

Barriers to and facilitators of the implementation of Community Health Worker programmes in high-income countries: a systematic review

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Abstract

Background: Global interest in Community Health Workers (CHWs) is rising as health systems seek to address persistent health inequities and the social determinants of health. However, in high-income countries (HICs), CHW implementation remains fragmented. This systematic review synthesises evidence on the factors that act as barriers and facilitators to the implementation and integration of CHW programmes across HIC primary healthcare settings.

Methods: We searched MEDLINE, Scopus, PsycINFO, and CINAHL for studies published between January 2001 and August 2025. Inclusion focused on qualitative, quantitative, and mixed-methods papers regarding CHW implementation in HICs. Methodological quality was appraised using the Mixed Methods Appraisal Tool (MMAT). Data were synthesised using a 'Best Fit' Framework Synthesis and confidence in the findings was assessed via GRADE-CERQual.

Results: Seventy-two papers were included (US n=64; UK n=4; Australia n=3; Belgium n=1), primarily comprising qualitative and mixed methods designs. Key facilitators included leadership buy-in, the presence of implementation champions, and established community partnerships that enabled resource sharing. Prominent barriers included precarious, short-term funding models that prioritised quantitative outputs over relational labour; hierarchical medical power dynamics; and disconnected IT systems that necessitated redundant data entry. The COVID-19 pandemic acted as a catalyst, elevating the CHW role within public health infrastructure while simultaneously exposing digital divides and structural fragility. GRADE-CERQual ratings indicated high confidence in findings regarding funding sustainability, training, and integration.

Conclusions: The evidence synthesised in this review reveals a fundamental misalignment within current health services: while CHWs are valued for their unique relational capacity, they remain systemically undermined by transactional health system designs. Achieving sustainability requires a strategic shift toward long-term, flexible funding models and the workforce development of supportive infrastructure, including reflective supervision and standardised training. Integration must move beyond short-term, project-based initiatives toward a resilient and permanent public health workforce capable of addressing structural health inequities.

Keywords

- Community Health Workers
- Implementation Science
- High-Income Countries
- Systematic Review
- Health Inequities
- Workforce Development
- Primary Health Care
- Framework Synthesis
- Social Determinants of Health

Background

Global interest in large-scale Community Health Worker (CHW) programmes is growing as health systems seek to address persistent health inequities and the social determinants of health [1]. The term CHW encompasses a broad range of frontline public health roles that serve as a trusted liaison between formal health services and marginalised communities [2, 3]. CHWs are defined by the World Health Organization (WHO) and the American Public Health Association as lay public health professionals who are trusted members of, or possess an unusually close understanding of, the communities they serve [4, 5]. This trusted relationship is rooted in shared life experiences, languages, and socioeconomic backgrounds, as these workers are typically recruited directly from the populations they support [6].

CHWs play a critical role in the delivery of primary healthcare in low- and middle-income countries (LMICs) [7-11], where they operate under various titles, including community navigator, promotora, ASHA, lady health worker, and community health advisor [6]. Their engagement is considered a cost-effective strategy to address the projected 11 million global

health worker shortage by 2030 [12, 13]. The CHW workforce has achieved substantial scale internationally and is active across multiple advanced economies. For example, the United States possesses a cadre of over 86,000 active CHWs employed across hospital, outpatient, and governmental sectors [14, 15]. Structured programmes also operate across other high-income country settings, including Canada [16], Australia [17], Belgium [18], and the UK [19] demonstrating that lay health work is an established and growing strategy within advanced health systems

CHWs are deployed in high-income countries (HICs) to help address a range of complex and overlapping pressures from ageing populations, a rising prevalence of non-communicable chronic diseases, and deep-seated health inequalities [20-22]. Systematic reviews and meta-analyses of literature from high-income settings establish that CHW interventions are associated with measurable clinical improvements in chronic disease management [23], enhanced glycaemic control for individuals living with type 2 diabetes [24], increased uptake of preventative breast and cervical cancer screenings among historically non-adherent groups [25, 26], and improved health-related quality-of-life for individuals navigating complex, chronic conditions such as chronic obstructive pulmonary disease [27] and HIV [28].

CHW initiatives have been successfully deployed in high-income settings focusing on a wide range of health issues and marginalised populations, from bilingual promotoras, or Latinx CHWs, delivering environmental safety navigation in the United States [29], to community navigators supporting immigrant groups in Australia [30], and health trainers addressing lifestyle-related public health challenges in the United Kingdom [31]. However, implementation models for CHW programmes vary significantly by economic context. In advanced economies, CHW workforces are often integrated into health services as discrete, localised, or time-limited initiatives targeting specific geographic territories or populations, rather than operating as a uniform national infrastructure [21]. In many LMICs, such as Brazil and Ethiopia, CHWs are integrated as permanent and salaried pillars of nationalised primary care strategies designed to expand health access and achieve universal health coverage [32, 33] via formalised task shifting to mitigate scarcity in the professional clinical workforce [34,

35]. Conversely, in advanced economies, healthcare delivery is typically structured around highly professionalised, state-regulated clinical models and formal credentialing frameworks [21, 5]. The broad literature notes that within these heavily institutionalised settings, the deployment of non-clinical lay workers frequently introduces complex integration dynamics alongside licensed clinical professionals [36, 37].

Global public health bodies, including the WHO, have highlighted a dearth of evidence regarding the implementation of CHW programmes in advanced economies, calling for rigorous research to identify how contextual factors and regulatory environments impact the applicability of policy options [38, 5]. Moreover, because implementation success is highly contingent upon contemporary environmental factors, there is a critical need to examine how these structural boundaries persist or evolve over time, particularly following recent periods of health system stress like the COVID-19 pandemic [39, 40]. To address these concerns, this systematic review aims to provide the first comprehensive synthesis of international evidence on the factors that act as barriers and facilitators to the implementation and integration of community health worker programmes in high-income settings, establishing a necessary baseline for workforce deployment and long-term sustainability.

Methods

This mixed-methods systematic review adheres to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines [41]. A mixed-methods approach was adopted to enable the quantification of reported barriers and facilitators alongside a qualitative exploration of how and why these factors operate within HIC health systems. The study protocol was registered in advance and amended to incorporate a refinement of the search strategy (PROSPERO: CRD42022310789).

Search Strategy

A comprehensive search strategy was developed in consultation with an information specialist to capture CHW implementation in HICs defined by OECD membership [42]. Four electronic

databases (MEDLINE via Ovid, Scopus, PsycINFO, and CINAHL) were searched using a combination of indexed terms and free-text keywords. The search included studies published in English between 1 January 2001 and 5 August 2025. Eligible literature encompassed peer-reviewed journal articles, doctoral theses, and practice-based case studies. Formal grey literature database searches were not conducted, and evidence in languages other than English was not included, due to resource constraints. The lower time limit of 2001 was applied to enhance relevance to modern health service configurations rather than historical models operating within older policy environments, particularly following international initiatives to expand and formalise CHW workforces in the early 2000s [43, 44]. Search strategies are provided in Additional File 1. The database search was supplemented by a manual backward citation search of the reference lists of all included studies and relevant systematic reviews.

Eligibility Criteria

Qualitative, quantitative, and mixed-methods papers were eligible if they reported on factors influencing the implementation of CHW programmes within HICs. The review followed the Population, Concept, and Context (PCC) framework for study selection:

- **Populations:** Community Health Workers (CHWs) and key stakeholders involved in programme delivery, management, or integration, including healthcare providers, clinical staff, programme managers, administrators, and commissioners.
- **Concept:** Factors influencing the implementation or delivery of CHW interventions. Studies evaluating clinical or biomedical patient outcomes exclusively, without reporting data on implementation determinants, barriers, or facilitators, were excluded.
- **Context:** Community and primary care settings within high-income countries (OECD members).

Interventions delivered within inpatient hospital settings or educational institutions (schools) were excluded. While schools are widely recognised as community platforms within broad public health frameworks, they represent highly structured, institutional environments. To

maintain conceptual consistency, this review restricted its scope to non-institutional, territory- or household-based community environments. This boundary was established to capture implementation determinants within general community and primary care infrastructures rather than within specialised institutional platforms. CHWs were defined in accordance with the American Public Health Association as lay individuals with a close understanding of their community, possessing job-related training shorter than that of a professional healthcare worker, whose primary aim is culturally appropriate health promotion [4].

