

STRATEGIES TO SUPPORT COMMUNITY
HEALTH WORKERS IN THE FRAGILE AND
CONFLICT-AFFECTED BUEA HEALTH
DISTRICT, CAMEROON

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Abstract

Community Health Workers (CHWs) have been acknowledged as critical in providing essential health services, especially within under-resourced health systems and fragile contexts. There has been renewed interest in CHWs in recent years in relation to achieving universal health coverage due to their unique position in the community and their ability to link communities and the health system. However, the best way to optimise CHW programmes and support CHWs is debatable. The optimisation of CHW programmes is particularly relevant in urban, fragile and conflict-affected settings (FCAS), such as Buea Health District in western Cameroon, where challenges CHWs face are exacerbated by the unstable context and their needs are dire. At the same time, there is a dearth of evidence and research to guide policies and practices.

This study seeks to explore strategies to support CHWs in the Buea Health District by understanding the current functioning and challenges of CHW programmes, how individual CHWs and their managers cope with and respond to shocks and uncertainty, and their views on the preferred support. Employing a mixed-methods approach, this study integrates key informant interviews (16) with CHW programme managers, supervisors, and community representatives alongside four focus group discussions with CHWs in the Buea Health District. In addition, participatory ranking exercises facilitated quantitative data collection, highlighting preferred support strategies from the CHWs' perspective. Finally, the work-life histories (5) of selected CHWs were documented to capture their experiences before and during the armed conflict in the Anglophone Regions of Cameroon.

The findings of this research highlight the lived experiences and challenges that CHWs encountered, including insecurity, which sometimes posed a risk to life, mistrust from the community, especially during the COVID-19 pandemic and population displacement. Some of these challenges, such as population displacement, eventually led to expanding roles for CHWs and a shortage of CHWs. Some of the coping mechanisms employed by CHW programme managers involved community engagement with local leaders, recruitment of temporary CHWs and remote supervision of CHWs. Overall, the analysis points to CHW's support strategies, such as compensation and benefits, operational support and work environment, and recognition and status for the CHWs, which are preferred strategies to support CHWs in the Buea Health District.

These findings have significant implications when designing and implementing CHWs programmes and support packages for CHWs. Stressing the relevance of context-specificity in approaches to CHW programming, the study proposes and applies a framework to support CHWs in FCAS, which intersects the CHW programme features, the local context, and the individual characteristics of the CHWs. Considering the intersection of these three variables would inform effective CHW programme designs and support packages that are sensitive and tailored to the unique characteristics of CHWs and their programmes in different settings. It also has implications for the design of agile CHW programmes that are responsive to the rapidly changing nature of fragile and conflict-affected settings and that cater to the well-being of CHWs in such settings to ensure improved CHW motivation, performance, and retention, as well as improved community health outcomes.

Keywords: Community Health Workers, health systems, human resources for health, focus group discussions, participatory ranking exercises, CHW compensation and benefits, fragile and conflict-affected settings.

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Abbreviations

Abbreviation	Definition
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AIDS	Acquired Immune Deficiency Syndrome
AR	Average Ranking
ARV	Antiretroviral
BRAC	Bangladesh Rural Advancement Committee
CAR	Central African Republic
CEMAC	Economic and Monetary Community of Central Africa
CHW	Community Health Worker
COC	Chief of Centre
CORDAID	Catholic Organization for Relief and Development Aid
COVID	Coronavirus disease
CRHP	Comprehensive Rural Health Project
DCE	Discrete Choice Experiments
DPT3	Diphtheria-Pertussis-Tetanus vaccine
DRC	Democratic Republic of Congo
EPI	The Expanded Programme on Immunization
EU	European Union
EWARS	Early Warning and Response System
FCAS	Fragile and conflict-affected settings
FCFA	Central African CFA franc
FGD	Focus Group Discussion
GHWA	Global Health Workforce Alliance
GPS	Global Positioning System
HF	Health centre
HIV	Human immunodeficiency virus
HRH	Human Resources for Health
HRM	Human Resource Management
IDMC	Internal Displacement Monitoring Centre
IDP	internally displaced person
ILO	International Labour Organization
JHPIEGO	Johns Hopkins Program for International Education in Gynaecology and Obstetrics
KII	Key informant interviews

LLIN	Long-lasting insecticidal nets
LMIC	Low- or Middle-Income Country
MMR	mixed methods research
MOH	Ministry of Health
MR	Median Ranking
MSF	Médecins Sans Frontières (Doctors Without Borders)
NGO	non-governmental organization
NGT	nominal group technique
NHO	National Observatory of Public Health
NSAG	non-State armed groups
NTD	Neglected tropical diseases
NW	North West Region
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
OECD	Organisation for Economic Co-operation and Development
ORS	Oral rehydration solution
PBF	Performance-Based Financing
PHC	primary health care
PLMI	National Multi-sectoral Programme to Combat Maternal, Newborn and Child Mortality
RBF	Results-based financing
SAPs	Structural Adjustment Programmes
SDG	Sustainable Development Goals
SSI	Semi-structured interview
SW	South West Region
TB	Tuberculosis
UHC	Universal health coverage
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
WASH	Water, sanitation, and hygiene
WHO	World Health Organization
WLH	Work life history
XAF	Central African CFA franc

PART 1

Introduction, Background & Methods

Part One of this thesis sets the stage and provides the necessary background for the research. Chapter 1 introduces the study, laying the groundwork for the subsequent analysis. Chapter 2 outlines the study's rationale, research questions, and conceptual framework, establishing the foundation for the investigation. Chapter 3 provides essential context by offering an overview of the health system in Cameroon and the evolution of the Anglophone Crisis, which frames the study's setting. Chapter 4 details the research methods employed, explaining the approach and techniques used to gather and analyse data, thus preparing the reader for the findings presented in Part Two.

CHAPTER 1: Introduction and Background

This chapter sets the stage for this study by providing a comprehensive introduction and background to the research. This chapter begins with an overview of the critical role that Community Health Workers (CHWs) play in delivering essential health services, particularly in fragile and conflict-affected settings (FCAS) like the Buea Health District. It outlines the pressing challenges these health workers face due to ongoing conflict and instability, emphasising the need for effective support strategies to enhance their resilience and performance.

1.1 Introduction

The problem this study seeks to solve is the lack of evidence-based support strategies for CHWs in FCAS that consider the unique individual and contextual factors influencing their performance. There is a pressing need to identify and develop effective support mechanisms tailored to the specific challenges of FCAS, ensuring that CHWs are well-equipped to fulfil their roles. This study seeks to address this gap by exploring the experiences and needs of CHWs in the conflict-affected Buea Health District, where there has been no research on this topic, aiming to inform health programme designers and policymakers in Cameroon in creating strategies that strengthen CHW support systems, ultimately contributing to health system strengthening and improved health outcomes in these vulnerable settings.

CHWs are paid or unpaid lay health workers employed to deliver essential primary health services at the community level (Hongoro & McPake, 2004; Lewin et al., 2010; WHO, 2015). They have been widely acknowledged as critical providers of essential health services, particularly within under-resourced health systems and fragile contexts. There has been a renewed focus on CHWs in recent years due to their significant potential to contribute to universal health coverage, given their unique position in the community and ability to act as a vital link between the community and the health system (Zulu & Perry, 2021). In FCAS, their role becomes even more indispensable because traditional health systems are often disrupted, under-resourced, and face severe workforce shortages. In such contexts, CHWs can partially substitute for missing or displaced health professionals and ensure continuity of care. Moreover, CHWs are often trusted community members, which is particularly important when public trust in the formal health system has eroded due to conflict or governance failures. By

maintaining direct links to communities, CHWs help restore some degree of health service delivery even when the formal health system is incapacitated. However, the best way to optimise the performance of these lay health workers remains a topic of ongoing debate, especially regarding how they can be effectively supported and integrated into weakened or disrupted health systems.

In the context of most low- and middle-income countries (LMICs), CHWs are essential for health promotion and disease prevention initiatives as part of the community-based primary healthcare infrastructure (Kane et al., 2016; Millington, 2018a). Moreover, CHW programmes are regarded as a means for strengthening sustainable health systems and improving global health outcomes (Najafizada et al., 2014). These programmes contribute to health systems by providing cost-effective services, enhancing system resilience, and empowering communities, making them a cornerstone of primary healthcare in these contexts (Afzal et al., 2021; Lehmann et al., 2019; Perry et al., 2021a; Perry & Hodgins, 2021).

Despite their importance, CHWs in these settings face significant challenges that hinder their performance and impact, including but not limited to security risks, inadequate support and resources, and psychological stress due to ongoing conflicts within their communities. Compounding these challenges is a lack of adequate research into strategies that can effectively support CHWs in such difficult contexts. One of the earliest calls for better CHW support was articulated by Gill Walt in 1988, who noted that CHW programmes would fail not because of the workers themselves but because of the absence of the support required to make them effective (Walt, 1988). This foundational insight remains relevant today as researchers continue to explore optimal support mechanisms for CHWs.

An example of research into supporting CHWs is a multi-country study across Sierra Leone, Liberia, and the Democratic Republic of Congo developed a comprehensive framework to examine the Human Resource Management (HRM) of CHWs (Raven et al., 2020). This study highlights the complexity of managing CHWs, particularly the interplay between health system 'hardware' (e.g., policies, guidelines) and 'software' (e.g., values, norms, relationships) and its impact on CHW performance (Raven et al., 2020). The study also reveals the importance of addressing gender disparities and attrition rates in such programmes, illustrating the nuanced challenges inherent in managing CHWs in these settings (Raven et al., 2020).

Further complicating the situation, CHWs in FCAS face even more acute challenges compared to other settings. It is well-documented that CHWs generally struggle with low recognition, insufficient remuneration, inadequate training, and lack of supportive supervision (Jerome & Ivers, 2010; O'Donovan et al., 2020). However, in FCAS, these issues are exacerbated by insecurity, population displacement, and the destruction of infrastructure or theft of essential commodities. In such contexts, the shortage of health workers is even more pronounced, further straining the health systems that CHWs are attempting to support (Bridge & Lin, 2024; Miller et al., 2020a; Werner et al., 2022).

A critical gap in the current literature is the absence of focused studies that address how to support CHWs, specifically in FCAS. Closing this gap is essential for optimising CHW programmes to enhance health equity and resilience in some of the world's most vulnerable communities. Central to this investigation is the analysis of key elements for the effective functioning of CHW programmes, including training, supervision, remuneration, and community engagement (Jerome & Ivers, 2010; O'Donovan et al., 2020).

In conclusion, this study aims to fill a critical gap in the global health literature by investigating effective support strategies for CHWs in FCAS, specifically focusing on the Buea Health District. By examining both the operational challenges and the perspectives of CHWs, this research will contribute to developing context-sensitive approaches that enhance CHW resilience and effectiveness. To set the stage for this analysis, the next section will delve into the background of CHWs, exploring their evolving roles and duties, the historical context that has shaped CHW programmes, and the ongoing debates surrounding their effectiveness. This section will also present the unique challenges CHWs face globally, focusing on the additional difficulties they encounter in FCAS. By providing this foundational understanding, the background will offer a comprehensive overview of the critical issues that underpin the functioning and success of CHW programmes in these challenging environments.

1.2 Background

This section provides a general overview of CHWs, detailing their roles, the rationale for their integration into health systems, and the range of challenges they encounter. It further discusses the ongoing debates surrounding CHW programmes, emphasising their function and adaptation in both conflict-affected and urban environments. Additionally, the section discusses the dynamics of CHW operations within urban areas of FCAS, highlighting the unique challenges and opportunities presented in these contexts. This background is not confined to any specific geographical or political context but aims to provide a foundational understanding applicable to CHWs' roles worldwide.

1.2.1 Definition and Historical Context Community Health Workers?

One of the earliest definitions of CHWs, which is still relevant today, is that they are ‘community members who work almost exclusively in community settings and serve as connectors between health care consumers and providers to promote health among groups that traditionally lack access to adequate care’ (Witmer et al., 1995, p. 1055). As trusted members of their communities, they serve as a link between health services and the community to facilitate access to care through various activities, such as outreach and health education (Lehmann & Sanders, 2007a). Typically, CHWs are paraprofessionals - individuals trained to assist professionals but not licensed to practice as fully qualified health workers - or lay individuals with community-specific training (Olaniran et al., 2017).

The inception of the Barefoot Doctors during the Cultural Revolution in China (circa 1966-1976) was a pivotal moment in the history of rural healthcare delivery, preventive measures, and basic medical care (Lee & Kim, 2018; Xu, 2012). This initiative was part of a broader movement to address the severe shortage of medical professionals and healthcare services in rural areas, exacerbated by the socio-political upheavals in China at the time. The barefoot doctor programme was introduced to solve the problem of limited access to health services in rural China, aligning with Mao Zedong's vision of accessible healthcare for all, regardless of their geographical location or socio-economic status (Lee & Kim, 2018). The barefoot doctors' responsibilities included treating common illnesses, providing preventive care, and health education to China's rural population (Lee & Kim, 2018). The barefoot doctor programme significantly impacted community health and the primary healthcare system in China. It

improved access to healthcare services in rural areas, improving public health indicators such as infant mortality rates (Lee & Kim, 2018).

The Alma-Ata Declaration, adopted in 1978 by the World Health Assembly of the World Health Organization, played a foundational role in the international recognition of the utilisation of CHWs and significantly influenced global health policies towards a more inclusive, equitable, and community-focused approach to healthcare (Christopher et al., 2011; Perry, 2018). The declaration emphasised the importance of primary healthcare (PHC) as the cornerstone for achieving "Health for All," advocating for comprehensive healthcare services that are universally accessible and socially acceptable (WHO, 1978a).

The Declaration of Alma Ata aimed to achieve 'Health for All' by utilising as many human resources as possible, including CHWs, who play an indirect role in achieving the objectives of the declaration (WHO, 1978a). Although goals of achieving "Health for All" was ambitious, it was later criticised as being too expensive, particularly by Warren and Walsh at the Bellagio conference a year later (Werner et al., 1997). However, the concept of utilising CHWs was not entirely new at the time of Alma Ata, as several countries had already begun integrating CHWs into their health systems before 1978.

For example, before the Alma-Ata Declaration, programmes such as the Bangladesh Rural Advancement Committee (BRAC) and Comprehensive Rural Health Project (CRHP), which were founded before the Alma-Ata Declaration, 1972 and 1970, respectively, already embodied the principles of the declaration (Baser et al., 2022; H. B. Perry & Rohde, 2019). While they were not influenced by the Alma-Ata Declaration, given their earlier start dates, their alignment helped reinforce the principles of the declaration and have become integral to global health initiatives decades after the declaration.

However, following the Alma-Ata Declaration, various countries adapted their PHC systems to local needs and challenges, demonstrating the flexibility and effectiveness of community-based healthcare delivery. For example, in 2004, the government of Ethiopia launched the Health Extension Programme to expand and strengthen its PHC system and achieve significant health coverage (Sebastian & Lemma, 2010). The aim was to use CHWs—Health Extension Workers—to improve health access and equity through preventive health actions and increased health awareness (Sebastian & Lemma, 2010).

Some of the key attributes that distinguish CHWs from other healthcare workers include their community membership, scope of work, and roles. CHWs are typically members of their community, sharing culture, language, and life experiences, which fosters trust and communication (Glenton et al., 2021; LeBan et al., 2021). This trust-based relationship enables them to effectively bridge the gap between health systems and communities, facilitating better communication and understanding. Additionally, trust facilitates community engagement and participation in health initiatives, enhances the effectiveness of health education, and supports the identification and addressing of health issues within the community (Glenton et al., 2021).

Health workers (doctors, nurses, and midwives, among others) may not have the same level of intimate community engagement or trust, partly due to differences in background, training, and the nature of their work (Glenton et al., 2021). CHWs differ from healthcare workers in their background, training, scope of work, work environment, relationship with the community, and their overall role within the healthcare system (Glenton et al., 2021). These differences enable CHWs to complement the work of healthcare workers by addressing barriers to care and promoting health at the community level.

In sub-Saharan Africa, CHWs are increasingly being trained and paid – though sometimes they remain volunteers - to provide advice, treatment, and preventive measures (Singh & Sachs, 2013). Even though CHWs receive different types of training and perform different roles based on their contexts, they have a common purpose: to expand primary health service delivery in a cost-effective, close-to-community and equitable approach for vulnerable populations (GHWA, 2011a; Sato et al., 2014). However, it is important to recognise that the specific remit and use of CHWs varies significantly across different regions and health systems.

1.2.2 Roles and Duties of Community Health Workers

There is extensive documentation on the potential advantages of the role of CHWs. Lewin et al. (2005) and Lehmann & Sanders (2007b) suggest that CHWs can improve health access, essential health services and health equity in underserved and remote communities. CHWs render health services to their community by carrying out community health outreach activities (health promotion, health education and disease prevention), treating common diseases, and collecting health data – though not necessarily true everywhere (Olaniran et al., 2019a; Richter

et al., 1974; Walt et al., 1990; Witmer, Seifer, Finocchio, Leslie, & O'neil, 1995). In contrast, healthcare workers typically provide direct clinical care, diagnose and treat illnesses, and perform medical procedures within healthcare facilities (Glenton et al., 2021).

In addition to addressing the community's health needs, CHWs also play an essential role in social development. CHW programmes help empower the community and contribute to its growth by providing employment opportunities for its members, particularly women. This role leads to economic growth and contributes to broader development goals (WHO, 2018b; Witmer et al., 1995). CHWs are essential in advancing universal health coverage by addressing the shortfall in healthcare personnel, particularly in rural regions, thereby directly supporting the achievement of Sustainable Development Goals (SDGs), such as SDG 3 (Good Health and Well-being) and SDG 1 (No Poverty); emphasising health equity and economic stability, respectively (Lehman et al., 2024). CHW programmes have the potential to provide a viable, cost-effective, and sustainable solution to strengthen health systems, especially in low-resource settings, and meet the growing demand for improved health outcomes (Mupara et al., 2023).

Other instances of the beneficial implementation of CHW programmes that have significantly impacted community health outcomes include CHW programmes in Mali and South Africa, among others. Proactive home visits by CHWs in Mali significantly improved access to antenatal care compared to passive health centre-based care (Kayentao et al., 2023). In South Africa, CHWs were effective in improving maternal and child health outcomes through community-based interventions (Le Roux et al., 2020). Other countries which have been making strong gains in population health outcomes using well-established CHW programmes include Brazil, Nepal, Liberia, and Rwanda (Giugliani et al., 2011; Miller et al., 2018b; Perry et al., 2021a).

1.2.3 Debates on the effectiveness of Community Health Workers

Irrespective of the growing body of evidence supporting the effectiveness of CHWs in improving health access in LMICs, CHW programmes have been subject to criticism over the years (Rifkin, 2016a; Zulu & Perry, 2021). First of all, there are certain recognised factors and programming elements that might hinder the effectiveness of CHW programmes, including the ambiguity of roles, the non-standardisation of training, weak supervision, monitoring and

evaluation from the formal health system, exploitation of CHWs considering unfair incentives, and weak integration with the formal health system and lack of recognition as legitimate health care providers (Folz & Ali, 2018; Rifkin, 2016b; Wintrup, 2023). I review the evidence on these in the section below.

Beyond programming elements, the effectiveness of CHW programmes has been debated, with (Vaughan et al., 2015) discussing their mixed success. Winangnon et al. (2007) and Vaughan et al. (2015) recognise the potential of CHWs in managing chronic diseases – and for tuberculosis, but the evidence is weaker for other areas - and expanding access to healthcare services but also underscore the necessity for effective training and supervision to realise this potential. Nonetheless, challenges persist, particularly concerning the quality of care CHWs provide, attributed mainly to their limited formal medical training. Pinto et al. (2020) highlight the sustainability issues of CHW programmes, which often rely on external funding, and point out the risk of burnout among CHWs due to overwhelming workloads and emotional strain.

In the initial phases of health programme developments across various countries, such as Ethiopia's Health Extension Programme and Liberia's post-war health sector rebuilding, the introduction and expansion of CHW programmes were met with scepticism and opposition from multiple fronts. Stakeholders, including health professionals, partners, funders, and communities, expressed reservations about primary healthcare-focused strategies that emphasised community-based service delivery over conventional clinical care (Alemayehu et al., 2023; Ruducha et al., 2017). Particularly, the expectation in communities for Health Extension Workers in Ethiopia to conduct clinical procedures and dispense medications such as antibiotics raised concerns with clinical professionals and other stakeholders about the Health Extension Workers' capacity to provide high-quality services (Alemayehu et al., 2023; Wang et al., 2016). Such scepticism was rooted in a historical preference for clinical care, casting doubts on the ambitious goals of CHW programmes.

Similarly, in post-conflict Liberia, despite policy support for a broad spectrum of services by community health cadres, the efforts to formalise and scale up CHW programmes frequently encountered resistance (Kentoffio et al., 2016). This resistance was not only from clinical cadres worried about the dilution of their responsibilities but also from governmental actors who, despite existing policies, blocked CHW programme implementations, as they did not agree with these policies. Critics within the health sector in Liberia voiced concerns over the

quality of care provided by CHWs and the sustainability of integrating paid, government-supported CHWs into the health system (Healey et al., 2021). Doubts were also raised about CHWs' management of medications, fearing that they might levy charges for services or engage in unauthorised sales of provided medications. Opposition groups to CHW programmes advocated instead for investment in formal healthcare infrastructure and workforce, questioning the effectiveness and sustainability of task-shifting to community-based health workers (Healey et al., 2021; Kentoffio et al., 2016). According to Balcazar et al. (2011) and Johnson and Gunn (2015), addressing these challenges requires proper training and a more integrated approach to embedding CHWs within the health system as a formal or professional cadre of human resources for health.

Cumulatively, these impediments may compromise the quality of care and services CHWs deliver. While criticisms of CHW programmes revolve around the lack of commitment and dedication from national governments and the formal health system, they can serve as guides for strengthening current CHW programmes and designing future ones (Zulu & Perry, 2021).

1.2.4 General CHW Programming Challenges

This section outlines the general challenges of CHW programming around the world, including programme design features such as financial incentives, CHW roles, recruitment, training, and supervision that could impact CHWs' performance.

1.2.4.1 Financial Incentives

The incentives received by CHWs were reported to be inconsistent and inadequate in many studies (Lee et al., 2009a; Lutwama et al., 2021a; Maes & Kalofonos, 2013a; Raven et al., 2020b; Sambakunsi et al., 2015). Sometimes, the inadequate incentives created tensions between the CHWs' daily income-generating activities and their CHWs' tasks, as they felt the money was not enough to support themselves and their families relative to the work they did (Raven et al., 2020b; Sambakunsi et al., 2015). Moreover, while some CHW programmes attempted to present fair compensation to the CHWs, they faced competing interests in the broader healthcare budget (Lee et al., 2009a). Additionally, in some cases, such as in the conflict-affected South Sudan, where CHW programmes were fragmented and supported by

multiple organisations, the incentives for CHWs were not harmonised across the CHW programmes, creating tensions (Lutwama et al., 2021a).

1.2.4.2 CHW Roles - duties

Generally, CHWs assume a broad array of roles that are highly dependent on the specific contexts in which they operate, reflecting the diverse needs and resources of the communities they serve. Despite their crucial contributions, CHWs often face significant challenges that can impact their effectiveness and well-being. For example, in Urban Malawi, CHWs reported that heavy work burdens and unreasonable expectations of them from their supervisors led to conflicting moral codes and the fabrication of data (Sambakunsi et al., 2015). Furthermore, CHWs in Ethiopia and Mozambique felt they carried the burden of work while CHW programme officers (salaried government workers, NGOs, and donor countries and foundations) enjoyed the elite status and material benefits from their work, and their aspirations for socioeconomic advancement went unfulfilled (Maes & Kalofonos, 2013).

Additionally, CHWs faced challenges with complex interventions, struggling with certain tasks because of inadequately designed tools - which can include data collection forms, health monitoring devices, and educational materials — and the absence of suitable work guidelines (Ruckstuhl et al., 2017b; Sami et al., 2017). Ntopi et al. (2020) report that adding clinical tasks to CHWs' existing tasks is related to role overload and affects their traditional roles – previous tasks they had - to the extent that they forget some of the traditional roles. Their traditional roles include identifying pregnant women within the community, providing health education and raising awareness on various health issues, and engaging in community mobilisation and patient tracking (Olaniran et al., 2019b).

Also, the lack of enough CHWs hindered them from conducting home visits, especially during vaccinations and disease surveillance (Sami et al., 2017). The shortage of CHWs means that the existing workers must cover larger areas or more households than they can manage, leading to delayed or missed visits, which can be critical during outbreaks or when regular vaccinations are scheduled. This shortage undermines the ability of health systems to monitor and maintain public health, especially in under-resourced or densely populated urban settings.

1.2.4.3 Recruitment

Early critiques by Ramprasad (1988) and (Skeet, 1984)) highlighted foundational issues such as the lack of standardised selection criteria for CHWs, which could lead to a mismatch between the skills of CHWs and the needs of the communities they serve. This lack of standardisation often results in variability in programme effectiveness and challenges in measuring the impact of CHWs across different settings (Perry et al., 2014).

Lee et al. (2009a) report that in eastern Burma (present-day Myanmar), the rapid enlistment of CHWs to take on increasingly complex tasks surpassed the capacity to train, supervise, and evaluate their performance. Furthermore, the recruitment, training, and supervision process of CHWs was considered time-consuming (Lee et al., 2009a). Additionally, the low literacy rate of the community members is reported to be a significant challenge in recruiting CHWs and also created problems in training, drug administration and reporting (Lutwama et al., 2021a; Raven et al., 2020b). Raven et al. (2020d) cite that conflict in Sierra Leone, Liberia and the Democratic Republic of Congo negatively influenced some community members' literacy and numeracy skills. The disruption caused by conflict affected the education of community members, leading to situations where individuals did not possess the literacy levels required for CHW roles (Raven et al., 2020d). As a result, the selection, training, and performance of CHWs in these contexts are directly impacted and challenging.

1.2.4.4 Training

Moreover, the training of CHWs has often been cited as inadequate, focusing more on theoretical knowledge than practical skills and failing to adequately prepare them for the realities of their roles within communities (Abdel-All et al., 2017; Schleiff et al., 2021). Such training deficiencies can lead to inefficiencies in healthcare delivery. They can diminish the trust and rapport between CHWs and community members, which are crucial for the success of any community-based health programme (Kasanda Ndambo et al., 2022).

Additionally, in the conflict-affected South Sudan, training (and refresher) sessions for CHWs were not standardised nationwide due to the lack of funds and governmental leadership (Lutwama et al., 2021a). Standardised training material and modules were occasional and had different durations (Lutwama et al., 2021a). However, the challenges faced by CHWs in conflict-affected South Sudan are not unique to this context. Similar issues are encountered across LMICs, where resource limitations and systemic health infrastructure weaknesses compound the difficulties of implementing effective CHW programmes (Ahmed et al., 2022a;

Redick et al., 2014). For example, in Kenya and Mozambique, while CHWs often lacked the training to address serious problems themselves, some resorted to delivering curative services when timely access to health centres was not possible (Give et al., 2015; Ochieng et al., 2014).

1.2.4.5 Supervision

CHW supervision encompasses a range of activities designed to support CHWs, including regular support and guidance, monitoring and evaluation of their work, and continuous training and capacity building. Supervisors ensure CHWs have the necessary tools and resources to facilitate problem-solving and feedback mechanisms. These supervisory activities help maintain the standards of care provided by CHWs, improve their skills, and ensure their integration within the broader health system.

CHW programme managers in Sierra Leone, Liberia, and the Democratic Republic of Congo cited that their workload and the long distance and large catchment areas to be covered by the supervisors were critical reasons for their supervisory structures not working effectively, restricting supervisors from maintaining regular supervisory visits (Raven et al., 2020b; Ruckstuhl et al., 2017a). In urban contexts, the compact nature of cities could reduce travel times between supervisory visits. However, programme managers have identified several barriers that hinder effective supervision in these environments. For example, the high density and complexity of urban areas can lead to difficulties in navigating and accessing different parts of the city, significantly when public transportation systems are disrupted in FCAS (Abujaber et al., 2022; Lutwama et al., 2021b; Miller et al., 2020b). Secondly, urban areas in FCAS often present a heightened risk of violence and insecurity, which can impede supervisors' ability to conduct regular visits and can also affect the safety of CHWs during their work (Abujaber et al., 2022; Lutwama et al., 2021b; Miller et al., 2020b). Some of the other cited impediments to adequate supervision include the lack of travel expenses and means of transport, inappropriate supervisory tools, inadequate understanding of CHW roles by supervisors, and insecurity in the area (Lutwama et al., 2021a; Ntopi et al., 2020; Raven et al., 2020b).

1.2.4.6 CHWs' Physical Environment

The environment of CHWs relates to contextual elements, such as community (most prominently), economy, physical environment, and health system policy and practice. These elements represent characteristics of settings in which CHW programmes operate and

sometimes serve as preconditions for the performance of CHWs or CHW programmes (Kok et al., 2015a).

CHWs face many challenges rooted in the local context and community dynamics that significantly impact their ability to deliver healthcare services effectively. These challenges range from mistrust and accusations from community members to logistical and security issues in less stable settings (LeBan et al., 2021; Perry et al., 2021a). For instance, in carrying out their duties, CHWs were not always welcomed into patients' homes. They were accused of causing diseases in the community for personal gain and hoarding material benefits meant for the sick (Maes & Kalofonos, 2013). Also, the pressure from community members on CHWs influenced the potential over-treatment of patients who tested negative for a disease of interest like malaria. This occurs when patients who test negative for malaria are still treated due to community expectations or demands for medical interventions, irrespective of clinical findings (Lee et al., 2009a). Also, CHWs were reluctant to adopt new practices due to fear of stigmatisation from the community (Sami et al., 2017). In some communities, CHWs faced apprehension from community members and found it challenging to locate or contact target individuals, like mothers, during home visits (Sami et al., 2017). On the other hand, CHWs in less stable settings, like in eastern Burma, lacked work, as about 60% of the population is displaced (Lee et al., 2009a). This displacement disrupts community structures and health service delivery, further challenging the role and effectiveness of CHWs in these areas.

1.2.4.7 CHW Integration in the Health System

In this context, *integration* refers to the formal inclusion of CHWs into the broader health system, with clearly defined roles, responsibilities, and support structures that enable them to function effectively alongside clinical health workers and other healthcare programmes.

Poor CHWs integration into primary care programmes further compounds these issues. Without clear roles, responsibilities, and recognition within the broader health system, CHWs can feel undervalued, and their potential to contribute effectively to health outcomes is not fully realised (Bhutta et al., 2010). Maes (2015) and Govender and Ngcwabe (2014) emphasise the importance of understanding CHWs' complex motives and experiences and the need to formalise their roles while providing better support.

Moreover, some CHWs reported that the relationship between them and their health centres was strained, and they reported feeling ignored and neglected when supplying medical commodities and selecting them for paid community health interventions (Raven et al., 2020b). Some health centres also provided minimal supervision to the CHWs as this has been perceived as additional work with no incentive, and some clinical health workers were reluctant to delegate additional responsibilities to CHWs (Lee et al., 2009a; Lutwama et al., 2021a). Furthermore, (Raven et al., 2020b) report that challenges in the drug supply chain led to delays in distributing commodities to the CHWs, resulting in their role to refer community members to the health centre merely.

Some health centres do not have adequate storage for medical supplies and reports of drug misuse, leading to stockouts (Lutwama et al., 2021a). Also, some countries do not have adequate standardised regulatory and performance management frameworks for CHW programmes, leading to inadequate coordination of CHW programmes (Lutwama et al., 2021a; Raven et al., 2020b). Moreover, according to the literature, there is a lack of commitment from national governments and donors regarding the pay of CHWs' salaries and the general sustainability of CHWs, leading to the scaling down of activities and abrupt interruptions due to funding gaps (Maes & Kalofonos, 2013; Soe et al., 2017).

1.2.4.8 CHWs' Individual Features

These are the socio-demographic characteristics of the CHWs, including individual features (or personal factors) of the CHWs, such as their age, gender, social status, role in the community, and relationship with the community. For example, despite national policies in Sierra Leone and Liberia preferring female CHWs, there were more male CHWs in some communities due to the limited presence of women in community affairs, along with a culture of favouring men for paid work (Raven et al., 2020b). Additionally, female CHWs were more likely to be absent from training due to their gendered responsibilities within the family setting (Raven et al., 2020b). Contrarily, despite seeking equal gender representation in some communities in urban Malawi, targeting men was challenging, as most of them finished their primary income-generating activities late in the day, making them often unavailable to act as CHWs when needed (Sambakunsi et al., 2015).

1.2.5 Community health workers in urban settings

This study explicitly acknowledges the role of urban settings in shaping the operational context and effectiveness of CHW programmes using the example of the Buea Health District. The urban setting is approached not as an isolated factor but as a critical layer that adds complexity to this setting. For instance, while exploring the challenges and support mechanisms for CHWs, attention is given to how these elements manifest or are altered in the urban context. This includes examining the unique urban challenges in urban healthcare systems.

The role of CHWs in LMICs has historically been geared towards addressing health service gaps in rural areas. This focus is well-documented, as evidenced by the extensive literature on rural CHW programmes (Scott et al., 2018c). With more than half the world's population now residing in urban settings, this rural-centric model faces challenges due to shifting demographics, health professional shortages, and unique urban landscapes in LMICs (Andrulis, 2000; Galea & Vlahov, 2004; Lozano et al., 2018; Vlahov et al., 2007). Rapid urbanisation, a defining feature of the modern world, intersects with and amplifies other global megatrends, including armed conflict, climate change, food shortages, underemployment, and weak governance (Crisp et al., 2012).

Urban areas in LMICs are characterised by distinct features such as high population densities, unplanned development, and a demand for services that often far exceeds supply, particularly in slums and informal settlements (Galea & Vlahov, 2005; Vlahov et al., 2007b). Slums, in particular, are marked by overcrowding, inadequate infrastructure, and limited access to essential services, which pose additional health challenges (de Siqueira Filha et al., 2022; Elsey et al., 2019). These characteristics create complex health challenges that differ significantly from rural contexts. For instance, the high population density in urban areas can lead to increased transmission rates of communicable diseases, while unplanned development can exacerbate issues related to sanitation and access to health centres (Ghanekar, 2022).

As urban areas grow, ensuring equitable access to health services is increasingly crucial, aligning with the Sustainable Development Goals (SDGs) that emphasise health equity and access. This study is particularly relevant to SDG 3: Good Health and Well-being, which aims to ensure healthy lives for all, and SDG 10: Reduced Inequalities, which focuses on reducing disparities within and among countries (UN, 2018). Additionally, SDG 11: Sustainable Cities

and Communities highlights the need for inclusive and resilient urban environments (UN, 2018). Urban growth presents unique challenges and opportunities to improve health outcomes for marginalised populations. Addressing these challenges requires scaling up health services and tailoring them to meet the diverse needs of urban residents, making CHW programmes integral to bridging service delivery gaps and promoting health equity in these settings.

CHWs are able to play a crucial role also in urban LMIC settings, where they have been effective in addressing a range of health issues, including conducting community outreach for TB/HIV, child health, maternal health, and non-communicable diseases (Wahl et al., 2019). In urban areas, their role tends to be more nuanced compared to rural settings. Accessibility to health centres is generally better in urban areas, so CHWs often focus more on enhancing communication, raising awareness, and providing education about health services. For instance, a study in Nairobi, Kenya, demonstrated that the Kenyan Community Health Strategy significantly increased exclusive breastfeeding rates in urban poor settings, with the prevalence of exclusive breastfeeding at 6 months rising from 2% to 55% in the intervention group (Kimani-Murage et al., 2016). Similarly, in Sierra Leone, CHWs strengthened the uptake of childhood immunisation and malaria prevention services (Ishizumi et al., 2021a).

1.2.6 Community Health Workers in Fragile and Conflict-Affected Settings

This study focuses on CHWs and CHW programmes in an urban FCAS – Buea Health District in Cameroon. This section describes FCAS and the issues CHWs and CHW programmes face, specifically in FCAS. The following section focuses on urban settings.

The conflict in Cameroon, particularly the Anglophone crisis, refers to the ongoing violent conflict between the government and separatist groups in the English-speaking regions of the North-West and South-West, where the Buea Health District is located. This crisis, which began in 2016, stems from long-standing grievances over political marginalisation, governance disparities, and the use of the French language in courts and schools in the Anglophone regions. The conflict has led to widespread violence, displacement, and the collapse of basic services, including healthcare. This study focuses on understanding how CHWs operate within this fragile and conflict-affected context, where insecurity, limited resources, and disrupted health services pose significant challenges to healthcare delivery. The fragile context of Cameroon is discussed in detail in section 3.2.

Before describing the specific role of CHWs in such contexts, it is worth noting that there is no agreed-upon definition of what constitutes a "fragile" setting (OECD, 2006a). One difficulty with defining fragile settings is that the rationale for classifying a context as fragile is frequently disputed and perceived as overly general in unique situations. Hence, there is no commonly accepted definition for both humanitarian and development stakeholders and relevant governments (Stewart & Brown, 2010).

Various definitions of “fragile states” reveal overlap and areas where they differ. However, Stewart and Brown (2010; p. 9) propose a comprehensive definition of fragile states as ‘states that are failing or at risk of failing, concerning authority, comprehensive basic service provision, or legitimacy’. Furthermore, the OECD (2006b) has worked on a framework to identify and list fragile settings, and a list is also available from the World Bank (World Bank, 2020). With specific reference to the health sector, Diaconu et al. (2020) consider fragility as a concept describing challenging circumstances in promoting or maintaining population health. The study acknowledges that not all fragile states are conflict-affected; however, conflict is a common feature among fragile states and serves both as an indicator and a

consequence of fragility (Simon et al., 2009). So, for this study, I will be using the definition of Stewart and Brown for fragile states.

The OECD States of Fragility framework (OECD, 2018) highlights that fragility includes multiple dimensions, including political, economic, social, and environmental challenges. These chronic stressors, alongside prominent references to conflict and violence, contribute to the cyclical nature of fragility, where such conditions can both lead to and result from fragility (Diaconu et al., 2020).

Moreover, in the context of global health, Diaconu et al. (2020) emphasise the emerging use of fragility to describe the breakdowns in trust between health systems and communities. This aspect of fragility critically affects health-seeking behaviours. From the perspective of the population, trust in the health system can be compromised by inequitable and inefficient care delivery or the system's inability to address the complex health needs of vulnerable populations (Diaconu et al., 2020). Conversely, health workers might also contribute to this breakdown in trust if service delivery goals and practices do not align with local cultural norms (Diaconu et al., 2020).

In the context of health systems, FCAS are particularly challenging because conflict and fragility can cause damage to healthcare infrastructure, leading to limited access to essential health services, the migration of healthcare workers, and an overall decline in health indicators (Odhiambo et al., 2020; Pattanshetty et al., 2023; Truppa et al., 2024). Poor quality of those services, increased health needs for communities, the spread of diseases, and violence such as sexual violence against women are often features of FCAS (Nlandu et al., 2016). Furthermore, conflict-affected settings impact the health system in unique ways, such as targeted attacks on health systems and health workers and impeding curative and preventive services due to prevailing insecurity (Howard & Sondorp, 2012).

Community-based health workforce, such as CHWs, has been shown to be critical in all phases of complex emergencies and post-emergency, including prevention, preparedness, response, and recovery. These initiatives provide local knowledge of the context and ensure that the actual needs of the community, including health needs, are met (GHWA, 2011). The importance of such community-based interventions is strongly highlighted by the increasing

number and frequency of complex emergencies – conflicts, natural disasters, pandemics, or epidemics, which put the health of the community at risk (GHWA, 2011).

It is well documented that CHWs are critical in delivering essential health services in fragile and conflict-affected settings (Miller et al. 2020a; Werner et al. 2022). In some of these FCAS, CHWs extend from delivering essential primary health services to performing community-based assessment and surveillance, first aid and psychosocial support in communities lacking health workers and are inaccessible to humanitarian workers (Naughton et al., 2017a).

During stable conditions, CHWs perform their usual roles; however, during an emergency and in its acute phase, they might be able to prioritise primary health care services, community-based surveillance and needs assessment, and provide first aid, essential life support and psychosocial services, when health workers or humanitarian workers do not have access to the communities (Naughton et al., 2017). Also, CHWs are strategically placed to meet the health needs of the community during the post-conflict phase or in protracted crises where there are shortages of professional health workers. For instance, in the Democratic Republic of Congo (DRC), where the state is fragile and the health system is fragmented, under-resourced and characterised by poor health indicators, the health system relies on CHWs to deliver essential primary health care services due to the severe lack of professional health workers (Advancing Partners & Communities, 2013; Millington, 2018b; Steege et al., 2018).

However, they face unique challenges, including security threats, psychological trauma, and the need for flexible funding (Miller et al. 2020a). Despite these challenges, CHWs have effectively improved access to care, disease detection, and adherence to care (K. Werner et al., 2022). For example, using mobile phones for reporting and data collection and providing buffer stocks to CHWs have been identified as important strategies (Miller et al., 2020). However, rigorous assessments of CHW interventions in these settings are needed (Miller 2020).

While the challenges CHWs face are similar to those faced by their counterparts in stable settings, they are exacerbated by the fragile context in which they find themselves (Raven et al., 2020). Concurrent with CHW programme management challenges, the security of the CHWs is also a concern as they are targeted for abduction, kidnapping, and killing by armed groups (Martinez, 2020; MSF, 2020). Similarly, during the northern Uganda conflict, health workers, including CHWs, faced insecurity, inadequate working conditions, disengagement

from social systems and psychological and emotional trauma from working under such conditions (Namakula & Witter, 2014).

1.2.7 CHWs/CHWs programmes in urban FCAS

The study site for the present work is an urban area affected by conflict and insecurity in Cameroon. This section explores the issues created by the intersection of conflict and insecurity in urban settings in general.

Additionally, the modern displacement patterns illustrate that more than half of forcibly displaced people globally are in or around the urban settings of developing countries (IDMC, 2011). A 2022 report (IDMC, 2022) recorded a total of 53.2 million internally displaced persons due to conflict and violence in 59 countries and territories as of 31 December 2021, with more than 80% of the conflict and violence taking place in sub-Saharan Africa. Moreover, current conflicts tend to be protracted and occur in urban settings, potentially exacerbating their health consequences (Beall et al., 2011)

The design features of CHW programmes, such as CHWs' roles, training, and supervision, take on an added layer of complexity in urban FCAS, as urban FCAS are characterised by the challenges typical of urban areas and those arising from conflict and fragility, such as disrupted health systems, increased violence, and heightened vulnerability of populations. Taking these into consideration, CHWs, in addition to their routine or task-based training, might need training in personal safety and security protocol for their safety and continuous delivery of essential health services in such complex settings. This necessitates a tailored approach to CHW programmes in these contexts.

While extensive research on CHWs examines their roles, performance, and training, most studies do not actively consider the specific settings these programmes are in, especially urban settings. This means that many studies do not specify the urban setting. In line with my previous research, which reviewed the literature on incentives for CHWs in FCAS, in a review of the literature on CHW programmes in both urban and conflict-affected settings, I also found that the findings did not highlight anything unique about the identified urban areas affected by conflict, even though these areas have their own set of challenges. Overall, there is insufficient detail provided on the context and specific characteristics of CHWs in the available studies. Such poor contextualisation limits the ability to understand how various contextual factors influence CHW programme outcomes, hindering the depth of analysis and comparison across

different settings. As such, key questions regarding CHWs and CHW programmes in urban FCAS remain unanswered. Relevant questions include:

- What are the most effective incentive structures for CHWs in urban FCAS?
- How do role clarity and workload management affect CHW performance and job satisfaction in urban FCAS?
- What community engagement and trust-building strategies are most effective for CHW programmes in diverse urban settings?
- How do the economic and political contexts of urban FCAS influence the performance and sustainability of CHW programmes?
- How do innovative supervisory models impact CHW performance and programme outcomes in urban FCAS?
- How do the personal characteristics of CHWs, such as age, marital status, and social status, influence their effectiveness in urban FCAS?
- What are the long-term impacts of different CHW programme designs and incentive structures on CHW performance in urban FCAS?
- How can policies be adapted to support CHW programmes effectively in the specific contexts of urban FCAS?

This gap in the research highlighted above points to the need for further work to understand how the specific challenges of urban contexts, especially those with conflicts, affect CHWs and CHW programmes. This study aims to address this gap. While it focuses primarily on the conflict and insecurity aspects, it still considers how the urban area location plays a role in influencing the observed dynamics for CHWs and CHW programmes. By doing this, the study explores how conflict, and to a lesser extent, urban settings, impact CHWs/programmes and how they can be supported to deliver essential health services to the affected communities continuously and efficiently.

In exploring strategies to support CHWs and CHW programmes, it is essential to consider how programme design and implementation factors, contextual elements and CHWs' individual characteristics intersect and influence the living and working experiences of CHWs. Furthermore, the insights from this section informed the development of the discussion guides for interviews and focus group discussions with programme managers, community representatives, and CHWs. The insights also guided the interpretation of the data from these

later exercises to recommend context-appropriate strategies to support CHWs and strengthen CHW programmes in urban fragile settings.

CHAPTER 2: Study rationale, questions, and Conceptual Framework

This chapter presents the rationale behind the study, outlining the primary research questions and the conceptual framework that guides it.

2.1 Rationale

The central problem this study seeks to address is the absence of evidence-based support strategies specifically designed for CHWs in FCAS. Despite the critical role that CHWs play in delivering healthcare in these vulnerable contexts, there is a lack of tailored mechanisms that account for the unique individual and contextual challenges they face. This gap is particularly evident in the Buea Health District, where no prior research has explored the specific needs and experiences of CHWs operating in conflict-affected environments. This research aims to contribute to the knowledge of this area by providing a nuanced understanding of the unique challenges CHWs face in the Buea Health District. It seeks to provide policymakers and health programme designers in Cameroon with the necessary insights to create robust, context-sensitive strategies that can strengthen CHW programmes, ultimately contributing to health system resilience and better health outcomes in FCAS.

The premise for this study builds on the findings and recommendations of previous studies, which call for strengthening CHW programming, especially with their design and implementation, to maximise the effectiveness of CHWs in achieving universal health coverage (Perry et al., 2021b). Furthermore, developing targeted support strategies is essential, particularly for CHWs working in FCAS. These strategies should address the specific needs and challenges CHWs face at an individual level, ensuring they are well-equipped and supported in fulfilling their roles in the complex settings in which they operate (Miller et al., 2020b; Raven et al., 2020d).

Given the complexity and variability of FCAS, understanding how CHWs in the Buea Health District respond to and cope with the inherent shocks, uncertainty, and fragility is crucial. This study seeks to capture these dynamics through appropriate methods (key informant interviews, focus group discussions, participator exercises, and life history interviews – discussed in Chapter 4), enabling a deeper exploration of CHWs' lived experiences and viewpoints.

As with other health workers, CHWs need support to ensure their optimal performance and influential contribution to health system strengthening and universal health coverage (Alam et al., 2012; Dil et al., 2012; Scott et al., 2018a; Walker et al., 2013; WHO, 2018c). However, despite the critical role CHWs have in FCAS, the evidence on the best form of support for this cadre of health workers is weak (Raven et al., 2020d). This study seeks to fill this gap by identifying how CHW programmes and support strategies for CHWs in FCAS can be strengthened. The emphasis is not on measuring outcomes such as motivation, performance, and retention of CHWs, which are often the focus of much of the existing research. Instead, the study aims to identify support strategies tailored to the unique challenges CHWs face in FCAS. This approach recognises that the conventional support strategies applied in more stable settings may not be directly applicable or effective in the complex and unpredictable environments of FCAS.

Therefore, the rationale for this study centres on the need to develop a nuanced understanding of CHW experiences in FCAS – the Buea Health District in this case. This understanding will guide CHW programme designers and health policymakers in Cameroon in developing effective support strategies that resonate with the real needs and preferences of CHWs. By developing support strategies that are contextually appropriate and responsive to the needs of CHWs in the Buea Health District, the study contributes to the broader goal of health system strengthening in FCAS. Ultimately, enhancing CHW support in the Buea Health District can improve health outcomes, increase access to care for vulnerable populations, and contribute to stabilising and rebuilding the health system amidst ongoing conflict.

2.2 Research Questions

This study seeks to answer the primary question: How can the CHW programme in the Buea Health District be optimised to support CHWs and enhance its performance and resilience in fragile and conflict-affected situations?

To answer the primary research question, the study seeks to answer the following secondary and specific research questions:

1. How does the CHW programme in Buea Health District operate during the conflict?

Firstly, this study investigates how the CHW programme in the conflict-affected Buea Health District adapts to challenges by analysing its strategies for recruitment, training, supervision, and incentivising CHWs during the conflict. The research aims to identify the specific challenges and assess the programme's flexibility, providing insights for optimising CHW operations and ensuring sustainable health service delivery during conflict.

2. What is the lived experience of CHWs in Buea Health District during the conflict?

Secondly, this study explores the daily realities, personal coping strategies, and adaptive behaviours of CHWs in Buea Health District during the conflict. It aims to provide insight into their lived experiences, focusing on how they navigate challenges, maintain resilience, and adapt to the demands of their roles. Understanding these experiences is fundamental for developing strategies to support CHWs' well-being, directly impacting the programme's effectiveness and sustainability.

3. How can CHWs in Buea Health District be supported by CHW programmes to cope better with shocks, uncertainty, and fragility in fulfilling their role?

Thirdly, and mainly, this study seeks to identify effective ways to support CHWs in Buea Health District in coping with the shocks, uncertainty, and fragility they face in a conflict-affected environment. By focusing on the perspectives and preferences of CHWs in relation to CHW programme design, the research aims to uncover what they believe would best enhance their resilience and ability to manage these challenges. The analysis will propose practical,

contextually relevant support mechanisms that resonate with CHWs' real-world experiences, improving the likelihood of successful implementation and uptake of these strategies.

2.3 Conceptual Framework

2.3.1 Presentation of existing CHW frameworks to guide CHW programme optimisation

This section provides a structured overview of four key CHW programme optimisation frameworks upon which the conceptual framework for this research is based. These frameworks offer various strengths and limitations in guiding the implementation, evaluation, and sustainability of CHW programmes. The following discussion provides a comparative critique of these frameworks and highlights how the integrated framework used for this research builds upon the strengths of these other frameworks whilst also addressing their shortcomings.

WHO Guidelines on Health Policy and System Support to Optimize CHW Programmes

(Cometto et al., 2018)

The WHO guidelines provide a comprehensive policy framework encompassing fifteen dimensions, including CHW selection, training, supervision, remuneration, integration, and data collection (Cometto et al., 2018). This framework is firmly rooted in systematic reviews and global best practices, ensuring that policy guidance is evidence-based. One of its major strengths is its emphasis on integrating CHWs into national health systems, which is essential for ensuring long-term sustainability and effectiveness (Cometto et al., 2018). Additionally, the framework stresses the importance of supportive supervision, career pathways, and remuneration, which have been shown to enhance CHW motivation and retention (Cometto et al., 2018).

However, a significant limitation of this framework is its limited adaptability to FCAS. While it offers broad guidance applicable across various contexts, it does not sufficiently account for the specific operational challenges encountered in conflict zones, such as governance instability, security risks, and the role of non-state actors in health service delivery. Furthermore, it assumes strong government involvement and long-term financial investment, which may not be feasible in contexts where state capacity is weak or non-existent.

Community Health Worker Assessment and Improvement Matrix (CHW AIM) (Ballard et al., 2018)

CHW AIM is designed primarily as an assessment tool that evaluates CHW programmes across ten key programmatic components, including training, supervision, incentives, and community involvement (Ballard et al., 2018). One of its key strengths is its ability to facilitate systematic

comparisons across different CHW programmes, thereby identifying best practices and programme gaps (Ballard et al., 2018). The framework is also designed to integrate with other policy tools, such as the WHO guidelines and the Community Health Planning and Costing Tool, allowing for a multi-dimensional approach to programme evaluation (Ballard et al., 2018).

Despite its usefulness, CHW AIM is primarily diagnostic and lacks detailed guidance on programme implementation. Its reliance on self-reported data introduces a risk of bias, as programme implementers may overestimate functionality or effectiveness (Ballard et al., 2018). Furthermore, it does not sufficiently tackle the unique challenges faced by CHWs in FCAS, where traditional structures of supervision, incentives, and training can be significantly disrupted.

Community Health Planning and Costing Tool (UNICEF, 2020)

The Community Health Planning and Costing Tool is an essential resource for estimating the financial requirements of CHW programmes (UNICEF, 2020). It allows policymakers to project costs and assess financial sustainability under different scenarios (UNICEF, 2020). This financial modelling capability is particularly useful for programme planning and resource allocation, helping to ensure that CHW programmes are adequately funded over the long term (UNICEF, 2020). The tool is designed to work alongside CHW AIM, enabling both programmatic and financial dimensions simultaneously (UNICEF, 2020).

However, the tool primarily focuses on financial considerations and does not provide in-depth guidance on programme implementation. It also lacks adaptability for FCAS, where cost structures may be unpredictable due to shifting funding streams and unstable governance. Additionally, it does not fully capture the non-monetary dimensions of CHW work, such as trust-building within communities and the social capital generated by CHW programmes.

Framework for Community Health Worker Optimisation in Conflict Settings (Habboush et al., 2023)

The CHW Optimisation Framework for Conflict Settings is designed to address the unique challenges CHWs operating in FCAS face. It integrates institutional, human resource, programmatic, and strategic factors to create a holistic approach to CHW optimisation in fragile environments (Habboush et al., 2023). This framework's particular strength is recognising

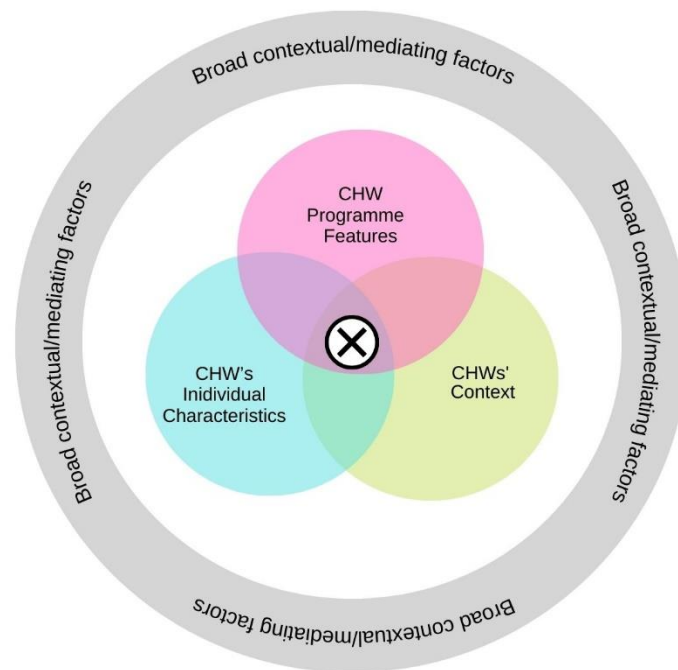
CHW representation and social role, acknowledging that community trust and participation are central to programme effectiveness (Habboush et al., 2023). Nevertheless, the main limitation of the framework is its applicability outside of Northwest Syria remains limited, requiring further empirical validation in other FCAS.

2.3.2 Proposed conceptual framework

To address the research questions identified above, this study proposes a conceptual framework that presents the three core elements, namely (i) CHW programme features, (ii) CHWs' individual characteristics, and (iii) the context in which CHWs and CHW programme operate, and their dynamic interaction. As depicted in Figure 1, the framework outlines the relationships between these elements (in relation to one another and at the junction between all three) to inform context-relevant strategies to support CHWs in FCAS.

This proposed framework resulted from my previous research on incentives for CHWs in FCAS, which revealed that while programme features such as incentives - both financial and non-financial incentives - affect the motivation, performance, and retention of CHWs, other factors, such as the specific context in which the CHWs operate, also play a crucial role. This earlier study suggested that it is essential to consider the context, as this will enhance our understanding of why certain incentives or interventions succeed, why they sometimes fail, whether the programme can be successfully adapted to meet the needs of fragile settings, why outcomes differ across settings, and how far results from a specific setting can be generalised to others.

Figure 1: Proposed Conceptual Framework



CHW Programme Features

The first component of the conceptual framework focuses on the CHW programme features, which encompass the specific elements that shape CHW programme design and operations and determine the programme's overall effectiveness. These elements include tangible aspects, such as financial and non-financial incentives, supportive supervision, and training, as well as intangible factors that directly influence CHW performance, such as recognition and appreciation, opportunities for career advancement, and clear role definitions. In FCAS, it is imperative to consider these programme features when developing strategies to support CHWs. Policymakers and programme managers can directly influence these features, thereby optimising CHWs' performance.

CHWs' Individual Characteristics

The second component of the framework focuses on the individual characteristics of CHWs, which include attributes such as age, gender, social status, role within the community, and relationship with the community. These personal characteristics, similar to CHW programme features, significantly influence CHW performance and ultimately affect health outcomes (Kok et al., 2015). Unlike programme features, however, these individual characteristics are inherently stable and cannot be easily modified (Haines et al., 2007). It is essential to engage

directly with CHWs to gain a comprehensive understanding of how their personal backgrounds and working environments impact their effectiveness. This understanding is essential for designing and implementing CHW programmes that are both effective and responsive to the unique needs of CHWs (Hantrais, 1999; Standing and Chowdhury, 2008; Palazuelos et al., 2013).

The proposed framework's emphasis on individual characteristics, more accurately described as demographic and social identity markers, highlights how these relatively stable attributes shape the performance and integration of CHWs within their communities. These features are not easily modifiable but play a critical role in influencing how CHWs engage with community members, how they are perceived, and how they themselves understand their role in the health system. They shape the extent to which CHWs are trusted or accepted by their communities. For instance, gender norms may affect whether CHWs can provide services related to maternal health or whether they are allowed to enter households unaccompanied. Additionally, these characteristics influence how CHWs navigate their own sense of authority and legitimacy. A younger CHW, for example, may feel less empowered to challenge misinformation or assert public health guidance in a community where age is closely tied to respect and influence. Furthermore, these identity markers intersect with broader structural conditions, such as insecurity, cultural hierarchies, or institutional bias, to either constrain or enhance a CHW's ability to fulfil their duties. For example, female CHWs may face restrictions on movement during periods of heightened conflict, while male CHWs may be viewed with suspicion due to their perceived affiliation with state structures.

