

**PROMOTING HEALTH SYSTEMS
RESILIENCE IN THE FRAGILE CONTEXT
OF NORTHERN GHANA: A STUDY OF
COMMUNITY-BASED HEALTH PLANNING
AND SERVICES (CHPS) EFFECTIVENESS**

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ABSTRACT

In 1999, the government of Ghana adopted the Community-based Health Planning and Services (CHPS) programme as a national policy. It then launched a scaling-up initiative in 2000 to support its Universal Health Care (UHC) agenda. Since its adoption, CHPS has significantly contributed to health service delivery in Ghana, such as improved family planning and immunization coverage. Despite these gains, however, critical implementation gaps persist. Doorstep services and volunteer support, necessary for supporting population health and family planning in marginalised communities, continue to diminish and CHPS scale-up in fragile settings such as the Northern region of Ghana, where poverty is high and health indicators relatively low, is slow.

This research investigated the factors constraining the implementation and effectiveness of CHPS in the fragile context of the Northern region of Ghana using a mixed-methods research methodology. Data collection was completed in three distinct stages, comprising 1) a review of the district health information management system (DHIMS) data; 2) key informant interviews and focus group discussions (FGDs) with CHPS stakeholders at the national, regional, district, sub-district, CHPS and community levels; and 3) participatory research using group model building (GMB) in the Kumbungu and Gushiegu districts of the former Northern region.

Findings identify that the Ghanaian Government is the main contributor to CHPS infrastructure. However, nearly all participating district facilities were ill-equipped and did not have adequate equipment and medicines owing to lapses in central government funding and National Health Insurance Scheme (NHIS) reimbursement challenges. As a result, there was a general perception of neglect among community members. The participatory research findings conclude that CHPS implementation was confronted by inadequate funding to support the programme's implementation, poor community engagement and support, and diminished health worker capacity owing to gaps in training, logistics, equipment, and infrastructure. These are further compounded by the drivers of fragility resulting from high poverty levels and a vicious cycle of debt servicing.

To mitigate the identified barriers, stakeholders during the study developed a set of interventions aimed at improving CHPS effectiveness. Feedback interviews twelve months after the GMBs showed good progress for interventions targeting health worker capacity, logistics management and community engagement. Comparatively, there was more progress for community engagement interventions than interventions relating to increasing political commitment and funding. Beyond identifying the enablers for CHPS effectiveness, this study supports the argument that the concept of fragility reaches beyond situations of conflict and disasters to include systemic challenges, such as the failure of governments to provide adequate resources to foster the smooth delivery of basic health services. This is particularly so in the context of this research where funding for health services is mainly centralised in a decentralised country. Comparatively, the community engagement interventions had more progress

than the interventions for increasing political commitment and funding. In poor and marginalised settings, effective and sustained community engagement can bridge resource gaps, empower users to demand accountability from officials and contribute to resilient health systems.

Using the GMB systems thinking methodology presented a holistic approach to understanding the systemic barriers to CHPS implementation and identified enablers that can minimise their impact on the programme. This approach of bringing together community members, health workers and policymakers on a shared platform was particularly appreciated by community members who seldom share a common platform with government officials in matters of social discourse.

Keywords: fragility, Ghana, Northern region, CHPS, health systems strengthening, resilience, social cohesion, stewardship, community health workers, UHC, RMNCH.

DECLARATION

I hereby declare that this thesis, as far as I know, is an original work and that its content has not been presented for a degree award at this institution or any other. Citations are adequately provided for all content not originally owned.

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father, thank you for everything, and more importantly, for being a strong believer in Girl Child education. May your soul continue to rest in peace.

DEDICATION

I dedicate this thesis to my husband, Richard Afoblikame, and three young children, who patiently accommodated my busy schedules, regularly checked in with my deadlines and enthusiastically supported my work.

ACRONYMS AND ABBREVIATIONS

ABR	Adolescent Birth Rate
ACERS	Acute Care and Emergency Referral System
AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
CAR	Central African Republic
CM	Community mapping
CDC	Centre for Disease Control and Prevention
CHAG	Christian Health Association of Ghana
CHAP	Community Health Action Plan
CHC	Community Health Compound
CHFP	Community Health and Family Planning
CHMC	Community Health Management Committee
CHN	Community Health Nurse
CHO	Community Health Officer
CHPS	Community-based Health Planning and Services
CHPS+	National Program for Strengthening the Implementation of the CHPS Initiative in Ghana
CHV	Community Health Volunteer
CHW	Community Health Worker
Covid-19	Coronavirus Disease 2019
CRS	Catholic Relief Services
CSOs	Civil Society Organisations
CLAISS	Centro Latino Americano de Investigaciones en Sistemas de Salud
DA	District Assembly
DAC	Development Assistance Committee
DACF	District Assembly Common Fund
DCE	District Chief Executive
DHS	Demographic and Health Survey
DP	Developing Partner
DRC	Democratic Republic of Congo
DHMT	District Health Management Team

DHIMS 2	District Health Information Management System 2
DTP-HepB	Diphtheria, Tetanus, Pertussis (whooping cough), Hepatitis B and Haemophilus–Hib influenzae type b
ENAP	Every New-born Action Plan
ENs	Enrolled Nurses
EPHF	Essential Public Health Functions
EVD	Ebola Virus Disease
FGDs	Focus Group Discussions
FP	Family Planning
FDFA	Federal Department of Foreign Affairs (Switzerland)
FCAS	Fragile and Conflict-Affected States
GDP	Gross Domestic Product
GEHIP	Ghana Essential Health Intervention Project
GHS	Ghana Health Service
GMB	Group Model Building
GMHS	Ghana Maternal Health Survey
GNAS	Ghana National Ambulance Service
GoG	Government of Ghana
GSS	Ghana Statistical Service
GAR	Greater Accra
HDI	Human Development Index
HIC	High-Income Countries
HIMS	Health Information Management Systems
HIV	Human Immune Deficiency Syndrome
HRH	Human Resources for Health
HSS	Health System Strengthening
HW	Health Worker
ICT	Information Communication and Technology
IDA	International Development Association
IGF	Internally Generated Funds
IMCI	Integrated Management of Childhood Illness
IMR	Infant Mortality Rate

IPTp	Intermittent Preventive Treatment of Malaria in Pregnancy
JHPIEGO	Johns Hopkins Program for International Education in Gynaecology and Obstetrics
JICA	Japan International Cooperation Agency
KII	Key Informant Interview
LMICS	Lower-and-Middle-Income Countries
MCH	Maternal and Child Health
MCHNP	Maternal Child Health and Nutrition Improvement Project
MHP	Maternal Health Program
MDG	Millennium Development Goal
MMR	Maternal Mortality Ratio
MNCH	Maternal Newborn and Child Health
MNH	Maternal and Newborn Health
MoH	Ministry of Health
MoTeCH	Mobile Technology for Community Health
MPs	Members of Parliament
MS	Microsoft
MTN	Mobile Telephone Network
NADMO	National Disaster Management Organisation
NCDs	Non-communicable Diseases
NGO	Non-governmental Organisation
NHIA	National Health Insurance Authority
NHIS	National Health Insurance Scheme
NHI	National Health Insurance
NMR	Neonatal Mortality Rate
NR	Northern Region
NSPS	National Social Protection Strategy
OECD	Organization for Economic Cooperation and Development
1mCHW	One Million Community Health Workers
OOPE	Out of Pocket Expenditure
OOP	Out of Pocket
OPD	Outpatient Department

PAA	Population Association of American
PAHO	Pan American Health Organization
PHC	Primary healthcare
PhD	Doctor of Philosophy
PHM	People's Health Movement
PMTCT	Prevention of Mother-to-Child Transmission
PNC	Postnatal care
PP	Percentage points
PPH	Post-partum Haemorrhage
PPMED	Policy Planning Monitoring and Evaluation Division
PTB	Preterm Birth
QMU	Queen Margaret University
RCC	Regional coordinating council
RH	Reproductive Health
RING	Resilience in Northern Ghana
RHMT	Regional Health Management Team
RMNCH	Reproductive, Maternal, New-born and Child Health
SARS-Cov-2	Severe Acute Respiratory Syndrome Coronavirus 2
SDHMT	Sub-district Health Management Team
SDOH	Social Determinants of Health
SDG	Sustainable Development Goal
SERC	Sustainable Emergency Referral Care
SHS	Senior High School Education
FSHS	Free Senior High School Education
SR	Savannah Region
SSA	Sub-Saharan Africa
SSNIT	Social Security and National Insurance Trust
S4H	Systems for Health
TFR	Total Fertility rate
TTH	Tamale Teaching Hospital
TB	Tuberculosis
TBA	Traditional Birth Attendant

THs	Traditional Healers
UDS	University for Development Studies
UER	Upper East Region
UWR	Upper West
UHC	Universal Health Coverage
UNDP	United Nations Development Programme
USA	United States of America
USAID	United States Agency for International Development
UWR	Upper West Region
U5	Under 5
U5MR	Under-five Mortality Rate
UN	United Nations
UNICEF	United Nations Children Fund
VHW	Village Health Worker
WHO	World Health Organisation
WASH	Water, Sanitation and Hygiene
YLD	Years Lost to Disability

GLOSSARY OF TERMS

Adolescent Birth Rate: The annual number of births to women aged 10-14 or 15-19 years per 1,000 women in those respective age groups. It is also referred to as the age-specific fertility rate for women aged 15-19 (WHO 2018).

Adolescent Pregnancy: This measures the annual number of births to women 10-14 or 15-19 years of age per 1,000 women in those respective age group (WHO 2018).

ANC four plus attendance: Percentage of antenatal clients making at least 4 visits (GHS 2017).

Antenatal Care (ANC) Coverage: Antenatal coverage indicates access and utilization of care during pregnancy. The indicator measures the proportion of women who received care at least once during pregnancy within a year (MoH 2020).

Community-based Health Planning and Services (CHPS): CHPS is Ghana's strategy to deliver essential community-based health services to deprived sub-districts communities (MoH 2016).

CHPS Zone: This refers to a demarcated geographical area of up to 5,000 persons or 750 households in densely populated areas where CHPS services are rendered. A zone may also be conterminous with electoral areas where feasible (MoH 2016).

CHPS+: A collaborative project between Ghana Health Service (GHS), the Mailman School of Public Health of Columbia University, USA, the University of Ghana's Regional Institute of Population Studies, Ghana, the University of Health and Allied Sciences (UHAS), School of Public Health, and the University for Development Studies (UDS) implemented in the Northern and Volta regions of Ghana. The project aimed to scale up the Ghana Essential Health Interventions Programme (GEHIP) piloted in the Upper East Region in Ghana (Phillips et al. 2018).

Social Cohesion: Social cohesion refers to the solidarity of a group of people who share similar backgrounds such as norms, trust and networks that fosters a better society and ensure that citizens have equal access to fundamental social and economic rights (Jenson, 2010; Larsen, 2013, 2014; Patel & Gleason, 2018). The concept is applied in this study to understand community members' access to basic services, support for each other and trust in service providers and the Government.

Community Health Compound (CHC): CHC is an approved structure from which a CHO operates. It consists of a service delivery point and a residential accommodation complex, both of which must be present to support service delivery (GHS 2016).

Community Health Management Committee (CHMC): This is a group of community leaders with different competencies and responsibilities drawn from the CHPS community. They are volunteers who commit to providing community-level guidance and mobilisation for the planning and delivery of health activities as well as see to the welfare of CHOs in their community (GHS 2016).

Community Health Officer (CHO): A trained health worker oriented in CHPS and placed in a CHPS zone to work with communities to achieve the objectives of providing basic PHC (GHS 2016).

Community Health Volunteers (CHVs): CHVs are non-salaried community members identified and trained to support CHOs in a community within the CHPS zone (GHS 2016).

Completed Functional CHPS Zone: A completed functional CHPS zone is one in which all CHPS milestones have been met, and the CHO resides in the community (in a CHPS compound) and provides a basic package of services to the catchment population (GHS 2016).

DHIMS 2: Ghana’s DHIMS 2 was introduced by the GHS in collaboration with the University of Oslo to collect routine data that will inform health decisions. Service data are collected into one storage point from all levels, including CHPS zones (Odei-Lartey et al. 2020).

Family Planning (FP)/percentage of family planning acceptors: Proportion of women in the fertile age group who receive family planning services during the year (GHS 2017).

Fragility: Fragility occurs when the state does not honour its basic functions and when governments lack both the political will and capacity to support basic services critical for reducing poverty, ensuring development, security, and respect for human rights (Rothchild 1995; Manyena and Gordon 2015). In this study’s context, fragility is gauged by assessing the availability and adequacy of basic social amenities, healthcare and the effectiveness of CHPS.

Functional CHPS zone: A functional CHPS zone can be either *completed* or *uncompleted*. The functionality of a CHPS zone does not necessarily depend on the presence of a compound, though a CHPS Compound is *highly* desirable in a zone where there is no health centre or hospital, particularly in an underserved or “oversea area” (GHS 2016).

Government Stewardship: Government Stewardship is used in the study to mean the Government or political commitment to providing the basic needs of communities, including resourcing the CHPS programme. The term is sometimes used interchangeably with political will.

Health workforce capacity: Workforce capacity in this study’s context refers to the adequacy of staff numbers, skill mix, training and resources to support the provision of adequate and quality primary healthcare.

Home visits: This is when CHOs visit community members to trace defaulters, follow up with clients referred by a hospital after discharge, and advise and support clients with non-communicable diseases like diabetes and hypertension. CHOs are expected to visit an average of eight (8) homes a day, which represents 50% of their working time (GHS 2016).

Institutional delivery and skilled birth attendance: This is the proportion of deliveries attended by skilled staff (GHS 2017).

Maternal and Child Health and Nutrition Improvement Project (MCHNP): MCHNP is a nationwide project implemented to catalyse the utilization of maternal and child health services (Amponsah et al. 2020).

Maternal Mortality Ratio (MMR): MMR is the number of maternal deaths during a given time period per 100,000 live births during the same time period (WHO 2018).

Mobile Technology for Community Health (MOTTECH): The MOTTECH project was a collaboration between the Ghana Health Services (GHS) and Grameen Foundation to improve maternal, newborn and child health services through mobile technology. The project was implemented in 2009 in the Upper East region of Ghana.

Neonatal Mortality Rate (NMR): This expresses the probability of a child dying within 28 days of birth. It is expressed per 1000 live births (WHO 2018).

National Health Insurance Scheme (NHIS): The NHIS is one of Ghana's social intervention programmes introduced to provide financial access to quality health care for all residents (NHIA 2022).

Penta-3: This is the proportion of children under one year of age receiving Penta-3 vaccine during a year (GHS 2017).

Postnatal Care (PNC): Postnatal care is a package of care for mothers and new-borns after delivery for six weeks with the aim of providing early detection and management of potential complications (GHS, 2020).

Postnatal Care Coverage (PNC): Proportion of women who delivered and attended postpartum clinic twice within the first three days (GHS 2017).

Resiliency in Northern Ghana (RING) project: The RING project was a five-year integrated partnership under the Feed the Future (FTF) Initiative funded by the United States Agency for International Development (USAID). The project aimed to contribute to the Government of Ghana's (GOG) efforts to sustainably reduce poverty and malnutrition in poor settings including the Northern region (RING, 2019).

Total Fertility Rate (TFR): This represents the average number of children that a woman would have if she were to live to the end of her childbearing years (50 years) and bear children in accordance with age-specific fertility rates of the specified year. It is expressed as the number of children per woman (WHO 2018).

An Uncompleted Functional CHPS Zone: This is where a zone has implemented all the steps under the CHPS milestones except that it lacks a CHPS compound and/or all of the required equipment (GHS 2016).

Under-five Mortality Rate (U5MR): U5MR refers to the probability of dying by age five per 1000 live births (WHO 2018).

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CHAPTER ONE: INTRODUCTION

1.1 Research Justification

After the Millennium Development Goals (MDGs) ended in 2015, the world embraced a new set of Sustainable Development Goals (SDGs) to end poverty, protect the planet and create an environment where people enjoy peace and prosperity by the year 2030 (UNDP 2022). Embedded in the Global Goals are targets that seek to improve reproductive, maternal, newborn and child health (RMNCH) by ensuring universal access to sexual and reproductive health-care services; reducing maternal mortality ratio (MMR) to less than 70 per 100,000 live births; and ending preventable deaths among newborns and children under five years (UN Women 2022). With less than a decade to go, progress has been modest, particularly, in lower-and-middle-income countries (LMICS) and sub-Saharan Africa (SSA). In addition, fragility sources and, more recently, the Covid-19 pandemic have disrupted critical RMNCH services, with a third of countries reporting disruptions to MNCH services, which could stagnate, or reverse gains made over the years.

The vulnerability of health systems all over the world is now apparent, particularly in the wake of public health shocks and disease outbreaks. These have implications for meeting the Universal Health Coverage (UHC) and the Sustainable Development Goals (SDGs) in 2030.

Promoting health systems resilience is required to push countries towards the attainment of UHC and build the necessary capacity to adequately respond to shocks or disease outbreaks (Cairns 2015). This includes strengthening health systems with fragility in mind. Health systems resilience is the capacity of health actors, institutions, and populations to prevent, prepare for, detect, adapt to, respond to and recover from public health threats, while ensuring the maintenance of quality essential and routine health services in all contexts, including in fragile, conflict and violence settings (Kruk et al. 2017; WHO, 2021). This concept requires actors to reorganise, based on lessons learned in order to providing the adequate services. The World Health Organisation (WHO) admonishes a bottom-up approach to health systems resilience to ensure

adequate preparedness and response to public health emergencies. This involves strengthening primary health care, enhancing the skills of health workers, and engaging communities in health promotion and disease prevention, particularly in low-resource settings (WHO 2021). Community Health Workers (CHWs) are vital for low- and middle-income countries and fragile settings, where they help overcome human resource challenges. They are also key to the new community health systems that provide health care at the community and household levels. Community health workers do not only bridge the human resource gaps across countries but are a critical component of promoting systems resilience across countries. The introduction of Community Health Systems (CHS) as a subset of broader health systems is vital for ensuring that people, institutions, and resources are matched to improve population health and to meet the SDG 3 targets of strengthening the health requirements for maternal and child health, malaria, and HIV/AIDS programmes, particularly in LMICs (Schneider & Lehmann, 2016; Francis Omaswa, 2019). The activities of CHWs including providing essential and routine health services, particularly in remote areas, detecting and reporting health threats in a timely manner and effectively engaging and empowering community members in the decisions concerning their health an essential attribute of building systems resilience (Scott et al., 2018a; Gebremeskel et al., 2021; WHO, 2021b). Despite their wide recognition and positive impact on health outcomes, however, CHWs often face low quality and marginalization in health systems due to poor incentives, inadequate equipment, lack of clear definitions and support, and unsustainable programmes (Lancet Global Health, 2017; Scott et al., 2018a; Masis et al., 2021).

This thesis reports on the findings from fieldwork conducted in Ghana between 2019 and 2020 to understand the barriers and enablers to Ghana's Community Health Planning and Services (CHPS) programme's implementation and effectiveness in the fragile context of the Northern region (NR) of Ghana.

1.2 The Research Problem

Ghana has made substantial gains in its UHC agenda, which have resulted in a decline in fertility, maternal, neonatal and under-5 mortality rates. Ninety-seven per cent

(97%) of pregnant women now receive antenatal care (GSS et al. 2015; Hug et al. 2019). Despite these declines, however, many, particularly in deprived areas have no adequate access to basic health services.

Nearly half of Ghana's population lives in rural areas, where they face significant infrastructural challenges to access healthcare. According to the Ghana Statistical Service, Ghana had a population of about 30.8 million in 2021, and about 41.1% of them resided in rural communities (GSS, 2021). This means that nearly 12.7 million people lacked adequate access to modern health facilities, specialist personnel, affordable insurance, and reliable transportation and communication systems. which are often concentrated in big cities and urban areas (Peprah et al., 2020; GSS, 2021). The country's health system is faced with a myriad of challenges including inadequate funding, human resources infrastructure and good governance, which poses a threat to building resilient health systems (Kweku et al. 2020). The National Health Insurance Scheme and Community-based Health Planning and Services Programme (CHPS) were introduced with aim to push the country towards its UHC agenda and improve reproductive, maternal and newborn health (RMCH).

The CHPS programme was introduced to improve access to health care in Ghana. The programme involves relocating community health workers to work with community members and provide key health services, especially RMNCH. Despite the exponential growth of CHPS in Ghana, however, there remain critical implementation gaps and diminishing effectiveness. The CHPS programme faces several challenges that affect the quality of health service delivery. These include high staff turnover, low staff motivation, and insufficient staff with the skills, qualifications, and experience needed to meet the health needs of the population (Ministry of Health (MoH) 2007; Ghana Statistical Service (GSS) 2008, 2012; Shiratori et al. 2016). Atinga et al. (2018) noted that poor service conditions contribute to poor staff behaviours such as frequent lateness to work, absenteeism and discrimination towards patients, which often limits access to care. Indeed, Nyonator et al. (2005) and Stone et al. (2014) argued that CHPS lost its priority of adequately meeting the basic health needs of deprived populations following its adoption as policy (Nyonator et al. 2005; Stone et al. 2014). The CHPS

programme is not as effective as it could be, partly because the guidelines for its implementation are not well communicated and understood. Different regions and leaders have different interpretations of key terms and concepts in the guidelines. In addition, key implementation gaps include diminishing doorstep services, community engagement activities, community volunteerism, inadequate human and financial resources and supervision that minimise the impact of CHPS on population health and family planning (Nyonator et al. 2005; Stone et al. 2014). Emphasis on the construction of community health compounds (CHCs) (ie., village clinics where community health nurses live and operate) as the basis for scaling up CHPS undermines the role of community mobilisation and involvement to sustain progress (GHS 2016).

Community health volunteer (CHV) services vary greatly, with services dependent on externally funded initiatives (GHS 2016). Similarly, Community Health Management Committees (CHMCs), formed to cater for the welfare needs of community health officers (CHOs) and CHVs, are either inactive or not trained in 65 per cent of CHPS zones (MoH 2016). Despite an increasing prevalence of chronic non-communicable diseases (NCDs) among Ghana's population and growing evidence that task-shifting¹ at the community level (even among CHWs, without formal professional training) can contribute to effective screening and management of patients at the community level, the community health programme is yet to fully incorporate these key services into its service package (De-Graft Aikins et al. 2012; Addo et al. 2012, 2013; Gaziano et al. 2015). These challenges inhibit the effective implementation and scale-up of CHPS for improving health outcomes and building a resilient community health system across Ghana.

CHPS scale-up and implementation challenges are more acute in the Northern region (NR) of Ghana, one of Ghana's fragile regions. The region is a focus of fragility in terms of multiple challenges such as high poverty levels, low political will and inadequate access to education, health services, and key infrastructure (Bliss and Streifel 2014; World Bank 2020).

¹ Task-sifting is a strategy recommended by the WHO to address the shortage and uneven distribution of health workers, especially in low- and middle-income countries (WHO 2008b)

Underdevelopment in this region is partly because of unfavourable historical and political factors over the years, contributing to extreme inequalities across sectors including health (Aikins and Koram 2017; Abdulai et al., 2018; Aboagye & Bolt, 2018; Gatwiri et al., 2020; Addi & Ayambire, 2022). The region's weak and under-resourced health system has implications for the quality and affordability of health services particularly in rural areas. Despite the potential of CHPS to deliver key services to the region's most distant and deprived areas, barely half of CHPS zones are functional (Phillips J.F. et al. 2016; Bassoumah et al. 2021).

There is currently a lack of evidence on how CHPS can be strengthened to enhance the resilience of the community health system in the Northern region, and how this can help achieve Ghana's UHC and RMNCH agenda. Therefore, this study seeks to understand the factors that will promote health systems resilience in the fragile context of the Northern region of Ghana by reviewing the effective implementation of the CHPS programme.

1.3 The Research Aims Objectives and Questions

The overall aim of this study was to investigate factors constraining the implementation and effectiveness of CHPS in the fragile context of the Northern region of Ghana and identify strategies to address the identified barriers. Specific objectives were to:

1. map progress in the implementation of CHPS in selected districts of the Northern region;
2. identify barriers and enablers to CHPS implementation in these settings using the analytic framing of fragility; and
3. use the above analyses to explore potential systems interventions to enhance the quality and utilisation of priority services in this context.

The first research objective aimed to map progress in the implementation of CHPS in selected districts of the Northern region, and to determine if it improved the service indicators.

The Northern region was considered because of the lowest CHPS coverage and health outcomes compared to other regions in Ghana. The research examined how the implementation of CHPS impacted service indicators for reproductive, maternal, newborn, and child health (RMNCH) over time. These indicators reflect the core components and objectives of the CHPS programme, which aims to provide accessible, affordable, and quality primary health care for rural communities. The research hypothesized that the effective implementation of the CHPS guidelines with a corresponding increase in functional zones² would improve health indicators in the Northern region.

The second objective of this research aimed to understand the barriers and enablers to CHPS implementation in study areas using the analytic framing of fragility. CHPS implementation and utilization vary across different regions and districts in Ghana, which is largely dependent on the availability of resources, the level of community participation, as well as the quality-of-service delivery. It is therefore important to understand the barriers and enablers to CHPS implementation in the Northern region of Ghana, which faces unique challenges including poverty and conflict. These challenges can affect the health system's performance and contribute to the fragility that undermines the achievement of UHC and SDGs in this setting. Using the analytic framing of fragility will enable the research to explore how the CHPS programme responds to the complex and dynamic needs of the population, and how it can be adapted and strengthened to overcome contextual challenges for improved health outcomes.

The final objective aimed to use the analyses from the first two objectives to explore potential systems interventions to enhance the quality and utilisation of priority

² A functional CHPS zone is when all the CHPS milestones have been completed, and that the CHO lives in the community (in a CHPS compound) or conducts outreach activities to offer a basic package of services to the people in a particular catchment area (GHS 2016a).

services in this context. This provides evidence-based and context-specific recommendations for improving the performance and resilience of the CHPS programme and the health system in this study area. By exploring the possible interventions that can address the barriers and leverage the enablers to CHPS implementation, this objective can contribute to the development of effective and sustainable strategies for achieving universal health coverage and the sustainable development goals in study context. This research therefore aimed to understand the challenges to CHPS effectiveness using the lens of fragility guided by the following research questions:

Main research questions:

What are the factors constraining the implementation and effectiveness of CHPS in the fragile context of the Northern region of Ghana?

Specific questions:

1. What is the progress of CHPS in selected districts of the Northern region?
2. What are the barriers and enablers to CHPS implementation using the analytic framing of fragility in these settings?
3. What are the potential systems interventions that might enhance the quality and utilisation of priority services in this context?

1.4 Structure of Thesis

This document consists of ten Chapters, with the first one presenting the study problem and objectives. The next two Chapters review the literature on fragility and health systems strengthening from global perspectives and existing frameworks. The third Chapter gives an overview of Ghana's health system and primary healthcare structure, focusing on the CHPS programme in the Northern Region. The fourth Chapter explains the research design and methodology. The following three Chapters report the study findings according to the data collection sequence and the research questions. The fifth Chapter describes the findings from the first phase of data collection, which examines the progress of CHPS service outcomes (reproductive, maternal, newborn and child health) in research sites. The sixth Chapter - phase two - analyses the

stakeholder perspectives on the barriers and enablers of CHPS effectiveness based on interviews and FGDs. The seventh and eighth Chapters - phase three - present the details of a participatory research that resulted in proposed interventions and feedback. The final two chapters discuss and conclude the document respectively.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This thesis uses various concepts and theories to analyse the study of health systems strengthening in fragile contexts. The literature review begins with a global overview of RMNCH and the progress and disparities among different countries in section 2.2. It then examines some of the structural and systemic barriers that hinder access to health services in section 2.3. Next, it explores the role of health systems strengthening in achieving the health targets in section 2.4. Finally, it reviews the concept of fragility and the importance of community health systems for promoting universal health care access, especially in fragile settings in section 2.5.

2.2 A Global Picture of Maternal Neonatal and Child Health (MNCH)

The world has seen improvements in RMNCH outcomes over the past 50 years, with global and national strategies contributing to these successes. In 2010, a global strategy for women's, children's and adolescents' health (2010 to 2015) was introduced to galvanise political support, raise resources, and promote a multi-stakeholder collaboration for adolescents, women and children's health. The strategy contributed to the MDGs successes. For instance, by the end of 2015, most LMICs had increased access to contraception, reduced maternal and child mortality and malnutrition and increased action for combating HIV/AIDS, malaria and tuberculosis (WHO 2016). According to the WHO, skilled health personnel in developing countries increased from 56% in 1990 to 68% in 2012 (Lazzerini et al. 2019). Despite these gains, however, at the end of the MDGs, there were still 289,000 maternal deaths; 2.6 million stillbirths and 5.9 million deaths recorded among children under the age of five years (including 2.7 million newborn deaths) and 1.3 million adolescent deaths (UNDP Ghana 2015). To galvanise action against preventable deaths and ensure that women and girls thrive to realise their full potential, an updated global strategy (2016-2030) was developed. It aimed to accelerate momentum for women's, children's and adolescents' health and help countries achieve the 2030 Agenda for Sustainable Developments (Every Woman Every Child 2015) (Kuruvilla et al. 2016). The WHO

further proposed eight principles and considerations (listed below) for improving the quality of care for women and newborns throughout pregnancy, childbirth and the immediate postnatal period. These are:

1. Respectful maternity care
2. Effective communication
3. Evidence-based practices
4. Competent and motivated human resources
5. Essential physical resources
6. Functional referral systems
7. Effective leadership and management
8. Continuous improvement and learning (WHO 2016).

These interventions have catalysed progress across countries but does cut across all sectors of healthcare, and many countries still struggle in their bid to meet the demands for primary healthcare (Bradley et al., 2015; Roth et al., 2018a;). According to The Lancet, no country is on track to meet the SDGs targets by 2030; access to MNCH services such as family planning, vaccines, malaria and HIV treatments barely cover a third of women and children who need them the most (UNICEF and WHO 2015; Roth et al. 2018; The Lancet 2018).

Africa continues to top the fertility chart at 4.7, compared to 2.5 children per woman globally. Of the projected 9.7 billion people in 2050, a quarter is expected to come from the continent (United Nations (UN) 2015). These statistics pose a significant challenge, not only for an already struggling continent, but also for attaining the SDGs, which requires continuous research and innovation around the best means to provide quality and affordable healthcare.

Health service access barriers go beyond health systems challenges to include individual, socio-economic and environmental circumstances of women and their households. Fan et al. (2021) highlighted that the utilisation of maternal care was primarily determined by geographical location, religion, ethnicity, education, income, and parity, among others. Access is adversely impacted by the low political will among

policymakers to implement reforms that improve service delivery and access (WHO 2021). The onset of the Covid-19 pandemic in 2019 has and would further confine advancement in most health indicators as authorities focus on preventing and managing the virus (UNICEF 2020; WHO 2020). As with other causes, fragility has been associated with some of the world's global health challenges. The interface between fragility and health systems performance plays out in several ways but is revealed mainly in poor health indicators. For example, between 1990 and 2015, 70 per cent of the countries with the highest infant mortality rate (IMR) and 14 of the 20 countries with the least reduction in MMR were fragile (Ager, 2019). Understanding the drivers of fragility is critical for a health system's functionality.

2.2.1 Neonatal and U5 Mortality

Under-five mortality rate (U5MR) refers to the likelihood of a child dying between birth and age five. Neonatal mortality rate (NMR) on the other hand expresses the probability of a child dying within 28 days of delivery (United Nations Children's Fund [UNICEF] 2020; WHO 2020a). Although between 1990 and 2015, U5MR fell by about 60 per cent (from 93 to 38 deaths per 1,000 live births), neonatal mortality saw a modest reduction. By 2019, NMR decreased from 37 in the 1990s to 17 deaths per 1,000 live births (UN Department of Economic and Social Affairs (UN-DESA) 2015; UNICEF 2020). As of 2019, most (122-136) of the 204 WHO countries had reduced U5MR lower than the SDG 3.2 target of 25, alongside, 133 (65%) others lowered NMR below the target of 12. Nonetheless, in 2019 alone, about 5.2 million children under five lost their lives, 47 per cent of whom were in their first month of birth. Thus, on average, 14,000 children died daily in 2019. It is worth indicating that these statistics, however, remain significantly lower than the 34,000 daily deaths (12.5m in total) in the 1990s, highlighting that significant progress has been made over the years. Contrastingly, almost half (47%) of under-five mortality are neonatal deaths, which is higher than 40 per cent in the 1990s (Paulson et al. 2021a; UNICEF 2020). Africa continues to record the highest under-five mortality rates since the 1990s. In 2019, sub-Saharan Africa (SSA) recorded the highest U5MR of 76 deaths per 1,000 live births. It is estimated that 48 million children under five (half of them neonates) will die between 2020 and 2030. In fragile countries, the U5MR is three times higher than

the global average. These rates are significantly higher for boys (40) than for girls (35) (UNICEF 2020; WHO 2020).

Globally, the years lost to disability (YLD) rate among neonates (0-27 days) was 30 per 1000 population; that of infants (28 days-11 months) and young children (1-4 years) was 42 per 1000 population each in 2016. The highest all-cause YLD rates occurred among male-neonates (0-27 days), infants (28 days-11 months), children (aged 1-4 years) and adolescents (10-19 years) in African and LMICs (Guthold et al. 2021).

The leading causes of under-five mortality besides preterm birth and intrapartum-related complications are associated with pneumonia, diarrhoea and malaria, often exacerbated by malnutrition. Up to half of these are preventable with adequate access to quality antenatal care, skilled birth attendance, postnatal care, vaccination, and treatment. Despite the known causes and the tremendous efforts towards improving MNCH worldwide, however, nearly 90 per cent of countries in SSA are projected to miss SDG 3.2 (UNICEF and WHO 2015; UNICEF 2020; WHO 2020).

2.2.2 Adolescent Pregnancies

Motherhood in adolescence can be detrimental to both adolescent girls and their children. High adolescent fertility remains a concern in certain parts of the world. As of 2015, the adolescent birth rate (ABR) in Africa was the highest at 98 births per 1,000 women aged 15-19 years (UN-DESA, 2015). The ABR fell from 56.4 in 2000 to 41.2 per 1,000 women aged 15-19 in 2020, with Central and Southern Asia recording the highest globally (UN 2021).

2.2.3 Maternal Mortality

The global maternal mortality ratio (MMR), according to UNICEF (2021), fell from 342 maternal deaths per 100,000 live births in 2000 to 211 (or 295,000 in absolute terms) in 2017. This notwithstanding, the MMR in SSA (564) remains the highest globally (Hug et al., 2019). The typical cause of maternal mortality is haemorrhage, which accounts for over a quarter of all maternal deaths. Other common causes include

hypertensive disorders (e.g., eclampsia), sepsis, embolism and unsafe abortion. The WHO (2021a) attributes half of the maternal deaths in LMICs to poor quality of maternal care. Maternal health and child health are inextricably linked, which require equal attention and investments. For instance, adverse childhood experiences are risk factors for preterm birth (PTB) later in life (Sulaiman et al. 2021). A healthcare system is therefore most effective if it comprehensively addresses both the needs of the mother and child.

2.2.4 Antenatal Care (ANC)

The WHO recommends at least eight contacts between pregnant women and service providers throughout pregnancy. The first contact is recommended at 12 weeks of gestation, with successive ones at 20, 26, 30, 34, 36, 38 and 40 weeks of pregnancy (WHO 2016). Between 2015 and 2020, 87 per cent of women had at least one antenatal contact with healthcare providers, while about 60-64 per cent made four or more contacts. SSA has the least (13%) uptake of four or more ANC visits (WHO 2016; UNICEF 2021). Robertson et al. (2020) predicted that disruption to ANC services - including management of preeclampsia and hypertensive disorder; intermittent preventive treatment of malaria in pregnancy (IPTp) and insecticide-treated nets or indoor residual spraying; malaria case management; micronutrient supplementation and tetanus toxoid vaccination - could contribute 16-22 per cent excess in maternal mortality in LMICs each month.

2.2.5 Postnatal Care (PNC)

Postnatal Care starts with a 24-hour observation of both mother and child after a healthy baby is born through an uncomplicated delivery in a health facility (WHO 2014). The WHO recommends at least four PNC contacts (either at a health facility or through home visits) in the first six weeks of delivery, regardless of the place of birth (WHO 2014). However, barely a tenth (13%) of women who deliver outside health facilities receive a PNC visit within two days (The Partnership for Maternal 2006).

2.2.6 Institutional Delivery and Skilled Birth Attendance

Globally, coverage of skilled deliveries stands at 83 per cent of births, representing a 17 per cent increase from 2007 (UN 2021). The WHO reports that about 80 per cent of births occur in health facilities worldwide, which offers an opportunity to provide essential newborn care. This notwithstanding, most of these mothers are discharged before the recommended 24-hour observation after birth, missing the timely detection of ensuing emergencies (WHO 2021).

2.2.7 Family Planning (FP)

The UN (2021) reported that the percentage of women of reproductive age (15–49 years) who have had their family planning needs met through modern contraceptives remained unchanged at 77 per cent since 2015. The report however showed that over a third (35%) of countries had reported disruptions to MNCH services, which could stagnate, or reverse gains made over the years. It is estimated that reduced contraceptive use due to disruption caused by Covid-19 contributed to between six and seven per cent more of maternal mortality each month (Robertson et al. 2020).

The above statistics show that RMNCH indicators have improved substantially in LMICs. However, they are still much lower than the global averages. More women are using antenatal care and giving birth in health facilities. This shows that they want to access care, but there may be challenges to get good quality healthcare.

2.3 Challenges to Maternal Newborn and Child Health

The causes of maternal mortality are widely known and primarily preventable. Structural and systemic barriers limit access to quality healthcare and stifle the achievement of RMNCH indicators. Inadequate funding, infrastructure (including water and sanitation), human resources for health, and sub-quality services (including ineffective referral systems), particularly in conflict-affected and other fragile settings, are commonly cited challenges. In addition, fragile settings tend to have fragmented, project-based interventions that are not institutionalised in the health system. Other challenges such as poor leadership and data quality issues within the health system and the broader political landscape undermine progress in service provision (WHO 2021).

Low- and middle-income countries lag in most targets aimed at improving health outcomes for mothers and children. This is a challenge that might affect the success of the Sustainable Development Goals, including improved health and wellbeing. To address the problems related to service provision and access, institutions have used various health systems frameworks, including the WHO's health systems strengthening building blocks in 2007.

2.4 The Role of Health Systems Strengthening

Health systems strengthening (HSS), defined as a significant and deliberate effort to improve a system's performance, aims to improve, maintain, or restore the health of a given population and germane for achieving the SDGs as shown in **Error! Reference source not found.** below (Kieny et al. 2017).

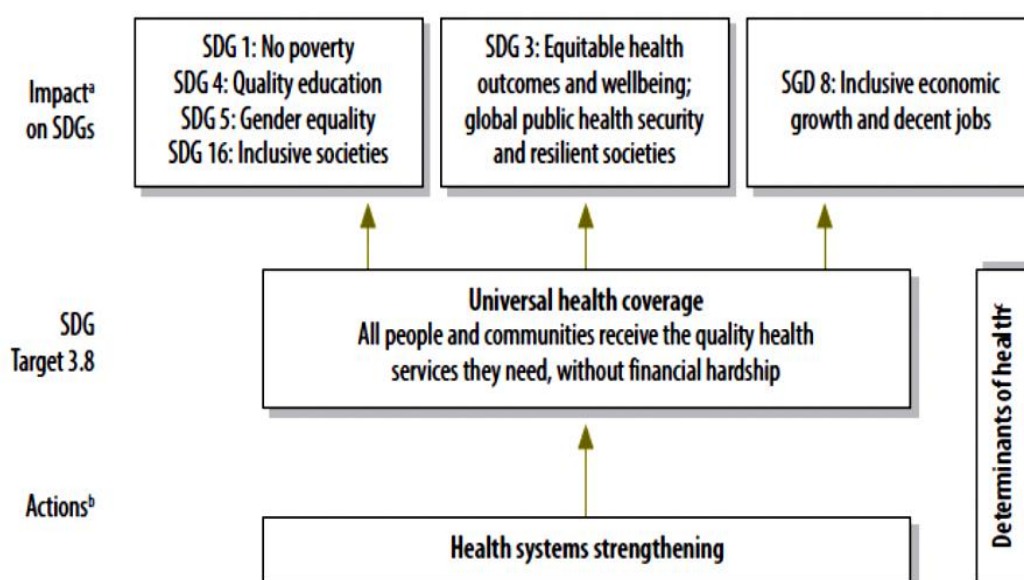


Figure 2.1: How Health System Strengthening Contributes to the SDGs through UHC

Source: (Kieny et al. 2017)

As indicated already, global health indicators have improved over the years, including a considerable decline in under-5 mortality by 60% (WHO 2022). This notwithstanding, some of these gains, like poverty levels, are receding, with COVID-

19 projected to worsen the current situation (SDG Indicators, 2022). Inadequate insurance coverage for many in LMICs remains a growing threat to achieving the SDG 3 agenda of good health and well-being. Costly healthcare is estimated to aggravate marginalised populations' physical and mental health amidst climate change, rising inequalities, and widespread corruption. These events can spur social unrest and leave vulnerable people in precarious situations (Landry et al. 2021). Strengthening health systems is, therefore, pivotal to sustaining gains made towards the global health targets and to achieve the UHC agenda.

The need for HSS became compelling following the ineffectiveness of investments in vertical programmes, which often target specific diseases or interventions to the neglect of broader health systems functionality (Balabanova et al. 2010; Witter et al. 2019). Health systems strengthening initiatives aim to improve key functions of the health system for better health outcomes through improved access, coverage and service quality or efficiency (WHO, 2010a; Witter et al., 2019). Chee et al. (2012) add that HSS moves beyond filling gaps in the system to supporting a permanent functionality of the system for better outcomes (Chee et al. 2013). The WHO's proposed framework for measuring health systems (also known as the "building blocks") encompasses six core components. These are (i) service delivery, (ii) health workforce, (iii) health information systems, (iv) access to essential medicines, (v) financing, and (vi) leadership/governance (WHO, 2010a) (see **Error! Reference source not found.**). Of the building blocks, leadership/governance and health information systems are cross-cutting components that inform policy and regulation of the blocks. Financing and health workforce make up the input components. Medical products and technologies and service delivery make up the expected outputs of the system.