Study Selection and Quality Appraisal

Two reviewers (AR and HD) independently screened titles and abstracts using Rayyan (Rayyan Systems Inc., Cambridge, MA) [45]. Country eligibility was assessed manually during screening as geographic contexts were readily apparent, while population exclusions primarily comprised non-lay healthcare roles and social prescribing link workers who fell outside the CHW definition. Full texts of potentially relevant articles were then independently assessed against the inclusion criteria by both reviewers. Disagreements at both stages were resolved through discussion or consultation with a third reviewer. Methodological quality was assessed using the Mixed Methods Appraisal Tool (MMAT) [46]. Because the sample included programmatic case studies and doctoral theses, papers were categorised based on the specific empirical data collection and analytical methods used to generate their findings (e.g., qualitative, quantitative, or mixed methods) rather than the overarching study label or publication format. The two reviewers independently appraised each study, following an initial calibration exercise conducted on 10% of the sample to ensure consistency. Any subsequent discrepancies in appraisal were resolved through consensus.

Data Extraction and Synthesis

Data extraction and synthesis employed the 'Best Fit' Framework Synthesis (BFFS) approach [47, 48]. The conceptual framework developed by Kok et al. [49] was selected as a foundational model for this study. The widely cited model [5] was chosen because it theorises

how the interaction between intervention design and contextual factors—spanning community, health system, and national levels—influences CHW performance. While originally based on evidence from LMICs, its comprehensive structure provided a robust starting point for adaptation to high-income settings. The framework was adapted a priori to exclude impact level factors. During synthesis, it evolved further to capture emerging themes, such as IT and Data Systems and the COVID-19 pandemic. The final adapted framework organised factors into four domains: Outer Setting, Health System, Intervention Design, and Individual Factors. A data extraction form incorporating the framework’s constructs was piloted, with data items including study characteristics, CHW roles, and contextual factors influencing CHW programme implementation. Data extraction was performed independently by one reviewer (AR) and checked by a second (HD). The full extraction sheet is provided in Additional File 2.

Integration of Quantitative Evidence

A convergent integrated approach was adopted to combine different data types within a single synthesis [50]. Where retrieved quantitative data were highly descriptive or lacked the homogeneity required for statistical pooling, findings were “qualitised” by transforming numerical data, descriptive statistics, and survey results into narrative descriptive statements [51]. These transformed statements were then coded and synthesised inductively and deductively within the adapted framework alongside the primary qualitative data.

Confidence Assessment

Confidence in the findings was assessed using GRADE-CERQual, the standard for transparently evaluating how well review findings represent the phenomena of interest. One reviewer (AR) evaluated the findings against the four components—methodological limitations, coherence, adequacy of data, and relevance—to produce summary statements and an overall confidence rating (high, moderate, low, or very low) for each finding. These assessments were verified by a second reviewer (HD), with any discrepancies resolved through discussion and consensus.

Manuscript Preparation and LLM Disclosure

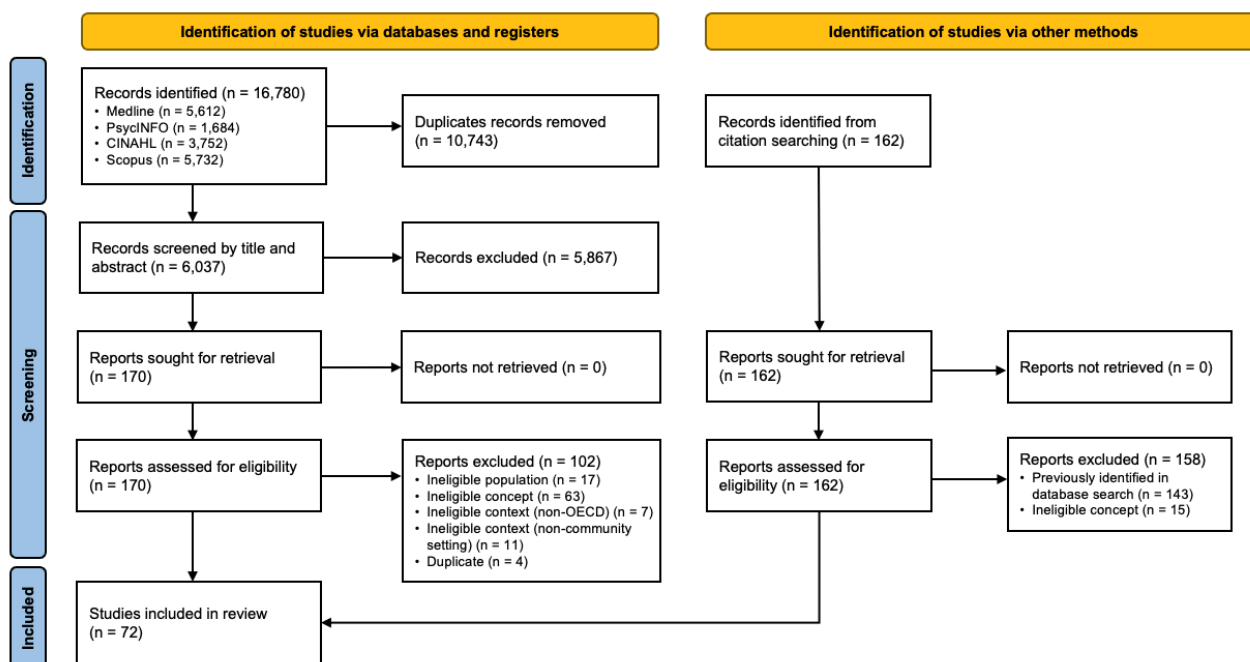
During the preparation and drafting of this manuscript, the authors used an LLM (Gemini 3 Flash) to assist with structural organisation, formatting according to journal-specific guidelines, and proofreading for grammatical accuracy and clarity. All intellectual content, data synthesis, and conclusions were critically reviewed and verified by the authors, who maintain full accountability for the accuracy and integrity of the work.

Results

Study Selection and Appraisal

Excluding duplicates, a total of 6,037 records were screened (Figure 1). Following full-text assessment, 72 papers met the inclusion criteria [52-62, 29, 63-122]. The search across MEDLINE, Scopus, PsycINFO, and CINAHL was supplemented by backward citation searching, which identified four additional studies. A total of 71 papers were appraised using the MMAT. One descriptive practice note that did not employ an empirical research design [60] was excluded from formal quality appraisal but retained for thematic synthesis due to its rich contextual data. Methodological appraisal found that the included evidence was of overall high quality. While most studies met all appraisal criteria, several papers had moderate limitations due to insufficient integration of qualitative and quantitative components [63, 72, 80] or a lack of methodological transparency in reporting [74, 81] (Additional File 1). These design-specific weaknesses, alongside issues of data adequacy and thematic coherence, directly informed the final GRADE-CERQual confidence ratings assigned to each review finding. Following the evidence synthesis, GRADE-CERQual assessments provided high confidence in four of the 18 summary findings and moderate confidence in the remaining 14 (Table 1; Additional File 1).

Figure 1. PRISMA 2020 flow diagram for new systematic reviews



Evidence Overview

The included evidence consisted of 51 qualitative studies [52, 54, 56-59, 61, 62, 29, 64-67, 69-71, 74-79, 83-86, 88, 89, 91-99, 101, 104, 106, 107, 109, 111, 113, 115-117, 119-122], 17 mixed methods papers [53, 55, 63, 68, 72, 73, 80, 81, 87, 90, 100, 102, 103, 110, 112, 114, 118], three quantitative studies [82, 105, 108], and one descriptive practice note [60].