CHWs' Context

The third component of the framework addresses the context in which CHWs operate. In this study, the context is defined by factors associated with fragility, including conflict, insecurity, urban and peri-urban settings, and displaced populations. The physical environment in which CHWs function directly influences their capacity to deliver health services and significantly impacts the health outcomes (Edem et al., 2017). CHWs operating in fragile environments encounter many challenges, many of which are similar to those faced in more stable settings but are exacerbated by the inherent instability and insecurity characteristic of these contexts. Furthermore, certain challenges are unique to fragile environments, such as the heightened risks of insecurity and targeted violence against CHWs. Therefore, it is imperative to consider

the specific environmental challenges and conditions when designing CHW programmes and developing strategies to support their work in these settings.

Relationship between CHW Programme Features, Individual Characteristics, and Context

The relationship between CHW programme features, CHWs' individual characteristics, and the context in which CHWs operate is complex and deeply interconnected. Each of these components influences the others, and their interplay is critical to the effectiveness of CHW programmes, particularly in FCAS. Understanding and leveraging this intersection is essential for developing strategies to support CHWs and optimise their performance in challenging environments.

The design and implementation of CHW programme features—such as financial incentives, training, and supervision—must account for the diverse individual characteristics of CHWs, including their age, gender, social status, and role within the community. The effectiveness of these programme features is contingent upon their alignment with the specific needs and attributes of the CHWs. For instance, the success of a training programme may vary depending on the educational background and prior experience of the CHWs involved. At the same time, the perceived value of financial incentives might differ based on their economic conditions and social status. Therefore, a tailored approach to programme design must consider the diversity among CHWs and ensure that each individual is adequately supported in their role.

The context in which CHWs operate significantly shapes the design and efficacy of programme features. My previous study highlights a critical gap in the literature and programme design: the lack of attention to the specificities of the fragile context. CHW programmes are often designed based on general considerations, failing to account for the unique challenges FCAS present. This oversight complicates the effective implementation of CHW programmes in these settings. For instance, Lopes et al. (2015) demonstrated in Guinea Bissau that although CHW performance improved following training, it declined once the training ended, as CHWs struggled to adhere to treatment guidelines and protocols without continued support. To address such challenges, programme features in FCAS must be adaptable to the volatile and unpredictable environment, with provisions for ongoing support, enhanced security measures, and flexibility in response to contextual shifts.

The physical and social environment in which CHWs work profoundly influences their personal experiences and the roles they can effectively perform within the community. The context of fragility, characterised by insecurity and social disruption, can significantly affect CHWs' ability to carry out their duties. For example, a CHW operating in a conflict zone may face additional challenges if they belong to a marginalised or targeted group, necessitating differentiated support strategies. The resilience and adaptability of CHWs are, therefore, critical in such environments, and support strategies must be designed to enhance these personal attributes, enabling CHWs to navigate the complexities of their operational contexts.

As per this study, the intersection of programme features, individual characteristics, and context forms the foundation for the optimisation of CHW programmes. It is imperative to recognise how these components influence one another and to develop strategies that integrate all three dimensions. A holistic approach is essential; for instance, a well-designed incentive programme might prove ineffective if it does not account for the socio-cultural dynamics of the community or the specific motivations of the CHWs. Consequently, the development of support strategies for CHWs in FCAS must be grounded in an integrated understanding of these interrelated components, ensuring that CHWs are equipped with the necessary tools and resources and supported by a contextually appropriate environment that addresses their unique needs and challenges.

2.3.3 Building on the existing frameworks for optimising CHW programmes

The proposed conceptual framework offers an integrated approach to understanding and strengthening CHW programmes in fragile and conflict-affected settings (FCAS). It uniquely addresses the dynamic interplay between three key elements: CHW programme features, CHWs' individual characteristics, and the contextual realities in which they operate. This holistic perspective directly addresses the distinctive challenges CHWs face in FCAS, moving beyond the more limited focus of existing frameworks.

The proposed framework builds upon foundational elements from established models whilst reconceptualising them as adaptable mechanisms rather than fixed inputs. While the WHO Guideline (2018) emphasises system integration, training, supervision, incentives, and policy support, the CHW AIM matrix (2018) offers structured implementation guidance, and the UNICEF Costing Tool (2020) quantifies resource requirements, these frameworks lack

conflict-sensitive adaptations. The proposed framework operationalises programme features with greater flexibility, local responsiveness, and practical workarounds essential for disrupted systems in FCAS.

Existing frameworks often view CHWs as implementers rather than individuals operating within complex socio-political contexts. The CHW AIM recognises performance metrics and capacity but lacks this broader perspective, while Habboush et al. (2023) address gender and security risks but treat CHWs' identity and vulnerability as relatively static. The proposed framework expands these considerations by introducing a context-responsive perspective on CHWs' characteristics, including gender roles, family status, caregiving responsibilities, and economic challenges. It acknowledges CHWs' heterogeneity and how their availability, performance, motivation, and risk tolerance depend on social expectations and lived realities. This approach humanises CHW programme designs and provides a new perspective for supporting CHWs in FCAS.

While existing frameworks acknowledge context to varying degrees, they rarely integrate it fully into programme design. The WHO and CHW AIM frameworks recognise contextual factors but do not incorporate them, and the UNICEF Tool merely offers cost adjustments for hard-to-reach areas. Habboush et al. (2023) make more progress in addressing insecurity, displacement, and political fragility in FCAS. The proposed framework builds on these elements to promote a deeper, more operational interpretation of context as fluid environments that CHWs navigate daily.

The proposed framework extends beyond the WHO Guidelines' policy foundation by contextualising programmatic elements within FCAS and incorporating adaptive strategies for effective functioning in fragile contexts. Unlike the CHW AIM and Community Health Planning and Costing Tool, which focus on assessment and financial planning, this framework explicitly connects programme features to CHWs' lived experiences and contextual realities. It considers variability in CHW experiences, particularly how workforce stability, security risks, and gender-based vulnerabilities affect programme outcomes in conflict settings.

The framework also builds upon the CHW Optimisation Framework for Conflict Settings by expanding focus beyond institutional and programmatic constraints to include individual CHW characteristics. While the existing framework acknowledges insecurity's impact, it doesn't fully

address how conflict differentially affects CHWs based on personal attributes such as gender, socio-economic status, and prior exposure to violence. The proposed framework integrates these factors, ensuring that support strategies are tailored to individual vulnerabilities and community perceptions rather than following a one-size-fits-all approach.

2.3.4 Theoretical Underpinning

While this study does not build on one particular theory to underpin the research – and rather adopts a pragmatic approach as detailed in section 4.2 - it draws on organisational, motivational, and social theories to support the relationships between the various components and establish the relevant strategy to support CHWS in FCAS. For example, the programme features component draws on the core principles of Self-Determination Theory, Equity Theory, and Organizational Commitment Theory (Adams, 1963; Deci & Ryan, 1985; Meyer et al., 1991), which collectively provide insights into how CHW programmes can be designed to enhance motivation, satisfaction, and commitment. Self-Determination Theory (Deci & Ryan, 1985) emphasises the importance of fulfilling CHWs' psychological needs for autonomy, competence, and relatedness, suggesting that empowering CHWs through meaningful responsibilities, adequate training, and strong community connections will boost their motivation and job satisfaction. Equity Theory (Adams, 1963) highlights the significance of perceived fairness in rewards and workloads, making it essential that CHWs feel they are fairly compensated relative to their peers. Ensuring equitable treatment is critical in maintaining CHW morale in under-resourced environments. Organisational Commitment Theory (Meyer et al., 1991) stresses that a strong emotional attachment to the health system can foster greater loyalty and retention, meaning that providing supportive supervision and career development opportunities can enhance CHWs' commitment and reduce attrition.

The CHWs' individual characteristic component draws on the Social Identity Theory, particularly relevant in FCAS, where social divisions and tensions can be heightened, understanding and leveraging CHWs' social identities for building trust, ensuring effective health interventions, and mitigating risks such as targeted violence (Hogg, 2016; Tajfel, 1972).

Lastly, the CHWs' context component draws on Ecological Systems Theory and Social Capital Theory. Ecological Systems Theory provides a framework for understanding how multiple environmental layers—from community dynamics to broader societal influences—affect

CHWs' ability to operate effectively in FCAS (Bronfenbrenner, 1983). Social Capital Theory emphasises the importance of social networks, trust, and community cohesion in supporting CHWs, enabling them to navigate the complex challenges of FCAS by leveraging community relationships and resources (Bourdieu, 1986).

In conclusion, by drawing on various organisational, motivational, and social theories, this study establishes a comprehensive framework for understanding and enhancing the performance of CHWs in fragile and conflict-affected settings. The next chapter provides a detailed overview of the context of Cameroon, setting the stage for understanding the environment in which CHWs operate and the challenges they face within Cameroon's unique socio-political landscape.

CHAPTER 3: Context and Study Setting

This chapter offers an overview of the socio-demographic and historical context of Cameroon, focusing on the Anglophone regions. It aims to provide an understanding of the country's dynamics by examining its governance structure, political arrangements, historical legacies, and health system organisation. Additionally, it explores the concept of fragility within the context of Cameroon, with special attention to the ongoing Anglophone crisis. Additionally, it presents the key health system components—including governance, human resources, health financing, and community participation—to provide a nuanced understanding of the environment in which CHWs and their programmes operate.

3.1 Historic Demographic Context of Cameroon

Cameroon is a country located on the Atlantic coast of the African continent, where Western and Central Africa meet. It shares its borders with Chad – to the north, the Central African Republic (CAR) – to the east, Equatorial Guinea and Gabon to the south, and Nigeria to the west (World Bank, 2018). (Figure 2)

Cameroon is a highly diverse country, often called "Africa in miniature" due to its wide range of ethnic groups, languages, and cultural practices. The country is home to over 250 ethnic groups, with the largest groups including the Fang, Beti, Bassa, Bamileke, and Fulani, among others. Cameroon has two official languages—French and English—reflecting its colonial history under French and British rule, which still influences governance, legal systems, and education today.

Religion plays a significant role in Cameroonian society. Christianity is the dominant faith, particularly Catholicism and Protestantism, while Islam is widely practised in the northern regions. Traditional African beliefs coexist with these major religions, contributing to the country's rich cultural diversity.

The legal system in Cameroon is a hybrid of French civil law and English common law, applied differently in the Francophone and Anglophone regions. This dual legal structure has been a

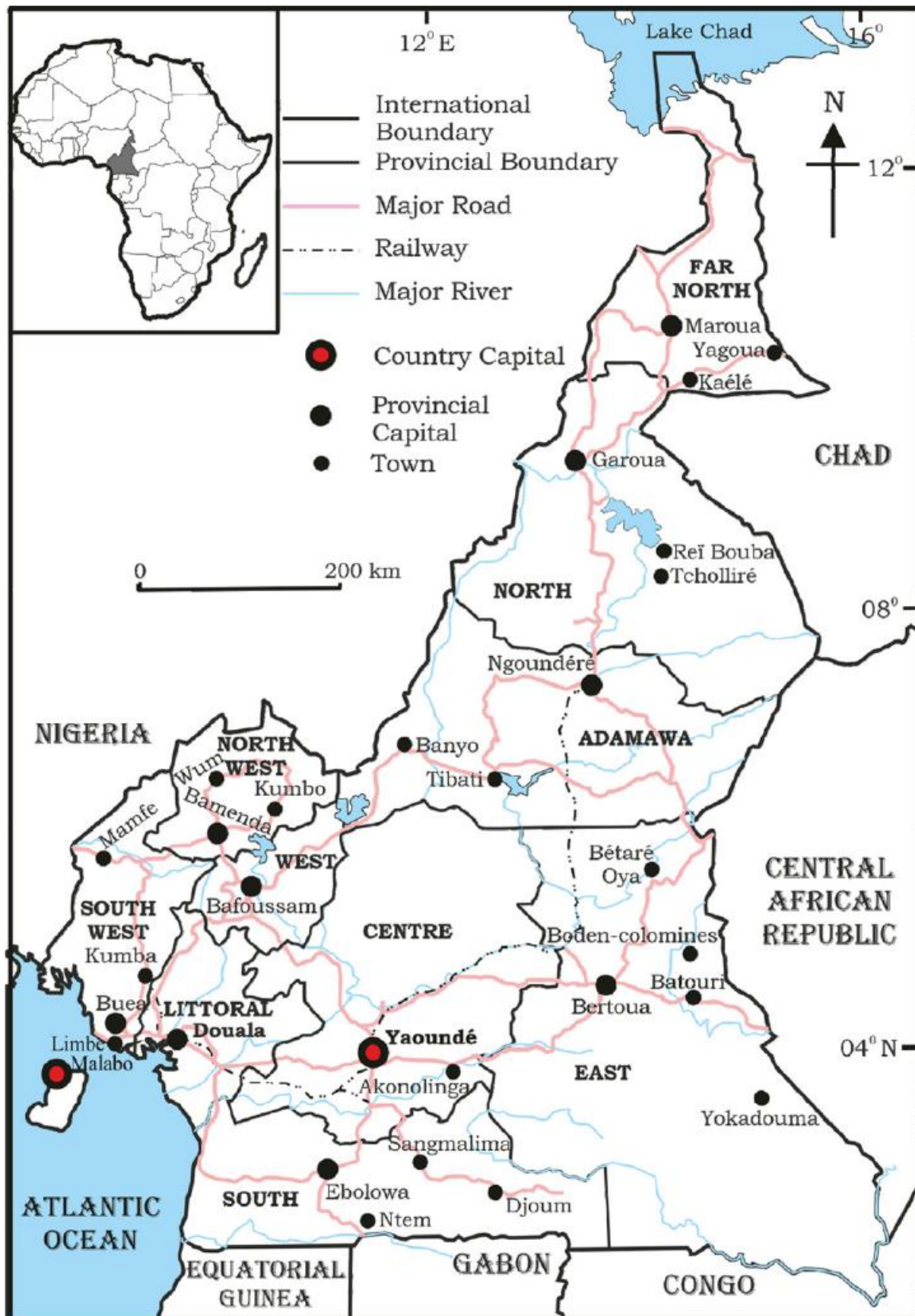
source of tension, particularly in the Anglophone regions, where residents have long expressed grievances over the imposition of French legal systems and practices.

Cameroon's education system mirrors its colonial history, with Francophone and Anglophone regions operating separate systems based on French and British educational models. The disparity in resources and the lack of integration between these systems have further fuelled discontent, particularly in the Anglophone regions.

3.1.1 Colonial History

As shown in Figure 2 below, two of Cameroon's regions bordering Nigeria (the North West and South West region) are Anglophone, while the rest of the country is Francophone (World Bank Group, 2022b). This French–English division dates to the First World War, when the joint British and French forces seized Cameroon, which until then – 1884-1916 - was a German colony (Saidu et al., 2021). Following the war, the League of Nations divided Cameroon between Britain (17%) and France (83%) (Kaiser 2016). These nations influenced their colonies with their language and culture, leading to present-day Anglophone and Francophone Cameroon (Kaiser, 2016).

Figure 2: Administrative Map of Cameroon with Neighbouring Countries (Forton et al., 2012)



Cameroon was reunited upon its independence, unfolding in two significant stages. In 1960, the larger French-administered territory gained independence from France, becoming the Republic of Cameroon (Njung, 2019). The following year, the smaller, British-administered territories, known as Southern Cameroons, were presented with a choice through a UN-organised plebiscite: to join either the newly independent Republic of Cameroon or Nigeria (Njung, 2019). Opting to unite with the Republic of Cameroon, Southern Cameroons merged with it to form the Federal Republic of Cameroon in 1961, thus bringing together the Anglophone and Francophone regions under one national identity (Njung, 2019). The reunification was driven by a desire for national unity and the economic and political benefits it was perceived to bring (Budi, 2018). However, the consequences of this reunification and the subsequent governance choices have been profound. The centralisation of power in the Francophone-dominated government and the lack of equitable development and representation of the Anglophone regions have exacerbated feelings of disenfranchisement among the Anglophone population. This has manifested in significant civil unrest, with calls for greater autonomy or even secession gaining momentum in recent years.

3.1.2 Economics of Cameroon

According to the World Bank's classification, Cameroon is a lower-middle-income country in Sub-Saharan Africa. Its population is 27.2 million, with 58% living in urban areas and 33% living in slums (World Bank Group, 2021).

Cameroon has a GDP of \$48 Billion as of 2023, with its economy predominantly driven by the agricultural and petroleum sectors (World Bank, 2024). According to the World Bank, Cameroon's primary trading partners in 2021 were China, the Netherlands, India, Italy, Nigeria, and the United Arab Emirates (World Bank 2021). However, the GDP per capita remains relatively low, at approximately \$1,673, reflecting modest economic output per person and suggesting a limited standard of living for the average citizen (World Bank, 2024). Cameroon's Gini index further accentuates this economic disparity, reported at 42.20 (2021 data), which indicates significant income inequality and highlights the uneven distribution of wealth within the country (World Bank, 2024).

Cameroon, despite its status of the largest economy within the Central African Economic and Monetary Community (CEMAC), has experienced a significant rise in poverty levels. -

primarily due to inequality, structural economic challenges, governance issues, demographic factors, and climate change. Between 2007 and 2014, the number of individuals living in poverty increased by 12%, reaching 8.1 million (World Bank, 2018). This economic growth has not translated into equitable development, as evidenced by various key economic and social indicators - rising income inequality, increasing poverty rates, limited job opportunities, and declining access to education and healthcare.

In addition to income disparities, Cameroon's Human Development Index (HDI) stands at 0.587, placing the nation in the medium human development category. The HDI provides a composite measure of average achievements in key dimensions of human development, including health, education, and standard of living. Cameroon's relatively low HDI score highlights the challenges the country faces in improving the overall quality of life for its population.

The inequitable distribution of financial resources and economic opportunities has profound implications for social relations and governance. In the Francophone regions, particularly in urban centres like Douala and Yaoundé, there is relatively better access to economic resources, job opportunities, and public services. This disparity fosters a sense of exclusion and frustration in the Anglophone regions, contributing to the ongoing socio-political tensions. The lack of equitable resource allocation has fuelled grievances among Anglophone communities, who perceive their marginalisation as evidence of systemic neglect by the central government.

3.1.3 Governance of Cameroon

Decentralisation (through devolution) is the form of governance adopted by the Cameroon government, introduced partly as a concession to the Anglophones' demand for federalism in the early 1990s (Kofele-Kale, 2011). While this shift in governance was presented as a move towards improving local autonomy, it was largely influenced by the pressures of Structural Adjustment Programmes (SAPs) imposed by international financial institutions like the IMF and the World Bank. These programmes, linked to loans provided in the late 1980s and early 1990s, encouraged decentralisation to improve governance and service delivery, particularly in sectors like healthcare (Enonchong, 2021). Decentralisation in this context often involved

transferring certain administrative and fiscal responsibilities from the central government to regional and local entities, ostensibly to make governance more responsive.

According to the 1996 Constitution, Cameroon is a 'decentralised unitary state', which means it has a central government and ten administrative regions with 360 councils that have some level of autonomy in terms of local governance, budgetary control, and the management of specific public services (Enonchong, 2021). However, while this governance structure was introduced in 1996, the first legislation was implemented in 2004, and further legislative instruments were decreed between 2008 and 2009 (Enonchong, 2021). The gradual implementation, beginning in 2010, may reflect the government's reluctance or inability to fully decentralise, hindered by factors such as political resistance, administrative inefficiencies, limited financial resources, and, importantly, the socio-political tensions, especially in the Anglophone regions. These challenges have likely influenced the inconsistent and uneven application of decentralisation across various sectors.

In the healthcare sector, decentralisation included transferring responsibilities related to primary healthcare services, managing health districts, and allocating resources to regional and district health authorities. However, this decentralised system has not necessarily improved health outcomes, particularly in the Anglophone regions, where ongoing conflict, resource constraints, and governance issues persist. The devolution of healthcare services has often resulted in fragmented systems with inadequate oversight and funding.

It is important to distinguish between decentralisation and devolution. Decentralisation refers to the broader process of transferring administrative responsibilities to lower levels of government. At the same time, devolution specifically involves the legal transfer of powers and fiscal authority to subnational entities, allowing them more control over local decision-making. The shift from a centralised system to one based on devolution theoretically aims to promote local autonomy and improve service delivery. However, in practice, the implementation of devolution in Cameroon has been uneven and fraught with challenges. The 2018 creation of the Ministry of Decentralisation and Local Development, followed by the 2019 law on decentralised regional and local authorities, represents attempts to consolidate and clarify the distribution of powers (Enonchong, 2021). Still, the emerging decentralised health

system remains fragmented and underfunded, leaving many regions, particularly the Anglophone areas, struggling with inadequate healthcare services (Enonchong, 2021).

While the government has pushed decentralisation as a path towards better governance, the reality has been mixed. Some regions have seen improvements in local service delivery, but others continue to experience challenges. In these areas, the decentralisation of healthcare has often led to unequal resource distribution and governance failures, exacerbating existing disparities. A more critical examination of the decentralisation process reveals that rather than empowering local health systems, the imposition of this governance structure under SAPs has contributed to the current healthcare sector's fragmented and under-resourced state.

3.2. Fragility in Cameroon

Cameroon experienced several decades of relative stability from the early 1980s until around 2010. This period began under President Paul Biya, who assumed power in 1982, and saw Cameroon generally avoid the civil conflicts and instability that affected many neighbouring countries. However, in recent years, the country has faced growing challenges and instability, including Boko Haram's attacks in the Far North, starting around 2010, and the Anglophone Crisis (explained in detail in 3.2.2), which began in 2016 with a secessionist insurgency in the English-speaking regions. These crises have significantly impacted the country's stability and contributed to its current state of fragility.

3.2.1 The Anglophone Crisis

The crisis relevant to this study is the “Anglophone Crisis”, the socio-political crisis in the English-speaking regions of the country, the North West (Capital: Bamenda) and South West (Capital: Buea) regions. The Anglophone Crisis in Cameroon started in late 2016 and rapidly deteriorated until 2020 (Figure 4). As of 2020, the Anglophone crisis in Cameroon continued to escalate, resulting in unmitigated violence and a deepening humanitarian crisis, with measures such as lockdowns and school boycotts meant to draw international attention to the Anglophone regions' plight (Bang & Balgah, 2022).

The beginning of the crisis in 2016 was marked by protests by English-speaking lawyers and teachers over the use of French in courts and schools in the country's Anglophone regions. Its root cause lies in the structural inequality between the minority Anglophone regions and the majority Francophone regions (Willis et al., 2020). This structural inequality between the two groups comprises what Willis et al. (2020) categorise as the “Anglophone Disadvantage” – misallocation of Anglophone resources, unequal educational and employment opportunities and the Anglophone underclass, and “worsening levels of inequality”. The International Crisis Group (2017) provides a further reflection on the root causes of the Anglophone Crisis, attributing it to Cameroon's colonial legacy and the failure of a centralised governance model, which has led to structural inequality between the two parts of the country.

Attempts by government security forces to repress what started as a peaceful protest by teachers and lawyers in 2016 have been blamed for the uprising of several armed groups in the

Anglophone region (OCHA, 2018). The non-state armed groups have a secessionist agenda and have been in confrontation with government forces in an armed conflict currently known as the Anglophone crisis (Bang & Balgah, 2022). These non-state armed groups, at least 15 of them with sizes ranging from a few dozen to over 500 members, have links with different Cameroon diaspora organisations and are demanding independence from Francophone Cameroon (Bang & Balgah, 2022; IDMC, 2019). These non-state armed groups are collectively referred to as “Amba boys”, “Amba”¹, or “The boys”. Despite the government forces’ efforts, the non-state armed groups still control vast rural areas and the main roads in the Anglophone regions (Bang & Balgah, 2022).

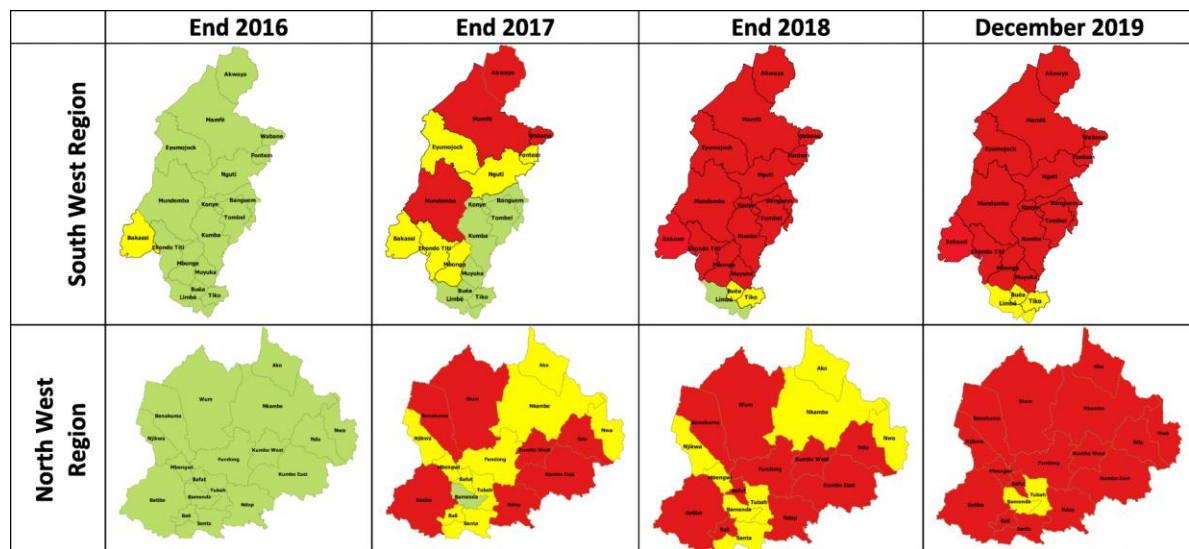
The government’s loss of full control of the region and ensuing fight against the various non-state armed groups has created an environment of insecurity for the population and humanitarian actors (Bang & Balgah, 2022). The affected population in these Anglophone regions have had to respect orders from the non-state armed groups boycotting schools, violating administrative orders, and imposing lockdown days as long as 10-14 days, all as forms of civil disobedience to the Cameroonian government (Bang & Balgah, 2022). For example, Mondays were declared lockdown/ghost town days by the non-state armed groups (Song & Kaledzi, 2023). On such days, markets are closed, offices are locked, and residents are expected to stay indoors (Akame et al., 2021; Song & Kaledzi, 2023). The various non-state armed groups enforce these lockdowns to pressure the central government into making concessions for the Anglophone community (Akame et al., 2021; Song & Kaledzi, 2023). Disobeying the lockdown carries severe risks for residents, including the possibility of being attacked, kidnapped, or shot (Bang & Balgah, 2022; Song & Kaledzi, 2023). Furthermore, they have been accused of kidnapping residents and relief workers in these regions for ransom, leading to limited operations by humanitarian stakeholders (Bang & Balgah, 2022).

On the other hand, government forces have been accused of raiding social infrastructures – schools, religious premises, and hospitals hosting internally displaced persons - and indiscriminately killing and burning houses/markets in areas controlled by non-state armed groups (Bang & Balgah, 2022). These actions are part of the military’s broader strategy to undermine the operational bases of the armed groups and weaken their support networks within

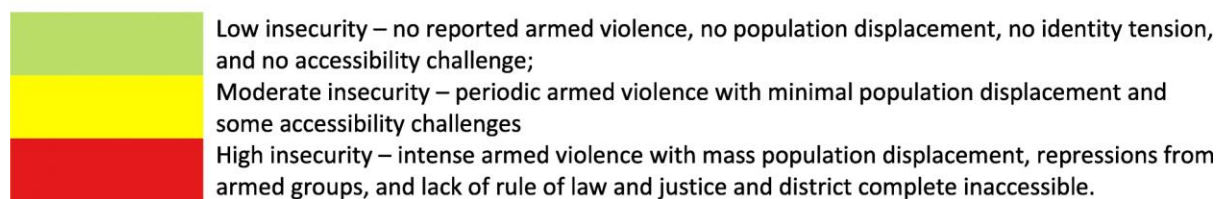
¹ Amba is short for Ambazonia, the proposed name for the independent state the non-state armed groups seek to create out of the anglophone regions of Cameroon.

the local population. To enhance security and curb the activities of these groups, the government has implemented several measures, including imposing curfews, restricting movement between areas, banning large gatherings, and prohibiting the use of motorbikes in certain regions, as these are commonly used by non-state armed groups for mobility and attacks (Craig, 2020; ICG, 2019; Nsodzefe, 2019; OCHA, 2018). Additionally, in January 2017, the government shut down internet access for 93 days and eventually access to social media and messaging apps in the Anglophone regions to limit rebellion amongst the population, a move described as an absolute violation of constitutional and human rights to access information and freedom of expression (Ritzen, 2018).

Figure 3: Evolution of the security situation in health districts in North West and South West Regions (Saidu et al. 2021).



Evolution of the security situation in health districts in North West and South West Regions.



The Anglophone crisis has profoundly impacted the Anglophone regions, affecting the economic well-being of the community and the health-seeking behaviours of its members. Economic hardships, fuelled by the loss of livelihoods, have significantly reduced access to healthcare services, especially for internally displaced persons, as will be detailed in the next section (Bang & Balgah, 2022).

Furthermore, Cameroon is second to Nigeria in terms of the most affected nations by the Boko Haram crisis, with more than half of the population in the Far North Region in need of

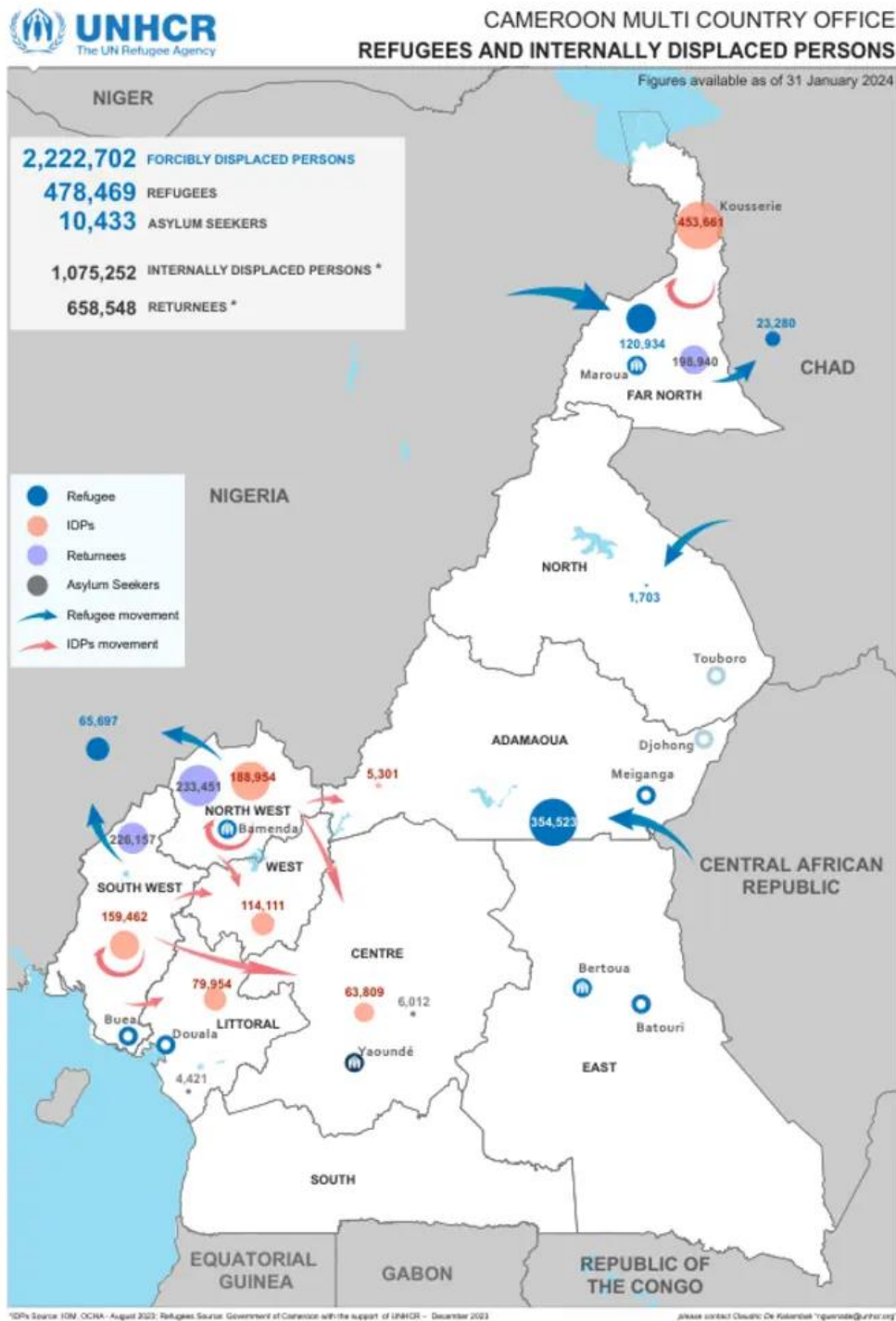
humanitarian assistance as the security in the region continuously worsens – leading to death and displacement of civilians (OCHA, 2019).

Boko Haram, an Islamist militant group that originated in Nigeria in 2002, began as a religious movement opposing Western-style education and seeking to impose a strict interpretation of Sharia law (Imerman, 2019). Over time, it evolved into a violent extremist group responsible for numerous attacks, including bombings, kidnappings, and assassinations, particularly targeting civilians, schools, and government institutions (Imerman, 2019). In Cameroon, the Boko Haram Crisis has interrupted public health programmes for disease control and prevention, such as immunisation campaigns (Nouetchognou, 2015). The insecurity has led to the closure of over a third of the health centres in the Far North region, causing health workers to flee for safety, making access to essential health services complex and leaving women and children the most affected (Nouetchognou, 2015). This terrorist attack-related violence was reported as the leading cause of mortality, followed by malaria, especially in children in this part of the country (Gignoux et al., 2020).

In addition to Boko Haram, since the mid-2010s, there has been an influx of around 470,000 refugees, primarily from the Central African Republic (73%) and Nigeria (26%), seeking shelter in Cameroon (UNHCR, 2024). At the same time, Cameroon hosts the highest number of refugees from the conflict-affected Central African Republic (CAR), overstressing the Cameroonian host communities' scarce resources (OCHA, 2019). Before the arrival of the Central African refugees, there was already a lack of access to quality healthcare in the East Region of Cameroon; the refugees' presence has further strained the health system (Barbelet, 2017; UNHCR, 2024).

As a result of the Boko Haram Crisis, the Anglophone Crisis (detailed below), and the Central African Refugee Crisis, Cameroon has faced three simultaneous complex emergencies (which are defined as humanitarian crises caused by the breakdown of authority due to internal or external conflict, resulting in a breakdown of social order), each with its unique causes and characterised by violence and insecurity, all against the backdrop of the COVID-19 pandemic which started in 2020 (OCHA, 2019).

Figure 4: Displacement caused by the crises in Cameroon (EU 2019)



3.2.2 The Current Health Situation in Cameroon Due to Fragility

Some community members, faced with financial constraints due to the conflict, have opted for cheaper alternatives for treatment, such as purchasing drugs from pharmacies and self-prescribing instead of seeking formal healthcare services (Bang & Balgah, 2022). The crisis has also resulted in frequent disruptions in healthcare services, with lockdowns lasting up to ten days, during which all normal activities, including schooling and health services, are suspended. Such restrictions have hindered economic activities and limited access to healthcare, with health centres closing and healthcare workers being unable to reach their workplaces, as well as the inability of medical supplies to reach the high-risk zones (Haddison et al., 2020). The displacement of community members, including health workers and CHWs, adds another layer of complexity, complicating health service planning and resource allocation due to fluctuating population sizes and gaps in healthcare delivery. Internally displaced persons often delay seeking medical care until conditions worsen, relying on herbal remedies due to financial constraints. Overcrowding in living conditions among internally displaced persons exacerbates the risk of communicable diseases, further straining the already stretched health services (Gidado et al., 2023; WHO, 2018a).

In terms of access to essential health services in the anglophone regions, the crisis has meant a stark reduction, with 40% of health centres no longer functional and 16 out of 18 health districts considered unsafe for health workers in the South West (SW) region (OCHA, 2019). Consequently, there was an observed drop in vaccination coverage for the DPT-3 vaccine by 28 and 42 points between 2016 and 2019 in the NW and SW, respectively (Saidu et al., 2021). The crisis has exposed the anglophone regions to the re-emergence of infectious diseases, increasing mortality and weakening the health systems (S. A. Johnson, 2017; Leidman et al., 2017).

The COVID-19 pandemic further exposed Cameroon's fragile health system and exacerbated the Anglophone regions' health challenges (Bang et al., 2020). As of 06 May 2020, there were 2,265 confirmed COVID-19 cases, with 108 deaths; however, the numbers were probably underreported as the insecurity hindered testing and data collation activities in the conflict-affected regions – the Anglophone and the Boko Haram crises (Bang & Balgah, 2022; UNHCR, 2020). While the pandemic could have exacerbated the Anglophone crisis, the crisis

probably affected the virus' spread, with the restricted movements and public gatherings instituted before the pandemic outbreak (Bang & Balgah, 2022).

3.3. Health and the Health System in Cameroon

3.3.1 The Current Health Situation in Cameroon

The health situation in the country is characterised by a high prevalence of infectious diseases, such as HIV/AIDS, malaria, and tuberculosis. In 2013, communicable diseases accounted for 40.7% of the disease burden in Cameroon, and non-communicable diseases accounted for 14.2% of the disease burden (NHO, n.d.). In addition, there has been a significant increase in mortality caused by non-communicable diseases, including cardiovascular diseases, cancers, mental illnesses, injuries from road accidents and work accidents, and occupational diseases (ILO, 2013; Ongolo-Zogo et al., 2017a). Maternal, child, and adolescent-related diseases account for 18.3% of the disease burden and 14.4% of deaths, and neurological diseases account for 4.7% of the disease burden and are responsible for only 1.2% of deaths (NHO, n.d.). Neglected tropical diseases (NTDs) account for only 1.8% of the disease burden, with an estimated death rate of 0.2% (NHO, n.d.).

Specifically, the maternal mortality ratio in Cameroon was estimated at 440 deaths per 100,000 live births in 2019, a slight increase from 437 in 2016, marking the onset of the Anglophone crisis (World Bank, 2023). Similarly, the infant mortality rate in 2019 was recorded at 56.6 per 1,000 live births, down from 61.7 in 2016 (World Bank, 2023). The under-five mortality rate also declined from 85.9 per 1,000 live births in 2016 to 77.3 in 2019 (World Bank, 2023). Furthermore, the prevalence of HIV among the population aged 15-49 decreased from 3.4% in 2016 to 3.0% in 2019 (World Bank, 2023). The data suggests that while there have been some improvements in population health metrics, the healthcare system in Cameroon remains under significant strain, particularly in conflict-affected areas, where the delivery and accessibility of essential health services are compromised.

However, it is crucial to interpret these statistics with caution. The conflict in the Anglophone regions resulted in the burning and closure of numerous health centres, severely restricting access to operational health services. This conflict-driven disruption could have significantly impacted the accuracy of these health indicators.

3.3.2 Structure of the Health System in Cameroon

The health system in Cameroon is structured into three main tiers: Central, Intermediate, and Operational levels. This tiered organisation is designed to enhance the accessibility, efficiency, and quality of healthcare services, particularly focusing on vulnerable populations such as women and children. Each level has specific roles and responsibilities, contributing to the overall functioning and success of the health system, as summarised in Table 1 below.

Table 1: Roles and Responsibilities of Health System Levels

Level	Primary Functions	Geographic Coverage
Central	Policy formulation, resource allocation, strategic programme development, supervision of Intermediate Level	National Territory
Intermediate	Translation of policies into actionable activities, resource reallocation, supervision of Operational Level	Administrative Regions
Operational	Execution of health activities, community participation, patient care, disease prevention, health promotion	Health Districts and Health Areas

At the Central Level, the system encompasses the entire national territory, functioning as the strategic hub for health governance. This level is responsible for formulating national health policies, laws, and strategic programmes (Ghogomu et al., 2017). Additionally, it oversees the allocation of resources, including staff, finances, and materials, ensuring that high-level human resources are adequately trained. The Central Level also supervises the Intermediate Level, providing the necessary strategic oversight and direction to maintain a cohesive national health strategy (Ghogomu et al., 2017).

The Intermediate Level corresponds to Cameroon's administrative Regions. It serves a key role in translating the policies, laws, and programs established at the Central Level into actionable activities that can be implemented at the operational level (Ghogomu et al., 2017). This level ensures that resources are reallocated appropriately to meet regional needs and supervises the operational activities carried out at the Health Districts. The Intermediate Level acts as the technical support arm of the health system, ensuring that the operational level functions efficiently and in alignment with national health objectives (Ghogomu et al., 2017).

The Operational Level, represented by Health Districts, serves the largest portion of the population and is the front line of healthcare delivery. Health Districts are responsible for directly executing health activities, including patient care, disease prevention, and health promotion (Ghogomu et al., 2017). This level is where community participation is most actively practised, enabling the community to express its needs and mobilise resources for health-related activities. The operational level focuses on delivering accessible healthcare services to the population and ensuring that community members are actively engaged in their health management (Ghogomu et al., 2017).

Geographically at the operational level, the health system is divided into Health Districts, each comprising several Health Areas. While the central level oversees the entire country and the Intermediate Level corresponds to administrative regions, the Operational Level focuses on Health Districts and Health Areas. Notably, health districts do not have direct administrative boundary equivalents like regions, but they are defined using specific criteria to ensure optimal service delivery. These criteria include population size, geographic accessibility, and socio-economic considerations.

A Health District typically serves a population of 70,000 to 120,000 people, encompassing five to ten Health Areas (Ghogomu et al., 2017). Each Health Area serves a smaller population, ranging from 5,000 to 12,000 in rural settings and 10,000 to 20,000 in urban areas (Ghogomu et al., 2017). The geographic accessibility of these districts is carefully considered, considering physical obstacles such as forests, rivers, and mountains to ensure that all population groups can access healthcare services without significant hindrance. Additionally, socio-economic factors are considered to group communities that can cooperate and share resources effectively, contributing to the overall success of the health district (Ghogomu et al., 2017).

A functional Health District in Cameroon includes a well-defined geographic entity with a specific population size, multiple Health Areas, a referral hospital known as the District Hospital, District Health Services for administration and management, and a dialogue structure to ensure community participation in healthcare activities (Ghogomu et al., 2017).

To prevent unnecessary duplication and ensure the rational use of healthcare resources, Cameroon's health system assigns a Minimum Package of Activities (MPA) to each level (Table 2). The MPA outlines the specific activities that each level is responsible for, tailored

to the local disease burden and health priorities (Ghogomu et al., 2017). For instance, at the Integrated Health Centres or Health Areas, the MPA focuses on health promotion and disease prevention, reflecting the need for these centres to engage in community health education and preventive measures. (Ghogomu et al., 2017) In contrast, District Hospitals are more care-oriented, focusing on treatment and patient care, while District Health Services focus on administrative, managerial, and supportive roles to ensure that health centres function efficiently (Ghogomu et al., 2017).

Table 2: Minimum Package of Activities by Health System Level

Level	Focus of Minimum Package of Activities
Integrated Health Centre/Health Area	Health promotion and disease prevention, community health education
District Hospital	Treatment and patient care
District Health Services	Administrative, managerial, and supportive functions to assist hospitals and health centres to perform efficiently

3.3.3 Evolution of the Health System in Cameroon

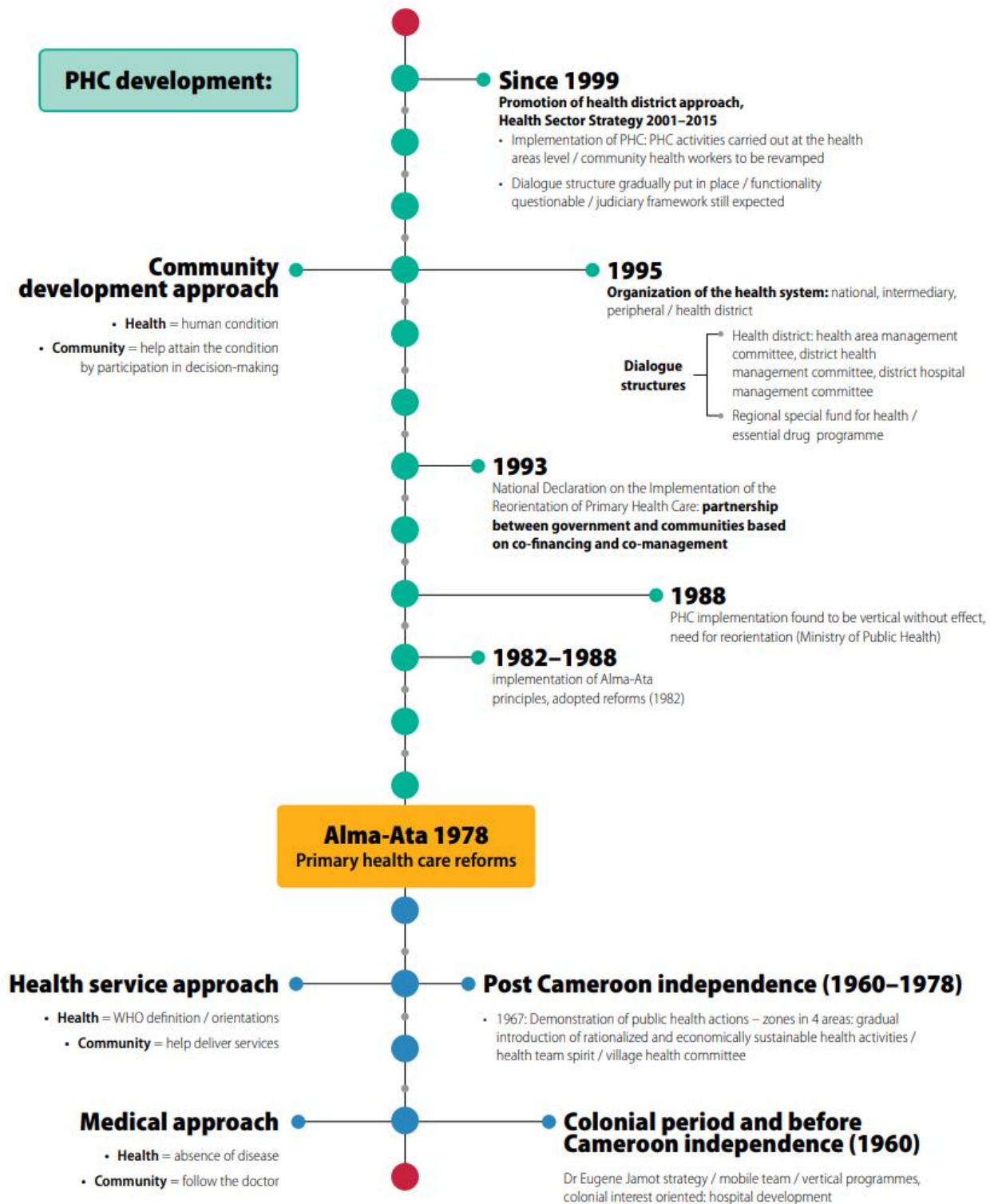
The health system in Cameroon is based on a primary health care (PHC) approach inspired by the Alma-Ata Declaration (WHO, 1978b, 1979). This approach focuses on providing accessible, essential health services that are community-based and universally accessible. Since 1967, the country has adopted a series of reforms to move away from the colonial-inspired approach that primarily focused on targeted, disease-specific interventions (such as malaria, tuberculosis, or maternal health) to a more holistic, integrated system (Ongolo-Zogo et al., 2017a). A PHC approach emphasises comprehensive care, preventive services, and the active participation of the community in health initiatives.

In 1982, reforms were introduced to promote community involvement in health initiatives (Ongolo-Zogo et al., 2017a; Walt & Vaughan, 1981) (Figure 5). However, to achieve this aim, the system needed to be restructured to better integrate PHC, addressing (among other issues) the inefficient use of CHWs and the non-existent mechanisms for community participation (Ongolo-Zogo et al., 2017a).

The need to restructure the health system led to the Reorientation of Primary Health Care (Reo-PHC) (Essomba et al. 1993). Reo-PHC involved realigning the national health system towards

the social goal of 'Health for All', ensuring access to PHC services through a decentralised management system centred on the health district level (Essomba et al. 1993). Under Reo-PHC, the integrated health centre served as the first level of contact between the community and the health system (Essomba et al., 1993), empowering communities to finance and manage their health care (Essomba et al. 1993).

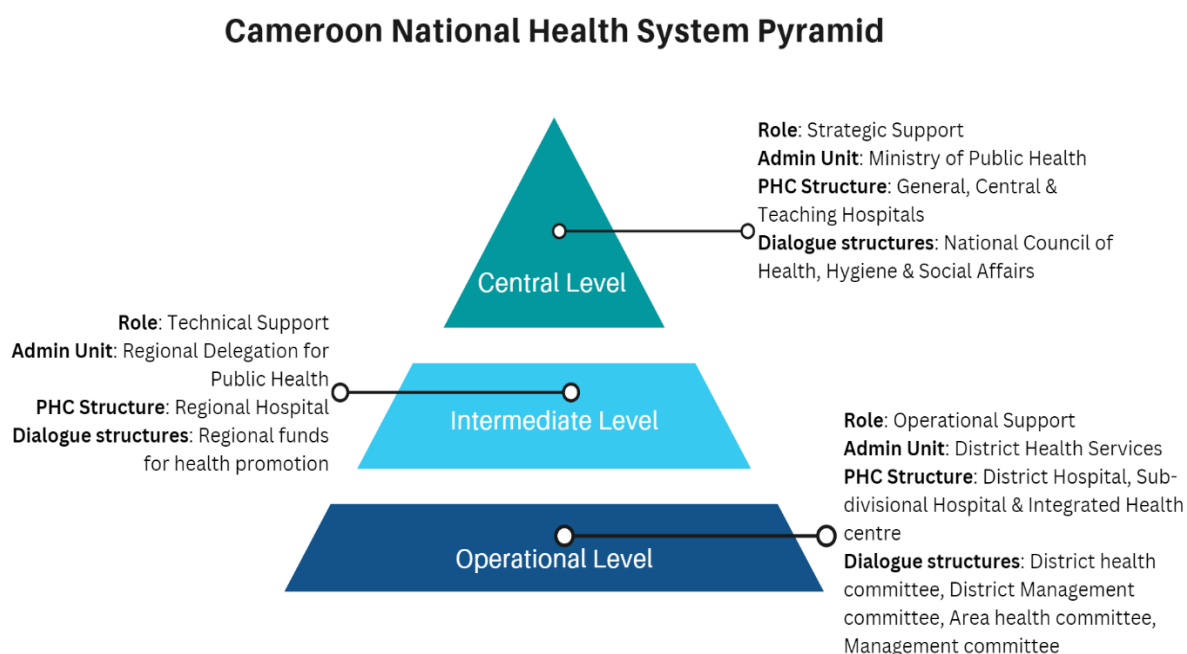
Figure 5: Historical background of PHC in Cameroon (Ongolo-Zogo et al., 2017a)



3.3.4 Health System Governance

Following the Reorientation of Primary Health Care (Reo-PHC), initiated in 1993, the national health system was reorganised, making the health district the operational unit of PHC in Cameroon. The purpose of Reo-PHC was to ensure universal access to PHC services through a decentralised management process focused on the health district level, with the institution of the integrated health centre as the first level of contact with the health system (MOH, 1997, 1998). Figure 6 shows the various levels of the health system hierarchy.

Figure 6: Cameroon National Health System Pyramid - adapted from (Ghogomu et al. 2017; Ongolo-Zogo et al. 2017)



A health district in Cameroon is geographically defined to include one or more municipalities and is subdivided into smaller health areas (Ghogomu et al., 2017; Ongolo-Zogo et al., 2017a).² The district is managed by a dialogue structure, which includes a district health committee and a hospital management team. The main objectives of this structure are to facilitate effective community participation in health activities, ensure clear communication between the health system and the community, and promote local stakeholders' ownership of health services (Ghogomu et al., 2017b).

² Ministerial decrees No. 0016/A/MSP/SG/DMH/SDH/PFSP/BFSP of 5 November 2001 creating health districts; and No. 0035/A.MSP/CAB of 8 October 1999 fixing the modalities for the creation, organisation and operation of health districts.

Despite this integrated, PHC-focused approach being outlined in the policies and strategies, in practice, the governance of the health system in Cameroon remains fragmented. This fragmentation is attributed to several factors, including the misalignment of external funding and an overemphasis on disease-specific (vertical) public health programmes. While aimed at addressing specific health issues, these vertical programmes have inadvertently contributed to systemic inefficiencies, duplication of services, and resource wastage, undermining the holistic approach to PHC as envisioned in the Alma-Ata Declaration (Chaitkin et al., 2019; De Maeseneer et al., 2008). External funding, often earmarked for specific diseases or interventions, has led to a scenario where the health system becomes overly focused on certain diseases (Fryatt & Blecher, 2023). This has resulted in inefficiencies, care gaps, and strain on the health workforce, as skilled personnel are redirected to these programs, leaving other areas of the health system understaffed and under-resourced (De Maeseneer et al., 2008; Schieber et al., 2006).

3.3.5 Community Participation in the Cameroon Health System

Community participation in Cameroon is facilitated through structures known as "health committees," which are designed to enhance community involvement, promote effective communication, and foster partnerships between the health system and the community (Ghogomu et al., 2017b). These committees serve as platforms for dialogue, allowing community members to engage with the health system, provide feedback, and express their concerns, needs, and priorities. This engagement is intended to inform decision-making processes and improve the delivery of health services (Dada et al., 2022; Ghogomu et al., 2017b)(Ghogomu et al., 2017b; Rifkin & Pridmore, 2002). By involving the community, health committees aim to increase the acceptance and uptake of health services (Ghogomu et al., 2017b). Their responsibilities include raising awareness about health promotion and disease prevention, mobilizing community participation in health programs, identifying health issues and needs, proposing strategies to address them, and notifying health personnel of any disease outbreaks in the community (Ghogomu et al., 2017b).

In the wake of the Alma-Ata declaration, Cameroon adopted a series of health reforms in 1982, such as creating health districts, the operational level of the PHC system, to promote community participation; however, this materialised in 1995 (MOH, 2012a). Despite these

legislative and regulatory efforts, including the enactment of Law No. 90/053, Law No. 90/062, and Law No. 96/03, which were designed to facilitate community engagement through dialogue structures at various levels of the health system, actual community participation in health governance remains markedly low in Cameroon (MOH, 2012a). These laws aimed to embed community involvement deeply within the health system's operational framework, yet the effectiveness of these measures has been limited. The ongoing challenge possibly lies in transforming these legislative frameworks into tangible increases in community involvement, which is crucial for the sustained improvement of health outcomes. Therefore, substantial efforts are still required to bridge the gap between policy intentions and actual community engagement in Cameroon's health sector. However, much work is needed to increase community participation in health in Cameroon.

3.3.6 Human Resources for Health

Overall, recent assessments point to the fact that Cameroon lacks enough Human Resources for Health (HRH) to meet the PHC needs of the population, and the ones present are primarily located in urban areas, an impediment to the implementation of PHC (Kingue et al., 2013; Ongolo-Zogo et al., 2017a). The ratio of health personnel (medical doctors, nurses and midwives) to the population is 1.07 per 1000 inhabitants, below the WHO recommended standard of 2.3 per 1000 inhabitants (MOH, 2016a). In 2011, the ratio of physicians per 1000 inhabitants was 0.1, compared to 0.4 in Nigeria and 5.3 in the United Kingdom. For nurses and midwives, 0.5 in Cameroon, 1 in Nigeria and 10.2 in the United Kingdom in 2011 - there is no recent data (World Bank Group, 2022a).

The shortage of HRH in Cameroon can be attributed to several factors. Economic reforms imposed by the IMF and World Bank led to a freeze in public sector recruitment, reducing health workers and uneven distribution across regions (Tandi et al., 2015). This created a dependence on the private sector and exacerbated regional disparities, especially in underserved areas like the northern regions, where health outcomes are the poorest (Tandi et al., 2015). Additionally, the centralised and bureaucratic system of recruitment and deployment has caused delays, with new hires waiting up to 36 months to receive their first salary, further discouraging public sector employment (Sousa et al., 2014). Poor working conditions, including low salaries, heavy workloads, limited career advancement opportunities, and inadequate equipment, have driven many health workers to migrate to other sectors or abroad

for better opportunities (WHO, 2013). These factors collectively contribute to the critical HRH shortage and maldistribution in Cameroon.

In addition to the acute shortage of HRH in Cameroon, there are sharp disparities in the distribution of personnel between administrative regions and districts. According to the 2011 MOH data, the North West Region, with a population of 1,831,702, had 3,847 health workers, which accounted for 10.07% of the total health workforce in the country (MOH & WHO, 2017). Specifically, there were 97 Community Health Workers (CHWs), 82 physicians (including generalists and specialists), 1,590 nurses, and 377 paramedical practitioners. The South West Region, with a population of 1,420,277, had 3,679 health workers, making up 9.63% of the national health workforce at the time (MOH & WHO, 2017). In this region, there were 8 CHWs, 94 physicians, 1,804 nurses, and 368 paramedical practitioners. In comparison to the total Cameroonian population of 19,938,151 and a total health workforce of 38,207, both the NW and SW regions had a significant share of the total health workers (MOH & WHO, 2017).

However, when considering the size of the populations, the NW region had a higher number of health workers in proportion to its population compared to the SW region. The economically wealthier regions Centre and Littoral regions, with the largest share of health workers at 24.33%, and 13.40% of the HRH in Cameroon, respectively, suggest regional disparities in the distribution of health personnel, a situation that may have been exacerbated by the Anglophone Crisis affecting the Anglophone regions, as well as by decentralisation policies (MOH & WHO, 2017). Wealthier regions like Centre and Littoral, which have better infrastructure and more resources, can attract and retain more health workers. In contrast, less wealthy regions may struggle to provide adequate incentives and working conditions, resulting in fewer health personnel. This uneven distribution of health personnel is causing negative impacts on PHC in Cameroon, as the four regions with the lowest numbers of health personnel contribute to three-quarters of the total number of national maternal deaths (Ongolo-Zogo et al., 2017a). In addition, the deficit in HRH, particularly stark in some regions, has resulted in issues with personnel management, such as the underutilisation of personnel, mismatches between profiles and functions, noncompliance with career profiles, and high rates of absenteeism in public health centres ranging from 2% - 37% (Tchuinguem, 2009).

