UNIVERSITY of LUSAKA

Passion for Quality Education: Our Driving Force

SCHOOL OF TECHNOLOGY AND SOCIAL SCIENCES

AN EVALUATION OF COMMUNITY PARTICIPATION IN HEALTH SYSTEMS STRENGTHENING: A CASE OF THE COMMUNITY HEALTH WORKER PROGRAMME IN CHONGWE DISTRICT.

A RESEARCH REPORT

Presented to the Faculty of The School of Technology and Social Sciences in partial Fulfilment of the Requirements for the award of a Degree of Bachelor of Arts in Development Studies

DAVID KANYANTA MBAYA
LLB18112059

DECLARATION

I, DAVID KANYANTA MBAYA (LLB18112059), hereby declare that this research report titled:

AN EVALUATION OF COMMUNITY PARTICIPATION IN HEALTH SYSTEMS STRENGTHENING: A CASE OF THE COMMUNITY HEALTH WORKER (CHW) PROGRAMME IN CHONGWE DISTRICT.

is my original work and has not been submitted for any other degree or qualification at this or any other institution. All sources of information have been duly acknowledged.

Student Name: David Kanyanta Mbaya

Signature: D K M

Date: 1st February, 2026

Supervisor's Name: Namonda Mateele (Ms)

Supervisor's Signature: 

Date: 1st February, 2026.

ABSTRACT

Community participation is widely recognised as a cornerstone of effective primary health care delivery, particularly in low- and middle-income countries where health systems often face resource constraints and limited reach. This study evaluated community participation in the planning, implementation, and governance of the Community Health Worker (CHW) programme in Chongwe District, Zambia, with a specific focus on a health-related software feature introduced to support service delivery. The target population comprised community residents, CHWs, and staff from the Centre for Infectious Disease Research in Zambia (CIRDZ), reflecting a diverse group of stakeholders directly engaged in or affected by the programme. Using a mixed-methods approach, data were collected from 40 respondents out of the current population which sits at above 300,000 people through questionnaires and focus group discussions, enabling both quantitative and qualitative insights into the nature and extent of participation.

The findings revealed limited and largely tokenistic community involvement in the planning and prioritisation of the software feature. Specifically, 83% of community residents reported no participation in planning processes, highlighting a disconnect between policy commitments to participatory health governance and actual practice. While participation increased during implementation—73% of residents took part in testing—the quality of engagement was undermined by challenges such as language barriers, inadequate training, and increased workload for CHWs. Feedback and accountability mechanisms were weak, indirect, and non-transparent, contributing to low levels of ownership and trust among community members.

The implications of these findings are significant for health systems strengthening. Limited participation in planning reduces the relevance of digital health interventions, as tools may fail to align with local needs, cultural contexts, and user capacities. Tokenistic involvement risks undermining efficiency, as poorly adapted interventions can increase workload without improving outcomes. Furthermore, weak accountability structures erode trust, which is essential for sustaining community-based health initiatives. For CHWs, who serve as the frontline link between communities and formal health systems, inadequate training and lack of participatory governance exacerbate burnout and reduce effectiveness. For residents, exclusion from decision-making diminishes their

sense of agency and weakens the social contract underpinning primary health care delivery.

The study concludes that despite policy frameworks emphasising community participation, meaningful engagement remains limited in practice. This constrains the relevance, efficiency, and sustainability of digital health interventions, particularly in resource-constrained settings like Chongwe District. To address these gaps, several recommendations are proposed. First, participatory decision-making should be strengthened during the planning phase, ensuring that community voices are integrated into priority-setting and design processes. Second, user-centred design principles must be adopted to tailor digital tools to local languages, literacy levels, and cultural contexts, thereby enhancing usability and reducing barriers to adoption. Third, transparent governance and feedback mechanisms should be institutionalised, enabling communities to hold programme implementers accountable and fostering trust. Fourth, capacity-building initiatives for CHWs should be expanded, with emphasis on digital literacy, workload management, and supportive supervision. Finally, future digital health interventions should embed mechanisms for continuous community engagement, recognising participation not as a one-off activity but as an ongoing process essential for sustainability.

By foregrounding community participation, digital health tools can be better aligned with local needs, thereby strengthening health systems and advancing equity in primary health care delivery.
Keywords: Community participation, Community Health Workers, health systems strengthening, digital health, Chongwe District, Zambia.

ACKNOWLEDGEMENTS

I wish to express my sincere gratitude to all those who contributed to the completion of this research report. First and foremost, I thank God for the strength, wisdom, and perseverance throughout this academic journey.

My heartfelt appreciation goes to my supervisor, for the invaluable guidance, constructive feedback, and unwavering support during the entire research process. Your insights greatly shaped the quality and direction of this work.

I am deeply indebted to the community members, Community Health Workers, and CIRDZ staff in Chongwe District who generously shared their time, experiences, and perspectives. Without their cooperation, this study would not have been possible.

I extend my thanks to the Faculty of the School of Technology and Social Sciences for the academic mentorship and resources provided throughout my studies. Special thanks also go to my classmates and friends for their encouragement and intellectual companionship.

Finally, I am profoundly grateful to my family, especially my parents, for their constant prayers, sacrifices, and belief in my education. Your love and support have been my greatest motivation.

DEDICATION

This work is dedicated to my family, whose unwavering support and encouragement have been my foundation throughout my academic journey.

Equally, I dedicate this work to my friends and all my support system throughout this journey.

To the community health workers and residents of Chongwe District, whose commitment to improving community health continues to inspire.

Table of Contents

Cases

CHAPTER ONE

INTRODUCTION AND BACKGROUND

1.0 Introduction

This chapter provides the foundation of the study by outlining the context, rationale, and direction of the research. It begins with a background to the study, situating community participation within the broader framework of community health worker (CHW) programmes and digital health interventions. The chapter then presents the statement of the problem, highlighting existing gaps in community involvement and efficiency challenges in the planning, implementation, and governance of health-related software features. The purpose of the study is articulated through the research aim, general objective, and specific objectives, which guide the inquiry. Research questions aligned to each objective are also presented. The chapter further outlines the significance of the study, defining its academic, policy, and practical contributions. Finally, the scope and limitations of the study are described, and key operational definitions of terms are provided to ensure clarity and consistency throughout the research.

The Community Health Worker programme in Zambia currently supports critical health services including maternal and child health, malaria prevention, tuberculosis and HIV referral, disease surveillance, and health promotion. Evidence shows that community-based interventions contribute significantly to health outcomes. For example, Zambia recorded a reduction in under-five mortality from 168 deaths per 1,000 live births in 2001 to 61 deaths per 1,000 live births in 2018, a change partly attributed to expanded community-based health services (ZDHS, 2018).

1.1 Background of the Study

Community participation has long been recognised as a cornerstone of effective primary health care delivery, particularly in low- and middle-income countries where health systems face persistent human resource and infrastructure constraints. The Alma-Ata Decla-

ration of 1978 emphasised the involvement of communities in the planning and implementation of health services as a means of improving relevance, ownership, and sustainability. In line with this principle, community health worker (CHW) programmes have been widely adopted globally as a strategy to extend essential health services to underserved populations while strengthening the link between communities and formal health systems(World Health Organization (WHO),1978).

Globally, CHWs play a critical role in delivering preventive, promotive, and basic curative services, including maternal and child health, disease surveillance, and health education. Increasingly, digital health technologies have been integrated into CHW programmes to improve data collection, reporting efficiency, and decision-making. Mobile applications and software platforms are used to track household visits, report health events, and support monitoring and evaluation. While such technologies have the potential to enhance efficiency and accountability, evidence suggests that their effectiveness is highly dependent on the extent to which end users and communities are meaningfully involved in their design and use (PATH,2024; Blondino et al., 2024).

