

Sustainable Integration of Community Health Workers in the Republic of Congo: A National Situation Analysis and Lessons from African Experiences

«Intégration durable des agents de santé communautaire en République du Congo : une analyse de la situation nationale et enseignements des expériences africaines »

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ABSTRACT :

Community health workers (CHWs) increasingly occupy a central place in primary health care systems and in health-system strengthening across Africa, but the existence of national policies and programs does not automatically translate into sustainable integration. This study assessed the CHW integration profile. We conducted a descriptive cross-sectional analysis of the situation of community health workers (CHWs) in the Republic of Congo, using data from the Africa CDC/UNICEF survey on the community health landscape in Africa (2024–2025). The national situation was examined across four domains: policy and governance; financing and sustainability; operational capacity and professionalization; and information systems and community anchoring. Data from other participating Member States were used to situate the Congolese context and identify relevant African experiences. Congo had all mechanisms assessed (costed national strategy, designated entity, coordination platform) as the majority of countries in the region. None of the resources mobilized were domestic, and neither an investment case nor a financial sustainability plan existed. A total of 26.3% of the national deployment target (2,443/9,289 CHWs) had been reached, against a regional median of 46.1%. CHW density was 0.49/1,000 population versus 0.74/1,000. Refresher-training and career-advancement mechanisms were absent. Congo had an exhaustive digital registry and strong community involvement, above regional medians, but lacked a formalized continuous quality-improvement mechanism, as in 29% of countries in the region. The Republic of Congo has built substantial policy, institutional, and community foundations for CHW integration, but institutionalization remains incomplete. Priority gaps concern domestic financing, workforce scale-up, professional development, and incorporation of CHW remuneration into public financing arrangements. Consolidating these foundations while strengthening sustainable financing will be essential to moving from a functional program to durable integration within the health system.

Keywords: Community health workers; community health systems; health system integration; primary health care; health financing; institutionalization; Republic of Congo; Africa

RESUME :

Les agents de santé communautaire (ASC) occupent une place de plus en plus centrale dans les systèmes de soins de santé primaires et dans le renforcement des systèmes de santé en Afrique, mais l'existence de politiques et de programmes nationaux ne se traduit pas automatiquement par une intégration durable. Cette étude a évalué le profil d'intégration des ASC. Nous avons réalisé une analyse transversale descriptive de la situation des agents de santé communautaire (ASC) en République du Congo, à partir des données de l'enquête Africa CDC/UNICEF sur le paysage de la santé communautaire en Afrique (2024–2025). La situation nationale a été examinée selon quatre domaines : politique et gouvernance ; financement et pérennité ; capacité opérationnelle et professionnalisation ; systèmes d'information et ancrage communautaire. Les données des autres États membres participants ont été utilisées pour situer le contexte congolais et identifier des expériences africaines pertinentes. Le Congo disposait de tous les mécanismes évalués (stratégie nationale budgétisée, entité désignée, plateforme de coordination), à l'instar de la majorité des pays de la région. Aucune des ressources mobilisées n'était d'origine domestique, et il n'existait ni dossier d'investissement ni plan de pérennité financière. Au total, 26,3 % de l'objectif national de déploiement (2 443/9 289 ASC) avaient été atteints, contre une médiane régionale de 46,1 %. La densité d'ASC était de 0,49/1 000 habitants contre 0,74/1 000. Les mécanismes de formation continue et d'évolution de carrière étaient absents. Le Congo disposait d'un registre numérique exhaustif et d'une forte implication communautaire, au-dessus des médianes régionales, mais ne disposait pas d'un mécanisme formalisé d'amélioration continue de la qualité, à l'instar de 29 % des pays de la région. La République du Congo a bâti des fondations politiques, institutionnelles et communautaires substantielles pour l'intégration des ASC, mais l'institutionnalisation demeure incomplète. Les principales lacunes concernent le financement domestique, le passage à l'échelle des effectifs, le développement professionnel et l'intégration de la rémunération des ASC dans les dispositifs de financement public. Consolider ces fondations tout en renforçant un financement durable sera essentiel pour passer d'un programme fonctionnel à une intégration durable au sein du système de santé.