The primary strategy to address the HRH challenges in Cameroon has been to capitalise on the existing potential to optimise the resources and efforts of key stakeholders through improved management and governance of HRH, strengthened production of HRH and strategic monitoring of HRH (MOH, 2016a). This strategy led to the recruitment of HRH, the creation of new training schools the revision of curricula for HRH and the streamlining of the process for contract or temporary workers to become permanent employees in the public sector (Kingue et al., 2013; MOH, 2016a). A retention policy for HRH was also developed to ensure the presence of healthcare professionals in rural areas of Cameroon that are difficult to access (Kingue et al., 2013). However, these strategies did not address the uneven distribution of healthcare professionals, and there remain insufficient allocation of financial resources for HRH and the lack of an accreditation system for HRH training (Kingue et al., 2013). Similarly to service delivery, introducing an integrated CHW programme was seen as a potential option to address some of the HRH challenges, particularly in terms of lack of resources, via task shifting to close-to-community providers that require less training.

3.3.7 Health Financing in Cameroon

The financing of Primary Health Care in Cameroon reflects a complex history shaped by key international declarations, including the Alma-Ata (1978), Harare (1987), and Bamako Initiative (1987) (Ongolo-Zogo et al., 2017). These milestones have influenced the development of diverse health financing mechanisms in the country.

In Cameroon, the primary mechanism for financing PHC is cost recovery at the point of care, with pre-payment schemes such as microinsurance and health insurance remaining limited. PHC funding is derived from community-based sources, including service fees, medicine purchases, and donations, as well as non-community-based sources like public budgets and international aid (Ongolo-Zogo et al., 2017). Since 1994, fiscal decentralisation has allowed local health committees to manage pricing and allocate resources (Ongolo-Zogo et al., 2017).

Health financing in Cameroon is sourced from the government, private companies, NGOs, and households. However, the Ministry of Public Health's budget allocation has stagnated at

around 4.87%, far below the 15% target set by the Abuja Declaration ³(Ongolo-Zogo et al., 2017). In Cameroon, private funding constitutes 55% of health financing, with households bearing 52% of this burden. External funding, primarily from international donors, is directed towards maternal, child, and adolescent health, disease control, and health district development (Ongolo-Zogo et al., 2017).

The government's procurement mechanisms for PHC include gratuity payments for priority diseases and subsidies for managing socially impactful conditions, often funded by external actors, for example, through global health initiatives such as the Global Fund and GAVI. Despite these efforts, pre-payment mechanisms remain underdeveloped and out-of-pocket payments remain widespread, limiting access to care for many citizens (Ongolo-Zogo et al., 2017).

Since 2011, the government has implemented a performance-based strategic purchasing mechanism through the World Bank-supported Performance-Based Financing (PBF) programme, which also drives CHW initiatives (as further explained below). The PBF programme aimed to increase efficiency in resource use through a performance focus and increase resources available at facility levels to reduce out-of-pocket expenditures. The PBF programme in Cameroon also included a community component called Community Results-Based Financing (RBF), which is described in detail in section 3.4.3.

³ The Abuja Declaration was a commitment made by African Union member states during a special summit held in Abuja, Nigeria, in April 2001. The declaration aimed to address the severe challenges posed by HIV/AIDS, Tuberculosis, and other related infectious diseases across the continent.

3.4. Community Health Worker Programming in Cameroon

The Ministry of Public Health made another attempt to address the negative effects of inadequate human resources by implementing CHW programmes, in line with the recommendations of the World Health Organization and the Global Health Workforce Alliance (MOH, 2021).

To coordinate the CHW programmes, the Ministry of Public Health established task forces to coordinate Interventions Under Community Directives at the various health system levels (MOH, 2012b, 2016b). However, these task forces were delayed in institutionalisation and encountered some dysfunctions, especially at the community and District levels, where the quarterly meetings were irregular and did not involve key members (MOH, 2012b, 2016b).

When analysing the number of CHWs in Cameroon (Table 4) compared to other countries using data from the WHO National Health Workforce Accounts database, it is evident that the deployment of CHWs varies widely across African countries, each with its unique healthcare challenges and strategies.

Cameroon, with 7,258 CHWs as of 2020, has fewer CHWs with geographical coverage of Health Districts at the national level of 49.7% compared to countries like Ethiopia and Rwanda. Ethiopia, with 42,630 CHWs, has implemented one of the most extensive community health programmes in Africa, the Health Extension Programme, which has been instrumental in improving access to primary healthcare services across the country (McPake et al., 2015; WHO, 2024). Rwanda's CHW programme, with 58,567 CHWs, is also notably extensive and has significantly improved health outcomes, including reduced child and maternal mortality rates (Schurer et al., 2020; WHO, 2024).

Table 3: Distribution of CHWs in Cameroon by Region in 2020 (MOH, 2021)

Region	Total Number of CHWs	Population	CHWs per 10,000 Population
Adamawa	475	1,345,931	3.53
Centre	823	4,846,011	1.70
East	386	1,146,980	3.36
Far North	1,944	4,824,521	4.03

Littoral	530	3,987,226	1.33
North	1,206	2,964,768	4.07
North West	802	2,244,287	3.57
West	242	2,113,371	1.14
South	240	818,186	2.93
South West	610	1,862,691	3.27

Liberia and Sierra Leone, which have 12,625 and 13,966 CHWs, respectively, have leveraged their CHW programmes in the aftermath of the Ebola outbreak to strengthen their health systems and improve surveillance, health education, and community trust in healthcare services (Healey et al., 2021; Ishizumi et al., 2021b; Miller et al., 2018; WHO, 2024). These numbers reflect a substantial investment in community-based health strategies to rebuild and enhance their healthcare delivery.

Chad, with 8,077 CHWs reported in 2021, has a slightly higher number of CHWs than Cameroon despite having a smaller population (WHO, 2024). This suggests a more intensive deployment of CHWs per capita, which could indicate different health system priorities or a response to specific health challenges within the country. In stark contrast, Gabon, with only 110 CHWs in 2020, has a significantly smaller community health workforce (WHO, 2024). This could be due to various factors, including different health system structures, funding priorities, or the availability of other healthcare resources.

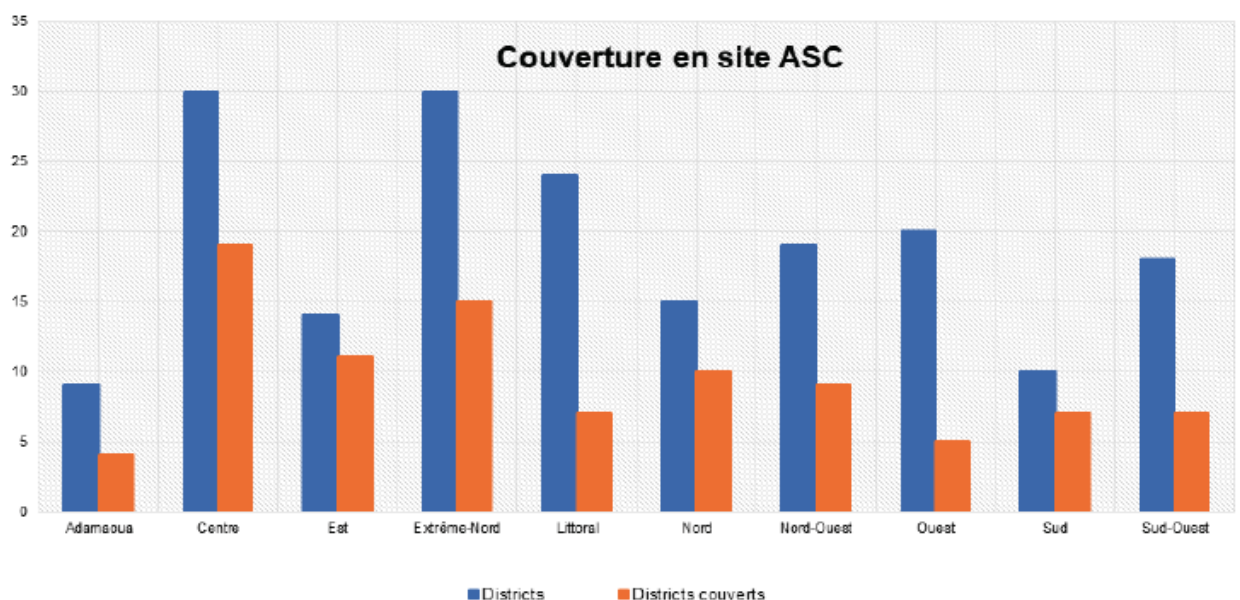
The variation in CHW numbers across these countries highlights the diverse approaches to integrating CHWs into national health systems. Factors influencing these numbers could include the burden of disease, geographic accessibility, government health policies, international support, and the health system to train and support CHWs. For Cameroon, the current number of CHWs and their geographical coverage suggest that the CHW programme can be expanded and enhanced to achieve better community health outcomes and more equitable access to healthcare services, particularly in underserved areas.

Various partners support the implementation of CHW programmes in Cameroon. These include the Global Fund, PLMI, UNICEF, JHPIEGO, and REACH OUT. These partners provide financial aid, training, supervision, and other resources necessary for the effective

functioning of CHW programs across different regions (MOH, 2021). The support from these partners can either be direct, where they manage their CHWs independently, or through pooled funding, where they contribute to national efforts managed by the Ministry of Public Health. It should also be noted that the numbers of CHWs presented are somewhat arbitrary as it is not clear whether they include contracted CHWs, active CHWs, or temporary CHWs.

Figure 9 shows that all ten regions in Cameroon have CHW programmes. The chart reveals significant regional disparities in the distribution of CHWs across Cameroon’s health districts. The East region, with the highest coverage ratio (0.86), demonstrates relatively comprehensive CHW integration, while regions like South and North also show fairly high coverage. In contrast, regions such as Adamawa, North-West, and South-West have less than half of their districts covered by CHWs. Littoral and West regions, despite their economic strength, exhibit the lowest coverage ratios (0.25). While at this moment, the actual reasons for this disparity are unclear, it could generally be attributed to a combination of political instability, geographical challenges, and varying levels of resource availability, all of which contribute to significant healthcare access disparities across the country.

Figure 9: Number of health districts covered by CHWs compared to the total number of health districts by region in Cameroon in 2020 (Source: PNLP 2019 activity report⁴)



⁴ Couverture en site ASC translates to CHW coverage across the health districts in Cameroon

3.4.1 Historical context of the CHW programme(s) in Cameroon

The concept of CHW programmes in Cameroon has its roots in the "health services" approach introduced in 1967. This approach was characterised by establishing four "demonstration zones of public health action," inspired by the World Health Organization, which aimed to model effective healthcare delivery at the community level (Ongolo-Zogo et al., 2017a). The approach progressively introduced selective health care and services that were considered economically viable, including the establishment of village health teams and village dispensing pharmacies. At the time, an evaluation of this health system approach revealed that community-based health activities stimulated demand for health services, and local communities were willing to fund, to some degree, health centres and activities (Ongolo-Zogo et al., 2017a). Following the 1978 Alma-Ata declaration and the adoption of the PHC approach, there was a further push to promote community involvement - the active participation of local populations in planning, managing, and financing health services (as described in detail in 3.3.5) (MOH, 2012a, 2016a).

CHWs in Cameroon have historically played a pivotal role in multiple health initiatives. These workers have been trained in diverse areas, including disease prevention, treatment, and community health education, enabling them to contribute effectively to several national health programmes. For instance, CHWs have been instrumental in the National Onchocerciasis Control Programme, where they aided in the management and distribution of treatments. They have also been critical in providing continuity of care for people living with HIV/AIDS, tracking and re-engaging patients lost to follow-up within the National Tuberculosis Control Programme, and managing uncomplicated malaria cases at the community level as part of the National Malaria Control Programme. Moreover, CHWs have been actively involved in responding to public health emergencies, such as the COVID-19 pandemic and the recent cholera outbreak in the Southwest region in 2021. Their roles have extended to community mobilisation efforts during National Immunisation Days and other public health campaigns to improve community health outcomes.

Over time, different community-based interventions, which included CHW programmes, were developed, making use of community members to ensure the participation of the local population (MOH, 2012a). In Cameroon, various names have been used for community

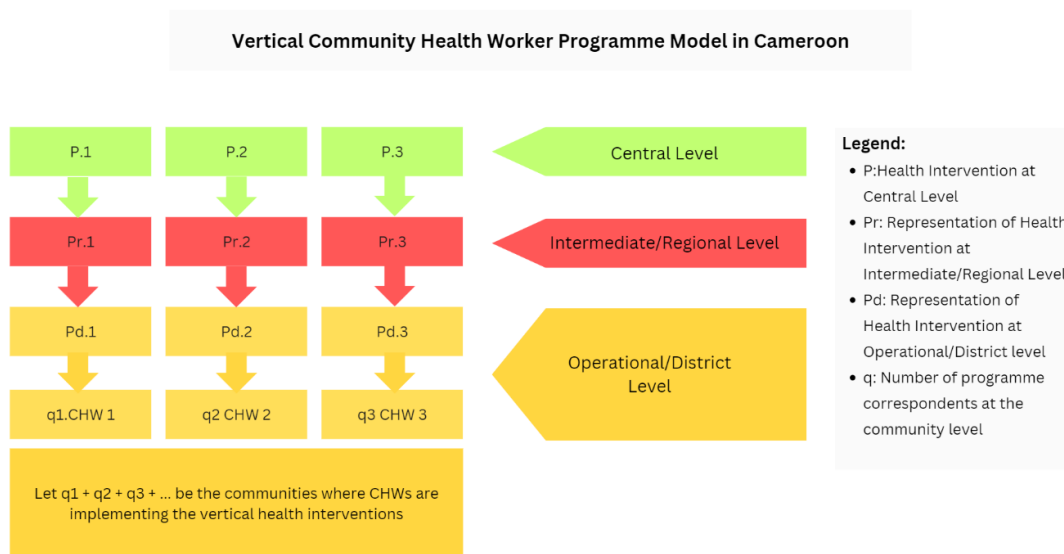
members involved in these interventions depending on the health theme concerned and the political and managerial choices of programme funders. The names included (MOH, 2012a):

- Health Promoters
- Community Health Workers
- Community-Based Service Volunteers
- Community-Based Distribution agents
- Traditional Birth Attendants
- Village Health Agents
- Peer Educators
- Community Distributors
- Community Volunteers
- Community Relay Agents
- Community Relays
- Social Mobilisers
- Cholera Soldiers

The Cameroonian health system was not initially designed to integrate CHWs into its decentralised structure fully. Full integration would mean that CHWs are systematically incorporated into every level of the health system, with clearly defined roles, adequate training, effective supervision, and formal structures for community participation. However, in practice, CHW programmes were selectively implemented through vertical health initiatives, often relying on undertrained CHWs with limited oversight from healthcare professionals (Ongolo-Zogo et al., 2017a). This lack of cohesive integration, combined with inadequate support mechanisms, reduced the effectiveness of CHWs in contributing to the overall health system (Ongolo-Zogo et al., 2017a).

The vertical model for CHW programming was used in Cameroon until 2010, as depicted in Figure 7 below. Figure 7 illustrates this vertical structure, depicting how health interventions were conceived and coordinated at the central level (P1, P2, P3), adapted and managed at the regional level (Pr1, Pr2, Pr3), and executed at the district level through CHWs (q1CHW1, q2CHW2, q3CHW3).

Figure 7: Vertical Community Health Programme Model in Cameroon (MOH, 2012a)



This model reflects the hierarchical organization of health services within Cameroon’s system at the time, where disease-specific interventions and services were conceived and governed at the central level. These interventions were then systematically distributed across all administrative tiers, ensuring consistent representation at regional, district, and community levels. In practice, this meant that each health programme, whether related to a particular disease or service, was initiated at the central level, managed at the intermediate (regional) level, and ultimately executed by CHWs at the district and community levels.

In this vertical framework, CHWs were deployed within their respective communities to implement disease-specific or service-specific activities as directed by the central health programmes. For example, programmes related to Family Planning, HIV/AIDS Control, Integrated Management of Childhood Illnesses, Nutrition, Malaria Control, Water-Hygiene-Sanitation, National Onchocerciasis Control, and Expanded Immunisation each had dedicated CHWs at the community level. These CHWs operated within a vertically integrated structure, which aligned central health policies with local implementation.

In 2010, at the Kribi Conference chaired by the Minister of Public Health on the use of community health workers for health interventions (MOH, 2012a), the following shortcomings of the vertical model were highlighted:

- Duplication of CHWs intervening in the communities
- Multiple complaints led to the discouragement and resignation of CHWs.

- Absence of a standard CHW profile
- Discrepancies in CHWs' level of health knowledge, communication skills and basic education
- Disparities in the motivation of CHWs across different programmes
- Duplication of resources for the same intervention
- The multiplicity of procedures for the selection and management of CHWs

In response to these shortcomings, the sequential integration model (Figure 8) was developed and subsequently adopted by the Ministry of Public Health following the 2010 Kribi Conference. This model was designed to address the inefficiencies of the vertical approach by sequentially integrating various health programmes around a single CHW or a group of CHWs, who would then intervene comprehensively across all relevant programme areas within their communities.

Figure 8: Sequential Integration Model of CHW programmes at the Health District (MOH, 2012a)

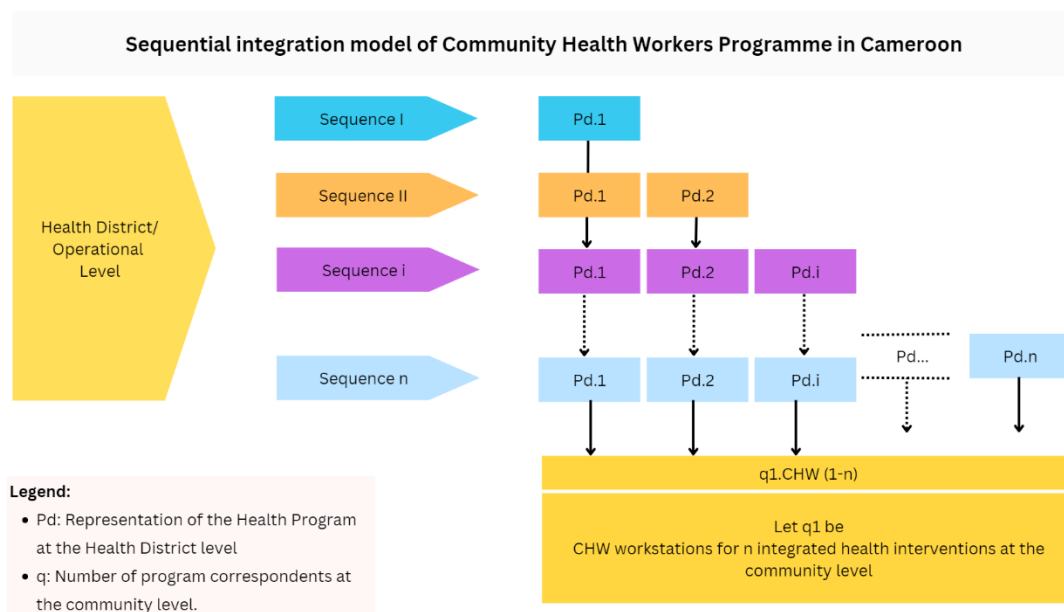


Figure 8 illustrates the Sequential Integration Model of CHW programmes at the Health District/Operational Level, where various health interventions are systematically coordinated (MOH, 2012a). Sequences (Sequence I, II, III, etc.) represent different phases of health interventions that are rolled out progressively rather than simultaneously to manage the CHW workload effectively. Each sequence integrates specific health programmes (Pd.1, Pd.2, etc.), moving away from isolated, vertical implementation towards a unified district health strategy

(MOH, 2012a). At the community level, CHWs (q1CHW, q2CHW, etc.) are responsible for implementing these integrated health interventions, reflecting a comprehensive role where they address multiple health needs in a coordinated, holistic manner (MOH, 2012a).

The Sequential Integration Model differs significantly from the Vertical Model in its approach to health programme implementation, the role of CHWs, resource utilisation, and community involvement. In the vertical model, health programmes were implemented separately, with CHWs often assigned to specific single-disease or service interventions, leading to duplication of efforts and inefficient use of resources. In contrast, the sequential model integrates these previously isolated programmes, implementing them in a phased manner through sequences, which allows CHWs to handle multiple health interventions in a coordinated fashion. This approach promotes the polyvalence of CHWs, streamlines resource use, and reduces redundancy. Additionally, the sequential model fosters greater community involvement by presenting health interventions as part of a unified effort, thereby improving the visibility and acceptance of CHW programmes within the community. Overall, the sequential model represents a more holistic and efficient strategy for delivering health services at the community level.

Based on the recommendations of the Kribi conference, the sequential integration model was considered more effective in promoting the versatility of CHWs and efficient use of resources, and the visibility of CHW interventions at the community level. However, the success of this model required compliance with guiding principles and the implementation of sustainability mechanisms (MOH, 2012a). These guiding principles include the involvement of the community and local authorities, a clear definition of the CHWs' roles and responsibilities, a standardised profile and training for CHWs, and adequate remuneration and incentives for their work (MOH, 2012a). Additionally, sustainability mechanisms, such as regular supervision and evaluation and linkages with health centres, are necessary to ensure the continued success and effectiveness of the integrated model (MOH, 2012a).

3.4.2 CHW Programme Structure and Implementation

This section explores the key elements that influence the structure and implementation of CHW programmes in Cameroon, as guided by the Ministry of Public Health's policies. Drawing from national guidelines, this section examines the roles, responsibilities, and operational frameworks that govern CHW programmes, focusing on how these policies shape the selection, training, supervision, and support mechanisms for CHWs.

3.4.2.1 CHW Roles

As defined by the Ministry of Public Health, CHWs in Cameroon fulfil various responsibilities, including promotional, preventive, and curative health interventions. Their promotional duties involve promoting healthy behaviours within communities, such as advocating for exclusive breastfeeding, malaria prevention, and adherence to vaccination schedules (MOH, 2012a). Regarding preventive care, CHWs engage in malnutrition screening, water purification, and community-based disease surveillance (MOH, 2012a). They are also trained to manage uncomplicated cases of common illnesses, including acute respiratory infections and malaria, under the supervision of healthcare professionals (MOH, 2012a). Moreover, CHWs are crucial in resource mobilisation, disseminating health information, and coordinating community health campaigns. Their deep-rooted understanding of local cultural and social dynamics significantly enhances the effectiveness of health interventions, promoting greater community participation. By acting as essential intermediaries between remote or underserved communities and the formal healthcare system, CHWs help to reduce the burden on health centres and address gaps in healthcare access, particularly in settings with limited resources.

The structural mechanism for sustainability involves defining the roles of different actors in CHW programmes, as depicted in Table 4 below (MOH, 2012a). This table delineates the roles of various stakeholders in the community healthcare system. Health Committees, both at the community and district levels, raise awareness, participate in the selection and evaluation of CHWs, mobilise resources, and ensure the availability of medical supplies (MOH, 2012a). The Health Area and District Executive Teams oversee the selection process, coordinate and supervise CHWs, and facilitate resource supply. The Regional Delegation of Public Health involves resource mobilisation, supervision, and implementation of health policies. The Municipal Council supervises community-directed interventions and supports CHWs. The Ministry of Health establishes the legal framework, coordinates activities, and advocates with

partners. Related sectors and partners provide the necessary support, both technical and financial.

Table 4: CHW programme actors and their roles in Cameroon (MOH, 2012a)

Actors	Roles
Community	<ul style="list-style-type: none"> - Participates in the CHWs selection process. - Participates in monitoring-evaluation of CHWs. - Mobilises resources for the implementation of interventions under community directives. - Convinces community members to buy into the process.
Community Health Worker	<ul style="list-style-type: none"> - Implements the integrated package of interventions. - Collects and transmits health information to the head of the local health area. - Participates in the epidemiological surveillance of diseases. - Serves as a transmission link between the community and health services. - Reports to the community leader.
Health Committee (community-based structure involved in health planning, implementation, and monitoring at the local level. It often includes representatives from the community, health workers, and local authorities.)	<ul style="list-style-type: none"> - Raise community awareness in the CHW selection process. - Participates in the choice of CHWs. - Participates in the evaluation of CHWs. - Mobilises resources for community-directed interventions. - Convinces community members to buy into the process. - Facilitates the supply of medicines and inputs for the health centre and CHWs.
District Health Committee (responsible for coordinating health activities within the district. It typically includes representatives from the health department, traditional leaders, and community members.)	<ul style="list-style-type: none"> - Raise community awareness in the CHW selection process. - Participates in the choice of CHWs. - Participates in the evaluation of CHWs. - Mobilises resources for community-directed interventions. - Convinces community members to buy into the process. - Participates in improving the quality of health services in the Health District. - Facilitates the supply and management of medicines and inputs for health centres in the Health District and CHWs.

<p>Health Area Team /District Executive Team (Technical team responsible for the day-to-day management of health services within a health area or district.)</p>	<ul style="list-style-type: none"> - Ensures the implementation of the CHWs selection process. - Coordinates interventions under community directives. - Trains and supervises CHWs. - Participates in the evaluation of CHWs. - Programme activities in the community in collaboration with CHWs. - Synthesises and analyses CHWs activity reports. - Makes decisions to resolve problems that hinder the smooth running of activities. - Facilitates the supply of medicines and inputs for CHWs. - Contributes to the motivation of the CHWs. - Documents community-directed interventions.
<p>Regional Delegation of Public Health (administrative arm of the Ministry of Public Health at the regional level. It is responsible for overseeing health programs and activities within the region, providing technical support to health districts, and coordinating with other regional stakeholders.)</p>	<ul style="list-style-type: none"> - Mobilises resources for the implementation of health activities. - Supervises and trains District Executive Team. - Participates in the evaluation of Health District activities. - Ensures the programming of integrated activities. - Coordinates the activities of the Health District. - Facilitates the supply of medicines and inputs for health centres. - Translates the health policy on Community Approaches into activities. - Documents community-directed interventions.
<p>Municipal Council (responsible for providing infrastructure, sanitation, and other services that impact the health of the population. It often collaborates with the health sector in implementing health programs.)</p>	<ul style="list-style-type: none"> - Ensure administrative supervision of interventions under community directives. - Contribute to the motivation of CHWs. - Mobilise resources for implementing interventions under community directives.
<p>Ministry of Public Health</p>	<ul style="list-style-type: none"> - Is responsible for establishing a legal framework. - Coordinates interventions under community directives. - Ensures advocacy with partners. - Develops the basic training module for CHWs on family planning.
<p>Related sectors</p>	<ul style="list-style-type: none"> - Provide technical, logistical and financial support
<p>The partners</p>	<ul style="list-style-type: none"> Provide technical and/or financial support.

3.4.2.2 Training of CHWs

In line with Cameroon's Ministry of Health guidelines, CHW training is recognised as a critical component in ensuring the competence and effectiveness of CHWs. Training is structured in sequences and emphasises the need for a basic foundational module that covers roles and responsibilities, interpersonal communication, and mobilisation techniques (MOH, 2012a). The primary focus is on promoting Essential Family Practices, crucial for improving child survival and community well-being (MOH, 2012a). These practices include exclusive breastfeeding, vaccination, proper nutrition, use of clean latrines, and home management of common illnesses such as diarrhoea and malaria. Additionally, the training addresses the importance of handwashing, Vitamin A supplementation, using long-lasting insecticide-treated nets, and encouraging contraceptive methods and HIV screening (MOH, 2012a).

CHWs are trained to manage these Essential Family Practices and to refer serious cases to health centres when danger signs appear. Training modules are developed to ensure CHWs are equipped with the necessary communication and health promotion skills, and additional specific training is provided as new programs are integrated (MOH, 2012a). With support from health programmes, the district management teams oversee the ongoing training process, ensuring regular sessions at least once a year and monthly supervision sessions (MOH, 2012a). Trainings are delivered in French, English, or any other locally appropriate language, and the initial training lasts at least 10 days, covering both basic and programme-specific content.

3.4.2.3 Supervision of CHWs in Cameroon

In Cameroon, supervising CHWs is critical to ensuring the sustainability and effectiveness of community-directed health interventions. Supervision is designed to be systematic and regular, addressing the gaps identified in previous initiatives. Following the initial training, a structured supervision plan is implemented to provide ongoing support and ensure CHWs can effectively carry out their responsibilities (MOH, 2012a).

The first follow-up occurs one month after CHWs begin their activities, with support from all supervisory levels, including central, regional, district, and sub-district teams. This is followed by a second supervision session one month later, coordinated by regional and district health management teams, with results shared at the central level. A third follow-up also scheduled a month after the second, continues this pattern of regular oversight. Beyond these initial

sessions, monthly supervisions are carried out by district health teams and health area supervisors, ensuring continuous monitoring of CHW performance (MOH, 2012a).

The Health Area teams, with backing from the District Management teams and the Regional Delegation for Public Health, provide direct oversight. This structured, multi-level supervision framework ensures that CHWs receive the necessary guidance and support to meet their communities' health needs while maintaining communication with higher-level health authorities. Through this approach, CHW supervision contributes significantly to the sustainability of community health interventions in Cameroon.

3.4.2.4 Remuneration of CHWs in Cameroon

Recognising the significant burden on CHWs, Cameroon's Ministry of Health outlined financial and non-financial incentive mechanisms to ensure their motivation and sustainability. Financial incentives for CHWs included discounts on health services if a CHW's work led to increased service utilisation, payment for participating in health campaigns, profits from selling health products, and bonuses for high performance in key health indicators (MOH, 2012b, 2021).

On the other hand, the recommended non-financial incentives for the CHWs included free consultations for them and their families, recognition in the community, community support (e.g., assisting with farm work), and work equipment, badges, T-shirts, and other gadgets (MOH, 2012b, 2021). This comprehensive incentive system which has been proven to be effective with CHWs in other settings is aimed at maintaining CHWs' motivation and ensuring the long-term success of CHW programmes by addressing both personal and professional needs, thus enhancing their service delivery and impact on community health (Bhattacharyya et al., 2001; Kok et al., 2015; MOH, 2021; D. Singh et al., 2015).

The *National Guide for the Integration of Interventions under Community Directives in Cameroon* suggests that the motivation of CHWs can be enhanced through various incentives. These include both monetary compensation and non-monetary rewards, such as acknowledgement of their work, opportunities for professional growth, and participation in paid activities. However, while the Cameroonian MOH acknowledges these motivational strategies, it raises the question of the consistency and equity of such incentives across different regions. The remuneration of CHWs, the presence of formal contracts, and the terms of

employment may vary significantly due to the disparate sources of funding, which include community contributions, local government allocations, and external aid. This variability could potentially lead to inequities in CHW motivation and performance, affecting the overall efficacy of CHW programmes. Therefore, there is a need to understand the specific contractual and financial arrangements for CHWs to evaluate the sustainability and fairness of their motivation and the consequent impact on health service delivery.

3.4.3 Community Result-Based Financing and CHWs

Community Results-Based financing is one of the major drivers of CHW programmes in Cameroon, which is implemented as one component of the World Bank Group-supported Performance Based Financing (PBF) programme mentioned above. It is worth describing the programme as part of this study to provide additional context to implementing CHW programmes in Cameroon.

PBF is a health financing reform involving a change in strategic purchasing, i.e., how healthcare services are reimbursed. This change is brought about by introducing a transfer of resources to healthcare service providers based on a contract (Fritsche et al., 2014). The contract defines a bonus payment according to a fee-for-service schedule for a selected list of services, conditional on a quality measure (Fritsche et al., 2014).

Recognising the potential of PBF to enhance healthcare delivery, the World Bank and the Government of Cameroon embarked on a broader PBF project in 2008, officially launching it in February 2011 (Sieleunou et al., 2017). This larger-scale project targeted four of Cameroon's ten regions, beginning in the Littoral Region and extending to the East, North-West, and South-West regions in 2012. It aimed to improve both the quality and quantity of healthcare services across public, private, and faith-based organisation facilities (Sieleunou et al., 2017).

The term 'community Results-Based Financing' (cRBF) is used to describe the community component of a PBF scheme involving community actors such as community CHWs that are contracted to improve access to –and sometimes directly provide– preventative, promotional, and curative healthcare services (Falisse et al., 2017). In the context of cRBF, CHWs are contracted by health centres for a broad range of responsibilities to strengthen community health infrastructure (MOH, 2016c).

According to the *Execution Manual for Performance-Based Financing in Cameroon*, CHWs' duties that can be contracted for the cRBF component include identifying and referring clients to healthcare facilities, tracing patients lost to follow-up for re-engagement in care, conducting home visits alongside Health centre staff, and orchestrating community awareness initiatives to promote healthcare service utilisation, all in line with the roles of CHWs described in section 3.4.2 (MOH, 2016c). This comprehensive package of tasks and activities emphasises CHWs'

integral role in enhancing healthcare accessibility and effectiveness through community engagement and support in Cameroon.

The selection and performance evaluation processes for CHWs are structured to ensure the efficacy and integrity of community health initiatives. Eligibility criteria for CHW candidates, which are in alignment with the *National Guide for the Integration of Interventions under Community Directives in Cameroon*, include prior participation in health programs, residency within the service area, literacy, commendable character, and the ability to communicate in local languages, with a strong encouragement for female applicants to foster inclusivity (MOH, 2012b, 2016c). Performance-based contracts, subject to a three-month probationary period, are instrumental in maintaining high service delivery standards. The operational toolkit for CHWs comprises referral registers, referral forms, performance declaration/validation forms, and designated registers for tracking referred clients, facilitating a systematic and accountable approach to community health service (MOH, 2016c). Performance indicators (Table 5 - used to evaluate the contributions of CHWs under the cRBF programme in Cameroon), such as the number of community referrals received and lost-to-follow-up cases re-engaged, serve as quantitative metrics for evaluating CHWs' contributions to healthcare objectives. This structured framework ensures that CHWs are effectively integrated into health systems, bolstering community health outcomes through targeted interventions and continuous performance improvement.

Table 5: CHWs performance indicators under cRBF in Cameroon.

Indicator	Definition	Data collection Tool	Unit price (FCFA)
Community referral received in the HF	Client referred by a CHW of its area and received in the HF	CHW referral registers and community referral registers of the HF	300 (£0.4)
Lost-to-follow up cases referred by the CHW and received in the HF	Lost-to-follow up cases of his area referred by the CHW and received in the HF	CHW referral registers and community referral registers of the HF	300 (£0.4)

At the end of each month, the facility holds a coordination meeting with the CHWs to evaluate their performance and supervise their work. The CHWs also discuss any difficulties they face during the month with the health centre and find appropriate solutions to improve their work

(MOH, 2016c). Meanwhile, the Head of the Health Centre assesses the level of achievement of objectives assigned to each CHW (MOH, 2016c).

The implementation of cRBF programmes in Cameroon reveals significant challenges and opportunities inherent in implementing such initiatives within health systems. Firstly, the engagement with existing community structures such as CHWs has proven indispensable, where the longstanding presence of CHWs necessitated an approach that involved training and subcontracting them through local health centres, tailoring these efforts to the needs of local contexts (Falisse et al., 2017; Sieleunou et al., 2017).

However, ensuring timely incentives and payments emerges as a critical issue, given that most of the community actors, CHWs in this case, are often living in situations close to poverty (Falisse et al., 2017). The adjustment of compensation structures for CHWs under the cRBF programme in Cameroon suppressing a fixed pre-payment mechanism led to increased CHW attrition, as it acted as a demotivator (Bertone et al., 2016; Falisse et al., 2017; Lohmann et al., 2018). One of the arguments for discarding such a mechanism of a fixed pre-payment was that it may make community actors like CHWs a de facto part of the MOH's payroll; hence, the need for a mechanism that balances between integrating these workers into the MOH's operational framework without stretching the fragile payroll system (Falisse et al., 2017; Renmans et al., 2016; Soeters et al., 2006).

Furthermore, in Cameroon, similar to Benin and The Gambia, the choice of indicators for the cRBF are a policy tool for MOHs to set healthcare priorities. However, while most cRBF schemes focus on health promotion indicators, the Cameroon scheme includes curative services. While the inclusion of curative service to the CHWs' package of activities might be perceived as beneficial for populations that do not frequently access the health centre, it raises concerns about tensions between expanding service delivery scopes and maintaining the quality and feasibility of CHW services (Baine et al., 2018; Falisse et al., 2017; Renmans et al., 2016). This expansion risks overextending CHWs' roles beyond their training and qualifications, potentially diluting the quality of care.

Ensuring the quality of CHW training involved in the cRBF programme is vital, given its direct impact on service delivery at the community level (Bhattacharyya et al., 2001; Falisse et al., 2017; Perry et al., 2014). In Cameroon, the predominant use of cascading training models for

CHWs under the cRBF programme, although practical for reaching a broad audience, often results in poor training quality, necessitating rigorous supervision and periodic refresher sessions (Falisse et al., 2017; Perry et al., 2014).

Moreover, the revitalisation of CHW systems in Cameroon through cRBF schemes has notably enhanced outreach and access, enabling the provision of services to previously unreached populations, such as nomadic communities, thereby improving essential health indicators like vaccination coverage (Falisse et al., 2017). Finally, integrating cRBF approaches within the broader health system highlights an opportunity for clarifying and enhancing the roles and skills of CHWs and health centre committee members (Falisse et al., 2017; Strachan et al., 2012). This approach fosters closer alignment with health centres and provides a structural basis for integrating new health interventions, positioning cRBF not merely as a financing mechanism but as a holistic platform for health system strengthening.

The implementation of the cRBF reveals that community engagement is crucial for expanding the coverage of essential health services in a cost-effective manner, particularly in situations where there is limited fiscal space for health. It is worth noting that successful programs have been built on local realities and institutions, and adjustments and learnings have been made from the field. However, there are still many more questions and unknowns than answers about key issues of such programs in FCAS. One such question is how to enhance community trust and promote adherence and behavioural change to CHW activities in FCAS, where trust in the government has been broken. Another question is related to community feedback mechanisms, including those that enable vulnerable individuals and groups to provide their input.

3.4.4 Challenges and Future Directions

According to the 2016 manual on training CHWs by the Cameroonian MOH and UNICEF, despite the government's dedication to improving public health, Cameroon struggled with several critical issues that necessitate a comprehensive and integrated community-based approach to health intervention (MOH & UNICEF, 2016). These challenges included limited community involvement in health problem management, underutilisation of health units by community members, and the scarcity of human, financial, and material resources (MOH & UNICEF, 2016). Against this backdrop, using CHWs was seen as a strategy for enhancing access to quality information and care within communities.

According to *Cameroon's Health Sector Strategy for 2016-2027*, the Cameroonian government acknowledges that community health in Cameroon is not sufficiently developed in the health system and that CHWs operate without a legal framework (MOH, 2016b). This lack of a legal framework implies that there are no standardised policies or laws that define the roles, responsibilities, training requirements, or operational protocols for CHWs within the health system. As a result, CHWs may face challenges such as inconsistent training, unclear job expectations, and limited support from the health system, which can affect the quality and effectiveness of the services they provide. The strategy also recognises the absence of a national policy for community health and the regulatory framework for community participation not updated, which has contributed to low availability and accessibility to quality health care and services, a priority problem for Cameroon (MOH, 2016b). The lack of a formal structure for community health initiatives hampers the integration of CHWs into the broader health system and limits the potential impact of community-based health interventions.

In recognition of the challenges faced by CHW programmes and the broader health system in Cameroon, the Cameroonian MOH developed the first *National Strategic Plan for Community Health*, aimed at strengthening community participation through community-directed interventions, such as CHW programmes, through their institutionalisation, community ownership and financial empowerment (MOH, 2021).

However, the CHW programmes in Cameroon are characterised by weaknesses such as insufficient financial resources for the implementation of community health activities – heavy reliance on external aid; weak managerial, human, and financial capacity in managing community health programmes; insufficient duration of training for dedicated human resources for community health; and insufficient supervision and monitoring of community interventions at all levels (MOH, 2021). Compounding these weaknesses, CHW programmes in Cameroon face threats such as the socio-political crisis in the North-West and South-West regions and the insecurity in the Far North and East regions (MOH, 2021). The programmes are also threatened by the massive influx of refugees from neighbouring countries and internally displaced persons, as well as the persistent practices of corruption and poor governance (MOH, 2021).

In response to these challenges, the Cameroonian government's *National Strategic Plan for Community Health (2021-2025)* outlines a comprehensive strategy with five key objectives (MOH, 2021):

1. **Strengthening Institutionalisation and Governance:** Establish a regulatory framework for community health, ensuring full participation from all relevant stakeholders to enhance the governance of community health interventions.
2. **Improving Community Health Service Provision:** Aim to serve at least 60% of populations living more than 5 kilometres from health centres or in isolated areas by community health workers or benefit from an integrated package of health interventions (see Appendix 1 for details).
3. **Enhancing Communication for Development:** Promote community health and increase demand for effective community health care and services through targeted communication strategies.
4. **Fostering Monitoring, Evaluation, and Research:** Implement comprehensive monitoring, evaluation, and operational research on community interventions to ensure quality data collection and impact assessment of community-directed interventions.
5. **Ensuring Access for Key and Vulnerable Populations:** Guarantee that at least 60% of key and vulnerable populations have access to quality healthcare, including community healthcare, focusing on gender and human rights considerations.

By achieving these strategic objectives, Cameroon aims to overcome the current challenges facing CHW programmes and enhance the effectiveness and reach of community health interventions, ultimately improving health outcomes and access to care for underserved populations. Furthermore, understanding how CHW programmes in Cameroon adapt and operate in fragile contexts provides valuable insights for building effective regulatory frameworks. By acknowledging the realities faced by CHWs, this research can identify programme gaps and propose strategies to reach isolated populations. These insights from this study could inform targeted communication approaches, promoting community health and supporting CHWs. Considering design, implementation, and CHW experiences, the comprehensive research approach adopted by this study could also contribute to monitoring and evaluation efforts. Moreover, eliciting CHWs' needs and preferences allows for contextually relevant support mechanisms, enhancing their capacity to serve effectively.

The findings from this study could contribute to addressing the threats to CHW programming in Cameroon, such as the socio-political crisis in the North-West and South-West regions and the fragile context in the northern part and the eastern border region. The insights from this study could also contribute to addressing some of the identified weaknesses, such as the weak managerial, human, and financial capacity in managing the CHW programmes.

CHAPTER 4: Research Methods

This Chapter reviews the research methodology selected for this study and explains why the methodological design and approaches were selected to answer the identified research questions.

4.1 Research Design

The research design adopted for this study is a mixed-methods approach, integrating quantitative and qualitative methodologies to comprehensively analyse the research questions (Creswell, 2014). This synergistic design allows for collecting and analysing measurable data to quantify patterns and trends while simultaneously gathering rich, descriptive data to explore participants' perspectives and experiences in depth (J. W. Creswell, 2014).

This exploratory study focuses on how and why questions within a relatively understudied topic and setting. Rather than testing specific hypotheses, the research aims to investigate how CHWs and their programmes in the Buea Health District respond to and cope with the shock, uncertainty, and fragility resulting from the Anglophone crisis. By adopting an exploratory approach, the study seeks to uncover nuanced insights and generate a multifaceted understanding of the complex dynamics at play, thereby contributing to the broader body of knowledge in global health and health systems strengthening.

This study applied the mixed-methods approach using a parallel design. A parallel mixed-methods design was chosen for this study to allow for the simultaneous collection of qualitative and quantitative data, providing a comprehensive understanding of how the CHW programme operates during the conflict, experiences, and preferred support strategies of the CHWs (Halcomb & Hickman, 2015). This approach maximised efficiency considering limited time and resources, reduced researcher bias, and enabled the immediate integration of complementary data, which is particularly important in the dynamic and complex context of the Buea Health District (Halcomb & Hickman, 2015).

The qualitative aspect involved key informant interviews with programme managers, supervisors, and community representatives, which provided insights into how the CHW

programme in the Buea Health District operated during the conflict. Simultaneously, focus group discussions were conducted to answer research question two, exploring the experiences and coping mechanisms of CHWs. At the same time, the quantitative aspect included a participatory ranking exercise to address research question three on the preferred support strategies for CHWs during the conflict. This exercise, informed by literature and preliminary findings from key informant interviews and focus group discussions, required participants to propose and rank support strategies and explain the rationale behind their choices. Following the ranking exercise, additional life history interviews were conducted with selected participants to explore their histories and experiences as CHWs further, adding depth to the qualitative and quantitative findings.

Furthermore, I adopted a pragmatic approach for this study to explore strategies for supporting CHWs and their programmes in FCAS. This choice was driven by the complexities of FCAS, where a flexible research strategy is essential. Pragmatism emphasises practical outcomes and the "reality cycle" concept, which acknowledges a single reality perceived differently across contexts and enhances the transferability and applicability of findings. Pragmatism allowed the research to remain theory-agnostic, facilitating a comprehensive exploration of the research questions and ensuring the development of academically robust insights and practical strategies for CHW support. Pragmatism's focus on "what works" aligns with the goal of addressing real-world issues, guiding the selection of research methods that best answer the research questions (J. W. Creswell, 2014; Hall, 2013; Shannon-Baker, 2015).

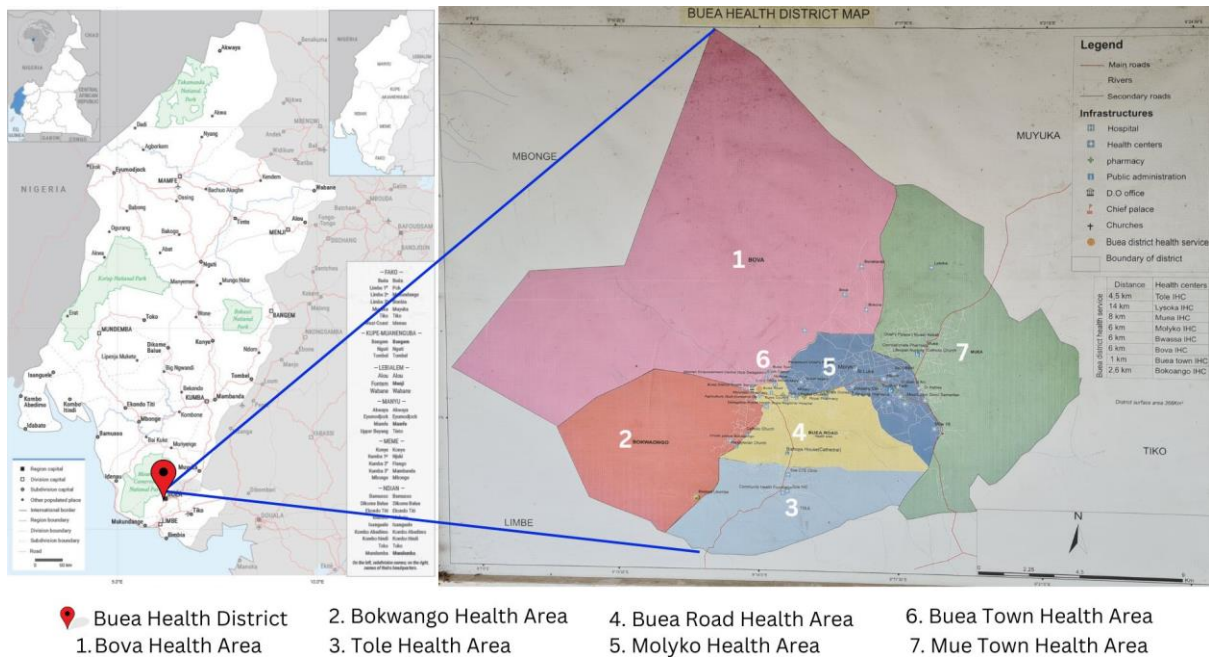
4.2 Site Selection

This study conveniently targeted the Buea Health District – Figure 10 - in the South West Region of Cameroon for its representativeness of both general fragility and the specific challenges posed by the Anglophone crisis. As the capital of one of the two conflict-affected Anglophone regions, Buea experiences insecurity and instability as other settings across the Anglophone regions, reflecting the broader conflict-affected context. Additionally, Buea is characterised by a mix of urban and peri-urban communities, ensuring that the research captures diverse operational settings for CHW programmes, which enhances the generalisability of the findings to other similarly fragile environments.

Moreover, Buea's status as a relatively stable urban centre made it a destination for internally displaced persons (IDPs) fleeing more insecure areas, providing a unique opportunity to study the impact of population displacement on CHW programmes in conflict settings. This selection ensures that the findings are relevant to Buea and can be generalised to other conflict-affected settings, especially those experiencing urban-rural dynamics and displacement. The choice of Buea also reflects practical considerations for my safety and research continuity, enabling more reliable data collection while adhering to Queen Margaret University's Health and Safety regulations. By selecting the Buea Health District, this study ensures that the research site offers a broad representativeness of the key dynamics in fragile and conflict-affected settings, thus enhancing the generalisability of the findings to similar contexts.

Buea Health District covers an estimated population of 181,843 in 2021 (Layu et al., 2022). The population has likely increased due to the influx of IDPs, contributing to discrepancies in population estimates, with figures ranging from 133,092 (Kimbi et al., 2014) to 181,843 (Layu et al., 2022). The United Nations High Commissioner for Refugees (UNHCR) reported that 246,000 IDPs resided in the Southwest Region in 2019, further supporting the increase in population. Buea Health District is divided into seven health areas—Bokwango, Bova, Buea Road, Buea Town, Molyko, Muea, and Tole—serving its diverse population through 38 operational health establishments – as depicted in Figure 10 below (Ghangha et al., 2021). However, precise data on human resources for health across these facilities were unavailable at the time of this study.

Figure 9: Map of Buea Health District – obtained from the Buea District Health Services



The health areas within the Buea Health District offer a representative cross-section of urban and peri-urban dynamics, making the site ideal for generalising findings to other FCAS. Molyko, a predominantly urban area, hosts most of the district’s educational institutions, including universities, high schools, primary schools, and many business establishments and student accommodations. Buea Road serves as the administrative hub, housing the offices of the Governor, Mayor, law enforcement, and the army barracks, alongside business establishments and most residential housing. Buea Town, in addition to being peri-urban, hosts some of the wealthier communities in the district, contributing a mix of socioeconomic backgrounds. Bokwango, also peri-urban, is primarily residential. Tole and Bova, also peri-urban, are located on the outskirts of Buea, characterised by vast farmlands. Tole is home to a tea plantation that employs many community members. Muea while having significant farmlands, is an important commercial hub, housing one of Buea’s main markets. It is also a critical access point into Buea, serving as the first stop for many internally displaced persons arriving from other parts of the region. This combination of urban, peri-urban, administrative, commercial, and agricultural environments within the Buea Health District ensures the site’s representativeness and enhances the generalisability of the study’s findings to other fragile and conflict-affected settings.

For the health areas selected for the focus group discussions, purposive sampling was employed to capture geographical and experiential diversity. Health areas were selected based on two key factors: CHW availability and the degree of conflict impact. This process aimed to ensure that collected data reflected a range of conflict-related experiences. Priority was given to health areas with distinct experiences of conflict and documented challenges to CHW operations. This ensured that the selected areas offered a rich comparative perspective on service delivery under the pressure of the conflict.

4.3 Sample selection

This study used a combination of convenient and targeted sampling to ensure the representativeness and generalisability of the findings, given the challenges of conducting research in a conflict-affected setting. Participants were selected from four key categories: Community Health Workers, Programme Managers / Supervisors, Community Leaders/Representatives, and Health Policymakers & Programme Funders (Table 6). Each category's inclusion was critical for obtaining diverse perspectives on the challenges of CHWs and their programme and optimising the CHW programme in the Buea Health District. Additionally, each informant category required a different data collection approach, as summarised in Table 6 below. Table 6 below highlights the informant categories, their specific roles, and the number of interviews conducted for each group.

Table 6: Overview of Research Informants

Category of Informants	Role	Sampling Method	Data collection approach	Number of informants
Community Health Workers	Frontline health providers delivering health services during the conflict	Purposive and convenient sampling	Focus group discussions	39
Community Health Workers	Frontline health providers delivering health services during the conflict	Purposive and convenient sampling	Participatory ranking exercise	39
Community Health Workers	Frontline health providers with extensive experience delivering health services before, during, and after conflict	Purposive sampling	Work-life histories	5
Programme Managers & Funders	Oversee programme funding, policy design, and management of community directed health interventions	Purposive sampling	Key informant interviews	6

CHW Supervisors	Direct supervision and coordination of CHW activities at health centre level	Purposive sampling	Key informant interviews	6
Community Representatives	Represent the community, providing insights into community perspectives on CHW programmes	Purposive and snowball sampling	Key informant interviews	4

4.3.1 Community Health Workers

CHWs were central to the study, as their direct experiences provided valuable insights into the daily operational challenges, coping strategies, and preferred support needs. Including CHWs from different health areas with varied backgrounds ensured that their contributions represented the real-life experiences of frontline health service providers. This diversity was essential in enhancing the generalisability of the findings to other FCAS, as it captures a broad spectrum of contexts within Buea, from urban to peri-urban settings, while also acknowledging the limitation of the representativeness of the research findings due to the small sample size.

Purposive and convenient sampling methods were employed, with CHWs nominated by Chiefs of Centres at the researcher's request. The researcher did not have access to CHW lists or details. Chiefs of Centres were asked to nominate CHWs based on experience-based criteria provided by the researcher, which prioritised individuals with extensive experience spanning pre-crisis, crisis, and post-crisis periods. The eligibility of the CHWs was conditional on having direct, longitudinal experience of CHW service delivery across the conflict phases. This ensured that participants could provide detailed, longitudinal insights into the impact of conflict on CHW operations and service delivery. The eligibility of the CHWs was conditional on having direct, longitudinal experience of CHW service delivery across the conflict phases. Importantly, as a limitation, individual demographic characteristics such as gender, age, and educational background were not used as selection criteria due to limited access and logistical constraints. This study limitation is further reflected on in section 8.4.

For the work-life histories, CHWs were purposefully selected from the FGDs based on their length of service and the quality of their contributions during the discussions. Those chosen had extensive experience predating the conflict, allowing the study to provide longitudinal narratives on CHW experiences before, during, and after the conflict. However, this introduced a bias against CHWs with shorter service durations, as their perspectives were not captured in the work-life histories. As a result, findings using this data collection approach primarily reflect

the experiences of long-serving CHWs rather than the broader CHW population. This limitation is further discussed in Section 8.4. Furthermore, A detailed description of the CHW sample, including participant demographics by health area and gender, is provided in Section 6.1.

4.3.2 CHW Programme managers & funders

Health Policymakers and programme Funders offered strategic insights into resource allocation, policy design, and funding priorities that were essential for understanding the broader systemic issues affecting CHW programmes in FCAS. By involving local and international stakeholders, the study ensured that the findings were generalisable across different funding and policy environments, providing relevant insights for optimising CHW programmes in various FCAS contexts.

Programme managers and funders were identified during key informant interviews with Chiefs of Centres, who recommended relevant stakeholders engaged in CHW-related health interventions within their respective health areas. The key informants included individuals involved in resource allocation, policy and programme design, and funding priorities for community health programming. Their inclusion ensured the study captured systemic insights applicable across different funding and policy environments in FCAS contexts.

4.3.3 CHW Programme Supervisors

CHW programme supervisors contributed operational and managerial perspectives, highlighting the implementation challenges and coping mechanisms required in managing CHW programmes in a conflict environment. Their insights into programme adaptation were crucial in identifying effective strategies that can be applied beyond the Buea Health District. By including managers and supervisors from both government and NGO sectors, the study ensured that the findings were representative of different organisational approaches, increasing their generalisability to other FCAS contexts with varying management structures.

Purposive sampling was used to recruit CHW supervisors from government and NGO sectors, ensuring a representation of different organisational perspectives. CHW supervisors, primarily Chiefs of Centres (nurses) responsible for overseeing day-to-day CHW operations, were directly contacted by the researcher across all health areas in the Buea Health District. Chiefs of Centres with direct supervisory roles over CHWs during the conflict period were selected

for their operational insights, management experience, and involvement in daily CHW coordination. This ensured rich operational perspectives.

4.3.4 Community Representatives

Community leaders/representatives were included as an alternative to directly involving community members, some of whom may have limited familiarity with CHW activities. Due to practical and methodological considerations, community members were not directly included in this study. Identifying and recruiting individuals who had directly received services from CHWs would have been time-intensive and unfeasible within the study's limited timeframe. Moreover, randomly selecting community members risked generating superficial insights, raising concerns about the reliability and depth of the data. Instead, the study engaged community representatives who serve on health management committees. These individuals were considered more appropriate informants, given their formal role in representing community perspectives in local health governance structures and their broader awareness of CHW activities and community-level health issues. Many community members were either not consistently exposed to CHW activities or lacked a thorough understanding of the scope and impact of CHW programmes, particularly amid the more complex and fluid conditions of the conflict. Community leaders, well-acquainted with CHWs and the broader community, were better positioned to provide nuanced insights into the reception and integration of CHW programmes. Their inclusion ensures a more reliable representation of the community's perspective while mitigating the risk of gathering uninformed opinions that could limit the generalisability of the findings. By focusing on those actively involved in community matters and familiar with CHW activities, the study sought to provide a more accurate reflection of the community's engagement with CHW programmes.

Purposive and snowball sampling were used to recruit community representatives involved in CHW-related activities and health planning. The researcher requested the Chiefs of Centres in all health areas within the Buea Health District to facilitate introductions to relevant community representatives through their respective health management committees. Community representatives were selected based on their active involvement in community matters and familiarity with CHW programmes.

The sampling frame for the KIIs was designed to include six participants from each of the three key categories: Programme Managers & Funders, CHW Supervisors (Chiefs of Centres), and

Community Representatives. While I could meet this target for Programme Managers & Funders, and CHW Supervisors, I could only interview four Community Representatives. This was due to challenges in two health areas: one where both the Community Representative and CHW Supervisor/Chief of Centre were unreachable and another where the Community Representative was not actively involved in community health or CHW programmes, making them unsuitable for the study. Despite this, the approach remained purposeful, working within a clear sampling framework while adapting to on-the-ground realities.

