

The Role of Community Health Workers in Advancing Universal Health Coverage: A Systematic Review of Effects on Service Coverage, Utilization, and Health Equity

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Abstract

Background: Community health workers (CHWs) are increasingly positioned as a practical strategy for advancing universal health coverage (UHC), especially in underserved populations. Yet evidence on their contributions across service coverage, utilization, equity, and implementation remains dispersed across disease areas and study designs.

Objective: To synthesize evidence on how CHWs contribute to UHC through service expansion, improved utilization, selected health outcomes, and health equity, and to identify implementation factors that shape effectiveness.

Methods: We conducted a systematic review using PRISMA-informed methods. Four databases (SciSpace, Google Scholar, PubMed, and ArXiv) were searched with structured terms related to CHWs, UHC, service delivery, equity, and health systems. After deduplication and reranking, 260 unique records were screened. Fourteen studies informed the qualitative synthesis. Findings were synthesized narratively by service area, equity dimension, and implementation context.

Results: CHWs performed diverse roles including home-based promotion and referral, integrated community case management, HIV and TB service support, noncommunicable disease screening and follow-up, psychosocial intervention delivery, and system navigation. Evidence showed improved maternal service utilization, increased appropriate treatment of childhood illness, gains in HIV and TB indicators, better chronic disease follow-up, and reductions in mental health symptoms. Equity-focused reviews found that CHW programmes were commonly equitable or pro-equitable, largely through reduced geographic, financial, and sociocultural barriers. Persistent constraints included weak supervision, inadequate remuneration, variable training quality, commodity stockouts, and poor referral linkages.

Conclusion: CHWs make meaningful contributions to UHC and health equity, but their impact depends on sustained supervision, fair compensation, continuous training, reliable supplies, and stronger integration into formal health systems.

Keywords: community health workers; universal health coverage; health equity; health systems strengthening; primary health care

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1. Introduction

Universal health coverage (UHC)—ensuring that all people have access to needed health services without financial hardship—remains a central goal of global health policy and a key target of the Sustainable Development Goals. Despite substantial progress, major gaps in service coverage, utilization, and equity persist, especially in low- and middle-income countries and among marginalized populations in underserved settings [4,5,11,13]. Health workforce shortages, geographic barriers, financial constraints, and weak health system infrastructure continue to sustain these inequities [4,7,11].

Community health workers (CHWs) have emerged as a critical human resource strategy for extending primary health care services to underserved populations and advancing progress toward UHC [4,7,11,13]. CHWs are lay or community-based health workers who receive standardized training to deliver health promotion, prevention, basic curative care, referral support, chronic disease follow-up, and social support within the communities they serve [4,7,11,14]. By virtue of their proximity to households, cultural concordance, and lower cost relative to professional health workers, CHWs are well positioned to influence multiple dimensions of UHC, including population coverage, service utilization, continuity of care, and health equity [4,5,11,13].

Over the past two decades, CHW programmes have expanded across diverse contexts, from large national or multicountry service platforms in countries such as Brazil, Ethiopia, Malawi, Namibia, and Uganda to targeted interventions focused on maternal health, child survival, HIV, tuberculosis, noncommunicable diseases, and mental health [1,2,6,7,10,14]. A substantial body of evidence has accumulated on CHW effectiveness; however, much of this literature remains fragmented across service areas, populations, and implementation contexts [4-6,11,13,14]. Existing systematic reviews have often focused on specific outcomes or programme types rather than synthesizing CHW contributions across the broader UHC agenda [4-6,11,13,14].

Furthermore, the sustainability and scalability of CHW programmes depend heavily on implementation conditions such as supervision, remuneration, training quality, supply chain reliability, referral pathways, and formal integration into health systems [4,7,8,9,13,14]. These factors shape whether CHWs can operate effectively, retain community trust, and sustain service delivery over time [7-9,13,14].

This systematic review addresses these gaps by synthesizing evidence on how CHWs contribute to UHC through improved service coverage, utilization, and equity. Specifically, we sought to: (1) identify the public health and primary care functions performed by CHWs; (2) assess their effects on service coverage, utilization, and selected health outcomes across major service areas; (3) examine their contribution to health equity and access for underserved populations; and (4) identify implementation, supervision, financing, and system integration challenges that influence effectiveness and sustainability. By integrating evidence across these domains, this review aims to inform policy decisions on CHW programme design, implementation, and investment as a strategy for advancing UHC [4,5,7,11,13,14].

2. Methods

2.1 Search Strategy and Information Sources

This systematic review was conducted using PRISMA-informed methods. We searched four electronic databases—SciSpace, Google Scholar, PubMed, and arXiv—using structured combinations of terms related to community health workers, universal health coverage, service delivery, health equity, and health systems strengthening. The search covered publications from database inception to 4 April 2026.

The search strategy employed structured queries combining controlled vocabulary and free-text terms related to community health workers, universal health coverage, service delivery, health equity, and health

systems strengthening. Three distinct query strategies were applied to each database to maximize sensitivity:

Query 1 (Core UHC and CHW terms): (“community health worker” OR “community health volunteer” OR “village health worker” OR “lay health worker” OR CHW OR VHT) AND (“universal health coverage” OR UHC OR “health coverage” OR “service coverage” OR “primary health care” OR “primary care”)

Query 2 (Equity and access focus): (“community health worker” OR CHW) AND (“health equity” OR “health inequit” OR “access to care” OR “underserved population” OR “marginalized population” OR “vulnerable population” OR “health disparity”)

Query 3 (Health systems and implementation focus): (“community health worker” OR CHW) AND (“health system strengthening” OR “service delivery” OR “task shifting” OR “health workforce” OR “implementation” OR “integration” OR “supervision” OR “training”)

No date restrictions were applied at the search stage. Reference lists of included systematic reviews were also screened to identify additional relevant studies. Only records available in English and containing sufficient extractable information were included in the synthesis.

2.2 Eligibility Criteria

Studies were included if they met the following criteria:

Population: Studies involving community health workers, defined as lay health workers receiving standardized training to deliver health services in community settings, regardless of specific job title (e.g., community health volunteers, village health teams, promotoras, health extension workers).

Intervention/Exposure: CHW programmes or interventions delivering preventive, promotive, curative, or supportive health services.

Comparator: Any comparator (usual care, no CHW intervention, alternative service delivery models) or no comparator (descriptive studies, program evaluations).

Outcomes: Studies reporting on at least one of the following: (1) service coverage or utilization (e.g., antenatal care visits, facility delivery, immunization coverage, screening uptake); (2) health outcomes (e.g., maternal and child health indicators, infectious disease outcomes, noncommunicable disease control, mental health symptoms); (3) health equity or access measures (e.g., coverage by socioeconomic status, geographic access, financial barriers); (4) implementation factors (e.g., supervision, training, remuneration, retention, integration, cost-effectiveness).

Study design: Randomized controlled trials, quasi-experimental studies, observational studies (cohort, cross-sectional, case-control), qualitative studies, mixed-methods studies, systematic reviews, and program evaluations were eligible.