In sub-Saharan Africa, the adoption of digital health tools within CHW programmes has expanded rapidly, often driven by donor-funded initiatives aimed at improving health information systems. However, *The BMC public health multi-country survey 2024* across the region indicate that many digital health interventions are implemented using top-down approaches, with limited participation of community members and frontline workers in planning and prioritisation. This has resulted in challenges such as complex system designs, increased workload for CHWs, duplication of data entry, and low levels of ownership among users. Where community participation is weak, digital tools may fail to address local health priorities or fit within existing workflows (Blondino et al., 2024; Segun-Omosehin et al., 2025).

In Zambia, community participation is formally embedded within the health system through structures such as Neighbourhood Health Committees (NHCs), which are mandated to support planning, implementation, and oversight of community health activities. The Zambian Ministry of Health has prioritised the strengthening of CHW programmes as part of its broader health system strengthening agenda, recognising the role of commu-

nities in improving service delivery and accountability. Additionally, Zambia has embraced digital health innovations to support CHWs, particularly in areas of reporting, surveillance, and performance monitoring (World Health Organisation, 2019; Misha et al., 2019).

Despite these policy commitments, practical challenges remain in ensuring effective community participation in both CHW programmes and associated digital health interventions. Evidence from local studies suggests that while communities and CHWs are often involved during implementation phases—such as data collection and reporting—they are less involved in decision-making processes related to planning, system design, and prioritisation. Feedback mechanisms are frequently informal or indirect, and accountability for system performance is often unclear. These challenges are further compounded by limited training, resource constraints, and power imbalances between local users and external stakeholders such as donors and software developers.

Within this context, organisations such as the Centre for Infectious Disease Research in Zambia (CIRDZ) play a significant role in supporting CHW programmes and introducing digital tools aimed at improving health service delivery. However, the extent to which community residents and implementing staff are involved in shaping these tools, and how such participation influences efficiency and effectiveness, remains insufficiently documented. Understanding community participation across the stages of planning, implementation, and management is therefore essential for improving the design and sustainability of digital health interventions within CHW programmes.

This study is situated within this broader global, regional, and national context and seeks to evaluate community participation in the CHW programme with a particular focus on the planning, implementation, and governance of a health-related software feature in Chongwe District. By examining perspectives of community residents and CIRDZ workers, the study aims to contribute empirical evidence that can inform more participatory, efficient, and context-responsive digital health interventions.

1.2 Statement of the Problem

Despite global and national commitments to strengthen health systems through community participation, many low- and middle-income countries continue to experience gaps in effective community engagement. The World Health Organization (WHO) estimates that by 2030, the global health workforce shortage will reach approximately 10 million health workers, with Sub-Saharan Africa bearing the greatest burden (WHO, 2020). This shortage has increased reliance on Community Health Workers (CHWs) to deliver essential health services, particularly in rural and underserved communities.

Taylor, Griffiths, and Lilford (2017) argue that the effectiveness of Community Health Worker (CHW) programmes is strongly shaped by the extent of community participation in planning, implementation, and management. Evidence from Sub-Saharan Africa demonstrates that programmes with weak community governance structures often experience reduced service utilisation, diminished accountability, and high attrition rates among CHWs, with attrition levels reported to reach 30–40% in poorly supported initiatives. In the Zambian context, the Ministry of Health (2021) highlights that several community governance structures, particularly Neighbourhood Health Committees, remain inconsistently functional, thereby limiting their capacity to provide effective support to CHWs. This underscores the importance of strengthening participatory governance mechanisms to enhance service delivery, accountability, and sustainability of CHW programmes.

Although community participation is emphasized in Zambia's national health policy and CHWs are operationally central to primary health care delivery, there is a lack of empirical evidence specifically examining how residents of Chongwe District, together with CHWs, Neighbourhood Health Committees, and health facility supervisors, engage in the planning, implementation, and management of health services within the CHW programme. The absence of district-specific evidence constrains informed decision-making, weakens targeted interventions, and limits the ability of policymakers and health managers to improve community participation for health systems strengthening. Therefore, this study looked to evaluate community participation through the Community

Health Worker programme in Chongwe District to generate evidence that can inform policy, practice, and future community-based health interventions.

1.3 Objectives of the Study

General Objective:

To evaluate community participation through the Community Health Worker (CHW) programme in Chongwe District.

Specific Objectives:

i. To assess community participation in planning of health services through the CHW programme.
ii. To examine community participation in implementation of health services through the CHW programme.
iii. To evaluate community participation in management and governance of health services.

1.4 Research Questions

i. What forms of community participation exist in the planning of health services through the Community Health Worker programme in Chongwe District?

ii. What forms of community participation exist in the implementation of health services through the Community Health Worker programme in Chongwe District?

iii. What forms of community participation exist in the management of health services through the Community Health Worker programme in Chongwe District?

1.5 Significance of the Study

The study would provide evidence to policymakers, health planners, and development partners on the role of community participation in strengthening health systems. Findings would inform strategies to enhance community engagement, improve CHW performance, and support achievement of Universal Health Coverage.

This study is particularly important because it provides policymakers with concrete evidence on how limited or tokenistic community participation undermines the relevance and sustainability of digital health interventions, enabling them to design policies that embed participatory governance into health systems. For health planners, the findings

highlight practical gaps such as language barriers, inadequate training, and weak accountability mechanisms, offering actionable insights to improve programme design and resource allocation. Development partners benefit by understanding how donor-driven, top-down approaches can create inefficiencies and erode trust, allowing them to realign funding priorities with community needs and ensure interventions are context-sensitive. For Community Health Workers, the study underscores the impact of increased workload and lack of authority, pointing to the need for supportive training and user-centred tools that enhance their effectiveness. Finally, for community members, the research validates their experiences of exclusion and provides a pathway for their voices to be integrated into planning and governance, strengthening ownership and trust in health programmes while ensuring that digital health tools address their actual priorities.

1.6 Scope of the Study

The study was conducted in Chongwe District and would focus on community members, CHWs, and community leaders involved in the CHW programme.

1.7 Limitations of the Study

Potential limitations included time constraints, reliance on self-reported data, and limited generalizability beyond the study area. These limitations were addressed through several strategies to enhance the credibility and robustness of the study. Time constraints were mitigated by careful planning of data collection schedules and prioritizing key respondents to ensure that essential perspectives were captured within the available period. The reliance on self-reported data was balanced by triangulating information from multiple sources, including questionnaires, focus group discussions, and observations, which helped validate responses and reduce bias. Although the study's generalizability was limited to Chongwe District, this was overcome by purposively selecting diverse groups of respondents—community members, CHWs, Neighbourhood Health Committee members, and health facility supervisors—whose varied roles and experiences provided rich insights that can inform similar contexts in other resource-constrained settings.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter reviews empirical literature relevant to the study on community participation in health systems strengthening through the Community Health Worker (CHW) programme. The literature review is structured in line with the first three specific objectives of the study, namely: community participation in the planning, implementation, and management of health services.

For each objective, studies are reviewed from three perspectives: global, regional, and local. The global perspective provides an international understanding of how community participation contributes to health systems strengthening through CHW programs. The regional perspective focuses on evidence from Sub-Saharan Africa, where CHW programmes are widely implemented due to health workforce shortages. The local perspective examines studies and policy documents from Zambia to contextualize community participation within the national health system framework.

This structured approach enables a comprehensive comparison of experiences across different contexts and facilitates identification of gaps in community participation within the Zambian setting, particularly in Chongwe District. The chapter further presents the theoretical and conceptual frameworks guiding the study.

2.1 Community Participation in Planning of Health Services

Globally, several studies highlight the importance of community participation in health planning as a means of strengthening health systems. Rifkin (2014) argues that meaningful community involvement in planning improves ownership and responsiveness of health services. George et al. (2015), in a systematic review of community participation in health systems research, found that communities that were involved in identifying health priorities experienced improved programme relevance and sustainability. Similarly, Kok et al. (2015) reported that CHW programmes that actively engaged communities

during the planning phase demonstrated better alignment with local health needs and improved service uptake.