Included in this total were two doctoral theses [54, 81]. Most studies were conducted in the US (n = 64) [52-55, 57-62, 29, 63, 66, 68-72, 74-86, 88-115, 117-121]. Other settings included the UK (n=4) [65, 73, 87, 116], Australia (n=3) [64, 67, 122], and Belgium (n=1) [56]. Most studies (n=48) defined the CHW role with reference to the American Public Health Association, characterising them as frontline public health workers possessing close understanding of the communities they serve [52, 54-56, 58, 59, 61, 62, 66, 69-72, 74, 76-78, 81, 82, 85, 86, 88-93, 95, 97, 98, 100, 101, 103-115, 118-121]. Alternative CHW titles included 'lay health worker' [29, 67], 'promotora' [57, 60, 63, 75, 79, 83, 94, 99, 102, 117], 'COVID-19 health ambassador' [53], 'health navigator' [84] 'health trainer' [65, 87], 'indigenous health worker' [64], 'community health advocate' [96], 'community health representative' [80], 'link worker' [122], and 'community health and wellbeing worker' [116].

Across all settings, key functions undertaken by the CHWs included service navigation, health promotion and education, addressing vaccine hesitancy, and assisting clients in meeting unmet social needs.

Some papers provided granular detail of the CHW role within workplace and community contexts, including primary care practices and community clinics [54, 61, 62, 65, 68-70, 72, 77, 80, 81, 85, 87, 89, 90, 96, 99, 103-106, 109, 112-114, 116, 118, 121], community-based organisations (CBOs) [52, 55, 57-59, 29, 63, 66, 77, 81, 83, 85, 92, 98, 100, 102, 107, 110, 112, 114, 121], client homes [68, 79, 80, 91, 99, 106, 117], and health departments [52, 29, 69, 77, 78, 82, 110, 112, 114, 121]. Others described interventions from a systems or policy perspective, illustrating high-level factors influencing programme implementation at the macro or state level [69, 71, 74, 82, 86, 87, 92, 101, 103, 108, 110, 112, 115, 120, 121]. Others focussed on CHW interventions characterised by particular aspects of the CHWs' background, such as having lived experience of the criminal justice system [77], being former refugees [84], or being members of a particular ethnic group e.g., the Navajo Nation [80]. The majority of studies provided evidence through first-hand testimony from stakeholders directly involved in their delivery or commissioning, including CHWs [52-56, 58, 59, 62, 64-66, 68, 70, 73, 74, 76-79, 81, 82, 84, 85, 88, 90, 93-96, 98-100, 102-104, 107-120], supervisors and administrators [52, 59, 29, 69-71, 77, 78, 83, 88, 89, 91, 92, 96, 100, 101, 108-110, 112, 120, 122], clinicians [61, 68, 70, 72, 89, 96, 104-106, 109, 113, 114, 118], and service users [53, 62, 68, 73, 100, 109, 122].

Qualitative Evidence Synthesis

The following section presents the qualitative synthesis, organised by the study's four overarching domains (Outer Setting, Health System, Intervention Design, and Individual Factors), followed by implementation themes and GRADE-CERQual summary statement. Table 1 identifies the studies relevant to each theme, alongside GRADE-CERQual confidence assessments, while Table 2 provides illustrative quotes.

Outer setting factors

Government and policy

Finding 1: Policy decisions were critical determinants of programme success; misalignment between policy design and need created structural barriers, while CHW collaboration in policy design facilitated implementation.

Policy-level decisions were identified by healthcare planners and commissioners as powerful, overarching determinants of implementation success. Policy misalignment proved highly detrimental: the UK's Health Trainer initiative was impeded by a fundamental disparity between the intervention design (developed via government policy paper) and actual population need [87]. Furthermore, a mid-course policy change enabling GPs to redeploy trainers to activities beyond their scope undermined fidelity and retention [87]. Conversely, successful implementation foregrounded “authentic collaboration,” where CHWs acted as architects of policy rather than mere subjects, effectively leveraging policy windows to secure recognition, a dynamic documented in a narrative case study of state-level advocacy campaigns involving CHW leaders and public health officials [86]. However, restrictive funding mechanisms frequently acted as barriers. Gunter et al [74] found from evaluations capturing both technical assistance staff and CHWs that Medicaid policies reimbursing only for narrow “health education” failed to cover the holistic support CHWs provide. Structural misalignment could also force organisations to piece together fragmented grants, fostering job insecurity, an issue raised by regional CHW leaders [110]. Furthermore, policies could actively exclude target populations: Sainz et al [107] noted in a study of 15 Latinx CHWs working within a community-based organisation that regulations excluding undocumented individuals from aid created critical barriers that CHWs had to navigate to support their clients. This was reinforced by an evaluation across five Medicaid Managed Care Organisations (MCOs), where MCO administrators, supervisors, and CHWs reported that rigid corporate billing metrics restricted holistic care workflows [120].

Certification

Finding 2: CHW accreditation was valued for facilitating professionalisation but variation in its application was confusing and a focus on academic over lived experience hindered workforce diversity.

The credentialing process, available to CHWs in the US, was valued by programme administrators and CHWs for legitimising the workforce, standardising skills, and creating career pathways [54, 88, 95, 101, 103]. For highly integrated cadres, such as a cohort of 107 bilingual Navajo Nation Community Health Representatives who are required to hold Certified Nursing Assistant qualifications, certification was essential for formal clinical team alignment [80]. Leaders also considered it essential for accessing reimbursement streams [74]. However, certification mandates could act as a barrier to recruitment when institutional protocols favoured formal education over “soft skills” or lived experience [78]. Based on interviews with 60 CHWs and supervisors within community-based organisations, Billimek et al [59] warned that models prioritising didactic training threatened the core CHW identity by excluding those with the necessary “connective capacity.” To mitigate this, some programmes implemented tiered systems where experience provided a pathway for advancement alongside certification [78]. Additionally, inconsistent state-level policies and a confusing multiplicity of accreditation programmes impacted workforce planning, causing systemic obstacles for executive directors and frontline workers alike [95, 101, 103, 115], while the cost of certification was also a major barrier, with leaders reporting that it limited recruitment and threatened programme sustainability [91, 103, 109].

COVID-19

Finding 3: The pandemic exacerbated existing inequalities while simultaneously creating new barriers. The relational support provided by CHWs was critical for helping communities during the crisis.

The COVID-19 pandemic acted as both a stressor and a catalyst across diverse academic, healthcare, and community alliances [58, 61, 73, 76, 93, 96, 109]. It introduced barriers such as the “digital divide,” which hindered virtual outreach, according to qualitative data captured across 11 academic sites and over 75 community partners [57], and required CHWs to combat disinformation [92]. Government-led responses, such as vaccine mandates or military

presence at clinics, occasionally triggered trauma and withdrawal among specific populations, requiring CHWs to act as mediators [84]. Despite these challenges, the crisis underscored the CHW role as “trusted messengers” to investigators and community representatives alike [58, 63, 76]. With the closure of other support agencies, CHWs became a critical source of in-person relational support [58, 73, 76, 96, 107], confirming their function as a frontline service adaptable to systemic failures, a perspective shared by focus groups of 21 CHWs embedded within grassroots community-based organisations [66].

Health system factors

Funding and sustainability

Finding 4: Securing sustainable funding was a pervasive challenge. Short-term grants and restrictive reimbursement models were barriers to job security and often prioritised quantitative outputs over relational labour.

A lack of sustainable financing served as a primary barrier to securing permanent employment contracts and maintaining stable workforce retention reported across studies surveying healthcare planners, managers, and frontline CHWs [61, 71, 83, 87, 91, 100, 101, 104, 109, 111, 114]. The reliance on short-term, fragmented grants created a cycle of job insecurity, causing high turnover as staff sought more stable employment [69, 101, 110]. The empirical scale of this risk was validated by a national survey of 1,858 CHWs, which identified dissatisfaction with organizational compensation and support as the single strongest predictor of intent to leave the public health workforce [82]. A structural mismatch was identified by executive directors and supervisors between funding metrics and CHW realities; funding often prioritised “products” (quantitative outputs) over “people” (relational trust), leading to abrupt contract terminations that undermined longitudinal care and community trust, as illustrated in a community-based participatory case study of 60 CHWs [59]. Furthermore, reimbursement rates in insurance-based systems frequently failed to cover the actual costs of service delivery or essential non-billable activities such as travel and care coordination [74]. Bureaucratic delays in distributing funds to community partners further threatened the operational viability of smaller organisations, according to multi-site academic and community alliance representatives [57]. Clinicians also recognised this barrier: a national

survey of 1,504 US primary care providers found that 45% identified “lack of reimbursement” as the primary obstacle to integrating CHWs within primary care teams [105].