Setting: All geographic settings and income levels were eligible.

Studies were excluded if they: (1) focused exclusively on professional health workers such as nurses, physicians, or clinical officers without a CHW component; (2) did not address service coverage, utilization, health outcomes, equity, access, or implementation factors relevant to UHC; (3) reported only process measures without health service or outcome data; or (4) were conference abstracts, editorials, or commentaries without primary data or systematic synthesis.

2.3 Screening and Selection

The search yielded 758 records across the four databases. Duplicate records and records judged clearly irrelevant during pre-screening were removed before title and abstract screening. This left 260 records for

screening. Of these, 208 were excluded after title and abstract review, and 52 full-text reports were assessed for eligibility.

Fourteen studies met the inclusion criteria and informed the qualitative synthesis. The included evidence consisted of 8 primary empirical studies and 6 systematic reviews or evidence syntheses. **Figure 1** presents the PRISMA flow diagram with internally consistent counts for all selection stages.

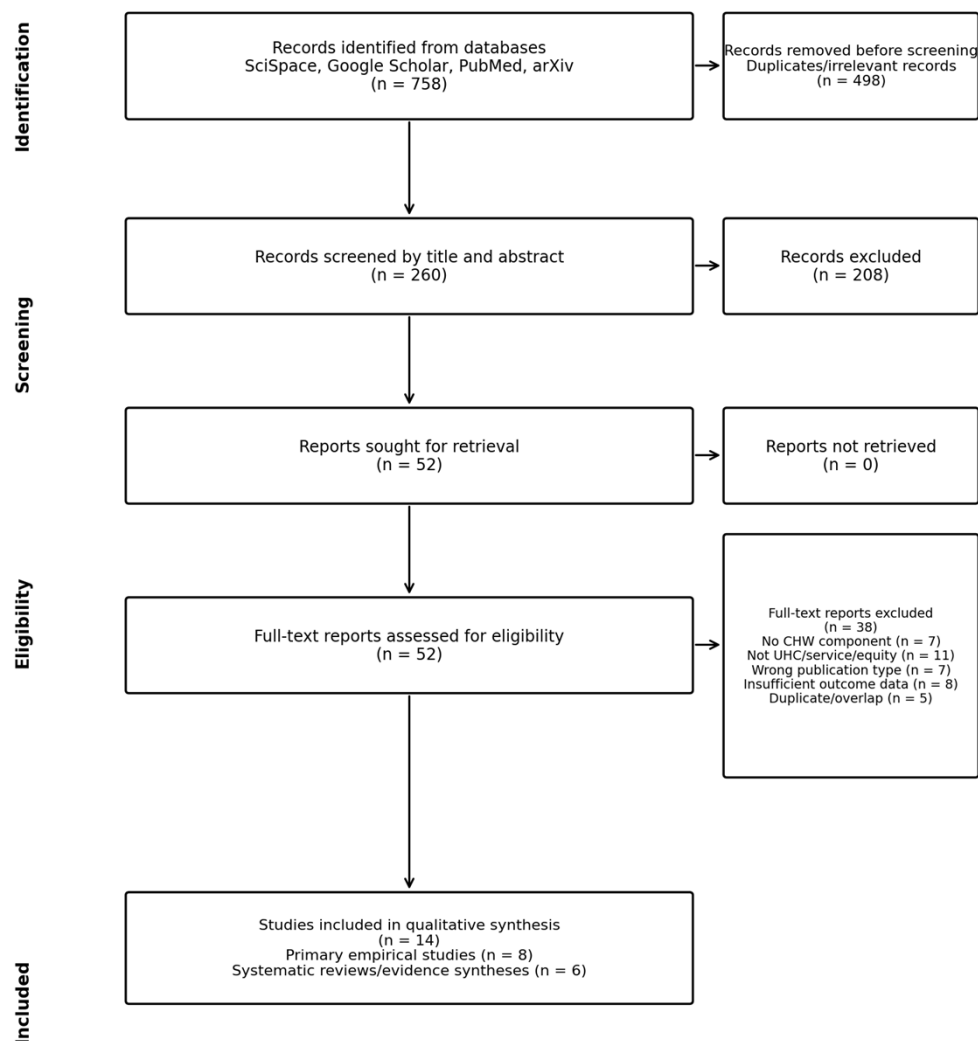


Figure 1. PRISMA flow diagram of study selection. Note. The flow diagram reports 758 records identified, 498 records removed before screening, 260 records screened, 52 full-text reports assessed, 38 full-text reports excluded, and 14 studies included in the qualitative synthesis.

2.4 Data Extraction and Quality Considerations

A structured extraction template was used to capture study characteristics, setting, design, population, CHW role or intervention, comparator where applicable, service coverage or utilization outcomes, selected health outcomes, equity dimensions, implementation factors, and key limitations. Implementation factors included supervision quality, remuneration adequacy, training gaps, supply chain issues, referral system functionality, and community acceptance.

Data extraction was performed systematically using the structured template, with internal cross-checking to improve consistency and accuracy. Because the included evidence comprised diverse primary studies, programme evaluations, qualitative studies, economic evaluation, and systematic reviews, formal pooled risk-of-bias scoring was not applied. Instead, study design, sample size, data source, and major methodological limitations were considered when interpreting the findings.

2.5 Synthesis Approach

Given the heterogeneity of study designs, populations, interventions, and outcomes, we employed a narrative synthesis approach organized thematically. Studies were grouped by: (1) CHW roles and functions; (2) service area (maternal health, child health, infectious diseases, noncommunicable diseases, and mental health); (3) equity and access; and (4) implementation factors.

For each service area, we synthesized evidence on effects on coverage, utilization, and health outcomes, noting the strength and consistency of findings across studies. We examined equity effects by extracting and comparing coverage or outcome measures stratified by socioeconomic status, geography, or other markers of disadvantage. Implementation factors were synthesized to identify common barriers and facilitators across contexts.

Where multiple studies reported similar outcomes, we described the direction and magnitude of effects and noted consistency or heterogeneity. We did not conduct meta-analysis because the included studies differed substantially in intervention design, comparator groups, populations, follow-up periods, and outcome definitions. Formal risk-of-bias scoring was not undertaken; this is acknowledged as a limitation. However, study design, sample size, and major methodological strengths and limitations were considered when interpreting the evidence.

3. Results

3.1 Study Selection and Characteristics

The systematic search identified 758 records across four databases. After removal of 498 duplicate or clearly irrelevant records, 260 records underwent title and abstract screening. Of these, 208 were excluded and 52 full-text reports were assessed for eligibility. Thirty-eight reports were excluded at full-text stage, leaving 14 studies for the qualitative synthesis. The included studies comprised randomized and quasi-experimental studies, observational and programme evaluation studies, qualitative and mixed-methods studies, systematic reviews, a multicountry programme analysis, and an economic evaluation. **Table 1** summarizes the characteristics of key included studies, organized by study design and geographic setting.