By strategically selecting participants across these categories, the study ensured that the findings reflect a comprehensive understanding of the challenges and opportunities for optimising CHW programmes in FCAS.

4.3.5 Inclusion and Exclusion Criteria

1. Community Health Workers

Inclusion Criteria:

- CHWs with direct service delivery experience during the conflict in the Buea Health District - experience across pre-conflict, conflict, and post-conflict periods.
- Willingness and availability to participate in FGDs, participatory ranking exercises, or in-depth work-life history interviews.
- For work-life histories: CHWs with long-standing service demonstrating insight during earlier FGDs or participatory ranking exercises.

Exclusion Criteria:

- CHWs with limited or no service experience during the conflict period.
- CHWs unable or unwilling to engage in the study's data collection processes.
- For life histories: CHWs with shorter service duration or less in-depth experiences during FGDs, thereby limiting the longitudinal insight required.

2. Programme Managers & Funders

Inclusion Criteria:

- Individuals responsible for policy, funding, or design of community health interventions within the Buea Health District.
- Experience in resource allocation, programme development, or funding decisions affecting CHWs.

Exclusion Criteria:

- Stakeholders without any involvement in CHW-related health programming.
- Individuals lacking operational or strategic decision-making roles in community health.

3. CHW Supervisors (Chiefs of Centres)

Inclusion Criteria:

- Individuals with direct supervisory roles over CHWs during the conflict period.
- Responsible for coordinating, supporting, or evaluating CHW performance.

Exclusion Criteria:

- Health staff without managerial or supervisory responsibility for CHWs.

4. Community Representatives

Inclusion Criteria:

- Recognised community leaders or members of health management committees actively involved in CHW or health-related activities.
- Familiarity with community-level reception and engagement with CHW programmes.

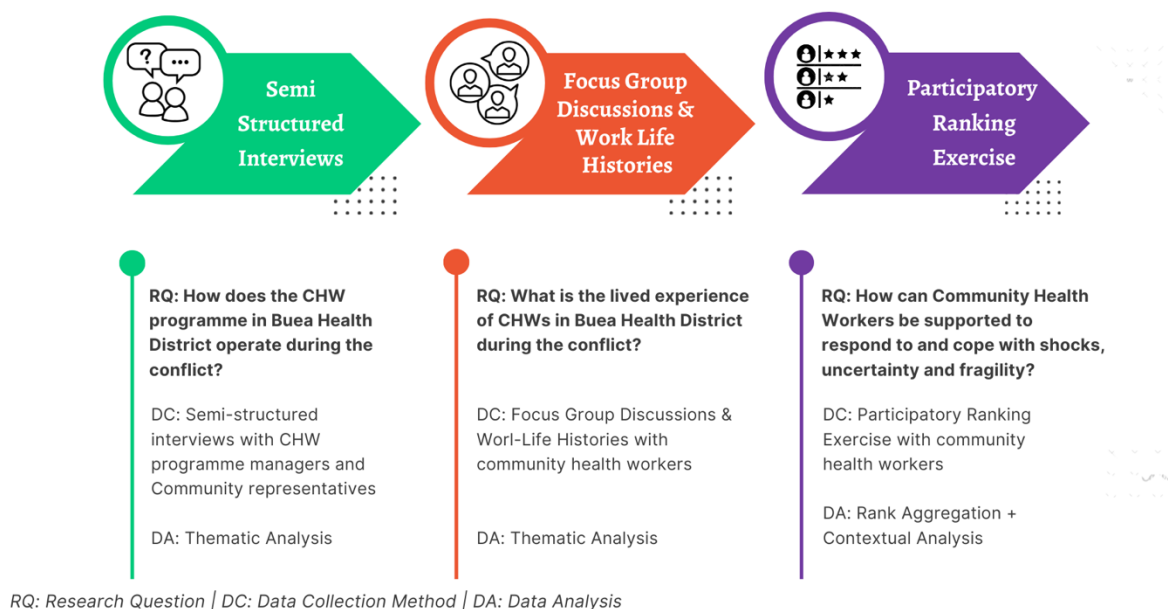
Exclusion Criteria:

- General community members without active engagement in health planning or CHW-related work.
- Representatives unavailable or unreachable during the study period.
- Individuals whose involvement in community health activities could not be confirmed.

4.4 Data Collection

The approach to data collection for this study (Figure 9) combined semi-structured, key informant interviews that offer in-depth professional insights, focus group discussions that captured a wider range of perspectives and dynamics, and participatory ranking exercises that prioritised identified support strategies for CHWs based on participants' experiences and perceptions, facilitating a deeper understanding of which strategies are considered most effective and relevant by those directly involved. Furthermore, work-life histories were incorporated to explore the experiences of selected CHWs during the Anglophone crisis at a more personal level. This method provided a narrative depth to the study, highlighting the personal journeys, challenges, and resilience of CHWs in the face of ongoing conflict. This multifaceted design ensured a thorough exploration of how CHWs/programmes in Buea Health District cope with the shock, uncertainty, and fragility of the Anglophone crisis, and how they can be supported to do so. A summary of the various data collection methods is depicted in Figure 10 below.

Figure 10: Research data collection methods.



4.4.1 Semi-Structured Interviews

Semi-structured interviews were chosen for this study due to their balance between structure and flexibility. They allowed me to use an interview guide (Appendices 2 and 3) with predetermined questions, explore emerging points, and probe deeper into participant responses. This is particularly important in gathering rich, detailed insights from the key informants—CHW programme managers, supervisors, and community representatives—about the complex and dynamic nature of CHW programmes in a conflict-affected setting (Rubin & Rubin, 2005; Newton, 2010).

Structured interviews, though offering consistency and easier comparability, would have limited the depth of responses, as they follow a rigid question format, making it harder to capture the nuanced realities of managing CHW programmes in FCAS (J. W. Creswell, 2014). Unstructured interviews, on the other hand, provide complete flexibility but risk deviating from the core research questions and making it harder to analyse data systematically, especially across different participant categories (J. W. Creswell, 2014). In contrast, semi-structured interviews strike a balance by providing a focused framework that ensures relevant themes are covered while also allowing space for participants to share unexpected insights. This flexibility was crucial for understanding how programme managers and supervisors adapted their operations in response to the ongoing conflict.

The research questions and literature review informed the interview guides and ensured focused yet adaptable discussions. To enhance relevance and depth, the guides were tailored to the different informant categories—policymakers, programme managers, and community representatives. Topics covered included operational challenges, support mechanisms, programme adaptations to conflict, and potential strategies for supporting CHWs in such environments.

The interviews were conducted in secure and familiar settings, such as the offices of organisations managing CHW programmes, to ensure participant comfort and safety. Each session lasted approximately 60 minutes, and note-taking and audio recording were used to capture the discussions accurately, followed by verbatim transcription.

4.4.2 Focus Group Discussions with CHWs

Four Focus Group Discussions (FGDs) were used to gather collective insights from CHWs, capitalising on the group dynamic to encourage discussion and shared experiences. FGDs are valuable for exploring group consensus on operational challenges, resilience, and coping mechanisms (Breen, 2006; Rabiee, 2004). However, FGDs present several challenges, such as the dominance of vocal informants. In FGDs, more vocal individuals can dominate the conversation, potentially skewing the data (Mitofsky, 1996). To mitigate this, the nominal group technique was used, ensuring that every participant had an equal opportunity to contribute by allowing individual rankings of priorities, preventing any participant from dominating the discussion (Manera et al., 2019). Also, the informants might have felt pressured to conform to the views of others in the group. To counter this, I created an open and comfortable environment where dissenting opinions were encouraged and normalised, reducing the pressure for conformity (Manera et al., 2019). This included using open-ended, non-leading questions that allowed the informants to express a wide range of views without feeling that a certain answer was expected. Additionally, I made it clear at the outset that all opinions were equally valuable, and disagreements were welcome, setting the tone for an inclusive discussion.

FGDs are particularly suited for this research because they capture the collective experiences of CHWs in a conflict-affected setting, allowing for rich discussions about shared challenges and strategies (Kielmann et al. 2012). Other alternatives, such as individual interviews or surveys, would not have allowed for the same level of dynamic interaction and shared understanding among participants.

The discussions were guided by a discussion guide (Appendix 4) centred around specific research questions, focusing on the CHWs' perceptions of programme components, the effects of the fragile context on their work, and personal factors such as gender and socio-economic status that influence their work. This approach facilitated a deeper understanding of the actual challenges and successes experienced by CHWs, ensuring that the key findings directly informed the strategies to support the CHWs within these communities.

Each of the four FGDs lasted up to two hours, and the conference hall of the Buea Town Integrated Health Centre was chosen as the venue for conducting the FGDs due to its safety

and ease of accessibility to the CHWs from other health areas. The FGDs were in English and mixed with Pidgin English, the common lingua franca used by CHWs and their communities. The decision to conduct the FGDs in both English and Pidgin English was made to cater to the linguistic preferences and comfort of the participants. As Pidgin English is the lingua franca among the CHWs and their communities, using it alongside English ensured accessibility and full participation, allowing participants to express their views and experiences without language barriers. This approach enhances inclusivity and ensures the collection of rich, nuanced data in a participatory and comprehensible manner.

4.4.3 Participatory Ranking Exercise

The Participatory Ranking Exercise (PRE) was chosen as it provided an interactive platform for CHWs to prioritise their needs and support strategies, directly involving them in the decision-making process (Ager et al., 2011). This method aligns with the participatory nature of the research, ensuring that CHWs' voices directly inform the study's conclusions. The ranking process allowed for a clear and actionable list of priorities, which is critical when working with CHWs in a conflict setting where resources are often limited and must be allocated effectively (Ager et al., 2011).

Alternatives to participatory ranking could include Delphi techniques (which involve iterative rounds of feedback from participants to build consensus) (Dalkey & Helmer, 1963) or Likert scale surveys (where participants rank their preferences on a predetermined scale) (Sullivan & Artino, 2013). However, the Participatory Ranking Exercise was more relevant to this context because it encouraged direct, face-to-face interaction and allowed participants to explain and adjust their rankings in real-time, fostering richer discussion and immediate consensus. Therefore, this exercise served as a useful tool in understanding and documenting the essential supports required by CHWs to maintain resilience and effectiveness in navigating the complexities of their work environment during ongoing conflict.

During the Participatory Ranking Exercise, the CHWs were first asked to propose various forms of support that would help them in their roles as CHWs, and these suggestions were listed visibly for the group. Each idea was discussed and included based on group consensus, ensuring that all voices were heard. I also proposed additional prompts informed by prior key

informant interviews and a review of the literature on the topic to ensure comprehensiveness. The CHWs then individually ranked the proposed support mechanisms, using sticky notes to indicate their priorities from most to least important. After the ranking, the CHWs were invited to explain their choices, offering insights into why certain strategies were valued over others. This interactive process allowed for real-time discussion, adjustments to the rankings, and a deeper understanding of each CHWs' and the groups' priorities. The ranked preferences were documented, and the final ranking was visually captured with photographs for record-keeping (Appendix 9).

4.4.4 Work-Life Histories

Work-Life Histories (WLHs) were selected to provide in-depth, longitudinal insights into the personal and professional journeys of CHWs. This method allowed the researcher to explore how CHWs' experiences before, during, and after the conflict influenced their ability to cope with and adapt to the evolving challenges of their work (Witter et al. 2017). WLHs provided a narrative structure that allowed CHWs to highlight key events and transitions in their lives, which offered valuable insights into resilience, motivation, and the broader social factors affecting their roles (Witter et al. 2017).

Alternatives to WLHs could include Case Studies (focused on in-depth analysis of a particular event or situation) or Ethnographic Research (which would involve long-term participant observation) (Creswell & Poth, 2016; Goodrick, 2014). However, WLHs were chosen because they allowed CHWs to reflect on their personal histories and how these have shaped their work. This approach was less time-intensive than ethnography and more focused on personal experiences than case studies, making it ideal for this research setting, where CHWs' evolving roles and coping strategies are central. WLHs also provided rich, qualitative data that added depth to understanding CHW experiences, complementing the quantitative insights gathered through the PRE.

Following the FGDs, four informants were invited to engage in the interviews (WLHs). These selected CHWs were invited to narrate their work experiences, focusing on both their CHW roles and other work experiences before, during, and after the conflict. This narrative approach, guided by a discussion guide (Appendix 5), allowed them to describe the evolution of their roles as CHWs and their capacities to cope over time, offering insights into significant shifts

in their professional and personal lives due to the conflict (Ssali et al., 2015). This method empowered CHWs to highlight what they deemed significant in their professional journey as CHWs, giving them autonomy to voice their expectations and recommendations for programme improvements. By focusing on their CHW work and other employment, the WLHs provided a holistic understanding of the factors influencing their resilience and effectiveness in delivering health services in FCAS.

Recognising that not every participant is suited for life history interviews, the selection was based on their contributions during the FGDs, particularly those with extensive experience and a willingness to participate further (Hagemaster, 1992). Prospective participants were approached with a clear explanation of the exercise’s objectives, including the interview’s length, logistics, and proposed date. Each interview was planned for approximately 60 minutes. The CHWs chosen for these interviews had worked in their communities throughout the conflict, offering a longitudinal perspective on the changes and adaptations necessitated by the crisis.

Table 7: Summary of data collection methods and focus

Research Method	Number	Duration	Focus
Semi-Structured Interviews	16 informants	~60 minutes each	Challenges, adaptations, and strategies in CHW programmes
Focus Group Discussions (FGDs)	4 – 39 CHWs	~2 hours each	Collective experiences, coping strategies, and operational challenges
Participatory Ranking Exercise	4 – 39 CHWs	Part of FGDs	Ranking support mechanisms for CHWs in conflict-affected settings
Work-Life Histories (WLHs)	4 CHWs	~45 minutes each	In-depth exploration of CHWs' personal and professional experiences in crisis

Table 7 above provides an overview of the key research methods used in this study, including semi-structured interviews, focus group discussions, participatory ranking exercises, and work-life histories. The number of informants, average duration, and specific focus are also highlighted. Semi-structured interviews were conducted with 16 informants, each lasting around 60 minutes, focusing on challenges and adaptations within CHW programmes. Four FGDs, each lasting approximately 2 hours, captured the collective experiences and coping strategies of CHWs. The participatory ranking exercises were integrated into the FGDs, allowing participants to rank support mechanisms. Finally, work-life histories were conducted

with five CHWs, lasting around 45 minutes each, exploring their personal and professional experiences in the conflict-affected Buea Health District.

4.5 Data Analysis

4.5.1 Semi-structured Interviews

The thematic framework approach by Ritchie & Spencer (2002) was selected for analysing the data from the semi-structured interviews due to its systematic, transparent, and iterative nature, which allows for the detailed exploration and reworking of qualitative data. This method was particularly suited to semi-structured interviews where the aim is to extract themes and patterns from large amounts of textual data. It provided a structured approach that enabled me to rigorously index and chart the data while maintaining flexibility in identifying emerging themes. This contrasts with other methods, such as content analysis, which might focus more on the frequency of certain words or concepts, potentially missing out on the rich contextual and interpretive aspects essential to understanding CHW programmes in conflict settings.

Grounded theory could have been an alternative, but it focuses on developing theory purely from the data without any pre-established framework, which would not have been fully appropriate for this study. Although the study adopted a pragmatic, theory-agnostic approach, it still relied on predefined research objectives and a conceptual framework to guide the exploration of CHW programmes in fragile contexts. This made the thematic framework approach more suitable, as it allows both deductive and inductive coding, balancing the structure provided by the research objectives with the flexibility to explore the constructed themes.

The themes for this analysis (Table 8) were constructed through a structured and iterative process based on the research objectives and the raw data. In the initial familiarisation stage, I immersed myself in the data, identifying key ideas and patterns across transcripts, field notes, and recordings. These early observations, combined with the research objectives and conceptual framework, formed the foundation for constructing the thematic framework. During the indexing and charting stages, key themes such as "CHW adaptability and resilience" and "community mistrust" were actively constructed from the research questions and issues raised by the informants. The data was systematically organised under these themes using coding

open coding to identify initial concepts and axial coding to refine and connect these concepts into broader categories and sub-themes.

Table 8: Summary of Thematic Analysis of Key Informant Interviews

Theme	Sub-theme	Definition of themes
Community Health Programme design	Recruitment of CHWs	Methods and criteria used for selecting CHWs
	Training and Capacity Building for CHWs	Information about the initial and ongoing training programs for CHWs
	Incentives for CHWs	The types of incentives (financial and non-financial) provided to motivate and retain CHWs
	Supervision of CHWs	How CHWs are monitored and supported through supervisory mechanisms,
Facilitators of CHW Programme	Increased community-based health provision	Shift of health service delivery towards more community-based models
	Transition in programme management	Shift from development-focused to humanitarian-focused organisations in overseeing CHW activities
	Community engagement	Methods and importance of building trust and engagement within communities
	CHW adaptability and resilience	The adaptability and resilience of CHWs in navigating the challenges posed by crises.
Challenges faced by CHWs	Security risk and restricted mobility	The physical safety threats faced by CHWs, such as abduction and violence, especially from non-state armed groups, how these threats affect the mobility and operational capacity
	Community mistrust of CHWs/Programs	The erosion of trust between CHWs and community members
	Population displacement	The impact of internal displacement on CHWs' roles,
Coping mechanisms for CHWs	Security risk management	Strategies implemented to mitigate security risks to CHWs
	Mobility and access strategies	Methods used to ensure CHWs can continue to provide health services despite restricted mobility due to security threats or hostile communities.
	Community trust building	Efforts to build/rebuild and maintain trust between CHWs and the communities they serve
	Adaptation to local dynamics	The adjustments made by CHWs/programmes based on specific local dynamics and threats

	Handling misinformation and mistrust	The approaches to combatting misinformation and general mistrust within communities, especially regarding health interventions
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The transcripts were manually annotated to ensure detailed engagement with the material, allowing the researcher to capture nuances and develop a deeper understanding of the relationships between different codes. Finally, during the mapping and interpretation stage, the themes were further refined by analysing how they related, identifying patterns (or typologies) that grouped similar experiences, and developing insights into the challenges and adaptations used by CHWs and their programmes. This process helped clarify how different aspects of the CHW experience, such as adaptability and community trust, interacted, leading to a more comprehensive understanding of their issues. These refined themes provided a clearer foundation for the identified strategies to improve CHW programmes in the Buea Health District. This process ensured that the constructed themes were rooted in the data and aligned with the study’s broader objectives, facilitating a comprehensive exploration of the challenges and coping mechanisms of CHWs in the conflict-affected Buea Health District.

I used manual coding for the analysis, using the Microsoft Word comment function to annotate the transcripts. Manual coding was chosen over tools like NVivo to allow for deeper, more flexible engagement with the data, ensuring that the nuanced perspectives of the informants in the Buea Health District were fully captured and interpreted without over-reliance on automated processes. These codes and sub-themes were then extracted onto a matrix in Excel, which was used to develop the final themes. The writing up for parts 2 and 3 of the thesis, which covers the research findings and discussion of the findings, respectively, is based on these themes.

4.5.2 Focus Group Discussions

To analyse the Focus Group Discussions (FGDs) data, I employed a thematic analysis approach as described by (Charmaz, 2006). The complexity of the discussions, characterised by multiple speakers and the use of Pidgin English, necessitated a thorough and iterative process. Given the lack of transcripts, I repeatedly listened to the recordings to capture relevant key points and quotes that reflected the CHWs' experiences during the conflict, particularly focusing on challenges and coping mechanisms discussed in detail in Chapter 6 of the thesis.

During this initial stage, I generated multiple category codes by noting ideas, constructing relationships, and identifying frequently used keywords by the CHWs. These keywords were crucial indicators of significant themes, capturing the core experiences and perceptions of the CHWs in the Buea Health District. These notes were then systematically organised into sub-themes and themes, which I transferred into an Excel matrix for further analysis.

The analysis required manual coding and thematic analysis, as it involved careful interpretation and translation of the data. Repeatedly listening to the recordings was essential to accurately capture the meanings and preserve contextual elements of the FGDs. This approach provided a detailed and nuanced understanding of the CHWs' perspectives, revealing how they navigated, responded to, and coped with the challenges and uncertainties of their roles during the crises. Table 9 below presents an overview of the identified themes, sub-themes, and their descriptions from the FGDs.

Table 9: Summary of Thematic Analysis of Focus Group Discussions

Theme	Sub-theme	Definition
Challenges of CHWs	Direct threats and insecurity	The immediate physical dangers that CHWs face while performing their duties
	Impact of the crisis on personal and professional life	Impact of the crisis on CHWs' personal lives. how these personal losses intersect with professional challenges
	Mistrust from the Community	The erosion of trust between CHWs and community members
	Financial instability and payment issues	The financial challenges faced by CHWs, including delayed payments, discrepancies in payment amounts
	Resource constraints and operational challenges	The logistical and resource-related challenges that CHWs encounter
	Interactions with Internally Displaced Persons	CHWs' roles in supporting IDPs who have been displaced by conflict
Adaptations and Coping Mechanisms of CHWs	Community Support, Trust, and Engagement	How CHWs leverage community support and trust to facilitate their health service delivery amidst crises.
	Operational Adaptations and Feedback Mechanisms	The tactical changes CHWs make to ensure their safety and the effectiveness

		of their operations in insecure environments.
	Motivation, Well-being, and Peer Support	The intrinsic and extrinsic motivational factors that drive CHWs
	Personal Coping Strategies	The personal strategies CHWs employ to cope with the adversities of working in a conflict-affected area

4.5.3 Participatory Ranking Exercise

The first part of the analysis involved quantitatively examining the CHWs' preferences using frequency, average ranking (AR), and median ranking (MR). Frequency was calculated by counting the times each strategy was selected across all participants. This frequency was expressed as a percentage to account for the varying sizes of the focus groups. The average ranking was determined by summing all the ranks given for each strategy and dividing by the frequency, yielding an average value that reflected the overall positioning within the preference hierarchy. The median ranking involved listing all ranks for each strategy in numerical order and identifying the middle value, providing a central measure unaffected by outliers.

These three metrics—frequency, average ranking, and median ranking—were chosen to provide a comprehensive and nuanced analysis of CHWs' preferences. The frequency metric highlighted the popularity and widespread acceptance of each strategy. The average ranking offered a quantitative measure of overall preference, while the median ranking provided a robust measure of central tendency, mitigating the impact of outliers. Together, these metrics ensured a balanced and detailed understanding of CHWs' support strategy preferences, facilitating the identification of the most critical and widely endorsed support measures. This multi-faceted approach allowed for a thorough and reliable analysis.

The second part of the analysis provided qualitative explanations for each ranking based on the CHWs' justifications. This qualitative analysis contextualised the quantitative findings, uncovering specific motivations or challenges influencing the CHWs' preferences. It also explored discrepancies where some strategies were discussed passionately despite lower quantitative ranks, indicating their significant importance to certain CHWs. The qualitative

insights captured personal anecdotes and the real-world implications of each preference, ensuring that the analysis reflected both dominant and minority voices.

By triangulating the quantitative data with qualitative narratives, the study provided a nuanced understanding of the CHWs' support needs, bridging the 'what' from the metrics with the 'why' from their experiences and perspectives.

4.5.4 Work-Life Histories

In analysing the work-life histories of the selected CHWs, a thematic framework approach similar to the one used for the Key Informant Interviews was employed, as described in section 4.6.1 above. This method allowed for an in-depth examination and comparison of the narratives across different respondents, ensuring a comprehensive understanding of their experiences.

Identifying correlations between emerging themes was pivotal, allowing for grouping similar themes into broader, overarching categories (Table 11). These categories provided a clearer picture of the CHWs' experiences and were charted. A comparative analysis was then conducted to highlight patterns and relationships within the responses, drawing out deeper insights into the CHWs' experiences. Table 11 below summarises the detailed themes and sub-themes identified during the thematic analysis of the work-life histories.

Table 10: Summary of Thematic Analysis of Work-Life Histories

Theme	Sub-theme	Definition of themes
Becoming a CHW	Initial Recruitment	Entry into the community health workspace, starting with roles such as sensitisation work.
	Transition in Roles	Evolution from initial sensitisation efforts to more formal responsibilities within various health programs.
	Passion for Community Health Work	Intrinsic motivation to serve the community.
Balancing Community Health Work with Other Responsibilities	Family Dynamics and Responsibilities	The CHW's role as the primary provider in the household
	Alternative Livelihoods	Engaging in various income-generating activities to sustain their family.

The Impact of Crises on Personal and Professional Life	Economic Impact of the Crisis	Economic difficulties affecting personal businesses and professional roles at health centres.
	Impact on health centre activities	Reduced community engagement and outreach activities affecting motivation and capacity to work.
	Emotional and Psychological Impact	Psychological toll on CHWs due to crises, impacting mental health and well-being.
	Personal Losses Due to Crisis	Severe personal losses and near-death experiences due to the crisis.
Coping and Adapting Amidst Ongoing Crisis	Sustenance through Alternative Means	How CHWs adapted to the economic challenges posed by the crisis by engaging in alternative livelihood activities
	Recovery and Resilience	how CHWs overcome physical and emotional trauma associated with violent incidents during their service
	Community Engagement and Reconciliation	how CHWs navigate complex social dynamics within their communities, especially after experiencing personal attacks from community members.
	Support and Cooperation Among Peers	the collaborative support provided by fellow CHWs during crisis situations

Timelines created collaboratively with the participants during the interviews served as an additional analytical approach, as these timelines offered a chronological perspective and helped contextualise the narratives within specific timeframes, adding another layer of depth to the analysis. Overall, this iterative approach to analysing the work-life histories of CHWs allowed for a nuanced exploration of their roles and experiences, especially in the context of conflict and fragility.

4.5.5 Data attribution and use of pseudonyms

To ensure clarity in data presentation while maintaining participant confidentiality, specific attribution methods were employed. For Key Informant Interviews and Focus Group Discussions (FGDs), quotes and references are attributed using respondent categories, locations, and assigned numbers. For example, a quote from a key informant interview is

labelled as "CHW Programme Manger 3" or "Community Representative 1", and a quote from a focus group discussion is indicated as "CHW-FGD". This method provides contextual information relevant to the analysis, such as the participant's role, without revealing their identity.

For the Work-Life Histories, which involve detailed personal narratives using vignettes and could potentially reveal the identity of participants, pseudonyms are used. Participants in these narratives are referred to by pseudonyms such as "Mola" and "Eposi." This approach allows for rich, individualised stories to be shared while safeguarding the participants' anonymity. The use of pseudonyms ensures that the personal and sensitive nature of their experiences is respected and that confidentiality is maintained.

4.6 Research Ethics

As this research involves the responses of human informants, ethics, bias, and reflexivity are especially important considerations in the research design. Ethical approval was secured from the Queen Margaret University Ethics Committee on August 17th, 2021, and from the Institutional Review Board, Faculty of Health Sciences, University of Buea on January 22nd, 2022. Letters confirming ethics approval are attached in Appendices 6, 7, 8.

Written consent was sought from all participants in all key informant interviews of this research. Before starting the research, participants were given an information sheet explaining the study's purpose and why they were invited to participate. The sheet also outlined the confidentiality and anonymity clauses of the research. I was available to answer any questions the informants had before participating in the research. Informants who agreed to participate in the study were asked to sign two copies of the consent form. The participant kept one copy, including contact details of the researcher, supervisor, and ethics committee. The researcher kept the second copy. In cases where participants were illiterate, verbal informed consent was obtained using the local language – pidgin English -and the informed consent form was read out in its entirety. See Appendix 9 for the Informed Consent.

However, it is worth noting that for the focus group discussions and the work-life history, the CHWs were sceptical about providing the names and signatures because they were not sure where it would end up. Addressing their apprehensions, I explained my ethical obligation to safeguard their identities and outlined the data management protocols. To uphold academic standards and ethical integrity, verbal consent was deemed appropriate in these cases, ensuring that ethical standards were met without compromising participants' safety or trust. After that it was agreed that verbal consent would be given instead of written consent before taking part in the research.

In the context of research ethics, it is crucial to acknowledge the compensation provided to the participants of this study. The participants were offered monetary compensation to cover their transportation costs to the venue for either the interview or the focus group discussions. This gesture was not only a token of appreciation for their time and contribution but also an ethical practice to ensure their participation did not incur any financial burden for informants.

Furthermore, during focus group discussions, each informant was provided with a bottle of water. This provision was made to ensure their comfort and well-being during the discussions, reinforcing the study's commitment to creating a conducive and respectful environment for the research participants. These measures of compensation were implemented as part of our commitment to ethical research practices, ensuring informants felt valued and respected for their involvement, thereby reinforcing the integrity and ethical underpinning of our study.

4.7 Positionality and Reflexivity

Reflexivity

Reflexivity involves the critical examination of how my personal experiences and background shape the understanding and interpretation of participants' experiences in this study (Nguyen et al., 2014). Born and raised in Bamenda, the capital of the North West Region of Cameroon, I have first-hand witnessed the unfolding of the Anglophone Crisis. Experiences such as encountering sporadic gunshots near my family home and workplace, witnessing tear gas being released from helicopters, and enduring ambushes while travelling through conflict zones have given me an understanding of the conflict's realities. These experiences resonate with the CHWs' experiences central to this research and have motivated my research, driven by a desire to understand and improve the conditions faced by CHWs in such challenging environments.

Professionally, my work as a Monitoring and Evaluation Analyst at Bamenda Health District Services provided me with insights into the operational challenges, resilience, and adaptability of CHWs. Responsibilities such as evaluating health centre performance, preparing immunisation campaign reports, managing HIV, Malaria, and health centre data, and interacting directly with CHWs have enriched my understanding of the healthcare landscape within conflict zones.

My educational experiences, particularly as a graduate student in Buea, the capital of the South West Region, further shaped my understanding of the context. Experiencing the insecurity and tension of daily life amidst the conflict has equipped me with an empathetic understanding of the challenges faced by the community and CHWs. My master's dissertation on incentives for CHWs in fragile and conflict-affected settings provided a theoretical and practical foundation for suggesting support strategies for CHWs.

While these experiences informed my perspective and allowed me to have better insights into the experiences of CHWs, they might also introduce biases such as an inclination to empathise more with the challenges faced by CHWs, potentially overlooking broader systemic issues. To mitigate this, I emphasised objectivity in my approach, such as triangulating data sources. Feedback sessions with my supervisors were also integral to my data collection and analysis

processes, helping identify and address personal biases. These debriefings served as a critical tool, offering external perspectives to challenge and refine my interpretations.

Positionality

Positionality refers to my position relative to the participants and how this affects the research process (Gary & Holmes, 2020). While my shared experiences with the participants provided a deep understanding of the context, they also created a complex dynamic of being both an insider and an outsider. As a native of Bamenda and someone who has lived through the Anglophone Crisis, I share a cultural, lingual and experiential background with the participants, particularly with the CHWs. This insider perspective helped in building trust and rapport with the participants.

However, my current position as an academic based in the UK introduced an outsider dimension, especially in interactions with CHWs. While district health teams and NGO workers might have seen me as a peer, CHWs might have perceived me as an external researcher with potentially different priorities and experiences. This dual positionality required careful navigation to ensure that participants felt respected and understood.

The potential power imbalance between myself and the CHWs could have influenced how they share their experiences and the degree of openness in their narratives. To address these dynamics, I adopted an empathy-and-respect-driven approach, prioritising participants' autonomy and ensuring their voices are central to the research. Also, I acknowledge the possibility that some answers could have been tailored to what participants assumed I wanted to hear rather than conveying their genuine thoughts and experiences. To address this, I endeavoured to probe for examples and “tension” points.

Furthermore, ethical considerations were paramount, given the sensitive nature of the personal impact of the crisis and my shared experiences with participants. The ethical protocol for the study was strictly followed, focusing on informed consent, confidentiality, and emotional sensitivity, especially given the potentially triggering nature of discussions about the crisis.

Integrating Positionality and Reflexivity

My experiences in Bamenda and Buea and my professional engagement with CHWs informed a pragmatic orientation for conducting this study. Moreover, my contextual understanding informed the selection of semi-structured interviews and participatory ranking exercises,

ensuring they were culturally compatible and sensitive to the communication preferences in the region. This methodological choice was also influenced by a desire to capture the depth of individual experiences while allowing for a broader analysis of trends and patterns within the study setting.

Incorporating the concept of “shared reality” into my PhD research journey, as articulated by Ma (2012), significantly informed my approach to interpreting qualitative data. This concept emphasises that true understanding of another person's narrative emerges when we can relate it to our subjective experiences. Engaging in this research on CHWs in the Anglophone Crisis of Cameroon, I endeavoured to interpret the qualitative data, transcending mere descriptions to achieve a deeper level of understanding.

Acknowledging both participant and researcher subjectivity was a key aspect of this process. My own experiences, having been born and raised in Bamenda and exposed to the realities of the conflict, invariably shaped my interpretation of the narratives shared by the CHWs. This personal connection to the research context enriched my understanding and brought a unique perspective to the analysis. However, it was crucial to remain mindful of these experiences and presumptions to avoid skewing the findings. Instead, I aimed to use them to add new insights and uncover different sides of the shared reality.

This approach was formative, not only in terms of data interpretation but also in contributing to my personal and professional growth within health systems and policy research. It deepened my understanding of the complex impact of conflict on public health and community resilience.

Being aware of and exploiting my unique positionality allowed me to navigate the fine line between subjective interpretation and objective analysis. It enabled me to add depth to the narratives, revealing the complex interplay of individual experiences and broader socio-political dynamics. This insightful understanding is essential for informing health policies and systems in conflict-affected settings, ensuring they are resilient, adaptable, and sensitive to the needs of those most impacted by the crisis.

PART 2

Findings

Part Two of this thesis presents the research findings, structured into three chapters, each examining the intersection of two components of the conceptual framework (Figure 1). Chapter 5 focuses on the operation of CHW programmes within a conflict-affected context. Chapter 6 explores the collective and individual lived experiences of CHWs in such environments. Chapter 7 investigates the preferred support mechanisms for CHWs to maintain optimal and sustainable performance amidst conflict. In Part Three, the findings will be discussed comprehensively, integrating the three elements of the conceptual framework with a focus on the implications for policy and practice recommendations.

CHAPTER 5: The CHW Programme in Buea Health District through crisis and insecurity

This chapter presents the findings derived from key informant interviews conducted with CHW programme managers, supervisors, and community representatives within the Buea Health District. It seeks to answer the research question: “How does the CHW programme in Buea operate during the conflict?”

The chapter is organised into three main sections. The first section examines the operational features of the CHW programme during the conflict, focusing on critical aspects such as recruitment, training, supervision, and incentivisation of CHWs. The second section identifies the challenges encountered in operating the CHW programme amidst the conflict, including insecurity, community mistrust in health interventions, and population displacement. The final section explores the adaptive strategies employed by the CHW programme in the Buea Health District to overcome these challenges, ensuring the continuity of operations and the delivery of essential health services throughout the conflict period.

The themes in this chapter were developed through a systematic and iterative approach grounded in the research objectives and the data collected from the semi-structured interviews. The insights from the field notes and interview transcripts, research objectives and the conceptual framework served as the basis for constructing the thematic framework, ensuring that the themes and sub-themes are directly relevant to the study’s goals and reflect the participants’ experiences.

5.1 Community Health Programme Operation in Buea Health District

The section examines the operational components of the CHW programme during the conflict, focusing on essential elements that sustain functionality. It analyses the recruitment and selection processes of CHWs, the training of the CHWs and how they are trained, and the supervision, and incentivisation to sustain CHW motivation and commitment during the conflict.

5.1.1 Recruitment of CHWs

In Buea Health District, health centres select CHWs based on their reputation and enthusiasm for health-related activities – as per the community’s assessment of community members. In this context, reputation refers to how well-known and trusted a potential CHW candidate is within their community, based on their past behaviour, contributions, and involvement in health-related or community activities. A good reputation suggests that the individual is reliable, respected, and likely to engage effectively with community members. This trustworthiness is crucial because CHWs play a pivotal role as intermediaries between the community and health services. Their ability to build rapport and maintain trust with community members is essential for their effectiveness in delivering health services, especially in sensitive and conflict-affected settings like the Buea Health District.

The recruitment process is usually led by the Chiefs of Centre (COCs), who are responsible for the overall management and operation of the health centres, which includes supervising the CHWs working with the health centre. According to the interviewed COCs in Buea Health District, the selection procedure includes consulting with community leaders to identify suitable candidates with a good reputation and a strong interest in health activities.

"When we look for someone to work as a community health worker, the first thing we consider is if they are well-known in the community and have a good reputation."- Programme Supervisor 1

In addition to their reputation and passion for health initiatives, the candidates being considered for a CHW position must be literate, be residents in the health area, and possess a good understanding of the community. This understanding includes familiarity with the community's social structure, cultural norms, health challenges, and local dynamics, all of which are crucial for effectively engaging with and supporting community members. In some instances, COCs mentioned that bilingualism in French and English is also important for effective communication, considering that some community members might be Francophone.

"If a community health worker can't communicate very well with the community members, there's no point in them working there. They might enter a house where the residents don't speak the country's official languages [French and English] or their own dialect. So, our community health workers should be able to speak Pidgin [Pidgin English] and English and manage a bit of French."- Programme Supervisor 2

While the informants noted that sex was not a consideration in selecting the CHWs, some remarked that the sex of the CHWs influences how they perform in certain tasks. One of the COCs remarked on their observation that male CHWs were found more suitable for physically demanding tasks like disinfection during cholera outbreaks, while the females excelled in roles requiring close engagement with vulnerable groups, such as pregnant women and malnourished individuals.

Furthermore, female CHWs were seen to be better at gaining access to households in their community, contrasting with the resistance often faced by male CHWs, who were suspected to either be undercover military officers or members of a non-state armed group (NSAG). One female informant also expressed their willingness to recruit more female workers based on their positive experiences, as captured in the quote below.

"Women have a softer, more accepted approach, especially in homes. During the crisis, a female CHW easily entered homes where men faced resistance [...] people were afraid they could be associated with non-state armed groups. If I have the opportunity, I would definitely bring in another female worker." - Programme Supervisor 2

However, there are other instances when male CHWs have appeared better suited to the context. This was often due to the domestic responsibilities of female CHWs, which impacted their availability. For example, a COC reported that male CHWs are generally more available than their female counterparts and have greater flexibility.

"Yeah, in my experience, the male community health workers tend to be more effective than the females. I get a lot of complaints from the female workers, you know. They often have other responsibilities like cooking, or they can't go to the field for various reasons. That's why sometimes they don't meet their targets."- Programme Supervisor 3

This is supported by another COC's observation that male CHWs are more suited due to their fewer domestic duties and their willingness to travel to remote areas considering the security concerns.

"In my health area, I've noticed that the male community health workers, to some extent, perform better than the females. The main reason is the context of [name of health area] itself. It has 14 communities, including four villages, and most of them are located in remote areas, far from the centre. The challenge here is the distance."- Programme Supervisor 6

5.1.2 Training of CHWs

Under the Performance Based Financing (PBF) programme, health centres contracting and recruiting CHWs are primarily responsible for initially training them according to programme needs and expectations – non-contracted staff were training for by the health centre before a campaign. However, in cases where the district PBF programme managers notice that the CHWs' outputs and effectiveness are below average or insufficient to meet the requirements, indicating capacity gaps, they initiate supplemental training at the district level for the CHWs.

“However, at the district level, we've occasionally stepped in. For instance, when we've noticed that the output from community health workers is not up to par or unsatisfactory, we've identified knowledge gaps as a potential reason. In such cases, we've organised a training programme at the district level. We invite all community health workers and the health centres they're attached to and conduct the training here. Although the initial training responsibility lies with the recruiting health centre.” - Programme Manager 1

Moreover, the frequent displacement of community members, including CHWs, during the crisis resulted in the recruitment of new CHWs who needed structured training. As health centres struggle with attrition, more periodic training became necessary. All of these are reflected in the comment:

“Regarding the impact of the current crisis on our training approach, it's clear that frequent changes of community health workers at the health centres lead to challenges in training at the recruitment level. This situation necessitates the need for refresher courses or training at the district level at least once a year. So, due to these circumstances, we find ourselves unable to go for a year without calling community health workers in to retrain and refresh their skills.” - Programme Manager 1

At the health centre level, key informants reported that generally the training of the CHWs is carried out around the outreach health campaign they are going to execute. Moreover, with the crisis and disease outbreaks such as cholera and COVID-19 in the region, the frequency of the trainings increased in response to increasing community needs. One of the key informants commented about the training in their health area:

"I can't say that the training for our community health workers is scheduled monthly or quarterly. It's based on what campaign we have. For example,

when we had a cholera outbreak, they received training on—how to disinfect, how to educate the community on hygiene practices to limit the spread, focusing on hand washing and such.

So, the frequency of training really depends on how often these campaigns or activities come up. And with the current crisis, there have been more interventions in the community, which means more training. The crisis has certainly intensified the need for more frequent and varied training sessions." - Programme Supervisor 1

Furthermore, at the programme level, informants remarked that before the crisis in the Anglophone regions in 2016, the training of trainers started from the central (national) level, who then trained regional trainers. The regional trainers, who are selected relevant staff at the Regional Delegation for Public Health, would then go and train community health workers at the district level. However, the informant explains that because of mobility and access issues posed by the crisis, recent training shifted directly to the district level instead. The regional trainers provide brief training to district teams first, who then train the community health workers in their health areas.

5.1.3 Supervision of CHWs

Effective supervision is essential to a well-functioning programme, monitoring performance and providing continuous support for the CHWs (Ludwick et al., 2018). CHW supervision in the Buea Health District involves a structured monthly performance evaluation and coordination process. At the end of each month, Health Centre heads hold coordination meetings with CHWs to review their performance. Two key indicators—community referrals received at health facilities and lost-to-follow-up cases referred by CHWs—are used to assess their contributions. The data for these indicators are collected through CHW referral registers. During these meetings, CHWs discuss the challenges they faced, and the Health Centre heads work with them to find solutions to improve their performance. Additionally, the level of achievement of the objectives assigned to each CHW is assessed, ensuring continuous monitoring and support to enhance their work in the community.

In Buea Health District, CHWs' supervision occurs face to face, though there are different approaches to this, depending on the intervention or campaign they are involved with. Some informants reported organising monthly supervisory meetings with the CHWs at the health

centre. Such meetings are meant to identify the challenges of the CHWs and propose solutions to them. This is reflected in their comment:

"Typically, we have monthly meetings with the committee [health management committee of the health area] and community health workers. At the end of each month, they come together for these meetings. It's in these gatherings where both groups are present that they can speak freely. These meetings serve as a platform for open discussion and also function as our evaluation sessions, where we assess progress and address any issues." – Programme Supervisor 4

Other informants reported going to the field to supervise the activities of the CHWs as they took place. However, they typically do this only for communities that are easily accessible in terms of security. One of the informants remarked that:

"For the areas that are more accessible, I personally engage with the community health workers. I go to each community and meet with them to evaluate their activities and discuss their experiences." – Programme Supervisor 3

Additionally, supervision was conducted quarterly through external PBF quality assessments, which also evaluated the CHWs. A programme manager described the supervision of the CHWs with PBF contracts to be done at different levels. At the most immediate level, CHWs receive day-to-day oversight from the health centres they are connected to, with the chief of the centre typically responsible for their daily management. In addition to this, district-level supervision occurs quarterly, employing standardised evaluation forms to assess CHWs' performance and identify their needs. This tiered supervision model ensures that CHWs are regularly evaluated and supported, which is critical for maintaining high standards of community health service.

It should be noted that not all CHWs are included in the PBF scheme. Some have PBF contracts with health centres, while others do not. CHWs without PBF contracts mainly participate in health campaigns and outreach activities but do not have formal contractual relationships with health centres.

5.1.4 Incentives for Community Health Workers

Financial and non-financial incentives are acknowledged as one of the key mechanisms for ensuring the recruitment, retention and performance of CHWs in all settings, including fragile

ones (Colvin et al., 2021b; Raven et al., 2020c). Insights from the interviews conducted for this research in Buea indicate a varied approach to CHW incentives. From the insights of the key informants, the financial incentives available for CHWs are based on the referrals they make to the health centre or are aimed to cover their transportation and meals during the outreach campaign activities they are involved in. Notably, these incentives align with Cameroon's CHW policy, with crisis payments serving as a local adaptation to address specific contextual challenges.

One of the informants further explained that a performance-based financing incentive system is in place at the health centre level and for CHWs, whereby CHWs receive compensation based on the number of cases referred to health centres, as stipulated by the PBF contract between the health centre and the CHW. However, there are challenges, such as irregular PBF payments, especially during crises. To address this, CHWs receive additional financial incentives from health centres, derived from patient consultation fees, to cover transportation and meal costs when PBF funds are delayed. Moreover, the PBF programme in Buea Health District was adapted to the local context by incorporating payments for services provided to internally displaced persons (IDPs), such as referring them to the health centre. Even with these adaptations, issues such as payment irregularities and other crisis-related challenges persisted, making it necessary to implement crisis payments to support CHWs. The programme manager elaborated

“The Performance-Based Financing programme has introduced an aspect where health centres are compensated for treating financially disadvantaged individuals [like internally displaced persons]. This ensures that the facilities are remunerated for the care provided. For every patient referred to and received at the health centre, the community health worker is paid 500 francs. Beyond that, the health centre carries out outreach, home visits, and many other activities that are not in the contract of the community health worker but that the community worker is involved in, such as sensitisation...at the end of the month, based on the financial strength of the health centre, they might decide to give the community worker something extra.”– Programme Manager 2

Furthermore, some informants identified non-financial incentives such as verbal appreciation and recognition from the health centre's Chief of Centres (COCs) as a means of motivating the CHWs, particularly during difficult crisis periods. This appreciation included verbal praise, congratulations for effort, and gestures of gratitude through handshakes and high-fives.

According to one of the informants' accounts, these displays of acknowledgement and validation contributed to motivating CHWs to persist in delivering services despite crisis conditions.

I knew that that period was a tough period and you need to motivate them. Their motivation was not only the one they were coming to sign [financial incentives for the programmes they were engaged in] When they come like that, I will appreciate them. I will congratulate them, even offer them a drink after work and give them high fives when they return from the field. I also tried talking with the revenue collector to improve their pay from 7000 FCFA [£9] to 10000 FCFA [£13] to motivate them. So, when it was increased, they were happy. – Programme Supervisor 2

However, this representation may inadvertently oversimplify the relationship between the CHWs and their supervisors, as well as the profound challenges both parties face amidst the crisis. Such expressions of appreciation are not merely superficial gestures but are embedded within a context where the informant and CHWs navigate the daily challenges of the crisis together. So, acknowledging CHWs' work, while seemingly simple, is an empathetic response to the shared experience of the crisis, reflecting an understanding of the importance of psychological support and the intrinsic motivation that sustains their commitment to community health amidst the crisis. The next section will specifically focus on presenting the challenges encountered in operating the CHW programme in Buea Health District during the crisis.

5.2 Challenges at CHW programme level

This second section identifies the challenges encountered in operating the CHW programme during the conflict, including issues related to insecurity, community mistrust in health interventions, and population displacement.

5.2.1 Security risk and restricted mobility

As highlighted in interviews with key informants, the role of CHWs during acute crisis phases is accompanied by significant challenges, particularly in delivering services to communities. A primary challenge identified is the security risks that restrict the mobility of CHWs within the Buea Health District. These risks are predominantly associated with threats of abduction or violence from non-state armed groups, which pose substantial obstacles to community sensitisation efforts and other essential activities.

One programme manager detailed how the heightened insecurity led non-state armed groups to perceive CHWs as potential threats, particularly due to their use of smartphones. The groups feared that these devices could be used to relay GPS coordinates, making their locations vulnerable. Consequently, some smartphones were destroyed by the non-state armed groups to mitigate this perceived threat:

"Initially, due to the heightened insecurity, many groups [non-state armed groups the community health workers encountered while out in the field] did not want the community health workers using smartphones. Their concern was that these smartphones could be used to provide GPS coordinates of their locations, making them vulnerable. As a result, some of these smartphones were destroyed by these groups." - Programme Manager

3

Furthermore, some CHWs faced direct threats from non-state armed groups due to their association with government services and government health centres. One informant recounted an incident where a CHW was threatened, had his phone seized, and was shot during a polio campaign. Despite taking precautions to disguise the polio vials, the CHW was accused of supporting the government and was abducted, though fortunately later released.

"Yes, during the crisis, there were incidents involving community health workers facing threats. I recall the chairman, who was also a community health worker, was threatened and his phone seized. He was even shot

during a polio campaign. He was accused of supporting the government and was taken into the bush [by members of the non-state armed groups]. This kind of threat has been a common experience for all of us working here [the health centre], especially since our institution is seen as a government institution. Interestingly, there's another private institution next to this Tole health centre, which operated without such issues."- Programme Supervisor 6

5.2.2 Community mistrust of health interventions

Beyond the security risks and threats of violence encountered by CHWs in the conflict-affected Buea Health District, interviews with key informants revealed significant challenges related to community mistrust of health interventions. This mistrust is particularly acute during health campaigns, where CHWs are often perceived by community members as agents of the government, working against the interests of the local population during the ongoing conflict. One programme manager highlighted this shift in community perception:

"With the onset of the crisis, one of the biggest challenges has been the change in the population's receptiveness. Previously, the community health workers were readily accepted, and the population was quite cooperative. However, now, even in areas where community health workers are generally well-received, we face significant obstacles. The community's perception has shifted. Since these health workers are associated with health activities that the population may perceive as government-sponsored, their work has become much more challenging."- Programme Manager 6

Another informant commented on the reluctance of community members to engage with CHWs during home visits, noting a significant decline in the willingness to share personal information. This mistrust has created substantial barriers to effective health service delivery:

"Yes, the community health workers were getting threats from the boys [the non-state armed groups, as they are popularly referred to], and the community was also difficult. The people don't want anyone coming to their doors now. When asked for their names during home visits, they refuse to give them. They won't even share their phone numbers. There's a lack of trust. They might know you, but they don't trust you. They fear being called for money or threatened, so they won't give out their contact details. This lack of trust made our home visits and work at the health centre really challenging."- Programme Supervisor 2

The global spread of misinformation surrounding COVID-19 vaccines further exacerbated this mistrust. Although not specific to the Buea Health District, this global phenomenon contributed to vaccine hesitancy, complicating the acceptance of other critical health campaigns, such as

the cholera response. The mistrust surrounding vaccines may be rooted in broader perceptions that government initiatives are a means of control, a view likely influenced by the historical marginalisation of the Anglophone regions of Cameroon, which underpins the Anglophone Crisis. Consequently, the association of CHWs with these government-linked initiatives has further eroded trust, making it increasingly difficult to deliver essential health services in the region.

5.2.3 Population displacement

The displacement of populations into and out of the urban and peri-urban areas of the Buea Health District, perceived as relatively safer zones, has had significant implications for the operations of CHWs, as reported by key informants. One informant noted that the influx of internally displaced persons (IDPs) from conflict-affected rural areas imposed additional responsibilities on CHWs, who were tasked with supporting these vulnerable groups. Specifically, CHWs were required to identify and create registries of IDPs within various communities to facilitate their access to healthcare services. This responsibility, which emerged as a direct consequence of the displacement crisis, expanded the scope of CHW duties, as highlighted in the following statement:

"Like I said, due to the crisis, we had to increase our tasks. Before the crisis, health activities were running smoothly, but with the crisis, we've seen a lot of internally displaced persons. These people are vulnerable and need help. Our community health workers had to take on additional tasks, like identifying these internally displaced persons in the communities. There was even a time when we had to create a list of these displaced persons, which was extra work for our health workers. But it was necessary so that we could assist them at the health level."- Programme Supervisor 1

Another informant elaborated on the increased workload experienced by CHWs during mass mosquito net distribution campaigns. The presence of newly settled IDPs, who were unfamiliar with the area, required CHWs to exert additional effort to reach these groups in addition to serving the usual residents:

"The presence of more than 200 internally displaced persons has significantly increased the workload of our community health workers. For instance, during the mosquito net campaign, they had to extend their efforts to cover these displaced persons who were unfamiliar with the area. This meant more physical work in terms of distribution and increased efforts in sensitising the community about the health services we offer. Additionally,

when these displaced persons seek services at our facility, we try to accommodate them by reducing their bills."- Programme Supervisor 4

The crisis-induced displacement not only increased the workload of CHWs but also led to the displacement of some CHWs out of the Buea Health District due to the insecurity, necessitating the recruitment of new CHWs. One informant observed that the crisis disrupted the CHW workforce and created challenges in maintaining a steady and committed team. New recruits often lack the experience and familiarity with the community that is essential for effective community health service delivery. This disruption is further compounded by the insecurity associated with recruitment, as described in the following statement:

"Yeah, the crisis has definitely affected the recruitment of community health workers. One major issue is that many of them have been forced to leave their homes. This means we constantly need to recruit new people. But recruiting someone new is like starting from scratch. Sometimes, they join thinking it's a paid job, but when they realise it isn't, they leave, and we have to start recruiting again.

Also, the recruitment process itself has changed because of the insecurity. It's challenging to find someone who is even willing to work as a community health worker in these conditions. It's not as easy as it used to be to find willing participants."- Programme Manager 1

These findings underscore the multifaceted impact of population displacement on CHW operations, highlighting the additional burdens placed on CHWs, the challenges of maintaining an experienced workforce, and the complexities of recruitment in an insecure environment. The following section will present the various adaptations and risk mitigation strategies that were implemented to ensure the continuous operation of the CHW programme amidst the challenges posed by the conflict.

5.3 CWH Programme Adaptation in the Buea Health District

This final section explores the adaptive strategies implemented by the CHW programme in the Buea Health District to address the challenges outlined in Section 5.2, thereby ensuring the sustained operation and delivery of essential health services during the conflict period.

5.3.1 Adaptations to address insecurity and restricted mobility

In response to the security threats and violence faced by CHWs, key informants consistently advised CHWs to avoid conducting activities if they perceived any threat or insecurity. However, different health areas adopted various strategies to ensure the safety of CHWs while maintaining the provision of essential health services during the conflict.

In one health area, where a CHW was shot and abducted, and the health centre was burned, the facility was relocated, and the COC engaged with community leaders to devise risk mitigation strategies. One informant provided further insight:

"Yes, in the beginning, we organised meetings that included our staff and community health workers and influential community figures like quarter heads and Chiefs. These meetings weren't just formalities but important for understanding the community's perspective on the security situation. The community leaders provided insights into how they felt about the insecurity and its impact. We conducted these evaluations regularly every month.

Despite the risks, I felt it was necessary to have these discussions. Sometimes, they would advise us on specific concerns, like suggesting that it might not be safe to open the health centre every day around certain dates, such as the 11th of February⁵, due to heightened security risks."

Programme Supervisor 6

Another informant emphasised the importance of relying on the guidance of CHWs themselves to navigate the insecurity:

" Their advice has been invaluable during the crisis. For instance, during the cholera campaign, they advised us not to cross certain areas to ensure our safety. Similarly, during the mosquito net distribution, they guided us to specific suburbs where the nets were welcomed, reducing the potential for violence. Their local knowledge has been crucial in achieving targets that would have been impossible without their guidance."

Supervisor 1

⁵ The 11th of February, marking the 1961 plebiscite where Southern Cameroon opted to join French Cameroon, has evolved into a symbol of Anglophone grievances in Cameroon. Separatist groups use the date to organise protests and demonstrations.

In addition to these localised strategies, the crisis also necessitated significant adaptations in the supervision of CHWs. Due to frequent disruptions and the postponement of planned supervisory activities, remote check-ins became an essential adaptation. This approach, which had not been formally implemented before the crisis, allowed for continued oversight despite the challenges posed by insecurity. For example, one COC mentioned planned to enhance communication and coordination by creating a WhatsApp group, reflecting the shift towards virtual supervision:

In addition to these face-to-face meetings, I am considering using a WhatsApp group or similar platforms to communicate with the community health workers. I plan to create a WhatsApp group to facilitate better communication and coordination, where all of us can stay connected." - Programme Supervisor 1

Similarly, for programmes such as the Early Warning and Alert Response System (EWARS)⁶, the supervision of CHWs in community-based surveillance was specifically designed to be conducted remotely due to the unstable security situation. However, when security conditions permitted, field supervisory visits at the district level were conducted to ensure effective coordination and collaboration between CHWs and health areas. The programme manager of EWARS elaborated on this approach:

"We regularly monitor the activities of each community health worker. If we notice any lack of activity in reporting, we reach out to them to understand what might be happening and whether they are facing any challenges. Additionally, when the security situation allows, we make efforts to visit the health districts. This is to ensure that there is effective coordination between the community health workers and the health areas and to facilitate their collaborative efforts." - Programme Manager 3

Moreover, in another health area, the COC revealed that they negotiated access to communities by engaging with non-state armed groups, as illustrated in the following quote:

"Negotiation has become essential, especially since the onset of the crisis. We've developed new approaches to engage with certain groups in the community. For example, during deworming campaigns, where we initially targeted only children, we had to start giving some of the medicines to these groups as part of our strategy to gain access and ensure the safety of our work." - Programme Supervisor 3

⁶ WHO's Early Warning, Alert and Response System (EWARS) is designed to improve disease outbreak detection in emergency settings, such as in countries in conflict or following a natural disaster. It is a simple, cost-effective way to rapidly set up a disease surveillance system.