Table 2.1: Health Systems Strengthening Building Blocks

THE SIX BUILDING BLOCKS OF A HEALTH SYSTEM

- Good **health services** are those which deliver effective, safe, quality personal and non-personal health interventions to those that need them, when and where needed, with minimum waste of resources.
- A well-performing **health workforce** is one that works in ways that are responsive, fair and efficient to achieve the best health outcomes possible, given available resources and circumstances (i.e. there are sufficient staff, fairly distributed; they are competent, responsive and productive).
- A well-functioning **health information** system is one that ensures the production, analysis, dissemination and use of reliable and timely information on health determinants, health system performance and health status.
- A well-functioning health system ensures equitable access to essential **medical products, vaccines and technologies** of assured quality, safety, efficacy and cost-effectiveness, and their scientifically sound and cost-effective use.
- A good **health financing** system raises adequate funds for health, in ways that ensure people can use needed services, and are protected from financial catastrophe or impoverishment associated with having to pay for them. It provides incentives for providers and users to be efficient.
- **Leadership and governance** involves ensuring strategic policy frameworks exist and are combined with effective oversight, coalition-building, regulation, attention to system-design and accountability.

Source: WHO (2009b)

The framework has been critiqued, with some HSS scholars arguing that the absence of key components (such as community engagement) that might influence peoples behaviours can limit the use of health-care services (WHO, 2010a). Moreso, using these building blocks in isolation without recourse to the fragile contexts of certain countries can pose a threat to meeting UHC.

2.5 The Concept of Fragility

Fragile and Conflict-Affected States (FCAS) are classified as countries with low health and development outcomes and are less likely to meet the SDG targets. According to the World Bank classification of FCAS, these countries, now 39 in total (See **Error! Reference source not found.**2), experience low levels of economic development and protracted conflict or high levels of population mobility, rendering their populations vulnerable (The World Bank 2022).

Table 2.2: List of Fragile and Conflict-affected Situations

HIGH-INTENSITY CONFLICT	MEDIUM-INTENSITY CONFLICT	HIGH INSTITUTIONAL AND SOCIAL FRAGILITY
Afghanistan Somalia Syrian Arab Republic Yemen, Rep.	Burkina Faso Burundi Cameroon Central African Republic Chad Congo, Dem. Rep. Ethiopia Haiti Iraq Libya Mali Mozambique Myanmar Niger Nigeria South Sudan	NON-SMALL STATES Congo, Rep. Eritrea Guinea-Bissau Kosovo Lebanon Papua New Guinea Sudan Venezuela, RB West Bank and Gaza (territory) Zimbabwe
HIGH-INTENSITY CONFLICT (INTERNATIONAL) Armenia Azerbaijan		SMALL STATES Comoros Kiribati Marshall Islands Micronesia, Fed. Sts. Solomon Islands Timor-Leste Tuvalu

Source: (The World Bank 2022).

The concept of fragility gained prominence in the 1990s through Madeleine Albright and others at the United Nations. Many have attributed fragility to a failing, weak, quasi-or crisis state (Gros 1996; Manyena and Gordon 2015). As there is currently no universal definition for fragility, the concept has been interpreted differently by different authors, many of whom point towards Zartman's definition (Manyena & Gordon 2015). Zartman (1995) posited that fragility occurs when the state does not honour its basic functions. In fragile states, governments lack the political will and capacity to support the provision of essential services critical for reducing poverty and ensuring development, security, and respect for human rights (Manyena and Gordon 2015). According to Erismann et al. (2019), most policymakers and donors, including the World Bank, ascribe fragility to poor state performance, translated as weak state capacity and legitimacy, which exposes populations to a variety of threats and shocks such as extreme poverty, insecurity, and lack of essential services (Erismann et al. 2019; FDFFA 2021). Thus, governments' failures affect majority of their people, especially the poor. These countries often have the worst health indicators and weakest health systems that threaten the achievement of UHC (The PLoS Medicine Editors

2011). Despite receiving billions of dollars in aid, fragile countries are confronted with malnutrition, lack of clean water, and a high under-5 mortality rate, among others (Woodward et al. 2016).

The causes of fragility, range from active violent conflict to inadequate provision of essential public services and breakdowns in social contracts between citizens and their central structures (Manyena and Gordon 2015). For example, in Beirut, Lebanon, fragility is imbedded in political instability, poor governance and financing challenges, declining economic activities with Syria, deteriorating security systems and inadequate social services such as repeated shocks to the health system following the influx of Syrian refugees (van Vliet and Hourani 2014; Ammar et al. 2016; Noubani et al. 2020). Fragility owing to the absence or inadequacy of public services weakens the link between communities and their health systems (Ager et al. 2019; Diaconu et al. 2020; Noubani et al. 2020). Erismann et al. (2019) conclude in their conceptualisation and contextualisation of fragility that the primary drivers of fragility include governments' inability or unwillingness to provide basic services, foster inclusive citizen participation, extreme dependence on external aid and a loss of social cohesion and communal spirit.

It is arguable that, fragility goes beyond situations of conflict, natural disasters and disease outbreaks to include conditions that may operate at the sub-national level within a country that would otherwise not be considered fragile. In this case, the underlying criteria suggested for determining fragility are effectiveness and legitimacy. An authority (at national, district or sub-district levels) is *legitimate* when it is willing and able to provide the basic services and security needs of its people, and *effective* when it maintains these successes. These fundamental elements (legitimacy and effectiveness) are interrelated in that a government's lack of capacity or unwillingness to appropriately provide the basic needs of its people, such as food, water, shelter, sanitation, health, and security betrays the latter's trust and renders the former ineffective (Newbrander 2007). These characteristics are akin to the immediate aftermath of a place or an area experiencing violence, or a natural disaster. It is therefore plausible that, besides the presence of conflicts, disasters and disease

outbreaks, fragility can be caused by stagnation, consistent underperformance, the collapse of a government or the breakdown of civil society, resulting in no or inadequate basic services (Newbrander 2007).

2.5.1 Fragility in Health Systems Context

Diaconu et al. (2020) detailed five distinct applications of the concept of fragility in the global health landscape. First, fragility is linked to security-related stressors where conflict or unrest depletes public health systems. Second, the term is applied in situations of chronic stressors underpinned by under-resourced and underperforming health systems following years of neglect and limited investment in health systems, which renders many governments unable to meet the health needs of vulnerable and marginalised groups. Fragility is also linked to inadequate financing and poor governance, evident in situations such as misuse of funds and corruption, which often limit funding/support available for healthcare services. In conflict-stricken states, for instance, poor governance limits the optimal use of external support whereas in stable countries inter-sectoral collaboration and the formation of policies that may otherwise promote health care are limited. The concept is further used to describe population-level fragility, where specific populations remain vulnerable because of violence and other tensions. This is evident in the recent Afghan crisis, where many were left vulnerable (Quadri et al. 2022). Fourth, and more specific to stable countries, the concept is attributed to situations where individuals lack the capacity to remain self-sufficient. Finally, fragility is interpreted as a breakdown between community and health systems, where the latter lacks the requisite knowledge/resources to deliver health services and/or when services do not meet the cultural norms of beneficiaries (Diaconu et al. 2020).

Overall, fragility stems from conflict, natural disasters, and catastrophic disease outbreaks but also include factors that compromise the effectiveness of a health system (such as poor governance, inadequate health infrastructure and health worker challenges) or weak “community coping or health capacities”, including illiteracy and poverty (Diaconu et al. 2020). These interpretations offer an additional lens through which we can understand the reasons behind poor health outcomes in specific settings.

2.5.2 The Impact of Fragility on Health Systems and Maternal, Newborn and Child Health

Fragility of any kind ultimately poses negative consequences to health systems, affects the health of ordinary people and can be daunting for health service providers and implementers alike. In fragile settings, health systems are unable to absorb shocks due to inadequate funds, a dearth of skilled health workers; poorly trained and remunerated workforce, poorly maintained facilities, and unreliable information (OECD 2008; WHO 2010b). They also lack essential drug supplies, have inadequate infrastructure, poor capacity-building mechanisms; and inadequate coordination and supervision by their governments (OECD 2020; Erismann et al. 2019; Newbrander et al., 2011). Beyond meeting the basic health needs of communities, recent pandemics including Ebola and Covid-19 highlight an urgent need to review the frameworks for health systems strengthening beyond the provision of essential health services.

When the Ebola virus outbreak hit Africa in 2014-2016, more than 10,500 people died (as of 2015). An evaluation of affected countries (Guinea, Sierra Leone and Liberia) found fragilities in health systems, which limited their capacity to handle the public health emergency while providing routine health services (WHO 2015, 2021). All in all, the affected countries lacked an adequate and well-trained health workforce, sufficient medical supplies, well-equipped infrastructure, sufficient funds and a robust public sector to deliver routine health services in an outbreak (Cairns 2015).

As of August 9th, 2022, an estimated 6.42 million lives had been lost to Covid-19 or SARS-Cov-2 (1,458 in Ghana) (WHO 2022). The pandemic sent unforeseen shocks down health systems, even for those notably robust. Existing literature shows that several health systems were fragile and struggled to deliver appropriate RMNCH interventions even before the pandemic. Covid-19 made the fragile health systems collapse and this caused more maternal and child deaths, undoing the advances towards the health and well-being goal of SDG 3 in LMICs (Robertson et al. 2020; Agbozo and Jahn 2021; WHO 2021). Recent studies support that RMNCH services, including antenatal care, family planning and immunisation, reduced in 2020. In

Ghana, for instance, service (DHIMS 2) data showed declining maternal health indicators between 2019 and 2020 in the region with the highest covid-19 case count (Agbozo and Jahn 2021). It is estimated that the inability of health systems to function correctly could lead to an increase in both maternal and U5 mortalities between 8.3–38.6 per cent and 9.8–44.7 per cent, respectively, per month. Coverage of obstetric interventions such as administration of uterotonics, antibiotics, anticonvulsants, and clean birth environments could reduce by 39–52 per cent in less than a year and contribute to 60 per cent of projected maternal deaths. Among children, wasting is expected to increase due to the fragility of health systems aggravated by Covid-19 and would account for 18–23 per cent of additional child deaths in LMICs. Access to antibiotics and oral rehydration solution is also projected to fall, resulting in about 41 per cent of additional child deaths (Robertson et al. 2020). The UN's (2021) report on the SDGs denoted that South Asia's disruptions to health services due to Covid-19 contributed to about 228,000 excess child mortality and 11,000 excess maternal mortality in 2020. The diversion of resources to combat Covid means fewer resources are now available for services such as maternal and child health, a key area that requires urgent attention to reverse poor outcomes particularly in fragile settings (Ahmed et al., 2021; Hossain et al., 2021). Thus, the drivers of fragility, whether at the health systems or community level, must be addressed to adequately deliver basic health services and promote equal access across countries (Diaconu et al. 2020). Promoting health systems resilience is required to propel the attainment of UHC and build the necessary capacity to adequately respond to shocks or disease outbreaks (Cairns 2015), which includes strengthening health systems with fragility in mind.

The concept of resilience is widely used in disaster risk reduction but has recently been applied to the global health landscape to promote health systems effectiveness particularly in the wake of pandemics, conflicts and widescale natural disasters, which have the potential to negatively impact the quality of health care and derail the UHC agenda of affected countries (Rodin 2015; WHO 2021). Resilient health systems are positioned to support good health outcomes, including during and after a crisis. Because of their composition, they are expected to offer positive health outcomes in both good and bad times (Kruk et al., 2017). By promoting resilience, institutions and

health actors aim to prepare and recover from unforeseen shocks, while ensuring adequate access to primary healthcare services (Haldane et al. 2021). Kruk et al define health system resilience as;

“...the capacity of health actors, institutions, and populations to prepare for and effectively respond to crises; maintain core functions when a crisis hits; and, informed by lessons learned during the crisis, reorganise if conditions require it.” (Kruk et al. 2017, p. 2).

Over the years, the conceptualisation and measurement of health systems resilience have been interpreted differently by different researchers. Whereas some scholars argue that resilience can be measured using health systems indicators including coverage, quality, efficiency, equity and the system’s responsiveness, others opine that the concept is the complex adaptive system that emerges overtime from the interaction and behaviours of different actors of the health system (Biddle et al. 2020; Saulnier et al. 2021). These arguments have raised questions of whether to invest in emergency preparedness or strengthen overall health systems functionality to promote resilience (UNICEF 2021). In a recent publication, Oxfam recommended six main foundations for promoting health systems resilience: 1) an adequate number of trained health workers, 2) available medical supplies, 3) robust health information systems, 4) well-equipped health facilities (infrastructure), including access to clean water and sanitation, 5) adequate financing and 6) a robust public sector to deliver equitable, quality service (Kamal-Yanni 2015) These are equally standard to operate any health system, and raise questions of whether additional components for promoting community health systems resilience are required.

While fragility is the exposure to a high level of risk and the lack of capacity (particularly from a government’s ineffectiveness and illegitimacy) to cope and reduce risks, resilience is the ability of a system or community to either resist, absorb, accommodate, or recover from the effects of a shock in a timely manner. These two concepts are not mutually exclusive, as both occurrences can happen at different times over time. Resilience is therefore not the absence of fragility, but the readiness of a system or community to either absorb or recover from a shock in a timely manner. A community can be resilient in some aspects but fragile in another. For example, in

Pupua New Guinea, the sources of fragility do not only stem from conflict but from poor governance, economic inequality, intercommunal and gender-based violence, the effects from climate change and limited adaptive capacity to shocks (Strouboulis et al. 2022). Therefore, a system's fragility or resilience should be nuanced and informed by the contextual factors surrounding a particular event or occurrence. This is the reason why preparing health systems to mitigate shocks is required.

2.5.3 The Role of Community Health Systems in Systems Resilience

Community health systems are a critical component of promoting systems resilience across countries. Years after the Alma Alta Declaration to propel UHC, many of the world's vulnerable still have no adequate access to essential health services. There are health worker shortages globally, and community health workers (CHWs) are frantically required to meet healthcare demands across nations (Jerome & Ivers, 2010; Pfaffmann Zambruni et al., 2017; Lancet Global Health, 2017). The introduction of Community Health Systems (CHS) as a subset of broader health systems is vital for ensuring that people, institutions, and resources are matched to improve population health and to meet the SDG 3 targets of strengthening the health requirements for maternal and child health, malaria, and HIV/AIDS programmes particularly in LMICs (Francis Omaswa, 2019; Schneider & Lehmann, 2016). Schneider & Lehmann (2016) define a community health system as:

“...the set of local actors, relationships, and processes engaged in producing, advocating for, and supporting health in communities and households outside of, but existing in relationship to, formal health structures.” (Schneider & Lehmann, 2016, p. 113).

Despite being widely recognised, CHWs, according to the Lancet, are still found in grey areas at the fringes of health systems and are undefined and unsupported to adequately support the achievement of health goals (Lancet Global Health 2017). The majority of CHW programmes are not well embedded into formal health systems, and even with large-scale government-led programmes, implementation challenges persist (Lancet Global Health 2017).

Community health worker (CHW) interventions have been embraced in both high-income countries (HIC) and LMIC as ‘culturally adept members’ of health workers who can contribute towards the attainment of universal health care (WHO 2008). CHWs are paid or volunteer health workers with a depth of understanding of community cultures, who receive some level of standardised training to provide culturally appropriate health services in communities (Olaniran et al., 2017; Scott et al., 2018a). The core functions of a CHW in the health system include 1) delivering diagnostics, treatment, and other clinical services, 2) assisting with appropriate utilisation of health services and making referrals, 3) providing health education and behaviour change motivation to community members, 4) collecting and recording data, 5) improving relationships between health services and communities, and 6) providing psychosocial support (Scott et al. 2018). CHWs play an essential role in LMIC and fragile settings to mitigate human resource challenges and are pivotal to the new crop of community health systems set up to support the delivery of health care at the community and household levels. Community Health Worker programmes have proven to be cost-effective and prudent for sub-Saharan Africa’s predominantly rural population (Vaughan et al., 2015; Scott et al., 2018b). In South Africa, CHWs played a significant role in the fight against HIV/AIDS pandemic. The South African government estimated that its lay CHWs (who mainly provide services related to TB/HIV) were about 65,000 and outnumbered other frontline health professionals such as nurses (Schneider and Lehmann 2010). In the Central African Republic (CAR) where a long-stretched armed conflict depleted its public health system, CHWs were at the forefront of preventing the spread of infectious diseases and malaria (Ruckstuhl et al. 2017). Similarly, following the Ebola Virus Disease (EVD) outbreak in Sierra Leone, stakeholders deployed CHWs for contact tracing, social mobilisation, and screening to reduce the intensity of the epidemic (Portner et al. 2016). In Asia, the concept has been widely implemented, with the Afghan Government, for example, deploying an estimated 28,000 CHWs to ensure access to basic preventive and curative services (Edward et al. 2015).

Despite evidence that CHWs contribute to improved health, concerns persist about their low quality resulting from poor incentives, inadequate equipment and the

programme's sustainability. For instance, between 2007 and 2017 alone, an estimated 70.2% of development assistance went to CHW programmes in sub-Saharan Africa. Of the amount, external donors contributed an average annual funding of 46% (Masis et al. 2021). In the wake of decreasing donor financing, Pascal Saint-Firmin et al., (2021) cautioned that over-reliance on external funding for the CHW programme threatens its sustainability. To reverse this trend and maximise the potential of CHW interventions for health systems strengthening and UHC, Scott et al., (2018a) proposed to resource the lay health workers with adequate logistics and supplies, monetary and non-monetary incentives, promote community embeddedness and integrate interventions into existing health systems. These enablers are equally essential for improving service outcomes, minimize attrition and bolster the programmes' sustainability, particularly in fragile circumstances.

2.6 Conclusion

Meeting the global RMNCH targets is crucial for achieving the overall Sustainable Development Goals in 2030. Despite significantly reducing the MMR ratio from 342 maternal deaths per 100,000 live births in 2000 to 211 in 2017 and improving skilled delivery, for example, more is required to meet the targets, particularly in LMICS and fragile settings. The Covid-19 pandemic has hampered service delivery attempts as there are observed disruptions to RMNCH services, particularly in fragile settings. As demonstrated in this half of the literature review, fragility occurs in settings experiencing conflicts, natural disasters and disease outbreaks, but can also be present at the sub-national level where a government lacks the political will and capacity to adequately provide basic services, including security and primary health care for its population. Health systems are weak in situations of fragility and have inadequate funding, human resources and essential logistical (including drugs) required for quality service delivery. Identifying and mitigating the drivers of fragility can promote the health and well-being of populations.

CHAPTER THREE: STUDY BACKGROUND AND CONTEXT

3.1 Introduction

With the key concepts underpinning this study explained in the previous chapter, this chapter explores the health systems challenges and drivers of fragility in the Northern region. The chapter begins by looking at Ghana's geographic and demographic composition in section 3.2. The section also reviews progress with RMNCH in the country's context. In section 3.3, the Chapter provides an overview of Ghana's health system and its primary healthcare delivery structure. The section further discusses the key barriers limiting access to RMNCH and some approaches adopted to improve access with a focus on National Health Insurance Scheme (NHIS) and CHPS programmes. Section 3.4 reviews fragility in the context of the region and ends with a discussion on conceptual framework in section 3.5.

3.2 Country Context

This section details Ghana's geographic and demographic context and the study region.

3.2.1 Geo-political Divisions of Ghana

Ghana (Figure 3.1) is a West African country with an estimated 238,537 square kilometres. It is bordered by to the east, Burkina Faso to the north, Cote d'Ivoire to the west and the Gulf of Guinea to the south (GSS et al. 2015).

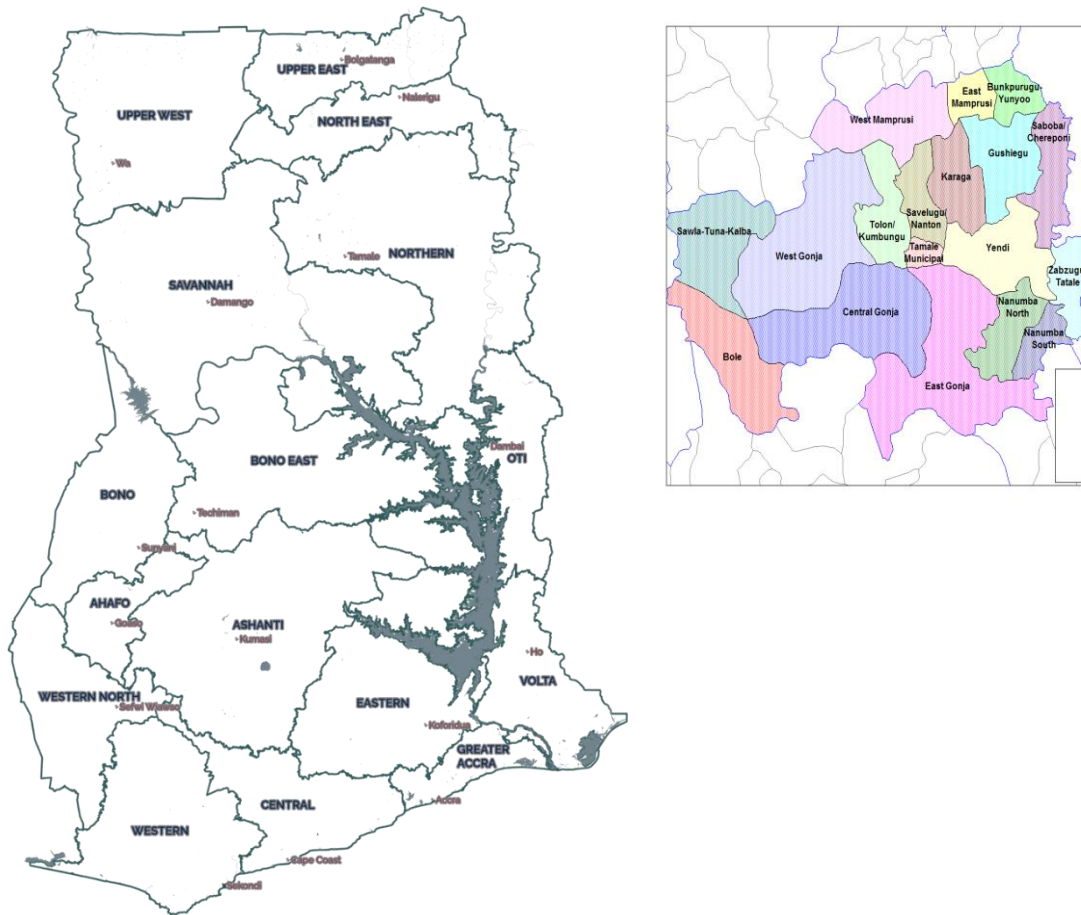


Figure 3.1: Map of Ghana

Source: GSS (2021)

Since gaining independence from the British in 1957, Ghana has primarily operated a multi-party democracy system with an elected presidency and parliamentary system, an independent judiciary system and an active media (GSS et al. 2015). As noted earlier, until 2018, the country was subdivided into ten administrative regions: Western, Central, Greater Accra (GAR), Volta, Eastern, Ashanti, Brong Ahafo, Northern, Upper East (UER) and Upper West Regions (UWR). These regions were further subdivided into 216 districts. In 2018, some regions, including the Northern region, were re-demarcated to create six additional regions. The Northern region, where this study was conducted, was split into three regions – Northern, North East and Savannah. Kumbungu and Gushiegu districts, where this study was conducted, remained part of the current Northern region. This study is therefore reported in the

context of the former ten regions; hence unless otherwise stated, the data presented represent the former Northern region.

3.2.2 Ghana's Socio-demographic Structure

The 2010 population census estimated the country's population stood at 24, 658,823. This was a 30.4 per cent increase over the 2000 census and showed a slightly dominant female population of 95.2 males per 100 females (GSS 2013; GSS et al. 2015). Currently, Ghana's population stands at 31 million (GSS, 2021). It is composed of diverse ethnic groups, with the Akans leading at 48 per cent, followed by Mole-Dagbani (17%) who come from the Northern region where this study was conducted (GSS 2013; GSS et al. 2015). As captured in Figure 3.2 below, Ashanti and Greater Accra are the most populated and urbanised compared to the other regions (GSS 2021).

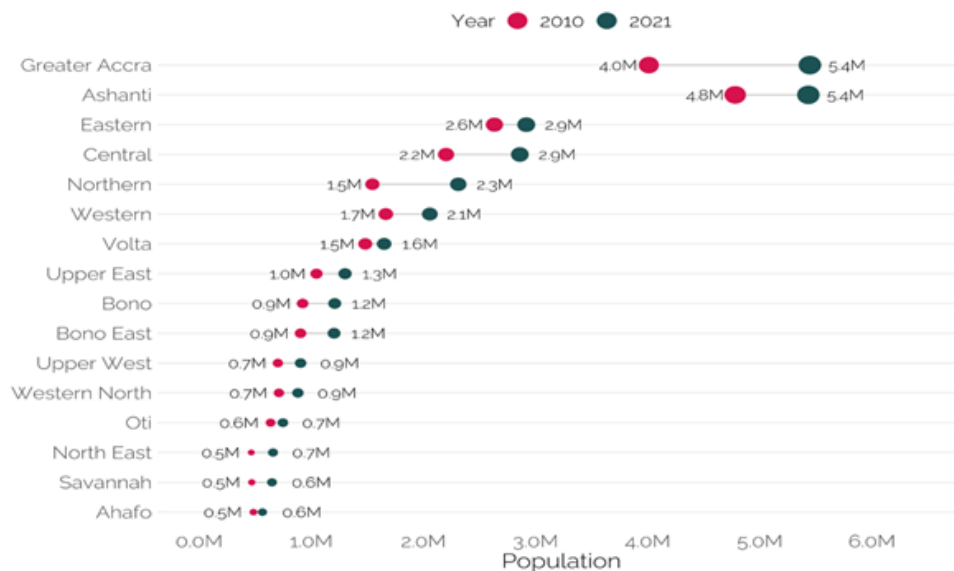


Figure 3.2: Share of Population by Region

Source: GSS (2021)

Whereas Greater Accra is the most densely populated city, (with 1,236 persons per square kilometre), the Northern region is the most sparsely populated (with 35 persons per square kilometre). Overall, Ghana's age distribution is youthful, determined by high fertility and reduced mortality rates (GSS 2012, 2013). There are three dominant

religions in the country: over 70 per cent of the population profess the Christian faith, 17 per cent to Islam and five per cent traditional religion (GSS 2013).

Ghana has predominantly been an agrarian economy. A greater number of the country's active population (15 years and older) work in the agricultural, forestry and fishery sectors. A further 21 per cent work in the service and sales sectors (GSS 2013). More recently, however, the service and industry sectors have grown, with the former alone contributing an estimated 52 per cent to gross domestic product (GDP) (GSS et al. 2015). The majority of the population is however self-employed, as captured in Figure 3.3 below (GSS 2013).

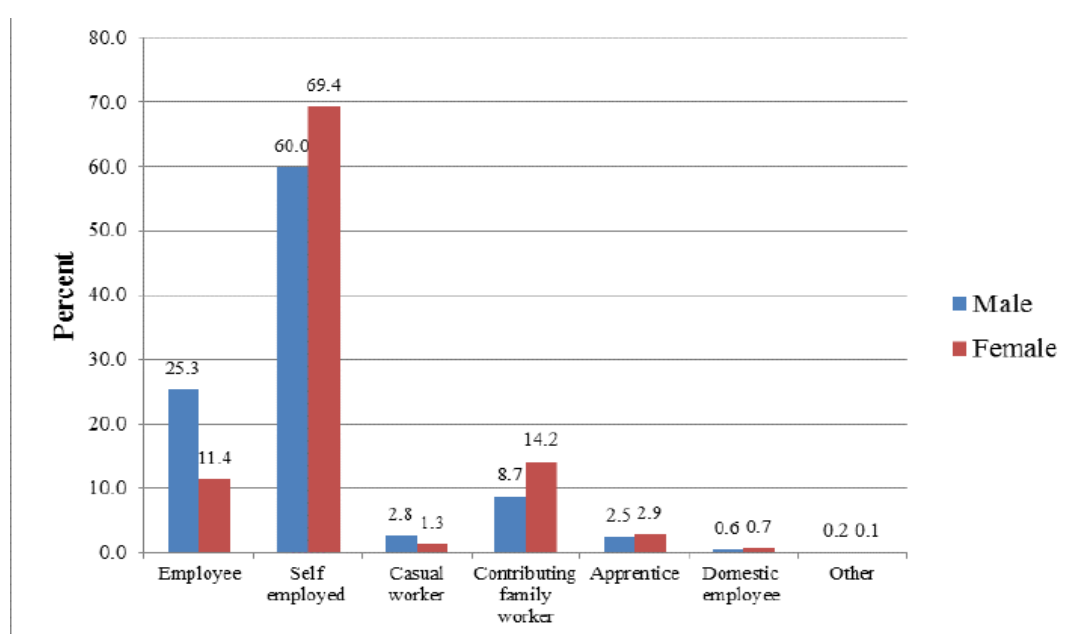


Figure 3.3: Employment Status of Employed Persons 15 Years and Older – 2010 Census

Source: GSS (2013b)

3.2.3 Fertility, Maternal and Child Health

The general health and well-being of most Ghanaians has improved over the years including recent declines in maternal and infant mortalities (MoH 2020). For instance, according to the Demographic Health Survey (DHS), fertility among women 15-49 years saw a significant decline from 6.4 children per woman in 1988 to 4.2 children per woman in 2014 – a drop of two births per woman over the past 26 years (GSS et

al. 2015). By 2014, Ghana's infant mortality rate stood at 41 deaths per 1,000 live births, with under-5 mortality at 60 deaths per 1,000 live births. Similarly, infant and under-5 mortalities declined by 28 and 44 per cent, respectively (GSS et al. 2015). The use of modern methods of contraceptives 'quadrupled' between 1988 and 2014 (although an estimated 30 per cent of married women continued to have an unmet need for family planning). The number of women receiving antenatal care from a skilled provider had significantly improved, with an estimated 97 per cent of women receiving antenatal care. This represented an increase from 82 per cent in 1988. Regarding the frequency of visits, about 87 per cent of pregnant women reported receiving at least four or more visits during their pregnancy. More deliveries (73%) occurred in health facilities compared to figures (42%) from 1988, and overall, 81 per cent of mothers received a postnatal check-up within two days after birth (GSS et al. 2015). These notwithstanding, progress has been far slower than global targets. An estimated 23 per cent of children received postnatal care within two days of birth, but most newborns (70%) did not receive any postnatal check-up. Similarly, statistics on immunisation show that the proportion of children aged 12-23 months who received "all basic immunisations" declined from 79 per cent in 2008 to 77 per cent in 2014 (Table 3.1) (GSS et al. 2015).

Table 3.1: Fertility, Maternal and Health Indicators of Ghana and Northern Region

Indicator	Ghana average	Northern region
TFR	4.2	6.6
Contraceptive use	27%	11.2%
Modern Contraceptive use	22%	17%
Unmet need for Family Planning	30%	27.8%
Neonatal mortality rate	29	24
Infant mortality rate	41	53
Under-5 mortality rate	60	111
MMR (2015)	319	
Women receiving ANC	95%	98%
Women receiving ANC 4+	87%	87.2%
Institutional deliveries	73%	
Home births (No midwife)	27%	63.9
PNC attendance	81%	71%
TBA assisted deliveries	26%	41%
Basic immunisation (12-23 months)	78%	

Source: GSS (2013b) GSS et al. (2015, 2018) NDPC and GSS (2018)

Ghana's MMR is lower than the SSA average but remains high at 319 and above the global average of 211 (Hug et al. 2019). The U5MR is also high at 60 and far beyond the SDG target of 25. Significant inequalities and access barriers to maternal and child health services exist, particularly among rural people and women and children of less education (Anarwat et al. 2021). Existing literature shows that the Covid-19 pandemic has negatively impacted most Ghanaians as many experienced psychosocial distresses during the lockdown (Boateng et al. 2021).

3.3 Health System Overview and Primary Health Care of Ghana

3.3.1 Ghana's Health System

Ghana's public health system comprises mainly the Ministry of Health (MoH), the Ghana Health Service (GHS) and the NHIS, which constitute the public sector, and a

private sector that is dominated by the Christian Health Association of Ghana (CHAG). Whereas the MoH oversees the formulation of policies and monitoring and evaluation, the Ghana Health Service facilitates the delivery of comprehensive and quality health care with an emphasis on primary health care as stipulated in national policies (GHS 2016). The GHS supervises Ghana’s three-tier healthcare delivery system (Figure 3.4). In line with the country’s decentralised system, the regional and district health directorates have oversight responsibility over the service delivery at the district, sub-district and community levels. In addition, the private sector and religious health organisations such as Christian Health Association of Ghana (CHAG) support the delivery of health services in the country.

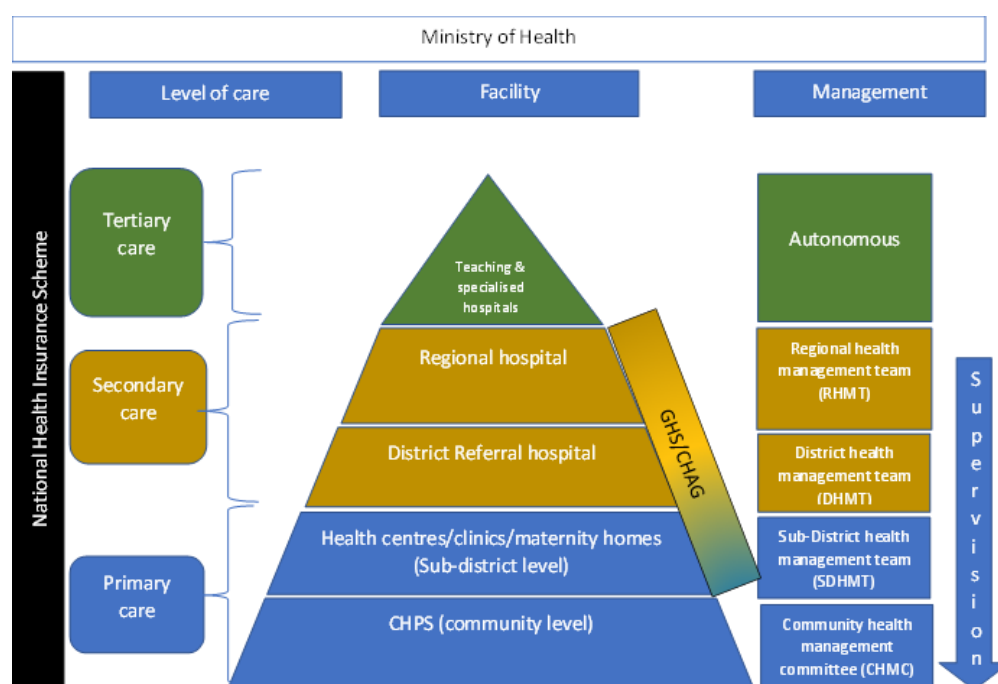


Figure 3.4: Three-tier Healthcare Delivery System in Ghana

Source: GHS (2016)

According to the MoH (2020b), Ghana has about 9,392 health facilities, of which two-thirds (6,131) are CHPS zones. The Ashanti and the Greater Accra regions have the highest number of health facilities, and about a third of all health facilities in the country are in those two regions. As captured in Table 3.2 below, teaching hospitals, regional hospitals, and CHPS zones make up public facilities, whereas clinics and

health centres are either public or private. All maternity homes reported in the table are private.

Table 3.2: Ghana's Health Facility Count

Region	CHPS Clinic	District Hospital Centre	Health Hospital	Maternity Home	Regional Hospital	Teaching Hospital	Total
Ahafo	130	18	3	20	7	7	185
Ashanti	1,113	185	24	152	127	70	1 1672
Bono	300	67	6	59	11	19	1 463
Bono East	274	34	3	39	12	5	367
Central	425	106	3	68	27	35	1 665
Eastern	842	90	10	129	29	27	1 1,128
Greater Accra	695	460	1	33	118	91	1 1,400
North East	96	9	2	19	2		128
Northern	312	53	9	59	18	7	1 459
Oti	172	11	2	36	6	2	229
Savannah	117	16	3	26		2	164
Upper East	363	55	2	60	8	2	1 491
Upper West	324	21	2	70	10	5	1 433
Volta	316	45	8	118	19	11	1 518
Western	402	131	4	54	30	16	1 638
Western North	250	39	5	26	12	21	353
Total	6,131	1,340	87	968	436	320	6 5 9,293

Table 3.2: Ghana’s Health Facility Count

Region	CHPS Clinic District Health Hospital	Maternity Home	Regional Teaching Hospital	Total
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Source: MoH (2020b)

Nurses and midwives make up the largest number of health personnel (79,285), however specialists such as clinical psychologists are among the fewest (40) (MoH 2020). Based on Ghana’s current 31million population (GSS 2021), the human resources for health (HRH) data in Table 3.3 suggests a doctor, nurse and midwife to population ratio of about 27:10,000, which is above the WHO’s recommended minimum threshold of 23 skilled health professions per 10,000 population. Nonetheless, the current ratio varies across regions as Greater Accra reportedly has the highest ratio of 7.9 per 1000 (79 per 10, 000) compared to Upper West with the least ratio of 1.5 per 1000 population (15 per 10,000) (Asamani et al. 2019).

Table 3.3: Ghana’s Human Resources for Health

Category of Health Personnel	Number of Personnel
Clinical Psychologist	40
Pharmacists	705
Biomedical Scientists	994
Public Health Officers /Disease Control Officers	2,791
Doctors	4,390
Nurses and Midwives	79,285

Source: MoH (2020b)

3.3.2 Individual, Institutional and Structural Barriers to MNCH in Ghana

Apart from the unequal distribution of health workforce across regions in Ghana, poverty, lack of/low level of formal education, no ANC contacts and low level of maternal education contribute to poor MNCH. For instance, women with formal

education are more likely to use contraception than their uneducated colleagues (Ahinkorah et al. 2021; Anarwat et al. 2021; Bediako et al. 2021; Ekholuenetale et al. 2021). Ekholuenetale et al. (2021) found that eight or more ANC attendances were far more common (60%) among the wealthiest quintile compared to the poorest (34%), demonstrating substantial inequity in access to MNCH services. Baatiema et al. (2021) identified other barriers: inadequate logistics and equipment, ineffective referral systems, lack of empathy at the point of care, insufficient personnel, and unaffordable service cost. Dissatisfaction with services and negative experiences, such as limited beds, are some of the factors that create access barriers for women seeking health care. In a study on parts of northern Ghana, Adjei et al. (2021) found that neonatal deaths resulting from asphyxia and prematurity were higher in rural clusters where distances are far from referral facilities. These challenges are projected to further heighten because of Covid-19 (Balogun et al. 2021). Before the Covid-19 pandemic, public funding for health sector was inadequate, including CHPS. Figures from the National Health Account (NHA) published that the general government health expenditure (GGHE) as a percentage of general government expenditure (GGE) had almost always fallen below the Abuja declaration of 15% (WHO 2011). As shown in Figure 3.5 below, apart from the year 2009, the Ghanaian government failed to fulfil its commitment to spend a minimum of 15% of its general expenditure on health between the years 2000 and 2019.

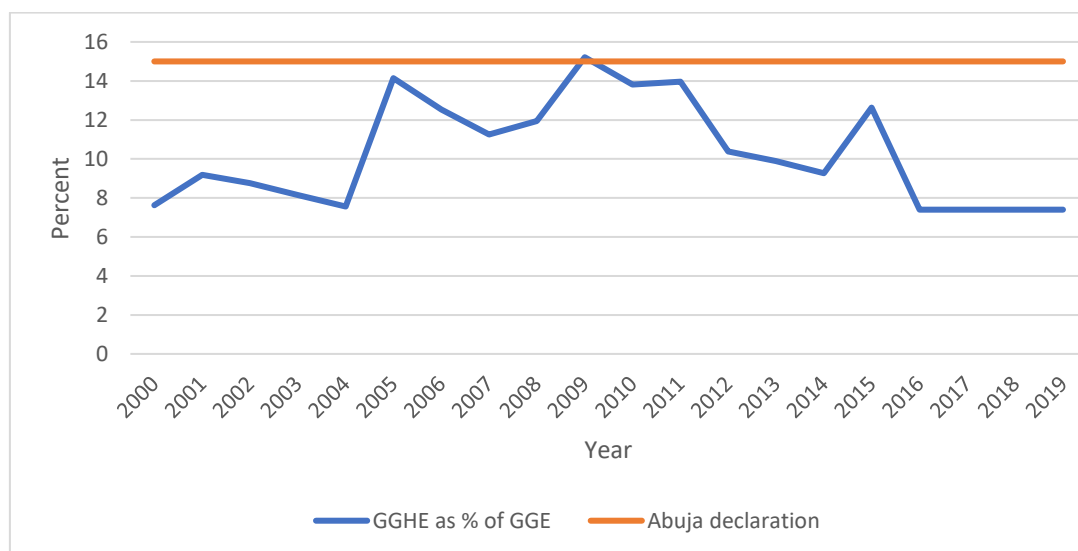


Figure 3.5: Ghana’s GGHE as a percentage of GGE compared to the Abuja Declaration

Source: WHO (2011, 2022a)

3.3.3 Approaches to Reducing Maternal and Child Health Barriers

One of Ghana's earlier attempts to improve maternal and child health was the introduction of a Free Maternal Health Programme (MHP) rolled out in the early 2000s to exempt women from making out-of-pocket (OOP) payments for delivery services, including caesarean sections. The policy was initially rolled out in four of Ghana's poorest regions (NR, UER, UWR and Central) before a national scale-up in 2005. Despite contributing to improved maternal and child health outcomes, the policy suffered funding hiccups and was later embedded into a National Health Insurance Scheme (NHIS) (Witter et al. 2007; Mills et al. 2008; Dzakpasu et al. 2012).