The included studies represent diverse geographic settings, with the majority conducted in sub-Saharan Africa (Tanzania, South Africa, Uganda, Kenya, Ethiopia) and systematic reviews incorporating evidence from across LMICs and selected high-income countries. Study designs ranged from cluster-randomized trials with experimental manipulation of CHW interventions to quasi-experimental analyses using routine health system data, large population-based surveys, qualitative program evaluations, and comprehensive systematic reviews synthesizing evidence across multiple countries and contexts.

3.2 Roles and Functions of Community Health Workers

Community health workers perform a broad range of public health and primary care functions that extend the reach and continuity of health systems. Evidence from systematic reviews, multicountry program analyses, and implementation studies consistently describes CHW roles across four major domains: linkage and navigation, home-based prevention and treatment, task shifting for specific diseases, and delivery of behavioral and mental health interventions [4], [7], [11].

Linkage and system navigation: CHWs serve as critical bridges connecting marginalized populations to formal health services, health insurance, and social support systems. In the United States, CHW programmes have demonstrated effectiveness in assisting uninsured and underinsured populations to enroll in health insurance and establish connections with primary care providers [11], [12]. This navigation function is particularly important for populations facing language barriers, complex bureaucratic systems, or mistrust of formal institutions. CHWs leverage their community ties and cultural concordance to facilitate access and reduce structural barriers to care.

Table 1. Characteristics of Key Included Studies

First Author, Year	Country/Setting	Study Design	Sample Size / Scope	CHW Intervention	Key Outcomes Measured	Main Findings
Geldsetzer, 2019 [1]	Dar es Salaam, Tanzania	Cluster-randomized pragmatic trial	60 clusters; 2,329 women surveyed	Home-based CHW visits for maternal health promotion and referral	Facility delivery, ANC attendance, skilled birth attendance	Home delivery reduced from 7.3% to 3.9% (RR 0.54; 95% CI 0.30–0.95); no significant change in <4 ANC visits (RR 0.97)
Thomas, 2025 [2]	Ekurhuleni, South Africa	Quasi-experimental, 9-year routine data analysis	District-level, multiple clinics	Ward-based outreach teams (CHWs) integrated into district health system	HIV testing, TB screening, child diarrhoea/pneumonia, NCD indicators	Intervention clinics improved in 7/9 routine variables (78%); fewer uncontrolled hypertensives and diabetics
Soremekun, 2018 [3]	Mid-western Uganda	Cross-sectional household survey	~6,501 children with recent illness	Village health teams providing iCCM and health education	Care-seeking patterns, treatment quality, out-of-pocket costs	CHWs were first care source for 20% of sick children; appropriate treatment more likely with CHW (RR 1.51; 95% CI 1.42–1.61); median OOP cost US\$0.00
Ahmed, 2022 [4]	33 LMICs	Systematic review	167 studies	Diverse CHW programs	Health equity, access, coverage by socioeconomic status	CHW programs successfully reach many marginalized groups, but health inequalities often persist; qualitative evidence identifies barriers to uptake
Schleiff, 2017 [5]	Multiple LMICs	Systematic review of CBPHC projects	42 projects, 82 equity measurements	Community-based primary health care including CHWs	Equity effects on neonatal and child health	87% of measurements equitable or pro-equitable; 78% pro-equitable (greater improvement in disadvantaged groups)
Barnett, 2018 [6]	Multiple (review)	Systematic review	43 articles, 39 trials	CHW-delivered psychosocial interventions	Mental health symptoms, substance use	Majority of trials reported symptom reductions; CHWs effective in delivering evidence-based interventions
Celletti, 2010 [7]	Brazil, Ethiopia, Malawi, Namibia, Uganda	Multicountry program analysis	5 countries, HIV service delivery	CHWs delivering HIV testing, adherence support, community	HIV service coverage, task shifting feasibility	CHWs can effectively deliver HIV services; requires clear scope, mentoring, referral systems, formal integration

Altaras, 2017 [8]	Wakiso District, Uganda	Qualitative evaluation	Peri-urban setting, iCCM program	mobilization CHWs providing integrated community case management	Perceived effectiveness, implementation barriers	Diagnostic limitations, drug stockouts, weak referral services constrain effectiveness
Mays, 2017 [9]	Two districts, Uganda	Mixed-methods assessment	Village health teams	VHT program support and retention	Retention intentions, partnership quality	57% anticipated remaining ≥10 years; retention associated with stronger partnerships, ease of home visiting
Akinyi, 2014 [10]	Butere District, Kenya	Economic evaluation	Rural district, maternal health CHW program	CHWs promoting maternal health services	Cost-effectiveness (cost per DALY averted)	Annual program cost US\$30,124; 1,205 DALYs averted; ICER US\$25/DALY averted
Knowles, 2023 [11]	United States	Systematic review	Multiple US CHW programs	CHW integration in health care and public health	Service linkage, insurance enrollment, chronic disease management	CHWs improve linkage to primary care, insurance enrollment, and chronic disease outcomes in underserved US populations
Lang, 2014 [12]	United States	Program evaluation	Community-based CHW program	CHWs assisting with insurance enrollment and primary care access	Insurance enrollment, primary care utilization	CHWs successfully connect marginalized populations to insurance and primary care
McCollum, 2016 [13]	Multiple LMICs	Systematic review	Multiple CHW programs	Diverse CHW interventions	Equity of CHW services	Targeted outreach, home-based services, strengthened referrals, and CHW social ties promote equity
Sharma, 2019 [14]	Multiple (review)	Systematic review	NCD management by CHWs	CHWs in NCD prevention and management	NCD screening, education, follow-up	CHWs improve screening and chronic disease indicators; training quality and adherence affect impact

Characteristics of key studies included in the systematic review, organized by study design. Studies span randomized trials, quasi-experimental analyses, large observational surveys, qualitative evaluations, systematic reviews, multicountry program analyses, and economic evaluations conducted in diverse low-, middle-, and high-income settings. CHW = community health worker; ANC = antenatal care; RR = relative risk; CI = confidence interval; iCCM = integrated community case management; CBPHC = community-based primary health care; NCD = noncommunicable disease; OOP = out-of-pocket; DALY = disability-adjusted life year; ICER = incremental cost-effectiveness ratio; VHT = village health team.

Home-based prevention and treatment: A core CHW function is the delivery of preventive and basic curative services in community and household settings. CHWs conduct home visits to identify pregnant women, promote antenatal care attendance, provide health education, and follow up on missed appointments [1]. In child health, CHWs deliver integrated community case management (iCCM) for common childhood illnesses including malaria, diarrhea, and pneumonia, providing assessment, treatment with pre-packaged medications, and referral for severe cases [3], [8]. This proximal service delivery reduces geographic and time barriers to care and enables early identification and treatment of illness.

Task shifting and disease-specific functions: CHWs have been deployed to deliver services traditionally provided by professional health workers, a strategy known as task shifting that addresses health workforce shortages. In HIV programmes across five countries, CHWs effectively delivered HIV testing, adherence counseling and support, community mobilization for testing and treatment, and linkage to antiretroviral therapy [7]. Similar task-shifting roles have been documented for tuberculosis screening and treatment support, cervical cancer screening promotion, and follow-up care for patients with hypertension and diabetes [2], [14]. These disease-specific functions require targeted training, clear protocols, and supportive supervision, but can substantially expand service coverage when well implemented.