Organisational readiness

Finding 5: Organisational cultures and professional norms facilitated readiness to adopt a CHW service. Successful integration required leadership buy-in combined with staff engagement to overcome hierarchical resistance.

Receptivity to CHW programmes was a critical determinant of success [75, 77, 87, 89, 96, 104, 109]. While strong leadership and the presence of “implementation champions” facilitated acceptance among a mixed-methods evaluation of clinicians, patients, and CHWs [68], leadership buy-in alone was insufficient if implementation was perceived as “top-down.” Such cultures were reported by clinic staff to limit innovation [104], whereas a collaborative culture among coordinated care organisation leaders [71] and a care philosophy aligned with social determinants of health reported by health system administrators and clinicians were associated with success [89]. Clinics assigned CHWs without involvement in the hiring process often reacted with wariness, as explicitly captured in a qualitative study of 14 clinic and project leaders [69]. Hierarchical power dynamics also inhibited integration; CHWs reported difficulties in making requests of clinicians across multiple ambulatory clinics [70], while health department supervisors and managers displayed scepticism regarding the capabilities of non-clinical workers [78]. To enhance readiness and integration, the suitability of a host organisation for adopting a CHW programme could be assessed against criteria like shared goals before implementation began, a process successfully piloted by non-profit health plan administrators [96].

Intervention factors

Intervention design

Finding 6: Healthcare initiations with clear scope of practice enabled CHWs to focus on key functions like outreach and relationship-building. Flexibility and cultural relevance were key facilitators, whereas rigid or non-translated materials hindered outreach.

Interventions with clearly defined CHW roles, objectives, and modes of engaging communities, such as employing health education frameworks, self-management skill building, and directly linking clients to social welfare services, material aid, and local support networks, were viewed positively by evaluation teams and community partners [64, 67, 73, 117, 122]. With clearly defined objectives and tools at their disposal, Indigenous Health Workers delivering the Flinders Chronic Condition Management Program found it easier to focus on building relationships [64]. Programmes that gave promotoras conducting home visits flexibility to organise their own schedules [117], or allowed Lay Health Workers in Melbourne to determine the areas on which they wished to focus their efforts through an “empowerment model” [67], were felt to increase CHW self-efficacy and improve delivery. Culturally grounded innovations significantly aided engagement: for example, Johnson et al [79] described how promotoras iteratively refined a nutrition curriculum for border communities,, modifying recipes to ensure ingredients were affordable and culturally preferred. Conversely, interventions could impede CHWs when materials were not adapted for specific populations, such as undocumented patients or non-English speakers, an operational challenge observed across regional coalitions and nationwide clinical models [102, 109].

Recruitment

Finding 7: Proactive, community-based recruitment strategies were essential for identifying suitable candidates; however, traditional HR protocols often acted as a barrier by prioritising formal education over lived experience.

Effective recruitment prioritised shared cultural backgrounds and interpersonal skills, according to programme coordinators and planners [29, 87, 91, 103]. Successful strategies included local recruitment drives, utilising plain-language job adverts posted in settings like schools and supermarkets [29, 97, 103], and leveraging partner networks across voluntary and community sector organisations [53, 73, 89, 101, 103]. Difficulties arose in finding candidates with the right mix of skills and qualities [91], particularly in rural areas. A major barrier emerged from institutional human resources (HR) protocols. Standardised scoring rubrics often favoured formal education and failed to recognise the “soft skills” or lived

experience critical to the CHW role, as highlighted by health department managers [78]. This “bureaucratic hiring” barrier prevented the employment of qualified community members [92], forcing some programmes to create tiered entry systems to bypass educational requirements [78]. Some programme administrators talked about “low barrier hiring processes” and noted that lengthy online application forms were a primary obstacle to employing a less traditional healthcare workforce [89].

Training

Finding 8: Training enhanced skills and self-efficacy while facilitating integration. Effective training was practical, continuous, and covered both clinical topics and 'soft skills' like trauma-informed care.

Training was consistently linked to improved confidence, retention, and team integration [68, 72, 88, 97]. Core curricula typically covered public health, disease-specific knowledge, and cultural competence across primary care clinics and programmatic evaluations [55, 72, 89], such as the Texas C-STEP framework which trained over 33 CHWs [60]. Flexible and practical methods like continuous, on-the-job, and interactive training were preferred by site leaders and CHWs [29, 89, 100, 103, 109, 111], although there could be a trade-off between convenient online modalities and face-to-face sessions valued for peer support, as observed by research and voluntary sector teams [73, 89, 103]. Key challenges involved tailoring training to CHWs’ varied abilities, like digital literacy, and personal circumstances [87, 91, 101]. Studies highlighted the critical need for training in “soft skills,” particularly motivational interviewing, which a qualitative focus group of 12 CHWs identified as a major asset for addressing social needs [81], and trauma-informed care [66], to manage complex client needs. This was supported by a secondary mixed-methods trial analysis involving 12 CHWs and 17 primary care providers, which focused heavily on training for internal team integration boundaries [68]. A lack of training for other staff regarding the CHW role was identified as a significant gap that perpetuated role confusion among clinic leaders [69].

Incentives

Finding 9: Low wages were a pervasive threat to sustainability. Non-financial incentives were valued but insufficient to prevent turnover driven by financial precarity.

Poor compensation was described as an endemic problem driving staff turnover and threatening sustainability across community-based organisations and public health departments [29, 83, 100, 101, 112]. A mixed-methods national evaluation incorporating a survey of 867 CHWs revealed that CHWs in some settings reported being “one paycheck away” from needing the services they provided, while highlighting payment delays within CBO networks [112]. While non-financial incentives—such as recognition, reimbursement for expenses, and access to professional networks—were appreciated by programme planners [29, 83], they did not fully mitigate the stress of low pay. An exploratory focus group study indicated that while “impact” and “purpose” were primary intrinsic motivators, the lack of pay parity with other roles was a source of frustration [81], while the reliance on volunteer CHWs, alongside paid, was viewed as unsustainable [92]. Statistical evidence reinforced this link between compensation and retention: Kirkland et al [82] found in a quantitative survey of 1,858 public health agency CHWs that CHWs dissatisfied with their pay had a 39% probability of intending to leave their jobs.

Supervision

Finding 10: Supervision that was responsive, understanding of the role, and developmental contributed to a resilient workforce; poor supervision was linked to worker turnover.

Supportive supervision was identified as a key facilitator for wellbeing and self-efficacy by cadres working across health systems and non-profits [55, 67, 100, 103, 109, 115, 117]. Effective supervisors were described by urban and rural CHWs as relatable, responsive, and capable of providing developmental support rather than just administrative oversight [81, 103, 115]. Programme leaders suggested that supervision focus on building individual capacity [91, 97, 101, 118], while a “trauma-informed” approach, sensitive to the CHWs’ lived experience, was thought by executive directors to mitigate burnout and turnover [101]. CHWs specifically valued supervisors who understood the “real life” nature of community work, which often occurs outside standard business hours, especially those supervisors who had previously worked in the field themselves [81]. Peer-to-peer supervision and weekly debriefs

were particularly valued for managing the emotional burden of the work, as highlighted by vaccine outreach health navigators and Melbourne-based Lay Health Workers [55, 67, 84, 113, 115]. However, a lack of supervisor capacity or understanding of the CHW role often left workers feeling unsupported, an issue raised within a municipal health justice network employing 18 CHWs with personal histories of incarceration [77]. Insufficient support was also a critical driver of attrition: Kirkland et al [82] identified dissatisfaction with “organisational support” within their large quantitative dataset as the single strongest predictor of a CHW’s intent to leave the workforce.

Communication and integration

Finding 11: Limited understanding of the CHW role among stakeholders acted as a barrier to integration. Clear role definitions, champions, and structured communication facilitated integration.