In Sub-Saharan Africa, community participation in health planning has been documented as a critical component of effective CHW programmes. Lehmann and Sanders (2007) found that community involvement in planning CHW activities in African countries enhanced accountability and programme acceptance. McCoy et al. (2012) observed that health facility committees in low-income African settings played a significant role in participatory planning and priority setting. Mutale et al. (2013) further demonstrated that community engagement in planning processes contributed to improved health system performance in Zambia and similar contexts.

At the local level, studies in Zambia indicate varying levels of community participation in health planning. The Ministry of Health (2021) reports that community structures such as Neighbourhood Health Committees are mandated to participate in planning health activities at community level. World Vision (2020) found that communities involved in planning CHW activities showed increased commitment to programme implementation. Additionally, the Provincial Health Office (2022) highlighted that participatory planning remains inconsistent across districts, underscoring the need for further evaluation at district level.

2.2 Community Participation in Implementation of Health Services

International evidence suggests that community participation during implementation enhances the effectiveness of health interventions. Bhutta et al. (2010) demonstrated that community-driven implementation strategies improved maternal and child health outcomes. WHO (2018) emphasised that CHW programmes that involve communities in implementation experience higher service coverage and sustainability. George et al. (2015) further noted that active community engagement during implementation strengthens trust and programme legitimacy.

Regionally, studies from Sub-Saharan Africa show that community participation supports successful implementation of health programmes. Lehmann and Sanders (2007) found that communities often contribute labour, mobilisation, and monitoring during implementation. Kok et al. (2015) observed that community support enhanced CHW motivation

and service delivery. McCoy et al. (2012) also reported that community oversight structures improved implementation efficiency and accountability.

In Zambia, community participation in implementation has been documented through CHW-led outreach activities. Mutale et al. (2013) reported that community involvement improved service delivery and programme performance. The Ministry of Health (2021) notes that communities contribute to implementation through health education, referrals, and outreach activities. ZamStats et al. (2019) further provide evidence that community-based interventions have improved access to primary health services in rural areas.

2.3 Community Participation in Management and Governance of Health Services

Globally, studies emphasise the role of community participation in health governance and management. Rifkin (2014) highlights that community involvement in management improves accountability and transparency. McCoy et al. (2012) found that community health committees contribute to oversight and performance monitoring. WHO (2016) further stresses that participatory governance structures strengthen health system resilience.

In Sub-Saharan Africa, community participation in health management has been linked to improved service quality. Lehmann and Sanders (2007) note that community governance structures enhance supervision of CHWs. George et al. (2015) found that community oversight mechanisms improved trust and programme sustainability. Kok et al. (2015) also reported that management involvement increased CHW performance and retention.

Locally, the Ministry of Health (2021) recognises Neighbourhood Health Committees as key actors in health management. World Vision (2020) reports that community-led monitoring improves accountability of CHWs. The Provincial Health Office (2022) further indicates that community feedback mechanisms contribute to improved health service management, though challenges persist in consistency and effectiveness.

2.4 Theoretical Framework

This study is guided by the Community Participation Theory and the Health Systems Strengthening (HSS) Framework, which together provide a foundation for understanding

how community involvement influences the planning, implementation, and management of health services through the Community Health Worker (CHW) programme.

2.4.1 Community Participation Theory

Community Participation Theory emphasises the involvement of community members in decision-making processes that affect their health and well-being. The theory posits that meaningful participation enhances ownership, empowerment, accountability, and sustainability of health interventions. According to Rifkin's model of community participation, effective participation occurs when communities are actively involved in identifying health needs, setting priorities, mobilising resources, implementing interventions, and monitoring service delivery. In the context of this study, the theory is relevant in explaining how community participation in planning, implementation, and management of health services strengthens the CHW programme and contributes to improved health system performance.

2.4.2 Health Systems Strengthening Framework

The Health Systems Strengthening Framework, as advanced by the World Health Organization, focuses on improving the six building blocks of a health system, namely service delivery, health workforce, health information systems, access to essential medicines, financing, and leadership and governance. Community participation is particularly linked to leadership and governance, service delivery, and health workforce support. By integrating this framework, the study examines how community engagement through the CHW programme contributes to strengthening governance structures, supporting frontline health workers, and improving service delivery at community level.

Together, these theories provide a lens for analysing the relationship between community participation and health systems strengthening. They guide the identification of variables, inform the development of research instruments, and support the interpretation of findings by explaining how community involvement influences the effectiveness and sustainability of the CHW programme in Chongwe District.

2.5 Conceptual Framework

The conceptual framework illustrates the relationship between community participation and health systems strengthening through the Community Health Worker programme. In

this study, community participation is conceptualised as the independent variable, operationalised through participation in planning, implementation, and management of health services. Health systems strengthening is conceptualised as the dependent variable, reflected through improved service delivery, accountability, CHW performance, and community ownership of health programmes.

Community participation in planning involves community engagement in identifying health priorities, participating in decision-making forums, and contributing to the design of health activities. Participation in implementation includes community involvement in outreach activities, health education, mobilisation, and support for CHW service delivery. Participation in management encompasses community roles in governance, supervision, feedback mechanisms, and monitoring of health services.

The relationship between community participation and health systems strengthening may be influenced by intervening factors such as policy support, availability of resources, capacity of CHWs, leadership effectiveness, and socio-cultural dynamics within communities. These factors can either enhance or constrain the extent to which community participation contributes to improved health outcomes.

The conceptual framework therefore demonstrates that when communities are actively involved across planning, implementation, and management processes, the CHW programme is more likely to function effectively, leading to strengthened health systems at the community level.