The NHIS was introduced following several years of implementing user fees or a "cash and carry" system where out-of-pocket expenditures (OOPEs) contributed up to 50 per cent of total health expenditures, and financial affordability a significant barrier to access. The scheme was created under Act 650 of 2003 and became fully operational in 2005, intending to increase the affordability and utilisation of health services, particularly among vulnerable populations including the elderly (over the 70s) and children under 18 years (Blanchet & Fink, 2012; Kwarteng et al., 2019; Leive, 2008; Okoroh et al., 2018; K. Singh et al., 2015; Bliss 2014). The Scheme operates under the National Health Insurance Authority (NHIA) as one of Ghana's social interventions to provide financial access to quality health care for all residents in the country. Funding is generated from several sources such as the National Health Insurance Levy (NHIL), composed of a 2.5% levy on goods and services collected under the Value Added Tax (VAT); 2.5 percentage points of Social Security and National Insurance Trust (SSNIT) contributions per month; return on National Health Insurance Fund (NHIF) investments; premium paid by informal sector subscribers; and Government allocation (NHIA 2022). Premiums are paid mainly by informal groups who often do not contribute to SSNIT payments (Table 3.4) (NHIA 2022). Besides pregnant women and indigents, subscribers pay an additional processing or renewal fee for their ID cards (NHIA 2022). By the end of 2008, pregnant women and their newborns of three months or younger were exempt from paying NHIS premiums as part of measures to

propel access to RMNCH services (Leive 2008; Blanchet and Fink 2012; Singh et al. 2015; Okoroh et al. 2018; Kwarteng et al. 2019).

Table 3.4: NHIS Exempt Group and Facilities Credentialed by NHIA to Provide Services

Members of the exempt group who do not pay NHIS premium.	Health facilities credentialed by NHIS to provide services to subscribers
<ul style="list-style-type: none"> • Formal sector employees and the self-employed who contribute to the Social Security and National Insurance Trust (SSNIT) • Children (persons under 18 years of age) • Persons in need of ante-natal, delivery and post-natal health care services (pregnant women) • Persons classified by the Minister for Social Welfare as indigents, • Categories of differently-abled persons determined by the Ministers responsible for Social Welfare • Persons with mental disorder • Pensioners of the Social Security and National Insurance Trust (SSNIT pensioners) • Person above seventy years of age (the elderly) • Other categories prescribed by the Minister 	<ul style="list-style-type: none"> • Community-based Health Planning and Services (CHPS) • Maternity homes • Health centres • Clinics • Polyclinics • Primary hospitals (district hospitals, CHAG primary hospitals, quasi-Government primary hospitals and private primary hospitals) • Secondary hospitals • Tertiary hospitals • Pharmacies • Licensed chemical shops • Diagnostics centres
Source: NHIA	Source: NHIA

The introduction of the NHIS facilitated the utilisation of health services in the early years – specifically, it increased outpatient visits per capita and the utilisation of antenatal and facility delivery services among enrolled pregnant women. For example, Nsiah-Boateng (2015) found an increase in money paid [by the government through the NHIS] for maternal health services and noted improvements in antenatal, skilled delivery and postnatal figures during its early years of implementation. A systematic review of the impact of NHIS showed reduced out-of-pocket expenditures and catastrophic health payments. Okoroh et al. (2018) also found that the scheme successfully reduced the financial burden of health care, and subscribers were more likely to pay less in OOPs. The intervention enabled pregnant women to access

adequate services and seek care for their sick children promptly (Singh et al. 2015). The authors however concluded that even the insured were still at risk of incurring catastrophic payments at the point of care as there was evidence of ongoing payments for consultation and medicines already covered under the scheme (Okoroh et al. 2018). Similarly, Kwarteng et al. (2019) found that the scheme failed to protect the vulnerable against catastrophic health costs and that the cost of the premium, either for registration or renewal, remained a barrier for many from poor households, without formal education and who lived in rural areas (Akazili et al. 2014; Kwarteng et al. 2019). To improve service access, Ameyaw et al. (2021) suggested the rollout of a district-level ambulance system to oversee the timely transportation of maternal obstetric neonatal and child health emergencies.

Apart from the NHIS, Ghana introduced the Community-based Health Planning and Services (CHPS) programme to improve health service access and utilization by providing doorstep PHC services (Awoonor-Williams et al. 2013; GHS 2016a). This is detailed in the following sections.

3.3.4 Primary Healthcare and CHPS in Ghana

Primary healthcare involves a set of tenets and standards that constitute a framework for policy formulation, leadership, decision making and commitment towards providing primary care and achieving UHC via health systems (Mash et al. 2018). Ghana's primary healthcare strategy started in the 1970s and predates the 1978 Alma Ata Declaration on Primary Health Care (PHC), which called on countries to deliver 'Health for All by the Year 2000'. During this period, the government deployed CHW interventions such as Community Clinic Attendants and Traditional Birth Attendants to reach the wider population (MoH 2016). Today, UHC is imbedded in SDGs to ensure that people everywhere have access to quality health services without facing catastrophic costs. The goal has a potential to improve health for all people, reduce inequalities and promote social and economic development by the year 2030 (WHO 2023).

3.3.5 History and Development of Community Health Workers Programmes in Ghana

Dating back to the 1980s, Ghana has implemented CHW interventions as part of its primary healthcare strategy. First, the Village Health Workers (VHWs) initiative was deployed to bring affordable health care to vulnerable populations. The intervention was informed by evidence from two main research projects: the Danfa Comprehensive Rural Health and Family Planning as well as a WHO-sponsored Brong Ahafo Regional Development Project. However, the scheme ended following organisational, resource, training, monitoring and supervision challenges (Cole-King et al. 1979). Ghana's second CHW initiative was the Bamako Initiative, sponsored by UNICEF to help address weaknesses found in the previous scheme while relying on volunteer health providers (Walt, 1988; Knippenberg, 1990; Phillips J.F. et al., 2016). Following this, a Community Health Nurses programme was introduced in the 1980s to help alleviate the weaknesses and controversies surrounding using volunteers for PHC delivery. The implementation research tested the efficacy of services this new crop of nurses provided and explored feasible means of financing their community work. In this regard, trained community health nurses (CHNs) worked directly from sub-district health centres and provided outreach services at fixed points in communities. The CHNs were eventually trained as Community Health Officers (CHOs) to manage CHPS zones at the community level (GHS 2016).

As indicated earlier, CHPS is one of Ghana's strategies for achieving UHC and promoting PHC delivery. CHPS was conceptualised in 1994 during what was termed 'The Navrongo experiment', which found (in a cell three model) that the combination of three main variables improved immunization and family planning coverages as well as reduced fertility and mortality rates (Debpuur et al. 2002; Phillips J.F. et al. 2016; GHS 2016). These variables were: (i) a compound (structure) where CHNs lived, provided ANC and other vital services and served as a point of contact during emergencies; (ii) volunteers assisted with outreach, case tracing and referral, health education and confidential counselling and; (iii) Community Health Management Committees (CHMCs) formed to lead community mobilisation and participation, service delivery and welfare of the CHN and volunteers. In addition, health centre staff

based at the district level were responsible for providing support for community entry and establishment, supervisory visits and providing feedback on implementation (GHS 2016).

The CHPS policy, first launched in 1999 and later rolled out in 2000, aims to bridge the access equity gap and achieve UHC through the provision of a basic package of essential health services in all communities by 2030 (GHS 2015; MoH 2016). The initiative relocates PHC services from sub-district health centres to convenient community locations to provide doorstep primary health care services to improve maternal and child health (Awoonor-Williams et al. 2013). In the early 2000s, when the policy was first rolled out, the creation of a CHPS zone was determined by a community's population – approximately 5000. However, in 2010, this changed, and zones were created according to electoral areas (MoH 2016). The CHPS model is guided by a set of principles/milestones and completes Ghana's three-tiered primary healthcare system by providing essential health services at the community level (GHS 2016). To guide implementation and catalyse scale-up, fifteen steps were proposed (Table 3.5.). Community health nurses and volunteers were also assigned distinct roles to support service delivery at the local level (Table 3.6). Guided by these steps, CHNs, volunteers and CHMCs were trained and equipped to provide primary and outreach services in communities. CHPS is financed by various sources such as the local government (District Assembly), the NHIS, development partners and international donor agencies, NGOs and out-of-pocket user fees (GHS 2016; Perry 2020). The programme also relies on financial and in-kind contributions from communities and key stakeholders to support the construction of compounds and provide oversight for service delivery and the welfare of resident CHOs.

As of 2008, CHPS was widely implemented by all districts in Ghana, with Government ministers contributing 10 per cent of their salaries towards its expansion (GHS 2015; MoH 2016; Phillips J.F. et al. 2016). The concept also grew popular among other countries, including Nigeria and Burkina Faso, which adopted similar PHC interventions (Russell et al. 2008). By 2016, CHPS had grown exponentially in most districts, with full national coverage projected by 2019.

Table 3.5: Fifteen Steps and Milestones for CHPS Implementation

Step	Key Task	Activities	Responsible	Output	Milestone Achieved
One	Plan	Situation analysis and problem identification at the DHMT level Consultation with DA: the District Chief Executive (DCE) and the Social Services Sub-Committee Zoning of communities in the district District CHPS Scale-up Plan	The DHMT (DDHS and public health nurses/ midwives)	Compiled situation analysis of available resources and programme requirements Detailed report showing the list of demarcated CHPS zones prioritised by year of implementation	Detailed plan created
Two	Consult and raise awareness of CHPS	Consultation and sensitisation of health workers	DHMT	Health workers accept CHPS strategy	
Three	Dialogue with community leadership	Identify contact persons e.g. assembly members Meet with the community's leadership Sensitise the chief and his elders highlighting key support areas from the chief and community (e.g. community durbar, workspace, land)	The DHMT (DDHS and public health nurses/midwives)	Chief and elders of the communities making up the zone sensitised	Community entry conducted
Four	Organise community information durbar	Community information durbars Participation by all communities making up the zone Address questions and concerns of community members Site selection and approval Roles and responsibilities of stakeholders including	Community leaders/DHMT	Informed community created	

Table 3.5: Fifteen Steps and Milestones for CHPS Implementation

Step	Key Task	Activities	Responsible	Output	Milestone Achieved
Five	Select and train CHOs	community members Assess, counsel, and select staff who are interested in community work Train/orient selected staff as CHOs Discuss with each CHO the zone where she/he will be assigned	DHMT/SDHT	Certification of CHOs	
Six	Select, approve, and orient CHMC	Selection of CHMC members based on the criteria outlined in the section “Step 6: Select, Approve, and Orient CHMC” in this guideline Durbar for approval of CHMC Orientation of CHMC	Community leadership, SDHT, DHMT	CHMC members confirmed and have signed a social commitment contract during the durbar	
Seven	Compile community profile	Compilation of community profile: information on geographic and demographic characteristics, settlement patterns, existing human habitation, and health features and facilities Read any available literature about the communities making the zone especially where the compound will be sited Ask individuals in the community about the history, norms, taboos,	DHMT; SDHT; CHMC members; DA; community leadership	Community profile brief and register established	

Table 3.5: Fifteen Steps and Milestones for CHPS Implementation

Step	Key Task	Activities	Responsible	Output	Milestone Achieved
		secret places, occupations, etc. Conduct a transect walk to identify important landmarks including schools, churches, mosque, chief palace, market, etc. Inform the opinion leaders on the necessity and time needed to register community members Register community members by community and by household Summarise the results to obtain population by community, number of households by community, etc.			
Eight	Construct/ operationalise compound	Procurement (construction, renovation, hiring, renting, or rehabilitation) of Community Health Compound for CHO residence Refer to the boxes in the “Community Participation in the Planning . . .” section of this guideline for further details	CHMC	Community Health Compound constructed	Community Health Compound operationalised
Nine	Provide CHPS logistics	Provide sufficient DHMT supplies, medicines, equipment, furniture, and transport to		Logistics stocking and Management System Established	Essential equipment supplied

Table 3.5: Fifteen Steps and Milestones for CHPS Implementation

Step	Key Task	Activities	Responsible	Output	Milestone Achieved
		CHPS zone for service provision			
Ten	Organise durbar to launch activities of the CHPS zone	Organise community information durbar to formally launch CHPS in the community Formal introduction of CHOs to the community at the durbar	Community leaders supported by DHMT/DA	Community awareness, understanding and support for CHPS and the CHOs	CHO posted
Eleven	Select CHVs	Selection of CHVs (refer to “Step 11: Select CHVs” section of these guidelines for selection criteria)	CHMC, SDHT	CHVs’ acceptance of status	CHVs deployed
Twelve	Approve CHV selection	Host durbar to finalise the selection and gain approval of CHVs from community and community leadership	CHMC, SDHT	Community approval obtained	
Thirteen	Train CHVs	Training of CHVs based on the training content spelt out in section “Step 13: Train CHVs”	DHMT, SDHT	Certification of CHVs	
Fourteen	Procure logistics, equipment, and volunteer supplies	Mobilisation of logistics and equipping the volunteers	DHMT, SDHT	Logistics management system established	
Fifteen	Launch the CHPS zone	Launch the CHPS zone Introduce CHMC, CHVs, and CHO during the durbar Introduce security guard for the compound, etc.	Chiefs, CHMC, and SDHT	CHPS zone launched and services provided	

Source: (GHS 2016)

Table 3.6: The Roles of the CHO, CHV and CHMC

The Roles of the CHO	The Roles of the CHV	The Roles of the CHMC
Engage the CHMC to manage community health service;	Mobilize and sensitize the community to take action to manage health in the community;	Liaison between traditional leaders and health authorities;
Initiate process for and develop community profile in collaboration with CHMC and CHVs;	Collaborate with the CHO and support CHPS service delivery;	Carry out community advocacy and diplomacy for CHPS;
Act as change agent for community health-seeking behaviour;	Visit, assess, and advise on environmental factors in the home that can affect health;	Develop Community Health Action Plans (CHAPs);
Engage community stakeholders for dialogue on CHPS;	Assist the CHO in home visits, outreach services, and work at the CHPS compound;	Mobilize and sensitize the community for health action;
Carry out community advocacy and diplomacy for CHPS;	Conduct home visits for health education and follow-up of defaulters;	Collaborate with the CHO and support the CHPS service delivery;
Deliver home-specific and home-relevant health services (prevention, promotion, and minor ailment treatment);	Carry out disease surveillance and report on disease and health events;	Engage and administratively supervise the CHV to support CHPS service delivery;
Treat minor ailments at the CHPS compound and refer more severe cases to higher care level;	Liaise between CHO and community members on health status of community;	Mobilize resources for CHPS service delivery;
Supervise supportive cadres and volunteers in technical community health service delivery;	Support in the organization of community durbars and disseminate health information;	Organize community health meetings (durbars) and provide feedback to communities on health issues with the support of the CHO;
Deliver school health services (prevention, promotion, and minor ailment treatment) with the support of the sub-district;	Provide first aid and treatment of minor ailments in hard-to-reach areas (which should be context specific), and refer cases to the CHO;	Settle disputes between CHOs, CHVs, and the community;
Manage and account for resources (financial and logistical) at the CHPS compound;	Assist in compiling and updating a community register and profile;	Assist in the maintenance of the CHPS compound.
Work closely with and report to the Sub-district Health Management Team.	Refer serious cases to the CHO or notify the CHO and refer to a higher level.	

Source: GHS (2016a)

3.3.6 The CHPS Strategy in Ghana: Successes and Failures

Since its adoption, CHPS has gainfully contributed to the delivery of primary healthcare in Ghana. In 2015 alone, the programme contributed 30 per cent of family planning uptake, 36 per cent to Polio-3 immunisations and 10 per cent to OPD (outpatient department) coverages (GHS 2015). In 2018, CHPS contributed all (100%)

of immunization services, 52% of skilled deliveries, 53% of 1st ANC visits and 34% of PNC provided to women within 48 hours of birth (Ministry of Health 2020). Moreover, as depicted in Figure 3.6, by 2016, CHPS had grown exponentially in most districts.

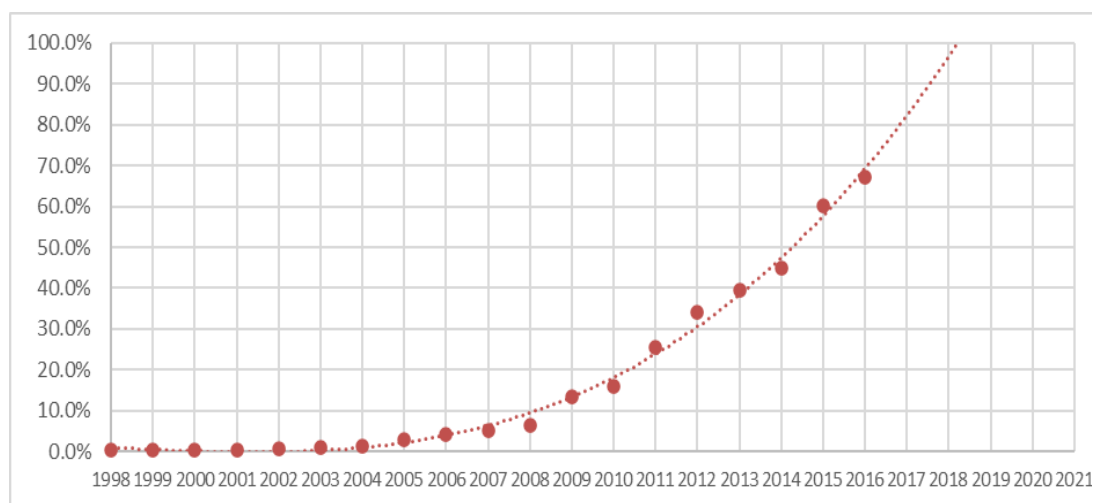


Figure 3.6: The Percent of National Coverage Achieved by CHPS (1998-2016)

Source: GHS (2016)

The distinct roles of CHWs in health education and the provision of ANC, emergency delivery, immunisation and referral contribute to reduced maternal, neonatal and U5 mortalities, as these key services are extended to rural communities where complications during childbirth are more likely to occur (Kyei-Nimakoh et al. 2016). Results from the GEHIP project, for example, demonstrated that effective CHPS implementation (as outlined in guidelines) along with leadership training and resourcing zones could reduce neonatal and maternal mortalities (Phillips et al. 2018). Indeed, the deployment of a referral system to foster the continuum of care through higher/referral facilities such as district and regional hospitals was a key component of GEHIP outcomes. Similarly, the CHPS programme thrives on effective community engagement, where health workers and community members plan and resource zones as detailed in the implementation guidelines. Meaningful community engagement can improve community health systems and make them efficient, responsive, and resilient. Beyond the potential of contributing to the achievement of the health for all agenda, community engagement builds stronger social ties and ensures communities gain more power over their own affairs, which can help improve their health and reduce the gaps

between different groups (Yuan et al. 2021). A review by Barker et al., (2020) showed that effective community engagement builds trust in the health system and make communities more effective in responding to crises (Barker et al. 2020).

CHPS has not always been responsive to users' needs. Service times are often unpredictable, making it challenging for clients/users to plan around service schedules. Some CHPS compounds are in poor states, with others built on sacred groves disregarding local taboos. The programme lacks a clear policy direction and a financing scheme, with many questioning the definition of key concepts and precisely what constitutes the CHPS basic service package. Moreover, most facilities are under-resourced and lack essential equipment and consumables to meet primary care requirements. Key challenges such as poor leadership and unclear policy direction have stifled overall implementation efforts (GHS 2015, 2016). Despite the potential of CHPS to foster primary healthcare in deprived settings of Ghana, implementation and scale-up have been slow, particularly in the Northern region.

3.4 Northern Region in Context/Description of Study Site

3.4.1 Demographics

The Northern region of Ghana has a population of about 2.5 million, and Mole Dagbong is its predominant ethnic group, comprising 16.6% of the country's population (GSS 2013). Unlike the rest of the country, about 60 per cent of the region's population profess the Islamic faith (GSS 2013).

Most Ghanaians aged 11 and above can read and write, however, literacy rates among the northernmost regions, which includes this study districts, are less than 50 per cent (GSS 2013). In the Northern region specifically, 54.9 per cent of the population has never been to school; this is double the national average (GSS 2013). The 2014 Demographic and Health Survey (DHS) reported that the Northern region had a Total Fertility Rate of 6.6 (the highest in the country) and an unmet need for family planning at 27.8 per cent . Additionally, the region's neonatal, infant and under-5 mortality rates were 24, 53, and 111 deaths per 1,000 live births, respectively (GSS et al. 2015). Data from the Tamale Teaching Hospital (TTH) indicate that more than half of neonatal

deaths are caused by preterm birth complications and birth asphyxia (Abdul-Mumin et al. 2021). Among married women 15-49 in the region, about 11 per cent reported using any type of contraceptives – the lowest in the country (GSS et al. 2015). Compared to the rest of Ghana, the Northern region had the highest number of home births (without a skilled supervisor) – estimated at 63.9 per cent – and had more assistance from traditional birth attendants (TBAs) during these deliveries (41.3%) (GSS et al. 2015). Residents of the region (59%), particularly in rural areas, were least likely to receive postnatal check-ups on time. Of the estimated 669 CHPS zones required to bridge the healthcare gap, barely a fifth (147 zones) is functional (Phillips J.F. et al. 2016; Bassoumah et al. 2021). Health workers continue to travel long distances, mainly due to the region’s sparse population, on poorly maintained and remote roads, thereby preventing the expansion of health care coverage. In addition, efforts to improve health indicators are sometimes constrained by the region’s fragile nature of social relations (UNDP 2012).

3.4.2 Fragility in the Northern Region Context

Since 2005, Ghana’s economy has grown at an average of 7% per year, boosted by its attainment of middle-income status in 2010 and the discovery of oil offshore, making it the second-largest economy in the West Africa region after Nigeria (World Bank 2011, 2018). Despite recent declines in poverty levels, however, regional inequalities persist. Compared to the wealthiest regions (Greater Accra, Ashanti, Central and Eastern regions) where there is a noticeable decrease in poverty levels, the reverse is true among the four poorest (Upper West, Upper East, Northern and Volta regions) as depicted in Table 3.7 (Cooke et al. 2016; World Bank 2020). Between 2012 and 2016, regional inequality was largely due to differentials in consumption (World Bank 2020).

Table 3.7: Poverty Rates, Gap, and Severity by Region in 2012 and 2016

Region	Poverty Rates			Poverty Gap			Severity of Poverty		
	2012	2016	Change	2012	2016	Change	2012	2016	Change
Western	20.9	21.1	0.2	5.7	4.9	-0.8	2.3	1.7	-0.6
Central	18.8	13.8	-5.0	5.6	3.6	-2.0	2.5	1.3	-1.2
Greater Accra	5.6	2.5	-3.1	1.6	0.5	-1.1	0.6	0.1	-0.5
Volta	33.8	37.3	3.5	9.8	13.0	3.2	4.0	6.4	2.4
Eastern	21.7	12.6	-9.1	5.8	3.1	-2.7	2.4	1.2	-1.2
Ashanti	14.8	11.6	-3.2	3.5	2.7	-0.8	1.3	1.0	-0.3
Brong Ahafo	27.9	26.8	-1.1	7.4	8.8	1.4	2.9	4.2	1.3
Northern	50.4	61.1	10.7	19.3	26.7	7.4	9.8	14.9	5.1
Upper East	44.4	54.8	10.4	17.2	23.8	6.6	9.0	13.2	4.2
Upper West	70.7	70.9	0.2	33.2	37.6	4.4	18.8	24.6	5.8
Ghana	24.2	23.4	-0.8	7.8	8.4	0.6	3.6	4.3	0.7

Source: Source: (GSS 2017; World Bank 2020)

The northern regions are indicated as foci of extraordinary fragility in terms of low political will and access to education, health services, infrastructure development, and donor support (Bliss and Streifel 2014; World Bank 2020). Compared to the national average (0.575), northern Ghana scores very low (0.116) on the Human Development Index (HDI) (UNDP 2018), which reports on achievements in education, health and overall living standards. Road transportation and ICT infrastructure are deplorable, and pupils continue to trail behind their southern counterparts in education. School enrolment in the region is also the lowest, with the highest dropout rate, leading to the highest illiteracy rate of any region (UNDP 2018). Key challenges in staff retention, long distances to school and the availability of key infrastructure contribute to this disparity (UNDP 2018). With youth unemployment significantly high, many migrate to economically vibrant areas, particularly Accra and Kumasi, or resort to illegal small-scale and artisanal mining, while women remain disproportionately underrepresented in economic activities (GSS 2013a; UNDP 2018). In addition to the above, parts of Northern Ghana continue to experience long-standing chieftaincy and land disputes (UNDP 2018), which minimises the potential of CHPS to reach marginalised groups.

Evidence suggests that impoverishment in Ghana's northernmost regions (sometimes referred to as the north) is because of unfavourable historical policies and inauspicious political decisions as well as the geography of the regions in terms of soil fertility, water, and mineral resources. Thus, apart from historical policies, the long-existing developmental divide between the north and the south (the rest of Ghana) stems from

the exclusion of the former from a fair share of productive economic investments of the country in that the country's agricultural policies only propel the production and marketing of cash crops, mainly found in the south (Abdulai et al., 2018; Aboagye & Bolt, 2018).

3.4.2.1 Colonialism and Underdevelopment in the Northern Region

The colonial government neglected the Northern Territory of Ghana, leaving it underdeveloped and deprived of economic opportunities, education, and social services. For this reason, the Territory was labelled the 'Cinderella' of Ghana.

By the Declaration of Independence in Ghana, the Territory only had four institutions of higher learning, a university graduate, and no industry. The reason for this underdevelopment was that policies and investments did not target economic and educational activities, but rather, intended to turn the area into a labour reservoir for the colony and Asante (Brukum 1998).

First, the imposition of taxes on essential Northern commodities such as livestock, kola, salt, shea butter and caravan routes annexed the region's potential to grow economically. Despite the abolition of some of these taxes such as the Caravan tax later, the development expenditure for the Territory was reduced. In 1899 for example, Frederick Hodgson, who was Governor at the time, stated that the North had no valuable minerals, timber or products, and so refused to... "spend on the Northern Territories a single penny more than is absolutely necessary" (Bening, 1975; Brukum, 1998). Contrary to this claim, northern Ghana had various tradeable commodities, such as tobacco, cotton, livestock, rice, shea nut, and groundnut. However, the colonial authorities ignored the potential of these products and failed to invest in their development. As a result, the region missed out on the opportunities to benefit from the global markets for cattle, rice, cotton, and shea nut. In the 1920s for instance, despite Balstone's advice to invest in cattle farming, Governor Guggisberg disregarded it, even though the cattle from the region were of higher quality than those in Argentina and South Africa (Brukum 1998).

Roads and railways, which could have facilitated the production and transportation of goods and services from the north, were underdeveloped. In fact, the expansion of railway lines from the South to the North was deemed expensive and unprofitable with Governor Hugh Clifford remarking the territory had to be "... content to wait for its turn" (Brukum 1998). These were all part of attempts to make the north a labour reservoir or a source of cheap labour for cocoa farms and mining areas in southern Ghana where the government profited from (Ntewusu 2015).

The priorities of the then government might have been skewed in that it harnessed resources of interest and developed areas that could facilitate their agenda to the neglect of the Northern Territory. However, this points to the essential role governance plays in overall development and health.

3.4.2.2 Neoliberalism and Health care in Ghana

Following Ghana's attainment of independence, healthcare, among other social interventions, was free under the first Prime Minister, Dr Kwame Nkrumah. By the early 1980s, the free healthcare policy became unrealistic as it faced severe challenges from high foreign exchange rates and import restrictions, particularly on essential healthcare equipment, drugs and supplies as well as the brain drain of the country's health workforce (Arhinful 2003). Public sector healthcare became overly expensive to continue as the costs reached unsustainable levels. Subsequently, the introduction of Structural Adjustments Programmes (SAP) by the International Monetary Fund (IMF) and World Bank (WB), also known as the Bretton Wood Institutions, aimed to improve the functionality of governments and sectors.

Neoliberalism is the political and economic ideology led by institutions such as the IMF, World Bank, and the World Trade Organisation (WTO) to open markets, deregulate governments and privatise basic services in education, healthcare, water, electricity and housing (Ayelazuno, 2014; Gatwiri et al., 2020; Addi & Ayambire, 2022). The proposed reforms also attached conditionalities to aid and loans for LMICs such as the Structural Adjustment Programme (SAP). The SAP Programs, which were

widely implemented by many Low- and Middle-Income Countries (LMICs) in the 1980s, including Ghana, contributed to inequalities and social exclusion in these implementing nations. Unfortunately, the legacy of these programs continues to leave many people in abject poverty. Others, like Ayelazuno (2014), argue that the SAP emphasis on primary commodity export to the neglect of the manufacturing sector has only led to market instability to the benefit of a few elites and foreign investors. Decentralisation and privatization of healthcare services under SAPs, for example, contributed to the sector's fragmentation (Gatwiri et al. 2020). According to Gatwiri et al. (2020), transferring the responsibility and cost of healthcare provision from the central government to local authorities and the private sector without adequate capacity, resources, and regulation contributed to a dysfunctional healthcare system. This system was inefficient, uncoordinated, and failed to meet the needs of vulnerable people.

In Ghana, despite the steady increase in economic growth and reduction in poverty in most regions of the country over the last three decades, there is still widespread inequality across sectors, with their roots embedded in neoliberal policies such as the SAPs. For example, neoliberal policies in the form of land commercialisation contributed to extreme urban inequalities with the insurgence of slums in Accra, thus creating inequalities and worsening the living conditions as many lack the basic infrastructure including toilet facilities (Addi and Ayambire 2022).

The SAP in Ghana saw a review of health sector reform aimed at recovering the full cost of drugs through the introduction of user fees in health facilities (Aikins and Koram 2017). The SAP reforms changed the delivery of healthcare in Ghana as with other developing countries. The program required significant cuts to government expenditure for health and the privatisation of health services (Elmendorf, 1999; Opong, 2018). These radical changes had implications for the health of people in marginalised settings like northern Ghana, contributing to unaffordable healthcare and increased inequality. Reduced government expenditure took the form of staff layoffs, poor staff remuneration and the closure of some public facilities. The introduction of a 'cash and carry' system (out-of-pocket payment) deprived many – particularly rural

dwellers – of access to basic health services due to the increased cost. Many deferred biomedical health check-ups, which disproportionately impacted their health. The burden on users was more pronounced in rural areas of Northern Ghana, as well as district and sub-district levels where people are expected to make their first contact with the health system. Additionally, rising inflation resulted in high costs of drugs and medical supplies as these were mainly imported. People who could not afford the cost of care resorted to self-treatment, which often compromised their health status. For example, in 1988, there was more self-medication among rural mothers (43.4%) compared with their urban counterparts (27.2%) (Adjei et al., 1988). The economic hardship due to SAP made it challenging for many to afford basic health services, particularly in northern Ghana (Oppong 2018).

As planning and resource allocation were centralised in many post-colonial developing countries, governments were largely responsible for providing public goods and services (Inkoom 2011; Chattopadhyay 2013). However, due to central government inefficiencies, many, including international bodies, proposed local governance and decentralisation reforms to enhance service delivery and alleviate poverty. (Ali Khan 2013). Decentralisation was therefore widely pursued among many African countries under the belief that it would empower sub-national level actors to bring health services closer to people (Inkoom and Gyapong 2016). However, in reality, these efforts were often driven by conditions for receiving loans and opening up markets, which inadvertently led to unhealthy competition and negatively impacted poorer populations.

Decentralisation in Ghana aimed to promote ‘legitimacy and stability’ amidst insecurity and spiralling economic crises, as well as encourage wider participation and local governance (Dickovick and Wunsch 2014). Health service decentralisation in Ghana took off in the late 80s to early 90s as with other public reforms with the aim of improving the provision and access of health service delivery. The concept gained prominence following the passage of the GHS and Teaching Hospitals Act of 1996, which outlines the membership, functions, and governing body of the GHS (Couttolenc 2012; Ghana Health Service 2023).

Subsequently, the country introduced the District Assembly Common Fund (DACF) to support important services such as education, healthcare, and other social interventions. The DACF was introduced under Article 252 of the 1992 constitution of Ghana with the goal of transferring funds from the central government to district assemblies to spearhead development projects as part of the decentralised system (Ayee 1995). The Fund receives a statutory allocation of 5% of the national revenue, which is then redistributed to districts based on an algorithm that considers factors such as population size, poverty levels, and the amount of revenue generated by the district assemblies themselves (Ayee 1995). The DACF is also disbursed using a set of criteria: equality, need, responsiveness and service pressure (Owusu-Mensah 2015).

Decentralising the health system in Ghana opened up existing structures and allowed for local participation in decision-making and the channelling of grievances to high-level units although sometimes community members were unaware of procedures for further actions (Yeboah-Assiamah 2016). The original objective of the programme was, however, farfetched as critics argued it was merely implemented to satisfy the demands of local elites and donor conditions for democratisation. For example, the SAP policies required Ghana to adopt a multi-party system and organise regular elections as a condition for receiving aid, which others argued was only a means by which donors imposed their interest on countries (Osei 2015). Apart from the external pressures from IMF and the World Bank for democratisation, poor living conditions owing to unfavourable SAP conditions and the impact of the military regime at the time of President Jerry Rawlings in the late 80s and early 90s triggered elites, urban workers, and students to embark on strikes and demonstrations requesting for democracy in Ghana (Boafo-Arthur 1999). Indeed, Resnick, (2017) argued that one of the drivers of district proliferation in Ghana was political. He opined that in most developing countries, progress on decentralisation was interpreted as an increase in sub-national governments, rather than focusing on how effectively those new sub-units functioned. Thus, Ghana's dominant parties: the National Democratic Congress (NDC) and New Patriotic Party (NPP), disproportionately targeted and split their non-competitive districts in order to win more votes, which often paid off (Resnick 2017).

Although districts had some autonomy to mobilise resources as indicated already, they were highly dependent on the central government for resources, including the recruitment and remuneration of health workers (Inkoom and Gyapong 2016). The distribution of DACF was sometimes politically motivated and was shrouded with mismanagement and poor accountability (Ayee, 1995; Banful, 2011). As of 2015, District Assemblies generated an estimated 22% of total revenue and relied on central government subvention³ for 69% of its resources to support development (Owusu-Mensah 2015). Poor resource mobilisation at the sub-national level was as a result of several factors including limited access to the socioeconomic data of residents, inadequate knowledge of existing tax regimes, and corruption among tax collectors (Owusu-Mensah 2015). The challenge of revenue mobilization further supports the argument that the country lacked adequate capacity and resources for decentralisation. Evidence suggests that poorer regions, including the Northern region, receive fewer resources, further widening the poverty gap (World Bank 2020).

Delayed disbursements of DACF allocations impact the effectiveness of DHMTs to support the provision of quality healthcare at the district and lower levels (Akosua Akortsu and Aseweh Abor 2011; Heerdegen et al. 2020). A study by Inkoom & Gyapong (2016) added that health facilities at sub-national levels were poorly coordinated and that staff were inadequate and often unequally distributed, particularly in remote settings (Inkoom and Gyapong 2016). This slow and uneven allocation of resources to sub-national levels exacerbates the cycle of vulnerability in the Northern region, making it difficult to escape, as demonstrated above.

The World Bank estimates that Ghana's GDP growth has slowed recently from 5.4% in 2021 to 3.2% in 2022, mainly because of disruptions from the Covid-19 pandemic. Likewise, poverty reduction has slowed with an estimated international poverty rate of 20.5% and hikes in utility bills (World Bank 2023a). This outlook could plunge many into entrenched poverty levels and further widen the inequality gap between the North and South. It also poses a threat to the quality of health service delivery and

³ The government of Ghana disburses a district assembly **common fund (DACF) subvention** to the local governments, i.e. the Metropolitan, Municipal, and District Assemblies (MMDAs) for poverty reduction activities and to provide infrastructure and social services.

access in this part of the country because it is predominantly rural and impoverished. The most probable obstacle is financial affordability, since many people would have to travel to bigger cities for health care. Nonetheless, the potential of CHPS to close the health inequity gap, particularly in the Northern region, is yet to be fully harnessed due to the programme's implementation challenges as well as fragility within and beyond the health system.

The reviewed literature from both Chapters Two and Three suggest that the WHO's proposed framework (service delivery, health workforce, health information systems, access to essential medicines, financing, and leadership/governance) for strengthening health systems is inadequate in fragile contexts because it does not sufficiently address all the political, social, environmental, and external factors that impact health. Therefore, using these building blocks in isolation without recourse to fragile contexts particularly in stable countries can pose a threat to meeting UHC across countries.

3.5 Development of Conceptual Framework

Building resilient health systems and communities requires an understanding of the drivers of fragility and designing strategies that limit their impact. To understand the challenges and enablers of CHPS effectiveness, the study conceptualised a fragility framework that assessed government stewardship, health workforce capacity and community cohesion.

So far, few frameworks exist for assessing health systems in fragile contexts. Existing ones have drawn on key lessons from overall health systems strengthening mechanisms proposed by the WHO. The variables used were based on a combination of fragility and health systems strengthening frameworks such as those proposed by Kruk et al. (2010) and Newbrander (2007). Others like The Health and Fragile States Network have focused on key elements of government that apply to the health sector. The Health and Fragile States Network, for example, argued that approaches that were effective in strengthening health systems in fragile contexts were those that incorporated: 1) a community involvement component intended to support sustainability and security of services; 2) focused on multiple elements beyond service

delivery to include addressing challenges with service utilization, invested in staff, strengthened community awareness and participation and mobilised local capacity to sustain gains; 3) integrated programmes into existing services and systems; 4) were committed to long-term investment in programmes, 5) built a diversity of partnership and worked effectively with key stakeholders from the community to overseas academic institutions and finally; 6) provided financial support including seed grants to support local initiatives (Health and Fragile States Network 2009). Witter et al. (2019) shared similar findings, noting that interventions that enabled HSS and improved access, especially in fragile and conflict situations, were those that targeted leadership and governance to provide cross-cutting solutions to systems challenges; invested in health worker interventions to increase supply, distribution and their performance; encouraged health financing either in the form of public or private funding, as well as external aid; facilitated the provision of adequate supplies and medicines and; those that designed health service packages to include a blend of CHW programmes and robust referral system to support the provision of basic services.

Kruk et al. (2010), in their proposed framework for rebuilding health systems in post-conflict countries (detailed in **Error! Reference source not found.**), emphasise that carefully designing a country's health system's building blocks can improve government capacity, promote social cohesion and strengthen social contract necessary for rebuilding states and reducing the recurrence of conflicts. Although this framework is designed for post-conflict states, it draws a lot of lessons from stable yet fragile states.

Table 3.8: A Logic Model for the Roles of the Health System in Post-conflict Countries

Program	Outputs	Outcomes
Functioning, equitable health system:	Improved access to quality, reliable health services for priority health problems	Reduced mortality and morbidity
National government stewardship	Enhanced social solidarity and cohesion	More capable, resilient state
Rehabilitated primary care facilities		Reduced risk of conflict recurrence
Re-established health workforce	Greater confidence in government and support for social contract	
Fair financing		

Table 3.8: A Logic Model for the Roles of the Health System in Post-conflict Countries

Program	Outputs	Outcomes
Guaranteed package of health services Equitable allocation of services	Stronger government capacity to administer public programs	

Source: Kruk et al. (2010)

The framework proposed by USAID (Newbrander 2007), focuses on key elements of government that apply to the health sector. The authors propose six basic structural components (stewardship, accountability, delivery of essential services, resource management concerning human resources, financial resources, facilities, drugs, supplies and commodities, financing, and security) of a state that affects health systems (see **Error! Reference source not found.**).

Table 3.9: Components of Fragility in Health Systems

Stewardship	Refers to who owns or controls the assets and resources of the health sector. It is about the assets and resources of the health sector. It also concerns the governance of the health sector, control of essential resources, and determination of the direction of the health system.
Accountability	Refers to the transparency with which transactions occur, resources are allocated, and money is spent. It also implies answerability for the way resources are used—not just financial resources but the allocation of human resources to various functions. That is, does the health system focus primarily on hospital and curative care or is it solidly based on primary health and preventive services?
Delivery of essential services	Refers to the operation of the elements of the health system that provide health services, whether in fixed facilities, such as health centres, clinics, outpatient departments, and hospitals or via mobile or outreach services and targeted campaigns, such as national immunization days.
Resource management	Refers to the operation of the health system in regard to who manages the operations of the health facilities and the health system through the Ministry of Health (MoH). The resources managed for the health sector include health facilities, financial resources, human resources for health, and training and health research institutions.
Financing	Refers to who pays to provide health services and where the money is coming into the health sector flows. Finances for the health sector come from private as well as public sources, including out-of-pocket payments, nongovernmental organizations (NGOs), and third parties. This financing encompasses both recurrent or operating costs and capital costs. Those paying for health services have a great deal of influence on how the health sector operates.
Security	Refers to the necessity for people to go about their daily lives and earn their livelihoods freely, without fear of violence.

Source: Newbrander (2007, p. 4)

Another HSS framework was one developed by the Ghana Health Service (GHS) in collaboration with researchers to improve CHPS implementation in Ghana under the project: Ghana Essential Health Intervention Project (GEHIP). The framework (**Error! Reference source not found.**) deployed a ‘systems solutions’ approach, leveraging the World Health Organisation's (WHO)’s health systems strengthening building blocks, to strengthen CHPS implementation. This GEHIP model was replicated in the Northern and Volta regions of Ghana under a flagship program titled *National Program for Strengthening the CHPS Initiative in Ghana (CHPS+)*. The programme aimed to transfer GEHIP approaches to the Northern and the Volta regions of Ghana, thereby demonstrating practical means of accelerating and improving CHPS implementation (Phillips et al., 2016).

Table 3.10: GEHIP Interventions

Type of Health System Component	Current Community Health Service Strategy	GEHIP Systems Strengthening Strategies
Essential services	Community Health Officers (CHO) provide IMCI, antenatal care & family planning.	Improving community-based services. Frontline workers are trained and equipped to save newborn lives by: Providing affordable equipment and information systems with organizational strategies for covering referral costs that are not addressed by the national health insurance system. Improving emergency management capacity: GEHIP trained frontline workers in triage and emergency management to prevent neonatal mortality.
Essential personnel	CHOs trained to provide primary health care; volunteers focused on health promotion.	Developing service quality by launching health and mortality audit procedures and responding to highlighted areas necessitating clinical care improvements to include: Essential emergency newborn care by midwives and community workers in risk identification & triage, resuscitation, community-engaged kangaroo mother care, and other newborn care interventions. Expanding volunteer skills in the management of childhood illness.