Communication and role clarity were critical themes, with confusion about the CHW role among clinical colleagues and other key stakeholders impeding integration. Rohan et al [105] found in a national survey of 1,504 primary care practitioners that one-third of primary care providers reported a “lack of clarity” about CHW functions as a major barrier. One supervisor noted in an evaluation of community-based and clinical initiatives that the CHW’s “biggest barrier is having the health care team understand what their role is” [111]. A source of this barrier was poor initial communication about the aims of the CHW service [71, 96, 111], which could cause unrealistic expectations about what CHWs could achieve among coordinated care organisation leaders [71] and fear of the CHWs encroaching on other staff roles, reported by preceptors and administrators [88]. In clinical settings, “hierarchical power dynamics” inhibited communication, as noted by ambulatory care clinicians and programme staff [70], while CHWs in some systems reported feeling “integral but not integrated” and “completely invisible” to the clinical team [90]. To enhance understanding and integration, proactive communication strategies were essential [96, 97]. These included formal onboarding processes where CHWs could explain their work to office staff and providers [88, 96, 99, 111] and purposeful integration into existing team communication channels [72]. Implementation champions were vital for raising buy-in [68, 96, 97, 99, 104, 118], while

structured communication mechanisms, such as “huddles” [74] or bi-directional learning collaboratives comprising clinic and health department leaders [69], facilitated rapport. Without structured opportunities for clinicians to learn about the CHW role and develop connections with individual workers, and vice versa, CHWs felt isolated and clinical partners disconnected [70].

Quality assurance and evaluation

Finding 12: Service evaluation contributed to programme sustainability but was hindered by a mismatch between outcome metrics and the preventative, relational nature of CHW work.

Service evaluation was crucial for assessing CHW performance and justifying programme funding [29, 83, 87, 97, 104, 118], but faced significant challenges. Some CHWs felt there was a high documentation burden, which could impede relationship-building, with obesity-related programme planners across 10 states noting that extensive demands were often outside the core strengths of the workforce [83, 118]. In terms of measuring programme impact, some leaders noted a fundamental mismatch between outcome metrics mandated by funders and commissioners—often focused on throughput or short-term clinical outcomes—and the preventative, relational nature of CHW work [71, 87]. For example, Wennerstrom et al [120] found that MCOs prioritised metrics like hospital readmission rates and “successful contact,” which administrators admitted failed to capture the full impact of the CHW’s work. Billimek et al [59] highlighted that such models focus on “units of service” and miss the unseen labour of trust-building.

IT and data systems

Finding 13: IT systems facilitated integration when interoperable but acted as a barrier when workers lacked access or systems were not optimised for CHW use.

IT tools had a mixed impact on programme implementation. Access to Electronic Health Records (EHRs) supported integration [55, 96, 97, 118], with some CHWs reporting that EHR access improved communication with providers [80]. However, onerous data entry could reduce the number of clients seen [95], and providers expressed liability concerns over EHR

access for non-clinical employees [88]. There were also time and training costs, for CHWs who may not be familiar with computers, an obstacle observed by supervisors and executive directors [91, 101] and for existing staff required to work in new and complementary ways [97]. Technical barriers were also prominent. Acharya et al [52] described from a feedback survey evaluating user entries how a lack of interoperability between CHW databases and EHRs created a “double documentation” issue. Tredinnick-Rowe et al [116] highlighted in a qualitative evaluation of 10 frontline workers and 6 managers in Cornwall, UK, that restricted access to NHS systems forced CHWs to rely on detached spreadsheets, limiting their ability to share intelligence with clinical partners. Conversely, systems designed with CHW input were found to improve usability and client engagement [52].

Other resources

Finding 14: Resource constraints, particularly regarding physical space and client aid, hindered outreach. Collaborative partnerships were essential for supplementing gaps in service provision.

A lack of material resources was a widespread concern across clinical and community-based sectors [29, 71, 83, 88, 89, 93, 97, 100, 103, 111]. Lack of dedicated physical space in clinics risked isolating CHWs from teams, leaving workers physically separated from physicians and underutilised by care teams [89, 97, 99, 111]. Many CHWs also often lacked resources to address clients' basic needs, leading to frustration and feelings of disillusionment among frontline staff when they could not offer tangible help [81, 90]. To address this, successful programmes leveraged collaborative multi-agency partnerships between CBOs, universities, and health centres to provide wraparound services, such as food boxes or rent assistance [83, 102].

Engaging clients

Finding 15: Trusted relationships were facilitated by shared experience and proactive outreach such as door-to-door canvassing and home visits

The capacity to build trusted relationships was consistently cited as a facilitator for community engagement [64, 67, 76, 85, 89, 91, 93, 96, 101, 111, 122]. Critical elements of trust-building included “listening, consistency, investing time, and following through on commitments” reported by clinic administrators [89], as well as being transparent and showing genuine interest to priority populations experiencing deep-seated mistrust of statutory services [98]. It also stemmed from cultural competence and shared experience, providing a deep understanding of client challenges [58, 64, 76, 85, 94, 98, 109, 111]. Billimek et al [59] defined this as “connective capacity”—a trust earned by being “present, visible, and available.” Effective engagement often required “high-touch” strategies such as door-to-door canvassing [57] and “repeated dialogue,” which a qualitative study of 6 refugee health navigators noted was vital to address vaccine hesitancy [84]. Home visiting was highlighted as a particularly powerful tool, described by one programme manager as “the single most important thing that happens” [91] because it allowed CHWs to observe family dynamics and other issues directly [85, 119]. Navigating family dynamics was also crucial; Johnson et al [79] found in a father-focused nutrition initiative that female CHWs successfully recruited hard-to-reach fathers by first building rapport with mothers as the “gatekeepers” of the family. Outreach was effective when workers used local communication channels, like notice boards, [58, 85, 111, 115], and had visual markers like uniforms [65].

Engaging partner organisations

Finding 16: Community partnerships were key facilitators, improving outreach, reducing duplication, and enabling bi-directional resource sharing. However, bureaucratic hurdles could strain these relationships.

Collaboration with community partners was a core CHW function, strengthening referral networks and reducing duplication [58, 91, 37, 111, 122]. Casillas et al [63] described from progress reports and surveys within a statewide alliance how statewide alliances allowed for “bi-directional information” sharing, enabling partners to repurpose materials and solve problems jointly. Pre-existing relationships were often the cornerstone of rapid implementation during the COVID-19 crisis [63, 92]. However, bureaucratic barriers, such as complex subcontracting processes required by academic or federal partners, could delay

funding and strain relationships with smaller CBOs, affecting field models deploying hundreds of frontline promotoras [102]. Key mechanisms for building community partnerships included CHWs attending meetings and delivering presentations at partner organisations, sharing client intelligence, and co-creating local events [58, 91, 99, 111].

Individual factors

CHW motivation and self-efficacy

Finding 17: CHWs were intrinsically motivated by a desire to help their communities and valued professional development. However, burnout from vicarious trauma, low pay, and a lack of recognition threatened retention.

CHWs were regularly described as intrinsically motivated by a desire to give back and challenge inequality [54, 67, 73, 88, 103]. Kirimi [81] found via an exploratory mixed-methods design that “impact” and “purpose” were top motivators for CHWs, often outweighing financial factors. However, Melbourne-based Lay Health Workers noted that low self-confidence could act as a barrier to executing responsibilities [67], while promotoras identified gender power imbalances when conducting outreach with male populations [94]. The emotional toll of working in under-resourced services and regularly being exposed to client trauma could lead to “compassion fatigue” [107] and burnout [64, 66, 76, 93, 95, 103, 115]. During the pandemic, CHWs were found to deprioritise their own wellbeing [59], necessitating robust mental health support systems to protect frontline staff within community-based frameworks [66]. These challenges led to increased worker turnover, creating barriers to programme sustainability [69]. Where CHWs received effective supervision and training [68], and received strong peer and clinical support [77], their confidence and resilience were enhanced.

Service users

Finding 18: Access was hindered by structural barriers including poverty, transport, and systemic marginalisation. Trust in CHWs helped navigate these barriers, but external constraints often limited engagement capability.