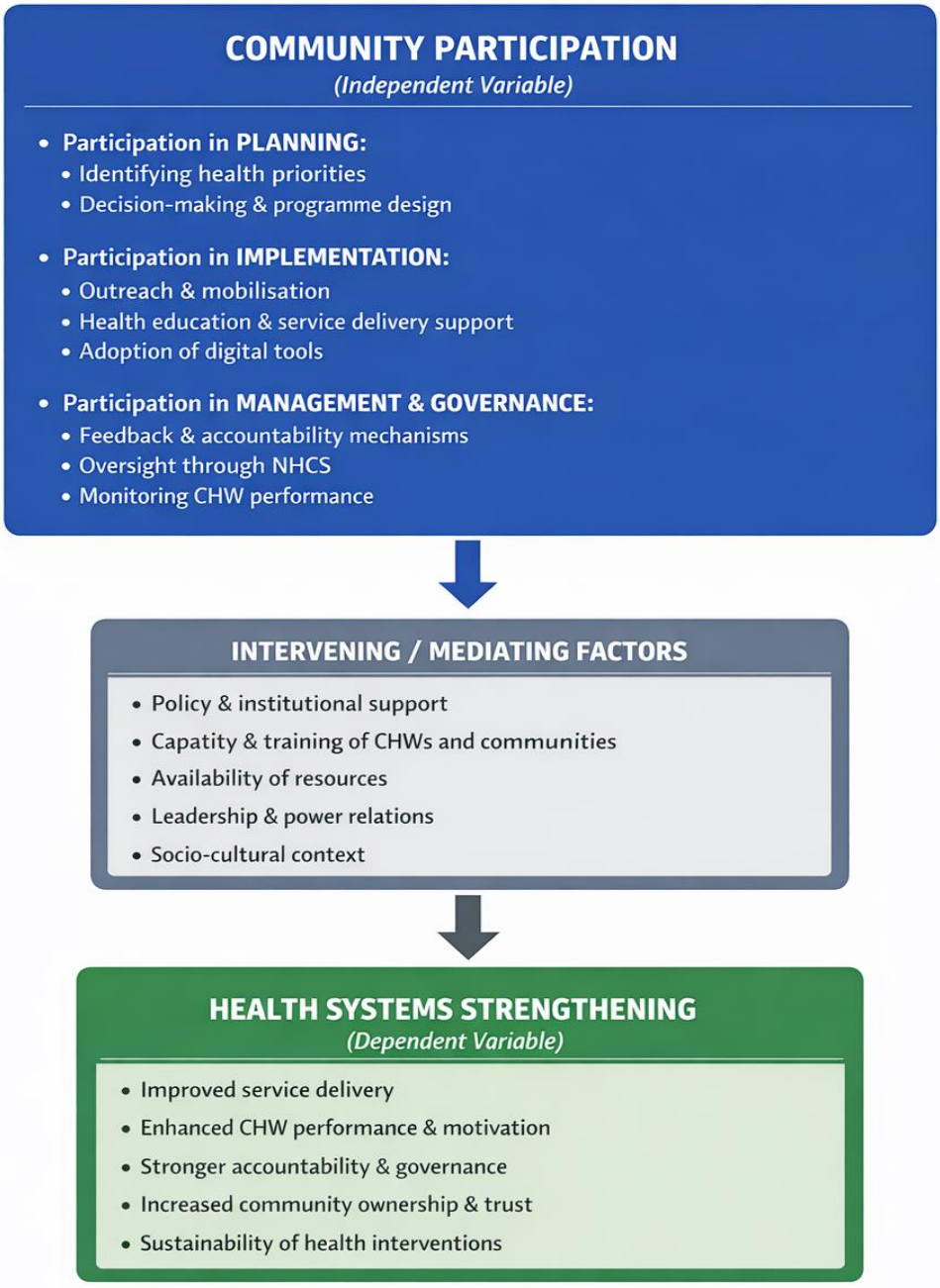

Figure 1 Conceptual Framework Diagram

Community participation and health systems strengthening are structurally and functionally interconnected, particularly within Community Health Worker (CHW) programmes.

First, community participation in planning ensures that health services reflect locally perceived needs and priorities. When communities contribute to identifying problems and designing interventions, CHW activities become more relevant, culturally acceptable, and responsive. This relevance improves service uptake and aligns with the health system strengthening goal of effective and people-centred service delivery.

Second, participation during implementation directly supports CHWs in delivering services. Community members assist through mobilisation, health education, referrals, and logistical support. This shared responsibility reduces the burden on formal health workers, strengthens community–health system linkages, and enhances coverage, efficiency, and continuity of care, which are central components of health systems strengthening.

Third, participation in management and governance strengthens accountability and transparency within the health system. Structures such as Neighbourhood Health Committees enable communities to monitor CHW performance, provide feedback, and engage in oversight. This contributes to stronger leadership and governance, improved trust, and increased CHW motivation and retention.

However, the strength of this relationship is shaped by intervening factors such as policy support, training, resource availability, leadership quality, and local power dynamics. When these enabling conditions are weak, participation becomes tokenistic and its contribution to health systems strengthening is limited. Conversely, when participation is meaningful and well-supported, it acts as a critical mechanism for sustainable health system performance at community level.

2.6 Knowledge Gaps

Despite extensive recognition of the importance of community participation in CHW programmes, several critical gaps persist in the literature:

1. Limited empirical evidence at district level
   Many studies analyse community participation at national or programme-wide levels, with insufficient district-specific evidence—particularly in rural settings

such as Chongwe District. This limits context-sensitive policy and programme design.

2. Weak analysis of participation quality:
   Existing literature often measures participation as presence or absence, rather than examining depth, influence, and decision-making power, resulting in limited understanding of tokenistic versus meaningful participation.

3. Insufficient linkage between participation and health system outcomes
   While participation is widely promoted, few studies explicitly demonstrate how specific forms of community participation translate into measurable health systems strengthening outcomes such as governance effectiveness, CHW performance, or sustainability.

4. Underexplored governance and accountability dimension
   Most research focuses on planning and implementation, with limited attention to community roles in management, feedback, and accountability, despite their importance for system resilience.

5. Limited evidence on community participation in digital health within CHW programmes
   As digital tools are increasingly integrated into CHW work, there is a gap in understanding how community participation influences the relevance, efficiency, and sustainability of digital health interventions.

6. Power dynamics and equity gaps
   The literature insufficiently addresses how power imbalances between donors, implementers, CHWs, and community members shape participation outcomes and marginalise certain voices, particularly less-educated or vulnerable groups.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Research Design

The study employed a descriptive cross-sectional research design using a qualitative approach, relying exclusively on qualitative data. The quantitative component used was to enable measurement of the extent of community participation in planning, implementation, and management of health services, while the qualitative component would provide in-depth understanding of community experiences, perceptions, and contextual factors influencing participation.

A cross-sectional design is appropriate because data was collected at a single point in time, allowing for efficient assessment of current practices and challenges related to community participation in the CHW programme. The mixed-methods approach enhances the validity of the study by enabling triangulation of findings from different data sources.

Chongwe District, located in Lusaka Province of Zambia, is both a peri-urban and rural area that has experienced rapid population growth in recent years. With a population of over 300,000 according to the 2022 census, Chongwe serves as a critical link between urban Lusaka and surrounding rural communities. The district is characterised by a mix of urban settlements, farming communities, and traditional villages, which makes it an important site for examining health service delivery in diverse socio-economic and cultural contexts. Its proximity to Lusaka city has contributed to increasing urbanisation, yet many parts of Chongwe still face challenges related to infrastructure, access to health facilities, and human resource shortages.

Health service delivery in Chongwe relies heavily on Community Health Workers (CHWs) and Neighbourhood Health Committees, who act as the bridge between formal health systems and community members. The district has been a focal point for several health initiatives, including programmes supported by the Centre for Infectious Disease

Research in Zambia (CIDRZ), which provide technical and supervisory support to CHWs. Given the district's growing population and mixed urban-rural composition, the effectiveness of CHW programmes and digital health interventions is particularly significant for ensuring equitable access to primary health care.

Chongwe's demographic diversity, coupled with its rapid urban expansion, presents both opportunities and challenges for health systems strengthening. On one hand, the presence of active CHWs and community structures provides a foundation for participatory health governance. On the other, limited resources, language barriers, and varying levels of education among residents highlight the need for context-sensitive approaches to digital health interventions. Studying community participation in Chongwe therefore offers valuable insights into how health systems can be strengthened in settings that combine urban pressures with rural health needs, making it a relevant and strategic research area.

3.1 Study Population

The study population would consist of community members residing in Chongwe District, Community Health Workers actively involved in health service delivery, community leaders such as Neighbourhood Health Committee members and traditional leaders, and health facility supervisors responsible for overseeing CHW activities. These groups were directly involved in or affected by community participation in the CHW programme and were therefore considered appropriate sources of information for addressing the study objectives.

The study population was drawn from groups directly engaged in or affected by the Community Health Worker (CHW) programme in Chongwe District, including community members, CHWs, Neighbourhood Health Committee members, traditional leaders, and health facility supervisors. These categories were selected because they represent both the beneficiaries of health services and the implementers responsible for programme delivery and oversight. Their inclusion ensured that the research captured diverse perspectives on community participation, ranging from grassroots experiences to

supervisory and governance roles, thereby providing comprehensive insights relevant to the study objectives.

3.2 Sample Size and Sampling Procedure

The study involved a sample size of approximately 40 respondents of the population of Chongwe district which currently stands at 315,121 people as of 2022 Census (Zambia Statistics Agency 2022), comprising community members, Community Health Workers, Neighbourhood Health Committee members, and health facility supervisors such as Centre for Infectious Diseases Research in Zambia (CIDRZ). Community members were selected using purposive sampling to ensure participation and to minimize selection bias. Purposive sampling would be used to select Community Health Workers, Neighbourhood Health Committee members, and health facility supervisors due to their specific roles, responsibilities, and direct involvement in the CHW programme. The combination of random and purposive sampling techniques was intended to ensure both representativeness and depth of information.

3.3 Data Collection Instruments

Three structured questionnaires were used in this study, targeting community residents, community health workers (CHWs), and CIRDZ workers respectively. The questionnaires contained both closed-ended and open-ended questions.

The closed-ended questions were used to collect quantitative data on respondents' levels of participation in the planning, implementation, and management of the health software feature. These questions required respondents to select predefined response options such as "Yes", "No", or "Somewhat".

The open-ended questions were included to allow respondents to provide detailed explanations, examples, and experiences related to their participation, challenges encountered, and perceptions of efficiency. This ensured that respondents' views were captured in their own words and provided contextual depth to the quantitative findings.