Mots clés : Agents de santé communautaire ; systèmes de santé communautaire ; intégration des systèmes de santé ; soins de santé primaires ; financement de la santé ; institutionnalisation ; République du Congo ; Afrique

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I. INTRODUCTION

Community health workers (CHWs) have become an important component of primary health care, particularly in low- and middle-income countries facing persistent health workforce shortages and barriers to accessing essential services. Their roles have progressively expanded from health promotion and community mobilization to disease prevention, referral, treatment support, and community-based surveillance (Glenton et al., 2021; Olaniran et al., 2017; Perry et al., 2014). Evidence indicates that well-supported CHW programmes can improve access to services and strengthen the interface between communities and formal health systems (Mupara et al., 2023; Perry et al., 2014; Perry & Hodgins, 2021). However, the contribution of CHWs depends not only on their deployment but also on the extent to which they are integrated within national health systems; WHO recommends coherent policies covering selection, supervision, remuneration, career development, and community anchoring (Cometto et al., 2018; WHO, 2018).

Integration is increasingly understood as a multidimensional process requiring alignment across governance, financing, workforce management, supervision, information systems, and community relationships, rather than simple inclusion within national policy (Lewin et al., 2021; Mupara et al., 2023; Schneider & Lehmann, 2016). This distinction between the existence of a programme or policy and systemic integration is particularly relevant in sub-Saharan Africa, where many countries have adopted national strategies and formalized CHW cadres, without institutionalization progressing uniformly, constrained by fragmented governance, insufficient domestic financing, dependence on technical and financial partners, and weak performance-management and information systems (Gichaga et al., 2021; Lewin et al., 2021; Masis et al., 2021).

The continental Africa Community Health Programme Landscape Survey 2024/5 illustrates this contrast at continental scale: it documents substantial progress in the formal recognition of community health programmes among African Union Member States, while identifying sustainable financing, professionalization, performance management, and information-system integration as the main persistent gaps, with more than 80% of Member States dependent on external resources (Africa CDC & UNICEF, 2025). Financing is a central element of this transition, since CHW programmes require recurrent resources for remuneration, supervision, and programme management; dependence on short-term or external financing threatens continuity even where programmes are formally recognized (Gichaga et al., 2021; Kumar et al., 2020; Masis et al., 2021).

The situation of the Republic of Congo is part of this transition. CHWs have long contributed to community mobilization, health promotion, and certain community-based services within the Congolese health system, but their integration remains limited by the absence of a clear legal framework, stable financing mechanisms, and robust interprofessional collaboration, despite the adoption of a National Policy on Community-Based Health Interventions (MSP, 2017) and a National Community Health Strategic Plan (Ministry of Health, Population, Advancement of Women and Integration of Women in Development, 2021). Previous research conducted in Congo has mainly focused on the contribution of CHWs to service utilization and health-system performance, on community perceptions of their services, and on their relationships with health professionals, with less attention paid to the system-level conditions required to institutionalize and sustain their contribution.

Using data from the Africa CDC continental survey on community health programmes, this study assesses the CHW integration profile of the Republic of Congo and identifies its main strengths and gaps relative to trends observed among

participating African Union Member States, across four domains: (1) policy, governance and coordination; (2) financing and sustainability; (3) operational capacity and professionalization; and (4) information systems, quality and community anchoring. By distinguishing policy commitment from operational functionality and durable institutionalization, the study aims to inform the next phase of community health system strengthening in the Republic of Congo.