Table 3.10: GEHIP Interventions

Type of Health System Component	Current Community Health Service Strategy	GEHIP Systems Strengthening Strategies
Information for decision-making	Complex paper registers without provision for feedback	Reforming information systems for decision-making by Simplifying information tools for frontline workers, improving data utilization procedures, and supporting supervisory decision-making. Knowledge management for decision-makers which compiles and disseminates lessons learned to managers.
Provision of drugs logistics	Fees for family planning supplies;	Ensuring access to essential equipment and supplies. Health information tools monitor access to essential equipment and ensure essential supply and logistics needs.
Resources, budgeting & planning	Annual budgeting; health sector financing	Building district capacity for budgeting and planning by developing a tool for the allocation of resources according to actual need so that budgeting is linked to the relative burden of disease benefits associated with an investment in alternative strategies for health care and supplying catalytic revenue that could be used to build community and district leadership involvement in CHPS financing. Supplementing flexible financing with \$0.85 per capita per year for three successive years in conjunction with leadership training and CHPS demonstration.
Leadership, governance, and Accountability	Leadership training through a process of augmenting workshops with participatory action for demonstrating community engagement.	Strengthening leadership with demonstration strategies for engaging teams of political, traditional and health system leadership into a system of collaborative observation, participatory problem solving and peer learning with a target on expanding development sector investment in CHPS scale-up.

Source: Phillips et al. (2016)

Nonetheless, the challenges posed by fragile contexts can undermine the performance and outcomes of health systems and should be incorporated in health systems and resilient frameworks. For example, (Diaconu et al. 2020) found that fragility can compromise both access and the quality of health care as many fragile states lack sufficient health infrastructure, human resources, logistics, and financing. In fragile contexts, factors such as inadequate surveillance, limited health promotion,

and delayed disease response contribute to an increased risk of outbreaks (Nuzzo et al. 2019; Ratnayake et al. 2020). Inevitably, poor governance and accountability in fragile settings weaken the cohesion among communities. Indeed, Thindwa (2017) argued that the lack of accountability and the erosion of citizens' trust in authorities are key drivers of fragility across countries. These challenges can be mitigated by fostering greater government accountability through regular citizen engagement and responsiveness to their needs and preferences.

3.5.1 Conceptual Framework

The above frameworks informed the conceptualisation of key constraints shaping CHPS implementation and effectiveness in the fragile context of the Northern region, of Ghana. A conceptual framework presents the key concepts underpinning a study and offers the relationships between them. It guides the interpretation of social reality, thus, providing a deeper understanding of the subject being studied (Jabareen 2009). Leshem & Trafford (2007) describe it as the 'scaffold' which guides the research design and fieldwork. This study was, therefore, guided by three overarching themes: 1) government stewardship, 2) health workforce capacity, and 3) community cohesion. Figure 3.7 below details the framework adopted for this study and expounds the logic that government stewardship has a direct correlation with CHPS effectiveness and affects both health workforce capacity and communities' trust in the health system and government.

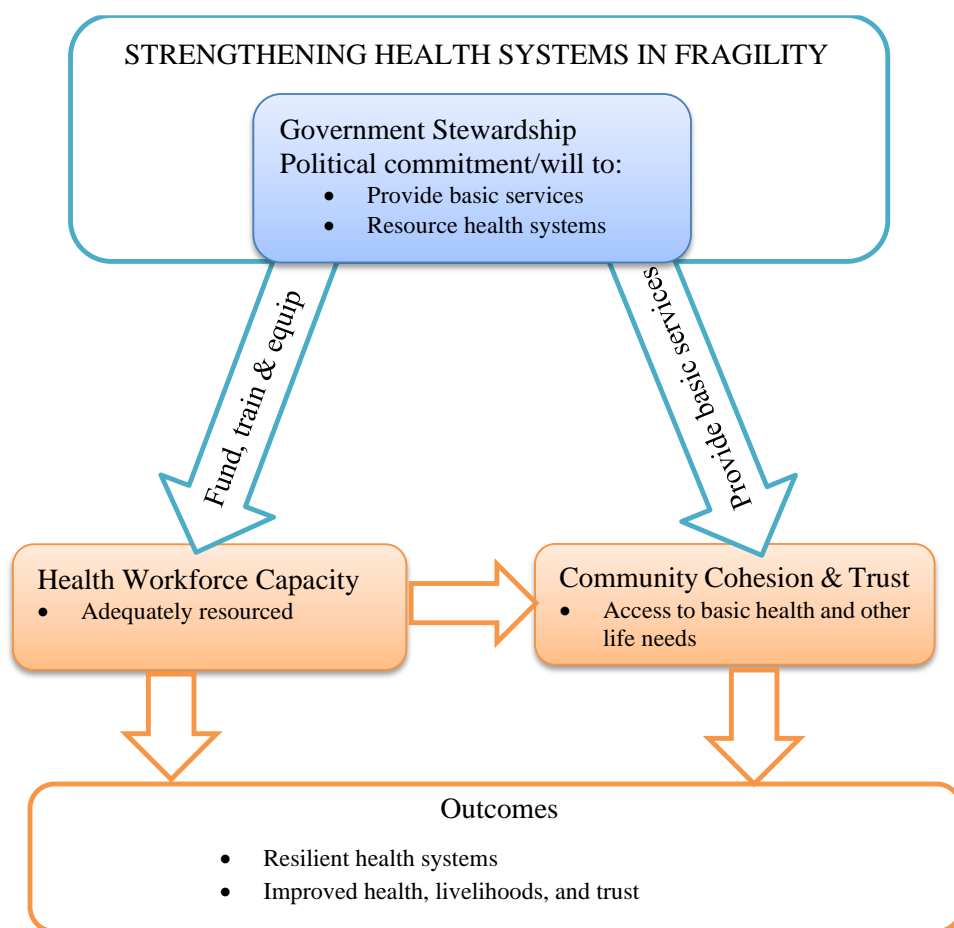


Figure 3.7: Conceptual Framework

Source: Author's construct

3.5.1.1 Community Cohesion and Trust in Primary Health Care

Social exclusion breeds inequality, marginalisation, weakens the cohesion among societies, can breed conflict and result in slow economic growth (OECD, 2011; Langer et al., 2017). To promote equality and long-term economic growth, many have turned to social cohesion. The concept was first conceptualised by Durkheim in the 1850s and concerns the interdependence or solidarity of a group of people with similar backgrounds such as norms, trust and networks to foster a better society (Larsen 2013, 2014; Patel and Gleason 2018). It is the belief held by a group of people that they constitute a common moral which forms the basis for trusting each other (Larsen 2014). Away from the shared beliefs, the perception that individuals do not 'cheat' each other is key for building such trust. The bond between residents and their willingness

to help each other is what constitutes social cohesion (Carpiano, 2006; Chan et al., 2006; Barnhart & Maguire-Jack, 2016).

Social cohesion has been measured differently by many scholars. While some (as shown above) perceive social cohesion as the cordial relationship or bond among a group of people in a society which fosters a general sense of belonging (North American perspective), others like Easterly et al., (2006) posit that social cohesion is positively related to ‘good’ institutions and as such can result in economic growth (also endorsed by the European Union) (Langer et al. 2017). According to Berkman and Kawachi (2000), social cohesion is determined through: 1) the ‘absence of latent social conflict’ expressed in any kind of inequality and 2) the presence of strong social bonds such as norms and trust (social capital) (Berkman & Kawachi, 2000).

Chan et al., (2006) intimate that the concept enables citizens to view society beyond just a collection of people, but as a network of groups, organisations and institutions. In other words, there are the **vertical interactions** that embodies the relationship between the state and society and the **horizontal interactions**, which exists among different individuals and groups (Chan et al. 2006). Langer et al., (2017) support this argument, noting that social cohesion is how individuals perceive both each other and the state. They argue that inequality transcends perceived group inequalities to include perceptions of fair or unfair treatment by a government; they also posit that trust is evident among people, across people and in relation to the state (Langer et al. 2017). Governments, therefore, have a responsibility to ensure that resources are equitably distributed to minimise tensions and that policies are deliberately designed to minimise inequality and promote cohesion among citizens (Langer et al., 2017; OECD, 2011).

The review of social cohesion (detailed above) makes it a compelling attribute of global health and primary healthcare delivery. Thus, in situations of distress, the cohesion among community members can be harnessed to support those in need. Similarly, the cohesion between communities and a state, if promoted, will increase leadership accountability, and promote equality in health care delivery and access. The application of social cohesion to population health is gaining traction and many have embraced the concept as part of the solution for reducing health inequalities (Chuang

et al. 2013). For instance, in 2005, the WHO Commission for Social Determinants of Health (CSDH) declared that action was required to address social factors that impact health. The Commission subsequently embraced the concept of ‘social capital’ as a key determinant of health equity and the well-being of individuals and communities (WHO, 2010a; Agampodi et al., 2015).

Social cohesion in this study aimed to understand citizens’ access to basic services and support for each other. The concept also explored the level of trust (relationship) community members bestowed in the Government and healthcare system.

3.5.1.2 Government Stewardship and Primary Health Care

Sub-Saharan Africa (SSA) shoulders a greater percentage (25%) of the world’s disease burden yet is unable to meet all its population health requirements owing to factors such as inadequate health workers and reduced health expenditures. The primary care workforce in the sub-region constitutes only three per cent of the world’s health workforce population and often lacks key resources such as medications, infrastructure and the required training and skills set to provide PHC, particularly in rural areas. Again, weak democracies and authoritarian regimes limit governments’ ability to prioritise and adequately fund healthcare (WHO, 2008; Agyepong et al., 2017; Mash et al., 2018b;). Amo-Adjei (2014) identified inadequate political commitment in the management of tuberculosis in Ghana and asserted that poor stewardship was revealed in inadequate financial resource allocation, poor human resource development and the provision of physical infrastructural.

A health system is responsible for funding, service delivery and stewardship. Governments, through their ministries of health, are stewards of health systems and are responsible for guiding these systems to improve the health and well-being of their populations (Travis et al. 2002). When the WHO introduced *good governance* as a key component of its six health systems strengthening building blocks, it further introduced the concept of stewardship as a practical framework to promote good governance and strengthen health systems (Brinkerhoff et al. 2019). Stewardship, according to the WHO, is when governments take responsibility for the health system

and the well-being of their populations by fostering functioning health systems, assuring equity, and coordinating interaction with government and society (Brinkerhoff et al. 2019). Accordingly, the domains of an effective health system’s stewardship are to generate intelligence, formulate strategic policy direction; ensure tools for implementation - powers, incentives, and sanctions; build coalitions/partnerships; ensure a fit between policy objectives and organisational structure and culture; and ensure accountability (Travis et al. 2002). Travis et al., (2002) posited that a health system’s stewardship is characterised by three main tasks which are: 1. provide vision and direction for the health system 2. collect and use intelligence, and 3. exert influence - through regulation and other means (Travis et al. 2002).

One of the earliest instruments developed to measure stewardship was the Essential Public Health Functions (EPHF) instrument developed by the WHO (Bettcher et al. 1998). Another broader instrument (Table 3.), detailing eleven key indices for measuring some aspects of the concept, was developed by the Centre for Disease Control and Prevention (CDC) and the Centro Latino Americano de Investigaciones en Sistemas de Salud (CLAISS) and the Pan American Health Organization (PAHO) (Alwan et al. 2016; PAHO and WHO 2020).

Table 3.11: Essential Public Health Functions

EPHF 1	Monitoring, evaluation and analysis of health status Public health surveillance, research and control of risks and threats to public health
EPHF 2	Health promotion
EPHF 3	Social participation in health
EPHF 4	Development of policies and institutional capacity for planning and management of public health
EPHF 5	Strengthening of institutional capacity for regulation and enforcement in public health
EPHF 6	Evaluation and promotion of equitable access to necessary health services
EPHF 7	Human resource development and training in public health
EPHF 8	Quality assurance in personal and population-based health services
EPHF 9	Research in public health
EPHF 10	Reducing the impact of emergencies and disasters on health
EPHF 11	

Source: Alwan et al. (2016)

The strong connection between stewardship and health (Spreng et al. 2014) has led to researchers like Steinglass (2013) emphasising political commitment, good stewardship, and political engagement at both national and sub-national levels in strengthening countries' ownership and support for immunisation and other health indicators (Steinglass 2013). For example, in 2005, the Indian Government increased spending on primary healthcare infrastructure, decentralised health planning and management, employed community health workers, transferred cash to poor pregnant women and provided free emergency transportation to promote institutional deliveries, especially among rural, less educated, and poor populations. Empirical evidence showed that the intervention led to improvements in institutional delivery skilled birth attendance, ANC attendance, PNC, and immunisations, as well as increased the uptake of emergency transportation (ambulance) and reduced OOP associated with delivery/childbirth. These results contributed to declines in MMR, U5MR and maternal mental health, especially among those with low socioeconomic backgrounds (Singh and Vellakkal 2021). This research explored the concept of stewardship by reviewing the Ghanaian government commitment to providing basic services, including basic healthcare, in study communities.

3.5.1.3 Health Workforce and Primary Health Care

A globally acknowledged threat to HSS and UHC is the paucity of fit-for-purpose and fit-for-service HRH, resulting from reduced numbers, inappropriate distribution, and limited capacity of providers to discharge duties. The need for health workers to meet growing demands is estimated at 4 million workers. One million of this number is needed in sub-Saharan Africa alone. The Alma Alta Declaration, more than 30 years ago, paved the way for the introduction of a community health worker (CHW) concept that promises to, in part, fill this human resource gap (Chen et al. 2004).

As noted in Chapter Two, the activities of CHWs, which include health promotion and commodity distribution, have contributed to the delivery of family planning and maternal and newborn health services, and made significant contributions to global health outcomes (Chen et al. 2004; Haver et al. 2015; Perry et al. 2016). There is mounting evidence that CHWs have contributed to enhanced service coverage and

positive health outcomes, hence have attracted global attention, with multiple development partners (DPs) and international NGOs providing support for training, supervision, infrastructure and essential commodities for the lay health workers (Edward et al. 2015). Large-scale national CHW programmes are perceived as the cornerstones of primary healthcare systems and can catalyse the achievement of the UHC agenda, as well as prevent child and maternal deaths (Perry et al. 2016). In settings where HRH is threatened, CHWs have been deployed to support health care delivery in marginalised communities. This study aimed to gauge the capacity of CHPS workers to provide basic health care in study communities.

3.6 Conclusion

Ghana is a West African country with a population of about 31 million. Until recently, the country was subdivided into ten administrative regions, including the Northern region where this study was conducted. In 2018, the country was re-demarcated to create six additional regions, totalling 16. This study is reported in the context of the former Northern region. Health service delivery in Ghana is governed by the Ministry of Health (MoH) and supported by the Ghana Health Service (GHS) and other public and private institutions. The country operates a three-tier primary health system comprising tertiary, secondary, and primary care. Like global health indicators, Ghana has successfully improved most of its health indicators such as ANC uptake. This notwithstanding, some continue to fall below global averages. This includes a high MMR of 319, compared to the global average of 211. Barriers to service delivery, particularly in relation to RMNCH, are embedded in high poverty levels, low levels of education, and inadequate logistics and equipment to support service delivery. The Northern region of Ghana experiences a unique form of fragility owing to factors such as colonialism, historical policies, low political will, as well as inadequate access to education, health services, and infrastructure development. Despite the potential of CHPS to bridge the health equity gap in this region, implementation and scale-up have been slow in the Northern region.

Existing health systems strengthening frameworks were not always conceptualised with fragility in mind, such as the WHO's health systems strengthening building

blocks. Promoting health systems resilience without addressing the drivers of fragility especially in stable countries can limit progress towards achieving UHC and RMNCH in poor countries.

This study aimed to understand the challenges with CHPS effectiveness using the lens of fragility. This research question was explicitly operationalised in the context of a research group active in exploring the impact of fragility of the operation of health systems, which is reflected in the conceptual framework detailed in section 3.7. Thus, the conceptual framework guiding this study consisted of three overarching themes: government stewardship, health workforce capacity and social cohesion.

CHAPTER FOUR: RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

This chapter presents a background to the research design including its paradigm and methodology underpinnings in sections 4.2. It details the rationale for using mixed-methods research and describes the methods deployed in the data collection process in section 4.3 and sampling in section 4.4. The chapter further explains the data collection, analysis, and ethical considerations in sections 4.5, 4.6 and 4.7 respectively. It ends with a reflection on the role of the researcher and measures deployed to promote the study's validity in 4.8.

4.2 Research Paradigm

How we understand and study the world (epistemology), what we believe to be true and real (ontology), what we value (axiology) and how we conduct our research (methodology) are all aspects of a research paradigm, which is a way of seeing and interpreting reality. Research paradigm is the pathway to formulating research questions and designing appropriate methods to answer them.

For many years, a paradigm war existed between positivists and constructivists. Positivists argue that knowledge is an independent and unproblematic reality out there waiting to be discovered in an objective and unbiased manner. The constructivists, on the other hand, argue that reality is rather a construction formed in people's minds and has no independent existence whatsoever and therefore seeks to gain a deeper understanding of the reality of others.

The emergence of pragmatism sought to end this war by emphasizing on 'the consequence' rather than 'the process, hence encouraging researchers to engage any kind of method(s) to best answer their research questions. Pragmatism offers a multifaceted and multidisciplinary approach to achieving research objectives, which is critical for designing and addressing health policy and interventions.

4.2.1 Philosophical Assumptions Underpinning this Research

Worldview, theoretical lens and paradigm have been used interchangeably to mean a set of beliefs and practices that guide a given field and sum up or interpret a researcher's own beliefs regarding a study. Research paradigm is the lens through which the world determines what we know and how we know it (epistemology), the nature of reality (ontology), our values (axiology) and research processes (methodology) (Hanson et al., 2005; Doyle et al., 2009; Glogowska, 2010). By one's worldview, researchers can pose questions and employ appropriate methods that answer them (Morgan 2007; Doyle et al. 2009).

For decades, a paradigm war existed between quantitative and qualitative research where the worldview of a researcher was largely informed by a positivist (quantitative) paradigm or naturalistic/constructivist (qualitative) outlook (Doyle et al. 2009; Glogowska 2010). Quantitative research, associated with positivity, claims that there is an independent and unproblematic reality out there and, therefore, is capable of being studied (Glogowska 2010). Thus, the positivist posits that there is only a single reality out there and seeks to understand this existing causal relationship through objective measurement and quantitative analysis. Researchers threading this pathway are classified as more objective and unbiased towards their studies. To achieve this unbiasedness, quantitative researchers use large samples in testing 'constructed' hypotheses and, by doing this, eliminate personal values in the inquiry process, making their studies more robust and conclusive (Doyle et al. 2009).

Constructivism/qualitative research, also termed naturalistic inquiry, post-positive or interpretative approaches, diverges from quantitative research and explores the 'context of human experience' in a study (Creswell 1994; Schwandt 2003; Doyle et al., 2009). Qualitative research holds the view that reality is rather a construction formed in people's minds and has no independent existence whatsoever (Murphy and Dingwall 1998; Glogowska 2011). Unlike positivists, constructivists are subjective and seek to gain a deeper understanding of the reality of others. Proponents of this paradigm posit that there is more than one reality, which can be interpreted differently as informed by existing circumstances during research (Appleton and King 2002;

Doyle et al. 2009). Using a smaller sample, the constructivist seeks to interpret the reality of other people through a process of detailed descriptions of their experiences.

Although positivists argue that quantitative studies are more objective – devoid of any bias imposed by personal values – some scholars have critiqued this, arguing that every research has an element of value judgement attached to them. For example, (Doyle et al. 2009) argued that the positivist inquiry produces evidence that is detached from the real context of health service work because the researcher is not involved or connected with it (Stevenson, 2005; Doyle et al., 2009).

4.2.2 Pragmatism and Mixed-methods Research

The pragmatist stance of philosophy, first conceptualised by Charles Sanders Peirce with further contributions from William James and John Dewey, aimed to end the long-standing paradigmatic feud between positivists and constructivists (Glogowska 2010). Pragmatism seeks to mediate the philosophical rivalry between positivists and constructivists by fostering an amalgamation of both quantitative and qualitative methods through a study process (Hanson et al. 2005). Pragmatists emphasize ‘the consequence rather than ‘the process, hence encouraging researchers to engage in any kind of method(s) that enables them to answer their research questions. Essentially, mixed methods move away from emphasising any particular paradigm affiliation but rather embrace the application of both quantitative and qualitative methods in a way that maximises the strengths of one and minimises the weaknesses of another (Johnson and Onwuegbuzie 2004; Doyle et al. 2009). Here, a researcher applies both qualitative and quantitative research methods in the collection, analysis and reporting of study findings (Tashakkori & Creswell, 2007; Doyle et al., 2009). Proponents of this paradigm argue that resorting to both quantitative and qualitative methodologies is essential for adequately addressing research questions in a useful and efficient manner. Thus, a study’s methodology should be “...chosen for its aptness for answering the research question posed rather than because of any pre-existing philosophical commitment” (Murphy et al. 1998; Ritchie and Lewis 2003; Glogowska 2011). Pragmatism emphasises the role of actionable knowledge in shaping the lives of people rather than seeking to understand social research from ontological, epistemological,

and methodological perspectives (Morgan 2014a) which is critical for promoting the general health and well-being of populations.

For decades, healthcare research was largely driven by positivity; however, pragmatists argue that the multifaceted and multidisciplinary considerations in designing and addressing health policy and interventions – related to humans – require a pluralist acceptance of the variety of health-related knowledge beyond a particular paradigm. The application of this lens allows researchers to focus on the purpose and consequence of knowledge for positive social action (Cornish and Gillespie 2009; Doyle et al. 2009). John Dewey encapsulates this way of thinking as a systematic inquiry, which follows five main steps (also shown in Figure 4.).

1. Recognising a situation as problematic.
2. Considering the difference it makes to define the problem one way rather than another.
3. Developing a possible line of action as a response to the problem.
4. Evaluating potential actions in terms of their likely consequences.
5. Taking actions that are likely to address the problematic situation (Morgan 2014a).

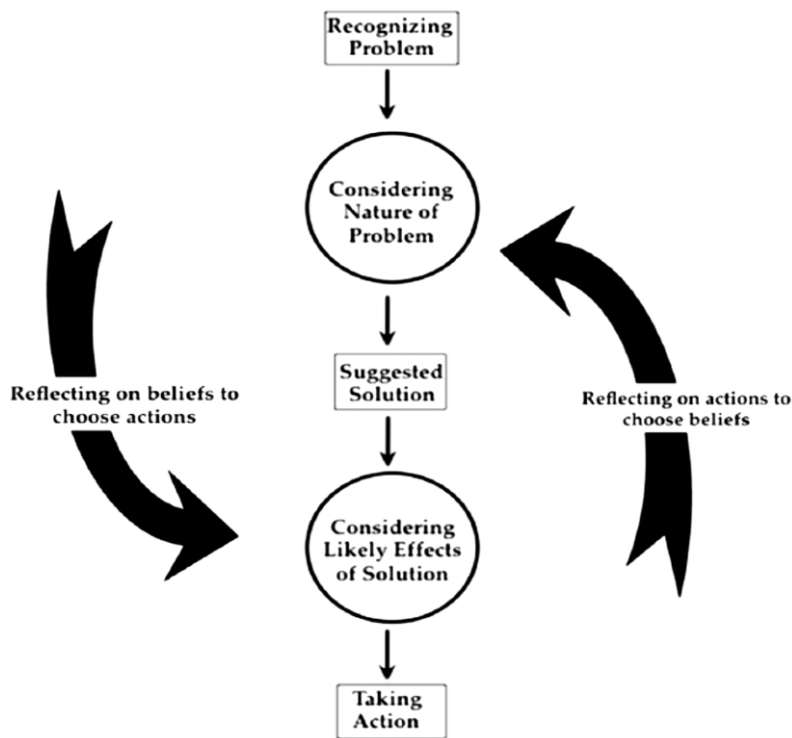


Figure 4.1: Dewey's model of inquiry

Source: Morgan (2014b)

In line with this argument, mixed-methods research has been increasingly applied to social research over the years. For example, research commissioned by the Health Research and Development Programme in the United Kingdom found an increase in the application of mixed methods research from 17% in the period before 1995 to 30% between 2000 and 2004 alone (Doyle et al. 2009). This popularity was attributed to the benefits of using mixed methods, including the ability to apply different methods at different stages to play specific roles and allow for triangulation of study findings so that one method 'checks' the other in a bid to increase validity or study robustness (Moran-Ellis et al., 2006; O'Cathain et al., 2007; Glogowska, 2010). Mixed methods research has many merits, but it also poses some challenges at the conceptualisation stage. Some scholars note that it can be difficult to determine how both methods will be used collaboratively while ensuring their rigour. Again, at the synthesis stage, researchers sometimes grapple with interpreting and reporting findings (Glogowska 2010). There are also conflicting views about what constitutes mixed methods (Sandelowski 2000; Tashakkori and Creswell 2007; Doyle et al. 2009; Bryman 2016).

Others have argued that depending on how study methods are applied, the use of different methods to complement each other's weaknesses can be expensive in terms of time and resources. To maximise its potential, Morgan (2007b, 2014b) proposed to apply mixed methods in a way that allows one method to supplement the other. This offers a deeper understanding and elaboration of a given phenomenon (Glogowska 2010). As one's choice of methodology should be informed or driven by the research question and objectives, Glogowska (2010) mentions that the use of mixed methods should be encouraged only where appropriate as it does not always constitute a superior method over others. For some, its composition should be left open as the study paradigm is still evolving (Tashakkori & Creswell, 2007; Johnson et al., 2007; Doyle et al., 2009).

Pragmatism is focused on solving problems of everyday life (Morgan, 2014b; Korte & Mercurio, 2017). Therefore, this study was conducted using this lens of philosophy to understand challenges with CHPS effectiveness in the fragile context of the Northern region. As detailed in Chapter three, fragile settings face some of the world's worst health outcomes as a result of weak health systems and other factors such as under-development. Thus, understanding the concept and complexity of fragility is relevant to healthcare practice and to promoting the health system's resilience across. Understanding the drivers of fragility and their effect on Ghana's CHPS programme is essential for promoting systems resilience and for meeting the country's universal health care agenda.

4.3 Mixed Methods Study

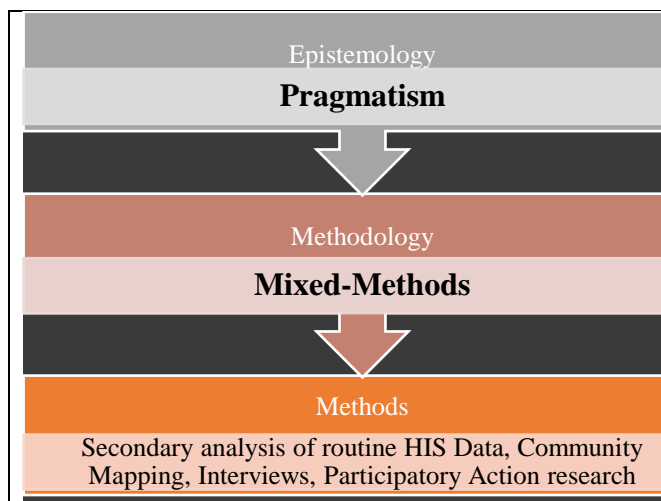


Figure 4.2: Research Methodology

Source: Author’s Construct

Mixed methods combine qualitative and quantitative data within the same study in terms of broad approaches, viewpoints, data collection and analysis to generate an in-depth understanding of a phenomenon (Burke, Anthony and Lisa 2007; van Griensven et al. 2014). The application of mixed methods research in the health sector is gaining traction due to the

different dimensions that impact health and disease and the diverse nature of health care teams required (Ong, 1993; Glogowska, 2010). The methodology addresses the complexity of dealing with humans, introduces human-focused interventions, and deploys patient-centred approaches to healthcare studies. The use of mixed methods solves the deficiency of using a single method and allows for triangulation so that one aspect of a study checks the other or the use of multiple methods to explain a concept (Glogowska 2010). According to Glogowska, (2010) pragmatists consider mixed methods as an appropriate means for answering research questions in a useful and efficient manner. However, Morgan (2014a) argues that regardless of the methods used, whether qualitative, quantitative, or mixed, pragmatism can guide social research as a philosophy that evaluates ideas based on their practical outcomes and implications.

This study was conducted using a mixed-methods methodology – without recourse to any method but one that will help answer research questions (Figure 4.). Specifically, an explanatory sequential mixed-methods design (Figure 4.), where the quantitative study preceded the qualitative study, was deployed in three distinct phases (Creswell 1994) (Figure 4.4). In phase one, CHPS data on RMNCH were reviewed to gauge CHPS progress in study communities. Phases two and three were qualitative studies

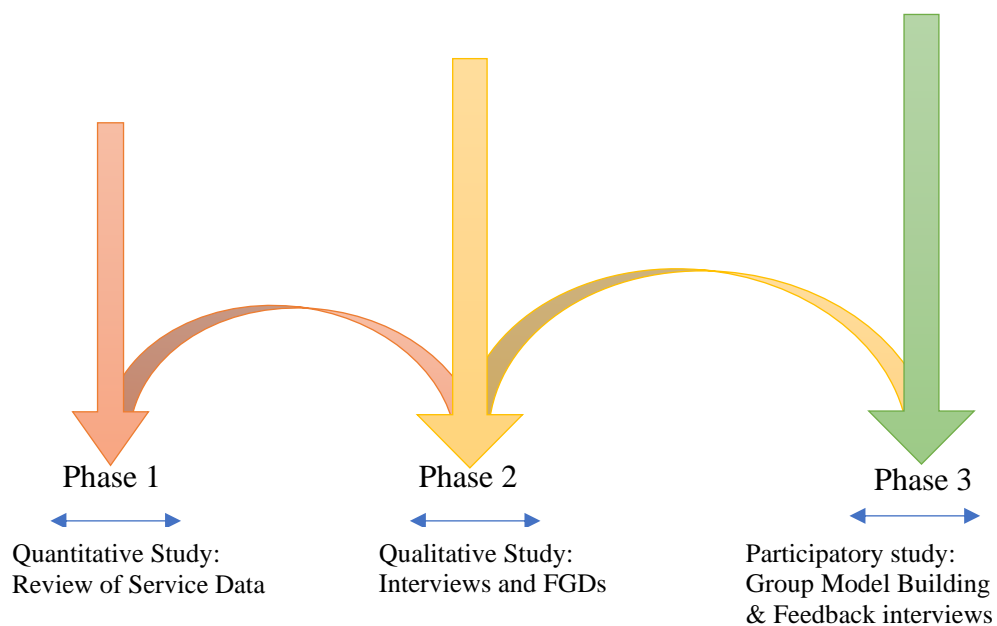


Figure 4.4: Research in Phases

Author's construct

4.3.1 Quantitative Methods

To better understand CHPS implementation challenges in study areas, the study first reviewed health service data associated with the programme as detailed in research question one. Existing literature shows a positive relationship between health indicators and functional CHPS compounds. For example, Nyonator et al., (2005) and Kweku et al., (2020) found higher skilled delivery, ANC, PNC, and FP among functional CHPS compounds (Nyonator et al., 2005a; Kweku et al., 2020). This study proposed that the effective implementation of CHPS guidelines (detailed in the literature review Chapter) with a corresponding increase in functional zones will improve health indicators. As CHPS seeks to provide RMNCH services, this research reviewed data on ANC4+, PNC, Penta 3, FP and home visits over five years (2012 to 2017). The decision to measure progress over the selected period (2012 – 2017) aimed to accommodate the period when DHIMS 2 started to when the study commenced. Following the retrieval of service data, a descriptive analysis using Excel was generated to gauge progress for the selected indicators.

4.3.2 Qualitative Methods

The qualitative research arm of this study was a combination of key informant interviews, focus group discussion (aided by community mapping methodology) and participatory action research using group model building (GMB) methodology. Interviews and focus groups (phase two) aimed to ascertain multiple perspectives on the challenges and enablers of CHPS in response to research question two. Group model building and follow-up interviews were carried out in phase three of the research, also in line with research question three.

Key informant interviews were conducted to gauge stakeholder perceptions of barriers and enablers of CHPS implementation. A total of 33 participants from the government and the health sector at the national, regional, district, sub-district and community levels were purposively selected for face-to-face semi-structured interviews.

Eight (8) focus group discussions, aided with a community mapping (CM) technique, were also carried out at the community level and targeted community members – users of the CHPS programme. Community mapping (CM) is a technique that helps to understand community perceptions of health topics by stimulating dialogue and critical thinking among stakeholders. CM is useful because it does not impose the moderators' views on the participants and gives them ownership of the discussions (Risisky et al. 2008; White and Stephenson 2014).

The CM sessions were conducted in focus groups of 8-12 participants each. During discussions, participants were asked to develop maps of their surroundings and, referencing these maps, indicate barriers and enablers of CHPS implementation, as well as issues of fragility that affect CHPS effectiveness.

4.3.3 Systems Dynamic Approach and Group Model Building

In relation to the study's third research question, phase three deployed a GMB methodology to explore potential systems interventions that might enhance the quality and utilisation of CHPS services. The sessions also validated emerging themes from interviews and FGDs, enabling triangulation and fostering the study's validity.

Group model building (GMB) is a systems thinking methodology that has been widely used in the global health landscape to understand recent public health challenges. GMB presents researchers with the requisite technique to engage diverse stakeholders on a particular subject in a process that provides a joint understanding of complex issues and makes recommendations to address them (Vennix, 1996; Siokou et al., 2014). In studies such as Ager et al. (2015) and Lembani et al., (2018), GMBs were used to understand stakeholder perspectives on the functionality of the health system in Yobe, Nigeria, during the Boko Haram insurgency. During GMBs, causal loop diagrams (depicting a qualitative description of possible *causes* of a challenge and the interrelationships between key domains) and stock and flow diagrams are often created to engineer the creation of possible *solutions*.

4.4 Research Sample

This study deployed a non-probability sampling method as it adequately supports exploratory studies such as this one. Nonprobability sampling is largely associated with qualitative research, where researchers seek to use a smaller sample size to establish processes and patterns of human behaviour that can be challenging to quantify. Thus, rather than quantify “how many” and “how much” qualitative studies seek to understand the “why” and “how” of a phenomenon (Tenny et al. 2022).

4.5 Sampling and Site Selection

The selection of the study site was first informed by an extensive literature search. As detailed in the literature review Chapter, the Northern region was purposively selected for this study because of factors including low health indicators and a high poverty rate. Compared to the national averages, the NR lags in terms of health indicators, such as a high total fertility rate of 6.6%, an unmet need for family planning, and a high number of home births of 63.9% (GSS et al. 2015). Despite the country’s recent economic growth, the Northern region remains relatively impoverished (Cooke et al. 2016; World Bank 2020). Overall, the region is a focus of fragility in terms of low political will and inadequate access to education, health services, and key infrastructure (Bliss and Streifel 2014; World Bank 2020). This is partly an outcome of unfavourable historical policies, unfavourable political decisions, and the

geography of the regions (Abdulai et al., 2018; Aboagye & Bolt, 2018). Despite the potential of CHPS to increase universal health coverage to many in distant and deprived communities, barely half of the region's CHPS zones are functional (Phillips J.F. et al. 2016; Bassoumah et al. 2021).

Secondly, my previous experience with Ghana's CHPS programme while working on the Ghana Essential Health Intervention Programme (GEHIP) contributed to the selection of study site. The GEHIP project aimed to improve CHPS effectiveness in one of the country's deprived settings – the Upper East region – using a systems strengthening approach. At endline, this approach catalysed the expansion of primary health service delivery and reduced under-five mortality by 30% in intervention districts (Phillips et al. 2016). This successful pilot informed scale-up in two of Ghana's deprived settings, the Northern and Volta regions, under a new flagship: CHPS+. Thus, the selection of study districts – Kumbungu and Gushiegu in the Northern region of Ghana – was informed by literature but was also done in consultation with stakeholders of the CHPS+ project, which included the District Health Management Team (DHMT) members.

Within districts, sub-districts and CHPS zones were sampled (using convenience sampling) with recourse to the DHMT's guidance on access (transportation) difficulties, particularly during the rainy season. In each district, sub-districts were divided into two clusters – those participating in the CHPS+ intervention and those that did not. In the Kumbungu district, Gupanerigu was the only CHPS+ participating sub-district and was automatically selected for inclusion. Within the Gupanerigu sub-district, Bognayili and Chesegu CHPS were purposively selected from its CHPS zones. Similarly, in the Gushiegu district, both Galwie and Katani sub-districts were part of the CHPS+ intervention and were both included in this study. It must be emphasised that although Galwie and Katani were sub-districts at the time of data collection, they were also CHPS zones and accessible (in terms of transportation), hence were considered for inclusion. Among non-CHPS+ zones in Gushiegu, Zamashegu and Zantilli, which are under the Gushiegu sub-district, were included in the study. In Kumbungu district, Tibung and Voggu CHPS constituted the non-CHPS+ facilities. In

all, five sub-districts (three of them from Gushiegu) and eight CHPS zones (split equally between the two districts and CHPS+ and non-CHPS+ zones) were selected for this study (**Error! Reference source not found.**, Figure 4.5).

Table 4.1: CHPS Selection Process

Districts	All Sub-Districts (health centres as proxy)	All CHPS zones	All CHPS+ Sub-Districts	Selected CHPS+ sub-districts	Selected non-CHPS+ sub-districts	Selected CHPS+ zones	All Selected CHPS zones
Gushiegu	5	19	2	2	1	2	4
Kumbungu	5	18	1	1	1	2	4

Source: Author's construct

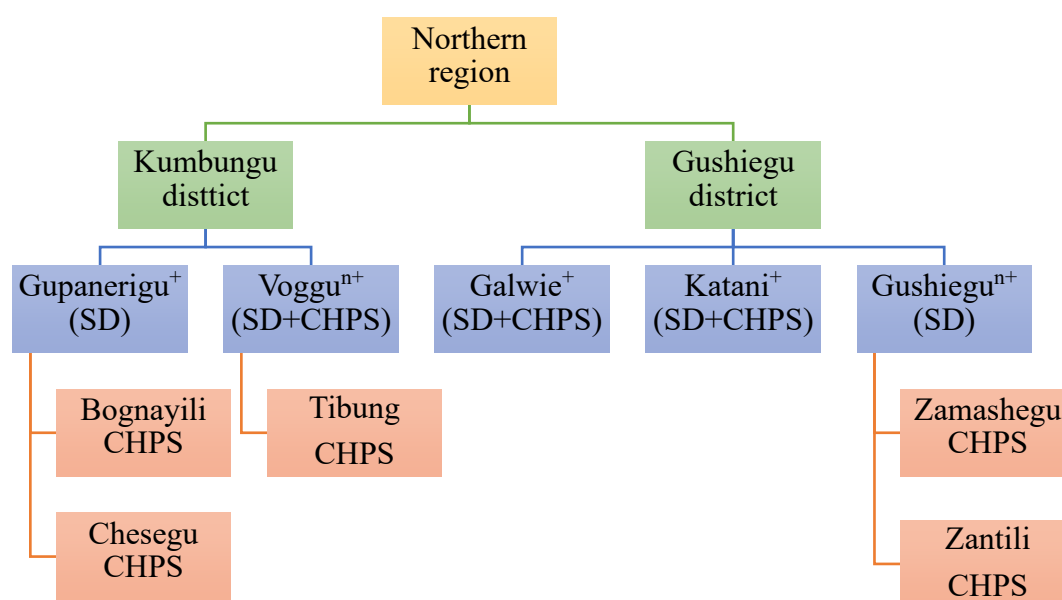


Figure 4.5: Selection of Study Sites

Source: Author's construct

4.5.1 Phase Two Sampling and Participants Selection

Expert sampling (a form of purposive sampling) was used to select phase two study participants. In purposive sampling, researchers, by their judgements, determine which units of a study should be selected to appropriately answer research questions. Expert

sampling allows researchers to identify people with expertise or experiences of the issue under study to ascertain more constructive views (Etikan and Bala 2017). In this study, experts who worked closely on CHPS, particularly in the Northern region, were selected to enable a broader understanding of research questions (Daniel 2012). Expert sampling was used to recruit the study's 33 key informants. The inclusion of healthcare managers, frontline health workers and partners, was purely purposive, enabling a broader range of perspectives (maximum heterogeneity) and fostering the transferability of findings (Petty et al. 2012). Regional and district stakeholders aided in identifying CHPS/community level informants and supported community entry for interviews, focus group discussion and participatory research.

Participants were considered for inclusion if they were at least 18 years old. Interview participants were further considered for inclusion if they had insights into CHPS by either having worked directly or indirectly on its implementation. They must have also held their positions for at least six months to qualify. Heads of divisions were invited to participate, and if they were not qualified (such as new in current position), another member of staff participated in lieu. These informants were selected from Ghana's Ministry of Health (MoH), the GHS (at national, regional, district, sub-district, and community levels), district assembly (DA), and communities. Development partner organisations were considered if their current work directly or indirectly concerned CHPS implementation (Table 4.).

In addition to the minimum age requirement, focus group participants had to be residents of the study communities for a minimum period of six months. Informants comprised of community health volunteers (CHVs) and community members (Table 4.).

Table 4.2: Key Informant Interview Participants

Level	Type of Participant	Number of participants per unit/dept	Total participants per Level
National	PPME	1	5
	Ministry of Health CHPS Coordinator	1	
	Development Partner involved in CHPS+	3	
Regional	CHPS Coordinator	1	2
	Regional Minister's office	1	
District	District Health Directors	2	6
	District CHPS Coordinators	2	
	District Chief Executives	2	
Sub-district	Katani Sub-district Head	1	5
	Galwie Sub-district Head	1	
	Gushiegu Sub-district Head	1	
	Voggu Sub-district Head	1	
CHPS	Mbanaayilli Sub-district Head	1	16
	Galwei (CHN=1; CV=1)	2	
	Katani (CHN=1; CV=1)	2	
	Zanteli (CHN=1; CV=1)	2	
	Zamashegu (CHN=1; CV=1)	2	
	Bognayili (CHN=1; CV=1)	2	
	Cheshegu (CHN=1; CV=1)	2	
	Voggu (CHN=1; CV=1)	2	
	Tibung (CHN=1; CV=1)	2	
Total			34

Source: Author's construct

Table 4.3: Focus Group Discussion Participants According to their CHPS Facilities

District	Sub-District	CHPS	Number of focus group/CM sessions	Number of participants
Gushiegu	Galwie	Galwie	1	15
	Katani	Katani	1	10
	Gushiegu	Zantilli	1	11
	(sub)	Zamashegu	1	11
	Nbanaayile	Bognaayili	1	10
Kumbungu	Voggu	Cheshegu	1	10
		Voggu	1	9
		Tibung	1	11
Total			8	87

4.5.2 Phase Three Sampling and Participants Selection

The GMB informants were randomly (simple random without replacement) and exclusively selected from phase two informants. A total of 41 informants participated in four separate GMB sessions, out of which 20 were randomly selected for feedback interviews.