Furthermore, one programme manager shared that CHWs initially gained acceptance due to their familiarity with the community and reputation as trusted individuals. However, the crisis has necessitated more restrictive measures for entering certain communities, often requiring either being from the community or being accompanied by a local. Previously, CHWs identified themselves with specific uniforms or used megaphones for announcements, but during the crisis, particularly with interventions like COVID-19 vaccination, such practices could provoke hostility. As a result, some CHWs opted to forgo branded jackets, and announcements via megaphones were replaced with more discreet interventions:

"Accessing the community has become more challenging. In the past, it wasn't an issue, but now, in some areas, you can't enter unless you're a known community health worker or from that specific area. Previously, community workers could wear their Ministry of Public Health jackets and do their work, but with the crisis, especially with interventions like the COVID-19 vaccine, this approach provoked hostility. So, some workers chose not to wear their jackets, and instead of using megaphones, they had to quickly and discreetly complete their tasks." – Programme Manager 1

In contrast, a community representative discussed using branded materials as a protective measure for CHWs while working in the community. They mentioned:

"Sometimes, they are given t-shirts to identify themselves as government workers. These t-shirts, along with flyers and stickers, help communicate their purpose and intentions to the community." – Community Representative 2

When asked about the risks associated with wearing these t-shirts, such as being targeted by non-state armed groups, the representative acknowledged the concern:

"Yes, these t-shirts do identify them as government workers, which is why it's challenging. Some community members have told them not to return after seeing them wear these t-shirts. In such cases, we advise the CHWs not to return to those areas for their safety." – Community Representative 2

The insights from these interviews emphasise that CHWs' adaptability and resilience were critical factors in sustaining CHW programme operations during the crisis. One Programme Manager highlighted that the success of CHW programmes in the conflict-affected Buea Health District was significantly influenced by the CHWs' dedication to protecting their communities from epidemic-prone diseases.

In addition to their established trust within their communities, CHWs possess deep local knowledge, greatly enhancing their effectiveness. This knowledge includes an understanding

of areas with higher risks of encountering non-state armed groups, familiarity with local shortcuts, insights into local cultural practices, and awareness of relevant stakeholders. Such familiarity enabled CHWs to navigate complex environments and adapt to rapidly changing conditions, as noted by one informant:

"The role of community health workers, though not formally recognised as health workers, is significant. Their presence and familiarity with the community are vital for the success of our health programmes. Their efforts in social mobilisation are particularly outstanding. The way they interact with the community, fostering acceptance of the healthcare system, is crucial for the success of our work." - Programme Manager 2

5.3.2 Adaptations to address community mistrust of health interventions

Several strategic adaptations were employed to restore trust and facilitate effective health interventions in response to the challenges posed by community mistrust and reluctance to collaborate with CHWs. One critical strategy involved integrating community leaders into the CHW activities, particularly during home visits. This approach leveraged the local influence and credibility of community figures to bridge the trust gap between CHWs and community members;

"So, when we realised that gaining the community's trust was a real problem, I decided to involve the health area and health centre chairmen. The community knew and elected them, so their presence could make a difference. I asked them to engage and accompany the health workers on home visits. To further facilitate this, I motivated these chairpersons. Their involvement meant that before entering a community, the health workers, along with the area chairman, would first meet the local quarter chief. Having the chief accompany them on their visits significantly eased the process. This strategy helped in overcoming the trust issue. Maintaining good relationships with the local chiefs is essential in our work. Without their support and influence, it would be challenging for community health workers to be accepted and effectively carry out their duties in these communities."- Programme Supervisor 2

To further mitigate community mistrust, particularly concerning vaccination campaigns, another approach involved deploying CHWs to sensitise the community prior to the arrival of vaccinators. This pre-emptive strategy aimed to build trust by ensuring that the initial contact was made by familiar faces, thereby reducing resistance to the intervention:

"When it comes to campaigns, mobilisation and sensitisation are key, particularly in [name of health area] with the ongoing crisis. Many people have different views about vaccines, especially with the arrival of COVID.

So, we send community health workers ahead of the campaigns to talk to the people. It's easier for locals to trust someone they know rather than a stranger telling them something. The community health workers go out, mobilise, and discuss the issues with the community, usually a few days before the actual campaign."-Programme Supervisor 1

Addressing misinformation, particularly related to the COVID-19 pandemic, has been another crucial task for CHWs. They actively engaged with the community to dispel rumours and ensure the accurate dissemination of information. One community representative described how they systematically documented and countered misinformation:

"When we began encountering those rumours [about COVID-19], we consulted our focal person [responsible for CHW activities in the district]. He created a group [WhatsApp] and provided us with forms to document any misinformation we came across. During our meetings with him, we would note down the various rumours circulating in the community. He then guided us on how to approach these issues. We embarked on three months of continuous community sensitisation, focusing on addressing the misconceptions based on our gathered information."- Community Representative 1

In addition to direct engagement, CHWs also collaborated with various community leaders, including religious figures and teachers, to reinforce their messaging and encourage community members to participate in vaccination campaigns. This strategy leveraged the leaders' credibility to enhance the impact of health interventions:

"Convincing community members was challenging, but we initiated meetings with community and church leaders, teachers, and others to discuss these issues. Following these meetings, the situation began to calm down, and we saw an increase in people getting vaccinated. We didn't stop there; we also reached out to the Muslim community, who make up a significant portion of the community. We spoke with the Imam, held advocacy meetings, and after these efforts, we observed a further calming of the situation." – Community Representative 1

In areas controlled by non-state armed groups, gaining access to conduct health activities often required negotiation through respected local intermediaries. These individuals, trusted by the community and the armed groups, played a pivotal role in securing safe entry for CHWs:

"In communities where non-state actors have significant control, accessing these areas for health activities requires someone renowned in the community, respected by the non-state actors, and trusted not to betray them. This intermediary would facilitate contact and negotiate entry. Once the armed groups permit access, they might require assurance that the intervention poses no harm. For example, CHWs might need to demonstrate the safety of vaccines by taking them first before administering them to the community." - Programme Manager 1

Another Programme Manager emphasised that involving a broad spectrum of community actors in immunisation campaigns, such as teachers and local leaders, has proven to be an effective strategy. This approach not only increases acceptance and adherence but also fosters a sense of ownership and engagement within the community:

"For our Polio campaigns, we often use more community health workers than vaccinators, particularly because the vaccine is oral. We also involve teachers and other respected community members like bike riders in these activities. Their involvement significantly increases acceptance and adherence to the campaign. This approach also fosters a sense of ownership among the community members, ensuring that the initiative is perceived as a collaborative effort rather than an external imposition." - Programme Manager 6

5.3.3 Adaptations to address challenges related to population displacement

In response to the challenges posed by population displacement on CHWs in the Buea Health District, several adaptive strategies were employed to ensure the continuity of essential health services. One programme manager highlighted the strategy of enlisting temporary CHWs, often in collaboration with local organisations, to fill the gaps left by displaced CHWs. This approach was crucial in maintaining service delivery across various communities:

"During stable times, each health area had its own community health workers. However, in 2019, due to the conflict, we could no longer rely on the conventional CHWs as many had relocated, and their names were no longer accessible through the health area or district personnel. We reached out to the communities directly, asking them to recommend individuals who could take on the role. These new recruits were trained and monitored closely. Additionally, local organisations within the communities provided support by offering community members, regardless of their formal association with the organisations, to assist in our work during periods of heightened insecurity. As the situation has stabilised, health district personnel and the conventional CHWs are gradually resuming their duties." - Programme Manager 3

In some cases, internally displaced persons who had settled within certain communities became integrated as CHWs. Their shared cultural background and language with the residents facilitated their assimilation and effectiveness in these roles.

"Some internally displaced persons have become prominent in specific communities and are now serving as community health workers. This role provides them with an opportunity to support themselves while assisting others. In areas where many IDPs share the same cultural background and language

with the local residents, these individuals have been particularly effective as CHWs."- Programme Manager 1

Another informant from a different health area emphasised the importance of CHWs' deep familiarity with the community. This intimate knowledge of each household and individual, combined with the trust they have built over time, enables CHWs to effectively identify and respond to health needs, such as providing alerts about sick individuals or new births:

"Our success is largely because our community health workers know every house and person in their area. For example, one of our workers is familiar with most community members. As a recognised CHW, she is often approached by residents for help, such as informing her about a sick woman in the area. She also tracks new births and informs us, allowing us to follow up and encourage new mothers to access EPI [Expanded Programme on Immunisation] services. The strong relationship between our CHWs and the community members is a key factor in our success." - Programme Supervisor 5

The quote emphasises how CHWs' intimate knowledge of their community and the trust they have built over time are critical to their effectiveness in identifying and responding to health needs. When displacement occurs, this deep community connection is disrupted, leading to challenges in maintaining the same level of service delivery. Displaced CHWs may lose this essential connection, and newly recruited CHWs, including internally displaced persons, may face difficulties in replicating the established CHWs' knowledge and trust within the community.

5.3.4 Shifts in health service delivery during acute crises

In addition to the risk mitigation and adaptation strategies, the increased community-based health provision was identified as a critical enabler of the CHW programme during acute crises. This strategic shift, which included the deployment of temporary CHWs and the transition of programme management from development-focused to humanitarian-focused organisations, facilitated the continued delivery of essential health services under challenging conditions. Consequently, this shift is included under the adaptations to the challenges discussed in Section 5.2, highlighting its role in supporting the resilience and effectiveness of CHW programmes during periods of instability.

The interviews revealed significant shifts in health service delivery during periods of crisis, with a marked increase in reliance on community-based health provision, particularly through

the expanded use of CHWs. One programme manager highlighted the implementation of community-based surveillance as a response to the disruption of conventional hospital-based surveillance due to regional insecurity.

"WHO has made use of community health workers [...] to implement community-based surveillance in the northwest and southwest regions. [...] WHO deploys Early Warning, Alert and Response System (EWARS) in disaster situations, especially when the conventional surveillance system is no longer functioning normally. You [...] deploy it within 48 hours and make use of community health workers to report cases in their communities." - Programme Manager 3

This adaptation involved recruiting and training temporary CHWs to replace those displaced by the conflict. These temporary CHWs, equipped with specific case definitions, reported cases of diseases with epidemic potential⁷ using the EWARS mobile application.

Another programme manager described a similar shift in the management of malaria initiatives. Previously, CHW activities relating to malaria initiatives had previously been supervised by a community development sub-recipient⁸ organisation – *Plan Cameroon*. However, the crisis and subsequent humanitarian emergency necessitated transitioning to a humanitarian sub-recipient, *Reach Out Cameroon*. This transition from a development-focused organisation to a humanitarian-focused one in managing CHW programmes, particularly within the context of malaria initiatives, underscores a strategic response to the evolving realities on the ground. The shift reflects changes in operational approaches, priorities, and expected outcomes, highlighting the critical role of CHWs during crises.

These findings highlight the necessity of adaptable and responsive programmes and health systems that can support CHWs in navigating the complexities of conflict-affected environments. The next chapter presents insights into the personal and professional experiences of CHWs in Buea Health District, exploring how these challenges and adaptations shape their day-to-day operations and impact their service delivery. These findings will not only provide

⁷ A disease with epidemic potential is one that has the ability to spread rapidly and widely among the population, causing a public health emergency.

⁸ A sub-recipient organisation is one that receives funding from a primary recipient organisation to implement a specific project or programme. This type of arrangement is often used to leverage the expertise and resources of local organizations to achieve development goals.

a richer understanding of their roles but could also inform strategies to enhance CHW programmes in similar contexts.

CHAPTER 6: CHWs' Lived Experiences in the conflict-affected Buea Health District

This chapter presents the findings on the experiences of CHWs operating during the conflict in the Buea Health District. The data is drawn from focus group discussions with CHWs from four Health Areas and the work-life histories of selected CHWs who participated in these discussions. There are also relevant insights from community representatives to support some of the points raised by the CHWs. The primary aim of this chapter is to address the second secondary research question: What are the lived experiences of CHWs in the Buea Health District during the conflict? It should be noted that some quotes from key informant interviews with community representatives are included here to reinforce and provide additional context to the challenges highlighted by CHWs during the focus group discussions.

The chapter is structured into four main sections. The first section (6.1) presents a background of the demographic of the CHWs who were selected for this study. The second section (6.2) examines how CHWs perceive their value and roles, providing insight into how they feel about being CHWs and ensuring that strategies to support them align with their experiences and needs. The third section (6.3) explores the personal challenges CHWs encountered while performing their duties during the crisis, offering a detailed account of the difficulties they faced daily. The fourth section (6.4) discusses the coping mechanisms and adaptations that CHWs employed to overcome these challenges, ensuring the continuous delivery of essential health services despite the ongoing conflict.

It is important to distinguish the focus of this chapter from that of Chapter 5. While Chapter 5 addresses challenges and coping mechanisms at the programmatic level, this chapter focuses on these issues at the individual level, specifically from the perspective of the CHWs themselves. Although similar themes arise, the emphasis here is on the personal experiences and strategies of the CHWs.

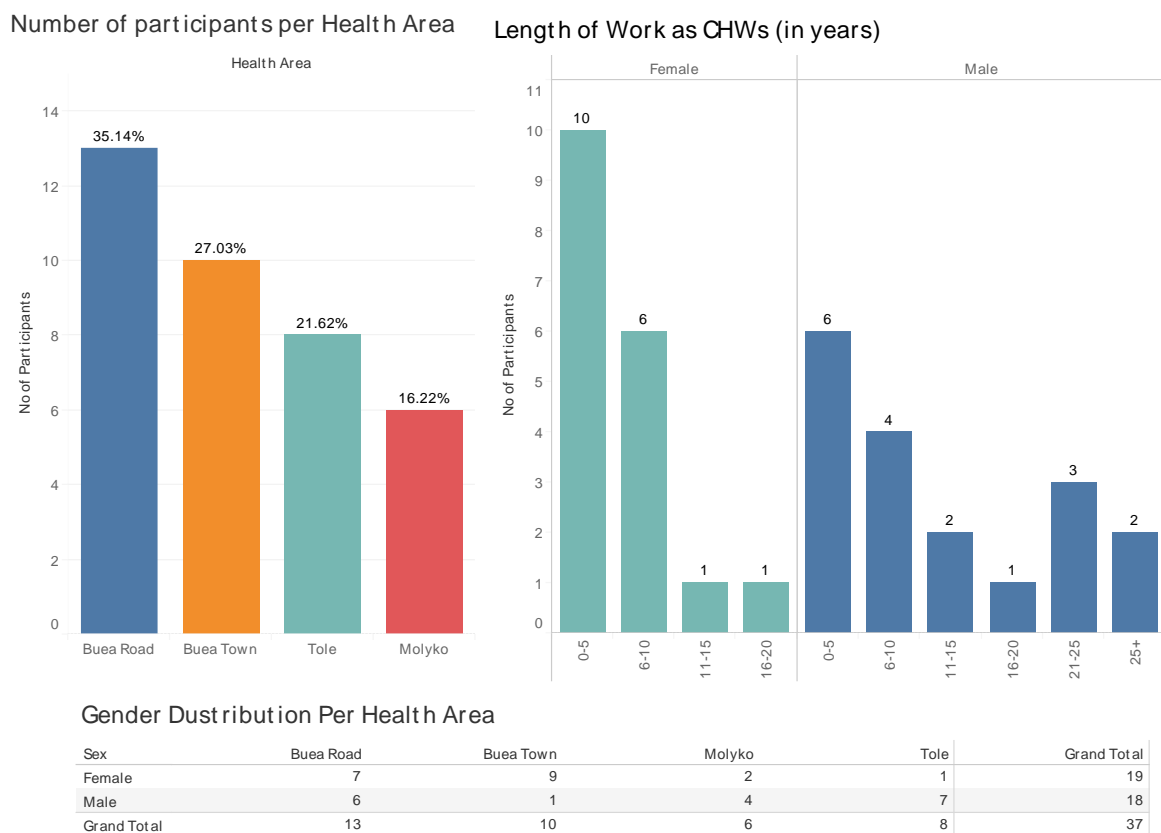
Additionally, this chapter incorporates vignettes derived from the work-life histories of the CHWs. These vignettes provide rich, contextualised narratives that capture the complexities and nuances of the CHWs' lived experiences during the conflict (Barter et al., 1999; Tremblay et al., 2022). By grounding the findings in real-world experiences, the vignettes enhance the

authenticity and credibility of the research. They are strategically placed throughout the chapter and intersect with multiple themes rather than being confined to one. This approach illustrates key concepts and humanises the data, allowing the CHWs' voices to be heard directly (Tremblay et al., 2022). Using vignettes strengthens the chapter's ability to address the research question comprehensively. It offers valuable insights into how CHWs navigate challenges, maintain resilience, and adapt to their roles in a conflict-affected setting.

6.1 Demographic of sample CHWs

This section provides demographic information about the CHWs who participated in this study, including their sex, duration of service as CHWs, and alternative sources of income. This information helps interpret findings in the subsequent chapters and provides a basis for better understanding the CHWs' personal and professional experiences.

Figure 11: Distribution of Community Health Workers Across Health Areas



1. Sex Distribution

Figure 11 summarises the distribution of CHWs across the four participating health areas: Buea Town, Tole, Molyko, and Buea Road. The combined analysis included a total of 37 participants, consisting of 19 females and 18 males. The varying sex distribution across the health areas provides insight into the sex dynamics that may potentially influence the experiences and perspectives of CHWs. Buea Road has a slight female majority, with 7 females and 6 males. Buea Town has a significant female majority, with 9 females and only 1 male, indicating a strong female presence in this area. Molyko presents a male majority, with 2 females and 4 males. Tole has the most pronounced male majority, with 1 female and 8 males.

2. Duration of Service

Table 12 shows the distribution of CHWs based on their duration of service across four health areas: Buea Road, Molyko, Tole, and Buea Town. Given this variation in experience, it is plausible to hypothesise that CHWs with differing lengths of service might perceive challenges and needs within their roles differently. This variation in perception could be influenced by their respective levels of expertise and familiarity with the community health environment. This hypothesis is grounded in the understanding that experience shapes perception (Abdel Rahman & Sommer, 2008; Snyder et al., 2015). More experienced CHWs may have developed coping strategies and a deeper insight into community health needs, whereas those with less experience might still struggle with fundamental challenges. Understanding the duration of service helps contextualise the CHWs' perspectives, which their tenure could influence in community health service.

Table 11: Duration of Service as a Community Health Worker

	Duration as Community Health (in Years)					
Health Area	0-5	6-10	11-15	16-20	21-25	25+
Buea Road⁹	8	1	-	2	-	1
Buea Town	2	6	2	-	-	-
Molyko	3	1	1	-	-	1
Tole	3	2	-	-	3	-
Total	16	10	3	2	3	2

⁹ One participant with the Buea Road group did not provide how long she has been working as a CHW, hence the reason why the numbers add up to 12 and not 13 for Buea Road Health Area.

3. Alternate sources of income

Figure 12 reveals a diverse range of additional occupations CHWs hold, indicating a multifaceted workforce with varied skills and experiences outside their primary roles as CHWs. In examining the additional occupations of the CHWs (Figure 12 and Table 13), the data reveals a diverse range of engagement in various sectors, reflecting the multifaceted lives CHWs lead. Agriculture was a prevalent additional occupation, with nine CHWs engaged in farming or related agricultural activities. Similarly, business and commerce, such as trading or running a small business, are equally represented by nine individuals. Community and social services, encompassing roles in public service and community engagement, account for 4 CHWs. Education, including studying, teaching, and technical and trade services, such as electricians and technicians, were both represented by eight CHWs.

Figure 12: Word Cloud for Additional Occupations for Community Health Workers



WordItOut

Table 12: Additional Occupations for Community Health Workers

Additional Occupation Category	Count
Agriculture	9
Business and Commerce	9
Community and Social Services	4
Education	8
Technical and Trade Services	8
Grand Total	38

The range of additional occupations indicates a broad spectrum of skills and experiences among CHWs, which could potentially influence their perspectives, motivations, and performance in their primary roles as CHWs. This occupational diversity also reflects the multifaceted nature of CHWs, which may indicate the broader socio-economic context within which they operate.

The analysis of sex dynamics facilitates an understanding of how sex roles and responsibilities may intersect with their professional experiences, potentially influencing their motivation, performance, and retention (which are not aspects directly explored by this study). The duration of service provides a perspective through which the longevity of CHWs in their profession can be assessed, hinting at the levels of expertise, commitment, and resilience among the cohort. Further, exploring their non-CHW work activities reveals the multifaceted nature of CHWs, highlighting additional responsibilities or external pressures that might impact their professional roles. Understanding these variables is instrumental in providing a nuanced comprehension of the CHWs' lived experiences, especially within the fragile and conflict-affected setting of the Buea Health District. This enriched context could contribute to interpreting the data from the FGDs. It sets a foundation for developing effective, sustainable strategies that resonate with the CHWs' realities and are tailored to sustain their motivation and performance amidst the prevailing challenges of working in a conflict-affected context.

6.2 CHWs' perceptions of their value and role as CHWs

This section explores the self-perception of CHWs regarding their value and roles within their communities and how they view their contributions to health amidst the challenges of the conflict.

During the focus group discussions, CHWs were asked to articulate the importance of having designated CHWs within communities. One participant highlighted the historical trust that CHWs have garnered over time, noting that they were once known as town criers—individuals responsible for disseminating important information—, sanitary inspectors, or tax collectors, roles that underscored their deep-rooted connection with the community. As one CHW explained:

*"It's important for a community to have a designated Community Health Worker, as they are recognised for their health knowledge and trustworthiness. [...] A CHW is someone who brings valuable health information to the community, aiding in improving community health."-
CHW-FGD*

This trust is particularly significant when health interventions, such as Mectizan distribution, are introduced. Communities rely on CHWs to deliver these interventions effectively, valuing them as reliable sources who can improve overall community health.

Supporting this assertion, another CHW emphasised the trusted status of CHWs within their communities:

"Community Health Workers are trusted individuals with the task of addressing health-related concerns for the benefit of the community. Each community faces unique health challenges and recognises who among them can provide assistance in times of need. Having a Community Health Worker within the community is a longstanding practice that continues to be relevant."- CHW-FGD

The discussions revealed that CHWs perceive themselves as trustworthy figures, essential for relaying critical health information to their communities. They emphasised that communities are often hesitant to accept information from unfamiliar sources, which reinforces the importance of CHWs:

"Community Health Workers are important in sensitising the community on health matters. When a message comes from someone residing within

the community, it gains more trust compared to when it comes from an outsider". - CHW-FGD

However, it is important to note that in the preceding chapter, CHW programme managers, supervisors, and CHWs themselves - as will be discussed later in this chapter - have recognised trust, or the lack thereof, from community members as a significant challenge. This presents a seeming contradiction between CHWs' perceptions of being trusted and the reported mistrust by community members. This issue will be further explored and addressed in the discussion chapter (8.2.2), where factors contributing to trust and mistrust will be examined to gain a comprehensive understanding of this dynamic and the implications for designing strategies to strengthen CHW programs in such contexts.

CHWs also highlighted their unique access to parts of the community that are often unreachable by formal health workers due to barriers such as geographical remoteness. Additionally, they underscored their role as vital links between health centres and their communities, particularly in health sensitisation efforts:

"Community Health Workers can go to places where formal health workers can't, especially during emergencies. They provide important information to the government about the community's health needs, which helps the government serve the population better." - CHW-FGD

When prompted about what it means to serve their communities, CHWs expressed that their roles provide both a sense of purpose and a source of inspiration. They derive profound joy from their work, particularly when they see tangible positive outcomes in their communities:

"Serving my community brings me great joy. [...] When we go out to sensitise the community, and they listen to what we have to say about cholera prevention, it provides me with a sense of joy." - CHW-FGD

Moreover, the CHWs who are also students, reported that their roles align with their academic pursuits, particularly in fields like international relations, conflict resolution, and sociology.

"Being a Community Health Worker is very fulfilling for me. My academic background is in International Relations and Conflict Resolution, a field that emphasises humanitarian actions. Serving my community as a Community Health Worker feels like practical training on the job. It's satisfying as it allows me to simultaneously engage with theoretical learning while experiencing the practical aspects first-hand." - CHW-FGD

A recurring theme throughout the discussions was the sacrificial nature of their roles. Despite often working without adequate financial incentives, CHWs are driven by a deep desire to serve and make a difference:

"To me, being a Community Health Worker means sacrifice. In our community, the role requires huge sacrifice, especially given the lack of a salary."

In exploring how CHWs perceive their roles within the community and how these roles align with their personal life goals and aspirations, this research attempted to uncover important insights for developing supportive interventions. Such interventions are designed to enhance CHWs' well-being and performance and promote engagement and retention, recognising the connection between their motivations and roles. This focus could contribute to efforts to optimise CHW programmes in FCAS, emphasising the support of CHWs as a cornerstone for improving community health outcomes and building more resilient health systems.

Vignette 1: Work Life History of Moki – 18 years a CHW

Moki has been a CHW in the Buea Tole area for 18 years. His journey began around 2003 when his quarter head selected him for the role. Reflecting on that moment, Moki says, *"They selected me in the quarter since I was always available. You know availability matters as a community worker."* Being chosen was a significant honour for him. *"I thought it wise that if this community has chosen me, it means they have me in high regard. They depend on me, and they know that I cannot fail them."*

As a CHW, Moki sees himself as a vital link between the health centre and his community. *"I work for the community because I was chosen by them to work for them. Working for them is... I work like a representative,"* he explains. His role involves more than just health education; it's about trust and responsibility. *"Anything that is in the health centre, my quarter must know because I was chosen to be a community worker. So, I always inform them when need arises."*

Balancing his duties hasn't been easy, especially during the ongoing conflict in the region. The crisis has deeply affected him both personally and professionally. *"This crisis has affected me a lot. One: I lost my child. My wife was pregnant, and the child died in her,"* he shares, the weight of the loss evident in his voice. Accessing health care was nearly impossible due to the insecurity. *"She could not access the hospital. From Tole to Buea was not easy. So, unfortunately for us, my child died because the moment we were supposed to reach the hospital, had passed."*

The challenges didn't stop there. *"It was not three weeks after that incident, I was shot. I was shot and taken to the bush,"* Moki recounts. He was the first person in Tole to return after such an abduction. He was targeted by the non-state armed group for his persistent involvement in health campaigns, even after previous threats. The experience was traumatic. *"I felt very bad because the questions they asked me, they would've asked me without shooting me. I would've still explained."* Despite the danger, he stood his ground. *"I fought... It was not easy, me and them. Before I could reach that bush, I was tired."*

These incidents emphasise the precarious situation CHWs face during the conflict. The programme operates under immense pressure, with limited resources and constant threats.

Despite the risks, Moki remains committed to his role. *"I deem it necessary to work because I could not stay in one place. At least I have children. I have a wife, a father, and mother to take care of,"* he says. His sense of duty and the dependence of his community on his services motivate him to continue. *"I always say that I will work for the community, no matter what."*

Moki's resilience is further demonstrated in how he copes with these adversities. After leaving his job at the Cameroon Tea Estate, when they declined to make him permanent, he focused on farming. *"I decided to go into farming and insure myself,"* he notes. Farming became both a livelihood and a coping mechanism. *"I had to work more seriously than I used to. After I left the work, I put more force and had enough time to work in the farm. That's why I added... if I was planting 10 [plantain] seedlings, I would add 15 or 20."*

His farming activities not only support his family but also help him reconnect with the community. *"Going about this work in the community, even when I'm doing the plumbing work, or even when I'm going to the farm, I see some people who might be in need... you can help them by educating them to go to the health centre when the need arises,"* he explains. This integration of his professions allows him to maintain his role as a CHW while sustaining his family.

Family support plays a crucial role in Moki's life. Living with his wife, five children, and aging parents, he acknowledges the collective effort required to navigate these challenging times. His wife contributes by helping on the farm. *"She supports me in the farming,"* he says.

The CHW programme's operation during the conflict relies heavily on the dedication of workers like Moki. However, he highlights the need for better support from the programme. *"I would like to find out if there's a way or means that the government can upgrade the community workers. Like put them even in a little incentive. Like a monthly incentive. It will be good,"* he suggests. Material support is also crucial. *"It will be good if gadgets too are given to community workers... Like in the rainy season; boots, raincoats, umbrella. It will facilitate the work of a community health worker."*

Moki's experiences reflect the broader challenges faced by CHWs in the Buea Health District during the conflict. The lack of consistent support and resources hampers their ability to serve effectively. Yet, Moki's commitment demonstrates how CHWs navigate these obstacles through personal resilience, community ties, and adaptability.

6.3 CHWs' challenges during the crisis

This section examines the challenges of CHWs operating amidst the crises in the conflict-affected Buea Health District, focusing on capturing the realities and challenges they face daily. This exploration aims to enhance understanding of health service delivery by CHWs in fragile and conflict-affected environments. The findings presented are derived from data obtained

during the first part of FGDs and life history interviews with selected CHWs, offering direct insights into their personal and professional experiences in these challenging settings.

6.3.1 Fear and Insecurity

Some CHWs frequently cited facing direct threats to their physical safety. In some instances, they are imposed with restrictions not to be found in certain communities after 18h00, with threats sometimes extending from the military and non-state armed groups. This community with the curfew has fenced houses where residents are perceived to be better educated, which is particularly unreceptive to CHWs. Despite the resistance, CHWs sometimes persist, educating community members on the benefits of activities like vaccinations. Sometimes, they involve the team from the district health service to intervene in such confrontations. Furthermore, the prevailing insecurity makes community members afraid to leave their homes, leading to challenges in access.

The life histories unveiled two significant incidents involving encounters with non-state armed groups, where CHWs were taken to their camps¹⁰, and subjected to extensive interrogation, resulting in trauma. These narratives included a particularly severe instance where a CHW was shot in the leg by a non-state armed group member, highlighting the extreme risks and dangers inherent in their duties. The life histories revealed two incidents of CHWs encounters with NSAGs, being taken to their and undergoing extensive interrogation, causing trauma. Among the reported incidents was a severe case where one CHW was shot in the leg by a non-state armed group, showcasing the grave risks associated with their duties. One of the CHWs described their experience in the quote below – the detailed narrative is in Vignette 1 above:

"This crisis affected me deeply. I lost my child when my wife was pregnant, and soon after, I was shot and taken to the Bush [non-state armed group camp]. I was the first to return alive, answering all their questions directly. The health centre was also burned, and without nurses, it was difficult to convince people to return. My small business was seized by those guys [non-state armed groups], but by God's grace, I've been blessed again despite everything." – CHW 1, Life History

¹⁰ An informal base or settlement where members of these groups reside, plan, and coordinate their activities. While it serves a similar function to a formal military camp, it lacks the official recognition and structured organisation typically associated with state military establishments.

The CHW attributed the loss of their child to the inability to access health centres in time, as the insecurity had severely restricted the movement of people and transport vehicles. The critical window for medical intervention was missed, leading to the child's death before any emergency medical response could be provided.

These encounters with non-state armed groups not only endangered the CHWs' physical safety, leading to life-threatening situations and profound trauma, but also disrupted their livelihoods and community health activities, resulting in the tragic loss of loved ones. Another CHW shared their experience:

"I nearly lost my life when I was taken to the bush [non-state armed group camp]; I thought it was the end. The crisis has deeply affected me—I've lost many dear ones, including one of my four children. Everything has slowed down, including business and community activities. Although the community is struggling to recover, it remains a red zone, and safety is still uncertain."- CHW 2, Life History

The findings from the male CHWs indicate a notable gender-based difference in experiences during the conflict, highlighting fear and insecurity. This difference likely arises from varying mobility patterns and community perceptions toward male CHWs, who may encounter increased scrutiny from military forces and non-state armed groups, as evidenced by the reported attacks and abduction of male CHWs in Tole. This difference could also be attributed to the greater availability of male CHWs for community health tasks and their ability to cover more physical ground compared to female CHWs, who are often considered less available due to domestic duties. The heightened vulnerability of CHWs seems related to the location of the health areas within the Buea Health District, where security incidents are notably concentrated in certain health areas.

The distribution of reported insecurity follows a pattern, with CHWs operating in Molyko, Buea Town, and Tole Health Areas experiencing disproportionately higher levels of security threats. This geographic disparity seems to correlate with the peripheral, peri-urban nature of Buea Town and Tole, which lack the institutional security infrastructure present in central areas like Buea Road. The absence of administrative offices and law enforcement agencies in these peripheral zones creates security vacuums where CHWs and community members are exposed to elevated risk. Molyko's position as a central hub paradoxically increases vulnerability due to its strategic importance, as it hosts most of the education and commercial institutions which

are targets of NSAGs, rendering it a contested space where CHWs navigate complex security dynamics.

The severity of these security challenges is illustrated through documented encounters with non-state armed groups, including two particularly traumatic incidents involving abduction and detention of 2 male CHWs in the armed camps of non-state armed groups in the Tole Health Area. The case of a CHW sustaining a gunshot wound exemplifies the extreme physical dangers faced by CHWs, especially the male CHWs in insecure zones. This multidimensional impact on CHWs demonstrates how security threats go beyond immediate physical danger to affect broader psychosocial wellbeing and community health service delivery.

The distribution of security-related challenges also indicates that CHWs with over 10 years of experience reported significantly greater exposure to these challenges compared to those with fewer years. This discrepancy implies that CHWs with more years of service may have greater visibility within communities, potentially increasing their vulnerability to targeting by conflict actors who perceive them as government sympathisers by NSAGs or as collaborators with NSAGs by state security forces. Furthermore, those CHWs who have served longer likely possess more extensive experience operating in pre-conflict environments, making the contrast between past security and current threats particularly pronounced in their professional experience. Their institutional memory of more stable operational contexts may frame the reported challenges as especially acute, thereby influencing their perception and reporting of security incidents.

6.3.2 Mistrust from the Community

The CHWs cited that community members had lost trust in the government, and this mistrust in the government was transferred to the CHWs during immunisation campaigns, particularly during the COVID-19 pandemic. This mistrust, deeply rooted in feelings of marginalisation in the Anglophone regions of Cameroon, was exacerbated by the government's militarised response to the Anglophone crisis. The result was a general scepticism towards government-led health initiatives, with community members often associating them with the same government they perceived as oppressive or neglectful. CHWs felt caught in the middle, striving to provide essential health services while facing the community's distrust.

During immunisation campaigns, particularly for polio, CHWs encountered resistance from community members who were sceptical and demanded identification before allowing any interaction. This mistrust intensified with the onset of the COVID-19 pandemic and the introduction of related vaccines, leading to increased hostility towards CHWs. The challenges faced by CHWs during these campaigns were further compounded by misinformation propagated through social media, which fuelled fear and suspicion. This environment of misinformation made CHWs feel overwhelmed and frustrated, as their efforts to educate and protect the community were undermined.

One CHW highlighted the difficulties of their role, noting the persistence required to overcome negative treatment from community members. They emphasised the importance of remaining focused on their mission to protect public health, particularly the well-being of children, despite the challenges:

“In our job, we sometimes encounter difficult people, but we focus on overcoming these challenges. Even when treated poorly, we remain committed to keeping the community, especially the children, healthy and safe from diseases. If we dwelled on the negative treatment, it would be hard to stay motivated to help.”- CHW, FGD

A community representative further elaborated on the deep-seated mistrust and fear towards CHWs during the crisis, driven by misinformation and conspiracy theories about health interventions:

"During the crisis, many people rejected CHWs, fearing they were bringing deadly diseases, especially targeting Anglophones. Some believed we had ulterior motives and were too scared or unwilling to accept CHWs. This made it challenging to sensitise those reluctant to listen or follow our guidance." – Community Representative 2

These perceptions left CHWs feeling misunderstood and unfairly judged. The baseless accusations and fear made their work more difficult and emotionally taxing, as they faced rejection from the very people they sought to help. The challenge of not being trusted despite their genuine intentions likely led to feelings of helplessness and frustration.

This mistrust was particularly evident during the COVID-19 pandemic, where social media misinformation played a significant role in creating barriers to effective community outreach.

The scepticism towards health interventions was further illustrated by another community representative:

"Sometimes, people react negatively when we conduct activities like vaccinations, believing we're part of a government plot to control the population. They think we've come with harmful intentions, which is simply not true." - Community Representative 3.

Such reactions made CHWs feel disheartened and demotivated, as their sincere efforts to improve public health were met with suspicion and hostility. The misconceptions about their intentions undermined their work and affected their morale, leading to feelings of isolation and disappointment.

While the data highlights mistrust towards CHWs, as illustrated by the quote above, it is imperative to understand these reactions within the broader context of the conflict and its impact on community perceptions. This mistrust can be attributed to heightened fear and uncertainty prevalent during crises, mainly when misinformation is rampant. Such fears can lead to scepticism about external interventions, including those by community health workers.

While the cholera campaign stood out as an example of the community's trust in CHWs, with community members readily heeding the guidance of CHWs, the rubella vaccine campaign was met with severe challenges, even resulting in threats to CHWs. The CHWs suggested the direct, visible impact of cholera and the community's recognition of the urgent need for action might have facilitated a more receptive attitude towards the cholera campaign, in contrast to the scepticism encountered in other health initiatives like vaccinations. While there was widespread receptivity to the distribution of mosquito nets, vaccinations often confronted scepticism, attributed to the community's lost faith in state actions. One of the CHWs remarked on the observable surge in vaccine hesitancy during the COVID-19 pandemic compared to pre-pandemic times.

The mistrust faced by CHWs does not necessarily negate the overall trust and respect that CHWs often hold within their communities, as discussed in 8.2.2. Often, CHWs are still regarded as vital links to healthcare and information. Their long-standing relationships within the community and their role in regular health interventions typically build a foundation of trust. Therefore, the contradiction in the data regarding trust and mistrust of CHWs arises more from the extraordinary circumstances of the crisis, which can temporarily influence community

perceptions and reactions. This situation left CHWs feeling conflicted—valued and trusted in some contexts yet mistrusted and rejected in others—adding emotional strain to their work. This dynamic is further explored in the discussion chapter, where the impact of the crisis on community trust is analysed in more detail.

The prominent reporting of community mistrust and non-cooperation among male CHWs compared to their female counterparts highlights a significant gender-based disparity that requires further examination. This trend likely arises from gendered perceptions in communities experiencing conflict, where male CHWs may encounter increased suspicion due to their wrongly perceived association with non-state armed groups, as reported in Molyko Health Area, in contrast to female CHWs, who may benefit from traditional gender roles that link women to caregiving and non-threatening intentions. The distribution of reported mistrust from the community suggests a relation with security challenges, with both phenomena concentrated in the same geographical areas: Molyko, Buea Town, and Tole Health Areas. This overlap strongly implies a connection between insecurity and community mistrust. In areas characterised by frequent security incidents, community members seem to develop heightened suspicion towards any external interventions, including those by CHWs.

The amplification of mistrust during specific health interventions, particularly the COVID-19 vaccination campaign, reveals how pre-existing suspicions intersect with crisis-specific concerns. The stark contrast between community receptiveness to cholera interventions and COVID-19 and rubella vaccinations demonstrates how the visibility and immediate threat of a disease influence trust dynamics. This suggests that community mistrust is not driven by a single factor but is contextual and intervention-specific, with CHWs navigating complex perception scenarios where their acceptance varies based on the perceived urgency and legitimacy of different health initiatives. The emotional toll of this fluctuating trust, valued in some contexts while rejected in others, probably creates significant psychological strain for CHWs attempting to fulfil their duties amidst conflict dynamics that go beyond their control or immediate influence.

The consistent reporting of community mistrust among CHWs with less than 10 years of service and those with more indicates that mistrust represents a systemic challenge, surpassing the duration of individuals' service as CHWs. This finding contradicts my assumptions that longer community embeddedness might insulate long-serving CHWs from community

mistrust, suggesting instead that the conflict environment has disrupted traditional mechanisms of social capital. The uniformity of mistrust experiences across tenure groups suggests that conflict-induced mistrust operates collectively rather than individually, with community perceptions shaped more significantly by broader socio-political conflicts and power struggles that extend beyond the local community than by interpersonal histories with specific health workers. Understanding the fluctuating levels of trust towards CHWs during a crisis requires acknowledging the complex interplay of fear, misinformation, and the community's historical relationship with CHWs. This nuanced perspective allows us to reconcile the seemingly contradictory data.

6.3.3 Payment issues

“You better not promise me something than to promise me and make me come back asking about it.” That was the opening phrase from one of the CHWs regarding the consistently delayed payments they experience after performing their tasks. One such experience was with the mosquito net distribution campaign, which happened in November of 2021, and five months later, the CHWs had not been paid for the distribution of the nets. This resulted in CHWs confronting administrators before being paid for their work from five months prior. The prolonged wait made them feel neglected and disrespected, as their efforts were not promptly recognised.

“These are the challenges. The main one is that we have the feeling that they [administrators] sit in offices and make decisions, but when it is time for that little motivation [payment], they do not rush. We say it is better to plead with us to go and work and you surprise us with the motivation than to say you will pay us and do so six months later. This is a bit immoral. It demoralises you and even kills that zeal in you to serve people.”-CHW, FGD

There is a consensus among the CHWs that many community health workers have dropped out in the past because of these pay-related challenges.

Additionally, CHWs recounted instances of receiving payment amounts different from those initially agreed upon. One CHW shared an experience during a cholera sensitisation campaign for an NGO, where the payment was to be processed through the district. Upon collecting their pay, they were asked to sign for a different amount, only to receive yet a different sum, a situation described as *"take it or leave it."* The CHW elaborated:

“They called us for payment, but we were asked to sign for one amount and given another. There's no justification; you either accept it or leave it. They made us sign for 30,000 XAF but paid 20,000 XAF, saying they deducted 10,000 XAF for themselves.”- CHW, FGD

This experience highlights the lack of transparency and respect that CHWs sometimes face, undermining their morale and commitment. Such practices affect their financial well-being and erode trust in the stakeholders they work with, leaving them feeling demoralised and undervalued.

A contributing factor to the delayed payments is the shift in the payment method from cash-in-hand to mobile money payments¹¹. Furthermore, with the transition to mobile money systems, errors like incorrect phone numbers led to non-payment and no way to rectify the issue. The current payment methods through mobile money also meant reduced amounts due to withdrawal charges, further diminishing their earnings and causing feelings of unfairness. One community representative highlighted that:

“Before the crisis, CHWs would attend training even without transport money, borrowing with the expectation of reimbursement. Now, the situation has reversed; after training and starting work, they often wait for payment, as seen with delays in the PME in December 2021.” – Community Representative 3

Moreover, some CHWs highlighted instances of unequal financial compensation for certain tasks and favouritism and nepotism influencing the selection for financially rewarding health activities. They pointed out that within the health sector, some activities offer better financial rewards; however, when such opportunities arise, programme administrators often preferentially select individuals like their relatives to participate. This practice left committed CHWs feeling marginalised and resentful, as their dedication went unrecognised while others benefited unfairly.

An example shared was the recruitment at the Regional Technical Group for AIDS, where individuals lacking a strong commitment to the community were selected. Such favouritism becomes more pronounced when interventions with substantial financial benefits are

¹¹ Mobile Money is a financial service that allows users to store, send, and receive money using their mobile phones. It is a form of electronic money that is linked to a mobile phone number and can be used to make a variety of transactions, including: Sending and receiving money, Paying bills, Purchasing goods and services, and Topping up airtime.

introduced, with administrators either choosing their relatives or other favoured individuals to partake, thus claiming the benefits. One CHW shed light on this issue:

“It feels unfair when we, who have been working very hard in the community, are overlooked for better-paying opportunities.” CHW, FGD

Such practices affect their motivation and create a sense of injustice and decrease trust in the system. CHWs feel that their efforts and dedication are ignored, leading to frustration and questioning the fairness of the programme administration.

The reports of payment-related challenges among CHWs indicate near parity between male and female CHWs, with only marginally higher reporting from male CHWs compared to their female counterparts. This relative consistency in payment grievances suggests that financial compensation issues transcend gender-specific experiences, pointing instead to systemic administrative deficiencies at the programme level that affect all CHWs, regardless of gender. Unlike other challenges that exhibit gender disparities, payment issues seem to represent a general vulnerability within the CHW workforce during conflict and likely before and after it.

The geographical distribution of payment concerns shows a notable uniformity across Buea Road, Buea Town, and Tole Health Areas, in contrast to the patterns observed with security challenges and community mistrust. This consistency indicates that financial compensation issues are structurally embedded within the CHW programme's administrative processes rather than influenced by location-specific conflict dynamics. The prevalence of these issues across different health areas suggests programme failures rather than localised implementation problems, pointing to broader systemic deficiencies in resource allocation and financial management during crisis situations. These compensation challenges significantly affect CHW motivation and retention, with participants explicitly linking workforce attrition to payment irregularities. The psychological impact of these financial uncertainties, described as *"killing that zeal to serve"*, compounds the other stressors CHWs face in conflict settings, creating a multidimensional burden that threatens the sustainability of community health programming in crisis-affected regions.

The concentration of payment-related concerns was evident among CHWs with over 10 years of service, along with significant reports from those with less than five years of experience. CHWs with over 10 years of service may have a broader comparative perspective on the

worsening of payment issues over time, as their institutional memory of pre-conflict compensation frameworks serves as a reference point for current grievances. Conversely, CHWs with fewer than five years of experience entered the profession with contemporary expectations of financial sustainability that the conflict-affected payment systems have failed to fulfil. This pattern suggests that payment issues manifest differently across stages: as a relative decline for CHWs with over 10 years of service and as unmet initial expectations for newer recruits, while being less prominently reported by mid-career CHWs who may have developed alternative compensation strategies (worth further exploration) or adjusted their expectations.

6.3.4 Lack of Resources and Personnel

The CHWs also expressed frustration and concern over the inadequacy of the current CHWs to cater to certain health areas, a shortfall exacerbated in communities experiencing an influx of internally displaced persons (IDPs). One recounted feeling overwhelmed when they were once out for a polio immunisation campaign and were assigned to a section of the health area they were unfamiliar with, along with another CHW from a neighbouring health area, and they got lost. This situation left them feeling unprepared and stressed. Additionally, they felt burdened by colleagues who were assigned but often unavailable due to other commitments. The following quote illustrates the gap in personnel availability and its impact on their work:

“When I started working as a community health worker, I was worried we didn't have enough people for our big health area. I talked to a colleague, and she said many people [IDPs] have come here because of the crisis, making it one of the busiest areas. But then you see only a few of us actually covering it all. Some people are supposed to help, but they're often busy with other things. It's like we have people on the list who either can't make it to work or don't really know the community well.” - CHW, FGD

They felt overworked and undervalued, noting a decrease in the number of CHWs over time without a corresponding increase in compensation despite the increased workload due to population growth. For instance, a health area was initially served by 18 CHWs, but now only about ten remain, with no adjustment in their remuneration to reflect the increased workload and population. The limited number of CHWs amid a rising population also led to insufficient time for health activities, leaving them feeling overwhelmed and under pressure from programme managers and supervisors to meet targets within tight time frames, especially those serving larger communities. One CHW expressed their frustration and sense of unfairness:

“Initially, we had 18 community health workers. But as the number of people has grown, we had to move workers around to manage the workload. We do most of the hard work but get little pay. We work six days but only get paid for five. Bringing up these payment issues often leads to arguments. With all the work piling up, those who give out vaccines usually get paid first and get more money, which I think is unfair.”- CHW, FGD

The participants also raised concerns and irritation over the competence of some individuals involved in health campaigns, particularly new, and sometimes temporary, recruits, whose lack of adequate training posed challenges and additional workload on the more experienced CHWs to amend the errors. One participant shared a revealing experience:

“During vaccination campaigns, those in charge often choose their friends and relatives, overlooking regular CHWs. Once, while distributing Fansidar, I noticed they were giving out the wrong dosage and mixing up vitamins meant for babies. When I tried to correct them, they ignored me, likely because I'm just a CHW and they were trainee nurses. Later, they realised their mistake and had to pretend they had given out the correct dosage.”- CHW, FGD

CHWs also felt physically exhausted and unsupported due to the lack of transportation for resources meant for the community. For instance, when they are out in the community distributing mosquito nets, and there is a shortage, they will have to walk back to the health centre to get more nets and return to the community. Moreover, that increases their workload and easily wears them out. The additional physical strain made them feel that their efforts were not adequately recognised or facilitated by those in charge.

The reported lack of resources and personnel highlights a subtle gender-based variation, with female CHWs being slightly more likely to report these challenges than their male counterparts. The geographical distribution of these concerns indicates a concentration in the Buea Road Health Area, followed by Molyko and Buea Town Health Areas, establishing a pattern that diverges from previously identified distributions of challenges such as insecurity and community mistrust. The higher population density on Buea Road, potentially exacerbated by internal displacement flows towards relatively secure zones, has placed a disproportionate strain on existing CHWs without a corresponding increase in their numbers to meet the population's needs. This demographic pressure has resulted in negative staff-to-population ratios, with a documented decrease from 18 CHWs to approximately 10 despite rising populations, leading to unsustainable workloads that undermine service quality and workforce retention.

Resource constraints, inadequate transportation fares, lack of supplies, and knowledge gaps in newly hired CHWs highlight the cascading impact of conflict-related disruptions on CHW programmes. CHWs' experiences navigating unfamiliar terrains during campaigns and rectifying mistakes made by less-qualified recruits show that resource constraints go beyond material shortages to include capability gaps that are further exacerbated by nepotism in recruitment, where personal connections precede qualifications.

The majority of reports concerning shortages of resources and personnel among less experienced CHWs, particularly those who have been working as CHWs for five years or fewer, highlight how resource constraints disproportionately affect individuals with limited operational experience. Junior CHWs may face greater challenges navigating resource-constrained environments due to underdeveloped professional networks, limited knowledge of alternative resource pathways, and fewer established coping mechanisms. Furthermore, junior CHWs commenced their service during the conflict period rather than prior to it, potentially lacking foundational knowledge of pre-conflict resource availability that could help contextualise current constraints.

6.3.5 Population displacement

Understanding CHWs' experiences when working with internally displaced persons in urban and peri-urban settings is essential to offering a nuanced perspective of the complex challenges faced at the intersection of conflict, health, and displacement. The insights from exploring the relationship between CHWs and IDPs would help develop context-specific interventions to strengthen CHW programmes in fragile and conflict-affected settings.

These IDPs are usually persons who have left more insecure areas of the Anglophone Regions and sought refuge in the presumable and relatively more secure communities that make up the Buea Health District. However, there are also individuals, including CHWs and health workers, who have left the relatively secure Buea Health District to seek refuge in more secure areas like the Neighbouring francophone Littoral Region.

These IDPs usually live in informal camps or with their relatives or rent. However, it was observed that the living conditions of the IDPs are rarely the best, warranting their classification

as vulnerable. One community representative described the situation in their community to be dire:

“Some people have died because they either didn't know to go to the hospital or didn't want to. Their tough daily life—like not having enough to eat or living in bad conditions—makes them reluctant. Many live in small, crowded spaces without enough food or necessities.” – Community Representative 2

Witnessing such hardships made CHWs feel a profound sense of urgency and responsibility. They found that IDPs were living in highly challenging conditions, including sharing spaces with poultry they rear. Some IDPs had resorted to activities such as sex work for survival, which heightened the CHWs' concerns for their well-being. The financial challenges led IDPs to avoid health centres even when in need, causing CHWs to feel distressed knowing that people were suffering without access to care. In response, CHWs accompanied ill individuals to health centres and referred severe cases to hospitals, feeling compelled to ensure they received help despite the increasing workload.

Additionally, one community representative commented that the presence of IDPs has increased the workload of the CHWs. These IDPs, who are often transient, further complicate tracking and care efforts. The displacement of community members poses significant challenges for CHWs, especially in managing vaccination programmes. Family relocations disrupt the vaccination schedule continuity, as CHWs often struggle to track children who have missed their vaccines. This issue complicates the continuity of care and impacts broader health initiatives. A nationwide catch-up programme for missed vaccinations has been implemented. Still, its effectiveness is limited by the difficulty in reaching relocated families, thus hindering the achievement of comprehensive vaccination coverage. These issues are exemplified in the words of the community representative, who sheds light on the practical difficulties encountered on the ground. The representative explains:

“These challenges have impacted our catch-up vaccination programme. We often find that the children on our list have moved to cities like Douala or Yaoundé, making it difficult to maintain our vaccination schedule. Each missed vaccine gets reported, and we struggle to track the children when families have relocated, and their phone numbers no longer work.”- Community Representative 3

In the FGDs, the CHWs supported the comments made by the community representative. They shared that it is their additional duty to register IDPs in the community, direct them to health

centres, and help them receive medical assistance, which includes providing free or discounted medications and consultations. The CHWs also act as focal persons when organisations come to the community to assist the IDPs and verify their displaced status.

In addition to healthcare-related responsibilities, some CHWs have gone above and beyond by providing resources such as farmland to IDPs to ensure they had some foodstuff during the harvesting season. One participant shared an illustrative example:

"When distributing aid to IDPs in [Health Area], those in [a community within the Health Area] are often overlooked, leaving them feeling forgotten. To help, I provided them with land to farm for food. One pregnant woman in the community was in distress, so my husband and I assisted her and sent her back to her village. Sadly, her sister informed us she passed away two days later."- CHW, FGD

Furthermore, the comments from the CHWs during the FGDs revealed that some of the IDPs were sceptical of the interventions offered by the CHWs and a general lack of collaboration with CHWs. The CHWs reported that this behaviour is due to prior encounters with organisations that made promises but failed to deliver. They cited that certain organisations invite the IDPs for meetings, training or workshops and promise them to support businesses they, IDPs, would like to start. They collect money from them to register their business ideas with the promise of helping them to start up and run these businesses, but never deliver. One participant highlighted the consequences of such scams on CHWs and their activities:

"So, such scams break the trust the IDPs have for any interventions. At times, you even get to an IPD's house, and it is difficult for them to give you the information you need to assist them because of that lack of trust."- CHW, FGD

Furthermore, the participants stated that corruption and mismanagement at the local council levels have prevented aid and support from reaching the IDPs, further deepening their mistrust towards interventions. For example, circa 2017-18, CHWs were tasked with collecting the IDPs' information to be submitted to the council for assistance; however, corruption at the council level prevented the IDPs from accessing the aid. A participant recounted her experience:

"The then-mayor asked us [CHWs] to identify IDPs in the community. I collected and submitted their names and information to the council. Unfortunately, many IDPs did not receive the assistance. One individual replaced the names of IDPs with his family members, claiming over 50 mattresses. This kind of dishonesty causes me great distress, as these IDPs

arrived with nothing and are not receiving the help they need.” - CHW, FGD

However, regardless of the general mistrust from the IDPs in Buea Health District towards interventions offered by the CHWs, some have expressed trust in the CHWs due to prior positive experiences with organisations like Doctors Without Borders (MSF). A CHW recounts:

"My experience with internally displaced persons has been positive. They often seek my assistance, especially since our collaboration with Doctors Without Borders left a good impression. Now, they approach me for advice when their children fall ill, viewing me as a trusted service provider." - CHW, FGD

These findings capture the CHWs' experiences working with IDPs during active conflicts, capturing their intricate dynamics, challenges, and responsibilities.

The dynamics between CHWs and IDPs demonstrate significant geographical differentiation across the Buea Health District, revealing how displacement creates distinct operational challenges based on locational context. In Molyko, CHWs face a dual challenge of resource inadequacy and pronounced trust deficits stemming from historical patterns of unfulfilled promises by external actors. This combination creates a particularly challenging operational environment where CHWs must navigate material constraints while attempting to rebuild trust frameworks damaged by previous institutional failures.

The Buea Road Health Area presents a socioeconomic dimension to the challenges of displacement, with CHWs reporting significant impoverishment among IDPs that manifests in risky survival behaviours, notably including transactional sex work. This area illustrates how economic challenges increase health vulnerabilities, creating a complex intervention landscape where CHWs must address immediate health concerns while recognising their interconnection with broader socioeconomic determinants. The similar trust deficits reported in both the Buea Road and Buea Town areas indicate a widespread pattern of scepticism towards institutional support across multiple geographical contexts.

The Tole Health Area presents a contrasting scenario highlighting potential pathways for effective engagement with IDPs. Here, CHWs identify financial barriers as the primary obstacle to healthcare utilisation among IDPs rather than trust deficits. Notably, this health area demonstrates how the individual investment of CHWs, through personal support and positive

prior interactions, can establish functional trust relationships with IDPs. The documented provision of farmland by CHWs to ensure food security for IDPs exemplifies how interpersonal commitment can transcend institutional constraints. This variation in CHW-IDP interactions across different health areas offers insights into the contextual adaptations required for effective health service delivery during displacement crises, emphasising how local adaptations and personal investment can compensate for systemic deficiencies in response mechanisms while also revealing the unsustainable burden this places on individual health workers operating in resource-constrained environments.

The challenges faced by CHWs in Buea Health District, including issues of insecurity, mistrust from community members, delayed payments, financial inconsistencies, systemic mismanagement, and population displacement, underscore the multifaceted difficulties within these contexts. These challenges, while similar to those encountered by CHWs in more stable contexts, are significantly exacerbated by the fragility and instability characteristic of FCAS. The compounded experiences of CHWs highlight the urgent need for targeted, context-sensitive strategies that provide both personal and professional support. Addressing these challenges is essential for optimising CHW programmes in FCAS, ensuring that CHWs remain motivated and capable of fulfilling their roles in community health and disease prevention.

Vignette 2: Work Life History of Mola – 9 years a CHW

Mola, a 38-year-old man born and raised in Tole, has dedicated the past nine years to serving his community as a Community Health Worker (CHW). *"I became a community health worker because I love doing it. I love doing service to humanity,"* he explains. His journey began in 2013 when the Chief of Centre invited him to participate in distributing medicines and conducting polio sensitisation campaigns. Despite the challenges, Mola remains committed: *"I always make sure that I'm available up to today."*

Before becoming a CHW, Mola was already deeply involved in his community. He's been farming since 1999 and learned to roast fish from his mother in 2002. These activities are essential for supporting his family. *"It is just to keep the family going. I have children. I have a wife also,"* he says. The income from farming and roasting fish helps with basic necessities, food, and school fees for his children.

Balancing multiple roles isn't easy, but Mola manages by carefully allocating his time. *"The farming is not disturbing because I'm the one to create the time,"* he notes. When called upon for community health work, he prioritises it, even if it means setting aside his farming activities. *"Maybe they tell you along the line we have this [health] programme... I need to create the time,"* he says. His dedication reflects the CHW programme's reliance on flexible and committed individuals to adapt to the demands of providing healthcare.

The ongoing conflict in the region has profoundly impacted Mola's life and work. *"I almost lost my life, especially when I was taken to the bush. I knew that that was the end of my life,"* he recalls about his abduction by a non-state armed group. The crisis has brought personal tragedy. *"I've lost so many dear ones,"* he shares. Economic activities have slowed, and safety remains a concern. *"We are just struggling to have something... if you can succeed to feed your family, send the children to school,"* he says.

Tragically, Mola lost one of his children during this period. *"I lost one of my children, my third daughter,"* he says quietly. The tension and danger made accessing health care difficult. *"The issue was very tense that before I even appeared to the hospital, it was too late."* His wife also faced serious health issues while he was abducted. *"My wife was seriously sick—very big abscess under the breast—until she was admitted... while I'm in the bush with severe torture,"* he recounts.