II. MATERIEL ET METHODES

II.1. Study design and data source

This study is based on a descriptive cross-sectional analysis of the situation of CHWs in the Republic of Congo, drawing on secondary data from the Africa CDC continental survey on community health programmes, a multi-country assessment of the status, organization, financing, and institutionalization of national community health programmes among African Union (AU) Member States. Data collection for this survey was launched in November 2024 and country responses were validated throughout 2025, including at a continental workshop held in Abuja, Nigeria, in August 2025; continental results were published in the Africa Community Health Programme Continental Landscape Survey Report 2024/5 (Africa CDC & UNICEF, 2025); all indicators in the present analysis therefore reflect the status of community health programmes as reported at that time, and should be interpreted as a single cross-sectional snapshot rather than a current or real-time picture. The country-level analytic database used for this secondary analysis was constructed, and the present analysis conducted, between July and August 2026. In total, 51 African Union Member States had usable data in this parent survey, including the Republic of Congo. At continental level, the parent survey reported that approximately 84% of Member States had a national community health strategy, that more than one million CHWs were already deployed across 48 countries, and that more than 80% of Member States remained dependent on external financing for their community health programmes (Africa CDC & UNICEF, 2025). The Republic of Congo was the focal country for the present analysis; the other 50 participating Member States with valid data provided the continental reference for each indicator. Rather than ranking countries or constructing a composite maturity score, the analysis used a domain-based approach, situating Congo's position against continental trends to identify its established foundations, areas of partial operationalization, and persistent gaps. Because response completeness varied across survey modules, the number of countries considered for each comparison varied accordingly.

II.2. Unit of analysis and indicators

The country was the unit of analysis; Congo was treated as a single focal case within the continental distribution rather than as a sample for inferential comparison, and the denominator for each indicator consisted of countries providing a valid, interpretable response to that item. Indicators were selected a priori for their relevance to the conceptual framework of CHW integration and organized into four domains: (1) policy, governance and coordination (national strategy, costed strategy, designated entity, coordination platform); (2) financing and sustainability (proportion of financing needs met, domestic/partner shares of mobilized resources, budget tracking, investment case, financial sustainability plan); (3) operational capacity and professionalization (deployment target and rate, CHW density, curriculum, refresher training, supervision, remuneration, inclusion in the public wage bill, career advancement); and (4) information systems, quality and community anchoring (national registry, continuous quality improvement, community involvement). The proportion of financing needs met and the domestic/partner shares of mobilized resources were analyzed separately, as they rest on different denominators, as were regular CHW payment and inclusion in the public wage bill, given that regular payment does not necessarily imply financial sustainability. For Congo, the reported refresher-training figures corresponded to cumulative participations rather than unique CHWs, and were therefore not used to estimate coverage.

II.3. Variables analyzed and calculation methods

Table 1 below defines the 25 variables retained for the analysis, organized by the four conceptual domains (Section 2.2), with their type and calculation method where this is not a simple binary or categorical response reported by the country.

Table 1. Definition and calculation method for the 25 variables analyzed, by domain.

Domain	Variable	Type	Definition / calculation method
1. Policy, governance and coordination	National CHW strategy	Binary (Yes/No)	Existence of a national community health strategy or plan, as reported directly by the country.
	Costed strategy	Binary (Yes/No)	Does the national strategy have an associated costed budget?
	Designated national CHW entity	Binary (Yes/No)	Existence of a government entity/directorate explicitly responsible for the CHW programme.
	National coordination platform	Binary (Yes/No)	Existence of a national mechanism bringing together CHW programme stakeholders (government, partners, civil society).
2. Financing and sustainability	% of financing needs met	Continuous (%)	Proportion of the financing needs identified in the national plan/budget that was actually mobilized, as reported by the country. (Domestic resources mobilized ÷ total resources mobilized) × 100.
	Domestic share of mobilized resources	Continuous (%)	
	Partner share of mobilized resources	Continuous (%)	(Resources contributed by technical and financial partners ÷ total resources mobilized) × 100.
	Budget aligned with national strategy	Binary (Yes/No)	Is the executed budget linked to national strategy priorities?
	Budget-tracking process	Binary (Yes/No)	Existence of a mechanism to track the allocation and execution of community health expenditure.
	Community health investment case	Binary (Yes/No)	Existence of a formal advocacy/investment case quantifying the benefits of the CHW programme.
	Financial sustainability plan	Binary (Yes/No)	Existence of an explicit plan for transitioning toward sustainable domestic financing.
Domain	Variable	Type	Definition / calculation method
3. Operational capacity and professionalization	Average annual cost per deployed CHW (US\$)	Continuous (derived ratio)	Annual strategy budget (US\$) ÷ number of CHWs deployed. A derived indicator, not requested directly by the questionnaire.
	CHWs deployed / target (%)	Continuous (derived ratio)	(Number of CHWs actually deployed ÷ national deployment target) × 100.
	CHW density per 1,000 population	Continuous (derived ratio)	(Number of CHWs deployed ÷ total population) × 1,000.
	Standardized CHW curriculum	Binary (Yes/No)	Existence of a standardized national curriculum for initial CHW training.
	Refresher-training mechanism	Binary (Yes/No)	Existence of an institutionalized (recurrent, planned) mechanism for CHW refresher training.
	Career-advancement mechanism	Binary (Yes/No)	Existence of a formal professional progression pathway for CHWs.
	Supervisory structure	Binary (Yes/No)	Existence of a formal structure for regular CHW supervision.
	Regular CHW payment system	Binary (Yes/No)	Do CHWs receive remuneration on a regular, predictable schedule (regardless of funding source)?
	Inclusion in the public wage bill	Binary (Yes/No)	Is CHW remuneration incorporated into the State's recurrent operating budget (public wage bill), as opposed to external/project financing?
	Monthly CHW payment (US\$)	Continuous	Average monthly amount reported by the country, converted to US dollars.
	CHW master registry	Binary (Yes/No)	Existence of a national registry listing active CHWs.
4. Information systems, quality and community anchoring	Registry includes geolocation	Binary (Yes/No)	Does the national registry include the geographic location of each CHW?
	Continuous quality-improvement mechanism	Binary (Yes/No)	Existence of a formalized process for regular review of performance data and corrective action (distinct from routine supervision).
	Community involved in CHW selection	Binary (Yes/No)	Does the community formally participate in the CHW selection process?
	Level of community involvement	Ordinal (1–5)	Five-level scale (very low to high), converted to a numeric score of 1–5 to allow calculation of continental medians and IQRs.