The phase three research was subdivided into two: 1) participatory action research guided by group model building (GMB) methodology and 2) GMB feedback interviews. In the first half, all health workers (including community health volunteers) at the district, sub-district and CHPS levels, as well as district assembly staff who participated in previous in-depth interviews, were invited for the study. Thus, informants qualified if they participated in any of the phase two studies – IDIs or FGDs. Community members (participants from FGDs) were systematically selected to take part in the sessions. As noted already, a total of 41 informants (comprising 21 and 20 participants from Gushiegu and Kumbungu, respectively) took part in the study (See Table 4.). There were 11 informants in the CM group and 10 in the HW group from Gusheigu district. There were 11 informants in the CM group and nine in the HW group (Table 4.4) in Kumbungu district. The composition of the GMB team is also presented in Figure 4. below.

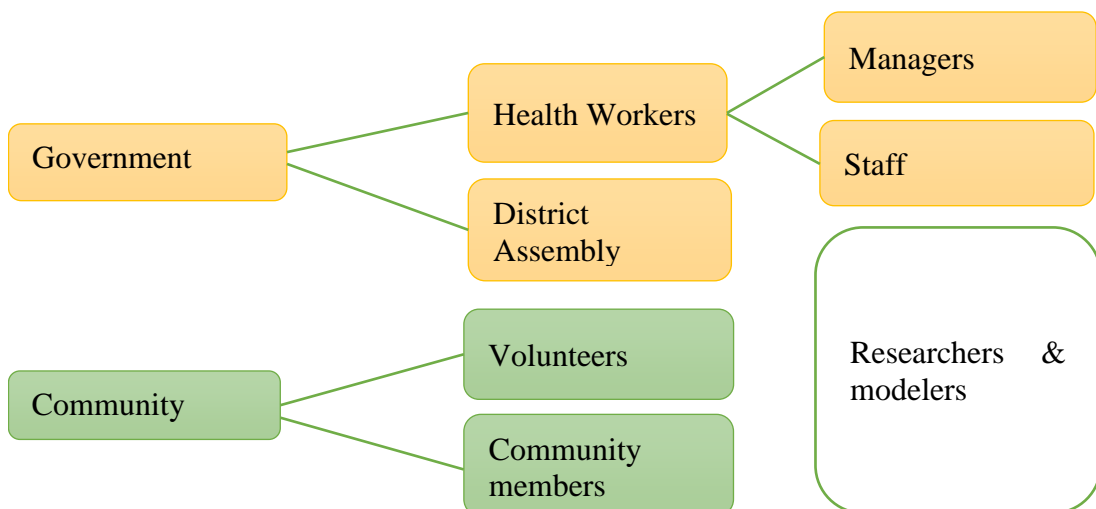


Figure 4.6: GMB Team Composition

Source: Author's construct

Table 4.4: GMB Sample

District	Number of districts, sub-district and CHPS level participants	Number of community participants (including CHVs)	Total participants per district
Gushiegu	10	11	21
Kumbungu	9	11	20
Total	19	22	41

Source: Author's construct

4.6 Data Collection

As reported already, the research design and proposal development were done through an extensive literature search. The data collection for this thesis spanned September 2018 to February 2020, and was carried out in the Greater Accra region, Tamale Metropolitan, and Kumbungu and Gushiegu districts.

4.6.1 Literature Review

The literature review was conducted using search terms such as fragility, health systems strengthening, community health, community health workers, resilience, Northern Region, Ghana, CHPS, effectiveness, reproductive, maternal, newborn and child health (RMNCH), social cohesion, and stewardship. Similarly, the Boolean operators used were as follows: “Social Cohesion” AND (health* OR Healthcare); Stewardship AND Government AND health*; Communit* AND health* AND (systems OR services OR workers) AND (strengthening OR resilience); CHPS AND effectiveness AND RMNCH AND (“northern region” OR Ghana) and; Communit* AND health* AND (systems OR services) AND fragility.

Searches were done from multiples sources, including Science Direct, Human Resources for Health, Health Research Policy and Systems, SAGE, Journal of the Operational Research Society, Global Health: Science and Practice, PLOS Medicine, the Lancet, Social Science and Medicine, Journal of Mixed Methods Research, Ghana Medical Journal, Politics and Policy and Google Scholar. Official and project websites such as the WHO, Ministry of Health, and ACERS project were reviewed for articles. A manual search of reference lists of some papers also contributed to the review

process. Furthermore, grey literature on CHPS were accessed and included reports on CHPS+, GHS annual reports and official reports of study districts (see figure 4.7 on published data used for this study). Searches were not restricted to specific years.

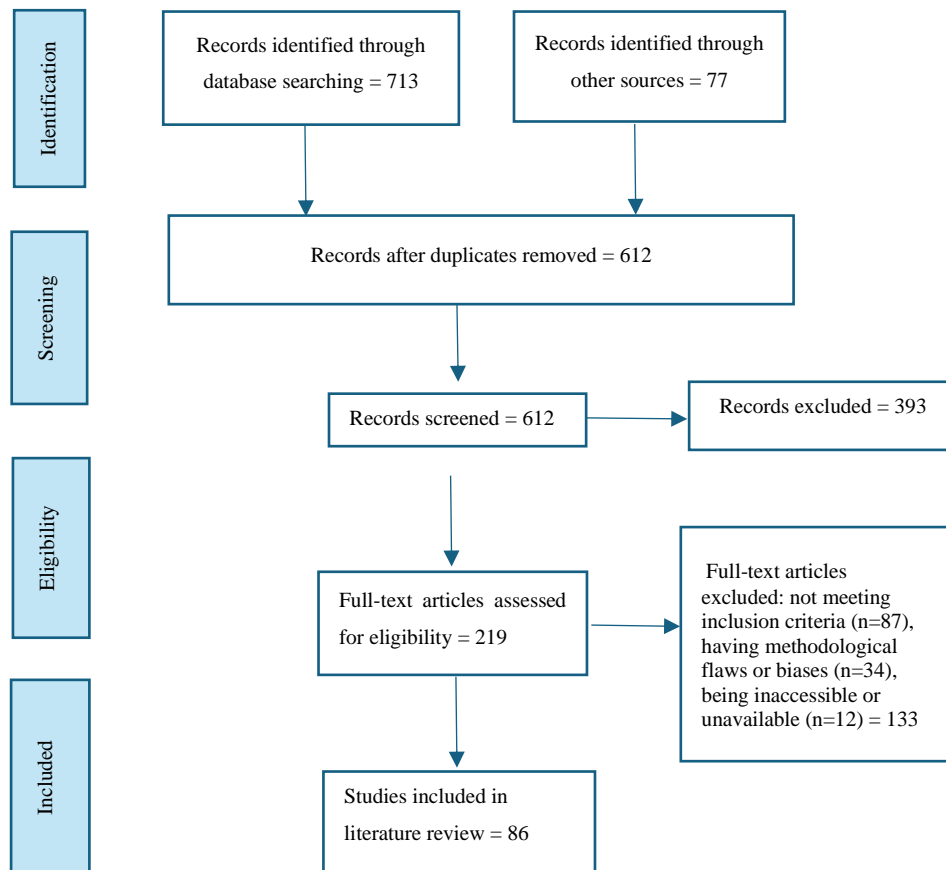


Figure 4.7: Prisma Flow Diagram

Source: Author's construct

4.6.2 Phase Two: Interviews and Focus Group Discussions (FGDs)

Phase two data collection spanned September 2018 and February 2019. Fieldwork was conducted by the researcher with support from two research assistants. A total of thirty-three (33) IDIs were conducted at six levels of Ghana's CHPS programme: national, regional, district, sub-district, CHPS and community levels. In addition, eight FGDs were conducted in sampled communities. All study tools were pretested and modified to suit study characteristics and the objectives of the research.

4.6.2.1 Interviews

A total of 33 key IDIs were administered to gauge stakeholder perceptions of barriers and enablers of CHPS implementation, as well as determine the drivers of fragility in study communities. Government and health sector officials at the national, regional, district, sub-district and community levels participated in face-to-face semi-structured interviews.

4.6.2.2 Focus Group Discussion (FGDs)

Eight Community Mapping sessions were conducted in focus groups of 8-12 people except in one community where participants were 15 in total. Although participants were randomly selected to participate in the sessions, the composition of the groups included members of the Community Health Management Committees (CHMC) as well as representatives of women and men's groups. This was intended to promote group diversity and promote participation. During discussions, participants were asked to draw the layout of their communities in the form of maps and indicate the availability and adequacy of major resources. Maps were later referenced to discuss the barriers and enablers of CHPS effectiveness.

4.7 Data analysis

Yearly averages of service data from phase one were reviewed and analysed using MS Excel. Qualitative data from KII and FGDs were analysed using dedoose software package and framework analysis. GMB data were also analysed using Vensim software version PLE x64. Finally, phone interviews from the GMB feedback study were analysed using MS Excel. These are detailed and depicted in Figure 4.8 below.

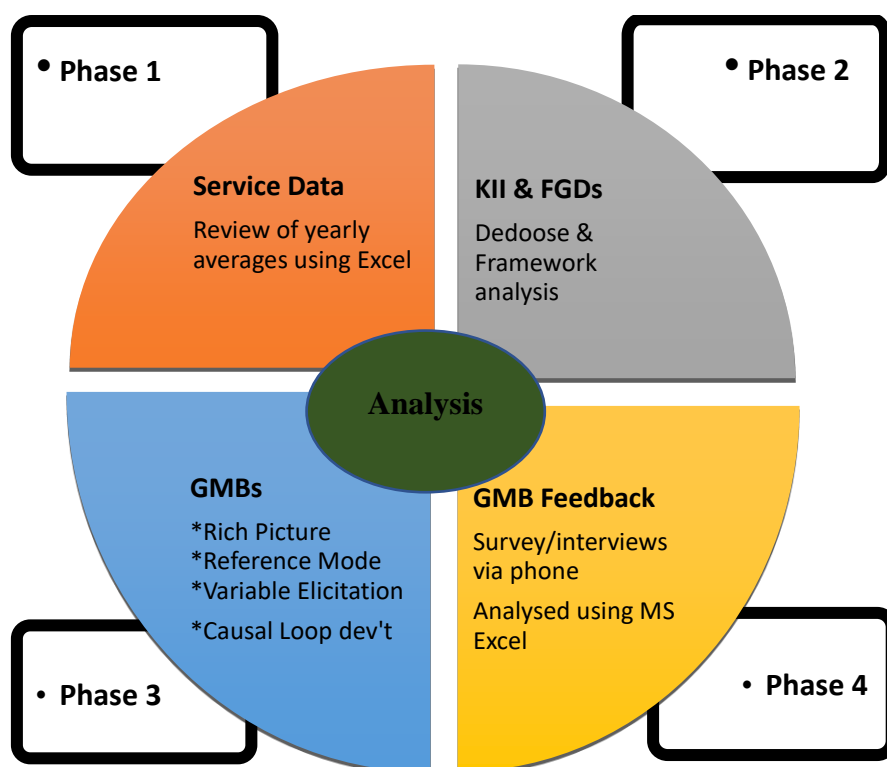


Figure 4.8: Data Analysis

Source: Author's construct

4.7.1 Data Analysis Techniques for Phase One Study

Service utilisation data from DHIMS were extracted and analysed over five years – from 2012 to 2017. Thus, yearly averages of FP, ANC, PNC, Penta 3, as well as home visiting in Kumbungu and Gushiegu were reviewed and compared with district annual reports and published literature to gauge CHPS progress in study districts.

4.7.2 Data Analysis Techniques for Phase Two Study

Audio recordings from interviews and focus group sessions were handled in line with the data storage guidelines of QMU and the Ghana Health Service to promote participant confidentiality. Audio recordings were transcribed verbatim and analysed using Dedoose software and framework analysis approach. Transcripts were hand-coded first, and later imported for further analysis on Dedoose software, where coding was done line-by-line, allowing for the generation of all relevant categories (Ritchie and Lewis 2003; Smith and Firth 2011). Data were analysed both inductively and deductively and followed these main steps:

Step 1: Familiarisation with Data

Prior to coding, each transcript was read repeatedly in search of ‘meanings and patterns’ (Braun and Clarke 2006). During the process, relevant codes were developed, with memos taken from the onset. To ensure transcripts retained information close to their original form, however, audio recordings were transcribed verbatim. All outsourced transcripts were read thoroughly and checked back against their respective audio recordings for accuracy. Transcripts of interviews in local languages (mainly FGDs) were cross-examined by two transcribers for accuracy.

Step 2: Generating Initial Code

Initial codes from the data set were generated during the review of transcripts. To ensure code reliability, transcripts were coded manually before the second round of coding using the dedoose software analysis package. Coding was theory-driven as research questions were informed by a conceptual framework: government stewardship, health workforce capacity and community cohesion and trust. That notwithstanding, coding was done both inductively and deductively. The use of the dedoose facilitated coding by tagging and naming selected texts.

Step 3: Searching for Themes

Coded extracts were categorised/combined under broader themes and sub-themes. At the early stages of categorisation, mind maps and tables were generated (see Figures 4.9 and 4.10). This stage paved the way for thinking about the relationship between codes, themes and the different levels that existed within themes (Braun and Clarke 2006).

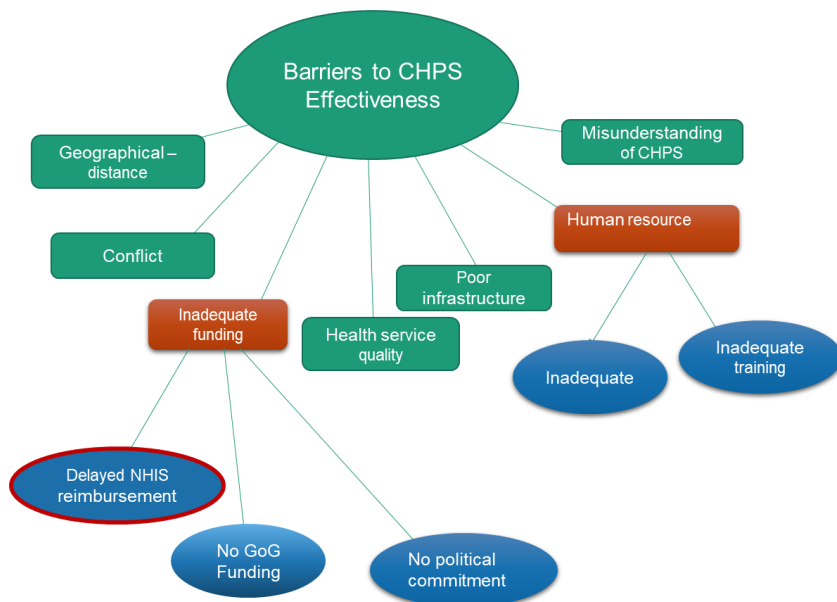


Figure 4.9: Initial Mind Map of Barriers to CHPS Effectiveness

Source: Author’s construct

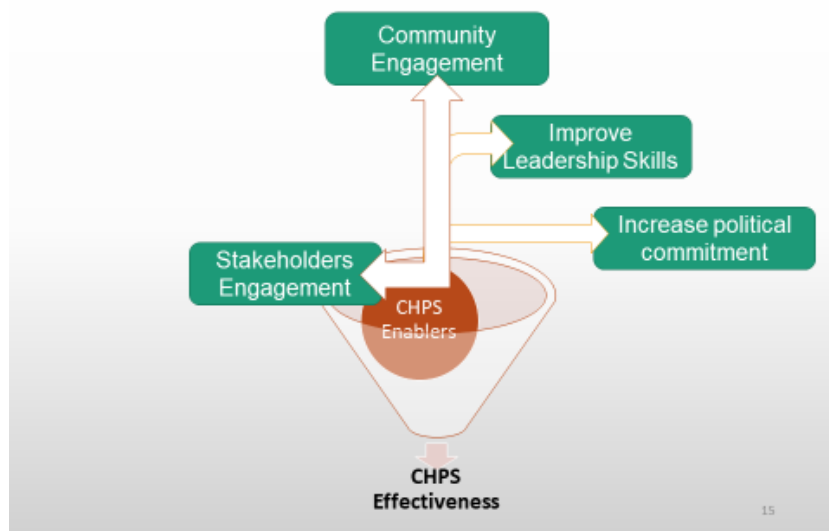


Figure 4.10: Thematic Map of Enablers to CHPS Effectiveness

Source: Author’s construct

Step 4: Review of Themes

Step four ensured that data within themes cohered together meaningfully (Braun and Clarke 2006) while promoting clear and identifiable distinctions between themes.

Thus, themes without adequate data were merged with others where possible, and broader themes were further subdivided into separate themes. Coded data extracts under themes were then reviewed to form a coherent pattern. Where patterns were incoherent, both themes and extracts were reviewed for refinement by either moving them to where they best fit or left out. This stage allowed the research to validate themes in relation to the overall dataset and code those that might have been missed the first time.

Step 5: Defining and Naming Themes

Themes were defined and refined, enabling a general review of all collated extracts under each theme and ensuring they were arranged coherently. Again, a narrative of each theme (mainly in line with study objectives) was produced with an emphasis on determining what was interesting about them and why (Braun and Clarke 2006).

4.7.3 Data Analysis Techniques for Phase Three Study

In line with the third objective of the study, which was to identify potential systems interventions to enhance the quality and utilization of priority services – a participatory research using GMBs was deployed to elicit points of fragility and identify drivers of CHPS effectiveness. The process established a linkage between variables affecting CHPS implementation. The steps GMB steps are detailed below:

Step 1: Rich Pictures

First, scripts were developed to guide illustrations of communities in what was termed ‘rich pictures’. During the sessions, community members were asked to draw maps of their communities while noting the composition of their health systems, including the processes of service provision and access.

Step 2: Reference Mode

The second stage involved reference modes where participants were engaged to plot (graphically) their perceived changes to pre-set indicators such as general well-being, service provision and access, support for CHPS work and community member contributions to CHPS as well as their perceived trust in the health system. The process

challenged participants to review their health systems ten years in retrospect and indicate projections for the future. Reference maps of individual groups are detailed in Appendices 8-11.

Step 3: Variable Elicitation

Step three engaged participants in identifying key variables affecting CHPS in a ‘variable elicitation’ exercise. Here, respondents itemised factors they perceived affected indicators such as the health-seeking behaviour of community members, service provision and quality, health worker capacity, population health, service access, government’s contribution to CHPS and, community members’ trust in CHPS and the government. Specifically, participants listed at least five factors with possible consequences (either negatively or positively) on the variables listed above. With the individual elicitations in place, the next step challenged participants to develop causal loops of key variables researched.

Step 4: Development of Causal Loop Models

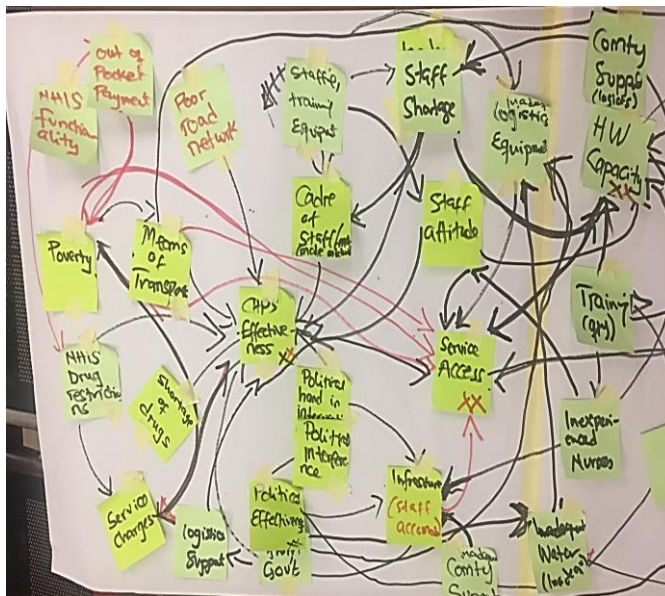


Figure 4.11: Development of Causal Loop Diagrams

Source: Author’s construct

Developing causal loop models entailed establishing linkages between variables by asking the question, ‘what could influence/affect a particular indicator’ and continued until all plausible answers were exhausted. The main goal was to understand the

barriers to CHPS implementation and effectiveness. Using the variables identified from the previous session, the research team posted them on a workpaper, establishing the linkages between variables and identifying causal loops as shown in Figure 4.11. The data were further developed and furnished using Vensim software version PLE x64 (detailed in Appendices 12-13).

Step 5: Identification of Points of Fragility and Interventions

Aimed at answering the research question three, this stage identified points of fragility and recommendations to promote CHPS effectiveness. Proposed interventions with potential rippling effects on other variables were also identified. These interventions were later ranked in order of their feasibility and impact. This was achieved by assigning each intervention a quadrant, as shown in Figure 4.2 below (feasibility and impact rankings are detailed in Appendices 14-22). All GMB sessions were audio-recorded to support reporting.

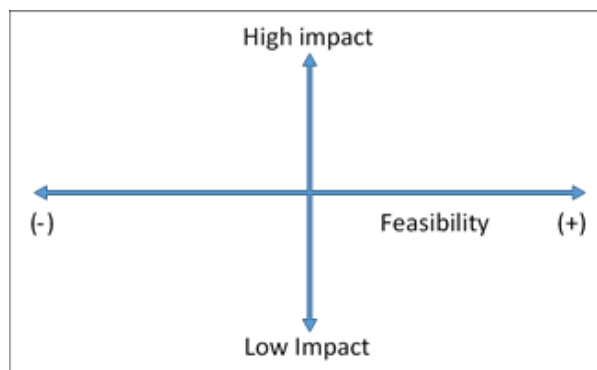


Figure 4.12: Intervention Ranking Guide

Step 6: Reflection

In the final step, reflective sessions were held with respondents, researchers and modellers to understand the system's dynamics and develop causal loop diagrams. During modelling, audio recordings were revisited to ensure consistency of reporting. Models were also presented to participants for authentication and refining where necessary.

4.7.3.1 Phase Three: GMBs Feedback Study

GMB feedback interviews were conducted from September 2020-May to 2021 and culminated the data collection for this study. Twenty (20) GMB participants, ten from

each study district, were contacted to ascertain feedback on the progress of identified interventions. Of those contacted, ten represented the health worker group, and the remainder (10) represented the community member group (which included volunteers).

Two evaluation forms (see Appendix 30) were developed to guide the data collection, with each detailing the agreed interventions (for either health worker or community member group), progress made, challenges encountered and recommendations for moving forward. All feedback interviews were conducted over the phone, and conversations lasted between 45 minutes to an hour. Of the 20 contacted, 15 were available for a phone conversation. Each participant was asked to assess their group's progress and that of the other groups. Thus, participants evaluated both Community Member and Health Worker interventions regardless of the group they belonged to. A Likert scale was used to determine the level of progress – “Good progress”, “some progress”, and “no progress”. “Good progress” refers to interventions that were fully implemented or nearly completed with some form of anticipated results (e.g., buildings, funds, personnel) already observed. Interventions were graded “some progress” if attempts were made to implement interventions and with minimal to no desirable outcome(s) observed. However, “no progress” referred to interventions that were never implemented and no outcomes observed. Here, the source of fragility either stayed the same or worsened. The study combined ‘don't know’ and ‘no progress’ because, CHOs work collaboratively with sub-district and district officials who oversee their work. They also work closely with community leaders to plan and carry out health activities. Their likelihood of being up to date with their own activity or intervention regarding their work and community is high. Therefore, if a community health worker is unaware of a recent health intervention (activity) while they were still at their post, it is most likely the intervention has not been implemented yet. Additionally, feedback interviews were conducted within a year of group model building sessions (GMBs), which might not be enough time to measure some of the outcomes of the interventions, especially those related to behavioural change. As a result, the study combined “good progress” and “some progress” as positive steps towards achieving the objectives of the interventions (key activities). Data were

analysed using MS Excel with evaluations weighted according to the number of responses and presented as percentages. To simplify analysis for reporting purposes, “some progress” and “good progress” were merged as “good progress”.

4.8 Ethical Considerations

Prior to data collection, the study acquired ethical approval from the Queen Margaret University (QMU) ethics committee and GHS’s Ethics Review Committee. Administrative permission from regional and district stakeholders was also obtained ahead of fieldwork. During interviews, facilitators explained the study objectives as well as possible risks associated with participating. Interviewees obtained either written or verbal consent from informants prior to discussions. Informants were assured of their confidentiality and were given an opportunity to opt-out of the study at any time without any consequences. In the quantitative study, data from DHIMS were collated in aggregates and analysed so that no participant details were collected. Audio recordings from interviews and FGDs were properly stored on QMU’s database and later destroyed and analysed.

4.9 Controlling Bias and Approach to Validation

4.9.1 Researcher Reflexivity

Reflexivity is the process of critically examining one’s own views, positions, biases, beliefs, and experiences that may influence the research design, execution, and interpretation. It helps researchers to situate their positionality in relation to the subject, the participants, and the context and processes of the study. However, reflexivity is not always complete or accurate, as some aspects of oneself may be hidden or unknown (Berger 2015; Whitaker and Atkinson 2019; Holmes 2020). Below, I reflect on my situatedness in this research as part of improving its trustworthiness.

4.8.1.1 The Role of the Researcher

My years of work with community health initiatives, including Ghana’s CHPS programme, motivated me to embark on this PhD programme at Queen Margaret University. For example, my work with the One Million Community Health Workers

(1mCHW) Campaign project focused on reinvigorating the community health volunteer arm of CHPS. Again, while working as a Reproductive Health Research Consultant for the Public Health Institute (USA), I assessed the use of misoprostol for post-partum haemorrhage (PPH) prevention in rural Ghana and worked closely with health stakeholders, including rural CHPS workers, to strengthen the community-based intervention. Prior to this, I worked on the Ghana Essential Health Interventions Program (GEHIP) and the Mobile Technology for Community Health (MoTeCH) projects of the GHS in the Upper East region (UER) of Ghana. These were collaborative projects between the GHS and Columbia University (USA). Working on these large-scale health systems strengthening projects with the GHS not only enabled me to support activities and research focused on improving CHPS effectiveness in one of the country's most deprived settings, the Upper East Region, but also inspired me to further understand the functionality of health systems, including barriers that limit its effectiveness and impact on population health. Through my doctoral studies, I aimed to understand the drivers of fragility in deprived settings and what strategies could promote resilience in the context of the Northern region. To this end, it is critical to state that my background in health systems strengthening and Ghana's CHPS programme informed the selection of participants both from an insider and outsider perspective. Some researchers posit that a researcher's background (particularly for insiders) can enable them to identify and recruit participants, increase trust between them and the researched, foster a good rapport for effective data collection and aid the researcher in approaching data collection and analysis with some amount of knowledge in the area study, necessary for addressing topics of interest (de Tona, 2006; Kacen & Chaitin, 2006; Darwin Holmes, 2020). Thus, my experience from working with CHPS stakeholders enabled the purposive selection of some key stakeholders (if they met the selection criteria) to contribute to understanding the possible barriers and enablers of CHPS in the Northern region. Recruitment of regional, district, sub-district and community level stakeholders was done from an outsider position as I had not worked in the Northern region.

My 'shared experience' or insider position on the CHPS concept enhanced a deeper understanding of the subject before fieldwork. During data collection, I was able to

ask some ‘sensitive’ questions, some of which included why the government had no dedicated funds for development. To minimise bias with some known participants, however, research assistants were engaged to conduct such interviews.

4.9.2 Approach to Validation

This study acknowledges key challenges associated with mixed-methods research such as time constraints, the possibility of having diverging conclusions and the level of knowledge required for evaluating each method (Glogowska 2011). Both Petty et al. (2012) and Glogowska (2011) recommend four criteria for ensuring rigour in mixed methods research: 1. Credibility (findings make sense and can be believed), 2. Dependability (findings can be repeated in similar contexts), 3. Confirmability/transparency (eliminating all forms of research bias and ensuring the study reflects the focus of enquiry) and 4. Transferability (findings are relevant to similar settings).

To improve the study’s validity, approaches such as prolonged engagements with transcripts and peer debriefing sessions were carried out with research assistants and an external researcher to test themes and contexts. In addition, an audit trail of the research process and personal reflexivity were applied to minimise all forms of bias, including the introduction of personal experiences and subjectivity, to ensure findings are dependable and transparent. Likewise, purposively selecting study participants in phase two fostered a wider inclusion of CHPS stakeholders from all levels (national, regional, district, sub-district and community), necessary for the transferability of research findings. Finally, the use of multiple methods allowed for triangulation of research findings and increased its dependability. For instance, findings from GMB sessions validated themes from interviews and FGDs, and although quantitative data were inconclusive, gaps in the DHIMS data echo access challenges expressed during the qualitative studies.

4.10 Conclusion

This study was conducted using a pragmatist lens of research philosophy. A mixed-methods methodology was deployed in three phases: phase one reviewed health

service data, tracking the progress of RMNCH service indicators over a five-year period (2012-2017); phase two composed of key informant interviews and focus group discussions; whereas phase three rolled out participatory action research with feedback interviews conducted afterwards. Kumbungu and Gushiegu districts from the Northern region were purposively selected as study sites. Within each district, four CHPS zones were identified to participate in the study. Ethics approval was obtained from Queen Margaret University (QMU) and Ghana Health Service (GHS) ahead of fieldwork. Data collection spanned September 2018 and September 2020. Service data, including family planning, antenatal, postnatal and home visiting, were retrieved from DHIMS. In addition, a total of 33 semi-structured interviews and eight (8) focus group discussions (FGDs) were conducted. A total of four (4) GMB sessions involving 41 participants were conducted in a participatory action research. Following the sessions, feedback interviews were conducted with 15 GMB participants. The DHIMS data was analysed using MS Excel, whereas interviews and FGDs were analysed using framework analysis and the Dedoose software analysis package. The GMB sessions and feedback interviews were analysed using Vensim software version PLE x64 and MS Excel, respectively.

CHAPTER FIVE: PHASE ONE STUDY FINDINGS – PROGRESS WITH RMNCH INDICATORS

5.1 Introduction

In line with the explanatory sequential design of this mixed-methods research, the quantitative studies (phase one) reviewed CHPS service data to gauge progress over time and to inform subsequent qualitative studies. Indicators ANC4+, PNC, Penta 3, FP and Home Visits were reviewed and analysed over a five-year period (2012 to 2017). The data were reviewed for all study districts, sub-districts and CHPS zones. These were further compared with the Northern regional averages. Findings were further validated by reviewing the districts' annual reports and other published literature, such as the Demographic Health Survey (DHS). Accordingly, this chapter begins with findings on maternal health indicators, comprising ANC four plus attendance and family planning, in section 5.2. In section 5.3, the progress of Penta-3 coverage, used as a proxy for gauging child health, is presented. The section also provides data on the progress of PNC. The chapter ends with a presentation of findings on home visiting, which is also the core mandate of CHOs.

5.2 Maternal Health in Northern Region

5.2.1 ANC Four Plus Attendance

Antenatal care is a critical component of maternal health. The WHO recommends at least eight (8) antenatal visits throughout pregnancy (WHO 2016b). Although ANC attendance has improved globally, SSA continues to record the least contact with healthcare providers. In Ghana, while the 2017 GMHS shows that over 91% of women who either had a live birth or stillbirth reported having four or more ANC visits (ANC4+), many more, particularly among the lowest wealth quintiles and those in rural areas, failed to meet the recommended visits (GSS et al. 2018). This study's review of at least 'four antenatal attendances' in study areas found a marginal decline in Gushiegu from 53% in 2012 to 51% in 2017. However, the ANC 4+ attendance in Kumbungu increased from 56%-82% within the same period. This great leap in Kumbungu must, however, be interpreted with caution as the denominator comprised only women who were already in contact with the health system (all women who attended ANC at least once within the same period). In other words, ANC4+ coverage

was a portion of overall ANC attendants/registrants. This indicator, although relevant, could seem high when actual ANC coverage is low. The figures below also indicate that whereas ANC4+ in Gushiegu had been consistently below the regional average, that of the Kumbungu, particularly for 2016 and 2017 (92% and 85%, respectively), far exceeded the Northern regional average of 71% and 72% and the national average of 76% and 74% within the same period (Figure 5.1). The DIHMS figure of 61.7% ANC4+ coverage by the NR for 2014 was lower than the 87.3% found in the 2014 DHS. This difference could have resulted from data management challenges observed in the DHIMS.

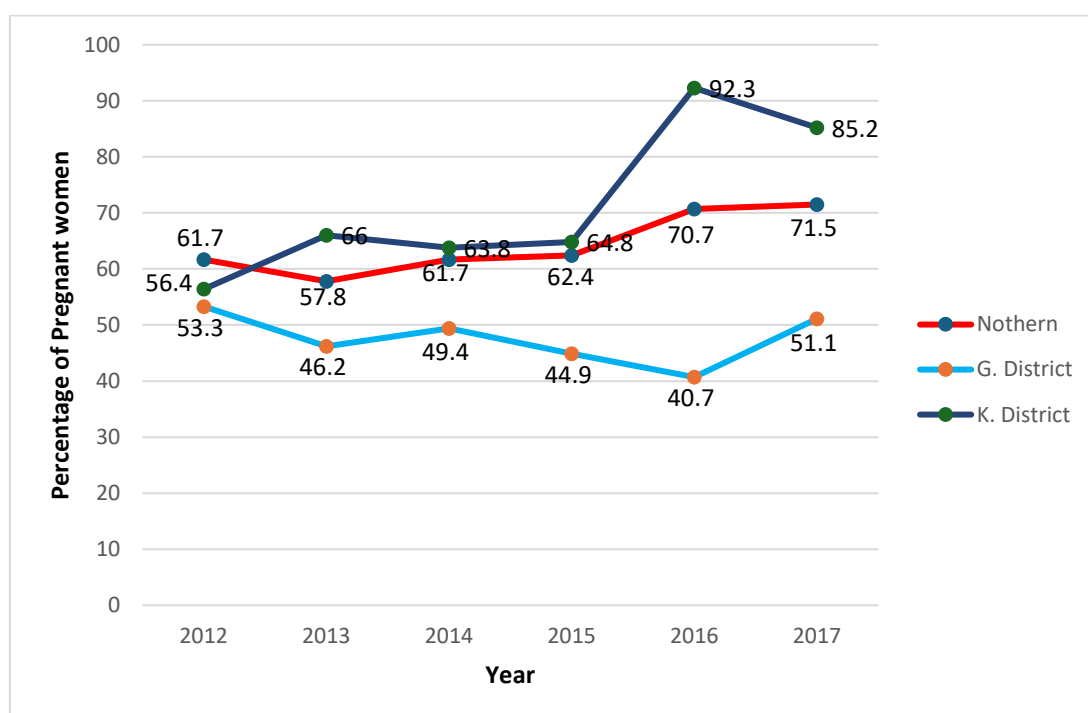


Figure 5.1: ANC 4+ Coverage in Select Regions

Source: GHS (2021)

Comparative analysis at the sub-district level found that both Katani sub-district and the Katani CHPS in the Gushiegu District recorded a steady decline in ANC4+ coverage from 86% in 2012 to less than 32% in 2017. This notwithstanding, there were marginal improvements in ANC4+ in other sub-districts - Galwie, Zantili and Zamashegu CHPS around the same period (Table 5.1). Inadequate data on Zantili made this observed increase inconclusive. On average, the performance of the four CHPS in Gushiegu dropped from its highest (59%) in 2012 to 46% in 2017.

Among CHPS zones in the Kumbungu district, there was no data on ANC4+ in Bognayili within the period under study (2012-2017). There were data for only 2016 and 2017 years for Tibung, which is inadequate to draw any meaningful conclusions. Apart from Voggu CHPS, the data from the rest of the CHPS zones and sub-districts in Kumbungu could be interpreted as unreliable as they had ANC4+ attendance exceeding 100%.

Table 5.1: ANC4+ Coverage in the Study Districts

District	Level/Facility	2012	2013	2014	2015	2016	2017
Gushiegu	Gushiegu sub-district:	41.5	33.7	44.9	33.5	38.5	55.3
	Zantili CHPS					29.2	40.3
	Zamashegu CHPS	32.6	36	18.1	34.9	39.4	44.8
	Galwie Sub-district:	59.3	64.1	76	56	71.8	67.3
	Galwie CHPS	60.1	66.1	57.9	63.1	46.7	78.5
	Katani Sub-district:	85.8	65.8	52.8	48.8	31.6	31.6
Kumbungu	Katani CHPS	85.8	65.8	52.8	48.8	35.1	28
	Gupanerigu Sub-district:	77.9	74.7	64.5	92.7	124.1	89.7
	Cheshegu CHPS	81.9	92.9	77.6	121.4	136.6	76.4
	Bognayili CHPS						
	Voggu Sub-district:	77.9	74.7	64.5	92.7	124.1	89.7
	Tibung CHPS					27.3	67.6
	Voggu CHPS	40.6	83.2	67.7	70.5	43.4	58.9

Source: DIHMS2, 2021

5.2.2 Family Planning and CHPS progress

Between 2012 and 2017, CHPS coverage in the two districts increased significantly. However, data on Family Planning (FP) coverage were largely missing for most participating CHPS zones. For example, in the Gushiegu district, Zantili CHPS did not have any data between 2012 and 2017, while the remaining zones only had records for the years 2012 and 2013. Similarly, there were no FP data for any of the CHPS in the Kumbungu district. Nonetheless, all sub-districts had data except for those in Kumbungu, which had no data for 2012.

The results showed that there was a parallel growth between functional CHPS zones and FP coverage (percentage of reproductive age women 15-45 using any FP method).

Over the period, the number of functional CHPS zones more than doubled in Gushiegu and quintupled in Kumbungu. In the same period, FP coverage in Gushiegu increased by five percentage points (PP), and that of Kumbungu rose by about 3PP from 5.7% in 2012. Coverage was higher in Gushiegu (all years) compared to Kumbungu, even though Kumbungu has more CHPS zones than Gushiegu. The analysis showed that both districts consistently fell short of 10% and below the Northern regional average, which more than doubled from 10% in 2012 to 23% in 2017 (Figure 5.2). A juxtaposition of the 2014 DHIMS data and that of the DHS on FP coverage for the NR in the same year found that the former's figure was significantly higher (17.9% compared to 11.2%, respectively). Similarly, in 2017, NR FP coverage (22.5%) from DHIMS far exceeded those reported in the GMHS for the same year (18.5%). Overall, the DHIMS data must be interpreted with caution as official reports from both study districts suggest an underestimation of population, which could have resulted in an increase in FP coverage.

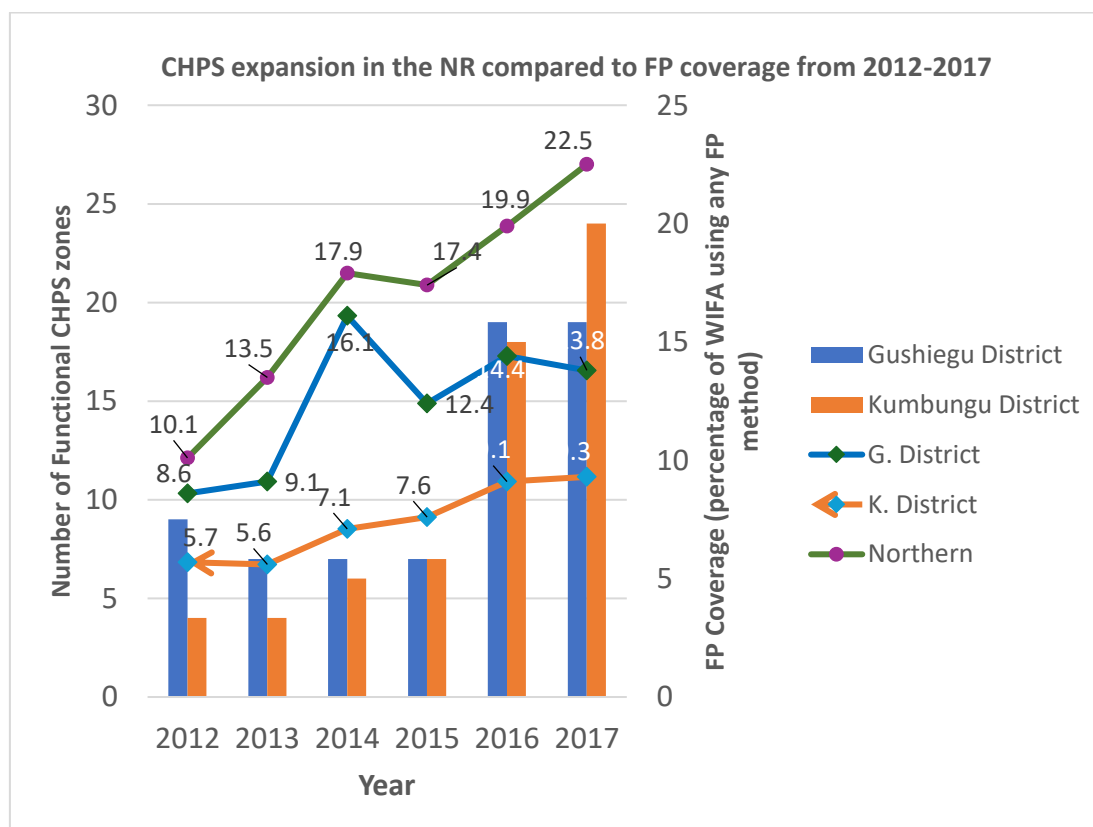


Figure 5.2: FP Coverage in the NR

Source: DHIMS (2021); Gushiegu DHMT (2012, 2015-2018); Kumbungu DHMT (2014, 2018-2019)

In the Gushiegu district, apart from Zantili, which had no data, all participating CHPS zones recorded improvements in FP coverage between the years 2012-2013, with Zamashegu topping the chart with 29% in 2013 and representing a 12-percentage point increase from 17% in 2012. All CHPS zones in Gushiegu had no FP data beyond 2013. Similarly, there were no FP data for any of the CHPS in Kumbungu.