Behavioral and mental health interventions: Emerging evidence demonstrates that CHWs can be trained to deliver evidence-based psychosocial interventions for mental health and substance use disorders. A systematic review of 43 articles covering 39 trials found that the majority reported significant reductions in mental health symptoms when CHWs delivered structured interventions such as cognitive-behavioral therapy components, problem-solving therapy, or motivational interviewing [6]. This role is particularly important for underserved populations with limited access to mental health professionals and can address a critical gap in primary care capacity.

Across these domains, CHW roles are characterized by proximity to communities, cultural and linguistic concordance, and lower cost relative to professional health workers. However, effectiveness depends critically on clear definition of scope of practice, adequate training, ongoing supervision, reliable supply chains, and formal integration into health systems [7]. When these enabling conditions are met, CHWs function as an essential component of comprehensive primary health care delivery.

3.3 Effects on Service Coverage and Utilization by Service Area

Evidence on CHW effects on service coverage, utilization, and health outcomes varies in strength and consistency across service areas. We synthesized findings for maternal health, child health, infectious diseases, noncommunicable diseases, and mental health, drawing on randomized trials, quasi-experimental studies, observational analyses, and systematic reviews.

3.3.1 Maternal Health

A cluster-randomized pragmatic trial in Dar es Salaam, Tanzania evaluated the effect of home-based CHW visits on maternal health service utilization [1]. CHWs conducted home visits to identify pregnant women, provide health education, promote antenatal care (ANC) attendance and facility delivery, and facilitate referral to health facilities. The intervention significantly reduced home delivery from 7.3% in control clusters to 3.9% in intervention clusters (RR 0.54; 95% CI 0.30–0.95), indicating a 46% reduction in the risk of home delivery. However, the intervention did not significantly affect the proportion of women attending fewer than four ANC visits (59.1% in intervention vs 60.7% in control; RR 0.97; 95% CI 0.88–1.07).

These findings suggest that CHW home visits can effectively promote facility-based delivery, a critical determinant of maternal and neonatal survival, but may have limited impact on ANC attendance in settings where baseline ANC coverage is already moderate. The trial was stopped early due to administrative reasons, which limited statistical power for some secondary outcomes. Nonetheless, the facility delivery

effect is consistent with other evidence that proximal CHW support and referral facilitation can overcome barriers to institutional delivery.

Economic evaluation of a CHW maternal health program in rural Kenya found favorable cost-effectiveness, with an incremental cost-effectiveness ratio of US\$25 per disability-adjusted life year (DALY) averted [10]. The program cost US\$30,124 annually and averted an estimated 1,205 DALYs through improved maternal health service utilization and outcomes. This cost-effectiveness profile compares favorably to other maternal health interventions and supports the value proposition of CHW programmes in resource-constrained settings.

3.3.2 Child Health

CHWs play a substantial role in child health service delivery, particularly through integrated community case management (iCCM) of common childhood illnesses. A large cross-sectional household survey in mid-western Uganda examined care-seeking patterns and treatment quality for children with recent episodes of malaria, diarrhea, or pneumonia [3]. CHWs were the first source of care for 20% of sick children, indicating substantial population-level reach. Children who received care from CHWs were significantly more likely to receive appropriate treatment compared to those seeking care from other sources (RR 1.51; 95% CI 1.42–1.61), a 51% increase in the likelihood of appropriate treatment.

Modeling analysis suggested that if CHWs treated all children currently receiving care from private providers or receiving no care, overall appropriate treatment coverage could increase from 47% to 64%, a 17 percentage-point gain. Importantly, CHW care had the lowest out-of-pocket cost, with a median cost of US\$0.00 compared to higher costs for facility-based and private care. This combination of improved treatment quality and reduced financial barriers positions CHWs as a pro-equity intervention for child health.

A quasi-experimental analysis in South Africa found that districts with ward-based outreach teams (CHWs) showed improvements in child health indicators including reduced diarrhea and pneumonia cases in routine clinic data over a nine-year period [2]. These findings, derived from routine health information systems, provide real-world evidence of CHW contributions to child health at scale.

Systematic reviews of community-based primary health care programmes, many of which include CHW components, have consistently reported positive effects on child health coverage and outcomes, with particularly strong evidence for pro-equity effects [5].

3.3.3 Infectious Diseases

CHWs have been widely deployed to expand coverage of HIV, tuberculosis, and other infectious disease services, particularly in settings with severe health workforce shortages. A multicountry analysis of CHW deployment for HIV services in Brazil, Ethiopia, Malawi, Namibia, and Uganda documented that CHWs effectively delivered HIV testing, adherence support, community mobilization, and linkage to antiretroviral therapy [7]. The analysis emphasized that effectiveness required clear definition of CHW scope of practice, structured mentoring and supervision, functional referral systems, and formal integration into health systems.

In South Africa, the introduction of ward-based outreach teams was associated with improvements in 7 of 9 routine health service variables (78% of indicators), including increased HIV testing rates and improved TB screening coverage [2]. The quasi-experimental design, using routine data over nine years, provides evidence of sustained impact at the district level. However, the study noted variability across clinics and indicators, suggesting that implementation quality and contextual factors influence effectiveness.

Qualitative evaluations of iCCM programmes, which include management of childhood infectious diseases, have identified both successes and persistent challenges. In peri-urban Uganda, stakeholders reported that

CHWs improved access to treatment for malaria, diarrhea, and pneumonia, but diagnostic limitations (reliance on clinical assessment without laboratory confirmation), drug stockouts, and weak referral systems constrained effectiveness [8]. These implementation barriers highlight the importance of supply chain reliability and health system strengthening to support CHW functions.

3.3.4 Noncommunicable Diseases

The role of CHWs in noncommunicable disease (NCD) prevention and management is expanding, driven by the growing burden of chronic diseases in LMICs and the need for long-term follow-up and adherence support. In South Africa, districts with CHW programmes showed fewer uncontrolled hypertensive and diabetic patients in routine health data compared to control districts [2]. This suggests that CHW home visits, medication adherence support, and health education can contribute to improved chronic disease control at the population level.

A systematic review of CHW involvement in NCD management found that CHWs improved screening coverage, patient education, and selected disease control indicators when provided with adequate training and clear protocols [14]. However, the review also noted that short-duration training, high CHW turnover, and poor patient adherence to recommendations limited impact in some settings. These findings underscore the importance of sustained investment in CHW training, supervision, and retention to achieve meaningful NCD outcomes.

CHW roles in NCD management typically include blood pressure and blood glucose screening, health education on diet and physical activity, medication adherence support, and referral for complications. Unlike acute infectious diseases, NCD management requires long-term engagement and behavior change, placing additional demands on CHW time and skills. Evidence suggests that CHWs can contribute meaningfully to NCD control, but effectiveness depends on integration with facility-based care, reliable medication supply, and ongoing supervision.