II.4. Data management and quality assurance

The tabulated continental dataset was restructured into a country-level analytic database, standardizing variable names and response categories while preserving source values. “Don't know”, blank, and not-applicable responses were retained as missing rather than recoded as “No”. Quantitative variables were checked for implausible values and internal inconsistencies; unresolved discrepancies were flagged and excluded from the affected calculation rather than corrected without documentary evidence. The target population for CHW coverage was excluded from the primary analysis because of inconsistent reporting definitions across countries. For Congo, deployment coverage was calculated as 2,443 CHWs deployed against a national target of 9,289 (26.3%), confirmed to use the same CHW definition and reference period. Missing data were handled through available-case analysis at the indicator level, with no imputation; denominators are reported alongside each result.

II.5. Statistical analysis

The analysis was descriptive; categorical indicators were summarized as frequencies and proportions among countries providing a valid response, and continuous indicators as medians and interquartile ranges (IQR), given the expected heterogeneity and the influence of extreme values. For each indicator, Congo's situation was situated against the corresponding continental distribution, focusing on the direction and magnitude of the gap and, for continuous variables, on its position relative to the median and IQR. Sensitivity analyses excluding observations flagged during quality control were used where relevant, with the aim of characterizing Congo's situation within an observed African landscape. This descriptive approach was chosen because it matches the study's objective — situating Congo among African experiences rather than testing statistical hypotheses; no hypothesis test, composite integration score, or multivariable model was therefore used.

II.6. Ethical considerations

This study is a secondary analysis of aggregated, country-level programmatic data and does not use any individual patient- or participant-level data. The ethical status of the parent survey, the administrative authorization governing the present secondary analysis, and the possible existence of a peer-reviewed principal publication are addressed in the Declarations section, which presents the full statement on ethics and data governance.

III. RESULTATS

III.1. Policy, governance and coordination

The Republic of Congo had all four policy and governance mechanisms assessed: a costed national community health strategy, a designated national entity, and a national coordination platform (Table 1), consistent with the National Community Health Strategic Plan 2021-2024 and the National Policy on Community-Based Health Interventions. These arrangements were broadly consistent with continental trends: 80.4% (41/51) of countries reported having a national strategy, 75.0% (30/40) a costed strategy, 90.2% (46/51) a designated entity, and 76.5% (39/51) a coordination platform (Table 2; Figure 1). Congo therefore had the main governance, planning, and coordination structures assessed in the continental survey.