Between 2012 and 2017, both Galwie and Katani sub-districts in Gushiegu recorded marginal improvements from 3%-8% and 5%-15%, respectively. However, there was no noticeable change in the FP coverage in the Gushiegu sub-district, which is in Gushiegu District. Similarly, at the sub-district level, Gupanerigu and Voggu sub-districts in Kumbungu district recorded similar figures across the years and indicated a steady increase in FP coverage from 2% to 11% in 2013 and 2017, respectively. Compared to sub-districts in Gushiegu, however, the Kumbungu sub-district figures were far lower than the Katani sub-district (5%-15%) but higher than Galwei (3%-8%). The FP data presented in Table 5.2 highlight the lack of adequate and consistent data on FP, which imposes limitations on proper analysis and projections of study findings for planning purposes.

Table 5.2: FP Coverage in the Study Districts

District	Level/Facility	2012	2013	2014	2015	2016	2017
Gushiegu	Gushiegu sub	1.9	2.6	3.3	2.2	2.2	2.2
	Zantili CHPS						
	Zamashegu CHPS	17.10	29				
	Galwie Sub	3.1	4.1	17.20	14.30	8.40	8.30
	CHPS Galwie	7.9	9.3				
	Katani Sub	4.7	5.5	9.80	5.80	10.70	14.70
Kumbungu	CHPS Katani	9.6	13.2				
	Gupanerigu Sub		2.1	5.3	5.7	8.5	11
	Cheshegu CHPS						
	Bognayili CHPS						
	Voggu Sub		2.1	5.3	5.7	8.5	11
	Tibung CHPS						
	Voggu CHPS						

Source: DIHMS2, 2021

5.3 Child Health

5.3.1 Penta-3

Pentavalent vaccine is widely administered among children under five years to protect them from diseases such as diphtheria, tetanus, pertussis (whooping cough), hepatitis B and Haemophilus influenza type b (DTP-hep B-Hib) (GAVI 2022). Penta-3 is the third dose of the pentavalent vaccine and was used in this study as a proxy for measuring the completeness of child immunisations. The study found that Gushiegu and Kumbungu districts, as well as the Northern region, recorded more than 100% of their estimated eligible child populations between 2012-2017 (Figure 5.3). For example, Gushiegu recorded Penta-3 coverage of 48%-138% between 2012-2017, whereas Kumbungu documented 228%-446% coverage during the same period. As previously discussed, gaps in the data did not allow for a proper comparison with other areas. Nonetheless, data reported in the 2014 DHS showed that Penta 3 coverage in the NR was 81% compared to a national average of 89%. Consequentially, these extreme values (of both districts) could have ballooned regional averages over the years reviewed. Underestimation of the eligible child population and cross-border clients or immigrants alone could not have accounted for the ballooned numbers. Clerical errors, which were admitted by staff as possible, were key contributors.

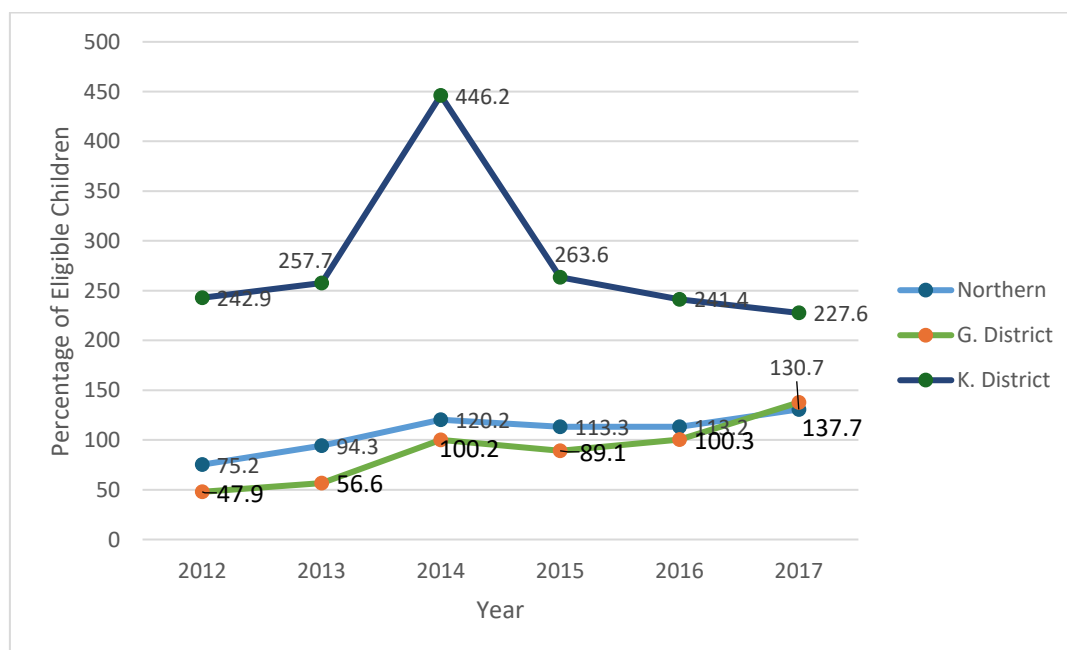


Figure 5.3: Penta 3 Coverage in the Northern Region

Source: DIHMS2, 2021

Similar to the regional averages, all the sub-districts in Gushiegu had a Penta-3 coverage of over and beyond the estimated eligible child population. At the CHPS level, data on Penta-3 were irregular, scarce and inconsistent. For instance, in 2013, Zamashegu topped all four CHPS zones in Gushiegu with 165%, but there was no data for the following years (Table 5.3). District health officials' suggestion that population figures were underestimated for all the years, hence contributed to these bloated percentages, is plausible but does not completely explain the gaps.

Table 5.3: Penta 3 Coverage in Study Districts

District	Level/Facility	2012	2013	2014	2015	2016	2017
Gushiegu	Gushiegu sub Zantili CHPS	58.1	100.6	132.7	109.1	116.4	142.6
	Zamashegu CHPS		164.5				
	Galwie Sub	87.4	92.5	140.5	152.2	102	110.9
	CHPS Galwie	84.6	75.6				
	Katani Sub	67.5	56.5	102.4	90.5	113.1	150.8
	CHPS Katani	136.1	113				
	Gupanerigu Sub		179.6	294.2	258.7	242.3	294.3
Kumbungu	Cheshegu CHPS				168.99	183.50	235.80
	Bognayili CHPS						
	Voggu Sub		179.6	294.2	258.7	242.3	294.3
	Tibung CHPS					149	199.30
	Voggu CHPS						

Source: DHIMS, 2021

5.3.2 Postnatal Care Coverage

Data on postnatal care coverage in the Northern region and the Kumbungu district included extreme values of over 100%, which was not an accurate indication of progress (Figure 5.4). A comparison with data reported in the DHS found that the Northern regional PNC coverage was 57% in 2014 – short of the national average of 78%. The study further reviewed PNC figures reported in the 2017 GMHS and found that both NR and the national coverages (59% and 78%, respectively) barely improved since 2014. Similarly, the DHIMS data from the Gushiegu district showed that after rising from 16% in 2013 to 90% in 2014, the district did not make additional progress in the years after.

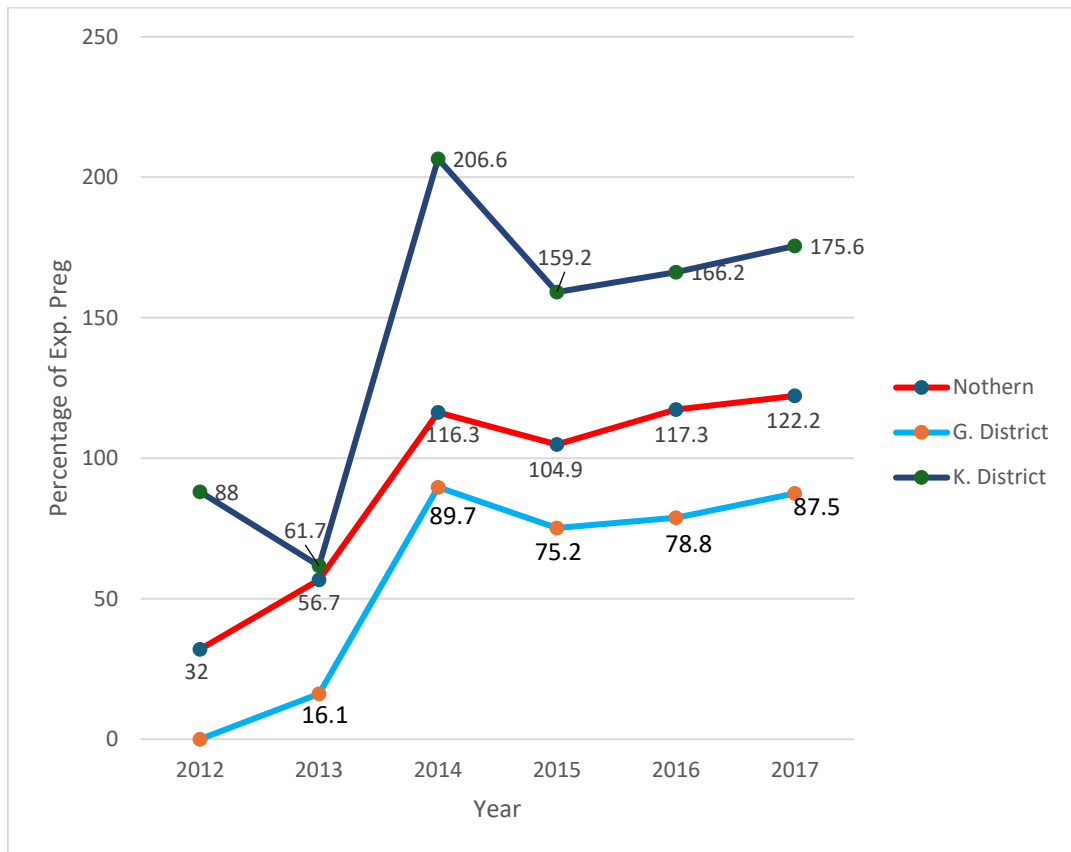


Figure 5.4: PNC Coverage in the Northern Region

Source: DIHMS, 2021

As observed in earlier sections, both sub-districts in Kumbungu (Gupanerigu and Voggu) recorded similar figures and showed a problem of erroneous data duplication. Additionally, both sub-districts and Tibung CHPS, which had any data on PNC from 2014-2017, recorded coverages that exceeded 100%, thus, rendering the data unreliable. The remaining three zones (Chesegu, Voggu and Bognaayilli) in Kumbungu did not have any data for the period under study.

In Gushiegu, PNC coverage in the Katani sub-district grew steadily from 17% in 2012 to 85% in 2017. The Galwie sub-district, on the other hand, had performed inconsistently such that after recording a 45-percentage point rise from 9.5% in 2012 to 65% in 2013, it kept declining and by 2017 had barely 38% PNC coverage. The figures from the Gushiegu sub-district were equally unreliable for establishing any trend due to the reasons explained earlier. Zantili CHPS had no data, and the remaining

CHPS zones had inadequate data to support analysis. The data, as presented in Table 5.4, reiterates the data management challenges of CHPS in the study area.

Table 5.4: PNC Coverage in Study Districts

District	Level/Facility	2012	2013	2014	2015	2016	2017	
Gushiegu	Gushiegu sub Zantili CHPS Zamashegu CHPS		29.2	182.7	142.5	146.3	151.1	
	Galwie Sub CHPS Galwie		9.5	65.3	57.9	36.3	37.8	
	Katani Sub CHPS Katani		16.6	42.8	47	52.1	84.9	
	Gupanerigu Sub Cheshegu CHPS		35.1	110	108.7	110.7	119.5	
	Kumbungu	Bognayili CHPS						
		Voggu Sub Tibung CHPS		35.1	110	108.7	110.7	119.5
		Voggu CHPS					162	231.1

Source: DIHMS, 2021

5.4 Home Visiting

Home visits, a critical component of the CHPS concept, are often measured in two ways – (1) the percentage of visits per CHO per year (a minimum of 1,092 home visits per CHO per year is required) and/or (2) the number of expected pregnancies and deliveries visited (each estimated at 4% of the population of the catchment area). A review of the health service data found no data on home visits within the period under study.

5.5 Conclusion

The reviewed data show that RMNCH indicators were inconclusive, and inadequate to gauge CHPS progress due to gaps in the data. Specifically, missing and sometimes excess values found in the reviewed data for ANC4+, PNC and Penta-3 made it challenging to gauge the progress of the CHPS indicators and rendered findings inconclusive. Despite the implementation of DHIMS for several years, findings

highlight CHPS data management challenges, including widespread missing data, duplications and extreme values exceeding 100%. Inadequate data governance may have contributed to the data challenges faced in the Northern region. Although adequate monitoring and supervision could have minimised these setbacks, population estimates, often generated at the national level for districts and making up the denominators for calculating RMNCH indicators, contributed to these gaps.

In settings where DHIMS data are not reliable, population surveys or other research data are often used for planning and monitoring purposes. However, a review of district annual reports did show any explicit acknowledgement of data challenges, and bloated figures were reported without further explanations. Similarly, the reports did not show any additional use of other data sources, such as from national surveys or any research data, to inform decision-making. These have implications for CHPS effectiveness in terms of proper planning and adequate logistics allocation in a manner that is commensurate with community needs.

CHAPTER SIX: PHASE TWO RESEARCH FINDINGS - INTERVIEWS AND COMMUNITY MAPPING

6.1 Introduction

This Chapter presents findings from the second phase of the research and emphasizes the barriers and enablers of CHPS effectiveness. Overall, thirty-three (33) in-depth interviews and eight (8) Community Mapping/FGDs were conducted to explore barriers and enablers to CHPS implementation in study districts. The chapter begins with an introduction to participants' characteristics (6.2), followed by results on the emerging themes from the data analysis. In line with the concept of social cohesion explored in the study, the first set of themes (section 6.3) discusses community member's perceptions of the availability and adequacy of basic services such as potable water, sanitation, education, security, road infrastructure and CHPS services. The second set of themes discusses informants perceived challenges, enablers as well and the role of external partners in CHPS effectiveness (section 6.4 - 6.6).

6.2 Informants' Background Characteristics

A total of 33 interviews were conducted across various levels of the CHPS programme. Of this number, 75% were males, and 25% were females. There were more informants from the community level (41%), which comprised CHPS workers and volunteers, than the others. All volunteer respondents were males (see Figure 6.1).

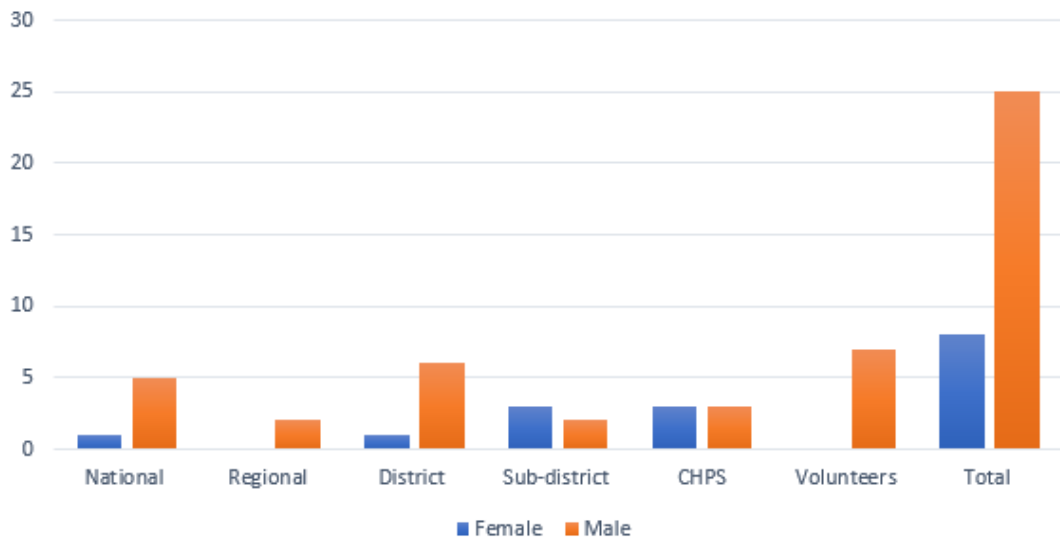


Figure 6.1: Interview Participants by Level and Sex

Source: Author's construct

Eight (8) community mapping sessions were held in all study communities. Altogether, there were 87 participants, with slightly more males than females. As indicated in Figure 6.2 below, the majority of FDG participants had no education and a little more than half were between the ages of 31-35.

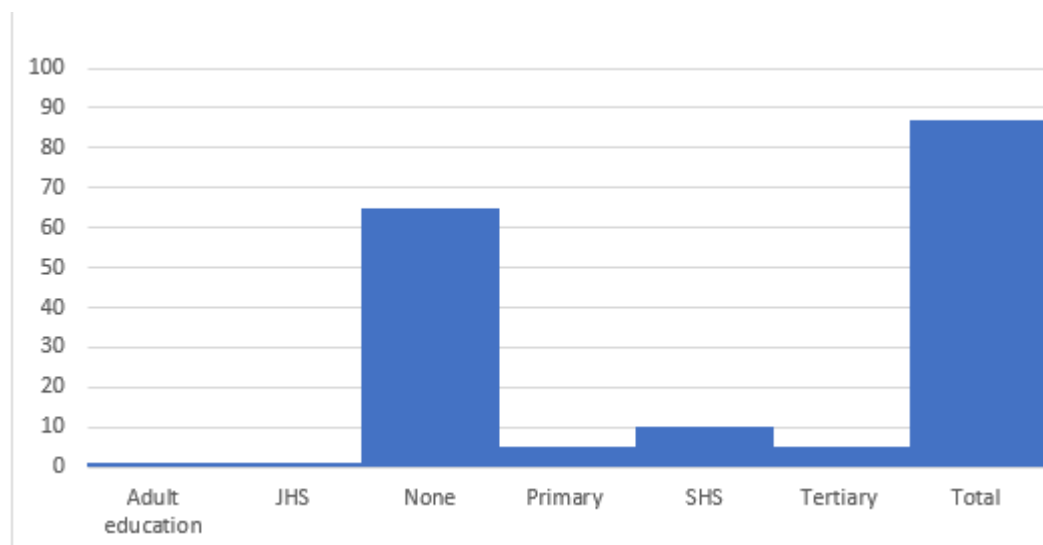


Figure 6.2: FGD Participants by Education

Source: Author's construct

6.3 Availability and Adequacy of Basic Resources

As indicated above, community mapping sessions, aided by FGDs, were deployed to explore resources available in study communities (Figure 6.3). Referencing UNICEF's District League Table indicators, the study explored the availability and adequacy of essential resources such as water, sanitation, health, security, education and governance. Since the study was conducted in communities with a functional CHPS zone, all study communities had a CHPS compound, except one, which was under construction at the time of data collection.

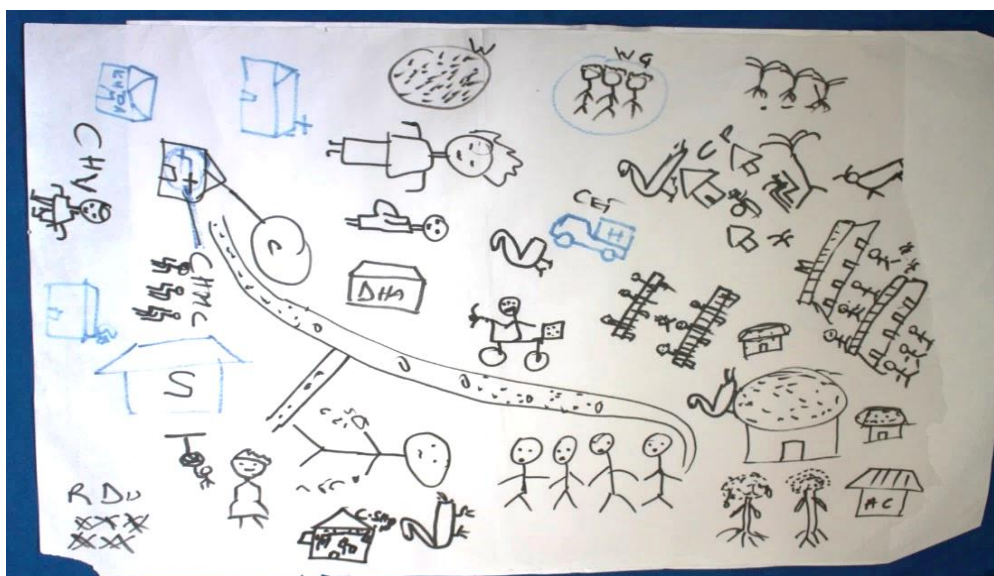


Figure 6.3: Community Map

Source: Fieldwork

6.3.1 Access to Potable Water

Nearly all communities visited had access to potable water either from pipes, dugout wells or boreholes. Water was largely provided by Government and Non-governmental organizations (NGOs), such as World Vision and church bodies. In rare instances, community members initiated the construction of water facilities or provided support to expand the resource. Despite the availability of water in all zones visited, however, many said it was inadequate and resorted to alternative sources such as dams, particularly during dry seasons.

6.3.2 Access to Sanitation

Of all eight communities visited, few had access to toilet facilities, most of which belonged to schools and were not in use at the time of the study as a participant said that:

“...We don’t even have a single one in this community. There is little of everything but not even a single one of that [toilet].” FC008

6.3.3 Access to Basic Education

All communities visited had access to basic schools either provided by the Government, an NGO or community members. Of the providers, Government was the main provider and responsible for resourcing schools with teaching and learning materials. While study participants indicated schools were accessible by children of school-going age, they highlighted inadequate infrastructure such as school structures, staff accommodation and furniture. This resulted in pupils belonging to different stages sharing a class. Furthermore, findings showed there was a general lack of teaching and learning materials, particularly among kindergarten and junior high schools, thus limiting the quality of teaching and learning in the areas visited. For example, a community member reported that:

“Not all kids have a classroom. They are not all accommodated because the classes have no furniture...they sit on the floor.” FG007

Another said that:

“The primary [school] is inadequate... The school was supposed to support eight classrooms, but there are only three. We constructed a two-classroom pavilion to augment the three, yet it is inadequate.” FZ002

6.3.4 Access to Basic Security

Ghana is not listed among fragile countries, but in the Northern region, conflicts resulting from chieftaincy and political disputes are occasionally recorded. Despite the sporadic conflict across study districts, however, findings showed that none of the communities visited had a police station, and although the need for proper security

systems stood out in the study, study participants indicated they trusted locally established security systems to protect them. For example, issues of theft and other conflicts were resolved by chiefs and elders at the community level. In some instances, community ‘watchdog’ groups were set up to foster local security.

6.3.5 Road Infrastructure

Road infrastructure was not a theme deliberately explored in this study; however, results showed that accessible road networks impacted service provision and access. The findings specifically highlighted the road network challenges in the Northern region, where distances are wide and roads unmotorable. During the sessions, some participants recalled the impact this had on service delivery and access, particularly for pregnant women, as this participant said that:

“[Our] road is not good and is a challenge to a pregnant woman or a sick person requiring care. They don’t have good roads [to reach] the health centre.” FS005

Community members attributed the deplorable nature of roads to poor government stewardship and the unwillingness of authorities to provide adequate social amenities, including roads. They perceived this as neglect, as one participant reported that:

“...we are neglected...If we were getting [adequate government support], we would have good roads in this town. We don’t have a road.” FB001

6.3.6. CHPS Contribution to Primary Health Care

The decision to seek care is dependent on multiple factors, including the cultural, religious and traditional beliefs of any given society. In study districts where culture is a significant determinant of health service access, such as in the delayed pronouncement of pregnancy news until special traditional rites are performed, which often delays access to antenatal services. In these circumstances, CHPS plays an instrumental role in ensuring marginalised communities and groups, such as pregnant women in their first trimester, receive adequate health services through their home visits and community outreach services. Home visits, a central role of CHPS workers, allow health workers to interact with community members daily, enabling them to identify health conditions promptly for referrals. Thus, the demarcation of more CHPS

zones and deployment of additional staff either to provide outreach or static services contribute to improved service delivery and critical for maternal and child health.

The findings showed t increased access to primary health care services, particularly in study areas. Interview participants, for example, noted that the opening/demarcation of more CHPS zones corresponded with increased service access as health services were now much closer to communities. According to the respondents, this improved the overall health and well-being of users in areas such as supervised delivery, family planning, immunisation, and management of acute malnutrition. In the following quote, a key informant described the contribution of CHPS to service indicators, reporting that:

“... when I look at our coverage before and now, we definitely have a lot to be grateful for CHPS. Because, if you look at our - almost all our indicators have appreciated... supervised delivery rate has appreciated and as many as we have the mothers coming to deliver under supervision, the more we expect that you know complications that would have arisen will be taken care of, deaths and other things will also be minimised... There’s an appreciation - huge appreciation on family planning, which had been a very thorny issue which has been for a very long time we hardly could go beyond 10%. In fact, I tell you, 10%. And now, we have been able to shoot to over 36%, yes! In a matter of 2 years, for me that’s too exciting. Our immunisation coverages are shooting, our child welfare is shooting. My municipality for that matter - that time it was a district - was actually having the highest level of malnutrition cases in this country. Highest! We were trailing. And there was a correlation between nutrition statuses and then performance in school as you know. Now we have come a long way now from what you call a very high severe malnourished situation - well looking at the coverage we have been able to reduce the burden of the severe malnourished children by over 60%. And for me that is the most exciting part of everything. ...for the first time in the history of this country and my municipality, we are able to reduce the burden of malaria by over 50%. Okay? All of these would definitely not have happened if we didn’t have CHPS.” DAY002

Findings emphasised that the programme’s contribution to improved maternal health particularly in relation to increased supervised deliveries and the timely identification and danger signs in pregnancy before they reached catastrophic proportions, as a key informant said:

“Let’s take the issue of Maternal Health and Maternal Deaths and others, over the years it was a mess, at least now the figures are reducing. Also, delivery, access you know women used to come to the facility with post-partum haemorrhage, post-partum eclampsia, pre-eclampsia, neo-natal asphyxia etc. but due to the implementation of the CHPS, those lives that would have been lost are being saved. It was minor conditions that would have been managed, are now being taking care of.” SB003

Another respondent said that:

“I think majority of the people have access, because if you come to look at CHPS, the essence, the brain behind or the main objective of the CHPS is to prevent infant and maternal deaths, and it also ensure mass referrals to health centres and giving of first aid. Those are among the reasons why the CHPS system was introduced. And in our [community] here, we have aligned the CHPS system to the electoral areas and we have – out of 24 electoral areas, I think all the 24 have CHPS ... but it’s like 12 have structures to house health staff. The others are benefiting through the outreach programmes of the district health centres – I mean district health centre.” DAH001

6.4 Challenges to CHPS Effectiveness

CHPS effectiveness, akin to health service delivery, is the ability of the CHS to provide services that are of good quality, efficient, affordable and accessible to community members. According to Kuir-Ayius (2021), this requires robust infrastructure, adequate and well-trained health workers, and good governance.

Results from this study showed that the potential of CHPS to provide quality primary health services which are affordable, efficient, and accessible to community members, was constrained by several factors. For example, nearly all informants agreed there were challenges with the quality of services provided as many missed the opportunity of accessing the 24-hour services promised by the CHPS programme. For example, a key informant reported that:

“In terms of coverages, I would say at least 60%... So, we still have that 40% to reach. Having said that, and I’m saying this because if you look at the distribution of CHPS compounds and those things, we’re almost getting there, and I’m sure we must be in the 80s, but in terms of services or if you combine

the two together, services, quality of the services and all that needs to be done, I would say 60%.” NNA001

The key barriers to CHPS effectiveness identified in this study included, transportation (long distances and poor roads), misunderstanding of the CHPS concept, human resource (shortage and inadequate training on CHPS), inadequate infrastructure, poor political commitment and funding, delayed NHIS reimbursement and sporadic conflicts, all impacted the quality of services provided at the local level (Figure 6.4).

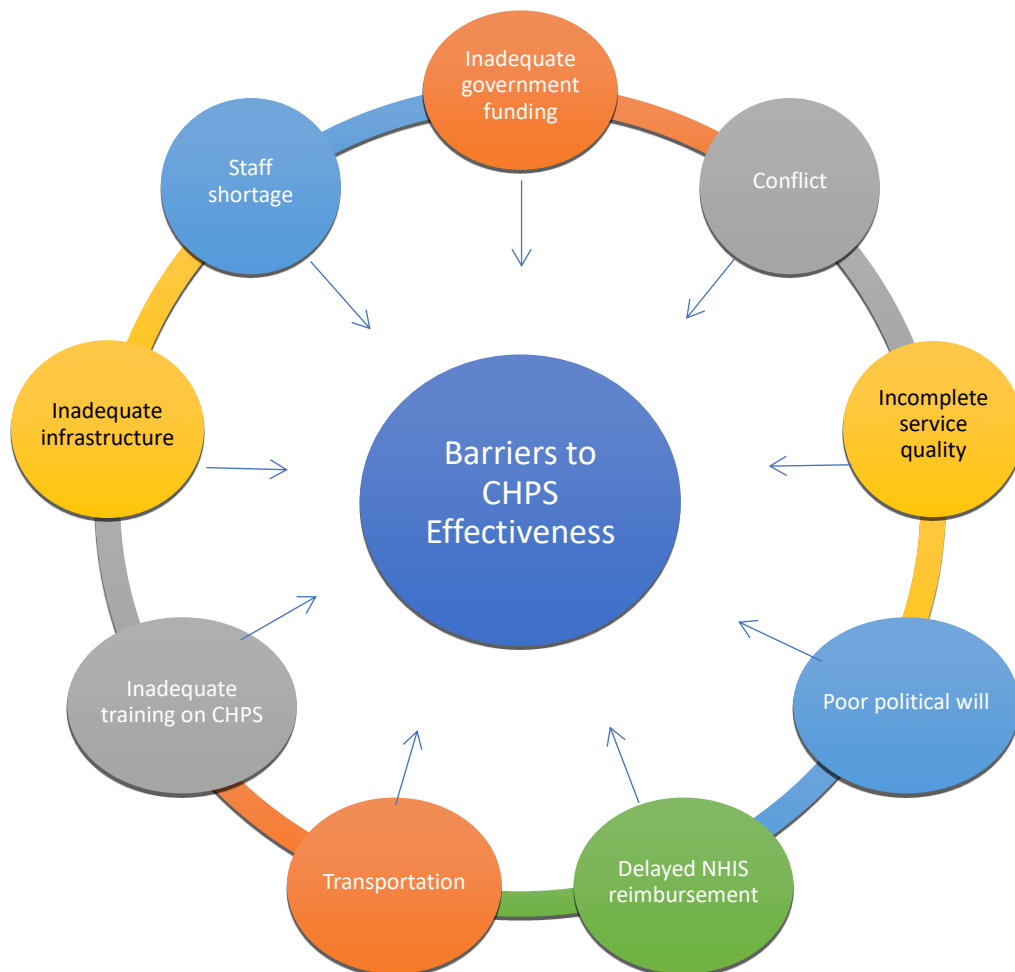


Figure 6.4: Challenges to CHPS Effectiveness

Source: Fieldwork

6.4.1 Inadequate Infrastructure

In gauging the adequacy of health services in research communities, the study purposely selected communities with a *completed functional CHPS zone* where all implementation milestones are complete, a community health compound (CHC)

constructed, and facilities fully equipped to provide basic services. Therefore, all study communities had a CHPS compound except one, which was under construction at the time of the data collection. The mapping/FGD sessions found that compounds were either constructed by the government, external partners or community members. Of all the three providers, the government was the largest contributor, with an estimated 98% of compounds either provided by the District Assembly, Members of Parliament (MPs) and other governmental bodies/partnerships. Community members' contribution to CHPS infrastructure was equally pronounced in the construction of accommodation and compound expansion. That notwithstanding, many zones did not have staff accommodation, which affected the adequacy and quality of services delivered, particularly at night, as most staff lived outside their service zones. Community participants were more concerned about inadequate services for vulnerable groups, as a respondent reported that:

“...it would have been easier for pregnant women to access delivery services at the CHPS compound at night if the health workers lived in this community or had accommodation here.” FC008

Apart from accommodation challenges, participants noted that inadequate infrastructure for key services such as deliveries limited patient privacy, thus impacting access. For example, a study participant said that:

“There was a midwife here, but each time she had a pregnant woman to attend to, the issue about the beds will compel her to transfer her to [B-town] and when that also happened, the means of transport to carry such pregnant woman was not available.” FT003

6.4.2 Transportation and Access

Results from this research showed that long distances, along with poor road networks, increased the cost of transportation and impacted service access in study areas. This was particularly a source of worry for clients requiring referral, services, both for advanced treatment and for medications. Some informants shared some personal experiences, reporting that:

“Travelling from here [community level] to Gushiegu is a problem, and even when we get there, not all the stores [pharmacies] accept health insurance; you still have to pay cash for some medications.” FK006

“When pregnant women arrive here [CHPS zone] in labour, how to get them to [Town B] becomes challenging without an ambulance. We don’t have an ambulance, not even the motor ambulance...We do not have the means to transport the patient from here to [Town B]. This is a small facility, their equipment and logistics are not adequately provided...There was a midwife here but each time she had a pregnant woman to attend to, the issue about the beds compelled her to transfer her to [Town B], and when that also happens, the means of transport to carry such pregnant woman is not available.” FT003

Community members again identified inadequate means of transport – motorbikes – for health worker activities limited the quality of services. At the time of this research, most staff motorbikes were either broken beyond repairs or could not be maintained owing to limited resources. Community participants however reported offering personal motorbikes to augment transportation requirements of health workers as this FGD participant said that:

“[health workers] do not have motorbikes. The CHPS has not had any motorbike for a while now. Their motorbikes broke and they are still unable to repair them. So, when they want to do something, they have to come to us and beg [for] a motorbike. Even when they have to go for stock [logistics], they have to beg the motorbike or they board a car to collect the stock.” FT003

6.4.3 Service Logistics and Equipment

Findings showed that challenges confronting service access in communities included inadequate logistics, particularly drugs, with shortages associated with the National Health Insurance Scheme (NHIS) and lack of responsiveness to claims submitted by facilities. Specifically, challenges with NHIS, including restrictions on CHPS treatment and prescription, left many subscribers unable to access care as a community member reported that:

“[we wish] drug prescriptions were more than what the facility was currently limited to.” FV004.

Community members who were unable to access treatment and medications at the rural level were compelled to travel to higher facilities to access care. For example, this study respondent said that:

“I have brought my child before; I came [and] it was night time...and they told me they didn’t have drugs, not even paracetamol or liver salt, it was not there, they asked me to go to town and buy liver salt.” FV004

Another participant reported that:

“It is a problem. Travelling from here to Gushiegu is a problem, and even when they[users] get to Gusheigu, not all the [pharmacy] stores accept health insurance; so you go, and they ask you to pay cash.” FK006

The research observed that inadequate access, especially among NHIS card bearers, resulted in increased demand to upgrade CHPS zones to health centres, which they perceived would be more equipped for service delivery as these participants reported that:

“We needed some things to be here that are not there, and their absence is a serious challenge for us...Over here, they don’t do blood transfusion...We don’t have blood transfusion and surgery services over here. As a result, we want our CHPS compound upgraded to a health centre. This will [also] allow access to some medicines that are not brought here.” FC008

“We need our facility upgraded because...the NHIS doesn’t cover a lot of drugs here. For instance, insurance doesn’t cover drips. There is a capsule called amoxicillin, which you can easily buy from the pharmacy, but when you go to our health facility, you cannot get it. That has led to some patients seeking care elsewhere.” FV004

6.4.4 Staff Adequacy, Training and Supervision

Findings showed staff were generally inadequate in study areas and multiple perspectives provided for this. Whereas frontline staff attributed shortages to inadequate staff, managers pointed to a problem of maldistribution. During interviews, nearly all frontline staff stressed staff shortages at the community level limited the provision of quality health services as the existing few were overworked. For some managers, inadequate staff at the community level led to the deployment of other

cadres, such as Enrolled Nurses (ENs), who might not necessarily be trained in CHPS and effective community engagement principles. Stressing the findings on staff shortages, a key informant said that:

“...one person [a CHO] is manning the zone. So, the day the person is sick, or something happens, that means there is no work in that zone... Currently, as we talk, we should have community health nurses in all our CHPS zones... [and] blend the category of staff in every CHPS zone..., but now we have people that we train on the job. ENs (Enrolled nurses) with purely clinical background...but we train them on the job, and then they are working as preventive officers in their zones.” DK006

The deployment of ENs to support service delivery in communities was not well received by some participants as they perceived the clinically trained nurses lacked the software skills for CHPS outreach activities. For example, a respondent reported that:

“... [They] come there [CHPS zone] as an enrolled nurse; a clinical nurse...but sometimes they will come there without training, and they will come and be a liability [on] you.” CS002

Contrary to views expressed by frontline staff, however, managers and external partner representatives attributed the dearth of staff numbers to poor leadership and maldistribution. Thus, actions such as political interference and manager favouritism placed many CHOs in urban centres to the neglect of rural and deprived communities where they are needed most. For example, a participant reported that:

“...with regards to the community health nurses or officers, we have by and large adequate or close to adequate but just maldistribution. In actual fact, we have trained a lot of community health nurses who can be posted to the CHPS zones and the CHPS zones are supposed to be in the rural areas,...but we have a higher number of those community health nurses who are supposed to be working in the CHPS zones working at the district level – being based at the district level, regional level...and it’s worse even in the Northern region. Northern region is worse... because you have a larger population of the trained community health nurses who are rather in the urban areas than in the rural areas.” NR006

Staff Training

Training, as an essential component of staff capacity, was a key finding of the study. Overall, results showed that community health nurses were adequately trained and possessed the requisite skillset to deliver health services at the community level. However, many lacked effective community engagement and mobilization skills, which are critical for CHPS effectiveness.

Effective community engagement and mobilization are the hallmarks of CHPS implementation as it ensures communities and other key stakeholders are well integrated into the planning and resourcing of their health. Before their deployment, community health nurses undergo additional two-week training on the CHPS programme and implementation. The training equips them with the requisite community engagement skills required to live and work collaboratively with community members. However, findings from in-depth interviews showed that most frontline workers lacked this training. This was pronounced in all study groups and was identified as a barrier to effective CHPS implementation, particularly in non-CHPS+ zones, as one interviewee said that:

“...the gap between education and strategy is wide... [When] you bring out the community health nurses, they don’t understand the concept well. So, when they come out [deployed], they are not able to execute their work well based on the CHPS concept.” NBB003

While the results showed poor community engagement among CHOs was a hindrance to CHPS effectiveness, a section of respondents, particularly partners and national stakeholders, maintained that managers and coordinators of CHPS at the district level equally lacked a wider understanding of the concept. Precisely, many lacked the basic implementation principles, with an estimated 135 sub-districts staff yet to be trained. This gap in leadership was expressed by a study participant who reported that:

“...there is a leadership problem. CHPS progress, CHPS scale-up, CHPS improvement and ensuring that things are getting on well are dependent on the leaders. Now, I say that because most of the district leaders – it’s unfortunate that they have gone to school...and are posted to the district, but there is no structured orientation on CHPS for them. So, they come, and they try to use their own initiatives.” NR006

The results further showed that inadequate knowledge of the CHPS concept among managers had implications for resources available for the programme. For instance, a key informant explained that:

“I think the challenge runs down the system. You know, everybody talks about CHPS, but everybody runs it the way they think it should be. So, the supervisors – the managers ensuring that there is this support for the service at the community level sometimes they don’t provide that support.” NNA001

Apart from the adequacy of training, some participants expressed worry about the quality of the two-week training. They described it as didactic, lacking sufficient practical lessons to enable a deeper understanding of the key concepts and implementation principles. In CHPS+ zones, however, initiatives such as ‘Peer Exchanges’ were encouraged to augment training on the programme. At the time of data collection, the initiative enabled staff in study districts to understudy their counterparts in the Upper East region (Bongo) to promote knowledge sharing on best practices.

Significantly, findings showed that a lack of understanding among health workers, particularly in community engagement and mobilization, ultimately affected community members’ knowledge of the programme, including what roles they could play to support its effectiveness. This was highlighted by a respondent who reported that:

“...at the community level like this, the community members are supposed to play a key role, but a lot of them are not aware about what they should do. So, when you go and [ask them to] contribute and run the facility they don’t always understand... If we are able to orient them, I think they will buy in and it [CHPS] will be very successful.” NW005

The results showed that resource constraints contributed to gaps in training as participants indicated districts were sometimes under-resourced. For example, a study participant reported there was the need to “... build staff capacity in CHPS, but they [managers] are unable to do so “because of resource constraints.” RD002. It is worth highlighting that some interviewees attributed resource challenges to the reluctance of

district-level managers to allocate funds (such as IGF) for the programme, as this interviewee said that:

“People are not trained as CHOs from school [community health training institutions]. They have to be trained when they come into the field through the system. Now, because of lack of funds, or should I say – I don’t think it is lack of funds but prioritisation. If you don’t prioritise, will you put in money there? No!” NW005

The findings above emphasise that leaders who have a better understanding of the CHPS programme are more likely to mobilise and allocate resources for its implementation.

