b>the provision of public recognition for CHW efforts resulted in increased and improved service delivery</b></p>	<p>organizations to navigate administrative hurdles</p> <p>Wennertstrom: As <b>MCOs continue to invest in CHWs</b>, it will be critical for administrators and supervisors to <b>learn about the full range of CHW roles and consider how they may be applied in a managed care context.</b></p> <p>Basu: <b>Higher Medicaid fee-for-service and capitated rates than currently used may be needed to support financial viability of CHW programs. A revised payment estimation approach may help state officials, health systems and plans discussing CHW program sustainability.</b>We found that the <b>threshold minimum levels</b> of both Medicaid FFS and PMPM payments estimated through our <b>microsimulation model</b> to sustain CHW programs were typically much higher than those currently publicly disclosed by Medicaid officials. We believe future research on the subject of CHW payment would benefit from the <b>broader disclosure of payment levels</b>, as publicly-available listings for CHW payment rates were limited to a few states with Medicaid state plan</p>
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					<p><b>incentive tracking and payments.</b></p> <p>Mpembeni: Financial incentives have also been reported as dominant motivating factors for retention of these providers.</p> <p>Saran: This study demonstrates that investing in efforts to improve community members' knowledge and recognition of CHWs' contribution to community health may have a significant impact on CHWs' motivation and retention in their role.</p> <p>Glenn: Results suggest the removal of financial incentives was perceived to have negatively impacted CHWs' desire to perform in three primary ways: 1) a decreased desire to work without financial compensation, 2) changes in pre- and post-intervention motivation, and 3) household income challenges due to dependence on incentives. Removal of financial incentives was perceived to have negatively impacted CHWs' level of effort expended in four</p>	
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					<p>primary ways: 1) <b>a reduction in CHW visits, 2) a reduction in quality of care, 3) CHW attrition, and 4) substitution of other income-generating activities.</b> Programs must consider how volunteer CHWs may be uniquely affected by performance-based incentives as these represent the sole source of financial compensation for their work. Although performance-based financial incentives can improve CHW motivation, these merit careful consideration by CHW project designers due to concerns about sustainability and negative effects. There is a need for more focused, high-quality research on the topic of incentives and motivation in order to explore whether performance-based incentives affect CHW motivation differently if their work is salaried or unpaid.</p> <p>Dam: e projects in the high-impact group tended to provide their CHWs with additional benefits beyond monetary compensation, including the provision of health insurance and priority access to disease</p>	
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					<p>testing. This highlights that additional benefits contribute to higher CHW job satisfaction and performance, which in turn may translate into to higher outputs and larger impact of the project. The importance of fair and commensurate compensation and the potentially positive impact on TB case notifications has been noted in other studies as well</p> <p>Zheng: After 1 year PBI implementation, process evaluation indicated VHWs found system more fair than prior household visit-based system. Still complaints about low payments despite increases in average stipend. However, attrition was low and VHWs with limited education were able to master PBI scheme. Successes are improved health services delivery for chronic disease, safe birth, and minor ailments. 42 VHWs performed 23,703 health actions in one year. For VHW incme, 23% more than under previous system. 0% attrition compared to usual 3-77% (Bhattacharyya) Challenges are</p>	
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						<p>unpredictable income. Recommending peer supervision as future growth of program to cost-effectively need of short supply of professionals. Need further study on impact on health outcomes.</p> <p>Musoke: In Uganda, one study found that the provision of non-financial incentives to CHWs—t-shirts, umbrellas, gumboots, and certificates, which were provided to all CHWs—resulted in improved CHW performance and motivation</p> <p>Gadsen: A 2021 systematic review on performance-based incentives reported that the provision of public recognition for CHW efforts resulted in increased and improved service delivery</p> <p>Chowdury: a 2021 study in Uganda that evaluated the effects of a competitive social reward (referring to a type of reward that provides public recognition) provided to the best-performing CHWs found a negative</p>	
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						<p>association between CHW performance and the provision of the social reward. The study provided a reward to 3% of the 4050 CHWs over the 3-year period. The authors hypothesized that the negative results might be a consequence of the design of the award mechanism which has subjective eligibility criteria leading to perceptions of favoritism, infrequent award provision, and inadequate transparency regarding the selection process</p> <p>Grant: A cluster randomized controlled trial (RCT) which evaluated a non-monetary incentives intervention in India found that the provision of public recognition (through a ceremony and certificate) resulted in greater CHW motivation than the other non-monetary incentives provided</p> <p>Kok: Despite the recognition that being a CBM is voluntary, incentives, especially those of non-financial nature, are important motivators and can potentially improve CBM performance. Incentive</p>	
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						<p>schemes for voluntary CBMs should include basic financial compensation with a mix of other incentives, including identification, regular refresher trainings and supportive supervision from the clinic and head office level. Continuous attention is needed to ensure incentives are in line with CHWs' roles and tasks and broader socio-economic context</p>	
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<p>Key synthes</p>		<p><b>*Access to quality care:</b> P4P schemes incentivize healthcare providers to meet quality targets, potentially improving care delivery for underserved populations if these targets are aligned with equity goals.</p> <p><b>*Support for CHWs:</b> Financial incentives from P4P programs can enable investments in CHWs who facilitate access to care, engage patients, and coordinate services--functions crucial for improving health outcomes in marginalized communities.</p> <p><b>*Understanding and acceptance:</b> The effectiveness of P4P systems can be limited by a lack of familiarity with the model, especially in regions or among providers with no prior exposure to such schemes, impacting the equity implementation across different healthcare settings.</p> <p><b>*Challenges in performance management:</b> if performance metrics</p>	<p><b>*Temporary grant challenges:</b> Many CHW programs initially rely on grant funding, which can compromise their long-term sustainability. Programs like NY Presbyterian Hospital's WIN initiative have transitioned from grant funding to operational budgeting after demonstrating cost savings, showcasing a successful model for sustainability.</p> <p><b>*Medicaid integration:</b> States are increasingly incorporating CHW services into 1115 waivers and demonstration programs, which helps direct Medicaid funds towards these services, potentially offering more stable funding source compared to temporary grants.</p> <p><b>*Federal and block grant potential:</b> CHWs could benefit from federal block grants such as from Department of Housing and Urban Development and Administration on Children and Families. However, these sources aren't</p>	<p><b>*Volunteers want compensation for their jobs:</b> CHWs and managers from many programs felt that monthly salary insufficient for the work they were expected to accomplish, and they felt like volunteers rather than paid employees. They note concern with work-related expenses which really reduces their net income.</p>	<p><b>*For PBIs, in Kenya,</b> task shifting to CHWs shows potential to increase clinic productivity by reducing workload on clinicians. With compensation issues, CHWs often feel underpaid relative to workload, impacting perception of roles and overall job satisfaction</p> <p><b>*Recommendations for improvement:</b> systematic improvements needed to address salary irregularities and ensure consistent medical supplies to support CHWs in roles effectively</p>	<p><b>*Diverse implementation of PBI scheme:</b> CHWs in Uganda, Kenya, and Rwanda show varying degrees of success with PBIs. Uganda's reliance on volunteerism without standardized incentives limits effectiveness, while Kenya's pool-based despite fostering community ties increases financial strain among CHWs. Rwanda uses a combination of performance-based funding and income-generating coops but lacks legal protections for volunteers.</p> <p><b>*Financial and non-financial rewards:</b> In Nepal, CHWs receive both types including uniforms and community recognition.</p> <p><b>*PBIs improve service delivery outcomes but absence of expected incentives can negatively impact retention and motivation.</b></p>	
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