III.2 Financing and sustainability

The financing profile contrasted sharply with the established policy and institutional architecture. Congo reported 0% of financing needs met, with resources mobilized 0% domestic and 100% partner-funded (Table 1) — below the continental median domestic share (10.0%, IQR: 1.0–40.0%) and above the median partner share (48.5%, IQR: 10.0–90.0%) (Table 2; Figure 2). The budget was reported as aligned with the national strategy (consistent with 73.5% of countries), but Congo lacked a budget-tracking process (present in 46.9% of 49 countries), an investment case, and a financial sustainability plan (each reported by 33.3% of countries continentally). The average annual cost per deployed CHW was also 786 US\$ for Congo (annual strategy budget divided by the number of CHWs deployed), a value below the continental median of 1,886 US\$ (IQR: 366–4,585 US\$; n=27) (Table 2). Thus, while strategic budget alignment was reported, mechanisms for resource mobilization, tracking, and long-term sustainability were lacking.

III.3 Operational capacity and professionalization

Congo reported a national target of 9,289 CHWs, of whom 2,443 were deployed (26.3%), placing it at the lower bound of the continental IQR (median 46.1%, IQR: 26.3–65.8%; n=35) (Tables 1 and 2; Figure 2). CHW density (0.49/1,000) was below the continental median (0.74/1,000, IQR: 0.35–1.43; n=40) but remained within the IQR. A standardized curriculum and structured supervision were both present, consistent with 92.2% (47/51) of countries for each. However, Congo lacked an institutionalized refresher-training mechanism (present in 66.0% of 50 countries) and a formal career-advancement mechanism (present in only 25.5% of countries continentally). Regular remuneration was reported (consistent with 72.5% of countries), at 60 US\$/month

(continental median 50 US\$, IQR: 34–126.5 US\$; n=32), but financed by partners and outside the public wage bill (present in 49.0% of countries). The workforce profile thus combined standardized training, supervision, and remuneration with incomplete deployment and the absence of refresher-training, career-advancement, and national wage-bill inclusion mechanisms.

III.4 Information systems, quality and community anchoring

Congo had an exhaustive, digital, annually updated CHW registry including geographic distribution (Table 1) — above the continental pattern (62.7% of countries with a registry; 96.9% of those including geolocation) (Table 2; Figure 1). However, Congo lacked a formalized continuous quality-improvement mechanism (present in 71.4% of 49 countries). Community involvement in CHW selection was reported, with an overall community-involvement level rated high (4/5), above the continental median (3/5, IQR: 3–4; n=46) (Table 2). Information systems and community anchoring therefore showed established strengths alongside a gap in institutionalized continuous improvement.

III.5 Overall integration profile

Taken together, the four domains reveal a heterogeneous integration profile (Table 3). Established foundations included the costed national strategy, institutional leadership, coordination platform, standardized curriculum, supervision, regular payment, digital registry, and strong community involvement. Operationally, only 26.3% of the deployment target had been reached, and refresher training, career advancement, and continuous quality improvement were absent. The most pronounced gaps concerned financing and long-term institutionalization: no financing needs were met from domestic resources, mobilized resources were entirely partner-funded, and Congo had neither resource tracking, an investment case, a financial sustainability plan, nor wage-bill inclusion. Figure 1 illustrates this contrast between established and absent mechanisms; Figure 2 situates Congo's position below the continental median for domestic financing and deployment rate, alongside greater reliance on partner financing.

III.6 Exploratory positioning within Central Africa (CEEAC)

To complement the continental reference, Congo was positioned against the ten other participating CEEAC countries — Angola, Burundi, Cameroon, Central African Republic, Chad, DR Congo, Equatorial Guinea, Gabon, Rwanda, and São Tomé and Príncipe (n=11 including Congo) (Table 4). Given the small number of reference countries and substantial missing data, this analysis is descriptive and exploratory, intended to provide context rather than replace the continental reference (Section 2.5); no IQR or inferential comparison was calculated at this subregional level.

Financing indicators show a pattern broadly consistent with Congo's own profile, rather than one in which Congo appears atypical: domestic financing shares were low in most CEEAC countries (median 5%, n=11), a financial sustainability plan was reported by only one country (Rwanda), and wage-bill inclusion was reported by only three of eleven countries. Congo's financing gaps therefore reflect a pattern shared across most of its immediate subregion, rather than a specifically national shortfall.