Supervision

Effective supervision emerged as a key ingredient for improved staff capacity and CHPS effectiveness. CHOs can be supervised by higher-level managers either from the national or regional levels; however, they are directly supervised by district and sub-district managers. The phase two research found supervision was ongoing in most CHPS zones. Nonetheless, many frontline staff perceived this was sporadic, with others attributing the challenge to inadequate logistics such as transportation as a participant said that:

“...they [supervisors] come, not often as how we want. You don’t wait [until there is a problem to visit] ...Because, when there’s any change [in service] they will hear it first before sometime we will hear it. But most times, they will wait when the problem comes; they will now come and say ah, but this thing... You get my point? So, it’s not frequent as how we want it. Ahaaa. Because we have district, we have sub-district. Sub-district also needs to come, but it’s on and off.” CS002

Another respondent reported that:

“...because of lack of resources, monitoring was a problem, and monitoring has continued to be a problem. And, because monitoring is a problem or a big challenge, people do not even go down to that [CHPS] level to see what is happening.” NR006

Inadequate supervision at the community level impacts staff capacity and their motivation to provide quality care. For example, some staff opined that regular supervision facilitated on-the-job coaching and enhanced their skillset, whereas others perceived it was a form of motivation as their contributions were recognised by management. Emphasizing this result, a key informant reported that:

“...[ensuring] your staff are doing well is also part of motivation. It shows that you have your staff at heart. But, if we are here for a full one year, apart from coming to do monitoring and supervision nobody comes to see how we are even faring.” SB003

6.4.5 Inadequate Staff Motivation

Motivation emerged as an essential component of workforce capacity. To gauge the level of staff motivation in study districts, interview questions targeted health worker perception of respect from supervisors, community members, as well as the health system. The findings showed that apart from salaries, which no interviewee touched on, staff were largely motivated by the amount of respect received from both community members and supervisors. Overall, they perceived supervisors and users appreciated their work. The service providers however acknowledged that inadequate logistics and equipment was a disincentive for many, and worried they were unable to meet service demands. Some expressed frustration at the lack of special incentives for rural workers. Incentive packages established to motivate and retain CHOs, such as offering early career progression are yet to be fully implemented. The rural workers perceived these packages were rather awarded to their urban counterparts, which ultimately affected their commitment. For example, one key informant reported that:

“At the national level, we have strategies. We have incentives for people who work in deprived communities. That is like policy, and one of them is if you are posted to a CHPS zone, and somebody is also posted to another area, when it comes to school, you will go to school earlier than the person. But the issue is how effective is this policy being implemented. Whether it is well implemented, these are some of the issue – the practical issue we have. So generally, there’s going to be some level of eh... some of the community health nurses leaving the field and moving to other professions.” NBB003

Another respondent said that:

“...the human resource problem is that those who are rather in the cities or around the cities get to go to school. You go to the district [where] people [CHOs who work in rural areas] have served five years, three years, and district director will tell you that there’s nobody to replace you, so remain there when they [rural workers] know that their colleagues in the cities are going to school every year. What is the incentive to continue being there?” NW005

The findings further showed that CHVs, who serve as liaisons between communities and health workers, were poorly motivated by both community members (who appointed them) and the health system. The informal workers also lacked the requisite resources to effectively carry out their duties.

Overall, inadequate incentives for rural CHPS workers contributed to poor health worker outcomes as this interviewee reported that:

“When I came [to this facility], it wasn't like that. Everybody was ...working helter-skelter. But now, most of the people [nurses] want to just go to school and rest because if you are even just doing the work and they don't see it – and they don't appreciate it, it becomes difficult for you to continue. Even though [we are being paid] ...if you are not being motivated or being encouraged, you will not have the zeal to do more.” CZ004

Another respondent said that:

“CHPS is targeted at deprived communities, [but] the people don’t want to go because there are no incentives available for them...If I say incentives, not necessarily from government per se. Sometimes when you are posted to a CHPS compound or a CHPS zone where you don’t have even accommodation for staff, and they need to rent even accommodation within that community, they don’t get [it]. They don’t get decent accommodation to rent. So, such a situation, what do you expect? People do not want to go. Even if they will go, they will go and stay in town [city and commute to work].” NBB003.

6.4.6 Infrastructure, Equipment and Logistics

Inadequate infrastructure, equipment, and key logistics such as drugs emerged as a determinant of staff capacity and CHPS effectiveness. Thus, CHPS infrastructure comprising of CHCs, and staff accommodation was inadequate in all zones. This finding was pronounced among all study participants, including community members.

Inadequate staff accommodation was identified as worrisome for providers as they indicated the facilities were either health unavailable or unfurnished. Consequentially, many resorted to bigger cities for accommodations, thereby marginalizing the original purpose of CHPS to provide basic services at all times. While providers asserted commuting long distances daily to work minimized patient-provider encounters, including for emergency care, community members were particularly concerned about the impact this had on maternal health, as most deliveries occurred at night. These concerns were highlighted by study participants who reported that:

“We realize that government will go to put up a CHPS compound without adding the needed [resources]... furnishing it to get people there. Sometimes they put up the facility, no lights, no water, and you know definitely, if those things are not there, the staff wouldn't go there to stay. You need to provide...solar panel, you need to provide some cooking utensils, fridge, tele, those things are completely missing and ...strangely enough,...it doesn't cost so much! It is doable. It doesn't cost so much. If you put in the right resources, the people will be happy, and you will not need to travel several kilometres. And even the key role of home visits, if it is done and done well, before the [health condition] gets to the extent to be referred to the health centre or the district hospital, it would have been curbed, and the unnecessary deaths – maternal deaths, child deaths will be averted.” NW005

Another key informant said:

“...sometimes it's the type of structure that they put [up]. Because it's a human being who is going to work there so if you put up a structure and you don't make it convenient enough, I think nobody will be ready to go and settle there – to always move into the community. So, I think those issues also affect the health service delivery.” SUB004

For managers, rising accommodation difficulties impacted the number of nurses deployed to communities, as this key informant reported:

“... because we don't have accommodation for some of these staff...we are unable to send more than a certain number to stay out there.” DAY002

Another also said that:

“... sometimes they want to bring staff but nowhere to stay. So, because of that, it discourages them to post more staff here.” CW006

Contrary to the views expressed above, however, partner representatives and managers at the national and regional levels noted an increasing quest among CHPS workers to reside in bigger cities for personal reasons. Discussions with community members corroborated this perception as participants noted that despite providing accommodation in some zones, staff preferred to live in cities.

Transportation, as part of CHPS logistics, was emphasized in the study. The results showed that the lack of robust means of transport (motorbikes) in nearly all zones visited impacted services, including home visiting, defaulter tracing and special outreach services. As a coping mechanism, health workers relied on either personal motorbikes or those of community members to render essential services in distant communities as these interviewees reported that:

“Transportation and the communication, they are all barriers that are preventing the CHO to operate and to get to the community members...Like currently this year, our CHPS zones, we are not having means for transportation. So, we are stuck.” SK002

“...Because CHPS is more prevention and health promotion, we more or less don't encourage the clinic aspect, but health workers are supposed to move to the household of community members to do home visiting and do all the necessary follow-ups, but because as we said earlier, the distances between one community and another and where the community health officers stay and work with them, they need certain transport to reach out to them. If we don't have these things in place definitely [outreach is impossible] We have had instances where we went on monitoring visits and the community health nurses were helpless! There is no transport system within that zone. I mean they have no means to move. Some of them walk alright but how long can they walk if the weather is not good how do they go? And some of them even use their pocket money to travel. I mean to provide service to other communities. So, it is a very big challenge, and these are some of the things that are making our indicators look very bad.” NBB003

“We still have some places that, staff are willing and then they are [conducting home visits]. They use their own motorbikes to go out for home visiting, outreaches and a whole lot of stuff. What they need is provide them fuel, they will go.” DK006

The problem of transportation in the Northern region goes beyond means of transport to include poor roads and long distances. Roads in the study region, particularly in

Gushiegu, are wide and unmotorable, rendering service delivery a daunting task for providers as some study participants said:

“The roads are so bad. Each time, to travel to a place, it’s on a rough road, you get there dusty and all that. Distances are long from one place to another, and these are issues that make the health staff not wanting to go there... Travel[ing] from one village to another to provide services is a problem.” NNA001

“Also, the road network does not spare us, because the deplorable states of our roads also - mostly disturb, because when they’re going they are supposed to move fast to reach on time to ensure that the situation remains stable for the person to survive. It’s not always easy because most of the roads are rocky, big, big gullies created by erosion or just depressions is not helping so much. I think those are the few I can mention with regards to the challenges.” DAH001

A facet of CHPS infrastructure emerging from the findings concerned the availability of social amenities. Consistent with concerns expressed by community members, providers and other respondents indicated that inadequate amenities impacted service delivery. Some participants asserted this was ‘unacceptable’ as detailed in the quote below:

“It is enough commitment and punishment enough for us to send them [health workers] to a community where there is no electricity, where there is no water, where reception of the telecos [telecommunications] are poor, but I think it’s unacceptable for us to ask them on top of that to walk, you know, several kilometres to the next villages to provide care because we want to do home visits. Yes! Home visit is crucial, but I don’t think that we’ll be fair to the staff. Remember already there are a few of them and they are overworked and on top of that they have to walk all these long distances in this era of insecurity, I don’t think that’s nice.” DAY002

On essential logistics and supplies such as drugs, results showed supply was inadequate and sporadic. These were consistent across all CHPS zones visited, including CHPS+ communities as a key informant reported that:

“...[Facilities] are being provided some of the logistics but it doesn't come frequently. At some point in time, it just cuts off. We don't get it till maybe a month or two, before we get it. So, it's a very big challenge to us. Because, for instance, the OPD services, when they [community members] come to the facility for health service, and there are no drugs, and you write for them to go and buy, it damp[ens] their spirit; like they came and they didn't get drugs so

next time, they wouldn't come to patronize from us, so that is also really not helping.” CM005

Findings further showed that NHIS reimbursement difficulties contributed to logistics and equipment challenges, affected the quality of care provided at the rural level and led to frequent referrals. This impact was echoed by some respondents who said:

“[The] NHIA (National Health Insurance Authority) is owing ... [which is] leading to the unavailability of the routine drugs and then some of the logistics...So it means that mostly the medicines are not there. [so], you just manage the temperature and then you would refer. So, in short, the things that you could have done you are unable to do because of these shortages.” SB003

Overall, the results established a linkage between staff capacity and trust. Although some health workers observed that community members understood logistics shortages were beyond them, others perceived their inability to provide appropriate care impacted trust in the health system, which could trigger agitations and ultimately affect community support for the Programme. For instance, a frontline staff said that:

“...the logistics to be able to work effectively [is important]. You know sometimes you have the knowledge, but [what] will help you do the work is not there. So, it's like you are there but you are not there. And the community members – because you are just there, they see you as you are their doctor. So, they want everything that is concerning their health when they come you will be able to solve it for them. When you are not able, then the confidence is going down, confidence is going down. So that is it.” S002

Reiterating the impact drug/logistics shortages had on trust and community support, another respondent said that:

“... in terms of medication, it's one of the critical aspects. You know CHPS compound as we are saying, you are trying to let the people have confidence in you...So, when the community [members] have confidence in you that's when you ask them to do anything for the facility, they will be eager to do! But they will come there, something small for you to give them, like the services you render you need something, the thing is not there. So, all the way the person needs to travel. Then why do you think they person should have confidence in the CHPS compound?” CS002

Another informant said that:

“...when people have their insurance and they come to CHPS level, er they don't expect to pay. But we all know some of the challenges relating to logistics. So, logistics availability at the CHPS zone or zones equally affects the scale up.” RD002

Beyond trust, the results showed that sub-standard health services caused agitations among community members as this key respondent said that:

“We had a problem with the community. So, the director had to come himself to explain things to them. Because they will not understand why they will come to a clinic and you will ask them to go and buy drugs. So, they started complaining.” CW006

6.4.7 Poor Community Engagement

As detailed in the literature review chapter, community members form a critical component of CHPS and are responsible for identifying volunteers to support frontline staff and establishing community governance structures, such as the community health management committees (CHMCs), responsible for overseeing CHPS operations. CHMCs develop plans (through the community health action plans strategy) and mobilise resources to support service delivery at the community level. Despite this important role, the results showed a general perception, particularly among managers, that the current CHPS programme lacked its effective engagement component as a key informant reported that:

“There have been some toning down of the earlier arrangements [community support], but it's not totally eliminated because there is still a resemblance of it happening somewhere. But I must say that it's really getting extinct... that beautiful community initiative has been kind of killed.” DAY002

Consequentially, key stakeholders such as the District Assembly (DA) and Members of Parliament (MP) were poorly engaged, resulting in a disconnect between CHPS workers and government officials, particularly at the district and community levels. This was explained by a participant who reported that:

“They [government officials] are such that, when you call them, they think you are in for something else; they don't pick your calls. So, to be frank with you, I don't even have the Assembly Man's number, the MP's [member of

parliament] number or the DCE [District Chief Executive] or whatever.” CZ004

Another participant said that:

“...the issue is that the community members themselves don’t see him [Member of Parliament] ...so, how do [I] go and search for him? No, I won’t because he doesn’t even have any help [for]the community.” CS002

Another key informant reported that:

“For the assemblyman, it's not that I'm reporting somebody, but I hardly see him around. So, that is why I didn't even mention his name because I don't even see him at all. It's only once a while when he's passing, then he'll just pass by [and say], ‘how are you guys doing?’ CM005

Multiple factors accounted for the inconsistent and poor community engagement among study communities and included poor leadership, community members’ perception that service provision is the government’s responsibility, and inadequate resources for staff training. This was explained by a respondent who said that:

“In Northern region, a lot of our communities are not appropriately mobilised for CHPS support, and that is because even health service delivery officers, we have quite a number of people who do not still understand what CHPS is like and how it works. So, if we go down to the community level, then it becomes a bigger challenge because communities, their orientation is like um they have their problems or their needs and government is supposed to come and take care of them so that orientation is not pro-CHPS” RD002

In communities implementing the CHPS+ project, health workers, including managers were trained in effective stakeholder and community engagement. Similarly, their introduction of a peer exchange initiative enabled knowledge transfer of key implementation milestones. This involved staff observing their counterparts in the Upper East region on best practices. During interviews, some participants acknowledged the impact of this training on community mobilisation and service delivery as these respondents reported that:

“Actually, with the experience of CHPS+ as we are implementing now, we realise that more of community mobilization – letting them understand their role makes them ready to come out to also participate fully in the process [of CHPS implementation]...Currently, I would say we have two facilities that are temporary, which the community initiated and then gave it out for us to start the process, so currently, we have the place running... Then it didn’t stop there; they’ve gone further to lobby the Assembly to put up a permanent compound over there, and so though the temporary place is there and we are operating in it, we are currently putting up the actual permanent CHPS compound.”DJ003

Another participant noted that:

“I always say that my sub-district is lucky to be running the CHPS+ project. So, we did a lot of community engagements, and we explained to them [community members] our problems and told them some of the things we can try to do and those that we cannot do. So, they are really supporting us a lot when it comes to CHPS implementation at our various facilities.” SD001

Another added that:

“Today we have it [community engagement] in our district, and then it's working perfectly.... Through community participation and involvement, communities have owned their own health system. They now pay more attention due to the involvement that we have with communities. Unlike previously, where everything was, ‘let's tell the politicians, let's tell DCE [District Chief Executive], let's tell MP [Member of Parliament]’, now, people understand the CHPS concept – majority of our people understand it. We still have problems, but majority of our people understand the CHPS concept and they are picking it up from there.” DK006

6.4.8 Comparative Analysis

Comparatively, respondents from both Kumbungu and Gushiegu districts were confident in staff knowledge to provide basic services but acknowledged key challenges such as staff shortages, poor motivation, inadequate infrastructure, logistics and equipment and inadequate training compromised service quality. In Kumbungu specifically, study participants were more concerned about poor social amenities and their impact on the health workforce. Both districts shared similar themes on the relationship between health workers and communities, describing it as cordial. Regarding CHVs, the districts perceived volunteers required more resources and supervision to effectively deliver on their duties. In Kumbungu, however, study

participants were concerned about volunteer fatigue due to poor motivation (remuneration).

Among partners and government representatives, findings showed the participants also perceived staff were competent to deliver on their responsibilities but required additional training, particularly in community engagement. The partners, however, highlighted that challenges such as inadequate amenities, infrastructure (particularly staff accommodation) and poor leadership impacted the quality of services.

Among CHPS+ and non-CHPS+ zones, both groups highlighted that inadequate infrastructure (including staff accommodation), poor staff motivation, transportation challenges, inadequate logistics and supervision as well as staff shortages constrained the capacity of health workers to address community health needs. In non-CHPS+ zones, however, participants identified culture as a hindrance to CHPS effectiveness. Unique to CHPS+ zones was inadequate social amenities, which they perceived impacted staff motivation. The respondents added that accommodation challenges reduced patient-client encounters and constrained how many staff could be posted to zones.

6.5 The Role of Partner Support in CHPS Effectiveness

External partner support for CHPS was underscored in study findings (Figure 6.). Amidst resource constraints, the results showed that partner interventions contributed to bridging workforce capacity in study zones.

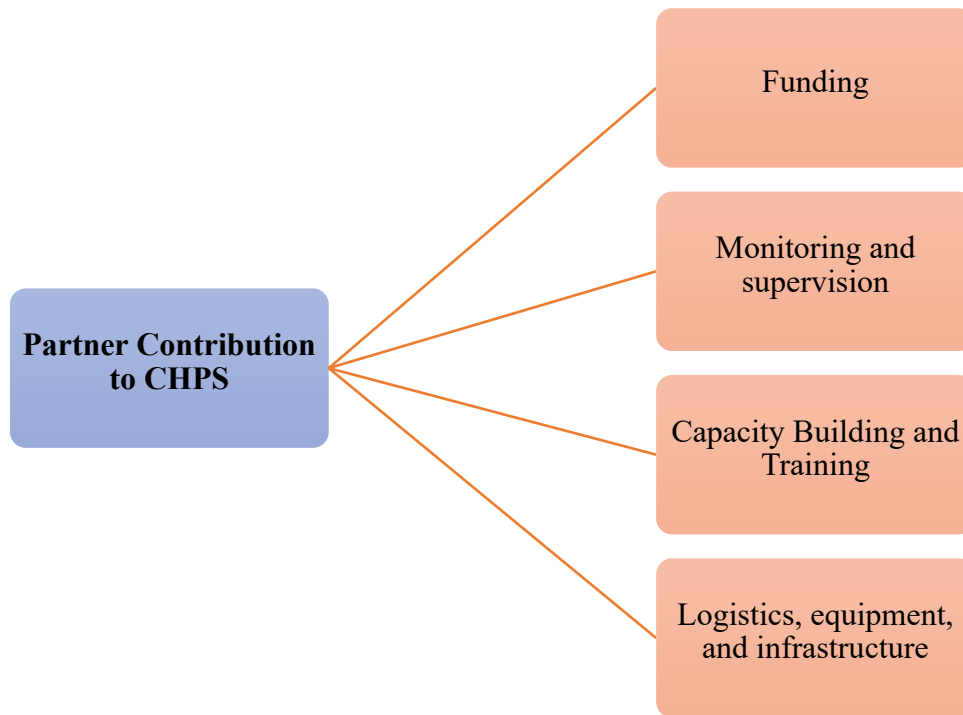


Figure 6.5: Partner CHPS contribution to CHPS

Source: Authors construct

Partners such as CHPS+, and USAID Systems for Health (S4H) projects provided financial, logistics and training support to implementing districts. Activities of the CHPS+ programme (which is a collaboration between the Columbia University, Ghana Health Service, and the University for Development Studies (UDS) in the Northern region) supported capacity building on the CHPS programme and its implementation. The partnership also provided catalytic funding for the procurement of logistics and equipment, as well as for minor infrastructural innovations. Similarly, during data collection, a Government of Ghana (GoG) and World Bank collaboration through a Maternal Child Health and Nutrition (MCHNP) project supported outreach services in communities. This was highlighted by managers and frontline workers, as some reported that:

“...for the past three years, we have been directly giving some financial support to all CHPS zones so the staff can move out, and in providing some equipment and motorbike and all that just to support them to do the public health – the health promotion and health prevention activities... We have been giving them money to organise community health durbars, to do home visits, outreach services because they don’t need to charge anything...Now we have had other ways of providing some equipment through our partners’ agreement. JICA

[Japan International Cooperation Agency], for instance, is supplying vehicles, motorbikes and then bicycles and some equipment to the three northern regions. Then we also have the MCHNP – it’s a World Bank project where we have procured about 50 vehicles to all the districts. We have provided about 1,000 motorbikes and about 3,000 bicycles. So, all these things are things that we are doing. The USAID they have been constructing CHPS compounds. So that is government commitment to CHPS” NBB003

“They [MCHNP] are supporting us to organise durbars, [and] outreach. So, they are providing us with some funds to buy fuel to do those activities.” CJ003

“...after several years, we had Systems for Health coming to support – give some training of CHOs in selected districts, not the entire region, just some selected districts, and that was to ensure that the management aspect or technical aspect of CHPS level service delivery was taken care of.” RD002

Frontline workers described partner support as timely in the wake of resource challenges as a key informant reported that:

“Sometimes you want to go for outreach, and there is no fuel to do so....We now use the MCHNP money to buy fuel to run multiple activities.” CW006

6.5.1 Capacity Building and Training

The study identified the critical role of partners in building the capacity of health workers. For example, JICA worked collaboratively with the national and regional stakeholders to develop planning and budgeting (Costing Tool) for CHPS. The aim was to strengthen CHPS implementation across the country. In study areas, partner involvement in capacity building, particularly in community engagement and mobilization, was emphasized as a study participant said that:

“...I just want to say that some NGOs or some organizations are really doing very well. They come around and then they still want us to talk more on the community role and then their involvement. You know when I was taken through the implementation guideline...I was very happy. I was like wow! These people [community members], they will now see the facility as theirs and not as the government’s or whatever.” SUB004

For some respondents, mainly frontline workers, partner contribution contributed to increased service uptake. For example, respondents indicated that the CHPS+

intervention on family planning had contributed to increased FP uptake among study populations as a key informant reported that:

“[CHPS+] has really helped because family planning aspect they are really patronizing and also it has also helped them in educating them on child spacing; on how to send their children to school, educating them so it has really really helped...” CM005

6.5.2 Logistics, Equipment, and Infrastructure

In addition to capacity building, findings showed that partners provided support for the procurement of key logistics, equipment and infrastructure. These included motorbikes and essential drugs as highlighted by this informant who said that:

“...the assembly through our budget with RING last year supported the health sector with some motorbikes. I can't remember the number. I think they were up to 10 or so. We are lucky to be benefiting from the support of an NGO called RING – Resilience in Northern Ghana in full.” DAH001

In the Northern region, where access to potable water is a major challenge, NGOs and other private stakeholders provided boreholes and pipes for use either by communities or CHPS centres. Partners such as the S4H and CHPS+ provided infrastructural (compounds and accommodation) support and, in some cases, refurbished existing ones. In addition, partners like JICA and CHPS+, at the time of this study, donated vehicles and motorbikes to support service delivery in study districts. As noted already, the MCHNP programme supported CHPS transportation requirements for home visiting and community engagement activities. The CHPS+ project also introduced an emergency transport system using modified tricycle ambulances to support referrals. This was highlighted by a respondent who reported that:

“...we had partners bringing in what we call rural emergency ambulance – rural ambulances. These are tricycles partners bought ..., they actually contracted the suppliers of what we now normally call ‘motorkings’ and then they refurbish them into some kind of rural ambulances....” DAY002

6.5.3 Monitoring and Supervision

Results showed that partners embarked monthly and quarterly supervisory visits in support of the CHW programme's effectiveness. For example, a DP representative said that:

“Hitherto, the national level didn't have the resources to go to monitor like supervise CHPS implementation, but through our intervention, we were able to do that.” NW005

It is worth iterating that the proactiveness of community members was another determinant of staff capacity. In one of the zones (B-CHPS), community members appeared more organised and initiated interventions which attracted external and government support, as a key informant reported below that:

“[At B- CHPS], the health facility was built by the community. Then we also have instances where they support[ed] us with ... benches, tables and other things in terms of infrastructure. And also at [M-CHPS] too, they supported us with water; they brought an NGO who came and drilled a mechanized borehole for us at the facility. So now, we have water there. And also, they supported the payment of electricity bills for the staff at the quarters. And they have been constructing urinary pits and other things, so the community is really contributing a lot in the implementation of the CHPS. They are doing very well.” SD001

6.6 Enablers to CHPS Effectiveness

Overall, the findings from phase two research showed that promoting CHPS effectiveness required improved leadership and strengthening staff capacity through the provision of key logistics and equipment and training in key CHPS concepts such as effective community and stakeholder engagement (Figure 6.6). These were unanimous across study districts and in both CHPS+ and non-CHPS+ zones.



Figure 6.6: Enablers of CHPS Effectiveness

Source: Authors construct

6.6.1 Effective Community and Stakeholder Engagement

Effective community and stakeholder engagement emerged as an enabler of CHPS effectiveness in study areas. First, the willingness and capacity of managers and frontline staff to engage stakeholders such as the District Assembly, partners and community members were perceived as critical for garnering support and mobilizing local resources for the CHW programme. Both interviews and FGDs showed that partnerships with government, non-governmental organizations, as well as private individuals, generated resources for the effective implementation of CHPS.



Figure 6.7: Code Excerpts from Dedoose

Source: Author’s construct

For example, District Assemblies contributed an estimated 90% of CHPS infrastructure, and although it is their core mandate, further engagements led to additional resources for key activities. Additionally, collaboration with partners and NGOs such as RING, S4H, JICA and, more recently, the CHPS+ project aided in generating additional resources for CHPS. This was expounded by a key informant who said:

“...the Assembly through our budget with RING last year supported the health sector with some motorbikes...I think they were up to 10 or so. We are lucky to be benefiting from the support of an NGO called RING – Resilience in

Northern Ghana in full. Every year they ask us to present a budget because they are aware of the critical nature of that sector. Last year we asked for support to buy motorbikes, [and] it was readily honoured. So, we bought the motor bikes, printers and other office equipment and furniture.” DAH001

The need to engage stakeholders from the NHIA on reimbursement delays was apparent in the research and pronounced among partners and healthcare managers. This was required to increase the resources available for service delivery. Similarly, informants stressed the need to engage government (political) stakeholders on the human resource situation, especially around political interference in staff distribution, as this participant said:

“...the regional director needs to sit with the coordinating council team; the minister, the coordinating directors and then they give the directives that goes right down to the districts, to the DCEs and then to the political figures that this is a service. The person [health worker] has been trained to provide service at any place [CHPS]...so if they decide that they are posting the person to any place, nobody should come and say that no, you can't be posted to that place and that they want you at the regional capital.” NR006

Effective and sustained community engagement emerged as a critical enabler of CHPS effectiveness in that it would allow community members to own, resource and work in tandem with health officials to provide adequate and quality care. Galvanizing community support was crucial for 1) holding authorities accountable, 2) generating local resources, 3) engaging other key stakeholders such as NGOs and philanthropists to support CHPS and 4) strengthening social cohesion. This was highlighted by the following key informants who said that:

“...in [the] Northern Region, a lot of our communities are not appropriately mobilised for CHPS support, and that is because...we have quite a number of people who do not still understand what CHPS is like and how it works. So, if we go down to the community level, then it becomes a bigger challenge because...their orientation is like, um they have their problems or their needs and government is supposed to come and take care of them... So, we have that as a huge challenge...And that is why the CHO training and other forms of capacity [building], including the communities themselves, [is] critical so we will be able to mobilise the community for community support. So, for now, community-mobilised communities to support CHPS is still a challenge because they lack the understanding of what CHIPS is and what their role as communities should be.” RD002

“...if the community is well informed and oriented, they can mobilise to get those things [equipment and logistics]. [Beyond] their contributions...they can lobby a lot of people to get it. I know of some communities where they are able to lobby big people and then even raise funds to be able to buy these type of things. So, I think the equipment is also a problem, but we can use the community and mobilise them. Weighing scales are not expensive, BP apparatus not expensive, stethoscope not expensive.” NW005

“Sometimes they [community members] may think they don’t have the resources, but through engagements and action plan you would be able to realise that they would be able achieve a particular objective. Recently they were able to [connect] pipe-borne water to the facility because they realised through their action plan that the facility didn’t have water. The chief, elders and other stake holders were able to mobilise resource to mount up a pipe water system at the facility” DS005

Other informants, mostly healthcare managers, presented that engaging/empowering community members to hold the government accountable for their social responsibilities including health/CHPS would promote the health system’s resilience as one participant reported that:

“I think we need stronger participation, especially at our Assembly level. I think people have to [place] more interest in what the assemblies are doing. They should get many more people who are very strong to get into the Assemblies and be able to hold officeholders accountable for whatever they’re doing. If, for instance, an Assembly is able to establish the provision of CHPS compounds and the DCE is not implementing it, the Assembly should be able to hold that DCE accountable. Impeach him! Because the plan that is to be implemented is supposed to be a product of the Assembly, and if you have put somebody in charge and the fellow is not living up to expectations, you should be able to hold them responsible. That accountability is very important.” RAI001

The findings also demonstrated that effective community engagement transcends mobilizing resources to impact the amount of trust community members bestow on health workers and the health system. For example, although inadequate logistics, such as drugs, constrained the delivery of quality services in nearly all zones, the results showed that communities that were effectively engaged in these challenges were less likely to be agitated. Thus, even in challenging situations, effective communication

and transparency with users can sustain trust in the health system. Highlighting the issue of trust, a key informant reported that:

“...where there is the lack of engagement, then there is the lack of trust. But, where there is engagement, then there is that trust because then they [community members] understand why things should be done this way; why they should come in to support; what the nurses are doing; what...they have to come in with and; they see the CHPS as a community owned service. So, it is a gradual process again, and then as people get to understand, then they will have the trust in the system.” NR006

It is worth noting that zones implementing the CHPS+ programme at the time of data collection were more engaged compared to others, as the following respondents shared that:

“...currently in our district, through community participation and involvement, communities have owned their own health system. They now pay more attention due to the involvement that we have with communities, unlike previously [where people depended on government officials as some put it:] let’s tell the politicians, let’s tell DCE, let’s tell MP. Now people understand the CHPS concept. Majority of our people understand. We still have problems, but majority of our people understand the CHPS concept, and they are picking it from there.” DK006

“Actually, with the experience of CHPS+ as we are implementing now, we realise that more of community mobilization – letting them understand their role, makes them ready to come out to also participate fully in the process. And so, we are having a number of – currently, I would say we have two facilities that are temporary, which the community initiated and then gave it out for us to start the [CHPS] process.” DJ003

6.6.2 Improve Staff Capacity

A key enabler to CHPS effectiveness identified in phase two findings involved enhancing staff capacity in areas such as improved leadership, training (particularly in community engagement), increased staff numbers and motivation, as well as an adequate supply of logistics and equipment.

6.6.2.1 Effective Leadership

Improving healthcare leadership was deemed to have a magnifying impact on CHPS effectiveness in areas such as resource mobilization, community and stakeholder engagement, staff training and distribution (See

Figure 6.). This was more pronounced among national-level stakeholders who argued that leaders who had a better understanding of the programme prioritized its implementation and ensured that staff were adequately trained and fairly distributed to zones. It is worth indicating that these elements also impact leadership. For example, engaging stakeholders such as community members on their roles in CHPS can in turn empower them to demand accountability from leaders. Similarly, investing in training and deploying appropriate staff can improve health outcomes, and hence serve as a key indicator for measuring leadership performance. Lastly, ensuring resources are available for use at the management level will improve their effectiveness.

During the study, however, informants noted a significant number of managers had a poor understanding of the CHPS programme, hence impacted how much resources were set aside for essential activities as these key informants reported that:

“The orientation of the key people in the health sector; the sub-district heads, the supervisors, the district health directors, the CHPS coordinators goes a long way...You notice wherever those people are oriented properly, CHPS is functioning very well! They are able to garner community support, engage the district assemblies properly and get the right resources.” NW005

“We need to also do the leadership capacity...building. We need to get the right people who understand leadership and governance issues so that we can place them in strategic positions to provide the needed leadership.” NBB003

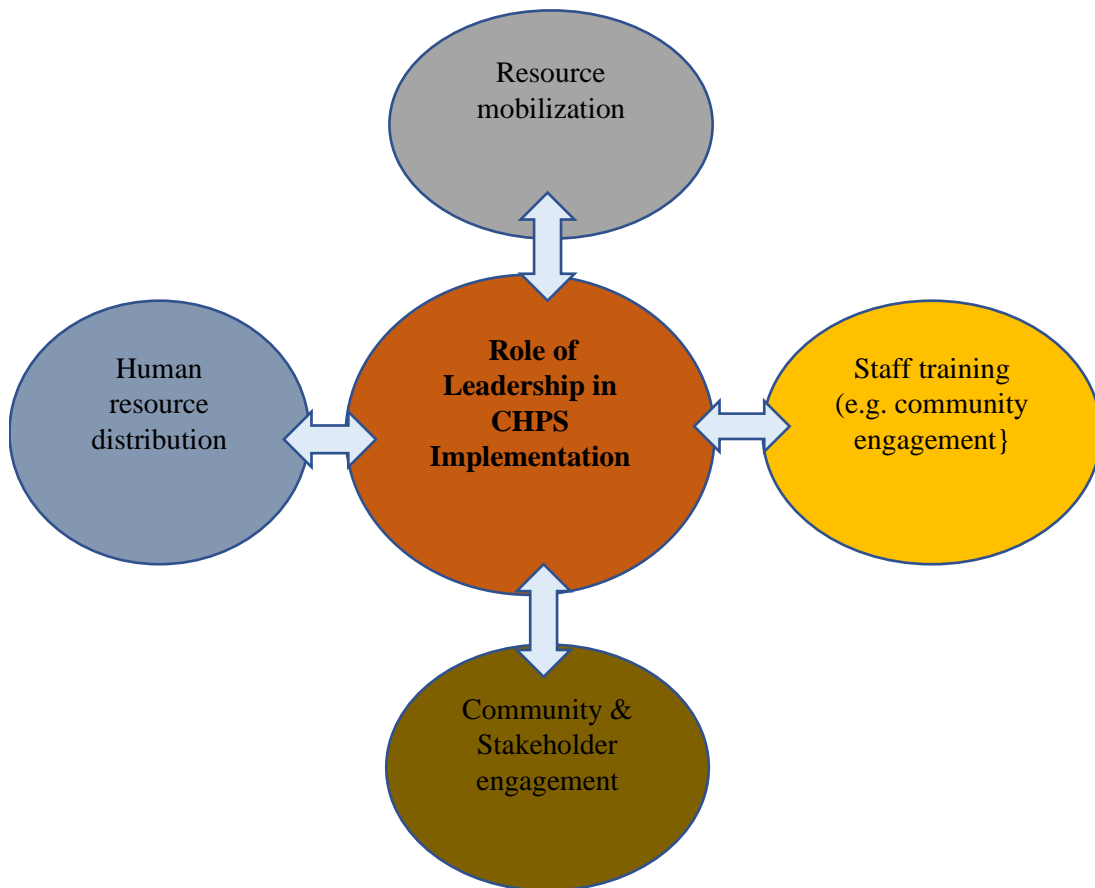


Figure 6.8: Leadership and CHPS Effectiveness

Source: Author’s construct

It is worth indicating that during fieldwork, there were ongoing leadership training sessions organised by the office of the Policy Planning Monitoring and Evaluation Division (PPMED)⁴ of the Ghana Health Services for managers in the study region, as one respondent reported that:

“Quite recently, there have been a lot of sensitization and stakeholders’ engagement on the CHPS processes right from the Ghana Health Service; the PPME unit ...The engagement has involved stakeholders like the health managers. Recently, even the district assemblies were invited for forums like that, and then some districts that we are implementing the CHPS+, we also have to engage our district assembly and other stakeholders ... and so with that, I know most managers are grabbing the concept very well. And then the

⁴ The PPMED is the implementing body of CHPS

conscious effort by some of our donors to really make it [CHPS] work, I will say it's also gaining grounds, and so whatever perception people were having previously is changing." DJ003

6.6.2.2 Training

As detailed in previous sections, improving staff knowledge of CHPS and effective engagement will contribute to the programme's resilience and improve health outcomes. When health workers lack the requisite skillset to engage communities, the relevance of community support and ownership is lost. This observation was prevalent in many communities visited, particularly in zones outside CHPS+, which stressed that engaging community members should transcend users to include political figures, 'endowed sons and daughters' (philanthropists), as well as other key stakeholders working in zones. This was reiterated by some respondents who said:

"It [community engagement] starts from the CHO at the community level; capacity building of staff, funds to carry out activities and logistics for bringing the community together. They need someone to facilitate the kind of engagement such that community can understand properly and make decisions to affect their own health. Lack of local leadership influence makes it difficult. The real problem is that there is no right local leadership whereby they can organise, especially the chiefs and elders. We need to do a lot of profiling with them in order to get their attention so that we will be able to mobilise them. The local leaders are not committed to the affairs of CHPS in the community. There are no people within the communities to manage their health affairs such as emergency services, etc." DS005

"You need to churn out or bring out community health nurses and officers that are properly trained and can engage the community and work with the community so the community members can appreciate their responsibility towards their own health" NBB003

"...we need to empower or build the capacity of the service providers to be able to understand the cultural aspects of each community and what it takes to be able to reach them. They [community members] are happy when you come in, and you are doing things according to their culture. They find it more acceptable, and therefore you are more likely to gain their support in what you are doing." NNA001

6.6.2.3 Increase Staff Numbers

Increasing staff numbers to meet the demand for basic health services at the community level emerged as an enabler for achieving the CHPS agenda. As noted already, whereas most frontline staff reported a dearth of CHOs in the system, managers and DP representatives argued that shortages resulted from an unequal distribution. Either way, addressing shortages presents an opportunity for improving the quality of CHPS services, such as increased time for patient-provider encounters as a respondent indicated that:

“So the way to go is to make sure that we have the right calibre of staff deployed and in their good numbers and in their right mixes” DAY002

6.6.3.4 Increase Logistics, Equipment and Drugs

An adequate supply of equipment and key logistics emerged as critical to building staff capacity for quality service provision. As presented already, the absence of key logistics such as means of transport (motorbikes) appeared to have axed staff from community outreach services, particularly in study areas where distances were notably wide and road networks deplorable. Consequently, all frontline staff argued that achieving CHPS effectiveness required “providing the logistics and the equipment we need” CM005. This need was endorsed by other respondents, such as DPs and government officials, as one respondent reported that:

“[When] the CHO is there, and logistics are not there, then it becomes a problem. If there is no transport, then the CHO cannot move because we know besides minor ailment treatment and home visits, they do outreaches [in] sparsely sited communities! To get to them becomes a challenge. And that is why sometimes - there is this thinking that [we are] turning the CHPS into health sectors or static clinics because if we don't have transport they can't move out. It becomes obvious that they will end up remaining at their compound. So, logistics, including transport, is critical.” RD002

Others said that:

“We need motorbikes; we need motorbikes because it's just only a few CHPS who have motorbikes. The others – some use their own personal bikes. Those who even use their own personal bikes they are those who are even committed to the work. Someone who is not committed to the work will not want to use

his or her own motorbike. And then maybe they can also try to give some funds – if they cannot provide the motorbikes, they can also give some funds so that if the person goes with the person’s own motorbike, the person can just come and get lunch pack or even fuel.” SUB004

“The challenges we also have in terms of bringing services is inadequate equipment and then inadequate transport to the CHPS zones... Because we have found that almost half of our CHPS zones don’t have adequate equipment. So, definitely, this affects service delivery. So, we need a way of regular[ly] replenishing and providing logistics, equipment, transport for our health workers on the ground, particularly vehicles or motorbikes.” NNB003

Away from health workers, inadequate logistics also had debilitating effects on patients and their decisions to access care. For example, the absence of referral facilities – means of transportation, particularly in non-CHPS+ zones – limited the continuum of care.

6.6.3.5 Motivation

To better position CHPS for Ghana’s universal health care agenda, study participants stressed a need to strengthen and increase incentive packages available to rural health workers who were perceived to be poorly incentivized compared to their counterparts in cities. Incentivising staff was equally relevant for minimizing staff turnover and what was noted among managers as an increased quest to pursue other career trajectories.

6.6.3.6 Increase funding

The results showed that improving CHPS financing for training and procurement of logistics will contribute to the programme’s effectiveness. Notably, managers and frontline workers advocated the need to strengthen engagement with the National Health Insurance Authority (NHIA), community members and partners to mobilise the needed resources for CHPS activities.

6.7 Conclusion

Findings from phase two studies - Interviews and FGDs – showed that the Ghanaian Government indeed played a major role in providing amenities such as schools and

health centres, many of which were under-resourced. Stakeholders, including service users, perceived staff were competent but lacked essential logistics to effectively render health services, which created a vicious cycle of access barriers and a sense of mistrust in the government. Amidst government funding challenges, external partners played a key role by providing training and logistics to support service delivery. Overall, the results showed that strengthening CHPS rested on increasing funding and improving staff capacity for effective community and stakeholder engagement, as well as for quality service delivery.

CHAPTER SEVEN: PHASE THREE FINDINGS – PARTICIPATORY ACTION RESEARCH USING GMB

7.1 Introduction

In line with the study’s third research question, which aimed to answer what potential systems interventions might enhance the quality and utilisation of priority services, four GMB sessions (Figure 7.1) were organised from January to February 2020 in the two study districts: Kumbungu and Gushiegu. The sessions were also used as a platform to triangulate findings from IDI and FGDs. Informants were drawn from the list of phase two study informants. As reported in Chapter four, district assembly and health workers (district, sub-district and CHPS level) automatically qualified and were selected to participate in the study. Community member participants were, however, systematically selected to participate. Thus, the first male and female on each community’s list were selected to participate, and if they were unavailable, the next person was contacted. Participants from the health sector and district assembly made up the Health Worker Group, whereas community members and volunteers made up the Community Member Group. Each session established a linkage between variables perceived to affect health service access, service quality, community trust and support, social cohesion, and government support.



Figure 7.1: Pictures of GMB sessions in Kumbungu and Gushiegu

Source: Field Work

The first section of the Chapter's findings (7.2) details informants' perceptions of the determinants of service access, which include financial affordability, staff capacity and previous experience. In section 7.3, participants' perceptions of service quality, which is believed to be impacted by factors such as the availability of key logistics and government commitment and community support, are presented. In section 7.4, findings on social cohesion – trust in Government, support for each other and the CHPS programme – are presented. Additionally, findings on the perceptions of Government support in communities regarding the provision of basic services including health care are presented in section 7.5. In sections 7.6 and 7.7. The Chapter presents findings on the points of fragility limiting CHPS effectiveness and proposed interventions that might promote the programme's resilience and improve the uptake of key services.