In terms of direct perspectives, service users directly participated in only three of the included studies, where they valued CHWs who were consistent and non-judgemental [73, 109, 114, 122]. However, the majority of evidence regarding client barriers was reported by CHWs and service providers, who observed that client engagement with CHW programmes was heavily constrained by external factors such as housing insecurity, lack of transport, and technical barriers [64, 93, 94, 103, 111]. Systemic marginalisation [94, 115], including fear of immigration enforcement noted across more than 75 community partners [57] and medical mistrust rooted in historical injustice, recorded in a community intervention survey of 152 older African American adults [53], were also significant barriers. CHWs were uniquely positioned to bridge these gaps through their lived experience, such as a municipal network of 18 CHWs possessing personal histories of incarceration [77], and through the provision of home visits and accessible outreach delivered in community settings [67, 89, 91, 96]. However, for some populations, such as those defined within Indigenous health and justice-involved evaluations, competing priorities like obtaining vital documents or housing often took precedence over health promotion goals [64, 77, 87].

Discussion

Summary of Main Findings

This systematic review synthesised evidence from 72 studies to identify the determinants of CHW programme implementation in HICs. The findings highlight a fundamental tension: while CHWs are valued for their unique ability to bridge the gap between communities and formal health systems, the systems themselves are often structurally ill-equipped to support this relational work. At the outer setting, policy frameworks frequently failed to align reimbursement mechanisms with the holistic nature of CHW practice. The COVID-19 pandemic acted as a catalyst, elevating the CHW role to essential infrastructure while simultaneously exposing digital and structural barriers. Within health systems, the review identified a people-versus-product tension, where funding models prioritised short-term clinical outputs over the long-term relational trust-building central to the CHW identity. Implementation was further hindered by hierarchical power dynamics, data silos caused by non-interoperable IT systems, and a lack of organisational readiness. Conversely, success was

facilitated by authentic collaboration in policy design, proactive recruitment strategies valuing lived experience, and leadership that actively championed the role. Ultimately, the review indicates that without addressing the structural precarity of the workforce—specifically regarding pay and integration—CHW programmes remain vulnerable to high turnover and limited sustainability.

Given the scale of this review, a wide variety of divergent experiences was evident across findings relating to policy, certification, recruitment, IT and data systems, partnerships, and motivation, where similar conditions yielded converse outcomes. For instance, formal certification was found to legitimise the workforce in some contexts [88, 101], but functioned as a barrier to recruitment by excluding experienced grassroots candidates in others [78]. Similarly, digital infrastructure tools had a mixed impact: electronic health record access facilitated communication with providers [52], whereas a lack of database interoperability or restricted system access created double documentation burdens and forced a reliance on unintegrated spreadsheets [52, 116]. These contrasting experiences appear to be shaped by several intersecting factors, including the structural differences between statutory health frameworks and community settings, or the degree to which a deployment relies on top-down versus bottom-up design. Rather than indicating simple variation, this heterogeneity underscores the context-dependent nature of CHW programmes along with the variation in the manner that the workers are deployed.

Comparison with Previous Research

The implementation determinants identified in this review demonstrate a notable alignment with the wider global literature on CHW deployment. Syntheses spanning varied economic and geographic contexts, such as those by Scott et al. [3], Kok et al. [49], and the World Health Organization [5], have consistently documented that CHW integration is heavily shaped by the interplay of overarching policy environments, institutional readiness, and frontline clinical relationships. The fact that contemporary findings from high-income settings mirror these older syntheses suggests that the core health service architectures governing lay health work have remained largely unchanged over time. A prominent example of this

continuity is the misalignment between the CHW scope of practice and available funding mechanisms. While reviews such as Viswanathan et al. [123] established the efficacy of CHWs in increasing healthcare utilisation, the findings of this synthesis suggest that structural and financial barriers to sustainable deployment remain a primary hurdle. In HICs, the challenge appears to stem less from an absolute scarcity of funds and more from the bureaucratic structure of existing reimbursement models, which can be poorly aligned with preventative, community-based care [74]. This is further complicated by high heterogeneity in evaluation methods, which can make it difficult for policymakers to draw generalisable conclusions about value for money [124].

Our findings extend this by highlighting how product-focused metrics actively undermine workforce stability, forcing organisations to terminate contracts with effective CHWs simply because they miss narrow quantitative targets [59]. This operational tension is reinforced by contemporary survey data from primary care clinicians, which indicates that healthcare practices frequently restrict CHWs to transactional tasks such as discrete screenings rather than longitudinal care, an issue closely tied to limited billing uptake and technical integration hurdles [105]. This contrast with many LMIC contexts, where funding challenges often relate to the scarcity of any funds, underscores the distinct HIC challenge of navigating complex reimbursement models. While this funding dynamic is heavily shaped by the dominance of US studies within our sample, the underlying tension between transactional structures and relational care is highly relevant to other HIC settings. In the US, this barrier is driven primarily by multi-payer insurance billing requirements [74], whereas in nationalised systems like those of the UK or Australia, it typically stems from a reliance on non-recurrent public health or local government allocations. Despite these architectural differences, the frontline operational result across OECD settings is consistent: a cyclical pattern of short-term commissioning that breeds workforce precarity and high turnover.

This institutional precarity directly impacts individual employment conditions, with the review providing clear evidence linking low compensation to workforce attrition. Although intrinsic motivation remains a powerful driver among CHWs [54, 73, 81], this synthesis incorporates

quantitative evidence demonstrating that dissatisfaction with pay and organisational support are among the strongest predictors of a CHW's intent to leave the workforce [82]. Long-scale survey data thus provide a quantifiable operational risk, yet the small number of quantitative data streams across the wider review sample means these statistical trends must be interpreted alongside the rich contextual nuances provided by the qualitative findings. Data indicating that a significant proportion of CHWs earn salaries near the poverty line [108] suggest that the workforce is often economically aligned with the populations they serve. This finding aligns with the WHO's global guideline advocating for fair remuneration [5]. It also suggests that HICs, despite their resources, face ongoing difficulties in professionalising the workforce effectively compared to some established LMIC national programmes, such as Brazil's *Sistema Único de Saúde* or Unified Health System (SUS) [125].

Integration of CHWs into clinical teams remains an equally persistent challenge. Consistent with implementation science literature on organisational readiness [126, 127], this review found that leadership buy-in is essential, but top-down leadership is insufficient if it ignores hierarchical power dynamics on the frontline [69]. The unique position of CHWs—bridging the gap between a client and a clinical provider—creates inherent friction within traditional medical hierarchies [94, 115]. Effective integration therefore requires protocols that explicitly address and manage these power dynamics through proactive efforts to facilitate communication [69, 74], ensuring the CHW's voice is heard and respected within the clinical team [70]. Importantly, while the macro-level funding architectures differ fundamentally between nationalised and multi-payer systems, frontline implementation barriers show a notable convergence. Clinical scepticism regarding lay roles and hierarchical power dynamics are features of modern Western medicine that transcend national healthcare boundaries. Whether a CHW is embedded within a US safety-net clinic or a UK Primary Care Network (PCN), they face a similar struggle to establish legitimacy alongside licensed clinical staff who are trained within traditionally professionalised, risk-averse structures. This is particularly relevant to the UK context, where PCNs and initiatives like the Community Health and Wellbeing Worker (CHWW) model, which emulates Brazil's highly integrated and geographically-based CHW model, are attempting to standardise integration [19, 128]. These efforts signal an intention to shift towards household-centred care, yet they remain highly

susceptible to the exact same professional hierarchies and boundary maintenance identified in the American literature.

These professional boundaries are frequently reinforced by the technical infrastructure of health services. For instance, this review identified several challenges associated with operationalising digital tools for complex CHW interventions. IT systems often acted as barriers due to a lack of interoperability, forcing CHWs to perform “double documentation” or navigate systems designed for billing rather than care coordination [52, 74]. These challenges are not unique to CHWs but reflect broader systemic digital barriers [129]. Our findings suggest that legacy administrative platforms can reduce relational capacity by prioritising rigid data entry over patient contact, reflecting a distinct HIC barrier where complex, established infrastructure is poorly configured for a lay workforce [52, 116].