The CHW deployment rate shows a different pattern depending on the subgroup considered: among the seven CEEAC countries with interpretable data, values ranged from 0% (DR Congo) to 100% (São Tomé and Príncipe), with Congo's rate (26.3%) close to the regional midpoint — contrasting with its position at the lower bound of the continental IQR, which suggests that workforce scale-up constraints are widely shared regionally, even though Congo's absolute gap remains substantial.

By contrast, Congo's digital registry and strong community involvement stand out as notable regional strengths: Congo and DR Congo were the only countries reporting “high” community involvement, and Congo was among six of eleven CEEAC countries with a national registry.

Table 2. Republic of Congo and Central African (CEEAC) reference countries across selected CHW integration indicators. 'n/a' = missing or non-interpretable response. Source: Africa CDC/UNICEF Continental Community Health Landscape Survey 2024/5.

Country	National strategy	Domestic funding (%)	Deployment rate (%)	CHW density /1,000	Refresher training	Wage bill inclusion	Financial sustain. plan	National registry	Community involvement
Angola	Yes	1.7	44.9	0.10	No	Yes	No	No	Low
Burundi	No	10	n/a	0.88	Yes	No	No	Yes	Moderate
Cameroon	Yes	6	39.7	0.37	Yes	No	No	Yes	Moderate
Central African Republic	Yes	10	18.3	0.72	No	Yes	No	No	n/a
Chad	Yes	2	20.2	0.44	No	No	No	No	Low
Republic of the Congo	Yes	0	26.3	0.49	No	No	No	Yes	High
Democratic Republic of the Congo	Yes	5	0	0.00	Yes	No	No	No	High
Equatorial Guinea	Yes	13	n/a	0.00	Yes	Yes	No	Yes	Moderate
Gabon	Yes	0	0	0.00	No	No	No	No	n/a
Rwanda	Yes	40	n/a	4.18	Yes	No	Yes	Yes	Moderate
São Tomé and Príncipe	No	0	100	0.71	No	No	No	Yes	Very low

IV. DISCUSSION

IV.1 Main findings

This study examines the CHW integration profile of the Republic of Congo within the African community health landscape. The findings reveal a differentiated pattern: Congo has established several institutional foundations usually associated with CHW integration — costed national strategy, designated leadership, coordination mechanisms, standardized training, structured supervision, exhaustive digital registry, regular remuneration, and strong community involvement — while significant gaps persist in workforce scale-up, continuing professional development, career advancement, continuous quality improvement, domestic financing, and long-term financial sustainability.

The central finding is therefore a gap between policy institutionalization and durable operational integration: the presence of a legal and policy framework does not mean that CHWs are fully integrated into the health system's financing, workforce-management, performance-management, and accountability arrangements, consistent with evidence that integration requires alignment across governance, financing, workforce management, and community anchoring, rather than isolated programme components (Cometto et al., 2018; Mupara et al., 2023; Schneider & Lehmann, 2016). These findings reflect the broader continental pattern: the 2024/5 survey found substantial progress in institutionalization alongside persistent weaknesses in financing, professionalization, and performance management, suggesting that Congo's experience reflects a broader continental transition rather than a country-specific shortfall.

IV.2 Policy commitment and institutionalization

Congo's national strategy, dedicated budget, designated leadership, and coordination platform constitute an important governance foundation, placing the country within the dominant continental pattern. Governance is central to CHW programme performance because it establishes accountability and the framework within which financing and workforce decisions are made (Lewin et al., 2021; Schneider & Lehmann, 2016). However, policy adoption should not be equated with integration: several downstream mechanisms meant to translate commitments into durable implementation remain incomplete, which supports the argument by Kiendrébégo et al. (2024) that CHW integration should be approached as a health-system reform requiring coordinated action across governance, financing, training, supervision, and working conditions, rather than as an isolated workforce intervention. This finding converges with the national Community Health System Maturity Assessment Report (MSP, 2024), which identifies similar limitations in translating political commitments into durable operational mechanisms.