Despite these hardships, Mola continues his work as a CHW, drawing on his sense of duty and commitment to his community. When asked why he persists despite the risks, he responds, *"Rendering services to humanity, you do not have a choice. You just need to help."* His resilience illustrates how CHWs navigate personal and professional challenges, maintaining their roles even when circumstances are dire.

To adapt to the ongoing conflict, Mola and his fellow CHWs have adjusted their approach to ensure they can continue providing services safely. *"Each and everybody have his or her own community that has been divided. You know that this zone is your zone. If I can finish earlier in my zone, I can come and assist you,"* he explains. This strategy helps them manage the risks associated with movement during the conflict and maintain coverage of essential health services.

At home, Mola is the main provider for his family of seven, which includes his wife, three children, and other relatives. His two eldest children, aged 19 and 17, are currently away taking their GCE exams. Financial pressures are significant, especially with limited incentives from his CHW work. *"At one point in time, [my wife] used to even say, 'I will ask your [Chief of Centre]—you guys are doing something that you are not being paid for,'"* he shares. The lack of consistent compensation adds strain, but Mola remains committed: *"We have to do what we have to do."*

Mola's experience highlights the challenges faced by CHWs in the Buea Health District during the conflict. The programme relies heavily on their personal commitment and flexibility but offers limited support in return. Mola suggests that providing basic necessities and regular incentives would significantly improve their ability to cope. *"They should at least consider the CHWs. We would always like to have some working tools,"* he says, mentioning items like umbrellas and raincoats for working in harsh weather. *"Maybe every month they can chip us something. Very important, at least. It is very, very motivating."*

6.4 Community Health Workers' Coping Mechanisms & Adaptations

As presented in the preceding section, CHWs frequently encounter various challenges stemming from the complexities of conflict and the fragility of their environments. This section

examines the adaptations and coping mechanisms employed by CHWs during active conflict, providing insights that could inform the development of strategies to optimise CHW programmes in these unique and challenging contexts.

6.4.1 Community Support

A recurrent theme from the focus group discussions was the profound influence of community support on CHWs' ability to navigate and cope with the challenges they faced. Recognising the importance of trust and acceptance within the community, CHWs frequently relied on moral and logistical backing from local leaders as a coping mechanism.

The CHWs collaborated closely with local leaders, such as community chairpersons and Chiefs of Centres, who actively encouraged community members to engage with health centres. These leaders often accompanied CHWs during their activities, thereby reassuring the community and promoting the use of health services. By leveraging the respect and authority of these local figures, CHWs were able to overcome mistrust and resistance—significant obstacles in conflict-affected areas. This partnership facilitated the implementation of health programmes and provided CHWs with essential moral support, helping them to remain resilient in the face of adversity.

Additionally, religious leaders played a vital role in supporting health centres, particularly during the peak of the crisis when many facilities had been abandoned due to insecurity. Collaborating with churches became an adaptive strategy for CHWs—a coping mechanism that addressed both resource limitations and community engagement challenges. Churches organised efforts to clean and maintain health facilities and mobilised resources to assist internally displaced persons. By facilitating the identification of those in need and encouraging donations of essential items like clothing, food, and medications, religious communities helped CHWs address resource shortages and extend their reach to vulnerable populations. This collective effort strengthened community bonds and provided CHWs with a network of support that was crucial for sustaining healthcare delivery during turbulent times.

Building trust and addressing misinformation were also pivotal strategies reported by CHWs. They encountered resistance during vaccination campaigns but managed to reduce it through

patient education and the involvement of senior CHWs, who were well-known and trusted within the community. The presence and influence of these established CHWs significantly eased the community's acceptance of health interventions. By providing accurate information and leveraging the credibility of respected community members, CHWs were able to ease concerns and increase the community's acceptance of health interventions. This approach not only enhanced the effectiveness of their campaigns but also reinforced the importance of trust-building as an essential component of their work.

These insights align with the responses from programme managers and supervisors discussed in section 5.2, where key informants highlighted the severe security risks and mobility restrictions faced by CHWs in the Buea Health District during the crisis. The threats from non-state armed groups posed significant challenges, leading to the implementation of various risk mitigation strategies, including seeking guidance from community leaders and negotiating access with armed groups. Furthermore, the mistrust towards CHWs, stemming from their perceived affiliation with the government, necessitated collaborative efforts with community leaders and targeted initiatives to counteract misinformation and rebuild trust.

6.4.2 Operational Adaptations

Safety emerged as a critical theme in the focus group discussions, underscoring the paramount importance of security for CHWs operating in conflict-affected contexts. CHWs reported that they routinely carried necessary identification documents and sought briefings from their supervisors and local community members before engaging with communities that might pose security risks. These briefings emphasised the need to "*work with care*," particularly in areas where the threat of kidnapping was prevalent. By being well-informed and prepared, CHWs could navigate dangerous areas more safely, reducing the risk of harm. This proactive approach to personal safety allowed them to maintain a presence in the community despite the ongoing conflict.

Operational adaptations to enhance security included innovative strategies such as storing and distributing mosquito nets at secure locations, such as a former police station, which provided both distributors and recipients with a heightened sense of safety. This strategy served as a coping mechanism by mitigating the risks of gathering in less secure areas. Additionally,

CHWs adapted their distribution methods by shifting from central distribution points to door-to-door services. This method minimised large gatherings—which could be targets of violence—and allowed them to reach households directly while reducing their visibility to potential threats. This approach, supported by subsidies for motorcycle transportation, demonstrated the CHWs' ability to remain flexible and responsive to the challenges posed by the conflict environment. By altering their operational strategies, CHWs could continue their work effectively while prioritising their safety and that of the community members.

The focus group discussions also highlighted the crucial role of feedback mechanisms in countering misinformation, particularly during the COVID-19 pandemic. Given the widespread misinformation within the community, CHWs utilised designated forms provided by the District Health Service to document and relay rumours and false information. This process ensured the district could implement targeted and effective solutions to address these challenges. By systematically collecting and reporting misinformation, CHWs contributed to a coordinated response to dispel rumours and educate the community, enhancing trust and facilitating better health outcomes. This adaptation addressed the immediate challenge of misinformation and strengthened the communication between CHWs and the health authorities, enabling more efficient and informed public health interventions.

6.4.3 Personal Coping Strategies

The motivational drivers for CHWs transcend financial incentives. The comments from the CHWs during the FGDs revealed a strong sense of community duty. They reported finding strength and motivation in fulfilling the community's needs even without incentives. They cited that they were also motivated to work, hoping the government would consider resolving their situation. Most of the time, encouragement comes from their peers, who serve as their strength. When they fear going into the community, they call on their peers to accompany them. Some believed their senior colleagues who had been working in the community longer also helped create social cohesion between the community and the CHWs who had not been working that long.

Some CHWs also reported relying on their religious beliefs as they believed God to be their helper. Also, an essential support structure came from some COCs, providing moral and

financial assistance during challenging times. A CHW shared an experience during the COVID campaign that highlights the variance in support structures:

“During the COVID campaign, I was stoned by a group in the community. When I reported it, the Chief of Centre sympathised and provided some financial support, while the District Medical Officer showed little concern. Although the Chief of Centre followed up later, I was disappointed by the lack of support from the District Medical Officer, who oversees all health activities in the district.”- CHW, FGD

This experience underscores how support from immediate supervisors, like the Chief of Centre, can boost CHWs' resilience by providing both emotional sympathy and practical assistance. Conversely, the lack of concern from higher-level officials can leave CHWs feeling unsupported, highlighting the importance of accessible support structures as a coping mechanism.

In addition to the work-related coping mechanisms, CHWs who participated in the life history interviews revealed several personal strategies that helped them endure the crisis in the Buea Health District (Vignettes 1,2,3). One key coping mechanism was turning to other activities, such as farming, to provide for their families amidst community health and economic setbacks. Engaging in farming allowed them to secure food and some income, mitigating financial stress and supporting their ability to continue serving as CHWs. As one CHW explained:

“No, I just had to adapt. Since I have my farm, sometimes I just go and harvest my cocoyam, plantain, or vegetables from the farm. Okay. So, if I have 1000, then I know I can cook.”- CHW 3, WLH

Maintaining productivity and avoiding idleness also emerged as significant coping strategies. By staying engaged in work activities, CHWs not only addressed economic needs but also combated the psychological toll of inactivity during the crisis. This proactive approach helped them maintain a sense of normalcy and purpose. One CHW, who had been shot and abducted, explained his determination to move forward and provide for his family despite the challenges:

“I felt it necessary to keep working because I have a family to support. It wasn't easy, but with God's help, I managed to move on. Now, I'm focused on my farm, which, though it's just starting, provides for my family and gives me a sense of purpose.”- CHW1, WLH

Reconciliation with traumatic experiences was also crucial for some CHWs. One CHW described the emotional challenge of confronting the mother of his shooter, who was from his own community, and eventually finding a way to coexist. By addressing the emotional burden

directly and seeking reconciliation, he was able to alleviate personal distress and foster a more harmonious community environment, which supported his ability to continue serving as a CHW:

“The person who shot me was the child of a classmate I've known for a long time, and the child knew me as well. It felt like my own child, which made it difficult to let go. The mother even saw me and ran away. I talked with her one day, expressing how her avoidance seemed to imply she had instructed her child to shoot me... From that point on, when she saw me, she would greet me, and we could talk. Tragically, she passed away suddenly three years later.” - CHW1, WLH

This reconciliation highlights the complexity of relationships within the community during the crisis.

Another CHW, who continued rendering community health services despite being previously abducted for promoting health activities, reflected on the inherent commitment to serving humanity:

“That is why I say when rendering service to humanity, you don't really have a choice but to help. There came a time when they [his abductors, NSAGs], too, recognised the importance of health. Even after burning the facility, they found themselves coming back to it, seeking medication.” – CHW 2, WLH

The CHW goes on to state that even before the non-state armed groups burned the health centre in the community due to the insecurity, which made it vulnerable to attacks, his house was a haven for some of the hospital supplies. He goes on to describe the support the CHWs provided to each other while providing community health services in insecure parts of the community.

“At one point, you can go to some certain zone [group of communities]. At one time, you know that you face some challenges. Maybe you can go and fall into their trap. Like my community, the way we are working down there, each and everybody has his or her own community that has been divided. You know that this zone is your zone. If I can finish earlier in my zone, I can come and assist you.” – CHW 2, WLH

This cooperation highlights how CHWs adapted to ensure the continued delivery of community health services despite the challenges, using collaboration and strategic planning as coping mechanisms to navigate the complexities of their environment.

In coping with the crisis, CHWs employed various innovative strategies to reach displaced individuals, adapting their methods to ensure their safety and the delivery of essential health

services. One key coping mechanism was disguising themselves and modifying their attire to avoid suspicion while delivering health services. Recognising the risks associated with being identified as health workers in conflict zones, they no longer walked about with badges or identifying attire in public areas. Instead, they dressed casually, keeping their badges concealed in their bags. This approach allowed them to move through communities without drawing unwanted attention, mitigating the risk of being targeted.

When venturing into the forest to assist displaced persons—a necessity due to the displacement caused by the conflict—they adapted their appearance again as a coping strategy. In these secluded areas, they wore their identifying attire so that people knew health personnel were available to attend to them. This selective visibility balanced their need for personal safety with the necessity of being recognised by those in need of care. After completing their work, they would disguise themselves again, leaving as if they were ordinary farmers to avoid raising suspicion about their activities upon re-entering insecure areas. This strategic adaptation of their appearance and behaviour enabled them to continue providing care under dangerous conditions.

By continuously adjusting their methods in response to the evolving security landscape, the CHWs effectively coped with the challenges posed by the conflict. Their ability to modify their strategies ensured that they could maintain access to vulnerable populations while also protecting themselves, highlighting the critical role of adaptability in their work during the crisis.

Vignette 3: Work Life History of Eposi, 12 years a CHW

For over twelve years, Eposi, a woman in the Buea Town Health Area, has been serving her community as a CHW. Her journey began in 2011 when she received a call that set her on this path. *"I was called that there's work in the health centre, that we should go and sensitise,"* she recalls. This initial invitation came from the chief of the health centre, marking the start of her deep involvement in community health initiatives.

Her first assignment was with the HIV Free Programme initiated by the Baptist Health Services. *"The first programme that came in was HIV Free Programme from Baptist. So, we went out, did the sensitisation,"* she explains. This role quickly expanded to include polio campaigns and family planning sensitisation. *"After that, Polio came up, we went... I was now recruited to work with Baptist [as a community mobiliser] from 2013 to 2016 for the HIV Free Programme,"* she adds.

Balancing multiple roles is a significant part of Eposi's life. In addition to her CHW duties, she works as a cleaner at the health centre, a hairdresser, a laundry worker, and tends to her farm. *"I am doing hairdressing, and I used to do laundry. I go to the farm,"* she says. Her daily schedule is meticulously planned to accommodate these responsibilities. *"By 5:30-6:00 am, I am here [at the health centre]. By 7:30-8:30... I leave... I come back at 12, then close at two. Then from there, I can go and start doing other things."*

As a single parent of three children and the primary caregiver for additional family members, Eposi carries a heavy burden. *"First, I'm a single parent with three children... We are ten in the house,"* she notes. She supports her own children alongside her siblings' children and younger relatives. *"Two of my junior sisters' children are with me... Four [children]. Plus my own three... Seven."*

The onset of the crisis in 2016 brought profound challenges to her life and work. *"The crisis really affected me,"* she admits. *"People were afraid. People went to Douala. You discovered that the work was so slow. At times, even to plait two, three people [was] difficult."* Economic hardships forced her to abandon small businesses due to skyrocketing costs. *"I was selling groundnut... Now groundnut is too expensive... If you're not careful, you will not even have the head money [starting capital]."*

Despite these obstacles, 'Eposi' remained committed to her role as a CHW. Her motivation stems from a deep sense of responsibility to her community. *"At times, I don't always look [at] money. I look at the well-being of people,"* she explains. *"I know that if a child is affected, it will affect the whole community and be like a burden to us. So those are the things that cause me to concentrate more when there is any activity."*

The conflict disrupted not only her personal life but also the operations of the CHW programme. Outreach activities became challenging, and community engagement declined. *"At first, we go out every month for outreach... free consultation... But after the crisis, people are not really coming here [to the health centre],"* she observes. The lack of adequate support and resources further strained her efforts. *"Our motivation is not the best. You work for how many years [for] 15,000 francs [a month],"* she notes. *"It's just a few months [ago] that they added 10,000... So, we don't have an option."*

To cope with the uncertainty and fragility of her situation, 'Eposi' adapted by relying more heavily on her farm to feed her family. *"Since I have my farm, sometimes I just go and remove my cocoyam or my plantain or vegetable in the farm,"* she says. The farm became a crucial safety net when other income sources were unstable.

Being a woman in her role has had both advantages and challenges. She finds that her sex helps her connect with community members, especially mothers and children. *"There are some places that we used to go at first... When I come, I just smile at them,"* she shares. *"I make them understand that this campaign is not for you; it's for our children. We are coming for the children and not for you."*

However, the demands of her multiple roles can be overwhelming. Managing a large household while fulfilling her CHW duties requires resilience and meticulous organization. *"I always put my things in order. I work according to my programme,"* she explains. She leverages support from her older children and community networks to manage childcare and household tasks when she's engaged in CHW activities.

Despite the hardships, 'Eposi' remains hopeful and continues to advocate for better support for CHWs. *"I will still bring the matter up because management [of CHWs] is under health area [committee],"* she says, emphasising the need for improved incentives and resources. She believes that addressing these issues is crucial for the sustainability and effectiveness of the CHW programme, especially during the ongoing conflict.

Through these histories, the resilience, adaptability, and commitment of CHWs to their roles and communities in the Buea Health District become evident, showcasing their determination to overcome the challenges posed by the crisis. Understanding the personal coping strategies of CHWs is essential for designing targeted support systems that enhance their resilience and effectiveness in crisis situations. By recognising their needs for economic sustainability, mental health support, safety measures, and innovative service delivery methods, stakeholders can develop comprehensive strategies that empower CHWs. This approach ensures the continuity of essential healthcare services in conflict-affected regions.

CHAPTER 7: Community Health Workers' Preferred Support Strategies

This chapter presents the preferred support strategies of CHWs in the conflict-affected Buea Health District, as indicated by themselves during a ranking exercise. The findings highlight how CHW programmes can enhance the effectiveness of CHWs' work, both generally and in response to the specific challenges of fragility and insecurity in the area, based on the CHWs' perspectives. The chapter draws on data collected through a participatory ranking exercise involving CHWs, highlighting the mixed-methods approach that combines qualitative insights with quantitative analysis. This section addresses the third research question: What strategies can be implemented to support CHWs and CHW programs in the Buea Health District to better cope with shocks, uncertainty, and fragility? It examines the aspect of the conceptual framework that focuses on the interplay between CHW programme design features, the socio-demographic characteristics of CHWs, and the environmental context of CHW programs.

The first section delves into the specific types of support that CHWs prioritise, while the second section categorises these strategies to provide a structured understanding of how different types of support can be implemented. By exploring these preferences, this chapter aims to inform the development of targeted interventions that address the unique challenges faced by CHWs in the Buea Health District. It highlights the importance of tailoring support strategies to the specific needs and contexts of CHWs, thereby enhancing their capacity to deliver essential health services amidst ongoing conflict and insecurity.

7.1 Community Health Workers' Preferred Support Strategies

In this study, preferred strategies for support refer to the specific types of assistance or resources that the CHWs identify as most beneficial or desirable to enhance their effectiveness, well-being, and sustainability in their roles. These preferences can encompass a broad spectrum, ranging from tangible aids such as equipment and monetary incentives to intangible supports like training, recognition, and integration into formal health systems.

Table 13 below presents the support strategies as identified directly by the CHWs during the FGDs. The table first displays the frequency with which each strategy is chosen and the

corresponding percentage of respondents endorsing it. Secondly, it illustrates how these strategies are ranked in terms of priority through the average and median ranking metrics, providing insights into their perceived importance.

The CHWs themselves primarily nominated and defined the support strategies. In instances where there were fewer nominations, the researcher proposed additional strategies based on the literature review on incentives for CHWs in FCAS, the key informant interviews, and the focus groups conducted earlier. These researcher-suggested strategies were only included in the final pool after receiving group consensus to ensure relevance and accuracy. Subsequently, the CHWs ranked these strategies according to their preference and importance. This approach ensured that the strategies reflected the insights and experiences of the CHWs while also drawing upon existing research in the field.

Table 13: Most Chosen Support Strategies

Preferred Support Strategy	Frequency	Percentage of Respondents (%)	Average Ranking	Median Ranking
Working tools	31	86	3.3	3
Training	28	78	2	1
Cash incentives	28	78	3.5	2
Government integration	20	56	3.2	3.5
Recognition	20	56	6.3	6
Preferential treatment	16	44	4.8	4.5
Identification	15	42	5.3	5
Employment of CHWs	15	42	5.5	6
Structured system	14	39	5.9	5.5
More CHWs	12	33	4.9	5
Gadgets	12	33	6.3	6
Community support	11	31	6.9	7
Supervision	10	28	5.5	4.5
Transportation	6	17	7	6
Expertise	5	14	7	7
In-kind payments	5	14	7.4	8
Peer support	5	14	7.2	8
Communication Credit	5	14	8.8	9
Health/Security	4	11	3.8	2
Dialogue structure	3	8	4.3	3
Sensitisation	3	8	7	8
Free commodities	2	6	3.5	3.5

7.1.1 Working tools

In this context, working tools refer to the essential tools and supplies provided to CHWs to carry out their roles effectively. These tools encompass supplies, personal protective equipment such as gloves, masks, aprons, and boots, educational materials including leaflets, posters, and brochures on various health topics, and indispensable data collection tools like registers and survey forms.

Working tools emerged prominently when observed across all health areas with a combined frequency of 31 (86% of participants). This dominant frequency, coupled with an average ranking (AR) of 3.3 and a median ranking (MR) of 3.0, underscores the critical importance and preference for Working Tools among CHWs.

Table 14: Frequency and Preference Ranking of Working Tools Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	6	2.7	2.5
Buea Road	9	4.6	4.0
Buea Town	8	3.1	3.0
Tole	8	2.5	2.0
Total	31	3.3	3.0

The data from Molyko demonstrates a high preference for Working Tools, as highlighted by a relatively low AR and MR value. However, while Working Tools are chosen more frequently in Buea Road, the higher AR and MR values suggest that they are of moderate importance, with other strategies for support being potentially more prioritised. On the other hand, in Buea Town, working tools are frequently chosen and have a relatively low AR and MR, indicating a significant preference. However, they may not be the top priority, as other support strategies might have even lower rankings. In Tole, the choice of working tools is solid, with the lowest AR and MR values among the health areas.

The CHWs who selected working tools often described them as "*indispensable*," with one respondent noting that one "cannot work without them." These tools are not just about utility; they play a significant role in facilitating tasks and ensuring the efficient execution of activities.

One participant emphasised that they "*facilitate their tasks*" and are an "*absolute necessity*." Their importance transcends the individual tasks of CHWs.

Moreover, equipment such as umbrellas, raincoats, and boots are vital, especially during adverse weather conditions, ensuring CHWs can carry out their duties effectively. These tools ensure comfort and protect CHWs, as highlighted by the metaphor likening Working Tools and IDs to "conditions necessary for seed germination."

In essence, the right tools and materials are foundational for CHWs, ensuring they can perform their roles efficiently.

The variability in preference for Working Tools across health areas may suggest differing local realities and needs and illustrate the importance of context-specific assessments when designing support strategies for CHWs.

7.1.2 Training

Training refers to capacity-building initiatives for CHWs that equip them with the necessary skills and knowledge to execute their tasks efficiently. When reviewed across all health areas, training manifested with a combined frequency of 28 (78% of the participants). Compared with an AR of 2.0 and an MR of 1.0, this significant frequency highlights the importance and preference CHWs allocate to training.

Table 15: Frequency and Preference Ranking of Training Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	6	2.8	3.0
Buea Road	10	2.4	1.5
Buea Town	8	1.4	1.0
Tole	4	1.0	1.0
Total	28	2.0	1.0

Molyko and Buea Road participants strongly prefer Training with their respective AR and MR values. Buea Town expresses an even stronger preference, as indicated by its remarkably low AR and MR values. Despite its lower frequency, Tole holds training in the highest regard, evident from its consistent AR and MR scores of 1.0.

The consistent mentions of training, coupled with its predominantly low average and median rankings, solidify training as a fundamental preference for the efficiency and effectiveness of CHWs. Throughout the discussions, it is repeatedly emphasised as the tool that "equips CHWs about their responsibilities," allowing them to operate both efficiently and with clarity. One CHW said,

"You cannot go for health education if you do not know what you are saying." – CHW, FGD

This sentiment is echoed across various responses, highlighting that without proper training, CHWs cannot be expected to effectively "convey the message" to the community, nor can they competently engage in activities like "community sensitisation and health education."

Notably, the lack of training has tangible consequences; as pointed out by one CHW, errors during vital activities like house identifications during pre-vaccination campaigns occur due to inadequate training. Training not only capacitates CHWs, making them proficient in their roles but also positions them as 'experts' in the field (or community), with one notable mention that they often end up "correcting the nurses who accompany them to the field."

The comments from one of the community representatives emphasised the need for training the CHWs to address the specific needs of their community and prepare them to adapt to the evolving challenges of their work context, as elaborated in the comment below:

"I would propose that they should be trained. By bringing them together for training, they can gain a clear understanding of what they need to do in the community. It's important to include workshops and practical exercises in their training so they can really grasp it. This way, they can effectively address some of the challenges they face, and we can focus our efforts on improving those areas." – Community Representative 2

Training provides the foundation, offering CHWs a clear understanding of their roles, responsibilities, and expectations. As one CHW said, "Without the training, we will not know what to do in the community." In the context of CHWs, training is more than just a preparatory phase; it's the key that unlocks their potential, ensuring that they do so with confidence, competence, and a clear direction when in the field.

7.1.3 Cash Incentives

Within the scope of this study, cash incentives are monetary rewards provided to CHWs as a form of compensation or motivation. These can take various forms, including but not limited to per diems, monthly stipends, and referral bonuses. Across all the health areas, cash incentives register a frequency of 28 (78% of the participants), mirroring training. However, when looking at the ranking metrics, cash incentives have an AR of 3.5 and an MR of 2.0, revealing the nuanced preferences and variances among the CHWs concerning cash incentives.

Molyko shows a strong preference for cash incentives, evident from its low AR and MR. Contrastingly, Buea Road, with the highest AR and MR values, indicates lesser importance. With similar ARs and MRs, Buea Town and Tole highlight a consistent and significant preference for cash incentives. The data highlights the contrasting values attributed to cash incentives in different health areas.

Table 16: Frequency and Preference Ranking of Cash Incentives Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	6	2.2	2.0
Buea Road	6	7.2	7.0
Buea Town	9	2.7	2.0
Tole	7	2.6	2.0
Total	28	3.5	2.0

Unsurprisingly, Cash Incentives are a pivotal component in the operations and motivation of the CHWs (Frequency: 28, AR: 3.3, MR:2.0). These incentives, often referred to as finances or money, directly influence the motivation and commitment of CHWs to their roles, as suggested by the data. One respondent aptly said,

"Money is a motivational factor for anything being done." - CHW, FGD

Another was even more candid, stating,

"Money is the most important because, without money, I would not be here." - CHW, FGD

Beyond mere motivation, these incentives also serve practical purposes. They help cater to transportation costs, which can be significant given the vast areas CHWs often cover, and they

address day-to-day needs, ensuring CHWs can meet necessities such as food and clothing. However, there is also an emotional and psychological dimension to these incentives. CHWs often view them as a form of appreciation and recognition for their hard work. They serve as a tangible acknowledgement of the promises made during training sessions. As one participant mentioned, not receiving these incentives after such promises can serve as "demotivation." Yet, it is also evident that the current incentive structures might not always meet expectations, with one CHW noting that the cash incentives are "too little and not encouraging." In essence, cash incentives for CHWs are not just about money; they represent appreciation, trust, motivation, and a means to meet practical needs, emphasising their importance in ensuring the effective functioning and well-being of CHWs.

A comment from one of the community representatives during the key informant interviews – which were conducted before the FGDs - supports the preference and prioritisation of the CHWs. They observed that inadequate compensation demotivates CHWs, reducing their commitment and effectiveness.

"It's about what they are compensated. They sometimes find it too small. For instance, during the polio campaign, a community health worker receives 10,000 francs [about £13] for six days of work. It's officially five days, but they still have to work the sixth day, Sunday, which isn't counted. This amount might seem substantial to some, but for a family person or someone who has to leave their business or farm, it's almost negligible. And the worst part is, this compensation isn't even paid immediately after the activities." – Community Representative 3

The community representative emphasised the significant impact of motivation on the performance of CHWs. He stated,

"People work according to what they receive. If you give them more, they won't want to lose the opportunity of being a community health worker. Right now, they see it as charity work [working for no pay] for the government" - Community Representative 3.

7.1.4 Government Integration

In the context of this study, government integration is the formal recognition and inclusion of CHW programmes within the national health system and policies. They are integrated into the government's health system, with access to government resources and support. This integration involves more than just participation in government health initiatives; it requires formal recognition of CHWs as an integral part of the national healthcare workforce. This recognition

is similar to that of other professional health worker cadres and includes obtaining official government matriculation numbers – as any other civil servant or government worker. Additionally, integration places CHWs on the official government payroll, ensuring they receive regular salaries and benefits similar to those of other health workers. This formal employment status also provides CHWs with job security, and eligibility for pensions.

Government integration had a frequency of 20 (56% of participants) across all four health areas, making it the fourth most mentioned support strategy. Regarding ranking, it had an AR of 3.2 and a MR of 3.5. This means it is also the fourth most preferred support strategy after training, cash incentives, and Working Tools.

In the Molyko Health Area, government integration was not selected because it was not one of the options they proposed. On the other hand, Buea Road, with notably low AR and MR values, shows a strong preference. Buea Town and Tole's more moderate rankings suggest a slight inclination and hint at varied perceptions of its importance.

Table 17: Frequency and Preference Ranking of Government Integration Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	-	-	-
Buea Road	6	1.7	1.0
Buea Town	10	3.7	4.0
Tole	4	4.3	3.5
Total	20	3.2	3.5

The data (frequency) illustrates that Government Integration ranks fourth in overall preference among the preferred support strategies for CHWs, following Working Tools, Training and Cash Incentives. However, health area variations are evident. Buea Road shows a strong preference for Government Integration. The choice is moderate in both Buea Town and Tole. Government Integration was consistently regarded as a sign of stability, recognition, and progress of CHWs during the discussions. Many CHWs perceived it as a culmination of their long-standing dedication to their roles, with one stating it is a

*"Privilege as a CHW due to the long duration they have been CHWs." -
CHW, FGD*

Government Integration is not just about formal acknowledgement, as the data suggests it provides tangible benefits. One respondent noted that,

*"It [Government Integration] gives you stability and more confidence knowing that you receive something [salary] at the end of every month." -
CHW, FGD*

Another perspective equated Government Integration with "climbing the step," suggesting it offers a sense of career progression and achievement. However, beyond personal advancement, Government Integration signifies a broader acceptance. Some CHWs believe it's a testament to their contributions and sacrifices and grants them a "sense of belonging" within the larger healthcare system.

Moreover, it provides financial security, potential insurance against work-related injuries, and a sense of consistent employment rather than sporadic, ad hoc engagements. The sentiment for many is clear; as one CHW put it,

*"With government integration, the CHWs are more motivated to work." -
CHW, FGD*

It's also seen as a potential source of retirement funds and a means to address delays in compensation (discussed in previous chapters). In essence, Government Integration for CHWs is more than an administrative step; it's a recognition of their value, a promise of stability, and a commitment to their continued contributions to community health.

7.1.5 Preferential Treatment

In the backdrop of this research, Preferential Treatment is the benefits or priorities given to CHWs due to their work, such as priority in medical treatments and discounted hospital fees.

Across all four Health Areas, preferential treatment had a frequency of 16 (44% of participants) across all the health areas and an AR of 4.8 and MR of 4.5. Preferential treatment ranked higher than recognition, with an AR of 6.3 and an MR of 6.0. Compared with recognition, preferential treatment exhibits a higher collective preference, as indicated by its lower AR (4.8 for preferential treatment vs. 6.3 for recognition). This suggests that, on a general scale, CHWs might prioritise tangible benefits like preferential treatment over formal acknowledgements.

In the Molyko Health Area, like Government Integration, preferential treatment was not selected because it was not one of the options they proposed. However, in Buea Road, there is a moderate preference for preferential treatment. The MR suggests that many respondents rank it higher in importance. In Buea Town, on the other hand, the CHWs have a somewhat uniform view, placing preferential treatment in the mid-range of importance. Lastly, in the Tole Health Area, the data indicated a stronger preference for preferential treatment among CHWs in this area, compared to other health areas.

Table 18: Frequency and Preference Ranking of Preferential Treatment Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	-	-	-
Buea Road	6	5.2	4.5
Buea Town	6	5.2	5.0
Tole	4	3.8	4.0
Total	16	4.8	4.5

From the data, preferential treatment emerges as another significant support strategy for CHWs, resonating deeply with their desire for recognition and respect for their sacrifices (as presented above). For many, preferential treatment is not just about tangible benefits but a symbol of "recognition for the work they do as CHWs." This sentiment is echoed across various responses, with CHWs highlighting it as a "means of appreciation" and a "form of acknowledgement."

Beyond symbolic value, preferential treatment offers practical benefits, such as discounts at health centres or additional advantages in public service offices. One relevant example shared was of a CHW who, after negotiations at a health centre, received a discount for her child's treatment due to her status as a CHW.

7.1.6 Other Identified Support Strategies

Beyond the primary support strategies of working tools, training, cash incentives, government integration, and preferential treatment, CHWs identified additional mechanisms that influence their effectiveness and motivation. These include recognition, identification, alternative

employment opportunities, structured systems for CHWs, increasing the CHW workforce, provision of gadgets, community support, supervision, transportation, communication credit, expertise acquisition, peer support, in-kind payments, health security, community sensitisation of CHW activities, dialogue structures, and access to free commodities.

Recognition, while frequently mentioned (56% of CHWs), was not a top priority, though it was valued for career progression and validation of their efforts. Identification (42%) was seen as essential for credibility and trust. Employment opportunities within health facilities (42%) were emphasised in Buea Town as a means of job security. A structured system (39%) was highlighted as essential for role clarity and advocacy, especially in Tole. Increasing CHW numbers (33%) was linked to workload reduction, particularly in Buea Town.

Gadgets (33%) were moderately valued for visibility and credibility. Community support (31%) was recognised as essential for security and morale. Supervision (28%) was seen as a mechanism for professional oversight, particularly in Tole. Transportation (17%) and communication credit (14%), prioritised in Molyko, were deemed essential for operational efficiency.

Other strategies, including expertise acquisition, peer support, and in-kind payments, were acknowledged but ranked lower. Health security was a critical concern in Molyko. Dialogue structures and access to free commodities were also noted as supportive mechanisms. These findings emphasise the need for localised, context-specific interventions to optimise CHW effectiveness and retention. The details about the other support strategies are attached in Appendix 9.

7.2 Comparative analysis of the distribution of support strategies across health areas and genders

This section presents a comparative analysis demonstrating how gender and geographical context shape preferred support mechanisms among CHWs in the Buea Health District. By simultaneously examining the distribution patterns of preferred support strategies across health areas and gender categories, the findings reveal how these dimensions create distinct operational realities that demand contextualised support interventions. This comparative analysis moves beyond demographic categorisation to illustrate how gender functions as a lived experience that differentially positions CHWs within specific geographical contexts, resulting in unique patterns of resource needs. The findings show that preferences for support mechanisms cannot be adequately understood through singular demographic analyses but rather require recognition of how gender identity and geographical positioning collaboratively construct the context within which CHWs navigate conflict-related challenges and articulate support needs.

The distribution of support strategies across the four health areas, Molyko, Buea Road, Buea Town, and Tole, exhibits significant variation in prioritisation, reflecting contextual differences in the needs of CHWs. These notable differences may be influenced by the contrasting realities the CHWs encounter in their respective health areas, considering the differing levels of insecurity and trust. Such variations can also be attributed to the distinct challenges they face and their unique socio-economic characteristics. Moreover, significant disparities exist between male and female CHWs regarding the support strategies they emphasise, as well as variations in these gendered preferences within each health area.

Across the health areas, Buea Town strongly preferred cash incentives, government integration, and training. This suggests that CHWs in Buea Town strongly emphasise financial security, career pathways, and capacity building. Working tools also feature prominently, indicating resource needs. Molyko, in contrast, places a higher emphasis on structured systems, recognition, and transportation. In comparison, cash incentives are acknowledged but less prioritised than in other health areas. This suggests that Molyko CHWs may already have some financial support but require structural and logistical reinforcements. Buea Road presents a relatively balanced prioritisation, with an emphasis on employment, preferential treatment, and

working tools. The prominence of employment concerns suggests that job security and professional recognition are critical issues for CHWs in this health area.

The distribution of support strategies among male and female CHWs reveals commonalities and key differences in their needs and priorities. Both groups emphasise the importance of working tools, training, and cash incentives, indicating shared concerns regarding professional development, access to necessary materials, and financial stability. Male CHWs and female CHWs rank working tools as essential. Training is also a priority for both groups. Similarly, cash incentives receive strong support, confirming that financial compensation remains a critical factor for CHW engagement and motivation. However, while male CHWs generally focus more on operational support through Identification and Recognition, female CHWs tend to emphasise systemic support, ranking Government Integration and Preferential Treatment higher. Addressing these gender-specific needs through targeted support strategies could be essential in strengthening CHW programmes.

This pattern likely arises from the varying degrees and types of credibility challenges male and female CHWs face when performing their roles in conflict-affected contexts like the Buea Health District. Male CHWs in Buea Health District function in a context where they face challenges such as heightened suspicion and scrutiny from community members, security forces, and armed groups. This suspicion and scrutiny create immediate physical security risks and operational barriers that inhibit their ability to perform their assigned tasks. For these male CHWs, support mechanisms that enable safer mobility within the community are vital protective factors that set them apart from combatants or other actors.

Conversely, the emphasis of female CHWs on Government Integration and Preferential Treatment suggest a preference for long-term security and sustainability. This pattern of preference may stem from women's disproportionate exposure to economic insecurity in conflict settings, where gender-specific economic barriers are often intensified. The findings suggest that female CHWs consider that while operational supports address immediate functional needs, only systemic integration into formal health structures can provide the occupational stability and economic security essential for sustained professional engagement amid conflict.

The gendered experiences of CHWs likely also influence these preference patterns. The findings suggest that female CHWs may be more drawn to collective welfare and systemic solutions based on lived experiences as CHWs during the conflict. In contrast, male CHWs may prioritise individual operational effectiveness based on experiences that reward autonomous performance. These gender-specific preference patterns highlight the necessity of developing support mechanisms for CHWs that address immediate operational needs and systemic integration requirements, acknowledging that effective CHW programme strengthening during conflict requires complementary rather than uniform support strategies across gender categories.

7.3 Reflection on CHWs' Preferred Support Strategy

The Participatory Ranking exercise was designed to identify a range of strategies that CHWs believe could support their roles within the Buea Health District's fragile and conflict-affected environment. This methodological approach facilitated an exploratory understanding of the CHWs' preferences grounded in their own perspectives. By doing so, it avoided presuming what their priorities or experiences might be. The exercise provided insights into the preferences for strengthening the community health programme in this complex setting, reflecting the CHWs' firsthand knowledge and experiences.

Also, after the analysis, the preferred strategies of support were ranked in terms of median ranking (Table 20) over the frequencies (as shown in Table 13) because by using median rankings over frequencies, the study presents a clearer picture of what most people in the group generally agree upon, rather than just what's mentioned most often.

Table 20: Preferred Strategies for Support, ranked by Median.

Preferred Support Strategy	Median Ranking	Average Ranking	Frequency	Percentage of Respondents (%)
Training	1	2	28	78
Cash incentives	2	3.5	28	78
Health/Security	2	3.8	4	11
Working tools	3	3.3	31	86
Dialogue structure	3	4.3	3	8

Government integration	3.5	3.2	20	56
Free commodities	3.5	3.5	2	6
Preferential treatment	4.5	4.8	16	44
Supervision	4.5	5.5	10	28
Identification	5	5.3	15	42
More CHWs	5	4.9	12	33
Structured system	5.5	5.9	14	39
Recognition	6	6.3	20	56
Employment of CHWs	6	5.5	15	42
Gadgets	6	6.3	12	33
Transportation	6	7	6	17
Community support	7	6.9	11	31
Expertise	7	7	5	14
In-kind payments	8	7.4	5	14
Peer support	8	7.2	5	14
Sensitisation	8	7	3	8
Communication Credit	9	8.8	5	14

Training, Cash Incentives, and Working Tools emerged as top, evidenced by their high median rankings of 1.0, 2.0, and 3.0, respectively, coupled with significant percentages, precisely 78%, 78%, and 86%, respectively. Furthermore, Government Integration and Preferential Treatment were also identified as crucial support strategies with median rankings of 3.5 and 4.5 and frequencies of 56% and 44%, respectively.

In analysing the preferred strategies from the participatory ranking exercise, it was necessary to consider both the median rankings and how frequently each strategy was recognised by participants. Some strategies, like Health/Security and Dialogue Structure, had relatively high median rankings (MR: 2.0 and 3.0, respectively) but were selected by a smaller proportion of participants (11% and 8%, respectively). This suggests these strategies may not have broad consensus and might represent the views of a specific group of participants rather than the majority. Therefore, these strategies were not included in the highest tier of support strategies. The aim was to focus on strategies that a larger percentage of participants agreed upon, which

could suggest a greater likelihood of these strategies being relevant and practical when considering their implementation in community health programmes.

7.3.1 Categorising the Strategies for Support

Table 20 presents the identified strategies to capture the various facets of strategies to support CHWs in responding to and coping with shocks, uncertainty, and fragility. However, some of the strategies, as proposed by the CHWs themselves, overlap or share similarities with others, leading to redundancy. For instance, strategies like "Government Integration" and "Structured System" might have overlapping aspects concerning systemic integration and organisation. Similarly, "Cash Incentives" and "In-kind Payments" might share similarities in terms of incentives, albeit in different forms. Hence, there is a need to consolidate strategies that share common themes or objectives to streamline the list of strategies and provide more precise insights into the focus areas. A summary of the categorisation is depicted in Table 21 below. The categorisation process involved the researcher thoroughly reviewing each strategy, understanding its primary objective, and aligning it with one or more broader themes. The three categories to consolidate the list include Compensation and Benefits, Operational Support, and Recognition and Status.

- a) **Compensation and Benefits:** Categorising these strategies under Compensation and Benefits helps identify the financial and material incentives for motivating CHWs and ensuring their sustained commitment.
- b) **Operational Support and Work Environment:** Operational support and the Work Environment are pivotal for the effectiveness and efficiency of CHWs. Grouping these strategies under Operational Support highlights the multifaceted support required to enhance productivity and ease the operational challenges CHWs face.
- c) **Recognition and Status:** Recognition and enhancement of status are significant for the motivation and retention of CHWs. Categorising these strategies under Recognition and Status underscores the importance of social acknowledgement and community acceptance in fostering a conducive environment for CHWs to thrive.

Table 21: Categorisation of Support Strategies for Community Health Workers

Category	Strategies
Compensation & Benefits	<ul style="list-style-type: none"> • Cash Incentives • Free Commodities

	<ul style="list-style-type: none"> • In-kind Payments • Employment of CHWs • Communication Credit • Transportation
Operational Support & Work Environment	<ul style="list-style-type: none"> • Training • Health/Security • Dialogue Structure • Working Tools • Government Integration • Supervision • Structured System • Gadgets • Expertise • Peer Support • Sensitisation • More CHWs
Recognition & Status	<ul style="list-style-type: none"> • Preferential Treatment • Identification • Recognition • Community Support

The organisation of strategies into categories, Compensation and Benefits, Operational Support, and Recognition and Status, provides a framework to examine the various support strategies that can aid CHWs. Some strategies may fall into more than one category, reflecting the complex and overlapping nature of the support needed by CHWs. For example, "Transportation" and "Communication Credit" may be seen as part of compensation but also play a role in the operational aspects of a CHW's work. Similarly, increasing the number of CHWs could be viewed as both improving operational capacity and acknowledging the importance of their role in the community. This categorisation helps clarify the types of support that could benefit CHWs, particularly in challenging environments.

PART 3

Discussion & Conclusion

Part Three of this thesis comprises a comprehensive discussion that integrates the research findings with existing literature and the conceptual framework. This chapter also presents the study's conclusions, offering practical implications for policy and practice to enhance CHW programmes in conflict-affected settings. Additionally, it critically evaluates the study's strengths and limitations, providing a balanced overview of the research outcomes.

CHAPTER 8: Discussion

This chapter provides an in-depth analysis of the findings presented in Part 2 of this thesis. It commences by offering an overview of the research findings (8.1) in relation to addressing the primary research question of 'how to optimise CHW programs in fragile and conflict-affected settings. Additionally, this chapter examines the optimisation of CHW programs in section 8.2 by integrating the research findings into the conceptual framework presented in section 2.3. I assess how these findings relate to the challenges and strategic priorities of the Cameroonian government for optimising CHW programmes, as outlined in section 3.4.5, and consider this in relation to the existing literature. Furthermore, the chapter reflects on the proposed framework for optimising CHW programs (8.3) in comparison to existing frameworks, explores the implications of this study for global public health policy and practice (8.4), discusses the strengths and limitations of the study (8.5), presents recommendations for future research (8.6), and concludes (8.7), making a case for the relevance of this research and the contributions it makes.

8.1 Overview of research findings

This study sought to answer the primary research question: How can the CHW programme in the Buea Health District be optimised to enhance its performance and resilience in fragile and conflict-affected situations? To answer the primary research question, the research answered the following secondary research questions:

8.1.1 How does the CHW programme in Buea Health District operate during the conflict?

The CHW programme adapted its recruitment processes by recruiting temporary CHWs to fill in for CHWs who had left the community due to the insecurity. Training initiatives were adjusted to the increased needs from the conflict crises and disease outbreaks – cholera and COVID-19; training organisations were shifted to different days and venues due to security issues. Supervision methods evolved to include remote check-ins and digital communication platforms like WhatsApp, allowing for continuous oversight despite restricted mobility and security challenges. Incentivisation strategies combined financial rewards, such as performance-based payments and transportation allowances, with non-financial recognition, fostering CHW motivation and retention despite irregular payment issues.

The programme confronted significant challenges, including severe security risks from non-state armed groups, pervasive community mistrust fuelled by misinformation, and the complexities of population displacement. The CHW programme implemented robust risk mitigation strategies, such as engaging community leaders to facilitate safe operations and employing trusted intermediaries to negotiate access in NSAG-controlled areas. Additionally, the programme enhanced community trust through pre-campaign sensitisation and collaboration with respected local figures, effectively countering misinformation and fostering a supportive environment for health interventions. These multifaceted adaptations demonstrate the programme's resilience and flexibility, enabling it to sustain essential health services despite the ongoing conflict.

Chapter five presented that the CHW programme in Buea Health District operated through a combination of strategic recruitment, adaptive training and supervision, diversified incentivisation, and proactive community engagement, all tailored to navigate and mitigate the challenges posed by the conflict.

8.1.2 What is the lived experience of CHWs in Buea Health District during the conflict?

The results presented in chapter six reveal that CHWs perceive themselves as essential and trusted members of their communities, leveraging historical roles and deep-rooted connections to facilitate health interventions and act as vital intermediaries between health centres and remote populations. Despite this strong sense of purpose and intrinsic motivation, CHWs navigated significant challenges that impacted their personal well-being and professional effectiveness.

Key challenges include pervasive fear and insecurity due to threats from non-state armed groups, which restrict their mobility and expose them to physical violence and trauma. Additionally, CHWs face substantial community mistrust, exacerbated by misinformation from the internet about health interventions like the COVID-19 vaccines, which made health interventions particularly difficult to implement. Payment issues, characterised by delayed and irregular compensation, alongside favouritism and nepotism, further demoralised CHWs and undermined their trust in programme administration. Resource shortages and inadequate staffing intensified their workload, leading to feeling overwhelmed and undervalued.

Moreover, population displacement complicates their roles, as CHWs must adapt to increased responsibilities and workforce instability while striving to maintain service continuity.

In response to these adversities, CHWs employed various coping mechanisms and adaptive strategies. Community support played a crucial role, with CHWs relying on moral and logistical backing from local and religious leaders to build trust with the community. Operational adaptations, such as modifying distribution methods to enhance safety, using remote communication tools, and negotiating access with armed groups, enabled CHWs to continue their work despite security risks. Personally, CHWs engaged in activities like farming to provide for their families, maintain productivity to sustain a sense of purpose and sought emotional resilience through peer support and religious beliefs. These adaptations highlight the resilience and flexibility of CHWs in maintaining essential health services amidst conflict. The interplay between their perceived value and their external challenges highlights the complex dynamics of trust and support within the community.

8.1.3 How can the CHWs in Buea Health District be supported to cope better with shocks, uncertainty, and fragility?

Employing a participatory ranking exercise, the study effectively identified and prioritised the support strategies most valued by CHWs. The top-ranked strategies—training, cash incentives, and working tools—emphasised the essential need for continuous professional development, financial stability, and adequate resources to perform their duties effectively. Additionally, the categorisation of support strategies into Compensation and Benefits, Operational Support and Work Environment, and Recognition and Status offers a structured framework that addresses the diverse challenges CHWs face, such as insecurity, community mistrust, payment irregularities, and resource shortages, as highlighted in Chapters 5 and 6.

This categorisation not only facilitates targeted interventions but also ensures that support is holistic, addressing both the material and psychosocial needs of CHWs. Furthermore, the emphasis on government integration and preferential treatment indicates the importance of systemic and institutional support in enhancing CHWs' operational capacity and morale. By aligning these preferred strategies with the identified challenges, Chapter 7 highlights that effective support mechanisms—ranging from financial incentives and robust training programs to enhanced supervision and community recognition—are fundamental in strengthening CHWs' capacity to deliver essential health services amidst conflict-induced adversity. These insights advocate for implementing context-sensitive, multi-faceted support systems that not

only mitigate existing challenges but also empower CHWs to navigate and thrive in fragile and uncertain environments, strengthening the overall community health infrastructure in Buea Health District.

These results, summarised in Table 22 below, lay the groundwork for the subsequent section (8.2), which focuses on optimising the CHW programmes in the Buea Health District and similar contexts. This discussion will be informed by the conceptual framework (Figure 1), which focuses on bringing together the findings that look at two elements in turn to focus on the intersection of all three elements: CHW programme features, individual CHW characteristics, and the conflict-affected context. Furthermore, the rest of the chapter combines these results to answer the primary research question: How can the CHW programme in the Buea Health District be optimised to support CHWs and enhance its performance and resilience in fragile and conflict-affected situations?

Table 22: Summary of research results

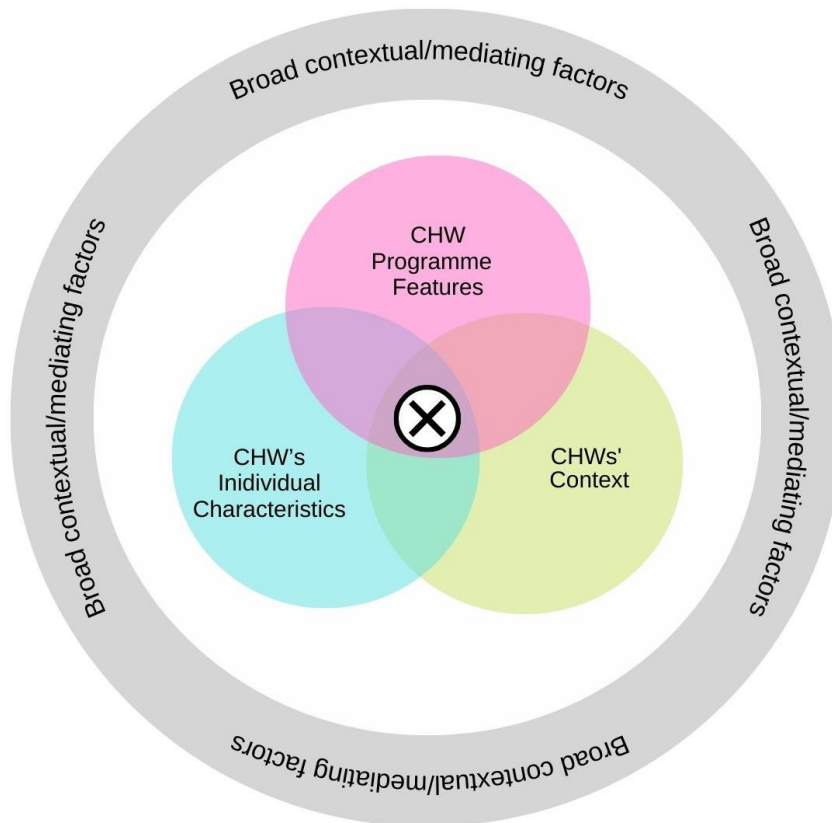
Chapter Number	Research Question Addressed	Elements of Framework Addressed (Intersections)	Main Data Source	Key Findings
Chapter 5	How does the CHW programme in Buea Health District operate during the conflict?	<ul style="list-style-type: none"> • CHW Programme Features + CHW Context 	<ul style="list-style-type: none"> • Key Informant Interviews (16) with programme managers and supervisors, and community representatives 	<ul style="list-style-type: none"> • Recruitment & Training: Temporary CHWs were recruited, and training adapted to security concerns. • Remote Supervision: Supervision shifted to remote check-ins and WhatsApp communication. • Incentivisation: Combined financial and non-financial rewards to maintain motivation despite payment delays. • Security & Trust challenges: Faced security risks, community mistrust, and population displacement challenges. • Risk Mitigation: Engaged local leaders, used intermediaries, and ran sensitisation campaigns to build trust and ensure safe operations.
Chapter 6	What is the lived experience of CHWs in Buea Health District during the conflict?	<ul style="list-style-type: none"> • CHW Individual Features + CHWs Context • CHW Individual Features + CHW Programme Features 	<ul style="list-style-type: none"> • Focus Group Discussions with CHWs (4 x 39 CHWs) • Work Life History Interviews (4) 	<ul style="list-style-type: none"> • Perception & Role: CHWs see themselves as essential, trusted community intermediaries, driven by a strong sense of purpose and historical connections. • Key Challenges: Faced fear and insecurity from threats by armed groups, community mistrust fuelled by misinformation, delayed/irregular payments, and resource shortages that strained their workload. • Coping Mechanisms: CHWs relied on community support from local leaders, modified operations to enhance safety, and employed personal coping

				<p>strategies like farming, peer support, and religious faith to stay resilient.</p> <ul style="list-style-type: none"> • Adaptation: Adapted distribution methods, used remote communication tools, and negotiated with armed groups to continue health service delivery despite security risks.
Chapter 7	How can CHWs in Buea Health District be supported to cope better with shocks, uncertainty, and fragility?	<ul style="list-style-type: none"> • CHW Individual Features + CHW Programme Features • CHW Context + CHW Programme Features 	<ul style="list-style-type: none"> • Participatory Ranking Exercise with CHWs (4 x 39 CHWs) 	<ul style="list-style-type: none"> • Top Support Needs: CHWs prioritized training, cash incentives, and working tools for professional development and financial stability. • Categorized Support: Support strategies were grouped into Compensation, Operational Support, and Recognition to address key challenges like insecurity and payment delays. • Holistic Approach: A focus on both material and psychosocial support ensures comprehensive solutions for CHWs. • Systemic Support: Government integration and institutional backing are crucial for improving CHW morale and effectiveness.

8.2 CHW Programme Optimisation in FCAS

All the results chapters of this study have explored each of the overlapping areas between two dimensions of the conceptual framework (Figure 13) —programme features, individual characteristics, and context—uncovering how these pairs interact and influence the performance of CHW programmes in conflict-affected settings. This framework outlines the relationships between these elements (in relation one to another, and at the junction between all three) to inform context-relevant strategies to support CHWs in FCAS. However, in the discussion, the focus shifts to the centre of the framework (marked X), where all three dimensions converge. At this intersection, a number of critical elements emerge from the data, based on the research objectives (namely: insecurity, trust, displacement, operational challenges, and sex), cutting across the secondary research questions and answering the primary research question of ‘How can the CHW programme in the Buea Health District be optimised to enhance its performance and resilience in fragile and conflict-affected situations?’ By examining the overlap of all three dimensions, the discussion aims to identify strategies that can effectively support CHWs and enhance the resilience and performance of CHW programmes.

Figure 13: Proposed Framework for Supporting CHWs in FCAS



8.2.1 Insecurity

In the Buea Health District, CHWs faced significant security challenges due to their involvement in government health programmes during the conflict, as shown by the narratives of their experiences and the incidents described in the findings (Chapters 5 and 6). This is not dissimilar from other study findings because of their perceived proximity to the government or to the opposing side. For example, in Afghanistan, where female CHWs are threatened by extremists who were against female employment, immunisation campaigns and family planning (Parry et al., 2021). In Nicaragua, militias specifically targeted health workers, including CHWs; a study found that out of 20 CHWs, ten were kidnapped, and five resigned due to threats (Britten, 1989; Broholm et al., 1989). Also, in Pakistan, community vaccinators have been targeted by militants, and many have been killed (Bhutta et al., 2013; Yusufzai, 2014).

This widespread insecurity and targeting of CHWs in the Buea Health District had a profound impact on CHW programme operations, leading to disrupted health activities and hampered training and supervision of CHWs. Additionally, the situation caused fear among CHWs,

leading to the displacement of CHWs from their communities to safer areas. This insecurity also resulted in the loss of loved ones and disrupted livelihoods, as reflected in the findings of this study. In other study findings, similar insecurity caused challenges in CHW recruitment, supervision, retention and disrupted home visits by CHWs, with CHWs unable to be deployed in certain areas (Capps & Crane, 1989; Miyake et al., 2017; Ruckstuhl et al., 2017c; Speakman et al., 2014; Weiss et al., 2015).

The results of this study identified risk mitigation strategies by the CHW programme managers to cope with these security-related challenges in the Buea Health District. These strategies included avoiding CHW activities if there were any perceived threats, remote check-ins for supervision using WhatsApp groups, engaging community leaders to negotiate access with non-state armed groups and ensuring the safety of the CHWs. At the individual level, the CHWs themselves had to rely on their familiarity with the community terrain by using shortcut routes to avoid the insecure areas or avoiding the insecure areas entirely or in some cases, getting rid of any branded attire and dressing discretely, and giving away some supplies to the non-state armed groups to gain access to the community.

At the CHW programme level, these mitigation strategies in the Buea Health District were consistent with those previously reported in other studies, to enhance the safety of CHWs and their supervisors. For example, in Afghanistan, northern Nigeria, and Yemen, collaboration among government officials, NGOs, and CHWs with local communities and leaders was essential to ensuring CHWs' safety and facilitating communication and warnings about unsafe travel conditions (Lembani et al., 2014; Miller et al., 2020; Speakman et al., 2014). Similarly, in South Sudan, supervisors used local networks to determine safe travel times, and in Yemen, when travel was unsafe, supervisors conducted remote supervision and data collection through WhatsApp (Kozuki et al., 2018; Miller et al., 2020). The identified risk mitigation strategies highlight the proactive and adaptive measures CHW programme managers and individual CHWs implement to ensure their safety while maintaining essential health services within the conflict-affected Buea Health District.

While these adaptations are essential for maintaining CHW operations in conflict-affected areas, they involve significant trade-offs that must be carefully managed to optimize health outcomes. For instance, avoiding high-risk areas may protect CHWs but leave vulnerable communities without necessary health interventions, potentially worsening health disparities.

Remote supervision via WhatsApp maintains communication but may compromise the quality of oversight, affecting service consistency. Negotiations with armed groups can ensure community access but risk compromising the neutrality of health services. Additionally, strategies like discreet routes and unbranded attire enhance CHWs' safety but may delay service delivery in emergencies.