The questionnaires were administered in person, with clarification provided where necessary to ensure accurate responses, particularly among community residents with varying levels of literacy.

Focus group discussions were conducted with selected community residents and CIRDZ workers to complement the questionnaire data. The focus groups explored issues related to planning, implementation, feedback mechanisms, accountability, and power dynamics surrounding the health software feature.

The focus group discussions allowed for interaction among participants, enabling the emergence of shared experiences and collective perspectives that may not have been fully captured through questionnaires alone. Notes were taken during the discussions, and key statements were recorded for thematic analysis.

3.4 Data Analysis

Quantitative data obtained from the closed-ended questionnaire items were coded numerically and entered into the Statistical Package for the Social Sciences (SPSS). Descriptive statistics, including frequencies and percentages, were generated to summarise respondents' demographic characteristics and levels of participation in planning, implementation, and management of the health software feature.

The results were presented in the form of tables to facilitate clear interpretation. No inferential statistical tests were conducted, as the study focused on describing patterns of participation rather than testing causal relationships.

Qualitative data from open-ended questionnaire responses and focus group discussions were analysed using thematic analysis. The analysis involved reading through the responses to identify recurring ideas and patterns. Similar responses were grouped and coded into themes corresponding to the study objectives.

Direct quotations from respondents were selected to illustrate key themes and provide evidence of participants' perspectives. The qualitative findings were integrated with quantitative results during data presentation to provide a comprehensive understanding of community participation and efficiency concerns.

3.5 Reliability and Validity

To ensure reliability and validity of the research instruments, the questionnaires and interview guides would be pre-tested in a community with similar characteristics to Chongwe District but outside the study area. Feedback from the pre-test would be used to refine the instruments prior to the main data collection. Validity would be further enhanced through triangulation of data from different respondent groups and data collection methods.

3.6 Ethical Considerations

Ethical considerations were rigorously upheld throughout the study. Ethical approval was secured from the relevant ethics committee, and authorization to conduct the study was obtained from the Ministry of Health and the Chongwe District Health Office. Informed consent was obtained from all participants prior to data collection, and strict measures were taken to ensure the confidentiality of information. Participation in the study was entirely voluntary, and respondents were clearly informed of their right to withdraw at any stage without incurring any negative consequences.

CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS OF DATA AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter presents and analyses data collected from community residents and CIRDZ workers regarding their participation in the planning, implementation, and governance of a health software feature designed to support community health service delivery. The chapter begins by outlining the demographic characteristics of the respondents and the classification of the collected data. It then presents and analyses the findings according to the research questions of the study using descriptive statistical techniques generated through the Statistical Package for the Social Sciences (SPSS) and thematic presentation of qualitative data. The results are presented objectively without interpretation of conclusions or implications, which are reserved for Chapter Five.

4.1 Demographic and Background of Data

This section presents the demographic characteristics of respondents and explains how the collected data were classified and prepared for analysis.

The study involved a total of 40 respondents, comprising 30 community residents and 10 CIRDZ workers. Quantitative data obtained from closed-ended questionnaire items were coded numerically and entered into SPSS for analysis. Frequencies and percentages were generated to summarise respondents' characteristics and levels of participation. Qualitative data from open-ended questions and focus group discussions were sorted, coded, and grouped into themes based on recurring patterns and relevance to the research questions.

4.1.1 Gender Distribution

In terms of gender distribution, 24 respondents (60%) were female and 16 respondents (40%) were male. Among community residents, 18 were female and 12 were male, while the CIRDZ worker group comprised 6 females and 4 males. The gender distribution indicates that women formed the majority of respondents, both among community residents and CIRDZ workers, suggesting that females are more prominently represented in community health participation and frontline engagement. This reflects broader trends in health systems where women often play central roles in caregiving, health education,

and service delivery. The higher female participation may also imply that digital health interventions and CHW programmes must be particularly sensitive to gendered experiences, ensuring that tools and training address women's perspectives, workloads, and accessibility needs to enhance effectiveness and equity.

Table 1 Gender Distribution of Respondents (n = 40)

Gender	Frequency	Percentage (%)
Female	24	60
Male	16	40
Total	40	100

Figure 2 Gender Distribution

Table 1 shows that the majority of respondents were female (60%), while males constituted 40%. This distribution reflects the gender composition of community health-related activities, where women are often more actively involved in community and health programmes.

4.1.2 Age Distribution

With regard to age distribution, the majority of respondents (60%) were aged 26–35 years, followed by 30% aged 36–45 years, while 10% were aged 46 years and above. This indicates that most respondents were within the economically active age group.

Table 2 Age Distribution of Respondents (n = 40)

Age Group	Frequency	Percentage (%)
26–35 years	24	60
36–45 years	12	30
46+ years	4	10
Total	40	100

Figure 3 Age Distribution

The data indicate that most respondents were within the economically active age group of 26–35 years (60%). This suggests that participation in the CHW programme is dominated by individuals who are actively engaged in community and livelihood activities.

4.1.3 Level of Education

In terms of educational attainment, 70% of community residents had secondary education, while 30% had tertiary education. All CIRDZ workers (100%) had attained tertiary-level education, reflecting their professional roles within the programme.

4.1.4 Length of Stay

Community residents reported an average length of stay in the community of 8.2 years, suggesting prolonged engagement with local health services. CIRDZ workers held various professional roles, including Field Coordinators (40%), Data Officers (30%), and CHW Supervisors (30%). These characteristics provided a diverse perspective on the software feature from both community-level users and implementing staff.

Table 3 Educational Level of Respondents (n = 40)

Education Level	Frequency	Percentage (%)
Secondary	21	52.5
Tertiary	19	47.5
Total	40	100

Figure 4 Education Level

Table 3 indicates that the majority of respondents had attained secondary education (52.5%), while 47.5% had tertiary education. This level of education may influence the nature and extent of community participation, particularly in understanding and engaging with health interventions.

4.2 Presentation of Findings by Objectives

4.2.1 Community Participation in Implementation of CHW Programme Activities

Participants were asked to report on their level of involvement in the planning of Community Health Worker (CHW) programme activities, including identification of health

priorities, participation in decision-making, and contribution to the design of programme activities.

Table 4: Level of Community Participation in Planning

Level of participation	Frequency	Percentage (%)
Not involved	33	82.5
Partially involved	5	12.5
Actively involved	2	5.0
Total	40	100

Figure 5 Level of Community Participation

Table 4 shows that the majority of participants (82.5%) reported that they were not involved in planning processes. Only a small proportion indicated partial or active involvement, suggesting limited community participation during the planning stage of the CHW programme.

Participants explained that planning decisions were largely made at higher administrative levels, with minimal input from communities and frontline workers.

> "Most decisions are made at district or office level; we are only informed later." (Community Resident)

The demographic findings carry several important implications for understanding participation in the health software feature and for shaping future digital health interventions. The predominance of female respondents (60%) highlights the central role women play in community health activities, consistent with broader patterns where women are often primary caregivers and frontline health actors. This suggests that digital health tools must be designed with sensitivity to gendered experiences, workloads, and accessibility needs to ensure equity and effectiveness. The age distribution, with most respondents (60%) between 26–35 years, indicates that participation is dominated by individuals in their economically active years, which may enhance programme sustainability since this group is both engaged in livelihood activities and capable of adapting to

new technologies. However, it also implies that older age groups, who may have different health needs or lower digital literacy, are underrepresented, potentially limiting inclusivity.

Educational attainment further shapes participation: while community residents were mostly educated at the secondary level, all CIRDZ workers had tertiary education, reflecting their professional roles and capacity to engage with technical aspects of the programme. This disparity underscores the need for training and simplified tools to bridge gaps in digital literacy and ensure that community residents can meaningfully participate alongside more formally educated staff. Finally, the average length of stay of 8.2 years among residents suggests strong community ties and long-term engagement with local health services, which is advantageous for building trust and sustaining interventions. The diverse professional roles of CIRDZ workers (field coordinators, data officers, supervisors) provide multiple perspectives on implementation, but also highlight the importance of aligning technical priorities with community realities.