Taken together, the findings support a distinction between programme presence, programme functionality, and systemic integration, consistent with the WHO health-system building-blocks framework and related work on integrated, people-centred services (WHO, 2007; WHO, 2015). Congo has an established programme architecture, and several components are functional — supervision, remuneration, digital registration, coordination, community engagement — but full integration requires these functions to be linked to durable national mechanisms for financing, workforce planning, professional development, and accountability, consistent with the characterization of integration as a multidimensional rather than binary process proposed by Mupara et al. (2023). In this sense, the main challenge for Congo may no longer be

whether CHWs should be part of the health system — that direction is already established — but how to translate existing commitment into durable operational institutionalization.

IV.3 Financing gaps

Financing is one of the main weaknesses identified. Congo reported no domestic contribution among resources mobilized for community health, no investment case, no financial sustainability plan, and no resource-tracking mechanism. This pattern is not unique to Congo: community health programmes in low- and middle-income countries depend heavily on external financing, and fragmented, unpredictable financing is a recognized obstacle to institutionalization (Gichaga et al., 2021; Masis et al., 2021). This finding is consistent with earlier national data, which had already documented a strong dependence of the Congolese health sector on external financing (MSP, 2020). The continental survey reinforces this finding, with more than 80% of Member States reported as dependent on external resources. However, the degree of dependence observed in Congo deserves particular attention because financial sustainability affects virtually every other integration domain: a programme may have a strategy, a curriculum, and a remuneration mechanism, but these remain fragile in the absence of predictable national financing. This is particularly visible in the remuneration findings: Congo's CHWs receive regular payments (~60 US\$/month), a positive operational feature, but entirely financed by partners and outside the public wage bill. Congo has therefore partly resolved the immediate question of CHW remuneration, but not the institutional question of who ultimately bears the recurrent financial responsibility for this workforce (Cometto et al., 2018; WHO, 2018).

IV.4 Scale-up, professionalization, and continuous improvement

Only 26.3% of the national deployment target had been reached, placing Congo at the lower bound of the continental IQR, with CHW density also below the continental median. Workforce numbers should not, however, be interpreted independently of programme design: WHO guidance stresses that the number of CHWs should reflect workload, catchment population, and scope of practice, rather than deployment targets alone (WHO, 2018). This distinction is relevant to Congo, where the broader thesis showed that CHWs can improve district-level indicators, but that these effects may weaken in the absence of sustained supervision, training, and resources (Hill et al., 2014; Kok et al., 2015). Congo already has a standardized curriculum and structured supervision, but lacks an institutionalized refresher-training mechanism and a career-advancement pathway — suggesting that initial preparation and routine supervision have received more

institutional attention than long-term professional development, consistent with the broader debate on CHW professionalization (Cometto et al., 2018; Mupara et al., 2023; Perry & Hodgins, 2021).

A related systemic gap is the absence of a formalized continuous quality-improvement (CQI) mechanism, despite structured supervision and an established information system. Supervision alone does not constitute CQI, which requires a regular cycle of data review, corrective action, and reassessment — capacities associated with health-system resilience (Naimoli & Saxena, 2018). The coexistence of a comprehensive digital registry and the absence of formal CQI identifies a clear opportunity: Congo already has part of the informational infrastructure needed for performance management, and the next step is to institutionalize the processes that convert this data into routine review and accountability — an increasingly important task as the programme scales up.

IV.5 Information systems and community anchoring as strengths

In contrast to financing and professionalization, Congo shows particularly solid foundations in information systems and community engagement: an exhaustive, geolocated digital CHW registry, and strong community involvement, including in CHW selection. Reliable workforce data are essential for planning deployment and monitoring performance, and their value could grow further if linked to supervision, training, remuneration, and service-delivery data — especially since the continental survey found persistent fragmentation and interoperability challenges in community health information systems, despite progress in national registries. Community anchoring is similarly central to CHW legitimacy and effectiveness (Perry & Hodgins, 2021; Schneider & Lehmann, 2016), and this finding converges with other components of the thesis showing strong community satisfaction and trust in CHW services. Community anchoring may therefore be one of Congo's strongest existing foundations, and formal integration should preserve this community identity rather than progressively turning CHWs into a workforce oriented exclusively toward health facilities.