To effectively manage these trade-offs, CHW programmes should prioritise high-need areas, enhance remote support with local oversight, empower communities, and adopt flexible, context-specific approaches. However, implementing these strategies requires balancing the immediate safety of CHWs with the equitable delivery of health services. For instance, prioritising high-need areas must be approached carefully to avoid perceptions of bias, which can further reduce trust and cooperation within already marginalised communities. Therefore, programmes must engage in continuous dialogue with community leaders and stakeholders to ensure that support strategies are both effective and culturally sensitive, thereby enhancing the resilience and performance of CHW programmes in fragile and conflict-affected settings.

When designing strategies to support CHWs or optimise CHW programmes in conflict-affected settings, it is essential to integrate considerations related to the challenges, mitigation strategies, and associated trade-offs. For example, this study identified training as one of the most popular and highly ranked support strategies for CHWs. Therefore, integrating security and threat awareness training into CHWs' training, similar to the training provided to humanitarian workers in conflict zones, could improve the safety and operational efficiency of CHWs in delivering essential health services during conflicts (Tin et al., 2023). This approach would not only strengthen CHW programme resilience but also address the critical need for health and security, a priority also identified by CHWs in the Buea Health District. Moreover, such training, which aligns with the duty-of-care strategies used in other high-risk settings, can significantly contribute to the effectiveness and sustainability of CHW programmes ((Blyth et al., 2021).

Furthermore, adapting strategies like offering insurance to CHWs, as reported in Bangkok during periods of increased insecurity, could be beneficial in the Cameroonian context (Miller et al., 2020). Although the specific type of insurance was not detailed in the original study, this measure could be tailored to include a risk allowance as part of the cash incentives. This modification would directly respond to the preferences expressed by CHWs in the Buea Health

District, where financial incentives were identified as an essential support strategy. By incorporating these context-specific strategies, CHW programmes can enhance both the safety and motivation of CHWs, ultimately leading to improved health service delivery in conflict-affected settings.

8.2.2 Trust

In this study, trust refers to community members' confidence and belief in CHWs' integrity, reliability, and competence. Trust is essential for the effective delivery of health services during moments of shock, uncertainty, and fragility. Trust facilitates engagement between CHWs and the community and fosters openness, cooperation, and receptiveness to health initiatives. However, in the Buea Health District, the narratives around trust are paradoxical and complicated.

Before the Anglophone crisis, CHWs in Buea Health District were highly trusted within their communities due to their cultural competence and established relationships. This trust enabled them to effectively promote health initiatives and support public health campaigns. However, the conflict has fundamentally altered these dynamics. The crisis has led to significant political and social unrest, with non-state armed groups and segments of the community viewing collaboration with government health initiatives with suspicion and hostility. Several factors contributed to the erosion of trust in CHWs during the crisis, such as perceived government affiliation, misinformation and propaganda about health interventions, and the historical marginalisation of the Anglophone regions in Cameroon. Consequently, CHWs, once trusted figures, became targets of distrust, perceived as government sympathisers or collaborators.

These trust issues are not dissimilar to those of other study results such as Assam in India. In the Indian context, the conflict, which was based on ethnicity, broke social relations and increased distrust and indifference towards CHWs, making them vulnerable to violence and threatening their security (Rajbangshi et al., 2021). However, while the conflict in Cameroon is not necessarily ethnicity-driven but more of a loss of trust in the government due to the historical perception of marginalisation, this study identified that CHWs in the Buea Health District faced similar challenges. Furthermore, Glenton et al. (2010) and Palazuelos et al. (2013) proposition that when people distrust the government, they equally distrust health workers – CHWs inclusive – who are perceived to be part of the government system. This proffer supports the case identified with the CHWs in Cameroon, where the loss of trust in the government was transferred to the CHWs working on government interventions such as immunisation campaigns.

While Glenton et al. (2010) and Palazuelos et al. (2013) argue that governmental distrust typically extends to health workers, the situation in Cameroon requires a more nuanced analysis. The lack of trust observed in this study, particularly during the COVID-19 pandemic, was exacerbated by global misinformation about the vaccine, which spread rapidly through social media. A prevalent belief among the community was that the government was using the COVID-19 vaccine as a tool for population control, aiming to reduce population growth through forced sterilisations or by introducing harmful substances. This conspiracy theory, fuelled by mistrust in government motives and disseminated by various anti-vaccine groups online, significantly eroded public trust not only in COVID-19 interventions but also in routine immunisations such as polio and measles. However, this distrust was predominantly directed at preventive measures rather than curative interventions.

During the 2021 cholera outbreak in the district, community members were more receptive to cholera vaccines. This phenomenon aligns with the assertion of Truong et al. (2022) that higher perceived risk and severity of a disease increase the likelihood of vaccination. In the context of the Buea Health District, the cholera outbreak presented an immediate and visible threat with rapid onset and high mortality rates, prompting the community to perceive cholera as a more urgent and severe health risk compared to COVID-19 (Olatunji et al., 2024). This is consistent with the health belief model, which suggests that a higher perception of susceptibility and severity can motivate individuals to adopt protective behaviours (Janz & Becker, 1984). In contrast, COVID-19, despite its global impact, was perceived differently due to mixed global and domestic messaging about its severity and the local epidemiological situation. Conflicting reports on infection rates, mortality, and the effectiveness of vaccines, coupled with the politicisation of the pandemic, led the community to question the necessity and safety of COVID-19 vaccines. This inconsistency in messaging created confusion and scepticism, reducing the community's willingness to accept COVID-19 interventions.

The mistrust towards specific health interventions and heightened insecurity in conflict settings complicate the trust dynamics between CHWs and the communities they serve. While scepticism surrounds certain programmes, many community members continue to value and respect CHWs due to their established relationships and consistent health interventions. This paradox of trust and mistrust reflects the extraordinary circumstances of the crisis, where political and social unrest temporarily disrupts the community's trust in CHWs. Similar patterns have been observed in other settings, such as the resistance to polio vaccination in

Northern Nigeria, driven by political and religious distrust (Yahya, 2007). These fluctuations in trust highlight the importance of understanding the complex interplay between fear, misinformation, and the community's historical relationship with CHWs. Therefore, in designing strategies to optimise CHW programmes or support CHWs in FCAS, it is essential to proactively incorporate trust-building mechanisms into CHW programmes, leveraging existing trust to mitigate newly emerging distrust.

To mitigate the trust-related challenges faced by the CHWs in Buea Health District, the CHWs programme managers involved community leaders, who were familiar and trusted figures in the community, to help build trust and facilitate the work of CHWs. This was especially effective in navigating trust issues during home visits. Involving trusted community leaders is an effective strategy for building and restoring trust, as demonstrated in other FCAS. For example, during the 2014-2016 Ebola outbreak in West Africa, initial mistrust towards health workers was mitigated by engaging local leaders, respecting cultural practices, and providing accurate information, which built community trust and improved disease containment (Richardson et al., 2016). Similarly, in northern Nigeria, resistance to polio vaccination due to rumours and distrust was addressed by involving local religious leaders and ensuring culturally sensitive outreach, leading to increased vaccination coverage (Kaufmann & Feldbaum, 2009).

Such relationships enabled CHW support and the acceptability and uptake of their health interventions in the Buea Health District. Community leaders hold significant social capital and influence public perceptions and behaviours. Their endorsement of CHWs and health campaigns lent credibility and legitimacy to these efforts (Kok et al., 2015; Standing & Chowdhury, 2008b). However, the success of this approach depends heavily on the choice of community leaders. If the leaders are perceived as biased or aligned with conflicting groups, this strategy could backfire, exacerbating issues of mistrust (Dirks et al., 2021).

To address COVID-19 misinformation in Buea Health District, CHWs gathered community feedback and relayed it to programme coordinators, who then provided information to counter the misinformation. This feedback loop was essential for tailoring communication strategies to address specific fears and misconceptions within the community. However, the effectiveness of this approach hinged on the accuracy of the information provided and the communication skills of the CHWs. The literature underscores the importance of feedback mechanisms in effectively countering misinformation and highlights the critical role of CHWs in sensitising

communities and disseminating accurate information (Glenton et al., 2010; Kreps & Neuhauser, 2010; Paluck & Shepherd, 2012). By adapting communication strategies based on community feedback, CHWs can more effectively mitigate the impact of misinformation. Still, this process depends heavily on the quality and clarity of the information shared (Jha et al., 2005).

A community with low levels of trust may pose a difficult working environment for a CHW to operate in, considering other compounding challenges of the FCAS (UNICEF, 2004). This low trust from the community can lead to demoralisation of the CHW, attrition and the ultimate failure of the health intervention (Goudge & Gilson, 2005; Ludwick, 2010; Macinko & Starfield, 2001; Walt & Gilson, 1990). To effectively address the pervasive challenge of low community trust in FCAS, it is imperative that strategies for optimising CHW programmes explicitly integrate trust-building as a fundamental component. The loss of trust hampers the CHW's performance and could jeopardise the overall success of health interventions. Therefore, strategies must extend beyond traditional support mechanisms and prioritise targeted trust-building initiatives. These should include actively engaging respected community leaders, establishing transparent and consistent communication channels, and providing comprehensive training and resources that enable CHWs to navigate the complexities of FCAS effectively. By embedding these trust-building measures within CHW programme frameworks, the interventions are more likely to sustain CHW morale, decrease attrition rates, and achieve more successful health outcomes in FCAS like the Buea Health District. This approach ensures that the strategies are not merely reactive but proactive in addressing the root causes of CHW challenges in these environments, leading to a more resilient and effective CHW programme.

8.2.3 Displacement

Displacement, driven by the Anglophone crisis, has led to an influx of internally displaced persons (IDPs) into Buea Health District, searching for increased relative security and better livelihoods. This crisis-driven displacement significantly increased the workload and responsibilities of CHWs. This surge in demand has required CHWs to manage expanded duties, such as identifying and creating IDP registries and facilitating aid access, which challenges their capacity to deliver quality healthcare services. The expanded roles of CHWs, while beneficial for the IDPs, strain CHWs by compromising their ability to perform routine tasks, leading to burnout, reduced care quality, and poorer community health outcomes.

At the programme level, displacement significantly disrupted health service planning and resource allocation, particularly during mass campaigns like mosquito net distribution. The influx of unfamiliar and transient IDPs increased the workload for CHWs and required additional efforts to reach these groups, complicating the effective delivery of services. Moreover, displacement challenges the continuity of essential health interventions, such as vaccination programmes, as CHWs need help in tracking and vaccinating children whose families have relocated.

The crisis-induced displacement not only increased the workload of CHWs by adding responsibilities related to IDPs but also led to the displacement of CHWs themselves, worsening staffing shortages in Buea Health District. Organisations such as the WHO, supported by local groups, addressed these gaps by recruiting temporary CHWs, with some IDPs integrating into the community and assuming CHW roles. However, using IDPs as CHWs may have negative implications. Their perception of security risks could be affected as they work in unfamiliar areas and interact with relatively unknown individuals (Rajbangshi et al., 2021). Additionally, community members may not be familiar with these new or temporary CHWs, leading to scepticism and reluctance to engage with them. While these efforts demonstrate commitment, they expose systemic vulnerabilities, emphasising the need for sustainable strategies. For example, the reliance on temporary CHWs and expanded roles is unsustainable, as temporary CHWs may lack the necessary training and experience, leading to inconsistencies in service delivery, and the expanded roles can overwhelm existing CHWs, making it difficult to meet both routine and emergency health needs effectively.

The impact of population displacement in the Buea Health District reflects broader challenges observed in other FCAS, such as the conflict-affected Assam State in India, where displacement and CHW shortages have led to increased workloads and diminished performance (Rajbangshi et al., 2021). In both contexts, displacement not only strains the operational capacity of CHWs but also exacerbates the living conditions of displaced CHWs, as conflict-driven displacement often results in the loss of assets, livelihoods, and family members (Rajbangshi et al., 2021). Similar issues are evident in South Sudan and Afghanistan, where CHWs report difficulties meeting their work expectations due to overwhelming responsibilities and competing priorities (Edmond et al., 2018; Sami et al., 2018). The reduced effectiveness in delivering essential services, such as newborn care, underscores the critical need for targeted strategies that address both the operational and personal challenges faced by CHWs in conflict-affected settings (Sami et al., 2018).

The findings from this study in Buea Health District, alongside evidence from other fragile and conflict-affected settings, underscore the significant challenge that displacement poses to CHW programmes in conflict-affected areas. To effectively address these challenges and support CHWs in these contexts, CHW programmes must implement targeted support strategies. For instance, increasing staffing, as identified by CHWs in the Buea Health District, is essential to balance expanded duties. In conflict-affected areas as well as in stable settings, increasing the number of CHWs has proven essential for expanding healthcare coverage and ensuring the continuity of vital health services, as demonstrated by successful interventions in regions like eastern Burma and Bangladesh (Afsana et al., 2014; Smith et al., 2009). However, reliance on temporary CHWs and IDPs has its limitations, suggesting the need for alternative approaches, such as allowing established CHWs to recommend trusted community members for interim or long-term roles – with the ultimate approval of the health management committee which oversees the day-to-day management of the health activities at the health centre, including CHWs. Leveraging community-led recruitment, where CHWs identify their peers, enhances their credibility and accountability, as seen in conflict zones like Burma and Uganda, by aligning with existing social structures and community norms, leading to better service delivery and programme success (Katarbarwa et al., 2005; Katarbarwa & Richards, 2001; Smith et al., 2009). Pairing newer CHWs with experienced ones can significantly reduce the risks of operating in unfamiliar and insecure environments by leveraging the seasoned CHWs' deep

knowledge of local dynamics, including safe routes, trusted community leaders, and potential security threats.

Additionally, given the expanded catchment areas due to the influx of IDPs and corresponding shortage of CHWs, CHW programmes must consider increasing cash incentives or transportation allowances, as strongly expressed by the CHWs in the Buea Health District, to ensure CHWs can efficiently cover these larger areas (Miller et al., 2020). Moreover, the intersection of displacement and insecurity further heightens the risks faced by CHWs, reinforcing the need for comprehensive safety measures and compensation strategies (as discussed in 8.2.1). Ultimately, strategic investment in training, incentivisation and compensation, and workload management is crucial for optimising CHW programmes and ensuring high-quality care by CHWs in FCAS. Strengthening institutional support, compensation, and resources for CHWs is crucial to maintaining their effectiveness and ensuring the success of public health interventions.

8.2.4 Operational challenges

This study identified operational challenges regarding recruitment, inadequate training and supervision, and insufficient and inconsistent and delayed remuneration of CHWS in the conflict-affected Buea Health District, which significantly affected the day-to-day operations of CHWS and their programmes. It should, however, be noted that these challenges mirror those generally faced by CHWs in stable contexts as well, but chronic fragility exacerbates them and requires innovative problem-solving to optimise CHW programmes (Raven et al., 2020c). Additionally, CHWs in FCAS have the most challenging of jobs, and strategies to support them are needed to respond to their particular evolving realities and contexts (Raven et al., 2020c).

8.2.4.1 Training

This study identified that conflict-related insecurity in the Buea Health District significantly disrupted the frequency and delivery of CHW training, necessitating adaptable strategies to maintain service continuity. The displacement of CHWs due to the Anglophone Crisis led to increased attrition, prompting health centres to recruit new or temporary CHWs and increase the frequency of refresher courses. In response to these challenges, training for community health interventions, such as malaria elimination, was decentralised from national and regional levels to the district level, allowing for more context-specific instruction. Training schedules were also strategically adjusted, with sessions planned on relatively safe days to mitigate security risks, and extended durations were introduced to accommodate disruptions caused by the conflict. These adaptations underscore the importance of flexible training strategies in conflict-affected settings to ensure CHWs remain effective despite ongoing instability.

In other study findings on stable contexts, CHW training typically follows a standardised and structured approach, with sessions planned well in advance and conducted at national or regional levels to ensure comprehensive coverage and consistency (Olaniran et al., 2017). These uninterrupted training sessions enable CHWs to receive thorough instruction without significant delays. The standardised curriculum in stable environments ensures uniformity in education and skills, maintaining a high standard of care across regions (O'Donovan et al., 2018; Olaniran et al., 2017). Additionally, stable contexts often provide better access to training

resources, including materials, qualified trainers, and secure venues, ensuring CHWs have the tools needed for success.

However, while essential, the adaptive training approach in conflict-affected settings introduces significant challenges that must be critically examined. For example, localising training to the district level offers the benefit of context-specific instruction, yet it risks inconsistencies in training quality across different health districts across the region. This decentralisation may lead to gaps in knowledge and skills among CHWs, undermining the overall effectiveness of health interventions. Furthermore, the flexibility required in programme planning is logistically complex and resource-intensive, straining already limited capacities in conflict zones. The scarcity of training resources and secure venues further compromises the quality of training, leaving CHWs inadequately prepared for their roles. The uncertainty and variability in training schedules, driven by security concerns, can negatively impact CHWs' morale and job satisfaction, leading to decreased effectiveness and higher attrition rates (Jaskiewicz & Tulenko, 2012).

The literature on CHW training in low- and middle-income countries emphasises the need for context-specific training programs to effectively enhance CHW performance and the quality of care provided (Crigler et al., 2006; Rowe et al., 2018). In conflict-affected areas like the Buea Health District, CHWs face both direct challenges, such as physical danger and psychological stress, and indirect impacts, such as population displacement and the erosion of community networks, which significantly hinder their effectiveness. In this context, training emerged as the most prioritised support strategy among CHWs, underscoring its critical role in maintaining their capacity to deliver quality healthcare. The lack of adequate training exacerbates existing challenges, such as increased workloads and persistent insecurity, further compromising CHW effectiveness.

To optimise CHW programmes in FCAS, training initiatives must be strategically designed to address the specific needs of both CHWs and the communities they serve. The Buea experience underscores the importance of expanding training beyond basic healthcare to include modules on navigating conflict environments, providing psychosocial support, and effectively engaging with communities—such as the stroke rehabilitation training programme for CHWs in South Africa (Scheffler & Mash, 2023). Additionally, integrating supervision strategies, such as community and group supervision, is essential in environments like Buea, where fluctuating

insecurity necessitates continuous support for CHWs to maintain service quality (Westgate et al., 2021).

In addition, Raven et al. (2020c) highlight the importance of fostering a sense of cohort among CHWs in FCAS, such as in Sierra Leone, Liberia, and the Democratic Republic of Congo, by encouraging peer support and the use of WhatsApp groups for collective problem-solving and learning. This approach resonates with the findings from Buea, where peer support, though not the most popular, was identified as a valuable strategy to alleviate workload and foster solidarity among CHWs, given the challenging nature of their roles. Peer support has proven beneficial for CHWs undergoing training in Mozambique (Steege et al., 2020). Incorporating peer support into training programs, particularly for new CHWs, could facilitate knowledge transfer from more experienced workers and enhance the overall effectiveness of CHW programs. The existing WhatsApp groups used for supervision in Buea could also be leveraged to support peer learning and collaboration, further strengthening the CHWs' ability to navigate the challenges of their roles. WhatsApp and other mobile health technology tools have a great potential for supervision, training and technical support for CHWs in these contexts (Perry & Zulliger, 2012). Incorporating these tools into CHW training and support strategies not only enhances their capacity to deliver quality care but also contributes to the resilience and adaptability of CHW programmes in FCAS.

8.2.4.2 Supervision

CHW programmes in the Buea Health District adopted a remote-hybrid supervision model in response to conflict-related insecurity. This approach included monitoring CHW activities, phone calls and WhatsApp groups for supervision during heightened insecurity. In-person supervision was contingent on security conditions. This model mirrors practices in other conflict-affected settings, such as Zambia, Pakistan, and Nigeria, where mobile health tools facilitate data collection and real-time communication, demonstrating cost-effectiveness and feasibility in disrupted environments (Perry, 2020; Rahman et al., 2019; Westgate et al., 2021; Whidden et al., 2018).

However, the remote supervision approach presents significant challenges, particularly concerning the availability and reliability of mobile devices, internet connectivity, and electricity in conflict zones (Agarwal et al., 2015; Biemba et al., 2017). CHWs often face difficulties with software applications due to insufficient training, updates, and hardware

compatibility, which impedes timely reporting and communication (Agarwal et al., 2015; Biemba et al., 2017). While this supervisory model offers improved communication and coordination, its effectiveness in fragile contexts remains under-explored, highlighting the need for robust support systems to overcome these technical barriers.

In some areas of the Buea Health District, monthly health management meetings were incorporated into the supervisory framework, allowing CHWs to present challenges and receive feedback from the management committee. This method, recommended in *Cameroon's National Guide for Community-Directed Interventions* and similar to approaches in stable settings like Ethiopia and India, fosters community engagement and strengthens ties between CHWs and the community (MOH, 2012b; Perry, 2020). However, its inconsistent application across health areas underscores the need for a more standardised and supportive supervision strategy, particularly in contexts with prevalent security and trust issues. This inconsistency also highlights the critical importance of the Cameroonian government's National Strategic Plan for Community Health (2021-2025), which emphasises the need to strengthen the institutionalisation and governance of CHW programmes (MOH, 2012b).

The adaptations to supervision in the Buea Health District while the adaptations to supervision in the Buea Health District have proven viable and feasible, drawing parallels with similar practices in other conflict-affected settings, it is crucial to recognise that these measures were primarily reactive responses to the challenges imposed by the Anglophone crisis. A more proactive approach is necessary to optimise CHW programmes in such volatile environments. This should involve integrating these adaptive strategies into the programme's design phase, rather than implementing them as ad hoc solutions. By embedding remote supervision models, robust support systems, and community engagement mechanisms from the outset, CHW programmes can become inherently more agile and resilient, better equipped to maintain effectiveness in the face of fragility, uncertainty, and shock. This strategic foresight ensures continuity in healthcare delivery during crises and strengthens the overall framework of CHW programmes, positioning them to withstand and adapt to future challenges more effectively.

8.2.4.3 Incentives

Incentives are pivotal in shaping the activities and motivation of CHWs (Bhattacharyya et al., 2001; Colvin et al., 2021; Ormel et al., 2019). In Cameroon, particularly within the Buea Health District, CHWs contracted to health centres are compensated based on the number of patient

referrals they generate, supplemented by payments for transportation and feeding during health activities. Additionally, they receive verbal commendations from supervisors intended to boost morale under challenging conditions. However, the effectiveness of these incentives is undermined when financial compensation is delayed, which this study identified as a significant disincentive (Bhattacharyya et al., 2001). For example, CHWs reported frustration and financial strain due to payments for participation in a polio vaccination campaign being delayed by five months. Such delays exacerbate the economic vulnerability of CHWs, who often live near the poverty line and face higher living costs in urban areas like Buea.

The situation is further aggravated by perceptions of unequal financial compensation and nepotism in the selection of participants for more lucrative activities. CHWs reported that those with personal connections to programme managers were often favoured for higher-paying assignments, leading to resentment and demotivation among other CHWs who view the system as inequitable. This perceived injustice not only demoralises CHWs but also undermines the overall effectiveness of health interventions, as those selected for higher-paying activities are not always the most qualified or committed.

The implications of these issues of delayed and inconsistent payments are significant. The unmet promises of incentives, delayed payments, and out-of-pocket expenses for work-related activities have been identified as demotivating factors for CHWs, even in stable settings (Kok et al., 2015c). In settings like Buea, these challenges are more severe due to disrupted economic activities and higher living costs. Financial pressures are intensified, making the burden of delayed payments and personal expenses more acute (George et al., 2017; Malik et al., 2010).

Moreover, CHWs in urban conflict settings face higher risks due to violence, instability, and denser populations that may increase exposure to health risks. These risks necessitate reliable compensation not only as a matter of fairness but also for the safety and well-being of CHWs. Unmet financial promises erode the trust between CHWs and their managing organisations. Trust is already fragile in conflict settings, and further undermining it can significantly affect the effectiveness of health interventions and community cooperation (Colvin et al., 2021a).

In optimising CHW programmes and enhancing support for CHWs in FCAS such as the Buea Health District, it is imperative to recognise the significance of incentives, particularly cash incentives, in driving CHW motivation, retention, and overall effectiveness. The consistent

prioritisation of cash incentives by CHWs in the Buea Health District emphasises their critical role as a practical means of subsistence and as a significant form of recognition and validation of their efforts. Furthermore, while transportation and communication support are acknowledged as necessary, they remain secondary to the pressing need for reliable financial compensation. In-kind payments, though less prioritised, provide additional motivation but are insufficient in addressing the core challenges faced by CHWs. These findings point to the necessity for CHW programs to ensure timely and equitable financial compensation as a foundational strategy, supplemented by other forms of logistical support, to sustain CHW engagement and optimise the delivery of health services in conflict-affected settings. The successful implementation of these strategies is likely to enhance CHW performance, mitigate attrition, and ultimately improve health outcomes in these challenging environments.

Finally, in line with the Cameroonian government's *National Strategic Plan for Community Health (2021-2025)*, strengthening the institutional framework and governance of CHW programmes in Cameroon is essential for addressing the persistent issues of remuneration and support for CHWs, particularly in conflict-affected areas like the Buea Health District. By formalising the integration of CHWs into the national health system – as identified as a top priority support strategy in this study, the government can establish standardised payment schedules, secure budgetary provisions, and implement accountability measures, ensuring timely and equitable financial compensation. This approach directly enhances CHW motivation, retention, and effectiveness, addressing key challenges in the Buea Health District. Furthermore, such institutional support aligns with the broader national strategic plan for community health in Cameroon's objective of ensuring access to healthcare for key and vulnerable populations, as it secures the continuity and quality of health services delivered by CHWs, even amidst displacement and insecurity. By addressing these interconnected challenges, the CHW programmes can generally become more resilient and responsive, ultimately ensuring that affected communities receive the necessary care despite the challenging context. However, it should be noted that integrating CHW programmes into government health systems in LMICs faces significant challenges, including resource constraints, bureaucratic inefficiencies, political instability, and sustainability concerns, which must be carefully addressed to ensure effective and equitable service delivery (Ahmed et al., 2022b; Asweto et al., 2016; Scott et al., 2018c; Zulu et al., 2014).

8.3.4.4 Resources

In this study, "resources" refers to both human resources—the CHWs—and the tools and materials necessary for their work, which are critical for effective CHW functioning in FCAS like the Buea Health District. The challenges in Buea underscore the necessity of adequate human resources, such as the availability and competence of CHWs, alongside essential working resources like medical supplies, communication devices, and logistical support. The shortage of CHWs, exacerbated by displacement and conflict, created significant operational challenges, including overburdened workloads, reduced efficiency, and compromised service quality.

Moreover, the logistical difficulties stemming from inadequate resources—including insufficient tools like boots, raincoats, and markers necessary for tasks like house numbering—compound the challenges faced by CHWs. The impact of these deficiencies is evident in the increased pressure on existing CHWs, leading to burnout and diminished care quality. Additionally, recruiting inexperienced CHWs often resulted in errors that further strained the limited workforce, as experienced CHWs had to correct or redo tasks, reducing overall productivity.

The insights from the review by Jaskiewicz and Tulenko (2012) underscore the importance of incorporating elements that directly influence CHW productivity—such as workload, supportive supervision, and adequate supplies—into the design and implementation phases of CHW programs. In the context of the Buea Health District, where the absence of sufficient CHWs and essential supplies has led to heavy workloads and compromised service quality, these considerations become even more critical. The preferred support strategies identified by the CHWs in this study, particularly regarding working tools, identification, the need for more CHWs, and gadgets, highlight the necessity of supporting CHWs in this context based on the model of Jaskiewicz and Tulenko (2012) - on how the work environment affects the productivity of CHWs. Integrating these context-specific preferences into CHW programme design and implementation is crucial for optimising these programmes and supporting CHWs in delivering healthcare in challenging environments similar to the Buea Health District.

While previous studies, such as those by Jaskiewicz and Tulenko (2012) and Kok et al. (2017), have identified various factors influencing the performance of CHWs, they often do not emphasise the critical role of human resources—the availability and competency of CHWs

themselves. Agarwal et al. (2019) have identified numerous metrics for measuring CHW performance, including incentives, supervision, service delivery, and community trust. However, these metrics do not fully capture the impact of human resource shortages on CHW performance. In FCAS such as the Buea Health District, the shortage of CHWs and the high attrition rates due to conflict-related stress and insecurity emphasise the need to consider human resources as a fundamental element influencing CHW performance.

In optimising CHW programmes and supporting CHWs in FCAS such as the Buea Health District, providing essential working tools, such as personal protective equipment, educational materials, and data collection devices, is critical to the effectiveness and safety of CHWs. The variability in preference for these tools across different health areas underscores the need for context-specific assessments when designing support strategies. While tools like raincoats and boots are indispensable for daily operations, especially in challenging terrains, identification tools like badges and uniforms also play a crucial role in establishing CHWs' credibility and ensuring their acceptance within communities. The consistent demand for more CHWs highlights the need to address workforce shortages, which directly impact health interventions' efficiency and effectiveness. Additionally, while gadgets like t-shirts and hats may seem secondary, they contribute to CHW identity, professionalism, and community recognition, all of which are vital for maintaining the morale and motivation of CHWs in these difficult contexts.

Ultimately, optimising CHW programmes and supporting CHWs in FCAS requires a comprehensive approach that integrates consistent supervision, adequate training, timely incentives, and robust support systems. This approach must address human and material resource needs to mitigate the challenges posed and exacerbated by conflict and enhance community health outcomes.

8.2.5 Gender

Gender, in the context of this study, refers to the influence of societal norms, task allocation, and community perceptions on the experiences and effectiveness of male and female CHWs. The theme of gender explored how the sex of the CHWs influences their experiences in the conflict-affected Buea Health District. It provides insights into the unique challenges faced by male and female CHWs, examining how societal norms, task allocation, and community

perceptions shape their roles and effectiveness. This section aims to inform more inclusive and effective strategies for supporting CHWs in such contexts, extending these considerations beyond the immediate conflict to post-conflict and stable environments.

The analysis of sex dynamics within CHW programs in the Buea Health District reveals critical considerations for optimising CHW programs and supporting CHWs in fragile and conflict-affected settings. While sex may not be a primary criterion for recruitment, the sexed allocation of tasks based on societal norms and perceptions significantly influences the effectiveness and safety of CHWs. Male CHWs are often assigned physically demanding tasks due to perceived physical strength, yet they face heightened risks of suspicion and violence, highlighting a need for tailored security measures. This is similar to the findings of the study by Raven et al. (2022), where male CHWs in Sierra Leone, Liberia, and the Democratic Republic of Congo were preferred due to having more physical stamina and could travel long distances for their work. However, while not implicitly stated, male CHWs could be perceived to be more vulnerable to attacks from non-state armed groups, as two male CHWs in Buea Health District reported being abducted.

Conversely, female CHWs are more accepted by communities and excel in roles requiring close engagement with vulnerable groups, but they may also face challenges related to societal expectations and domestic responsibilities. This is similar to the findings by Raven et al. (2022) and Najafizada et al. (2019), who reported that female CHWs could easily discuss aspects relating to reproductive and sexual health and could generally counsel both men and women on health issues. Other studies report that performance regarding specific tasks could differ between male and female CHWs, and the fewer domestic duties CHWs have, the more active they were with fewer dropouts (Alamo et al., 2012; Crispin et al., 2012; Kebriai & MS, 2009; Olang'o et al., 2010). This reflects societal perceptions of sex roles where physical strength is attributed to men, and caregiving or nurturing roles are seen as more suited to women.

Additionally, the preference for male CHWs based on their perceived availability and flexibility is notable. Some Chief of Centres attribute this to fewer complaints and greater consistency observed among male CHWs. This perception may be influenced by societal patriarchal norms regarding men's and women's roles and responsibilities, which can impact their perceived availability for work-related tasks, performance and retention (Raven et al., 2022b). However, in a context like the Buea Health District, while there is a perceived

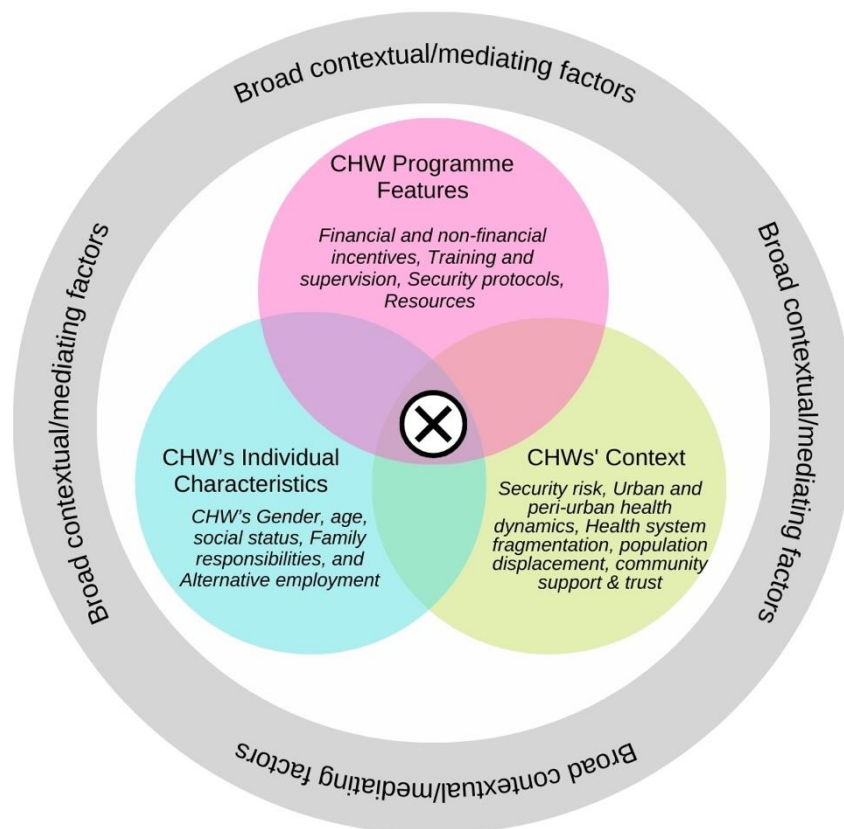
preference for male CHWs, there is a downside to such preference, as some community members are suspicious of the male CHWs either being thieves or belonging to NSAGs and are out in the communities to spy on them or extort them. The aspect of suspecting male CHWs is similar to the case in Sierra Leone, albeit for different reasons, who are suspected of having ulterior sexual motives when engaging with female community members (Raven et al., 2022b). The female CHWs in Buea Health District do not experience these suspicions, and community members are more receptive to them.

While sex does not inherently determine the performance and effectiveness of CHWs, societal norms and roles attributed to different sexes can influence task allocation, community perceptions, and the financial pressures experienced by CHWs. Addressing these dynamics is crucial for ensuring that both male and female CHWs are utilised effectively and supported adequately, enhancing the overall impact of health interventions (Kok, et al., 2015; Raven et al., 2022b). The financial expectations placed on male CHWs as breadwinners and on female CHWs without husband support, as identified in this study, highlight the need for equitable, timely, and sufficient financial compensation as a core strategy for optimising CHW programmes in FCAS like the Buea Health District. By recognising and responding to the unique challenges faced by male and female CHWs, programme designers and implementers should ensure that both are adequately supported, leading to more resilient CHW programmes and improved community health outcomes.

8.3 Reflections on the proposed framework for optimising CHW programmes in FCAS

The framework in Figure 1 (and again below Figure 14 for ease of reference) was developed to guide this study, by providing a systematic approach to organising data. However, the framework has then evolved into a more generalisable model for understanding CHWs' experiences and CHW programming in FCAS, specifically as it seeks to address the gaps in existing CHW programme optimisation approaches and CHW support structures, which often overlook the importance of the context and, specifically, the complexities of working in FCAS. As explained in Chapter 2, current models or frameworks of and approaches to CHW programme optimisation do not seem to fully account for the unique challenges posed by conflict, such as insecurity, displacement, and disrupted community networks. The proposed framework addressed this gap by providing a more holistic and adaptable approach tailored to the specific needs of CHWs operating in such volatile environments. Below, I reflect on how the findings have further illuminated a revised, more broad, generalisable and insightful interpretation of the framework towards a model for understanding CHWs' experiences and optimising CHW programming in FCAS.

Figure 14: Proposed Theoretical Framework



8.3.1 CHWs individual features

The initial conceptualisation of CHW individual characteristics within the proposed framework positioned these attributes as relatively static determinants of professional identity and service delivery, mainly focusing on gender, age, and social status. However, the research findings from the Buea Health District indicate that CHW characteristics are not fixed but are dynamic and influenced by shifting economic, social, and security conditions. While demographic attributes remain important, the study highlights that factors such as household responsibilities, financial insecurity, alternative income-generating activities, and personal risk tolerance significantly shape CHW retention, engagement, and coping strategies. These findings necessitate a revised interpretation of CHW characteristics within the framework, integrating a broader and more flexible understanding of how CHWs navigate their roles amidst conflict-related adversities.

The study findings emphasise the extent to which CHW economic vulnerability influences their performance and level of engagement. Many CHWs in Buea reported that they do not rely solely on their CHW stipends, as payments are often irregular, delayed, or inadequate to meet their household needs. As a result, many CHWs engage in secondary employment, including farming, petty trading, and informal labour, to supplement their incomes. These alternative income-generating activities serve as both a coping mechanism and a determinant of CHW availability, particularly in cases where CHWs must prioritise more stable sources of income over their health service commitments.

This finding challenges the initial assumption that CHWs function primarily within a structured health system, highlighting that their role exists within a complex economic reality where financial insecurity directly impacts workforce retention and service delivery continuity. It also suggests that financial incentives alone may not be sufficient to ensure CHW motivation, particularly in contexts where alternative income streams may offer more immediate or reliable financial security. CHW programme designs must integrate alternative livelihood considerations, recognising that many CHWs engage in multiple forms of employment to sustain themselves. Remuneration structures should account for economic realities, potentially incorporating hybrid incentive models that include cash payments, in-kind benefits, and community-driven support mechanisms.

The study findings also highlight the role of family status and caregiving responsibilities in shaping CHW participation and service delivery patterns. While gender remains a covert determinant of role allocation and community acceptance, the research further demonstrates that household responsibilities significantly influence CHW mobility, time commitment, and retention rates. For instance, male CHWs are often expected to travel longer distances, which exposes them to more significant security risks, including targeted attacks and abduction.

Additionally, CHWs who serve as primary income earners for their families experience greater pressure to seek alternative employment opportunities, particularly when CHW stipends are insufficient to meet household needs. This has direct implications for workforce retention, as CHWs may be forced to leave their roles or reduce their hours in favour of more stable financial opportunities.

The revised interpretation of the framework departs from traditional, static interpretations of CHW individual characteristics, instead recognising how CHWs adapt their professional roles in response to economic pressures, security risks, and family obligations. This broader conceptualisation allows for the development of more responsive and sustainable CHW programmes, ensuring that policies and interventions that i) acknowledge the economic realities of CHWs, incorporating hybrid incentive models that go beyond cash payments, and ii) recognise the gendered and family-based constraints affecting workforce retention and service delivery.

8.3.2 CHWs' context

The original interpretation of CHW context within the proposed framework positioned context as a structural determinant, emphasising how conflict, displacement, and governance fragility shape CHW operations. It recognises that insecurity, population mobility, and health system instability were critical contextual factors influencing CHW effectiveness. The findings from the Buea Health District reveal that context is not merely a structural determinant but an active and dynamic force that CHWs must navigate daily. CHWs do not passively operate within a fragile context, they actively engage with their environment, negotiate risks, and employ adaptive strategies to sustain service delivery. The research findings necessitate a shift in the framework's interpretation of the CHW's context from a passive external constraint to an integrated programme component incorporating security management, risk mitigation, and

community trust-building as fundamental elements. Integrating security management into CHW programming enhances CHW confidence and motivation, improving service quality and working conditions. Also, embedding community engagement in programme design improves CHW accessibility, leading to greater service coverage and intervention success.

8.3.3 CHW programme features

The research demonstrated that CHWs require a broader and more flexible range of support mechanisms beyond financial remuneration and structured supervision. CHWs identified community trust-building, security protections, adaptive supervision models (e.g., WhatsApp-based monitoring), and non-financial incentives (e.g., preferential healthcare, in-kind payments, identification badges, and peer networks) as equally critical components of an optimised programme. These findings highlight that programme features must be both conflict-sensitive and locally adaptable, incorporating hybrid incentive models and community-driven recognition mechanisms to sustain motivation.

Programme effectiveness is not solely dependent on structured financial incentives; non-financial and community-based incentives (e.g., recognition, access to free commodities, and enhanced security measures) play a crucial role in CHW retention and performance. Training should focus on technical health skills, including security and emergency preparedness, negotiation strategies with non-state actors, and misinformation management, equipping CHWs for complex environments. Supervision models should be decentralised and flexible, ensuring continuous support through peer engagement, digital tools, and localised leadership rather than relying on top-down, rigid hierarchical structures.

8.4 Study Strengths and Limitations

While this research provides insights and practical strategies to support CHWs in conflict-affected settings, it is important to acknowledge the study's limitations. Understanding these limitations is crucial for contextualising the findings and ensuring a balanced interpretation of the results. The following section outlines key constraints encountered during the study, which may impact the generalisability and applicability of the research outcomes.

One of the limitations of this study is its focus on a single health district—Buea Health District—out of the 18 health districts in the South West region and the 37 health districts across the Anglophone regions of Cameroon. Buea Health District was purposefully selected due to its urban, conflict-affected context and the researcher's familiarity with the area, which provided a safer and more feasible setting for the study. However, this specific selection raises concerns about the representativeness of the sample and the generalisability of the findings. The unique socio-political, economic, and healthcare dynamics of the Buea Health District may not be representative of the diverse settings and challenges encountered in other health districts within the region or the broader Anglophone areas of Cameroon. Consequently, while the findings offer valuable insights into CHW programme dynamics in an urban, conflict-affected setting, they should be interpreted cautiously when applied to other contexts. Nonetheless, the challenges faced by CHWs in Buea share similarities with those in other conflict-affected regions such as Sierra Leone, Liberia, and the Democratic Republic of Congo (Raven et al., 2020c), suggesting that some insights from this study may be relevant to understanding CHW experiences in other regions with similar conflict-related challenges.

A comparative analysis would have enriched the study's representativeness and the generalisability of the findings, offering more nuanced insights into how local dynamics influence CHW experiences and the effectiveness of various support strategies in different conflict-affected urban environments. This broader perspective could have enhanced the generalisability of the findings and provided a deeper understanding of the contextual factors shaping CHW support needs. However, this aspect of the study was not feasible due to significant security concerns arising from the ongoing Anglophone crisis and the restrictions imposed by the COVID-19 pandemic. These factors, combined with adherence to Queen Margaret University's regulations and agreements with supervisors, necessitated a focus on Buea Health District alone, thus limiting the scope of the study.

Secondly, another limitation relates to the sampling choices made in this study, which, while necessary due to the conflict-affected setting, introduced some limitations to interpreting and generalising the study findings. The purposive and convenient sampling of CHWs likely oversampled those who were more experienced and committed, as Chiefs of Centres may have tended to nominate CHWs who were actively engaged and available. This may limit the generalisability of findings, as less experienced or less active CHWs, who may face distinct challenges, were underrepresented. Reliance on Chief of Centre nominations may have excluded those displaced or unavailable during the study period, and the over-representation of accessible areas due to security constraints reduced the diversity of experiences captured. These limitations highlight the need for cautious interpretation of findings, especially regarding the broader CHW population in similar conflict-affected settings. Furthermore, the CHWs for the life history interviews were purposefully selected as a subgroup of those present for the focus group discussions. The purposeful selection aimed to include those with extensive and deep experience as a CHW before and during the conflict who have lived in their community for a long time. However, while they provided rich insights into their personal experiences being CHWs, they may not be representative of the CHWs in the district and other contexts. The insights gained, while rich and informative, might not fully encapsulate the diversity of experiences and opinions present among all CHWs in the district, particularly those who are newer to the role or have different interaction levels with their communities. Importantly, the sampling approach also had an impact on analysis. In particular, selecting FGD participants based solely on health area, without considering other demographic factors such as gender, age, and education, limits the depth of analysis, as I was not able to fully disaggregate individual characteristics at analysis stage.

A further limitation of this study pertains to the potential for social desirability bias, Hawthorne effect, during interviews, where informants might have provided normative responses—stating what they believed the researcher wanted to hear or what they perceived as the "right" answer. This bias is particularly relevant given the researcher's dual positionality as both an insider familiar with the local context and an outsider positioned as an academic researcher. The insider-outsider dynamic may have influenced how participants perceived the research process, potentially leading them to modify their responses to align with perceived expectations. To mitigate this, I employed strategies such as rephrasing questions and revisiting topics later in

the interviews to elicit more genuine and spontaneous responses. Despite these efforts, the potential for response bias could not be entirely eliminated, and it remains a factor that may have subtly influenced the findings.

Additionally, my familiarity with the context – being from the setting, while advantageous in many respects, introduces the possibility of bias during the data analysis phase. Reflexivity played a crucial role in this process, as I actively engaged in self-reflection to identify and account for personal biases that could shape the interpretation of the data. This reflexive approach, detailed in Section 4.7, involved continuously questioning assumptions and being transparent about the potential influence of my background on the analysis. Nevertheless, it is important to acknowledge that complete objectivity is challenging to achieve, and my positionality may have influenced the analytical process to some extent. By openly addressing these limitations, the study aims to provide a balanced and nuanced interpretation of the data while recognising the inherent complexities of conducting research in a familiar setting.

Fifthly, some CHWs participating in the study did not have a good mastery of the English language, presenting a language barrier. In engaging with these CHWs, the researcher communicated in Pidgin English as they have a good mastery of both languages and the context. This approach was adopted as it was assumed that communicating in a language familiar to the participants would facilitate a more comfortable and effective interaction, enhancing the quality of the collected data. However, some meaning and essence might have been lost in translation despite this familiarity. This limitation suggests that some aspects of the CHWs' experiences and perspectives may not have been fully captured or may have been inadvertently modified in the process of translation and interpretation. As such, this potential distortion of meaning should be considered, particularly in the context of nuanced or culturally specific expressions and concepts.

8.5 Conclusion

To answer the primary research question—*How can the CHW programme in the Buea Health District be optimised to support CHWs and enhance its performance and resilience in fragile and conflict-affected situations*—a comprehensive, integrated approach is required, drawing on the proposed conceptual framework, which considers the intersection of CHW programme features, CHW individual features, and the context where the CHWs work in. Optimising the programme involves reinforcing key features such as training, financial incentives, and supervision while also considering the individual characteristics of CHWs and the context they work in.

Providing adaptive and ongoing training ensures CHWs have the skills to operate in high-risk environments and effectively manage misinformation. Implementing reliable compensation systems and offering diverse incentives motivates CHWs and provides them with essential financial stability. In addition, strengthening supervision through flexible and responsive models offers CHWs the operational support and professional development needed to enhance their resilience and performance, ensuring they can continue to deliver vital health services even in volatile settings.

Furthermore, fostering community trust and engagement is fundamental for the success of the CHW programme. Leveraging the support of trusted community and religious leaders helps bridge trust gaps and counteract the widespread misinformation that undermines health initiatives. Addressing security risks through clear risk mitigation protocols ensures the safety of CHWs, allowing them to maintain their essential roles in delivering health services. Additionally, adopting flexible service delivery models enhances workforce stability and ensures continuity of care despite population displacement.

The interplay between programme features, individual characteristics, and the conflict-affected context highlights the need for tailored, context-specific strategies. By adopting a holistic approach that considers the unique challenges and leveraging the strengths of CHWs, the programme can build a more resilient and effective health system. This integrated strategy supports CHWs in their critical roles and contributes to improving health outcomes and fostering community trust in fragile and conflict-affected settings.

8.5.1 Implications for Policy and Practice

Building on the findings and insights gained from this research, it is essential to consider the broader implications for policy, practice, and future research. The implications discussed in the following section highlight the potential impact of the study on improving support for Community Health Workers (CHWs) in conflict-affected settings and inform strategies for strengthening health systems.

8.5.1.1 Responsive Programme Design

In designing strategies to optimise CHW programmes and support CHWs in FCAS, programme designers, implementers, health policymakers, and relevant stakeholders need to prioritise responsiveness to both the operational context and the individual needs of CHWs throughout the programme lifecycle. The inherent instability of FCAS—characterised by frequent shocks, uncertainty, and fragility—necessitates CHW programmes that are flexible and adaptive to evolving circumstances (Raven et al., 2020c). Traditional programme designs, which may work well in stable settings, are inadequate in these contexts. Therefore, CHW programmes must be inherently flexible and capable of adapting to sudden changes to maintain service continuity and effectiveness (Lewin et al., 2021).

Furthermore, CHW programmes should recognise that CHWs are not only health workers but also individuals navigating unique personal and professional challenges within volatile environments. For instance, the personal safety risks and economic pressures CHWs face in FCAS necessitate a programme design that is both sensitive to these challenges and capable of providing the necessary support. In contexts such as Cameroon, where there is a strategic focus on strengthening the institutionalisation and governance of CHW programmes, it is imperative to create "decision space" for managers and CHWs (Alonso-Garbayo et al., 2017; Muthathi et al., 2020). This decision space allows for context-specific decision-making that enhances resilience and adaptability, enabling managers to tailor interventions to real-time challenges while providing CHWs with the autonomy to address community-specific needs and manage their well-being more effectively (Alonso-Garbayo et al., 2017; Muthathi et al., 2020).

Expanding this decision space is critical because how CHW programmes are governed—including the processes and structures through which they are managed, resourced, and held accountable—directly impacts their performance and sustainability (Lewin et al., 2021). A

programme's responsiveness is closely linked to governance, as it determines how effectively the programme can adapt to local needs and structures Community health workers at the dawn of a new era. CHW programmes risk becoming rigid and less effective in dynamic environments like FCAS without flexible and context-sensitive governance structures.

Additionally, the timely establishment or amendment of laws and regulations, for example in the programme design phase, is crucial for the effective functioning of CHW programmes (Daniels et al., 2012). In South Africa, for instance, the functioning of CHW programmes has been hampered by poor regulation, which limited the rights of CHWs and contributed to low pay levels (Daniels et al., 2012). This example highlights the importance of ensuring that CHW programmes are supported by appropriate legal and regulatory frameworks that enable responsive and effective programme design (Daniels et al., 2012).

Ultimately, tailoring CHW programmes to the specific needs of different contexts and groups will likely enhance their sustainability and effectiveness in the medium to long term (Lehmann et al., 2019; Pallas et al., 2013). Different contexts—whether remote areas with poor physical access or conflict-affected urban communities with high population densities—present unique challenges that require adaptive and context-specific programme strategies (Lewin et al., 2021). By incorporating these considerations into programme design, CHW programmes in FCAS and beyond can achieve greater impact and improve health outcomes across diverse settings.

8.5.1.2 Supporting CHWs' wellbeing

CHWs in conflict-affected environments, such as the Buea Health District, encounter significant risks, including life-threatening situations and exposure to traumatic events. This study highlights the critical need for targeted mental health and psychosocial support (MHPSS) tailored to such contexts. Although this method did not come from my research, evidence from the literature suggests that it could be a productive approach. MHPSS interventions have proven effective in improving mental health outcomes in low- and middle-income countries (Bangpan et al., 2019). However, there is a notable gap in their explicit application for CHWs. However, leveraging existing MHPSS services designed for the general population in FCAS could be an effective strategy to include CHWs as beneficiaries, recognising that they are integral members of the communities they serve and are similarly vulnerable to the psychological impacts of conflict.

In conflict zones like Northwest Syria, MHPSS services, including psychological first aid, counselling, and stress management, have been successfully provided to both health workers and community members (Bou-Orm et al., 2023). These services could be strategically incorporated into CHW support programmes in similar contexts, acknowledging the dual role of CHWs as both caregivers and community members affected by conflict. Similarly, community-level MHPSS programs implemented in regions such as the Democratic Republic of Congo, Mali, and Nigeria have shown effectiveness in reducing psychological distress among victims of violence, which parallels the stressors faced by CHWs in the Buea Health District (Andersen et al., 2022).

Other reported MHSSP measures to support CHWs included managing working hours, rotating CHWs between tasks that provide low and high reward, supplementing lost resources, providing proper equipment, and strengthening overall organisational support - as greater perceived support is associated with lower distress and greater mental well-being for frontline workers like CHWs in FCAS (Aldamman et al., 2019; Thormar et al., 2013).

These interventions, however, must be culturally sensitive and contextually adaptable to ensure their effectiveness. When comprehensive MHPSS services are not feasible, alternative strategies like supportive supervision and peer support should be prioritised. These approaches can provide a practical and scalable means of fostering resilience and mitigating the impact of trauma on CHWs, ensuring they remain effective in their roles despite challenging circumstances.

8.5.1.3 Peer mentoring and supervision

To optimise CHW programmes in conflict-affected settings like the Buea Health District, CHW programme stakeholders should consider implementing a structured peer supervision and mentorship model. While this approach did not emerge from my study, evidence from literature point to the fact that it might be an effective approach. This approach involves pairing more experienced CHWs with newly recruited ones, leveraging the former's familiarity with the community dynamics and their nuanced understanding of the local context (Westgate et al., 2021). The concept of peer supervision, where CHWs assist their peers in learning new skills and assessing the quality of their work, has been successfully implemented in various contexts,

including Bangladesh, Ethiopia, Ghana, Malawi, Nepal, Niger, Rwanda, and Sierra Leone (Westgate et al., 2021).

In conflict zones, where traditional supervision from programme managers is often interrupted, peer supervision offers a practical alternative to ensure the continuity of CHW activities (Raven et al., 2022b). For example, in Kenya, peer mentoring combined with WhatsApp networking significantly improved the knowledge and skills of health workers involved in immunisation services, demonstrating how digital platforms can facilitate continuous engagement and support (Hossain et al., 2021). Such a model is particularly relevant in the Buea Health District, where CHWs frequently rely on their more experienced colleagues for guidance when dealing with challenges such as vaccine hesitancy or navigating insecure areas. Furthermore, there are already WhatsApp groups of CHWs for supervisory purposes. This study highlighted that CHWs in the Buea Health District often turn to each other for support, whether to manage heavy workloads or for company and safety in perceived insecure communities. This established yet informal practice among CHWs in Buea underscores the potential effectiveness of strategically embedding peer supervision and mentorship into CHW programmes in stable and fragile and conflict-affected settings.

Furthermore, from the findings of this study, peer mentorship acts as a form of on-the-job training, especially critical in conflict and displacement contexts where formal training programs may be disrupted. By facilitating tacit knowledge transfer from experienced CHWs to newcomers, this approach not only enhances the skills of new recruits but also fosters a sense of teamwork and accountability (Nakibaala et al., 2022). A mixed-methods study in Ethiopia, Kenya, Malawi, and Mozambique found that peer supervision, in combination with group supervision encouraged better coordination of tasks among CHWs and improved accountability to both peers and the organisation (Westgate et al., 2021).

However, it is essential to consider the potential challenges associated with peer supervision. The creation of tensions between CHWs and their peer supervisors, particularly if constructive feedback is not well managed, must be mitigated through adequate training for peer mentors (Nakibaala et al., 2022). Additionally, sustaining this approach in unstable humanitarian settings requires ongoing support and adaptation to the changing circumstances on the ground.

Implementing a peer supervision and mentorship model within CHW programmes offers a cost-effective, resilient, and contextually adaptive solution for supporting CHWs in conflict-affected settings (Nakibaala et al., 2022). By incorporating this approach, programme designers and implementers can enhance CHW programme performance, reduce attrition, and improve overall health outcomes in these challenging environments.

8.5.1.4 Support Packages for CHWs

The debate surrounding the most effective support packages for CHWs has been longstanding, with extensive evidence suggesting that a mix of financial and non-financial incentives is critical (Bhattacharyya et al., 2001; Steinwand, 2001). However, FCAS such as the Buea Health District, the design of these support packages requires a more nuanced approach. Policymakers, programme designers, and managers must consider the interplay between programme features, the local context, and the individual characteristics of CHWs as described in section 8.3. This multifaceted approach ensures that support packages meet the needs of both the context and the individuals, thereby enhancing the effectiveness and sustainability of CHW programmes.

One of the perpetual challenges in CHW programmes is determining how best to motivate CHWs (Perry et al., 2017). While there is no one-size-fits-all solution, lessons can be drawn from past and current CHW programmes to inform future strategies (Perry et al., 2017). Insights from this study in the Buea Health District and the study by Raven et al. (2020c) in Sierra Leone, Liberia and Democratic Republic of Congo, highlight that supporting CHWs in the Buea Health District requires a comprehensive approach. This comprehensive approach encompasses compensation and benefits (e.g., cash incentives, transport fare, communication credit, in-kind payments, free commodities), operational support and work environment (e.g., training, supervision, work gadgets, structured systems, working tools), and recognition and status (e.g., preferential treatment, recognition, and community support). This approach aligns with the concept of discrete incentives aimed at motivating CHWs to perform specific tasks or achieve certain performance levels (Perry et al., 2017).

It is critical to consider local precedents and CHW expectations when determining support packages (Perry et al., 2017). CHWs may have participated in different community health interventions, each offering different support packages, shaping their expectations for new programmes or interventions (Perry et al., 2017). Programme designers and implementers

should also consider how they perceive and value their work. For instance, the CHWs in this study reported deriving significant satisfaction and a sense of purpose from their work in health promotion and disease prevention, despite its challenging and demanding nature. Reinforcing these intrinsic motivations through social recognition is essential. Examples from Afghanistan and Nepal, where CHWs are celebrated through dedicated annual days and provided with ID cards recognising their contributions to the health system, serve as practical models that have been identified and prioritised by the CHWs in the Buea Health District (Perry et al., 2017).

Beyond financial incentives and status recognition, CHWs can be further motivated by clearly defined roles and responsibilities and supportive supervision from peers and managers—both of which were prioritised by CHWs in this study (Liu et al., 2011; Perry et al., 2017). As previously discussed, the community context is also crucial in sustaining CHW motivation. However, there is a notable gap in the evidence regarding the ongoing management and adjustment of support packages over time. Support packages, once implemented, often remain static or are only altered due to external circumstances such as funding changes rather than through a planned and responsive process (Perry et al., 2017).