Taken together, these findings imply that effective digital health interventions must account for gender dynamics, age-related capacities, educational differences, and community stability. Policies and programme designs should therefore integrate gender-sensitive approaches, provide tailored training to bridge educational gaps, and ensure inclusivity across age groups to strengthen participation, ownership, and sustainability of health system innovations.

Participants were asked to report on their involvement during the implementation of CHW programme activities, including participation in outreach activities, testing of health interventions, and support to service delivery.

Table 5: Community Involvement in Implementation Activities

Participation status	Frequency	Percentage (%)
Participated	32	80.0

Did not participate	8	20.0
Total	40	100

Figure 6 Community Involvement in Implementation Activies

As shown in Table 5, most participants (80%) reported that they were involved in implementation activities. However, qualitative responses indicated that participation was often constrained by limited training, time pressures, and inadequate resources.

> "We were involved in testing, but it was difficult because there was no proper training and we used our own airtime." (Community Resident)

4.2.2 Community Participation in Management, Feedback, and Governance

Participants were asked to report on their involvement in management processes of the CHW programme, including feedback mechanisms, supervision, accountability, and communication with programme authorities.

Table 6: Effectiveness of Management and Feedback Mechanisms

Perception	**Frequency**	**Percentage (%)**
Effective	14	35.0
Not effective	18	45.0
Not sure	8	20.0
Total	40	100

Figure 7 Effectiveness of Management and Feedback Mechanisms

Table 6 indicates that nearly half of the participants (45%) perceived management and feedback mechanisms as ineffective. This suggests weaknesses in governance structures and accountability processes within the CHW programme.

> "We give feedback, but there is no way of knowing if it reaches the people in charge." (CIRDZ Worker)

4.2.1 Participation in Planning

Analysis of quantitative data indicated limited participation in the planning and prioritisation of the software feature. Among community residents, 25 out of 30 respondents (83%) reported that they were not involved in planning, while 5 respondents (17%) indicated minimal involvement through token consultation. Similarly, 28 respondents (93%) reported no participation in identifying software features, with only 2 respondents (7%) indicating involvement through annual surveys.

Qualitative responses from community residents revealed that awareness of the software often occurred during testing or rollout stages. Respondents described planning decisions as originating from higher administrative levels, with limited opportunity for local input.

Among CIRDZ workers, 8 out of 10 respondents (80%) reported being consulted but not involved in decision-making, while 2 respondents (20%) reported no involvement in planning. Regarding feature prioritisation, 9 respondents (90%) reported no participation, while 1 respondent (10%) indicated involvement through monthly reporting mechanisms. Qualitative responses highlighted that operational concerns raised by staff were often deferred to later phases.

Findings indicated varying levels of participation during the implementation and rollout of the software feature. Among community residents, 22 respondents (73%) reported participating in software testing, while 8 respondents (27%) reported no participation. Participation was largely limited to short-term testing activities.

Qualitative responses highlighted challenges related to limited training duration, language barriers, reliance on personal resources such as airtime, and the complexity of the software interface.

All CIRDZ workers (100%) reported participating in testing of the software feature as part of their official responsibilities. However, qualitative data indicated that testing often occurred alongside routine work duties, with reported delays in addressing identified technical issues.

4.3 Discussion of Findings

4.3.1 Community Participation in Planning

The findings of the study revealed limited participation of both community residents and CIRDZ workers in the planning and prioritisation of the health software feature. The majority of community residents (83%) reported that they were not involved in planning, while those consulted described the process as tokenistic. Similarly, most CIRDZ workers reported being consulted without decision-making power.

These findings are consistent with global studies by Rifkin (2014) and George et al. (2015), who argue that community participation in health programme planning often remains consultative rather than empowering. At the regional level, Lehmann and Sanders (2007) found that community involvement in planning is frequently constrained by top-down health system structures. Locally, the Ministry of Health (2021) notes that although community participation is policy-mandated in Zambia, implementation varies significantly across districts.

The exclusion of both end users and implementers from prioritisation processes suggests a misalignment between system design and local needs. This finding aligns with Kok et al. (2015), who observed that externally driven programme priorities often undermine contextual relevance. The emphasis on donor reporting requirements over community needs, as reported by respondents, reflects challenges identified in local studies by Mutale et al. (2013), where health interventions prioritised reporting efficiency rather than service delivery effectiveness.

4.3.2 Community Participation in Implementation

The study found that community residents and CIRDZ workers were more involved during implementation than planning. However, this participation was characterised by challenges related to training, workload, language barriers, and system complexity. While 73% of community residents participated in testing, participation was often reluctant and limited by inadequate support. All CIRDZ workers were involved in testing, though this was reported as burdensome and disruptive to routine work.

Globally, the World Health Organization (2018) emphasises that effective community participation during implementation requires adequate training, resource support, and context-appropriate tools. The findings of this study suggest that these conditions were not sufficiently met. Regionally, Lehmann and Sanders (2007) highlight that community and frontline worker involvement during implementation improves programme ownership only when participation is adequately supported. Locally, Mutale et al. (2013) found that insufficient training and resource constraints undermine the effectiveness of digital health interventions in Zambia.

The persistence of complex workflows and duplicate data entry reported by CIRDZ workers reflects broader regional concerns about inefficiencies introduced by poorly designed health information systems (McCoy et al., 2012). The findings suggest that implementation-focused participation alone is insufficient when system design does not align with user workflows.

4.3.3 Community Participation in Feedback, Governance, and Accountability

Findings revealed weak feedback mechanisms, unclear accountability structures, and limited transparency in decision-making. Community residents relied on indirect feedback channels through CHWs, while CIRDZ workers used formal digital systems with limited influence over prioritisation. Both groups reported slow response times and uncertainty regarding responsibility for system failures.

These findings align with global literature by Rifkin (2014), which stresses that meaningful participation must extend to governance and accountability. Regionally, George et al. (2015) note that weak feedback loops and power imbalances undermine trust in health interventions. Locally, reports by the Ministry of Health (2021) and the Provincial Health Office (2022) highlight similar governance challenges within community-based health programmes.

The study further revealed power dynamics favouring external decision-makers and more educated participants, which mirrors findings by Kok et al. (2015), who argue that unequal power relations often marginalise community voices. The lack of transparency re-

garding software costs and maintenance further contributed to low trust, reinforcing observations made in regional and local studies on digital health governance.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter discusses the findings presented in Chapter Four in relation to the study objectives and existing literature reviewed in Chapter Two. The discussion interprets the results on community participation in the planning, implementation, and governance of the health software feature, drawing comparisons with global, regional, and local studies. The chapter further presents conclusions derived from the study findings and provides practical recommendations aimed at improving community participation and efficiency in the design and implementation of digital health interventions. Areas for further research are also suggested.

The study on community participation in the Community Health Worker (CHW) programme in Chongwe District, Zambia, using mixed methods with 40 respondents (30 community residents, 10 CIRDZ workers), found limited tokenistic involvement overall. Specifically, 83% of community residents reported no participation in planning or prioritization of a health software feature, with decisions driven top-down; implementation saw higher engagement (73% in testing, 80% overall), but challenges like language barriers, inadequate training, increased workload, and complex interfaces persisted; governance revealed weak, indirect feedback mechanisms (45% deemed ineffective), unclear accountability, and low trust. These gaps constrain digital health tool relevance, efficiency, and sustainability despite policy commitments.

5.2 Conclusions

This study demonstrated that although community residents and CIRDZ workers are central to the effective functioning of digital health interventions, their participation in the planning, implementation, and governance of the health software feature remained largely consultative and operational rather than decision-oriented. The findings are important because they reveal a critical mismatch between system design and user realities, where software tools prioritised donor reporting requirements over efficiency, accessibility, and everyday service delivery needs. Limited involvement in planning constrained relevance, while participation during implementation without adequate training, authority, or system responsiveness increased workload and reduced trust. Weak feedback mechanisms and

unclear accountability further undermined ownership and sustainability. These findings underscore the necessity of meaningful, context-sensitive participation across all stages of digital health interventions if such systems are to improve efficiency, strengthen community health delivery, and achieve long-term sustainability within resource-constrained settings.