Implications for Practice and Policy

Translating these findings into health service design would benefit from structural adjustments across financing and deployment frameworks. First, sustainable funding models should consider transitioning from transactional, short-term mechanisms to structures that better accommodate relational care. In multi-payer configurations, this might involve moving away from episodic fee-for-service models toward value-based payment architectures or capitated global budgets that explicitly account for outreach and care coordination [74]. Within single-payer frameworks like the UK’s NHS, sustainability could be enhanced by moving away from discretionary grants and integrating workforce funding into the core baseline allocations of Integrated Care Systems or long-term PCN contracts [19, 128]. Furthermore, to maintain workforce equity and diversity, evolving state credentialing and certification frameworks should ideally incorporate flexible, portfolio-based assessment pathways that recognise lived experience and community trust alongside formal academic qualifications [59].

Frontline implementation would also likely benefit from clearer operational protocols to manage clinical team and technical integration. Rather than dropping workers into existing practices without structural adjustment, primary care services could introduce formal multidisciplinary frameworks that clearly define complementary scopes of practice and look to mitigate traditional medical hierarchies [70]. This clinical integration might be further supported by technical infrastructure updates. Health service providers should consider involving CHWs directly in the design and customisation of electronic health record workflows, ensuring that systems are optimised to capture qualitative social determinants of health rather than narrow clinical data points [52, 116]. Finally, healthcare employers could address workforce attrition by establishing structural care frameworks, where reflective, peer-supported supervision is offered as a protected component of standard working hours to help alleviate burnout and vicarious trauma [130, 107].

Future Research Directions

Future research should move toward evaluative studies of solutions, such as the impact of certification policies on workforce diversity and retention—testing the hypothesis that increased professionalisation might inadvertently exclude community-embedded candidates. As the cost-effectiveness of CHW interventions in certain HIC contexts remains under-researched [124], robust economic analyses are essential. Van Iseghem et al. [124] highlight that sustainable funding must account for the social embeddedness of the role, supporting the argument that future evaluations should adopt a societal perspective to capture the full breadth of CHW impact, including contributions to poverty reduction and community empowerment.

Strengths and Limitations

A key strength of this review was the use of the Kok et al. [49] framework as a foundation, which grounded our analysis in established evidence of CHW performance while allowing for the inductive generation of new themes. Further strengths include the prospective registration of the study protocol, a comprehensive multi-database search strategy, and the

use of independent dual screening and extraction to ensure procedural rigour. Furthermore, while previous reviews in this field have largely relied on narrative or scoping methodologies, a distinct strength of this study is the application of the GRADE-CERQual framework specifically to HIC implementation data. This allows us to move beyond thematic description and explicitly weight the empirical certainty of our findings for the benefit of health service commissioners.

Limitations include the absence of forward citation and grey literature searching, as well as evidence in languages other than English, due to resource constraints, meaning some programmes may have been missed. The broad scope of the review also increased the likelihood that some relevant studies were not captured. However, these omissions were mitigated by the substantial volume of included studies and the data saturation achieved, with the high GRADE-CERQual confidence ratings further indicating that the primary findings are robust and unlikely to be altered by additional research. Geographically, the evidence base was heavily dominated by studies from the US, whose specific insurance-based healthcare landscape may not be directly transferable to countries with nationalised systems like the UK or Canada. A final limitation is that while the review captured the perspectives of healthcare leaders and frontline CHWs, the voice of the service user remained under-represented.

Conclusion

This review reveals a central paradox: while the CHW workforce is increasingly recognised as essential infrastructure—a status highlighted by the COVID-19 pandemic—it is simultaneously undermined by systemic fragility. Funding models, data systems, and professional hierarchies remain ill-equipped to support relational, community-centred work [High certainty]. Sustainability depends on a fundamental shift in health system design. Systems must adapt to protect and professionalise this cadre, adhering to the principles advocated by the Community Health Impact Coalition (CHIC) [130], ensuring CHWs are salaried, skilled, supervised, and supplied [Moderate certainty]. Moving toward sustainable financing and

genuine integration is required to value trust-building as highly as clinical outputs [High certainty].

Abbreviations

BFFS: Best Fit Framework Synthesis

CBO: Community-Based Organisation

CHIC: Community Health Impact Coalition

CHW: Community Health Worker

CHWW: Community Health and Wellbeing Worker

EHR: Electronic Health Record

GP: General Practitioner

GRADE-CERQual: Grading of Recommendations Assessment, Development and Evaluation – Confidence in the Evidence from Reviews of Qualitative research

HIC: High-Income Country

IT: Information Technology

LLM: Large Language Model

LMIC: Low- and Middle-Income Country

MCO: Managed Care Organisation

MMAT: Mixed Methods Appraisal Tool

NHS: National Health Service

OECD: Organisation for Economic Co-operation and Development

PCN: Primary Care Network

PRISMA: Preferred Reporting Items for Systematic Reviews and Meta-Analyses

SUS: Sistema Único de Saúde / Unified Health System

UK: United Kingdom

US: United States

Declarations

Ethics approval and consent to participate

Not applicable. This study is a systematic review of previously published research and did not involve direct contact with human participants or the collection of primary individual data.

Clinical trial number

Not applicable.

Consent for publication

Not applicable.

Availability of data and materials

The datasets generated and/or analysed during the current study, including full search strings and data extraction tables, are included in supplementary information files.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

AR and HD led the study design, conducted the electronic database searches, and performed study screening and data extraction. JEH, CG, MH, and NW provided methodological oversight and contributed to the interpretation of findings. AR drafted the initial manuscript. All authors read and approved the final manuscript.

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Additional Files

Additional File 1.docx

- Containing 'Additional Resource 1: Database Search Strategies', 'Additional Resource 2: Mixed Methods Appraisal Tool (MMAT) (2018) Quality Criteria', and 'Additional Resource 3: GRADE-CERQual assessment'.

Additional File 2.xlsx

- Containing full and complete Microsoft Excel data extraction sheet.

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Table 1. Summary of qualitative themes and GRADE-CERQual assessment of confidence

Domain and theme	Summary of review finding	Studies contributing to the finding	GRADE-CERQual assessment of confidence	Explanation of GRADE-CERQual assessment
Outer setting factors				
Government and policy	Policy decisions were critical determinants of programme success; misalignment between policy design and need created structural barriers, while CHW collaboration in policy design facilitated implementation.	[52, 54, 56, 57, 59, 63, 66, 69, 73, 74, 77-79, 82, 84, 86, 87, 92, 102, 105, 107, 108, 110, 112-114, 120, 121]	Moderate confidence	Moderate concerns: coherence; adequacy Minor concerns: methodological limitations; relevance
Certification	CHW accreditation was valued for facilitating professionalisation but variation in its application was confusing and a focus on academic over lived experience hindered workforce diversity.	[54, 59, 60, 62, 66, 69, 73, 78-80, 86, 88, 91, 95, 101, 103, 108, 110, 112-115, 120, 121]	Moderate confidence	Moderate concerns: adequacy. Minor concerns: coherence
COVID-19	The pandemic exacerbated existing inequalities while simultaneously creating new barriers. The relational support provided by CHWs was critical for helping communities during the crisis.	[53, 54, 56-59, 61, 63, 66, 73, 76-79, 81, 84, 92, 93, 96, 102, 105, 107-110, 114, 120]	High confidence	Minor concerns: coherence; adequacy
Health system factors				
Funding and sustainability	Securing sustainable funding was a pervasive challenge. Short-term grants and restrictive reimbursement models were barriers to job security and often prioritised quantitative outputs over relational labour.	[52, 54, 56, 57, 59-61, 63, 66, 69-71, 73-76, 78, 79, 81-83, 85-87, 90-92, 100-102, 104, 105, 107-114, 116, 120, 122]	High confidence	Minor concerns: coherence, adequacy
Organisational readiness	Organisational cultures and professional norms facilitated readiness to adopt a CHW service. Successful integration required leadership buy-in combined with staff engagement to overcome hierarchical resistance.	[53, 54, 56, 57, 63, 66, 69, 70, 74, 75, 77-80, 84, 87, 89, 90, 92, 96, 102, 104, 105, 109, 110, 112, 116, 121]	Moderate confidence	Moderate concerns: coherence; adequacy