To effectively manage and adjust CHW support packages, it is imperative to start with an inclusive design process that meaningfully incorporates the perspectives, needs, and expectations of CHWs, such as this study, which documents those perspectives, needs and perspectives. Once a support package is in place, ongoing management is necessary to adapt to changes in workloads, social contexts, and individual CHW circumstances (Perry et al., 2017). For instance, as CHWs remain in their roles over time, their personal and professional situations may evolve, potentially influencing their motivation and engagement (Perry et al., 2017). Similarly, shifts in the broader social, economic, and political landscape can impact the effectiveness of CHW incentives (Perry et al., 2017).

It is critical to continuously evaluate and adapt CHW programme features in conjunction with the evolving context and individual characteristics of CHWs. This approach ensures that support packages remain adequate to motivate CHWs to engage, stay in their roles, and perform optimally, thereby contributing to the overall success and sustainability of CHW programmes in FCAS.

8.5.2 Recommendations for further research

Considering these study limitations, future research could provide further insights and strengthen support strategies for CHWs in fragile and conflict-affected settings. Future research could adopt a comparative approach to examine the experiences and support needs of CHWs in various health districts. Conducting comparative studies across different health districts, especially those with varying conflict dynamics, can provide a more comprehensive understanding of CHW experiences and support needs. By including districts like Bamenda in the North West region of Cameroon, researchers can identify unique challenges and successful strategies applicable in different contexts. This broader perspective allows for the development of more versatile and adaptable support programmes that are effective in diverse fragile environments. Understanding the similarities and differences in CHW experiences across various settings will help tailor interventions more precisely, ensuring they address specific local needs while maintaining general applicability. Additionally, understanding the full spectrum of CHW environments ensures that support programmes are adaptable and can be tailored to meet the needs of CHWs in various locations, whether in conflict zones, rural areas, or more stable regions. This approach enhances the generalisability and applicability of the research findings.

Secondly, conducting longitudinal studies would provide a more comprehensive understanding of how the challenges and support needs of CHWs evolve over time, particularly as conflicts and health system dynamics shift (Taylor et al., 2018; Thomas et al., 2021). Such studies, which track CHW experiences and needs across extended periods, would offer critical insights into the temporal aspects of CHW work, allowing researchers to observe how changes in the broader context influence the challenges CHWs face and the effectiveness of the support strategies implemented. This approach is crucial for assessing the long-term impact of strategies to optimise CHW programmes and support CHWs, ensuring that these interventions remain relevant and effective as circumstances change.

In addition to longitudinal studies, discrete choice experiments (DCEs) could significantly enhance the development of tailored support packages for CHWs in FCAS (Agarwal et al., 2019; Ajisehiri et al., 2022; Brunie et al., 2016). DCEs allow researchers to systematically assess the preferences of CHWs regarding various support strategies, as identified in this study. By quantifying the trade-offs CHWs are willing to make between different types of support—

such as financial incentives, operational resources, and recognition—DCEs can help design support packages that are closely aligned with the actual preferences and priorities of CHWs. This method ensures that the support packages are effective and valued by CHWs, enhancing their performance and resilience in conflict-affected settings.

Finally, another avenue for future research is through action research or randomised control trials to pilot the implementation of various support strategies for CHWs in different combinations (Baynes et al., 2023; Horwood et al., 2017). By conducting such trials or pilot studies, researchers can systematically evaluate which combinations of strategies—such as salary provision, enhanced training, dedicated supervision, and adequate supply of resources—are most cost-effective and impactful in improving CHW performance and community health outcomes. These pilots should be conducted in diverse settings, including both stable and fragile, conflict-affected areas, to determine the generalisability of the findings. The results from these studies can provide valuable insights into optimising resource allocation and support mechanisms, ensuring that CHW programmes are both efficient and effective in delivering health services and achieving positive health outcomes for the communities they serve.

In conclusion, this research has highlighted the vital role of CHWs in the Buea Health District, focusing on their lived experiences, coping mechanisms, and operational challenges. While specific to Buea, the results have a broader relevance: the effectiveness of CHW programmes hinges on support strategies that integrate CHW programme features, individual CHW characteristics, and the specific context in which they operate. By ensuring CHWs are adequately compensated, trained, supervised, and equipped from the outset—even in stable conditions—programmes can enhance the resilience and responsiveness of CHWs. This research shows that while CHWs display resilience and adaptability, their ability to meet community health needs is significantly improved when these support structures are in place. This proactive approach prepares CHWs and their programmes to remain agile and effective in the face of fragility, shocks, and uncertainties, making this research relevant to global discussions on health system strengthening in fragile contexts.

The findings are especially pertinent in the current global landscape, where CHWs are indispensable in mitigating the health impacts of crises ranging from emerging infectious diseases to conflicts and climate change. As instability and health challenges increase, robust CHW programmes become more critical. Strengthening these programmes addresses

immediate crises and represents a forward-looking strategy for building resilient health systems capable of withstanding future challenges. This research contributes to the field by offering a framework for understanding how context-specific and integrated CHW support can enhance health outcomes in fragile and conflict-affected settings, highlighting the importance of sustained, holistic support in building more resilient health systems worldwide.

The effectiveness of CHW programmes in FCAS relies on a comprehensive and proactive approach that integrates context-specific programme design features and socio-demographic characteristics and adapts to the evolving context. Recognising CHWs as the people and essential health professionals they are and ensuring their sustained support, global health leaders, governments, and communities can significantly enhance health outcomes and resilience in some of the world's most challenging environments. This holistic and forward-thinking strategy is imperative for building resilient health systems that respond to current and future health challenges.

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Appendices

Appendix 1: Integrated package of health interventions for CHWs in Cameroon

Areas of intervention of the CHWs: the integrated package of health interventions

CHWs can contribute to the promotional, preventive, curative and rehabilitative areas in particular.

Promotional activities

These activities aim to encourage the population to adopt breast behaviours for health.

TARGETS INTERVENTIONS	Child	Teenager	Pregnant woman	Mother	Community
Promotion of Essential Family Practice	X	X	X	X	X
Exclusive breastfeeding	X	X	X	X	X
Malaria prevention	X	X	X	X	X
Drinking water consumption	X	X	X	X	X
Hand washing with soap and water or ash	X	X	X	X	X
Use of improved latrines	X	X	X	X	X
Vitamin A supplementation	X		X	X	X
Complementary feeding in children 6-23 months	X	X	X	X	X
Deworming of children	X			X	X
Application of the complete immunization schedule for children aged 0-11 months	X		X	X	X
Referral of pregnant women to CPN			X		X
Referral of pregnant women to health centres for childbirth			X		X
Promotion of HIV testing		X	X	X	X
Promotion of Family Planning					
Participation in mass health activities	X	X	X	X	X
Any other social problem that requires a change in behavior (alcoholism, management of family food, etc.)	X	X	X	X	X

Preventive activities

Services and actions at the community level organised to prevent common illnesses or their complications.

TARGETS INTERVENTIONS	Child	Teenager	Pregnant woman	Mother	Community
Screening for cases of acute malnutrition in children under 5 years old, pregnant and breastfeeding women	X		X	X	X
Water purification		X	X	X	X
Latrine disinfection		X	X	X	X
Organization of vaccination sessions in advanced posts in favour of EPI targets	X		X	X	X
Screening of cases of anaemia (children, pregnant and breastfeeding women)	X		X	X	X
Transfer of iron/folic acid tablets to anaemic children and pregnant/lactating women	X		X	X	
Case reference	X	X	X	X	X
Community disease surveillance (AFP, TNN, Cholera, yellow fever, Buruli ulcer, MAPE, etc.)	X	X	X	X	X
Distribution of condoms		X	X	X	X
Contraceptive renewal		X		X	X
Renewal of intermittent malaria treatment			X		
Home monitoring of patients, new-borns and those given birth in the immediate postpartum period	X			X	X
Home screening and monitoring of tuberculosis	X	X	X	X	X
Leprosy screening and monitoring at home	X	X	X	X	X
Recognition of side effects of ARVs and IO medications	X	X	X	X	X

Curative activities

Strengthening the capacities of CHWs allows them to be able to manage certain simple cases of illness at home, especially with supervision by health personnel.

TARGETS	Child	Teenager	Pregnant woman	Mother	Community
INTERVENTIONS					
Treatment of simple cases of AKI (pneumonia) with antibiotics	X				
Treatment of simple cases of malaria	X	X		X	X
Treatment of simple cases of diarrhoea with low osmolarity ORS and zinc	X	X	X	X	
Performing the rapid malaria screening test	X	X	X	X	
Community management of moderate acute malnutrition	X		X	X	X
Distribution of Ivermectin/Mectizan		X		X	X
Treatment of other diseases for which studies have proven to be managed at home	X	X	X	X	X
Help with monitoring, compliance and management of ARV side effects	X	X	X	X	X
Psychosocial support and therapeutic education	X	X	X	X	X

Other activities

The participation of CHWs in the studies carried out and the collection of health information at the community level and many other activities falls within their competence.

TARGETS	Child	Teenager	Pregnant woman	Mother	Community
INTERVENTIONS					
Mobilization of local resources					X
Collection and transmission of health information (management of input stocks, number of home birth cases, maternal and infant deaths, etc.)					X
Participation in community research activities					X

TARGETS	Child	Teenager	Pregnant woman	Mother	Community
INTERVENTIONS					
Social reintegration (mentally ill, leprosy, fistulas, etc.)					X
Search for those lost to follow-up (Vaccination, TB, HIV, CPN, malnutrition, etc.)	X	X	X	X	X
Organization of the community reference and counter-reference (decision-making, transport, financing, etc.)	X	X	X	X	X

Appendix 2: Key informant interview guide

Key Informant Interview Guide – Health Policy Maker/Implementer, Chief of [Health] Centre & Programme Managers

1. Introduction

This interview aims to identify and document the key features of Community Health Workers programmes in the South West region working in urban settings having displaced persons. It will focus on thematic areas that are critical to designing CHW programmes specific to the context of urban fragile settings.

READ THE INFORMED CONSENT FORM TO THE RESPONDENT(S) AND ASK THEM TO SIGN IT.

Personal & General information

1. Can you tell me a bit about yourself, your role, and what do you do in relation for CHWs programmes (probe? *scope of activity*)
2. How do you define ‘community health workers’? Who belongs under this designation? (probe: *has this remained consistent over the past decade? Has anything changed in the scope of CHW and CHW programmes in Cameroon?*)
3. About how many CHWs are included in the programme(s) you are familiar with? [*ask for each programme*]

2. Intervention Design & CHWs Individual Features

1. CHW Scope of Work

- a. What kind of roles and tasks do CHWs have?
- b. Are CHWs allowed to perform tasks beyond their scope? What sort of tasks can they do outside their job description? In what instances can they perform tasks beyond their scope?
- c. How has the ongoing crisis affected how CHWs execute their tasks?
- d. Given the challenges CHWs face working in a conflict setting, can you give me an example of how CHWs have had to adapt their scope of work during this crisis?

2. Incentives for CHWs

- a. What sort of incentives are available for CHWs? (Probe: *we are thinking here of both financial incentives i.e. salary, performance payment, drugs revolving funds, etc. and non-financial incentives e.g. badge, t-shirts, certificates, etc.*)
- b. What determines the incentives allocated to each CHW?
 - c. What is the source(s) for the funds used for the payment of CHWs’ incentives? / Who pays for the incentives of the CHWs? How do the funds flow from the donor to the implementing agency/ies or the District Team, to the facility (if relevant) and then to the individual CHW?

3. CHW Recruitment & Hiring

- a. What are some of the specific qualities and qualifications required for a CHW role? (probe: do you think this has changed over the years? If so, in what ways?)
- b. What channels do you use for the recruitment and hiring of CHWs? (do you make radio announcements or use newspapers or some other means?)
- c. How does the gender of the CHW influence your decision when hiring/recruiting?

4. Training for CHWs

- a. **Can you talk about the training CHWs receive when they are recruited and while on the job?**
- b. How has the crisis affected the training provided to the CHWs?

5. Supervision of CHWs & Performance assessment

- a. How do you carry out the supervision of the CHWs you work with?
- b. How do you think gender affect how CHWs perform at their job? Do you have any examples in mind that you can talk about? How about age?
 - c. How has the crisis affected how you carry out the supervision of the CHWs you work with? How have you adapted to the challenges of supervising CHWs during the Crisis?

6. Linkage to the Health System

- a. How has population displacement affected how the health centre/system uses CHWs?

7. Program Performance and Sustainability

- a. What do you think about the performance of CHW programmes that you are familiar with? Are they successful? And if so, what does 'success' mean in this context? Can you provide an example?
- b. If you could change anything about the current CHW programme, what would you change? And why?

3. Environmental/Contextual Features

1. In your opinion, how are CHW programmes in urban and peri urban settings different from programmes in rural settings?

2. What are some of the major challenges implementing a CHW programme in an urban conflict affected setting? Please provide some concrete examples.

- a. How has the crisis influenced the design or the changes in CHW programmes in this setting (urban)?
 - b. What lessons have you learned implementing a CHW programme during a crisis like this?
3. Could you suggest any other individual whom you consider to be knowledgeable about CHW programmes in this region/district/community, broadly speaking?

Appendix 3: Interview guide for key informant interview with community representatives

Key Informant Interview Guide – Community Leaders

1. Introduction

This interview aims to identify and document the key features of Community Health Workers programmes in the South West region working in urban settings having displaced persons. It will focus on thematic areas that are critical to designing CHW programmes specific to the context of urban fragile settings.

READ THE INFORMED CONSENT FORM TO THE RESPONDENT(S) AND ASK THEM TO SIGN IT.

1. Can you tell me about yourself and your role in the community?
2. Can you tell me more about your community? What sort of people live in your community? What do these people do? About how many people live in your community?
3. How would you say the crisis has affected your community?
4. What is your opinion about the use of community health workers to provide health services to your community? How important do you consider the role of the community health workers during the crisis?
5. How did the crisis prevent your community health workers from accessing health care services? How have things changed over time?
6. What do you think community health workers are doing not doing well that they need to improve on?
7. What have been some of the challenges of CHWs working in your community – before the crisis, during the crisis, and now?
8. How do you think the displacement of people into/out of your community has influenced the health needs of your community and how CHWs work in your community?
9. How do you think the gender of the community health worker affects how they carry out their tasks?
10. If you had the power, what will you change about how the community health workers carry out their activities in your community?
11. Why do you think it is important to use community health workers during the crisis to provide health services to the community?
12. Why do you think it is important for you to be involved in the selection of the CHWs and how the programme operates in your community?

Appendix 4: Focus group discussion guide

Discussion Guide CHW FGD Buea Health District

Introduction and consent

General introduction:

Good morning/afternoon, my/our name is/are_____. We are research students in Public Health. We are here to get your opinions and views about the work you do about community health workers in your community. We want to hear about what you enjoy most about our work and the challenges you have experienced while doing your work during the crisis. At the end we would also want to hear from you how you can be supported to do your work as community health workers very well.

The information provided will be used in my school assessment and potentially by the Government and NGOs working with Community Health Workers to improve the working conditions of community health workers in places like Buea Health district that are experiencing a humanitarian emergency or a crisis

- Participation in this discussion is free and there is no obligation to respond, you can stop at any point.
- No personal data will be shared with others and the information provided will be analysed anonymously and used confidentially.
- Your views are valuable and important and will contribute to ensuring Community Health Worker are designed to meet your needs.

Our group discussion will last around 2 hours, with a break and refreshments.

Do you have any questions? Are you willing to participate in the group?

Note taker will collect the signed consent forms from the participants

Ice Breaker question (60 secs/person)

1. Can you tell us your name, how long you have worked as a community health worker, and what do you do when you are not working as a community health worker?
2. What do you consider the most important tool you need to do your job?

Introductory Question (60 – 90 secs/person)

1. What does it mean to you to serve your community as a community health worker?
Alternate form: why is it important for your community to have community health workers?

Key Questions (40 – 45 mins)

1. What part of your tasks as community health workers do you feel you had to go an extra mile, in what situations, and why?
2. What aspects of your work as a community health worker do you experience the most satisfaction?
3. In your opinion, what were the major challenges you faced when working as a community health worker during the crisis? [**First specify which crisis period you are talking about. Reiterate why you are interested in what happens during crises**]
 - a. Which aspect of your work did the crisis affect the most?
4. Considering these challenges, how have you changed the way you work as a community health worker during the crisis?
5. What demotivates/discourages you from working as a community health worker during the crisis, and why? [*examples of disincentives, inconsistent remuneration, changes in tangible*

incentives, inequal distribution among different CHWs, CHWs from outside the community, inadequate trainings, inadequate supervision, heavy work burden, lack of respect from health centre staff, unfair selection of CHWs, unclear roles and expectations, inadequate staff and supplies]

6. When you are discouraged and encounter these challenges, who provides you with the support you need to keep on doing your job, when, and how?
7. In your opinion, what health activity/campaign that you participated in was the most successful during the crisis? What did you do to ensure the activity was a success?
8. What has been your experience working with internally displaced persons during the crisis?

Probe questions:

Is there an example of that which you can share?

Debriefing/Concluding Questions (60-90 secs)

1. Is there anything else you would like to add about your work as a community health worker during the crisis?

Alternate question: of all the things discussed here today, what would you say are the most important issues you would like to express?

Break (15 – 20 minutes)

During this time the research team will set the hall up for the next exercise. This will involve distributing multi-coloured sticky notes and markers to the various sitting positions of the participants while they are away for the refreshment break. The research team will also set up the board and mark it by numbering the margins from 1 – 10 for the ranking exercise.

Part 2

Participatory Ranking Method

Facilitator welcomes participants back from break and reminds them the aim of the focus group discussions and introduces the next exercise, the Participatory Ranking Method.

Framing Question

1. How do you as a community health worker working in a fragile and conflict-affected prefer to be supported to enable you do your work well? (*What can be done to make your work easier?*)

Pile Sorting

- The facilitator will invite then invite the participants to suggest what form of support they prefer to enable their optimal performance as a community health worker. The facilitator will also encourage the participants to assign meaning to their stated preferences by asking them to explain why they consider the stated form of support as important. If there is consensus from 2 or more other participants, the suggestion will be included and if not, it will be passed over.
- When a participant suggests a preferred form of support, the participant will also suggest what colour of a sticky note should represent that suggestion. For example, green for money and the other participants will be invited to write “money” on their respective sticky notes. This process will be repeated till the list of suggestions is exhausted. If a participant makes a suggestion similar to a prior one, the group will be called upon to deliberate if it should be grouped with the prior suggestion or it should stand alone.
- All the time, the note taker will be noting their preferences and the assigned meaning, as well as the unselected suggestions and possible reasons why. All the participants will be invited to suggest form of support and assign meaning to it.

- The facilitator could also prompt the group on certain forms of support which he considers important but have not been mentioned by the participants. The facilitator's prompts will be based on the literature and on the suggestions from the other stakeholders during the key informant interviews.

Ranking

- When the group has exhausted all possible suggestions and assigned them to the coloured sticky notes, the facilitator will now invite participants to rank their suggestions using the number ranking on the board, from what they consider the most important to the least important. After that the participant will be invited to provide a brief explanation of their ranking.
- The above process will be repeated for all the participants. At the end of the ranking, the participants will be invited to reorder their choices if they have had a change of mind and they will be invited to provide an explanation for the reconsideration.
- During the entire process, the note taker will be noting the ranks and the meanings assigned to the ranks. At the end of the exercise, the note taker will take a picture of the board with the ranked preferences.

Appendix 5: Interview guide for work-life histories with CHWs

Work-life History Interview Discussion Guide

Being a CHW

- 1) How did you become a community health worker? What motivated you to become a CHW?
- 2) Other than being a CHW, what income-generating activities are you involved in? (How long have you been doing these activities? The money you make, what do you spend it on?)
- 3) How does being a CHW affect these other activities?
- 4) [AND] How do these other activities affect/influence your work as a CHW?
- 5) How long have you lived in this community? (Did you move here? When? Where were you before? What is the difference between your current community and the previous one?)

Impact of the crisis

- 6) How has the conflict affected your life? What has changed in your life because of the crisis?
- 7) How did you have to adapt to these personal challenges of the crisis?

Gender

- 8) What is your marital status, and do you have kids? (How long have you been married, and how many kids do you have? What are the ages of the kids? What does your partner do for a living)
- 9) How does being a man/woman affect your work as a CHW?
- 10) How do your roles at home as a father/mother /caregiver affect/influence your activities as a CHW? (How do the activities as a CHW influence/affect your domestic activities as a mother/father/caregiver)

Appendix 6: Queen Margaret University Ethical Approval (Front and Back cover)



Queen Margaret University
EDINBURGH

For Office Use Only

Ref. Number	
Assigned Reviewers	
Outcome	<input type="checkbox"/> Granted <input type="checkbox"/> Amendments <input type="checkbox"/> Rejected

APPLICATION FOR ETHICAL APPROVAL FOR A RESEARCH PROJECT

This is an application form for ethical approval to undertake a piece of research. Ethical approval must be gained for any piece of research to be undertaken by any student or member of staff of QMU. Approval must also be gained by any external researcher who wishes to use Queen Margaret students or staff as participants in their research.

Please note, before any requests for volunteers can be distributed, through the moderator service, or externally, this form **MUST** be submitted (completed, with signatures) to the Secretary to the Research Ethics Panel (ResearchEthics@qmu.ac.uk).

You should read QMU's chapter on "Research Ethics: Regulations, Procedures, and Guidelines" before completing the form. This is available at:
<http://www.qmu.ac.uk/quality/rs/default.htm>

The person who completes this form (the applicant) will normally be the Principal Investigator (in the case of staff research) or the student (in the case of student research). In other cases of collaborative research, e.g. an undergraduate group project, one member should be given responsibility for applying for ethical approval. For class exercises involving research, the module coordinator should complete the application and secure approval.

The completed form **should be typed** rather than handwritten. **Electronic signatures** should be used and the form should be **submitted electronically**.

Checklist: Documents enclosed with application:

Please note that any application with missing relevant documentation will be returned to the applicant.

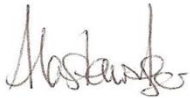
Enclosed (please tick)	Not applicable (please tick)	Document name
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Research protocol or proposal
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Participant Information Sheet(s) (PIS)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Participant consent form(s)
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Copies of recruitment advertisement material
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Sample questionnaires (please detail below)
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Interview schedules or topic guides
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Letter(s) of support from any external organisations involved in the research
<input type="checkbox"/>	<input checked="" type="checkbox"/>	If interacting with potentially vulnerable groups, please provide the following information for checks by authorised personnel: PVG¹² Membership No: Disclosure Number (unique to each certificate): Date of issue:
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Risk assessment documentation
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Any other documentation (please detail below)

**For completion by
The Head of Division/Subject Area/Group, OR
Division/Subject Area/Group Research Ethics Committee:**

Please tick **one** of the alternatives below:

- I refer this application to the QMU Research Ethics Panel.
- I find this application acceptable and an application for Ethical Approval should now be submitted to a relevant external committee.
- I grant Ethical Approval for this research.

Name *(if you have an electronic signature please include it here)*



_____ (Head of Division/ Subject Area/ Group)

Date 17/08/21

Please email one copy of this form to the applicant and one copy to the Secretary to the Research Ethics Panel (ResearchEthics@qmu.ac.uk).

Date application returned: _____

Appendix 7: Ethical approval from the University of Buea

UNIVERSITY OF BUEA

P.O BOX 63
Buea, CAMEROON
Tel:(237) 332 21 34/332 28 13
Fax: (237) 332 22 72



REPUBLIC OF CAMEROON
PEACE- WORK- FATHERLAND

FACULTY OF HEALTH SCIENCES- INSTITUTIONAL REVIEW BOARD IRB00008917-US Office for Human Research Protection (OHRP)IORG007426

Secretary : **Professor Halle-Ekane Edie Gregory**

Your Ref _____

Our Ref: **2022/ 1538-12 /UB/SG/IRB/FHS**

Date: **26 JAN 2021**

Notice of Ethical Approval

Application number: 1538-12

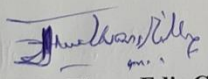
Principal Investigator: **Alinedoh Carlson Mbi Nkwain**

Study Title: **“Strategies to support Community Health Workers in Fragile Urban Workers Working in Fragile Urban Contexts: A case Study of the Anglophone Regions in Cameroon”.**

Application Type: **Initial**
Sponsor: **Student**
Review Type: **Normal**
Date of Approval: **26th January 2022**
Expiration Date: **26th January 2023**

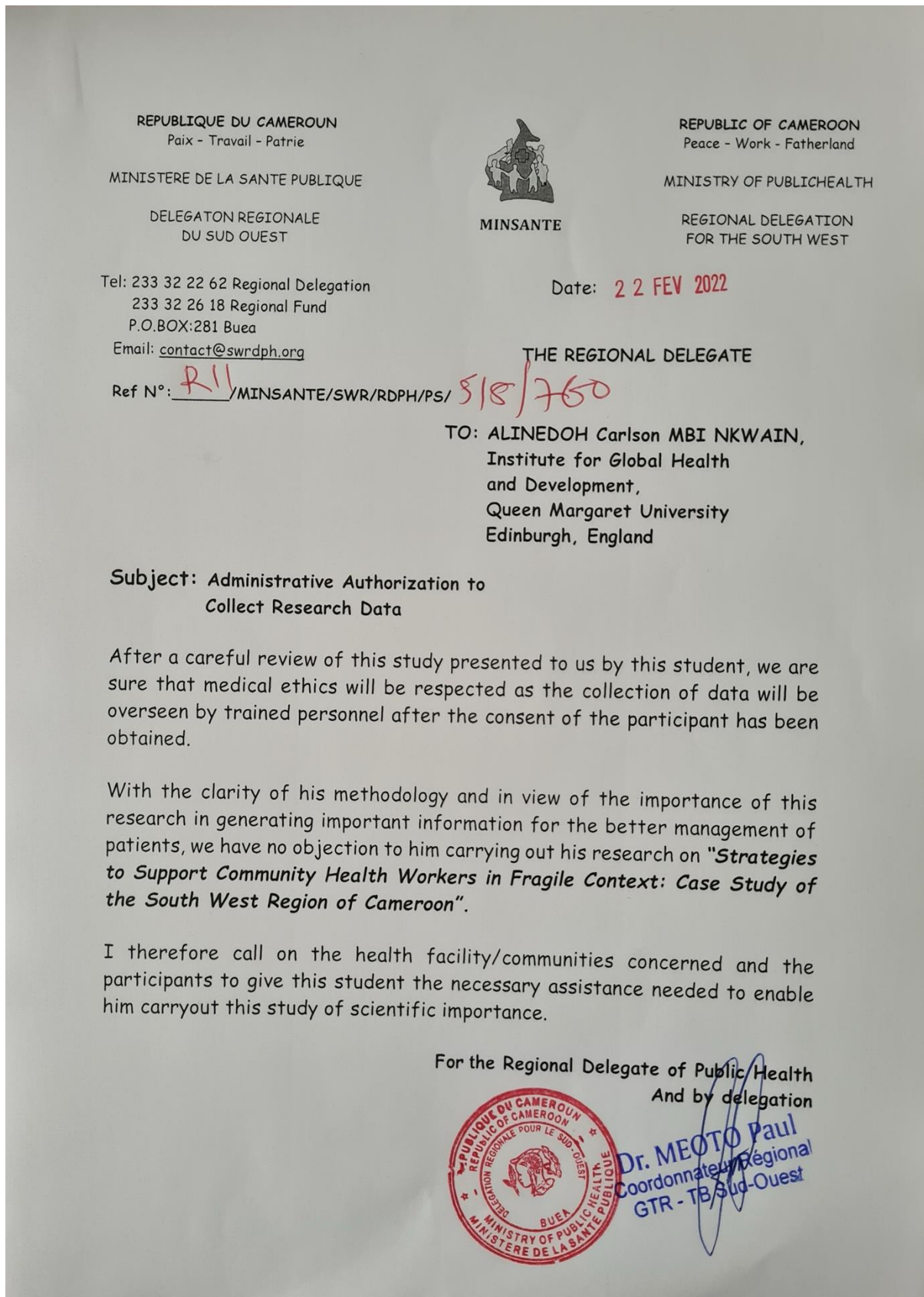
Principal Investigator’s responsibilities:

1. The study must be conducted in strict accordance with the protocol approved by the Board
2. Changes to the protocol or its related consent documents must be approved by the Board before implementation
3. Adverse events or unanticipated problems must be reported promptly to the Board
4. Participants must receive a copy of the consent document, if appropriate
5. The Principal Investigator is responsible for the on-going conduct of the study. The study must be implemented according to national and international guidelines for the ethical conduct of research on humans. He must collaborate with the IRB’s monitoring of the study’s implementation.
6. Any future correspondence must include the application number, and the PI’s name in the subject line.
7. A renewal application or project closure report must be submitted at least one month prior to the expiration date indicated above. These must be done using the FHSIRB’s secretariat AND an electronic copy sent to: irbfhs@gmail.com, making sure to reference the application number indicated above. This form is available at <http://www.healthresearchweb.rg/en/cameroon/institution2130>


Professor Halle Ekane Edie Gregory
Secretary; Institutional Review Board
Faculty of Health Sciences University of Buea



Appendix 8: Administrative authorisation from the South West Regional Delegation for the collection of research data



Appendix 8: Information sheet and consent form

Information Sheet and Consent Form

Strategies to Support Community Health Workers in Fragile Contexts: A Case Study of the Anglophone Regions in Cameroon

Alinedoh Carlson Mbi Nkwain

Institute for Global Health and Development
Queen Margaret University, Edinburgh

Information for participants

Thank you for considering participating in this study which will take place. This information sheet outlines the purpose of the study and provides a description of your involvement and rights as a participant, if you agree to take part.

1. What is the research about?

This study seeks to inform Community Health Workers programmes and strategies designed to the specific context of the urban/peri-urban areas of the conflict-affected Anglophone regions of Cameroon to meet the Community Health Workers' unique needs and the needs communities they serve.

2. Do I have to take part?

It is up to you to decide whether or not to take part. You do not have to take part if you do not want to. If you do decide to take part, I will ask you to sign a consent form which you will keep one copy and I will have one copy.

3. What will my involvement be?

You will be asked to take part in an interview/focus group discussion about your experience/knowledge of working with/as Community Health Workers in either the North West or South West Regions during the crisis. It should take approximately 1 hour for the interview (3 hours for the focus group discussions).

4. How do I withdraw from the study?

You can withdraw from the study at any point until, without having to give a reason. If any questions during the interview/focus group discussion make you feel uncomfortable, you do not have to answer them. Withdrawing from the study will have no effect on you. If you withdraw from the study, I will not retain the information you have given thus far, unless you are happy for me to do so.

5. What will my information be used for?

I will use the collected information for my doctoral thesis for a PhD in Global Health. I also aim to present the findings of this work to stakeholders in the regions (for example, funders/implementers of CHW programmes and health policy makers) to support improvements in policy and practice in relation to CHW programmes.

6. Will my taking part and my data be kept confidential? Will it be anonymised?

The records from this study will be kept as confidential. Only I will have access to the files and any audio tapes. The transcription of the audio tapes will be anonymised so that they would not include your name. In addition, your name or any other information that might lead to identify you will not be used in any reports or publications resulting from the study (instead I will use a code and/or a general description of your role). All digital files, transcripts and summaries will be given codes and stored separately from any names or other direct identification of participants. Any hard copies of research information will be always kept in locked files.

Limits to confidentiality: confidentiality will be maintained as far as it is possible, unless you tell us something which implies that you or someone you mention might be in significant danger of harm and unable to act for themselves; in this case, we may have to inform the relevant agencies of this, but we would discuss this with you first.

7. Who has reviewed this study?

This study has undergone ethics review in accordance with the Queen Margaret University (QMU) Research Ethics Policy and Procedure and in Cameroon with the Ethics Committees of the Regional Delegations for Public Health in the North West and South West Regions.

8. Data Protection Privacy Notice

All your personal information will be treated in accordance with the terms of the UK Data Protection Act 2018 and the General Data Protection Regulation (GDPR). The QMU General Data Protection Regulations (GDPR) Data Protection Privacy Policy can be found at: <https://www.qmu.ac.uk/media/4733/data-protection-policy-may-2018.docx>

9. What if I have a question or complaint?

If you have any questions regarding this study please contact me, on calinedoh@qmu.ac.uk.

If you have any concerns or complaints regarding the conduct of this research, please contact my supervisor Maria Bertone on mbertone@qmu.ac.uk or the QMU Research Ethics Review Board via researchethics@qmu.ac.uk.

If you have read and understood this information sheet, all questions you had have been addressed, and you are happy to take part in this study, please sign the consent sheet below.

06 August 2021

CONSENT FORM FOR KEY INFORMANT INTERVIEWS

Strategies to Support Community Health Workers in Fragile Contexts: A Case Study of the Anglophone Regions in Cameroon

PARTICIPATION IN THIS RESEARCH STUDY IS VOLUNTARY

I have read and understood the study information dated 06/08/2021, or it has been read to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction. YES / NO

I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and that I can withdraw from the study at any time, without having to give a reason. YES / NO

I agree to the interview/focus group being audio recorded. YES / NO

I understand that the information I provide will be used for the doctoral thesis of the researcher, Alinedoh Carlson Mbi Nkwain, and that the information will be anonymised. YES / NO

I agree that my (anonymised) information can be quoted in research outputs. YES / NO

I understand that any personal information that can identify me – such as my name, address, will be kept confidential and not shared with anyone other than myself. YES / NO

I give permission for the (anonymised) information I provide to be deposited in a data archive so that it may be used for future research. YES / NO

Please retain a copy of this consent form.

Participant name:

Signature: _____ Date _____

Researcher's name:

Signature: _____ Date _____

For information please contact: Alinedoh Carlson Mbi Nkwain, calinedoh@qmu.ac.uk

CONSENT FORM FOR FOCUS GROUP DISCUSSIONS

Strategies to Support Community Health Workers in Fragile Contexts: A Case Study of the Anglophone Regions in Cameroon

PARTICIPATION IN THIS RESEARCH STUDY IS VOLUNTARY

I have read and understood the study information dated 06/08/2021, or it has been read to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction. YES / NO

I consent voluntarily to be a participant in this study and understand that I can refuse to answer questions and that I can withdraw from the study at any time, without having to give a reason. YES / NO

I agree to the interview/focus group being audio recorded.	YES / NO
I agree to maintain the confidentiality of the focus group discussions	YES/NO/
I understand that the information I provide will be used for the doctoral thesis of the researcher, Alinedoh Carlson Mbi Nkwain, and that the information will be anonymised.	YES / NO
I agree that my (anonymised) information can be quoted in research outputs.	YES / NO
I understand that any personal information that can identify me – such as my name, address, will be kept confidential and not shared with anyone other than myself.	YES / NO
I give permission for the (anonymised) information I provide to be deposited in a data archive so that it may be used for future research.	YES / NO

Please retain a copy of this consent form.

Participant name:

Signature: _____ Date _____

Researcher's name:

Signature: _____ Date _____

For information please contact: Alinedoh Carlson Mbi Nkwain, calinedoh@qmu.ac.uk

Appendix 9: Other Identified Support Strategies

1. Recognition

Within the scope of this study, recognition means the formal acknowledgement and appreciation of CHWs' roles and contributions by the government, communities, or organisations they work with.

Generally, recognition had a frequency of 20 (56% of participants), just like Government Integration. However, regarding ranking, it had an AR of 6.3 and a MR of 6.0 across all four health areas. In essence, the given AR and MR values suggest that while "Recognition" is deemed necessary (as indicated by its frequency of mentions), it may not be the topmost priority for CHWs compared to other support strategies.

Table 1: Frequency and Preference Ranking of Recognition Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	6	6.8	7.0
Buea Road	5	5.0	5.0
Buea Town	4	6.5	6.0
Tole	5	6.6	6.0
Total	20	6.3	6.0

The higher AR and MR in Molyko imply recognition might be secondary to other priorities. With balanced AR and MR rankings, Buea Road indicates a consistent value placed on recognition. Buea Town and Tole offer moderate rankings, reflecting a similar importance level. Among the health areas, Buea Road seems to prioritise recognition the most, while Molyko leans towards other, more important strategies for support.

The data suggest that recognition plays a profound role in the lives and motivation of the CHWs. While many CHWs are deeply committed to their roles, with some noting that "work is out of passion and the reward is from God," there is a common sentiment that acknowledging their efforts would serve as a significant boost. The data indicates recognition is not just about personal validation; it has tangible implications.

Beyond this, recognition is a pathway for career progression and alternate employment opportunities. As one CHW articulated,

“If those who have been CHWs for longer are recognised, newer members are encouraged as they see the work to be something worth doing.” - CHW, FGD

Such forms of acknowledgement validate their years of service and provide tangible benefits, like "preferential treatment like price reductions at the hospital."

Recognition for CHWs is not a mere formality; it affirms their contributions, a source of motivation, and a tool that facilitates their broader integration and acceptance within the community and the healthcare system.

2. Identification

Within the context of this study, identification means official badges or IDs provided to CHWs to validate their role and facilitate their work in communities.

Across the health areas, identification had a frequency of 15 (42% of participants), an AR of 5.3 and an MR of 5.0. The AR and MR suggest a moderate preference for "Identification." The close values indicate a relatively uniform opinion about its importance among participants.

In the Molyko Health Area, there is an indication of a uniform, slightly lower preference for identification compared to the overall average. There was no selection for identification in Buea Road, suggesting it was not deemed a priority in this region. The data from Buea Town highlight a consistent moderate preference for identification in the area. Similarly, in Tole, a mild preference for identification persists.

Table 2: Frequency and Preference Ranking of Identification Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	5	6.0	6.0
Buea Road	0	0	0
Buea Town	4	5.5	5.5
Tole	6	4.7	5.0
Total	15	5.3	5.0

The varied metrics across health areas for identification underline local disparities in their perceived importance. Molyko and Buea Town present similar moderate rankings, with Tole slightly inclined towards valuing identification more. The absence of Identification in Buea Road's selections suggests local specificities in perceived needs.

In the absence of monetary incentives or recognition, having proper identification is essential. A badge or any form of ID provides credibility and fosters trust and acceptance within the community. One respondent pointed out that,

“Identification helps the community trust them more and facilitates community acceptance and collaboration.” - CHW, FGD

Without such identification, CHWs might face resistance, especially from those unfamiliar with them. They might "face resistance from the community if they do not recognise them," underscoring the importance of community trust and acceptance in their roles. The data suggests that without adequate identification, CHWs face challenges, with one CHW mentioning a situation where a lack of identification led to threats of calling the police on the CHWs by community members. In line with identification, working tools and gadgets like t-shirts are instrumental in community interactions, serving as identifiers and fostering a sense of acceptance and trust within the community. This sentiment is captured in the statement that such tools "identify CHWs in the community, fostering acceptance of their services."

The importance of identification extends beyond mere recognition; it offers security, ensures credibility, and solidifies the CHWs' standing in the community.

3. Employment of Community Health Workers

Within the framework of this study, the employment of CHWs means hiring CHWs for roles within health centres, such as cleaners, plumbers, yard men, and electricians, in addition to their responsibilities as CHWs.

The employment of CHWs racked a combined frequency of 15 (42% of participants) across the four health areas, just like identification. Regarding the collective rankings, it had an AR of 5.5 and an MR of 6.0 (compared to 5.3 and 5.0 of identification, respectively). The AR suggests a moderate preference for employing CHWs as hospital cleaners, plumbers and yard men. The MR being slightly higher than the average indicates that at least half of the

participants ranked it as lesser importance (with 1 being the highest preference). The proximity of these two values means a relatively consistent opinion among participants.

Like Government Integration and Preferential Treatment, the employment of CHWs was not selected in the Molyko health area because it was not one of the options listed by themselves at the beginning of the FGDs. However, the data indicate a moderate preference for the employment of CHWs in the Buea Road Health Area, leaning slightly towards lesser importance. On the other hand, in Buea Town, the data suggest a stronger preference here than in other areas. The close values in AR and MR indicate uniformity in preference for the employment of CHWs. In Tole, the data suggest a lower priority for this strategy than in other health areas, with participants mainly agreeing about its lesser importance.

Table 3: Frequency and Preference Ranking of Employment of CHWs Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	-	-	-
Buea Road	6	5.3	6.0
Buea Town	4	4.3	4.0
Tole	5	6.6	7.0
Total	15	5.5	6.0

The diverse AR and MR values across health areas highlight the distinct perspectives CHWs hold regarding employing CHWs. This spread underscores the heterogeneity of CHW priorities across areas and emphasises the importance of tailoring support strategies to cater to localised needs and preferences.

The sentiment from the CHWs who selected this option is that employment of CHWs in roles at the health centre within health centres, such as cleaners, ensures that the right individuals, those familiar with the community, are chosen rather than relying on nepotism. One respondent aptly mentioned that employment is like the "icing on the cake," providing CHWs with added confidence in their roles.

Beyond job security, employment serves as an "upgrade" or progression for CHWs, especially those who have dedicated many years to their roles. It can also provide alternative roles, offering them opportunities for additional income.

4. Structured System

In the backdrop of this study, a Structured System means a more organised and systematic approach to CHW programme management, ensuring consistency, quality, and efficiency. The CHWs referred to this as having more clarity in their job description to optimise their efficiency in carrying out those tasks.

A structured system had a combined frequency of 14 (39% of participants) for all four health areas. Regarding the collective rankings, it had an AR of 5.9 and an MR of 5.5. While a structured system is mentioned 14 times and has relatively high rankings (indicating lower preference), the CHWs generally recognise the importance of having a structured system. However, when asked to prioritise their preferred strategies to support them, they rank other options (like cash incentives or working tools) higher than a structured system. This could be due to various reasons, which would be explored when looking at the reasoning for their selection and ranking.

The figures in the Molyko Health Area indicate that a structured system is not the topmost preference in this area, like Buea Road. In Buea Road Health Area with the lowest frequency of one, it implies a structured system might not be as vital here. The matching AR and MR of 6.0 depict a moderate to low preference by the respondent who chose it. In contrast, the figures suggest a stronger inclination towards a structured system in the Tole Health Area compared to the other health areas.

Table 4: Frequency and Preference Ranking of Structured Systems Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	5	6.8	8.0
Buea Road	4	7.0	7.5
Buea Town	1	6.0	6.0
Tole	4	3.8	3.5
Total	14	5.9	5.5

The varied AR and MR values across the health areas highlight the diverse perspectives CHWs hold regarding a structured system as a support strategy. While CHWs in some areas frequently mention a structured system, indicating its relevance, the accompanying rankings suggest it may not always be their foremost priority compared to other support strategies. Tole showcases a strong inclination towards a structured system, emphasising its value. Conversely, Buea Road, with its higher rankings, places a structured system as a lesser priority.

The CHWs who selected a Structured System expressed that even without a Structured System, CHWs continue their duties, but there is a unanimous sentiment that structure provides added benefits. They suggested that such a system acts as a protective umbrella, ensuring the well-being of CHWs, much like how nurses have guilds.

Based on the CHWs' insights, a structured system doesn't merely offer operational efficiency; it provides a platform for collective advocacy, allowing CHWs to voice their challenges and fight for their rights. As one respondent aptly put it,

"If we are going to be organised, the structure will be first." - CHW, FGD

According to them, the structure guides CHWs in their tasks, clarifies roles and schedules, and even offers a platform to address issues like delayed payments. A structured system organises, guides, and advocates for CHWs, ensuring they can operate efficiently and have their concerns addressed.

5. More Community Health Workers

Within this study's scope, more CHWs refer to increasing the number of CHWs to serve communities efficiently.

More CHWs had a combined frequency of 12 (33% of participants) for all the health areas. An AR of 4.9 and MR of 5.0 indicate a moderate preference for more CHWs among respondents. The closeness of the AR to the MR suggests a generally consistent opinion among participants regarding its importance.

In Molyko, more CHWs were not an option for selection. In Buea Road, the identical AR and MR stress a unified viewpoint on its importance, which is also similar to "Employment of CHWs." In Buea Town, the data suggest that "More CHWs" might be slightly more preferred to "Preferential Treatment". In contrast, Tole did not prioritise "More CHWs."

Table 5: Frequency and Preference Ranking of More CHWs Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	-	-	-
Buea Road	6	5.3	5.3
Buea Town	6	4.5	5.0
Tole	0	0	0
Total	12	4.9	5.0

While the collective metrics suggest a moderate preference for increasing CHW numbers, local distinctions emerge. Both Buea Road and Buea Town show similar frequencies. Still, the matching AR values with other strategies in these health areas suggests that while CHWs acknowledge the importance of increasing their numbers, different strategies for support might hold equivalent or higher immediate importance.

The call for More Community Health Workers indicates the current workload and challenges existing CHWs face. An increase in CHWs is a direct solution to managing the overwhelming workload. Some of the CHWs who chose this option pointed out that due to shortages of CHWs, they have had to cover more areas, work on non-work days, or even deal with the mistakes of untrained individuals. One CHW mentioned being called on a non-workday to distribute mosquito nets because of the shortage of workers.

Having more CHWs eases the workload and ensures that community activities are taken more seriously, as a more significant presence reinforces the importance of health campaigns. The sentiment is straightforward: more CHWs mean reduced workload, more efficiency, and better outcomes for the community.

6. Gadgets

Within the scope of this study, Gadgets mean the branded items provided to CHWs that support their visibility and identity, such as t-shirts, jackets, hats, and other wearable items.

Gadgets have a combined frequency of 12 (33% of participants), the same as having more CHWs. However, an AR of 6.3 and MR of 6.0 suggest that, while Gadgets are recognised and mentioned, they are not the topmost priority among other strategies. Gadgets are slightly less

preferred than More CHWs, with an AR of 4.9 and MR of 5.0. A lower AR and MR value indicates a stronger preference; thus, more CHWs are viewed with higher importance than Gadgets.

Gadgets were not a proposed option in the Molyko Health Area, just like Government Integration, Preferential Treatment, Employment of CHWs, and more CHWs. However, the data from the Buea Road Health Area show that Gadgets are moderately important, like in the Tole Health Area. In the Buea Town Health Area, the figures suggest that gadgets are less preferred than other strategies.

Table 6: Frequency and Preference Ranking of Gadgets Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	-	-	-
Buea Road	5	6.4	6.0
Buea Town	3	6.7	7.0
Tole	4	5.8	6.0
Total	12	6.3	6.0

However, those who selected the option suggested that Gadgets play a multifaceted role in the daily operations of CHWs. Beyond their functional purpose, gadgets like t-shirts serve as tools of identity, allowing CHWs to stand out and be recognised in the communities they serve, functionally like uniforms. One CHW highlighted how such gadgets help them get "preferential treatment as a community health worker" in various institutions. Additionally, gadgets confer a sense of professionalism, making CHWs appear more formal and boosting their credibility. In essence, gadgets are more than just tools; they're symbols of identity, professionalism, and recognition.

7. Community Support

Within the scope of this study, Community Support refers to any form of assistance and backing provided to CHWs by the local communities they serve, ensuring their integration and acceptance. This could include logistical support wherein community members help them to organise outreach activities or accompany them during their outreach activities, providing some sense of security during times of insecurity or directing the CHWs to the safer sections of the community. It also entails community members providing social support to CHWs, such

as welcoming them into the community and offering them emotional support. These can help CHWs to feel valued and respected and be more effective in their work.

The combined frequency of community support was 11 (31%) across all four health areas. Community support had a combined AR of 6.9 and an MR of 7.0. These values suggest that, on average, community support is ranked just below 7th in importance. The MR being 7.0 means that half of the rankings are above seven and half below, corroborating the AR.

In the Molyko Health Area, community support was not a proposed option, like Gadgets and Government Integration, Preferential Treatment, Employment of CHWs, and More CHWs. However, the data from the Buea Road Health area show that community support is moderately important compared to other strategies for support. The numbers here indicate that while community support is recognised, it is not the most prevalent concern for the CHWs, like in Buea Town and Tole Health Areas.

Table 7: Frequency and Preference Ranking of Community Support Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	-	-	-
Buea Road	5	6.6	7.0
Buea Town	4	7.0	7.5
Tole	2	7.5	7.5
Total	11	6.9	7.0

Community Support is foundational to the success and well-being of CHWs. The CHWs who selected this option highlighted that the collaboration and appreciation from community members not only serve as motivation but also provide a vital sense of security. As one CHW aptly mentioned,

"You cannot work in a community where they do not recognise and support you." - CHW, FGD

This support is not limited to financial contributions but extends to collaborative efforts that facilitate CHWs' access and integration into the communities they serve. Community Support also guarantees their safety while working in a conflict-affected context. Receiving support and

acknowledgement from the community propels CHWs to go the extra mile, ensuring better health outcomes for all.

8. Supervision

In this study, supervision refers to any form of regular oversight and guidance provided to CHWs by higher-level health workers or officials to ensure quality of care.

Supervision is considered a vital support strategy with a frequency of 10 (28% of participants), an average ranking (AR) of 5.5, and a median ranking (MR) of 4.5. The AR suggests it's more crucial than Community Support (6.9), Gadgets (6.3), Structured System (5.9), and Recognition (6.3), and is on par with Employment of CHWs. The MR further reinforces its importance, being more preferred than several other strategies, though less so than Government Integration (3.5), training (1.0), Cash Incentives (2.0), and working tools (3.0).

In the Molyko Health Area, supervision was not a proposed option, like Gadgets and Government Integration, Preferential Treatment, Employment of CHWs, Community Support and More CHWs. However, the figures from Buea Road Health Area suggest supervision is moderately important. In the case of Buea Town Health Area, the statistics also suggest supervision is less preferred. In the Tole Health Area, the lone CHW who selected supervision had both AR and MR at 2.0, meaning they perceived supervision as essential.

Table 8: Frequency and Preference Ranking of Supervision Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	-	-	-
Buea Road	6	5.2	4.5
Buea Town	3	7.3	9.0
Tole	1	2.0	2.0
Total	10	5.5	4.5

As a support strategy for CHWs, supervision holds different values across different health areas. While its collective frequency suggests moderate emphasis, its comparative average and median rankings underscore its relative importance. Specifically, when compared against other strategies like Community Support and Gadgets, Supervision emerges as a more preferred

choice. This preference is consistent in areas like Buea Road but varies in places like Buea Town and Tole, where its significance is perceived differently.

Furthermore, the CHWs who selected supervision as an option suggest that proper and timely supervision ensures that work is conducted efficiently and correctly. One CHW recounted a situation where they had to return to a remote community to be supervised after their task, emphasising the need for ongoing oversight.

“Supervision ensures that work is properly done. At all levels, supervision is very important. Without it, it is like no one is acknowledging what you are doing, and no one is concerned. However, with proper supervision, we are confident we are doing the right thing. And timely supervision is important to prevent errors in the field.” - CHW, FGD

Supervision is not just about oversight but guidance, direction, and affirmation. As another CHW pointed out,

“Supervision is not a form of punishment but a push to assist us. When we are well supervised, the work becomes lighter and makes us better at our job.” - CHW, FGD

Proper supervision reduces errors, ensures alignment with job descriptions, and reinforces the confidence of CHWs, knowing that their efforts are aligned with broader health goals.

9. Transportation

Within the scope of this study, transportation refers to any financial support provided to CHWs to cover their commuting costs, emphasising transport fares. With a frequency of 6 (17% of participants), it's evident that transportation is a recognised need among CHWs. The AR of 7.0 and MR of 6.0 suggest it's considered a mid-level priority collectively. This importance, however, is concentrated in Molyko, where all instances of this strategy were observed.

Table 9: Frequency and Preference Ranking of Transportation Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	6	7.0	6.0
Buea Road	0	0	0
Buea Town	0	0	0
Tole	0	0	0
Total	6	7.0	6.0

While many CHWs have worked without dedicated transportation allowances, those who selected this option suggest that providing transportation fares or adequate finances can significantly ease their burden. As one CHW poignantly stated,

"As a health worker, the goal is to rescue. That's why you see me in action. I don't do it just because there's supposed to be pay. It's my passion driving me. And for many of us community health workers, when passion drives us, we don't keep asking, 'Why haven't I been paid?' or 'Why wasn't this given to me?' But if the money's there, why not give it to us?" - CHW, FGD

A comment from one of the community representatives supports the perspectives of the CHWs on the provision of transportation. They believe it is essential for CHWs to have transport fares. Particularly during the rainy season, they should be provided with umbrellas and raincoats for protection. They hold that this form of support is important, considering they often have to go out to the field without any immediate monetary compensation. Ensuring they have transport fares means more people are likely to participate in community work.

10. Communication Credit

Here, Communication Credit refers to the allowances given to CHWs to facilitate communication, often in the form of mobile airtime or data. Communication credit had a frequency of 5 (14% of participants). The AR of 8.8 and MR of 9.0, among the highest values, highlight that while some consider communication credit significant, there are other more critical needs for CHWs across all health areas. This is reinforced by the fact that only Molyko Health Area has shown a need for communication credit, pinpointing a communication challenge in this area.

Table 10: Frequency and Preference Ranking of Communication Credit Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	5	8.8	9.0
Buea Road	0	0	0
Buea Town	0	0	0
Tole	0	0	0
Total	5	8.8	9.0

Some CHWs highlight that communication credit is rarely provided to CHWs, making it a lesser concern for them. However, they suggest they can allocate transportation and communication credit funds if they receive adequate financial compensation (cash incentives).

11. Expertise

In this study, Expertise is the specialised knowledge or skills CHWs acquire through experience. Expertise in Molyko has an AR and MR of 7.0, suggesting that while it's recognised, other support strategies hold more immediate importance for CHWs in this area. The CHWs indicate that while having some form of Expertise is beneficial, they can still perform their tasks if compensated adequately. Their primary motivation is often income or additional earnings rather than becoming experts in the field. Nonetheless, field experience is valued as it aids in future engagements.

Table 11: Frequency and Preference Ranking of Expertise Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	5	7.0	7.0
Buea Road	0	0	0
Buea Town	0	0	0
Tole	0	0	0
Total	5	7.0	7.0

12. Peer Support

Peer Support is the support strategy established among CHWs, allowing them to collaborate, share experiences, and provide mutual assistance. Peer Support is recognised in Buea Town with AR and MR values of 8.0 and Tole with AR and MR values of 7.0 and 7.5, respectively. In Buea Town, despite its acknowledgement, it is not among the most preferred support strategies, possibly due to other pressing needs. In Tole, the relatively high AR and MR values indicate that while Peer Support is valued, different support strategies might be of higher priority.

Table 12: Frequency and Preference Ranking of Peer Support Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
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Molyko	-	-	-
Buea Road	-	-	-
Buea Town	1	8.0	8.0
Tole	4	7.0	7.5
Total	5	7.5	7.8

The CHWs who selected Peer Support suggest it is necessary for CHWs, though not a popular or top-ranking priority. They believe that given the challenging nature of their roles, peer support acts as a vital support system. It not only eases their workload but also fosters mutual encouragement among CHWs. This solidarity is especially evident when they collaborate during community activities, complementing each other's efforts.

13. In-Kind Payments

In-kind Payments are compensation in the form of goods or services, rather than money, provided to CHWs. Overall, in-kind payments appear less critical across the health areas where they were considered, with both average and median rankings leaning towards the lesser preferences.

Table 13: Frequency and Preference Ranking of In-Kind Payments Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	-	-	-
Buea Road	1	7.0	7.0
Buea Town	1	8.0	8.0
Tole	3	7.2	8.0
Total	5	7.4	8.0

While one of the lowest-ranked preferences, in-kind payments are believed to be extra motivation. Whether it is a bar of soap or other necessities, these tangible rewards resonate with CHWs and their families, giving them a sense of appreciation for their hard work.

14. Health/Security

Health/security refers to measures taken to ensure the physical safety and health of CHWs, especially in areas with security threats. Despite its modest frequency of 4 (11% of

participants), the low AR (3.8) and MR values (2.0) indicate that they strongly prefer this strategy, suggesting that where it's needed, it's deemed important. This is primarily in Molyko, pointing to area-specific concerns about CHW safety and well-being.

Table 14: Frequency and Preference Ranking of Health/Security Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	4	3.8	2.0
Buea Road	0	0	0
Buea Town	0	0	0
Tole	0	0	0
Total	4	3.8	2.0

While Health/Security was not among the most popular choices per frequency, it was ranked highly by those who selected it. One CHW remarked, "You have to be healthy to give health." CHWs need protection from various stakeholders, the community, and the government against threats and harm from non-state armed groups and hostile community members to ensure their well-being as they serve.

15. Sensitisation

Sensitisation refers to efforts to raise awareness among communities about the role of CHWs and the importance of health initiatives. With a frequency of 3 (8% of the participants) and a relatively high AR and MR, Sensitisation is only discussed in Molyko. However, while recognised with an AR and MR of 7.0 and 8.0, other urgent support strategies exist.

Table 15: Frequency and Preference Ranking of Sensitisation Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	3	7.0	8.0
Buea Road	0	0	0
Buea Town	0	0	0
Tole	0	0	0
Total	3	7.0	8.0

16. Dialogue Structure

Dialogue Structure in this study refers to the established communication channels, formal or informal, that facilitate consistent communication among CHWs, community members, and health system officials. Even though it is mentioned infrequently (only three times), the emphasis on maintaining this dialogue structure, especially between CHWs and the health system via the Health Area Management Committee, underscores its broader significance to CHWs. The particular attention given to this dialogue structure in Buea Road suggests specific operational challenges unique to that health area. With an Average Ranking (AR) of 4.3 and a Median Ranking (MR) of 3.0, it's clear that the Dialogue Structure is deemed important. This structure is critical for CHWs to communicate concerns, provide feedback, and address issues.

Table 16: Frequency and Preference Ranking of Dialogue Structure Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	-	-	-
Buea Road	3	4.3	3.0
Buea Town	0	0	0
Tole	0	0	0
Total	3	4.3	3.0

17. Free Commodities

Free commodities in this context denote medical supplies and tools given to CHWs without charge, aiding their roles. With a total mention of only twice, its Average and Median Ranking of 3.5 emphasises its significance to the CHWs who chose it. However, it suggests that the majority have other, more immediate concerns, or they already have them. Lastly, Free Commodities offer additional support, enhancing the overall well-being and effectiveness of CHWs in their roles.

Table 17: Frequency and Preference Ranking of Free Commodities Among CHWs by Health Area

Health Area	Frequency	Average Ranking	Median Ranking
Molyko	-	-	-
Buea Road	2	3.5	3.5
Buea Town	0	0	0

Tole	0	0	0
Total	2	3.5	3.5