Community participation is widely recognised as a cornerstone of health system strengthening, as it improves relevance, efficiency, trust, and sustainability of interventions, particularly in resource-constrained settings. When communities and frontline workers are meaningfully involved in planning, implementation, and governance, digital health tools are more likely to align with local priorities, cultural contexts, and existing workflows, thereby reducing duplication, workload, and inefficiencies. Conversely, tokenistic or consultative-only involvement—as seen in many donor-driven, top-down initiatives—creates a mismatch between system design and user realities, prioritising external reporting requirements over accessibility and everyday service delivery needs. This study demonstrated that although community residents and CIRDZ workers were central to digital health interventions, their participation remained largely operational rather than decision-oriented, leading to increased workload, reduced trust, and weak ownership due to inadequate training, authority, and feedback mechanisms. These findings underscore the importance of embedding context-sensitive participation across all stages of digital health interventions to strengthen community health delivery and ensure long-term sustainability.

Future research should explore comparative outcomes between participatory and non-participatory approaches, assess long-term impacts on trust and sustainability, and investigate equity dimensions such as gender and socio-economic inclusion. Policy development should institutionalise community engagement in national digital health strategies, adopt user-centred design standards, build CHW capacity in digital literacy and governance, establish transparent accountability mechanisms, and align donor-funded projects with local priorities to ensure digital health tools genuinely strengthen health systems and advance equity in primary health care delivery.

5.3 Recommendations

In light of the findings and the conclusion of this study, the following recommendations are proposed:

1. **Strengthen meaningful community participation in planning and decision-making**

   Health authorities and implementing partners should move beyond consultative approaches and actively involve community members, CHWs, and district-level implementers in the planning and decision-making stages of CHW programmes and related digital health interventions. Structured platforms for joint priority setting and decision-making should be established to ensure that community knowledge and frontline experience inform programme design. This is essential to address the identified mismatch between system design and community needs and to enhance ownership and sustainability of health interventions.

2. **Improve efficiency through user-centred design and capacity support**

   Digital health tools and programme processes should be designed or revised using user-centred approaches that prioritise simplicity, relevance, and alignment with local workflows. This includes reducing duplication of tasks, simplifying reporting processes, and ensuring that tools are accessible to users with varying literacy and digital skills. In addition, continuous and context-appropriate capacity-building for community members and CHWs should be provided to support effective participation and utilisation of health systems, thereby improving service delivery efficiency and performance.

3. **Enhance governance, feedback, and accountability mechanisms**

   Clear and functional governance structures should be strengthened to define roles, responsibilities, and accountability across community, district, and implementing partner levels. Feedback mechanisms should be transparent, responsive, and traceable, enabling communities and frontline workers to see how their input influences decisions and system improvements. Improved transparency and accountability are critical for building trust, reinforcing community ownership, and

ensuring that participation contributes meaningfully to health systems strengthening.

REFERENCES

Bhutta, Z.A., Lassi, Z.S., Pariyo, G. and Huicho, L. (2010) Global experience of community health workers for delivery of health-related Millennium Development Goals: A systematic review, country case studies, and recommendations for integration into national health systems. Geneva: World Health Organization.

George, A.S., LeFevre, A.E., Schleiff, M., Mancuso, A., Sacks, E. and Sarriot, E. (2015) 'Community health workers at the dawn of a new era: 2. Planning, coordination, and partnerships', Health Research Policy and Systems, 13(1), pp. 1–12.

Kok, M.C., Dieleman, M., Taegtmeyer, M., Broerse, J.E.W., Kane, S.S., Ormel, H., Tijm, M.M. and de Koning, K.A. (2015) 'Which intervention design factors influence performance of community health workers in low- and middle-income countries? A systematic review', Health Policy and Planning, 30(9), pp. 1207–1227.

Lehmann, U. and Sanders, D. (2007) Community health workers: What do we know about them? The state of the evidence on programmes, activities, costs and impact on health outcomes of using community health workers. Geneva: World Health Organization.

McCoy, D., Hall, J.A. and Ridge, M. (2012) 'A systematic review of the literature for evidence on health facility committees in low- and middle-income countries', Health Policy and Planning, 27(6), pp. 449–466.

Ministry of Health (MoH) (2021) National Community Health Worker Strategy 2021–2025. Lusaka: Ministry of Health, Zambia.

Mutale, W., Ayles, H., Bond, V., Mwanamwenge, M.T. and Balabanova, D. (2013) 'Measuring health system strengthening progress in Zambia: A mixed-methods evaluation of the BHOMA intervention', BMC Health Services Research, 13(1), pp. 1–10.

Provincial Health Office (PHO) (2022) Annual Health Performance Report: Lusaka Province. Lusaka: Ministry of Health.

Rifkin, S.B. (2014) 'Examining the links between community participation and health outcomes: A review of the literature', Health Policy and Planning, 29(Suppl. 2), pp. ii98–ii106.

World Health Organization (WHO) (2016) Framework on integrated, people-centred health services. Geneva: World Health Organization.

World Health Organization (WHO) (2018) WHO guideline on health policy and system support to optimize community health worker programmes. Geneva: World Health Organization.

World Vision International (2020) Community engagement and accountability in health programming: Lessons from sub-Saharan Africa. Lusaka: World Vision Zambia.

Zambia Statistics Agency (ZamStats), Ministry of Health (MoH) and ICF (2019) Zambia Demographic and Health Survey 2018. Lusaka, Zambia, and Rockville, Maryland, USA: ZamStats and ICF.

World Health Organization. Declaration of Alma-Ata: International Conference on Primary Health Care, Alma-Ata, USSR, 6–12 September 1978. Geneva: WHO, 1978.

World Health Organization. Community health workers delivering primary health care: opportunities and challenges. Report to the Seventy-second World Health Assembly, WHA72.3, 2019.

Mishra, S.R., Lygidakis, C., Neupane, D., et al. Combating non-communicable diseases: potentials and challenges for community health workers in a digital age. Health Policy and Planning, 34(1):55–66, 2019. https://doi.org/10.1093/heapol/czy099

PATH. Investing in community health with digital tools. PATH, April 2024. (Zambia Digital Community Health Project).

Blondino, C.T., Knoepflmacher, A., Johnson, I., Fox, C., Friedman, L. The use and potential impact of digital health tools at the community level: results from a multi-country survey of community health workers. BMC Public Health, 24:650, 2024.

Blondino, C.T., Knoepflmacher, A., Johnson, I., Fox, C., Friedman, L. The use and potential impact of digital health tools at the community level: results from a multi-country survey of community health workers. BMC Public Health, 24:650, 2024. (Multi-country survey across 28 countries, including sub-Saharan Africa).

Segun-Omosehin, O.A., Omiye, J.A., Elalfy, A., et al. Evaluating the digital health technology landscape in sub-Saharan Africa and its implications for cardiovascular health. npj Digital Medicine, 2025. https://doi.org/10.1038/s44325-025-00055-9

APPENDICES

QUESTIONNAIRE FOR COMMUNITY RESIDENTS

Dear Respondent,

This questionnaire forms part of a research study titled:

AN EVALUATION OF COMMUNITY PARTICIPATION IN HEALTH SYSTEMS STRENGTHENING: A CASE OF THE COMMUNITY HEALTH WORKER (CHW) PROGRAMME IN CHONGWE DISTRICT, ZAMBIA

The purpose of this study is to evaluate community participation in health systems strengthening through the Community Health Worker (CHW) programme in Chongwe District.

Your responses will be kept confidential and used for academic purposes only.

Consent:
I voluntarily agree to participate in this study.