3.3.5 Mental Health

Mental health services are severely under-resourced in most LMICs and underserved communities in high-income countries, creating a substantial treatment gap. CHWs represent a promising strategy to expand access to evidence-based mental health interventions. A systematic review of 43 articles covering 39 trials examined CHW delivery of psychosocial interventions for mental health and substance use disorders [6]. The majority of trials reported significant reductions in mental health symptoms, including depression, anxiety, and post-traumatic stress, when CHWs delivered structured interventions such as cognitive-behavioral therapy components, problem-solving therapy, interpersonal therapy, or motivational interviewing.

The review found that CHWs could be effectively trained to deliver these interventions with fidelity, and that outcomes were comparable to those achieved by professional mental health providers in some studies. This evidence supports the feasibility and effectiveness of task-shifting mental health care to CHWs, particularly for common mental disorders in underserved populations. However, the review also noted variability in training duration and quality, supervision intensity, and intervention fidelity, all of which influenced outcomes.

Mental health is an area where CHW cultural concordance and community ties may be particularly valuable, as stigma and mistrust of formal mental health services are common barriers to care. CHWs can provide culturally appropriate, community-based interventions that reduce these barriers and improve access for marginalized populations. **Table 2** synthesizes CHW functions, key outcomes, and health equity implications across service areas.

Table 2. Synthesis of CHW Functions, Outcomes, and Health Equity Implications by Service Area

Service Area	Primary CHW Functions	Key Outcomes and Effect Estimates	Health Equity Implications	Supporting Evidence
Maternal Health	Home visits to identify pregnancies; ANC promotion; facility delivery promotion; referral facilitation	Facility delivery increased (home delivery RR 0.54; 95% CI 0.30–0.95); no significant effect on ANC attendance in some settings	Reduces geographic and financial barriers to institutional delivery; particularly benefits rural and poor women	Geldsetzer, 2019 [1]; Akinyi, 2014 [10]
Child Health	Integrated community case management (iCCM) for malaria, diarrhea, pneumonia; health education; growth monitoring	CHWs first care source for 20% of sick children; appropriate treatment more likely (RR 1.51; 95% CI 1.42–1.61); modeled coverage increase from 47% to 64%	Lowest out-of-pocket cost (median US\$0.00); proximal access reduces barriers for poor and rural families	Soremekun, 2018 [3]; Thomas, 2025 [2]; Schleiff, 2017 [5]
Infectious Diseases (HIV, TB)	HIV testing; adherence support; TB screening; community mobilization; linkage to treatment	Improved HIV testing and TB screening rates; 78% of routine indicators improved in CHW districts	Reaches marginalized populations with limited facility access; reduces stigma through community-based delivery	Celletti, 2010 [7]; Thomas, 2025 [2]
Noncommunicable Diseases	Blood pressure and glucose screening; health education; medication adherence support; lifestyle counseling	Fewer uncontrolled hypertensives and diabetics in CHW districts; improved screening coverage	Extends chronic disease management to underserved areas; reduces long-term costs of uncontrolled disease	Thomas, 2025 [2]; Sharma, 2019 [14]
Mental Health	Delivery of evidence-based psychosocial interventions (CBT, problem-solving therapy, motivational interviewing)	Majority of trials reported significant symptom reductions in depression, anxiety, PTSD	Addresses severe treatment gap in underserved populations; reduces stigma through community-based, culturally concordant care	Barnett, 2018 [6]
Cross-Cutting Functions	System navigation; insurance enrollment; referral facilitation; social needs linkage	Improved insurance enrollment; increased primary care utilization; linkage to social services	Reduces structural barriers to care; particularly benefits immigrant, low-income, and linguistically isolated populations	Knowles, 2023 [11]; Lang, 2014 [12]

Synthesis of community health worker functions, key outcomes with effect estimates, and health equity implications across major service areas. CHWs contribute to universal health coverage through diverse roles spanning maternal and child health, infectious and noncommunicable diseases, mental health, and system navigation. Evidence demonstrates measurable improvements in service coverage, utilization, and health outcomes, with consistent pro-equity effects through reduced financial and geographic barriers. CHW = community health worker; ANC = antenatal care; RR = relative risk; CI = confidence interval; iCCM = integrated community case management; CBT = cognitive-behavioral therapy; PTSD = post-traumatic stress disorder; TB = tuberculosis.

3.4 Contribution to Health Equity and Access

A central rationale for CHW programmes is their potential to reduce health inequities by extending services to underserved populations. Evidence from systematic reviews and equity-focused analyses demonstrates that CHW programmes frequently achieve pro-equity effects, although the magnitude and consistency of equity gains vary by program design and implementation context.

A comprehensive systematic review of 42 community-based primary health care projects, many incorporating CHW components, examined equity effects on neonatal and child health across 82 equity measurements [5]. The review found that 87% of measurements were equitable (no difference by socioeconomic status or other markers of disadvantage) or pro-equitable (greater improvement in disadvantaged groups), and 78% were demonstrably pro-equitable. This high proportion of pro-equity effects indicates that well-designed CHW programmes can preferentially benefit the most disadvantaged populations and contribute to reducing health inequities.

A broader systematic review of 167 studies across 33 LMICs examined CHW contributions to health equity more generally [4]. The review concluded that CHW programmes “successfully reach many (although not all) marginalized groups,” including rural populations, the poor, ethnic minorities, and other disadvantaged communities. However, the review also noted that health inequalities often persist despite CHW programmes, and qualitative evidence identified barriers to uptake of CHW advice and referrals among the most disadvantaged groups. These barriers included competing demands on time, lack of resources to act on health recommendations, and mistrust of formal health systems even when mediated by CHWs.

Several mechanisms explain how CHW programmes promote equity. First, proximal service delivery reduces geographic barriers, particularly important for rural and remote populations with limited transportation options. Home visits by CHWs eliminate the need for travel to health facilities, reducing both time and financial costs. Second, CHW services are typically provided free or at very low cost. In the Uganda child health study, CHW care had a median out-of-pocket cost of US\$0.00, compared to higher costs for facility-based and private care [3]. This financial accessibility is critical for poor households facing catastrophic health expenditures. Third, recruiting CHWs from the communities they serve enhances cultural concordance, language concordance, and social trust, reducing social and cultural barriers to care. Fourth, CHWs often provide targeted outreach to the most disadvantaged households, actively identifying and following up individuals who would not otherwise seek care.

A systematic review specifically examining equity of CHW programmes identified program features associated with greater equity [13]. These included targeted household outreach (rather than facility-based or passive recruitment), home-based service delivery, strengthened referral linkages to ensure continuity of care, and CHWs’ pre-existing social ties to communities. Programs that incorporated these features were more likely to achieve pro-equity effects.