Intervention factors				
Intervention design	Healthcare initiations with clear scope of practice enabled CHWs to focus on key functions like outreach and relationship-building. Flexibility and cultural relevance were key facilitators, whereas rigid or non-translated materials hindered outreach.	[52, 54, 56, 57, 59, 60, 62-64, 67-70, 73, 75, 77, 79-81, 86, 92, 102, 108-110, 116, 117, 120-122]	Moderate confidence	Moderate concerns: coherence; adequacy
Recruitment	Proactive, community-based recruitment strategies were essential for identifying suitable candidates; however, traditional HR protocols often acted as a barrier by prioritising formal education over lived experience.	[53, 54, 60-62, 29, 63, 69, 73, 75, 79, 81, 82, 87, 89, 91, 92, 96, 97, 101, 103, 105, 107, 108, 112, 114, 120]	Moderate confidence	Moderate concerns: adequacy
Training	Training enhanced skills and self-efficacy while facilitating integration. Effective training was practical, continuous, and covered both clinical topics and 'soft skills' like trauma-informed care.	[52-55, 57, 59, 60, 62, 29, 63, 66, 68-70, 72, 73, 75, 77-84, 86-92, 95, 97, 100-103, 108-114, 116, 120, 121]	High confidence	Minor concerns: coherence; adequacy
Incentives	Low wages were a pervasive threat to sustainability. Non-financial incentives were valued but insufficient to prevent turnover driven by financial precarity.	[54, 57, 59, 60, 29, 66, 69, 77, 78, 81-83, 86, 92, 100-102, 107, 108, 110, 112-114, 121]	Moderate confidence	Moderate concerns: adequacy Minor concerns: coherence
Supervision	Supervision that was responsive, understanding of the role, and developmental contributed to a resilient workforce; poor supervision was linked to worker turnover.	[52-55, 57, 59, 60, 62, 63, 66-70, 73, 74, 77-81, 83, 84, 91, 97, 100-103, 107-110, 112-118, 120]	Moderate confidence	Moderate concerns: coherence Minor concerns: methodology; adequacy
Communication and integration	Limited understanding of the CHW role among stakeholders acted as a barrier to integration. Clear role definitions, champions, and structured communication facilitated integration.	[52-57, 59, 60, 62, 66-73, 77, 78, 80, 81, 84, 86-88, 90, 92, 96, 97, 99, 101, 102, 104-107, 109-116, 118-122]	High confidence	Moderate concerns: coherence Minor concerns: adequacy
Quality assurance and evaluation	Service evaluation contributed to programme sustainability but was hindered by a mismatch between outcome metrics and the preventative, relational nature of CHW work.	[52, 53, 57, 59, 60, 29, 71, 79-81, 83, 84, 86, 87, 97, 102, 104, 107, 108, 110, 116, 118, 120]	Moderate confidence	Moderate concerns: adequacy Minor concerns: coherence

IT and data systems	IT systems facilitated integration when interoperable but acted as a barrier when workers lacked access or systems were not optimised for CHW use.	[52, 53, 55, 57, 60, 63, 69, 70, 73, 74, 77, 80-82, 87, 88, 90, 91, 93-97, 101, 102, 108, 110, 111, 116, 118, 120]	Moderate confidence	Moderate concerns: coherence; adequacy Minor concerns: relevance
Other resources	Resource constraints, particularly regarding physical space and client aid, hindered outreach. Collaborative partnerships were essential for supplementing gaps in service provision.	[53, 54, 57, 59-61, 29, 63, 70, 71, 75, 77, 79-84, 86, 88-90, 92, 93, 97, 99, 100, 102, 103, 107, 108, 111, 113, 114]	Moderate confidence	Moderate concerns: adequacy Minor concerns: relevance
Engaging clients	Trusted relationships were facilitated by shared experience and proactive outreach such as door-to-door canvassing and home visits	[52-55, 57-60, 62-65, 67-70, 73, 75-81, 84-86, 90, 92, 94-96, 98, 102, 105, 107-114, 116, 117, 119, 120]	Moderate confidence	Moderate concerns: adequacy Minor concerns: coherence
Engaging partner organisations	Community partnerships were key facilitators, improving outreach, reducing duplication, and enabling bi-directional resource sharing. However, bureaucratic hurdles could strain these relationships.	[52-54, 56-60, 63, 67-69, 73-75, 77, 79-81, 83, 84, 86, 88-90, 92, 96, 98, 99, 102, 107, 108, 110-114, 116, 118, 120-122]	Moderate confidence	Serious concerns: adequacy Moderate concerns: coherence
Individual factors				
CHW motivation and self-efficacy	CHWs were intrinsically motivated by a desire to help their communities and valued professional development. However, burnout from vicarious trauma, low pay, and a lack of recognition threatened retention.	[52-57, 59, 60, 62, 29, 64, 66-70, 73, 76-81, 83, 84, 86, 88, 90, 92, 93, 95, 102, 103, 107, 108, 110, 112-117, 120]	Moderate confidence	Moderate concerns: adequacy; coherence
Service users	Access was hindered by structural barriers including poverty, transport, and systemic marginalisation. Trust in CHWs helped navigate these barriers, but external constraints often limited engagement capability.	[53, 60, 62-70, 73, 74, 77-79, 84-89, 94, 96, 102, 103, 107, 109, 111, 114-116, 122]	Moderate confidence	Moderate concerns: adequacy Minor concerns: coherence; relevance

Table 2. Selected illustrative quotes

Domain & Theme	Source & Context	Illustrative Quote
Outer Setting Factors		
Government and Policy	Stupplebeen et al, 2019 (US)	"I think that's where we need to move is towards statewide policies that really support the CHW ... We need something at the legislative level that would support that as a legitimate position and role, that would actually get paid." CHW programme administrator
Certification	Mason et al, 2011 (US)	"There is an inherent tension between promoting heightened professional status for CHWs and retaining the very characteristics that make CHWs distinctive and effective—their ties and orientation to communities they serve."
Inner Setting Factors		
Funding & Sustainability	Smithwick et al, 2023. (US)	"You know how it works when you work with grants, you have this person for 1 year ... she's gained so many skills, and then she has to leave because I don't have any more funds." CHW Manager
Organisational Readiness	Fuller et al, 2024 (US)	"I have no problems telling you that we were leery about [bringing on the CHW] ... bringing someone in that we didn't have a say so in who they picked or what this background was." Clinic Leader
Intervention Factors		
Programme design	Gunter et al, 2023 (US)	To ensure services aligned with regulations, the programme "emphasized CHW visits include health education, self-management skill building, and resource connections."
Recruitment	Ingram et al, 2025 (US)	"The recruitment and hiring protocols favor people with education... and the scoring rubrics make it difficult to recognize soft skills such as building rapport"
Training	Kirimi, 2024	"Motivational Interviewing was a serious game changer [because] being able to effectively communicate ... is a must"
Incentives	Rahman et al, 2021 (US)	"They can go to McDonald's and make 15 bucks an hour and they're going to come and do this really hard work for \$12?" Programme Director
Supervision	Wilkinson et al, 2016 (US)	"My supervisor and my manager, they actually started out with me as working in the field ... they're very understanding." CHW
Communication and integration	Tredinnick-Rowe et al, 2024 (UK)	"Interviewees described the seamless connection and interaction between the CHWs and other members of the team, as well as with other organizations providing services in their community."
	Allen et al, 2015 (US)	"I feel like my voice is heard but ... it's like I'm a little fish in a big pond because there are so many other things that they're focusing on right now, that sometimes my role and position gets put on the back burner." CHW
Other resources	Lapidos et al, 2021 (US)	"You offer this service ... They feel like ... 'I'm going to get help!' and then we have to say, 'Never mind, you're not going to get it'" CHW

Engaging clients	Sherman et al, 2017 (US)	"You know, you have to develop that trust. And people will know if you're being fake."
Individual Factors		
CHW motivation and self-efficacy	Kirimi, 2024 (US)	"I know this is a calling for me ... this is much greater than a paycheck." CHW
Service users	Carson et al, 2022 (US)	"They'll say, 'well, so-and-so said they were going to help me, but it never happened.' ... why should I trust you?" CHW