Signature: _____ Date: _____

PART A: DEMOGRAPHIC INFORMATION

1. Gender: Male [ ] Female [ ]

2. Age: 18–25 [ ] 26–35 [ ] 36–45 [ ] 46+ [ ]

3. Highest level of education:

4. Primary [ ] Secondary [ ] Tertiary [ ] Postgraduate [ ]

5. Length of stay in the community: _____ years

PART B: COMMUNITY PARTICIPATION IN PLANNING

1. Are communities involved in planning health activities?

   Yes [ ] No [ ]

   a) Please explain how communities are involved or why they are not involved.

2. Do communities participate in identifying health priorities?

   Yes [ ] No [ ]

   a) Describe the process used to identify these priorities.

PART C: COMMUNITY PARTICIPATION IN IMPLEMENTATION

1. Do communities participate in implementing health activities?

   Yes [ ] No [ ]

   a) In what ways do community members participate?

2. Does community participation improve service delivery?

   Yes [ ] No [ ]

   a) Please explain how or why not.

3. Have you ever assisted a CHW in mobilizing community members for health activities such as immunization, antennal care or Health talks?

4. Do community members participate in providing health education or awareness activities in the community together with CHWs?

   Yes [ ] No [ ]

   a) Please explain the type of health education provided and your role in these activities.

5. Have community members supported CHWs through material or non-material contributions during implementation of health activities?

Yes [ ] No [ ]

a) Please describe the type of support provided (e.g. time, labour, meeting space, transport, communication).

6. How do community members assist CHWs in identifying and referring individuals who need health services (such as pregnant women, sick children, or vulnerable households)?
   Please give specific examples.

7. In your opinion, how does community involvement during implementation affect the success of health activities in your area?
   Please explain your answer with examples.

8. What suggestions do you have for improving community involvement in the implementation of health services through the CHW programme?
   Please provide recommendations.

PART D: COMMUNITY PARTICIPATION IN MANAGEMENT AND GOVERNANCE

1. Are you familiar with the structure and functions of the Neighbourhood Health Committee (NHC)?

( ) Very familiar
( ) Somewhat familiar
( ) Heard of it but not familiar
( ) Never heard of it

2. How often does the NHC meet with community members?

( ) Monthly
( ) Quarterly
( ) Occasionally
( ) Never
( ) Don't know

3. Have you ever attended an NHC meeting?

( ) Yes, regularly

( ) Yes, occasionally

( ) No, but would like to

( ) No, not interested

4. How are NHC members selected in your community?

( ) Community election

( ) Appointed by traditional leaders

( ) Appointed by health facility

( ) Volunteer basis

( ) Don't know

5. What governance roles do community members play in health service management? (Select all that apply)

( ) Monitoring CHW performance

( ) Managing health resources

( ) Resolving health-related disputes

( ) Providing feedback to health facilities

( ) No governance role

( ) Other: _____

6. How transparent are decisions regarding health resource allocation in your community?

( ) Very transparent

( ) Somewhat transparent

( ) Not transparent

( ) Don't know

7. Are there mechanisms for community members to hold CHWs accountable?

( ) Yes, through NHC

( ) Yes, through community meetings

( ) Yes, direct feedback to health facility

( ) No mechanisms

( ) Don't know

8. How are community concerns about health services addressed?

( ) Through formal complaint systems

( ) Through community leaders

( ) Directly with CHWs

( ) Not addressed systematically

( ) Other: _____

9. Do community members participate in evaluating health services?

( ) Yes, regularly

( ) Sometimes

( ) Rarely

( ) Never

10. What changes would improve community governance of health services?

(give examples)

QUESTIONNAIRE FOR CIRDZ WORKERS

Dear Respondent,

This questionnaire forms part of a research study titled:

AN EVALUATION OF COMMUNITY PARTICIPATION IN HEALTH SYSTEMS STRENGTHENING: A CASE OF THE COMMUNITY HEALTH WORKER (CHW) PROGRAMME IN CHONGWE DISTRICT, ZAMBIA

The purpose of this study is to evaluate community participation in health systems strengthening through the Community Health Worker (CHW) programme in Chongwe District.

Your responses will be kept confidential and used for academic purposes only.

Consent:
I voluntarily agree to participate in this study.

Signature: _____ Date: _____

PART A: DEMOGRAPHIC INFORMATION

1. Gender: Male [ ] Female [ ]

2. Age: 18–25 [ ] 26–35 [ ] 36–45 [ ] 46+ [ ]

3. Highest level of education:

4. Primary [ ] Secondary [ ] Tertiary [ ] Postgraduate [ ]

5. Position at CIRDZ: _____

PART B: COMMUNITY PARTICIPATION IN PLANNING

1. Are communities involved in planning health activities?
   Yes [ ] No [ ]
   a) Please explain how communities are involved or why they are not involved.

2. Do communities participate in identifying health priorities?
   Yes [ ] No [ ]
   a) Describe the process used to identify these priorities.

PART C: COMMUNITY PARTICIPATION IN IMPLEMENTATION

1. Do communities participate in implementing health activities?
   Yes [ ] No [ ]
   a) In what ways do community members participate?

2. Does community participation improve service delivery?
   Yes [ ] No [ ]
   a) Please explain how or why not.

PART D: COMMUNITY PARTICIPATION IN MANAGEMENT AND GOVERNANCE

1. What is CIRDZ's framework for community health governance?

2. How does CIRDZ build the capacity of NHCs and other governance structures?

3. What accountability mechanisms has CIRDZ established between communities and health providers?

4. How does CIRDZ promote transparency in health resource management?

5. What role does CIRDZ play in community feedback and grievance mechanisms?

6. How are community representatives involved in programme monitoring and evaluation?

7. What governance challenges has CIRDZ identified in Chongwe District?

8. How does CIRDZ address power dynamics in community health governance?

9. What partnerships support community governance structures?

10. What are CIRDZ's priorities for strengthening community governance in the next 2 years?

QUESTIONNAIRE FOR COMMUNITY HEALTH WORKERS (CHWs)

Dear Respondent,

This questionnaire forms part of a research study titled:

AN EVALUATION OF COMMUNITY PARTICIPATION IN HEALTH SYSTEMS STRENGTHENING: A CASE OF THE COMMUNITY HEALTH WORKER (CHW) PROGRAMME IN CHONGWE DISTRICT, ZAMBIA

The purpose of this study is to evaluate community participation in health systems strengthening through the Community Health Worker (CHW) programme in Chongwe District.

Your responses will be kept confidential and used for academic purposes only.

Consent:
I voluntarily agree to participate in this study.

Signature: _____ Date: _____

PART A: DEMOGRAPHIC INFORMATION

1. Gender: Male [ ] Female [ ]

2. Age: 18–25 [ ] 26–35 [ ] 36–45 [ ] 46+ [ ]

3. Highest level of education:

4. Primary [ ] Secondary [ ] Tertiary [ ] Postgraduate [ ]

5. Years of service as CHW: _____

PART B: COMMUNITY PARTICIPATION IN PLANNING

1. Are communities involved in planning health activities?
   Yes [ ] No [ ]
   a) Please explain how communities are involved or why they are not involved.

2. Do communities participate in identifying health priorities?
   Yes [ ] No [ ]
   a) Describe the process used to identify these priorities.

3. How often do you conduct community consultations for health planning?

4. What role do traditional leaders play in health planning?

5. How do you balance community priorities with health facility directives?

PART C: COMMUNITY PARTICIPATION IN IMPLEMENTATION

Do communities participate in implementing health activities?
Yes [ ] No [ ]
a) In what ways do community members participate?

Does community participation improve service delivery?
Yes [ ] No [ ]
a) Please explain how or why not.

PART D: COMMUNITY PARTICIPATION IN MANAGEMENT AND GOVERNANCE

Describe your relationship and reporting structure with the NHC.

How does the NHC supervise or support your work?

What accountability mechanisms exist between you and the community?

How are community feedback and complaints processed?

What role do community members play in monitoring health outcomes?

How transparent are health resource management processes?

How do community governance structures influence your work priorities?

What challenges exist in community governance of health services?

How do you involve marginalized groups in governance processes?

What improvements are needed in community health governance?