Despite these positive findings, important limitations remain. CHW programmes do not automatically reduce inequities; program design, implementation quality, and health system context all influence equity outcomes. In some settings, CHWs may preferentially reach less disadvantaged households within poor communities (e.g., those with better housing, more education, or stronger social networks), leaving the most marginalized behind. Referral systems may fail to function equitably if facility-based services are inaccessible, unaffordable, or discriminatory. Supply chain failures that leave CHWs without essential medications or supplies undermine their ability to deliver equitable care.

Furthermore, equity in access does not automatically translate to equity in health outcomes. Downstream determinants of health—including nutrition, housing, water and sanitation, and social protection—may limit the health gains achievable through improved service access alone. CHW programmes are necessary but

not sufficient to eliminate health inequities; they must be complemented by broader social and economic policies that address the root causes of disadvantage.

Nonetheless, the evidence consistently demonstrates that CHW programmes, when well designed and implemented, can expand access to essential health services for underserved populations and contribute meaningfully to reducing coverage gaps and health inequities. This positions CHWs as a critical strategy for advancing the equity dimension of universal health coverage.

3.5 Implementation Challenges and Enabling Factors

The effectiveness and sustainability of CHW programmes depend critically on implementation factors including supervision, remuneration, training, supply chain reliability, referral system functionality, and integration into formal health systems. Evidence from program evaluations, qualitative studies, and systematic reviews identifies recurrent challenges and enabling factors across diverse contexts.

3.5.1 Supervision and Mentoring

Effective supervision is consistently identified as essential for CHW performance, yet is frequently inadequate in practice. The multicountry analysis of HIV CHW programmes emphasized that CHW contributions require structured mentoring, regular supervision visits, and clear performance expectations [7]. Supervision serves multiple functions: providing technical guidance and problem-solving support, ensuring adherence to protocols, maintaining motivation, and identifying training needs. In the absence of regular supervision, CHWs may feel isolated, lack confidence in clinical decision-making, and experience burnout.

However, supervision systems are often weak in resource-constrained health systems. Supervisors may be overburdened with large numbers of CHWs to oversee, lack transportation to conduct field visits, or have insufficient training in supervisory skills. Qualitative evaluations in Uganda found that CHWs valued supervision but reported infrequent contact with supervisors and limited feedback on performance [8], [9]. Strengthening supervision requires investment in supervisor training, transportation, communication infrastructure, and protected time for supervisory activities.

3.5.2 Remuneration and Retention

CHW remuneration varies widely, from fully salaried positions to volunteer roles with small stipends or performance-based incentives. Inadequate remuneration is a major driver of CHW attrition and demotivation. An assessment of village health teams in Uganda found that 57% of CHWs anticipated remaining in their positions for at least 10 years under current conditions, but retention was positively associated with stronger partnerships with health facilities and ease of conducting home visits [9]. This suggests that while many CHWs are committed to their roles, retention is fragile and depends on supportive working conditions.

CHWs frequently report financial strain, particularly when expected to volunteer or work for minimal compensation while facing opportunity costs of foregone income-generating activities. In some settings, CHWs must use personal funds to purchase supplies or transportation, creating financial barriers to performing their duties. Systematic reviews have documented that inadequate remuneration contributes to high turnover, reducing program continuity and effectiveness [4].

The debate over volunteer versus salaried CHW models reflects tensions between financial sustainability and workforce stability. Volunteer models may be more affordable at scale but risk exploitation and high turnover. Salaried models provide greater stability and professionalization but require sustained government financing. Hybrid models with stipends, performance incentives, and non-financial benefits (e.g., training, recognition, career pathways) may offer a middle ground, but evidence on optimal remuneration strategies remains limited.

3.5.3 Training Quality and Duration

CHW training is essential for competence and confidence, yet training programmes vary widely in duration, content, and quality. The multicountry HIV program analysis emphasized the importance of standardized training curricula, competency-based assessment, and ongoing refresher training [7]. However, systematic reviews of NCD management by CHWs noted that short-duration training and lack of refresher courses limited effectiveness [14].

Training challenges include insufficient time to cover complex clinical protocols, limited opportunities for practical skill-building, high dropout rates during training, and lack of follow-up to reinforce learning. In mental health, effective delivery of psychosocial interventions requires substantial training in therapeutic techniques, yet many CHW programmes provide only brief orientation [6]. Balancing the need for comprehensive training with the practical constraints of CHW time and program budgets is an ongoing challenge.

Competency-based training approaches, which assess CHW skills through practical demonstration rather than time-based completion, may improve training quality. Ongoing mentoring and supervision can reinforce training and provide just-in-time learning. However, these approaches require investment in training infrastructure, skilled trainers, and protected time for learning.

3.5.4 Supply Chain and Commodity Availability

CHWs' ability to deliver effective care depends on reliable access to essential medicines, diagnostics, and supplies. Supply chain failures—including drug stockouts, expired medications, and lack of diagnostic tools—are frequently reported barriers to CHW effectiveness. The qualitative evaluation of iCCM in Uganda found that drug stockouts and diagnostic limitations (lack of rapid diagnostic tests for malaria, inability to confirm pneumonia) undermined CHW credibility and effectiveness [8]. When CHWs cannot provide promised treatments, community trust erodes and care-seeking declines.

Supply chain challenges reflect broader health system weaknesses, including inadequate forecasting and procurement, weak logistics management, and insufficient funding for commodities. Addressing these challenges requires health system strengthening beyond the CHW program itself, including investment in supply chain infrastructure, information systems, and management capacity.

3.5.5 Referral Systems and Health System Integration

CHWs function as part of a continuum of care, identifying cases that require facility-based management and referring patients for higher-level services. However, referral systems are often dysfunctional. Patients referred by CHWs may face long wait times, poor treatment at facilities, unaffordable fees, or lack of available services. When referrals fail, CHWs lose credibility and patients lose trust in the health system.

Effective referral requires bidirectional communication between CHWs and facilities, clear referral protocols, transportation support for patients, and feedback to CHWs on referral outcomes. Few CHW programmes achieve this level of integration. The multicountry HIV analysis emphasized that formal integration of CHWs into health systems—including clear reporting relationships, inclusion in health information systems, and participation in facility-based meetings—is essential for effective referral and continuity of care [7].

Integration also involves defining CHW roles within the broader health workforce, avoiding duplication or conflict with other cadres, and ensuring that CHWs are recognized and valued by facility-based staff. In some settings, professional health workers view CHWs as competitors or as unqualified, undermining collaboration. Building mutual respect and clear role delineation requires attention to health workforce dynamics and organizational culture.

3.5.6 Cost-Effectiveness and Financing Sustainability

Economic evaluation of CHW programmes is limited but generally favorable. The Kenya maternal health program demonstrated high cost-effectiveness at US\$25 per DALY averted, well below commonly cited willingness-to-pay thresholds [10]. However, cost-effectiveness depends on program scale, efficiency, and health system context. Small-scale, donor-funded pilot programmes may not be representative of costs at scale or under government management.