IV.6 Regional positioning within Central Africa

The continental reference places Congo among 51 heterogeneous AU Member States. A complementary, more proximate comparison with ten Central African (CEEAC) countries sharing comparable fragility, resource constraints, and epidemiological burden (Section 3.6) helps distinguish challenges specific to Congo from those reflecting broader subregional constraints. Congo's financing weaknesses — absence of domestic contribution, financial sustainability

plan, and wage-bill inclusion — were shared by most CEEAC reference countries, consistent with structural, region-wide community health financing constraints (Gichaga et al., 2021; Masis et al., 2021), suggesting that closing this gap will likely require solutions extending beyond national reform alone. Congo's deployment rate (26.3%), although low at continental level, was close to the CEEAC midpoint, suggesting that workforce scale-up constraints are a shared feature of health systems facing similar constraints rather than a specifically Congolese shortcoming. Conversely, Congo's digital registry and strong community involvement stand out as notable subregional strengths, positioning the country as a potential reference point for regional peer learning. These subregional findings remain exploratory given the small number of reference countries (n=11) and should be read as complementary to, not a substitute for, the continental analysis.

IV.7 Implications, strengths, and limitations

Three implications follow. First, further CHW scale-up should be accompanied by a financing transition strategy: increased domestic resource mobilization, incorporation of recurrent costs into national budgets, expenditure tracking, and development of an investment case and a sustainability plan (Gichaga et al., 2021; Kumar et al., 2020; Masis et al., 2021). Second, workforce expansion should be linked to professionalization — institutionalized continuing education, defined career pathways, strengthened supervision — so that the objective is not simply to reach a numerical target but to sustain a functional, motivated workforce over time. Third, Congo's existing strengths in digital registration and community engagement should be leveraged to build a learning, accountable community health system, linking registry data to training, supervision, and performance, while preserving the community structures that anchor trust and legitimacy. These priorities align with the direction of Africa CDC's community health workforce strategic priorities, as well as with the National Health Development Plan 2023-2026 (MSP, 2024).

The strengths of this study include its use of a standardized continental survey to situate Congo within a broader African context, a domain-based approach capturing the multidimensional nature of integration without relying on an unvalidated composite score, and a clear distinction between the existence of programme mechanisms and their institutional sustainability. Limitations include reliance on country-reported data, subject to differences in interpretation and reporting practice; variable response completeness across indicators and denominators; some quantitative variables not fully comparable across countries (for example, the target population for CHW coverage, excluded from the main analysis); a cross-sectional design that cannot establish

causality nor confirm that continental medians represent an optimal standard; and a national-level focus that cannot capture subnational implementation heterogeneity. Future analyses combining national program indicators with subnational implementation and outcome data would strengthen understanding of how institutional integration translates into service delivery and population health outcomes.

V. CONCLUSION

This study offers a systemic assessment of CHW integration in the Republic of Congo within the broader African community health landscape. The findings show that the country has moved past the initial stage of establishing a community health programme: several important foundations are already in place, including a costed national strategy, designated institutional leadership, coordination mechanisms, standardized training, structured supervision, an exhaustive digital CHW registry, regular remuneration, and strong community involvement.

However, these achievements coexist with significant gaps in the mechanisms needed to sustain and expand the program. Only 26.3% of the national CHW deployment target had been reached at the time of the survey. Institutionalized continuing training, formal career advancement, and systematic continuous quality improvement were absent. More importantly, the financing structure remained very fragile, with no domestic contribution reported among mobilized resources, CHW remuneration financed by partners rather than the public wage bill, and no investment case or financial sustainability plan.

These findings therefore suggest that the central challenge for the Republic of Congo is no longer simply to establish or recognize the role of CHWs, but to translate existing policy and organizational achievements into durable operational integration. This requires linking future workforce expansion to predictable domestic financing, professional development, institutionalized remuneration, strengthened resource tracking, continuous quality improvement, and effective use of CHW information systems.

Progress toward these priorities would help shift the community health programme from implementation dependent on external support toward a more resilient, nationally institutionalized component of the health system. At the same time, the country's existing strengths in governance, digital workforce registration, supervision, and community engagement provide a substantial foundation on which this transition can be built.

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