Financing sustainability is a critical challenge. Many CHW programmes are initiated with donor funding and face uncertain futures when external support ends. Transitioning to government financing requires political commitment, budget allocation, and integration into national health workforce and financing plans. In some countries, CHW programmes have been successfully integrated into national health systems with government financing (e.g., Brazil's Family Health Strategy, Ethiopia's Health Extension Program), but in many others, CHW programmes remain fragmented, donor-dependent, and vulnerable to funding gaps.

Sustainable financing models must address not only CHW remuneration but also supervision, training, supply chain, and health system integration costs. Advocacy for CHW programmes must emphasize their value proposition for UHC and health equity, making the case for sustained public investment.

4. Discussion

4.1 Principal Findings

This systematic review synthesized evidence on how community health workers contribute to universal health coverage through improved service coverage, utilization, and health equity. We identified substantial evidence that CHWs perform diverse and essential functions spanning health promotion, disease prevention, basic curative care, chronic disease management, mental health service delivery, and system navigation. Across multiple service areas—maternal health, child health, infectious diseases, noncommunicable diseases, and mental health—CHWs demonstrate measurable positive effects on coverage, utilization, and selected health outcomes.

Quantitative evidence from randomized trials and quasi-experimental studies documents significant improvements in facility delivery rates, appropriate treatment of childhood illness, HIV and tuberculosis service coverage, chronic disease control, and mental health symptom reduction. Equity analyses consistently show that CHW programmes achieve pro-equity effects, with the majority of measurements demonstrating greater improvements in disadvantaged populations. Mechanisms promoting equity include proximal service delivery, reduced financial barriers, cultural concordance, and targeted outreach to marginalized groups.

However, CHW effectiveness is constrained by persistent implementation challenges. Inadequate supervision, insufficient remuneration, variable training quality, supply chain failures, weak referral systems, and incomplete integration into formal health systems undermine CHW performance and sustainability. Addressing these challenges requires sustained investment in health system strengthening, not merely in CHW programmes as isolated interventions.

4.2 CHWs as a Strategy for Universal Health Coverage

Universal health coverage encompasses three dimensions: population coverage (who is covered), service coverage (which services are covered), and financial protection (what proportion of costs are covered). CHWs contribute to all three dimensions, though their impact varies by program design and context.

Population coverage: CHWs extend services to populations underserved by facility-based care, including rural and remote communities, urban slums, ethnic minorities, and other marginalized groups. By delivering services in homes and communities, CHWs overcome geographic barriers that exclude populations from

facility-based care. Evidence from this review demonstrates that CHW programmes successfully reach many marginalized groups, expanding population coverage [4], [5].

Service coverage: CHWs expand the range of services available at the community level, including preventive services (immunization promotion, health education), basic curative care (iCCM, wound care), chronic disease management (hypertension and diabetes follow-up), mental health interventions, and system navigation (insurance enrollment, referral facilitation). This expanded service coverage is particularly important for primary health care services that require frequent contact, long-term follow-up, or behavior change support. Evidence from this review shows measurable increases in coverage of maternal health services, child health treatment, infectious disease screening and treatment, and mental health interventions [1], [2], [3], [6].

Financial protection: CHWs reduce financial barriers to care through multiple mechanisms. First, CHW services are typically provided free or at very low cost, reducing out-of-pocket expenditures. The Uganda child health study found that CHW care had a median cost of US\$0.00, compared to higher costs for facility-based and private care [3]. Second, by providing care in communities, CHWs eliminate transportation costs and opportunity costs of travel to facilities. Third, by improving prevention and early treatment, CHWs may reduce the need for costly facility-based care for advanced disease. Fourth, CHWs assist with insurance enrollment and navigation, expanding financial protection through insurance coverage [11], [12].

However, CHWs alone cannot achieve UHC. They function as one component of a comprehensive health system that must also include well-functioning primary care facilities, referral hospitals, supply chains, health information systems, and financing mechanisms. CHWs are most effective when integrated into this broader system, with clear referral pathways, bidirectional communication, and mutual support between community-based and facility-based care.

Furthermore, UHC requires addressing social determinants of health that lie outside the health sector. CHWs can identify social needs and link clients to social services, but cannot substitute for adequate nutrition, housing, water and sanitation, education, and social protection. Achieving UHC requires intersectoral action and political commitment to equity, not merely health service expansion.

4.3 Equity Implications and Mechanisms

The consistent finding of pro-equity effects across diverse CHW programmes is a major strength of the CHW strategy. In a global context of persistent and widening health inequities, interventions that preferentially benefit disadvantaged populations are urgently needed. This review found that 78% of equity measurements in child health CBPHC programmes were pro-equitable, and that CHW programmes successfully reach many marginalized groups [5], [4].

Several mechanisms explain these pro-equity effects. **Proximal delivery** reduces geographic barriers that disproportionately affect rural and remote populations. **Financial accessibility** (free or low-cost services) reduces economic barriers that disproportionately affect the poor. **Cultural and linguistic concordance** reduces social and cultural barriers that disproportionately affect ethnic minorities and immigrant populations. **Targeted outreach** ensures that the most disadvantaged households are actively identified and followed up, rather than relying on passive care-seeking that may favor the less disadvantaged.

However, equity is not automatic. Program design choices critically influence equity outcomes. Programs that rely on facility-based recruitment or passive care-seeking may miss the most marginalized. Programs that require user fees, even small ones, may exclude the poorest. Programs that recruit CHWs from relatively advantaged community members may lack credibility or access to the most disadvantaged households. Programs that fail to address language barriers or cultural norms may not reach ethnic minorities or other marginalized groups.

The systematic review by McCollum et al. identified program features associated with greater equity: targeted household outreach, home-based services, strengthened referral linkages, and CHWs' pre-existing social ties to communities [13]. These features should be prioritized in CHW program design. Additionally, equity monitoring—routine collection and analysis of coverage and outcome data stratified by socioeconomic status, geography, ethnicity, and other markers of disadvantage—is essential to identify and address inequities in CHW program reach and effectiveness.

It is also important to recognize that equity in access does not automatically translate to equity in health outcomes. Downstream determinants of health may limit the health gains achievable through improved service access alone. For example, improved access to child health treatment may have limited impact on child mortality if underlying malnutrition, unsafe water, or inadequate sanitation persist. CHW programmes must be complemented by broader social and economic policies that address root causes of health inequities.

4.4 Implementation and Health Systems Integration

The implementation challenges identified in this review—inadequate supervision, insufficient remuneration, variable training quality, supply chain failures, weak referral systems—are not unique to CHW programmes but reflect broader health system weaknesses. Addressing these challenges requires health system strengthening, not merely programmatic fixes.

Supervision requires investment in supervisor training, transportation, communication infrastructure, and protected time. Innovative supervision models, including peer supervision, group supervision, and mobile health-supported supervision, may improve efficiency and reach. However, supervision cannot be effective if supervisors themselves are overburdened, under-resourced, or lack authority to address performance issues.

Remuneration requires political decisions about CHW professionalization and financing. The volunteer model, while affordable, is increasingly recognized as unsustainable and potentially exploitative. Transitioning to salaried or stipended models requires government budget allocation and political commitment. Performance-based incentives may improve motivation and performance but must be carefully designed to avoid unintended consequences (e.g., focus on easily measured indicators at the expense of quality or equity).

Training requires investment in training infrastructure, skilled trainers, standardized curricula, and ongoing refresher training. Competency-based approaches and mentoring can improve training quality but require time and resources. Pre-service training for CHWs, analogous to pre-service training for professional health workers, may improve baseline competence and professionalization.

Supply chain reliability requires investment in forecasting, procurement, logistics management, and information systems. CHW programmes cannot function effectively if CHWs lack essential medicines and supplies. Integrating CHW commodity needs into national supply chain systems, rather than managing them through parallel systems, may improve reliability and efficiency.

Referral systems require bidirectional communication, clear protocols, transportation support, and accountability. Integrating CHWs into health information systems, including electronic medical records and referral tracking systems, can improve communication and accountability. However, technology alone is insufficient; referral systems also require functional facility-based services, affordable care, and respectful treatment of referred patients.

Health system integration requires defining CHW roles within the broader health workforce, establishing clear reporting relationships, including CHWs in health facility meetings and planning processes, and ensuring that CHWs are recognized and valued by facility-based staff. Integration is not merely

administrative but cultural, requiring attention to power dynamics, professional hierarchies, and mutual respect.

Importantly, health system strengthening for CHW programmes benefits the entire health system. Improved supervision, supply chain reliability, referral systems, and information systems strengthen facility-based care as well as community-based care. Investments in CHW programmes should be framed as investments in health system strengthening for UHC, not as parallel or competing priorities.

4.5 Sustainability and Financing

The long-term sustainability of CHW programmes depends on sustained financing, political commitment, and institutionalization within national health systems. Many CHW programmes are initiated with donor funding and face uncertain futures when external support ends. Transitioning to government financing requires advocacy, budget allocation, and integration into national health workforce and financing plans.

Economic evaluation provides evidence to support the value proposition of CHW programmes. The Kenya maternal health program demonstrated high cost-effectiveness at US\$25 per DALY averted [10], well below commonly cited willingness-to-pay thresholds. However, cost-effectiveness evidence alone is insufficient to ensure sustained financing; political commitment and prioritization are also required.

Sustainable financing models must address the full costs of CHW programmes, including remuneration, supervision, training, supply chain, and health system integration. Underestimating these costs leads to under-resourced programmes that cannot achieve their potential. Realistic costing and budgeting are essential for sustainability.

Integration into national health financing mechanisms, including health insurance schemes and government budgets, is critical for sustainability. In some countries, CHW services are included in benefit packages and reimbursed through insurance, providing a sustainable financing stream. In others, CHW programmes are funded through government budgets as part of primary health care. Both models can work, but require political commitment and adequate resource allocation.

Donor funding can play a catalytic role in initiating and scaling CHW programmes, but should be designed to support transition to government financing rather than creating dependency. Donors should support capacity building, policy development, and integration into national systems, not merely fund parallel programmes.

4.6 Strengths and Limitations

This systematic review has several strengths. We employed a comprehensive search strategy across multiple databases, used systematic screening and data extraction methods, and synthesized evidence across diverse study designs, service areas, and geographic settings. We examined not only effectiveness but also equity and implementation factors, providing a holistic assessment of CHW contributions to UHC.

However, several limitations should be noted. First, the heterogeneity of CHW programmes, interventions, populations, and outcomes precluded meta-analysis, limiting our ability to generate pooled effect estimates. Second, the quality of included studies varied, with some relying on routine data or observational designs that may be subject to bias. We did not conduct formal quality assessment or risk of bias scoring, which limits our ability to weight evidence by study quality. Third, publication bias may favor studies reporting positive effects, potentially overestimating CHW effectiveness. Fourth, many included studies were conducted in sub-Saharan Africa, limiting generalizability to other regions. Fifth, long-term sustainability and scalability of CHW programmes remain under-studied; most evaluations report short- to medium-term outcomes.

Additionally, the evidence base on implementation strategies is largely qualitative and descriptive, with limited rigorous evaluation of specific supervision models, remuneration strategies, or training approaches.

More implementation research is needed to identify best practices and generate actionable guidance for program managers and policymakers.

Despite these limitations, the consistency of findings across diverse contexts and study designs strengthens confidence in the principal conclusions: CHWs make measurable contributions to service coverage, utilization, and equity, but effectiveness depends critically on implementation quality and health system support

5. Conclusion

Community health workers represent a critical strategy for advancing universal health coverage by expanding service coverage, improving utilization, and promoting equity in access to essential health services. Evidence from randomized trials, quasi-experimental studies, large observational surveys, and systematic reviews demonstrates measurable positive effects across maternal health, child health, infectious diseases, noncommunicable diseases, and mental health. Equity analyses consistently show pro-equity effects, with CHW programmes preferentially benefiting disadvantaged populations through proximal delivery, financial accessibility, cultural concordance, and targeted outreach.

However, realizing the full potential of CHW programmes requires sustained investment in implementation quality and health system integration. Adequate supervision, fair remuneration, high-quality training, reliable supply chains, functional referral systems, and formal integration into health systems are essential enabling conditions. These are not merely programmatic details but fundamental determinants of CHW effectiveness and sustainability.

Policymakers and program managers should prioritize:

1. Sustained financing through government budgets and health insurance mechanisms, moving beyond donor-dependent pilot programmes to institutionalized, scaled programmes.
2. Fair remuneration that recognizes CHW contributions and supports retention, moving beyond exploitative volunteer models.
3. Robust supervision and mentoring systems that provide technical support, maintain motivation, and ensure quality.
4. Comprehensive, competency-based training with ongoing refresher training and mentoring.
5. Reliable supply chains that ensure CHWs have essential medicines, diagnostics, and supplies.
6. Functional referral systems with bidirectional communication, clear protocols, and accountability.
7. Formal integration of CHWs into health systems, including health information systems, workforce planning, and facility-based collaboration.
8. Equity monitoring to ensure that CHW programmes reach and benefit the most disadvantaged populations.

Future research should prioritize rigorous evaluation of implementation strategies, long-term sustainability models, and scalability. Implementation research using experimental and quasi-experimental designs can identify best practices for supervision, remuneration, training, and integration. Economic evaluations should examine costs and cost-effectiveness at scale under government management, not only in donor-funded pilots. Equity research should examine not only coverage but also quality of care and health outcomes by socioeconomic status and other markers of disadvantage.

Community health workers are not a panacea for health system weaknesses or a substitute for comprehensive primary health care. However, when well supported and integrated into health systems, they make substantial, measurable contributions to universal health coverage and health equity. Investing in

CHW programmes is investing in the foundation of primary health care and the realization of the right to health for all.

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AI Declaration

The author declares that artificial intelligence (AI) tools were used solely to assist with language editing, grammar refinement, and improvement of clarity and readability. AI tools did not generate original data, analyses, or scientific interpretations. All content was critically reviewed, revised, and approved by the author, who takes full responsibility for the accuracy and integrity of the manuscript

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