7.2 Triangulation of Phase Two Study Findings

Emerging themes from phase two study were validated during GMBs sessions. This followed the variable elicitation exercise, so that findings from both studies could be compared. The results from the two phases were comparable except for conflict and leadership, which were unique to phase two. In Gushiegu, for example, informants perceived that conflicts in the district had subsided by the time GMBs were conducted. None of the districts mentioned leadership as a challenge to effective CHPS implementation during the GMBs.

7.3 Determinants of CHPS Effectiveness

Figure 7.2 below shows a reinforcing loop (orange arrows) between government stewardship, staff capacity and resource allocation. Increasing government funding and allocating resources to communities improves staff capacity to provide quality health services, positively impacting community members' perceptions of government effectiveness. The green arrows also show a reinforcing loop between staff capacity, service quality and community support. Here, improving staff capacity improves service quality, which then increases community members' support for staff and the CHPS programme. The study highlighted the relationship between users' financial affordability and their health-seeking behaviour; users' financial affordability depends

on their NHIS subscriptions or their ability to pay out of pocket. With an NHIS subscription, users have better financial affordability and can seek allopathic care (either at the CHPS or from a higher facility). This affordability, however, decreases with increased out-of-pocket payment (OPP), and in turn increases users' decision to seek traditional treatment, which is readily available and cheaper.

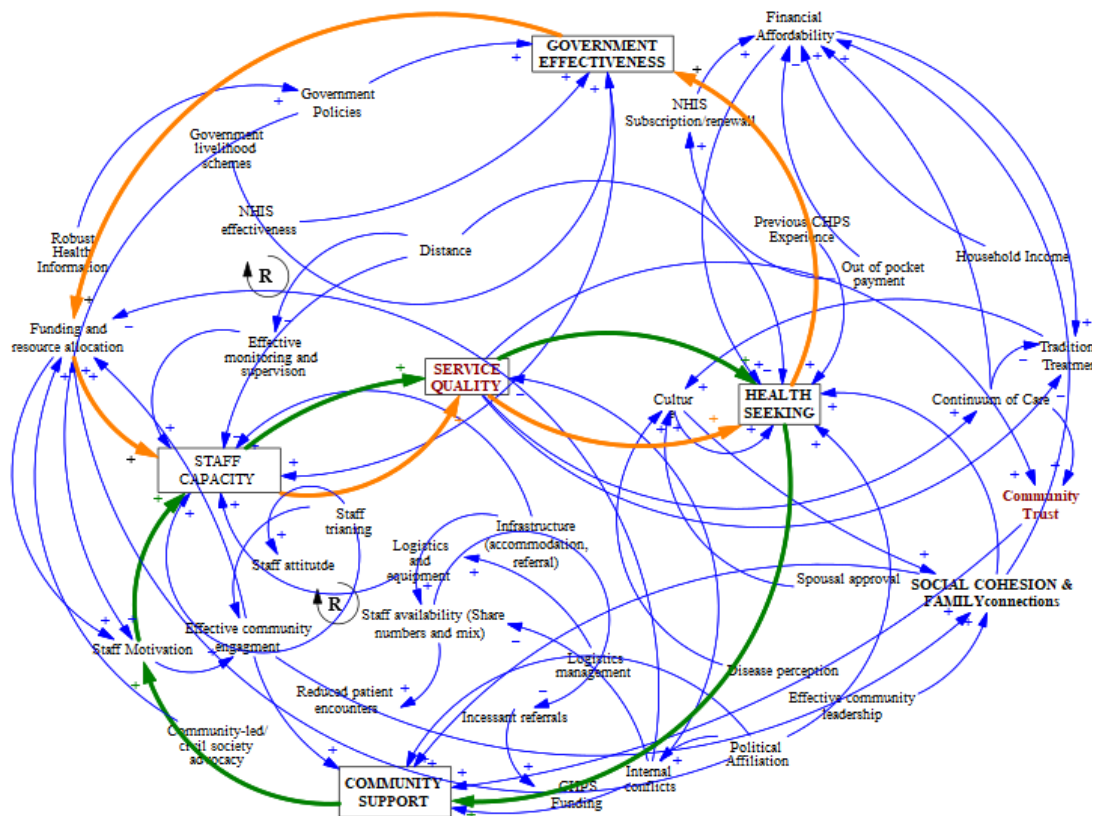


Figure 7.2: Causal Loop Diagram of CHPS Effectiveness in Gushiegu and Kumbungu Districts

Source: Author's construct

7.4 Access to Primary Health Care

Combined results (**Error! Reference source not found.**) from the GMB analyses showed that access to healthcare was informed by two major pathways: CHPS and traditional treatment. According to informants, decisions to access CHPS services depended on socio-cultural factors, distance, financial affordability, health worker capacity, previous experience and service quality and government policies that minimize out-of-pocket payments for services.

Access to CHPS services in study districts has seen marginal improvements over the past ten years owing to increased CHPS zones and staff numbers. In newly created zones, outreach services and health promotion activities have promoted wider coverage. In Gushiegu district, the health worker group emphasised the role of the district hospital in access. The hospital, which serves as the referral facility for all CHPS zones, has, in recent times, been bolstered to provide laboratory and specialised care critical for the continuum of care. The district's community member group validated this, stressing that emergency cases were addressed sooner, which minimised complications and loss of lives. In the Kumbungu district, community members reported that NHIS subscriptions had declined since 2019.

Despite evidence of improved access, findings showed this did not commensurate with service quality due to inadequate funding, equipment and logistics to support service delivery. Key among service delivery challenges was delayed NHIS reimbursement. In Gushiegu, for instance, health workers asserted that payment delays reduced funding available to support service delivery, such as for procuring equipment, logistics and drugs. Furthermore, inadequate community engagement on available services at the CHPS level and seasonal conflict were additional contributors to access challenges.

Community members were particularly concerned about the quality of services at the CHPS level. Users reported dwindling service quality owing to NHIS restrictions on services and drug prescriptions. Curbs on community-level diagnosis and prescriptions limited the adequacy and quality of services provided at CHPS facilities. Moreover, reimbursement delays were perceived to have deprived health workers of essential logistics and drugs necessary to render quality healthcare. The groups noted increased out-of-pocket payments (OOP), particularly among users who had to travel to sub-district and district facilities to access care. In the Kumbungu district, community members noted that staff attitudes played a major role in access. In zones where providers were dismissive of clients, such as the use of phones during service encounters and rushed diagnoses, community members doubted the quality of

services. The non-residential state of many health workers impacted access. According to the CM groups, non-resident nurses compound access challenges, particularly at night and compelled many to seek alternative treatment options such as traditional treatment. Pregnant women requiring delivery services at night were greatly impacted.

As shown in Figure 7.2 above, the GMB discussions demonstrated that health workforce capacity had a positive association with access. The discussions connected staff capacity to the availability of essential logistics and infrastructure, training, and funding, without which meeting the health needs of users can be daunting. Informants however noted the effects of inadequate funding on staff training (such as the mandatory 2-week CHPS training), allowances and remuneration (particularly for auxiliary staff) and essential equipment, logistics and drugs. The limited capacity of frontline workers resulted in increased referrals at the community level and resulted in many paying out of pocket (OOP) for health services.

In the Kumbungu district, the HW group indicated poor community engagement on available CHPS services contributed to low coverage. The essential role of community health volunteers (CHVs) in community engagement efforts was extensively discussed in the CM group. The participants further observed that volunteers were poorly equipped and motivated to support CHPS service.

Previous experience with CHPS services had a positive correlation with service access in study areas. This was particularly pronounced among the HW groups. In Kumbungu, for example, health workers stressed how [or that] poor staff attitudes and logistical challenges affected users' decisions to access care in future.

Financial affordability was a key determinant of health-seeking among community members. First, the requirement to pay a premium for an NHIS subscription or renewal was challenging for community members who were already on the borderline of poverty. Secondly, recent challenges with NHIS effectiveness have increased OOP for

healthcare, particularly for drugs and transportation to referral centres. Thus, the ability of individuals, relatives and social networks to support these costs greatly impacts access. According to the CM groups, the inability to pay out of pocket compelled many to resort to other treatment options (including traditional/herbal treatment) or discontinue care altogether.

Government policies that limit OOP for health care had a positive impact on service access. This was noted by both health worker groups. In Kumbungu, for instance, participants argued that policies such as the *free maternal and child health* programme minimized the financial barriers to healthcare and promoted access. In Gushiegu, health workers linked financial affordability to the effective implementation of the CHPS policy. The current CHPS policy aims to provide primary healthcare to communities at no cost; however, this is yet to be fully implemented. During GMBs, participants noted that the policy, when implemented effectively, will reduce the financial barriers to care. In Gushiegu, community members highlighted poverty alleviation programmes could increase household incomes, which is critical for bridging financial barriers to care.

Socio-cultural determinants, such as spousal permission, disease perception and a longstanding tradition of seeking traditional treatment, were linked to access during the GMB discussions. In the Gushiegu district, for example, discussants shared that some traditional beliefs impacted early access to antenatal services as this participant reported that:

“...in our local setting, we have a practice where a woman is not supposed to announce her pregnancy until it is six months old. The woman is not allowed to access ANC [antenatal] until after six months. Also, there are some illnesses that are believed to be incurable at the hospitals but curable traditionally.”
GB001

The sessions further established a linkage between spousal permission and access. This was highlighted by health worker informants, who noted that in traditional Northern Ghana, women require spousal approval to access care for themselves and their

children, which sometimes delayed access. Similarly, health workers in Gushiegu added that disease perception informed access. For example, the belief that some illnesses cannot be adequately managed by orthodox allopathic medicine refrained many from accessing timely services.

Delays in seeking care threaten the general well-being, particularly in maternal health, of many in study communities. In Gushiegu, for example, health workers observed many conditions that came to the clinic in deteriorating states and required treatment at the next level. Nonetheless, recent engagements with community stakeholders such as Traditional Birth Attendants (TBAs) and Traditional Healers (THs) were deliberate attempts to identify conditions before they reached catastrophic proportions. For example, TBAs were engaged as liaisons between providers and pregnant women, ensuring that the latter received adequate care during and after delivery.

The GMBs sessions showed that distance impacted access. Wide distances and poor road networks in most parts of the Northern region and study districts has resulted in transportation shortages and high transport cost. This limits service access in most communities. In the Gushiegu district, health workers noted that poor road networks affected the continuum of care for many who could not afford the cost of referrals. Again, bad weather conditions, such as in the rainy seasons and flooding, rendered some communities unmotorable and axed from CHPS services. Despite acknowledging the impact of geographical factors on access, the CM group in Gushiegu noted that some health workers hid behind long distances and bad weather conditions and did not show up for work. This was reported as being most common among staff who stayed outside CHPS zones. The group added that long distances impeded adequate monitoring of CHPS staff and sometimes contributed to poor staff capacity.

7.5 Service Quality

Reference mode exercises indicated that it was generally viewed that CHPS service had expanded over the past ten years due to the demarcation of additional zones, staff deployment and external support. Nonetheless, discussants shared that the quality of services is affected by health worker capacity (comprising of staff training and motivation; logistics, equipment and infrastructure; and monitoring and supervision), seasonal conflicts, as well as government and community support.

The GMB sessions showed that CHPS infrastructure, comprising of community health compound (CHC) and staff accommodation, was largely provided by the Government of Ghana through the district assemblies (DA). In Gushiegu, for example, health workers noted the contribution of infrastructure to services provision. That notwithstanding, participants noted that inadequate funding limited staff capacity to provide quality services. Specifically, inadequate funding affected 1) staff training, 2) allowances and remuneration, especially for auxiliary staff and 3) logistics, drugs and equipment. These findings from HW groups were corroborated by CM groups, especially in rich pictures. In the Gushiegu district, community members indicated that political interference in the allocation of state resources (where government officials allocate more resources to strongholds) impacted staff capacity. Community members in Gushiegu indicated that they have, in times past, engaged the media and local government representatives to promote equal distribution of state resources, particularly for the road sector.

The GMB sessions showed that training and deployment of appropriate staff had a positive correlation with staff capacity. The CM groups noted staff shortages in many rural facilities resulted from limited numbers trained from institutions. In the Kumbungu district, community members observed inadequate skills and experience among some staff. In Gushiegu, poor staff attitude impacted service quality. Community members were discouraged from accessing CHPS services when staff were rude, impatient and appeared unconcerned during service encounters, which discouraged them from accessing services.

Challenges with staff capacity culminated in frequent referrals and affected communities' trust in the primary health system as a participant said that:

“...if I come to you and I will not get quality, I will not come again...so that affects trust”. GM002

The sessions found that the availability and adequacy of essential logistics, equipment and infrastructure impacted service provision. Inadequate infrastructure, particularly staff accommodation, was reported as limiting service encounters at night as many resided in bigger cities – outside their work zones. The CM group in Gushiegu were very concerned about pregnant women who required delivery services at night, and in Kumbungu, HWs urged the need to strengthen referral systems amidst access challenges. Infrastructural development was pronounced key for promoting person-centred care and ensuring patient privacy, such as during deliveries.

Participants reported that motivation for frontline workers had a positive correlation with service quality. Deliberate government policies, adequate funding and community support were all sources of motivation identified by HW groups. The GMBs revealed health volunteers were the least motivated among CHPS workers as they were poorly motivated and equipped to support community engagement and outreach services.

The essential role of partners in strengthening staff capacity and service quality was highlighted by both health workers and community member groups in Kumbungu. Support from partner organisations such as Resiliency in Northern Ghana (RING), Japan International Cooperation Agency (JICA), USAID's Systems for Health and the CHPS+ project contributed to an increased number of qualified personnel and CHPS compound enhancements. For example, health worker groups noted that the World Bank's Maternal, Child Health and Nutrition Project (MCHP) supported community outreach programmes at the community level for improved staff capacity to provide services. In communities implementing the CHPS+ communities, emergency transport systems were deployed to bridge access gaps.

7.6 Community Trust, Support and Social Cohesion

Participants stated that growing community support for CHPS owing to increased engagement in CHPS+ communities compared to other study communities. Participants identified effective and sustained community engagement as the bedrock of CHPS which ensured that community members were involved in planning and resources for their own service delivery. However, findings showed that inadequate engagements at the community level contributed to a poor understanding of the CHPS concept, hence reducing support for CHPS. In Gushiegu, health workers indicated recent engagements with community members dispelled the notion that CHPS development was the sole responsibility of the government and promoted community support for the programme. Support for CHPS was evident in active participation and contribution towards infrastructure and logistics. Examples of community-initiated projects included urinals (toilets), pipes and the construction of labour rooms. In the Kumbungu district, community members indicated they provided transportation (by lending motorbikes) support to frontline staff for outreach services.

Findings showed that community members' trust in the health system and government was a key determinant of community support. Specifically, the sessions showed that communities trusted the health system and government when health services limited out-of-pocket payments, particularly for NHIS subscribers. As indicated earlier, expanded coverage did not correspond with quality, hence, limited trust. This was acknowledged in all four groups. In Kumbungu, community members said the preponderance of referrals, occasioned by inadequate logistics and medicines, reduced client satisfaction and fed into a general sense of mistrust in the government's commitment to drive development and improve wellbeing. In Gushiegu, community members said the availability and adequacy of referral systems to facilitate the continuum of care enhanced both trust and service satisfaction. Findings also highlighted a strong relationship between staff attitude and trust. For example, participants explained that the unexplained use of phones during service encounters compromised patient confidentiality. This was acknowledged by health workers in Kumbungu.

The GMBs provided a platform to bridge key communication gaps and bolstered trust between health workers and community members. In Kumbungu, for example, misconceptions about NHIS access difficulties were clarified. Community members who could not adequately access services, particularly with NHIS subscription, perceived frontline staff were dishonest and claimed funds when they were gone. This misconception was clarified by health workers during the GMB sessions.

Support for CHPS was strongly associated with effective community engagement. Thus, the ability of CHOs and volunteers to effectively engage community members in their roles as stakeholders inspired active participation and support. Additionally, the deployment of a community health action plan (CHAP) activity in CHPS zones created a platform for both community members and health workers to discuss communal health requirements as well as take action to address them. Although findings suggest renewed trust in the health system, the GMBs identified staff capacity (including transportation and key logistics) as a hindrance to effective engagements.

During GMBs, participants linked social cohesion to support for individuals and CHPS. The discussions showed that the willingness of communities to support each other in difficult situations largely depended on culture, community leadership and effective community engagement. In Gushiegu, community members, particularly relatives, provided financial and transportation support to relatives and other community members who required advanced care. In the Kumbungu district, community members said they provided emergency support, such as blood donations, to people who required emergency care. Strikingly, the participatory research found that communities with stronger social support systems were more likely to garner external support for CHPS and other community initiatives. For example, in Bognayili, Kumbungu, a community-initiated community health compound was completed with support from philanthropists and government officials. Despite establishing the role of social cohesion in community support for CHPS and other communities requiring care, the findings showed that community attempts could be hindered by poverty/financial affordability.

7.7 Government Support

In the causal loop analysis (7.2), study participants linked Government support for CHPS to political affiliation, community engagement, community/civil-society advocacy and erratic conflicts. Participants reported improvement in the overall development and well-being following infrastructural advancement in both health and education as well as road and telecommunication. The health worker group in the Gushiegu district, for example, noted the construction of the Eastern Corridor Road had eased transportation challenges in communities along the stretch. Similarly, CM groups attributed improved development in their communities to increased CHPS compounds and expanded roads and water facilities. As noted earlier, greater health worker presence and the introduction of referral systems were reported to have contributed to improved access. For instance, in the Gushiegu district, CMs stressed the introduction of emergency transport systems had eased transportation challenges in distant communities and promoted service access. Again, both Gushiegu and Kumbungu districts were recently upgraded to municipal and district status, respectively, which increased resources available for development.

Interestingly, GMB exercises showed a disconnect between community members and government officials (especially Members of Parliament). This was more pronounced among Kumbungu district participants, where health workers asserted that the government officials were only in touch with electorates during elections.

Policies designed to address health and other developmental challenges had a positive bearing on trust in Government. Study participants stressed that the government was committed if policies and initiatives promoted the allocation of resources for development and wellbeing. Specific to CHPS, policies which enhanced service delivery and access were discussed. This included the effective implementation of policies such as CHPS, NHIS and free maternal health policy.

Greater government commitment among the erstwhile Government (2012 and 2016) was reported. Government initiatives compelled District Assemblies to construct at least two CHPS centres each year in furtherance of CHPS. Additionally, government officials, including the President and Members of Parliament, contributed 10% of their salaries to CHPS development. Unfortunately, study participants noted CHPS was 'misplaced' in the current Government's health agenda, owing to diminishing funding and logistical support.

In the Kumbungu district, health workers highlighted the role of data in policy formation. Thus, the availability of timely and accurate data (such as eTracker software used at the CHPS level) was critical for informing policies.

As noted earlier, government funding for CHPS had plummeted in study districts and constrained resources available for CHPS operation. In Kumbungu, community members noted that the ability of district assemblies to mobilise revenues was sometimes affected by internal conflicts. Currently, local assemblies mobilise revenue through tolls, levies and other fees to fund developmental projects. During conflicts, these efforts are limited, and support for CHPS stifled.

The responsiveness of the National Health Insurance Scheme (NHIS) to claims was, perhaps, the foremost determinant of Government stewardship in study districts. Both CM and HW groups indicated recent challenges with the programme affected service delivery and access. Delays in NHIS reimbursements have reduced funding available for adequate service provision. Similarly, service access is currently limited as a result of curbs on NHIS treatment and medication.

The GMB groups noted political interference in the allocation of resources affected overall development and CHPS. For example, a greater percentage of CHOs was centred in urban and peri-urban centres to the neglect of rural communities as a result of political interference. According to the HW groups, political interference in staff distribution increased attrition among rural workers who felt marginalized.

Community and civil society-led advocacy can play an essential role in Government stewardship and improve CHPS efficiency. The HW groups highlighted that communities that were well-informed about their rights and empowered to hold duty-bearers accountable stood a greater chance of garnering political support. Although community members in Gushiegu had previously launched a campaign to protest poor roads, the study revealed many were oblivious of their ‘power’ to demand government accountability and development.

Finally, and as stressed in the section on social cohesion above, communities that were well-mobilised and initiated projects were more likely to attract government commitment in health and other sectors.

7.8 Points of Fragility

The GMBs offered a platform to identify key challenges and enablers of CHPS effectiveness in study areas. Key variables and linkages (as discussed above) were reviewed during the GMB, allowing participants to identify five pressing fragility sources. Fragility points common to the HW groups were health worker capacity, effective community engagement and funding. The need to tackle barriers to service access was stressed in Gushiegu, while in the Kumbungu district, health workers maintained that government commitment/support was a caveat to CHPS effectiveness. Similar to the health worker groups, CM groups identified *health worker capacity* (comprising of inadequate staff, logistics, equipment and drug shortages) and *government support, including NHIS challenges*, as the major sources of fragility requiring redress. In the Kumbungu district, community members noted inadequate volunteer training and community engagement as fragility points that limit support for CHPS. Details of individual fragility points are detailed in Table 7.1 and graphed in Figure 7.3.

Table 7.1: Points of Fragility- Community and Health Workers Groups

Point of Fragility	Gushiegu HW	Kumbungu HW	Gushiegu CM	Kumbungu CM	Ratings
Health Worker	X	X			2
Availability of Drugs/ Medicines	X	-	X	X	3
Logistics and Transportation	X	X	X	X	4
CHPS infrastructure			X		1
Staff inadequacy (numbers)			X	X	2
Staff attitude	-	X			1
CHV training				X	1
Community engagement and support	X	X		X	3
Funding	X	X			2
NHIS challenges			X		1
Service access	X	-			1
Political commitment/ government support	-	X		X	2

Source: Field Work

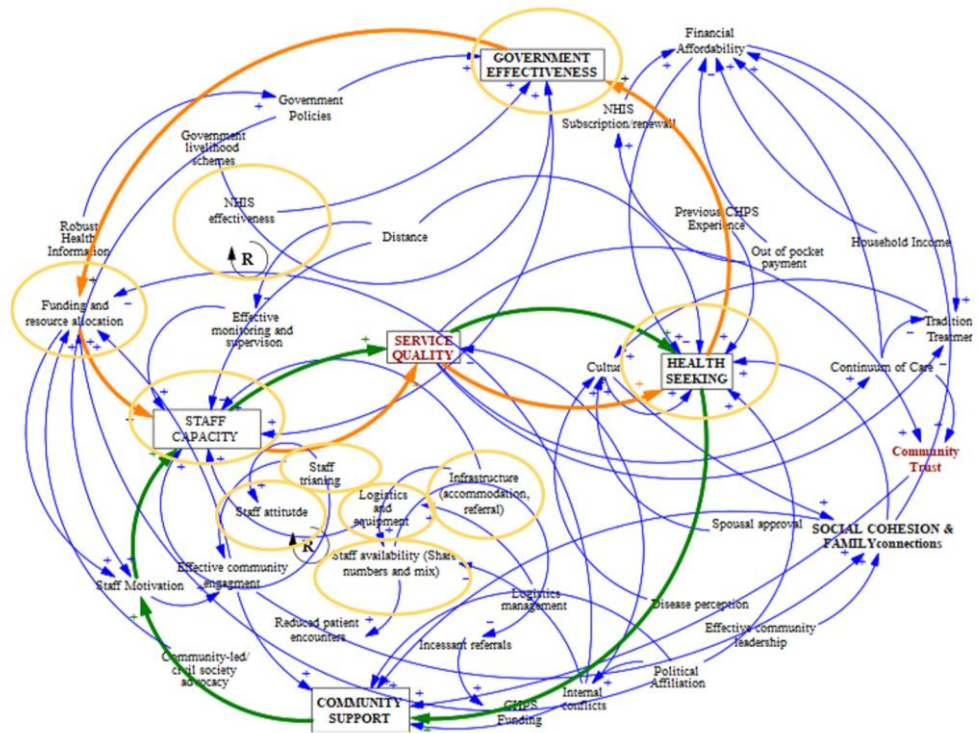


Figure 7.3: Causal loop diagram of CHPS effectiveness and fragility points (highlighted in yellow circles)

Source: Author’s construct

7.9 Prioritization of Fragility Points

Interventions that minimise the impact of sources of fragility were identified in respective GMB groups. Participants were guided to rank-order each intervention for their feasibility and impact. Table 7.2 details interventions ranked feasible and impactful. Group-level interventions and rankings are detailed in Appendice 14-28.

Table 7.2: Highly Feasible and Impactful Interventions

GCM: Gushiegu community members GHW: Gushiegu health workers
 KCM: Kumbungu community members KHW: Kumbungu health workers
 HF – High feasibility HI: High impact

District	Fragility point	Intervention	HF/HI
GCM	CHPS Infrastructure	Mobilise communities to initiate construction	HF/HI
GCM	Drug Shortage	Engage CHMCs/DHD on drug shortages	HF/HI
GCM	Inadequate CHPS logistics (Motorbikes)	Community support through the lending of motorbikes for service delivery	HF/HI
		Organise fund-raising durbars	HF/HI
GHW	Funding	Write partnership proposals to NGOs and others	HF/HI
		Initiate silver collection from religious/worship centres (e.g. churches, mosques, etc.)	HF/HI
GHW	Human resource capacity	Provide incentives for staff retention (e.g. awards, cooking equipment, scholarships)	HF/HI
		Retrain and sponsor staff for special courses.	HF/HI
GHW	Political commitment	Empower community members to hold the Government accountable	HF/MI

		Create or build alliances with pressure groups and civil society organizations to demand accountability	HF/MI
		Form health committees	HF/HI
GHW	Community engagement in CHPS	Identify opinion leaders (focal persons) to lead advocacy	HF/MI
		Educate communities on CHPS to promote ownership and support.	HF/HI
GHW	Transportation and logistics	Lobby NGOs, government, partners, etc., for logistics and equipment	HF/HI
		Include logistics and transportation needs to the IGF budget line	HF/HI
KHW	Health worker capacity	Conduct regular in-service training	HF /HI
		Conduct supportive supervision	HF /HI
		Conduct regular/continuous community entry	HF /HI
KHW	Community engagement and ownership	Organise Focus Group Discussions (FGDs) and durbars	HF /HI
		Develop Community Health Action Plans (CHAPs)	HF /HI
		Identify community focal persons to help make engagements	HF /HI
KHW	Access to CHPS services	Conduct outreaches (using IGF for fuel)	HF /HI

KHW	Availability of drugs/medicines	Ensure proper logistics management	HF /HI
		Train staff on the code of conduct of health workers	HF /HI
KHW	Staff attitude	Regular supervision by community health management committee (CHMC) sub-district, district and regional leadership.	HF /HI
		Sanction staff for unprofessional behaviour	HF /HI
KCM	Role of Community Health Volunteer (CHV)	Provide incentives (soap, support in menial works) to the CHV	HF /HI
KCM	Human Resources (shortage of Health Workers)	Mobilise community to provide accommodation for Health Workers	HF /HI
KCM	Government Support	Assembly Member to lobby government through District Assembly (DA) to construct standard Community Health and Planning Services (CHPs) compounds with staff accommodation	HF /HI
KCM	Community Support	Community Health Management Committee (CHMC) and Assembly Member to organise clean-up exercises	HF /HI
		Community Health Management Committee (CHMC) Mobilise community to provide some CHPs	HF /HI

Infrastructure such as pavilions, toilets
etc.

Source: Field Work

7.10 Conclusion

Four Group Model Building (GMB) meetings were convened with government officials (from the Ghana Health Service and District Assembly), community health volunteers and community members in Gushiegu and Kumbungu districts. The participatory research study brought stakeholders onto a single platform to discuss challenges confronting CHPS effectiveness and identify interventions for strengthening the programme. To understand and identify sources of fragility in CHPS, linkages were established between variables that concern government support, service provision and access, community trust and support, and social cohesion. Findings from the GMB showed government stewardship was driven by a community's political affiliation and the level of community engagement and advocacy. Specific to CHPS, the Government's willingness to allocate adequate funding and facilitate timely reimbursement of National Health Insurance (NHIS) claims was key for delivering quality services. The sessions further showed that service quality influenced users' decision to either seek care at the facility level or resort to alternative treatment options, such as traditional medicine. In addition to service quality, financial affordability, distance, and policies that limited out-of-pocket payments (OOP) were key determinants of service access. There was also a perceived strong link between service quality and community members' trust in both the health system and government. Similarly, the level of community members' trust in the health system and Government impacted the amount of support provided for CHPS advancement. Thus, community members were more likely to support CHPS if they trusted both the health system and the government to provide their basic health needs. Effective community engagement was perceived as critical for demanding government accountability and garnering community support for the CHPS programme.

CHAPTER EIGHT: PHASE THREE FINDINGS ON GMB FEEDBACK

8.1 Introduction

Chapter eight is the last of the findings chapters and presents feedback on the GMB interventions detailed in chapter seven above. The findings on progress are presented in section 8.2, with a comparative analysis of both CHPS+ and non-CHPS+ zones and perceived challenges impacting progress detailed in section 8.3. The chapter ends with a conclusion in section 8.4.

8.2 Progress of GMB Interventions

Twenty (20) GMB participants, ten from each study district, were contacted to ascertain feedback on progress with identified interventions. Of those contacted, ten represented the 'health worker' group, while the remainder represented the 'community member' group (including volunteers). Each participant was asked to evaluate the work of their team and those of others. Thus, participants evaluated progress for both Community Member and Health Worker interventions regardless of which team they belonged to. Feedback interviews were conducted via mobile phone, and conversations lasted between 45minutes to an hour. Of the 20 contacted, only 15 were available for a phone conversation. Challenges such as internet connection (particularly for community members), transfer from place of work and 'refusal' to participate were reasons contributing to attrition. In the case of the latter, both district CHPS coordinators declined phone interviews. Four key responses were ascertained from respondents regarding each intervention; '*good progress*', '*some progress*', '*no progress*' and '*don't know*'. Although responses were not weighted, they were asked in order of importance/achievement. The data were collated using Excel, and to better appreciate data given the limited number of participants, responses for 'good progress' and 'some progress' were combined as 'good progress', whereas responses for 'no progress' and 'don't know' combined as 'no progress'. Proportions of responses to each variable investigated are shown in Figure 8.1 and Table 8.1 below.

Feedback generally indicated there was good progress in improving health worker capacity, particularly in organizing in-service training and strengthening supportive supervision for frontline workers. For a greater number of those contacted, key activities such as training conducted for new staff and reshuffling of old staff both aimed to improve staff capacities and attitudes. There was also good progress reported in securing medicines and supplies, mainly due to improved logistics management. Community engagement received the most progressed actions among all interventions. Thus, nearly all participants indicated key activities, such as identifying Community Health Management Committee (CHMC) members and opinion leaders/focal persons to lead advocacy roles, were successful.

There was generally poor progress reported towards interventions designed to improve political commitment, funding, transportation and logistics, and resourcing (training and incentivising) community health volunteers. Regarding funding, community initiatives such as organising fundraising durbars and initiating silver collections from religious organisations were impossible owing to restrictions of the Covid-19 pandemic across the country. As noted in earlier chapters, the study observed stakeholder challenges with improving political commitment and funding. For example, many who were contacted – mostly health workers – indicated the fear of being tagged to a particular political party, hence limited mobilisation efforts to improve political commitment. The lack of feasible strategies to improve NHIS effectiveness and now for improving, political will and funding for CHPS advancements can leave negative consequences for primary health service delivery.

Table 8.1: Responses on Progress with GMB Interventions

SN	Point of Fragility	% good progress	% no progress	GP	NP
1	Improving Health Workforce	100.00	-	14(100%)	0(0%)
	a Availability of Drugs/ Medicines	66.67	33.33	10(67%)	5(33%)
	b Logistics and Transportation	37.50	62.50	9(38%)	15(63%)
	c CHPS infrastructure	50.00	50.00	4(50%)	4(50%)
	d Staff inadequacy	52.38	47.62	11(52%)	10(48%)
	e Staff attitude	60.00	40.00	12(60%)	8(40%)

f	CHV training	28.57	71.43	2(29%)	5(71%)
2	Community engagement and support	77.27	22.73	51(77%)	15(23%)
3	Funding	8.33	91.67	2(8%)	22(92%)
4	NHIS challenges	-	-	0	0
5	Service access	57.14	42.86	4(57%)	3(43%)
6	Political commitment/government support	33.33	66.67	7(33%)	14(67%)

Source: Fieldwork

Figure 8.1 below is a graphical presentation of the progress with GMB interventions. It shows that there has been no progress in raising funds for CHPS. However, the health worker numbers had improved.

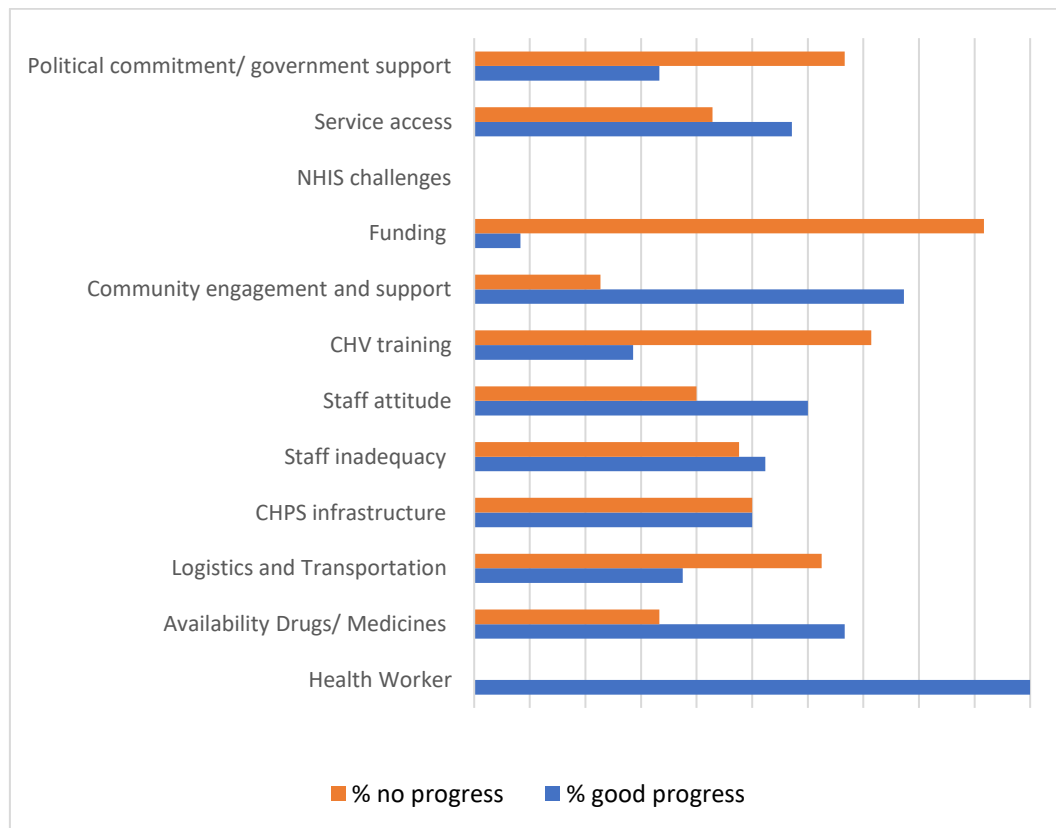


Figure 8.1: Progress of GMB Interventions

Source: Author's construct

8.3 Comparative Analysis: CHPS+ Zones vs non-CHPS+ Zones

Change in district-level leadership in both districts has contributed to cross-cutting interventions across study areas. For example, in-service training were organised for new staff to improve community engagement and staff behaviour. District-wide

logistics and procurement management training have contributed to improving the availability of logistics and medicines.

8.3.1 Increasing Political Commitment and Government Support

Overall, interventions involving advocacy or engagement with government officials to garner political commitment, increase funding and secure more CHPS infrastructure saw minimal progress. This was true for both CHPS+ and non-CHPS+ districts. Chesugu and Bognayili, both CHPS+ zones, appeared more proactive in engaging government officials on funding and support compared to other CHPS+ zones. In non-CHPS+ zones, Tibung made impressive gains in some fundraising activities amidst covid-19 restrictions. They successfully engaged politicians and prominent community members for help after a storm took off their pavilion for Reproductive Child Health (RCH) in June and July 2020. Similarly, in August 2020, philanthropists contributed to building a maternity ward, which is currently near completion. There were also written proposals submitted to the district assembly and other NGOs for support. In Zantili, another non-CHPS+ zone, a fundraising durbar was successfully organised to fund the operation and maintenance of a rural ambulance donated by Catholic Relief Services (CRS).

Despite challenges in securing ample political commitment, however, the study reveals District Assemblies continue to support CHPS infrastructure, although not financially. In some communities, the DHMT has provided funding for logistics, possibly from internally Generated Funds (IGF), such as the financial clearance to employ lay workers (Cleaners) in some facilities. DHMT contributions could have been clarified by representatives, who unfortunately could not participate in this study.

In some CHPS+ zones, participants indicated there were discussions with managers to minimise political interference in the distribution of staff. Health workers did not pursue interventions that aimed to empower community members to hold authorities accountable. Many indicated they feared being victimised and tagged to a particular political party. This was a common concern among CHPS+ and non-CHPS+ zones alike.

8.3.2 Human Resources Capacity

GMB feedback revealed appreciable progress with health worker capacity interventions across study communities. A midwifery school was recently commissioned in Gushiegu, which was expected to train more midwives to meet the demand for supervised delivery services, particularly in rural areas. In the Kumbungu district, the assumption of office by a new district director has improved staff distribution across facilities, with each CHPS facility operating with four health workers. This appears to have resolved most of the staffing challenges raised during GMBs.

Improved supervision, particularly in CHPS+ communities, and the introduction of incentives, such as awarding hard-working staff and sanctioning staff who presented poor behaviours at work, all contributed to improved staff capacity and attitude. In Kumbungu, for instance, a frontline staff member's salary was cut in half for bad behaviour. In Gushiegu, a CHO received the 'best worker of the year' award and was given a citation and some money during the study period. The district is also sponsoring existing staff for midwifery programmes and acknowledging hardworking staff.

Actions aimed at improving volunteer capacity did not receive much progress. Although many indicated a training or two was organised for volunteers (mainly to support the management of Covid-19), many did not receive any incentives either from fellow community members or the service.

8.3.3 Community Engagement

Interventions targeting community ownership of CHPS and realizing community resources to support service delivery were reported to have made impressive gains across all study communities. Although many had CHMCs and focal persons already identified (as this is a key CHPS milestone) before the GMBs, progress was reported for strengthening the above in addition to advocating for more infrastructure, logistics and equipment as well as improving staff numbers. It must, however, be emphasised

that in CHPS+ zones, good progress could have been driven by the project interventions which supported effective community engagement activities.

In zones such as Bognayiliy, Voggu, Zamashegu and Zantili, community members constructed pavilions and urinary pits to support service delivery. In Zamashegu, community members engaged key stakeholders to support the construction of a labour room. They were also determined to commence the building themselves after the rainy season. Similarly, in Tibung, community members offered staff a room and were in the process of constructing a three-room structure to accommodate staff and serve as a labour ward. Again, in Zantili, community members advocated and got a rural ambulance from CRS to support referrals.

8.3.4 Equipment, Logistics and Drugs

Essential equipment and logistics, including means of transport, were deemed critical for expanding service access, particularly in the Kumbungu district. Attempts were made to secure more logistics from the DHMT. Again, a few engagements were held with NGOs and other philanthropists to support the supply of CHPS logistics. In the case of the latter, health workers and community members indicated they did not know which NGOs to contact. Although most communities made marginal progress in securing logistics and equipment for CHPS operation, most contacted indicated challenges with NHI claim reimbursements and inadequate funding limited the realisation of proposed interventions. Overall, feedback revealed marginal progress in securing adequate logistics and equipment. This was likely because interventions were more in the power of DHMTs. Nonetheless, in Katani, a CHPS+ zone, ACER donated a motorbike in June and a borehole in November 2020. In Chesugu, some motorbikes were presented by the DHMT, and all zones continue to receive financial support from the MCHP programme to implement outreach activities. Again, in Zamashegu, community members continue to lend personal motorbikes to health workers to embark on health activities, but this did not seem sustainable as they indicated such machines are not always available. It is also worth stressing that proper logistics management introduced by the DHMT in Kumbungu, for instance, had improved the availability of logistics.

8.3.5 Challenges to Progress

Ghana, like many countries all over the world, has been greatly impacted by the Covid-19 pandemic. As of May 2021, an estimated 92,000 people tested positive for the virus, with 783 deaths (GHS 2022). Although the country introduced restrictions earlier on in April 2020 for only three weeks, this left consequences on the country's socioeconomic structures. (Amewu et al. 2020) reported GDP fell by 27.9%, and an additional 3.8 million Ghanaians became temporarily poor during the period. Similarly, Bukari et al. (2021) stressed the pandemic had increased poverty levels, with females and rural settings disproportionately affected and called for heightened social protection interventions. The health sector undoubtedly bore a greater part of the burden presented by Covid-19. For example, in an article assessing the impact of Covid-19 on the health financing system in Ghana, authors Abor & Abor (2021) projected that:

“...adverse effects on the various sources of healthcare financing, including government support, donor support, national health insurance scheme (NHIS) and out-of-pocket payments, which will impact the general delivery of healthcare in the country.” (Abor and Abor 2021).

Due to Government's limited fiscal space, among others, spending on health has always been inadequate (WHO 2022b). The Covid-19 pandemic has exacerbated this, leading to a reprioritisation of health funding to other urgent areas, such as vaccine procurement which has dire consequences on CHPS. A ban on religious bodies such as churches and mosques that some of the CHPS depended on to raise funds also contributed to poor progress. Restrictions on assembly/gathering also affected communities' ability to mobilise themselves in large groups for key activities, including educational or fund-raising durbars.

Feedback revealed Covid-19 similarly posed an obstacle to realizing interventions in study areas. For example, restrictions on social gatherings for any purpose limited community mobilisation efforts for organising fund-raising durbars, raising funds at religious gatherings and mobilizing community members for outreach purposes. In Bognayili, for example, plans to build staff accommodation with support from an NGO, My Dream, was unsuccessful due to the Pandemic.

8.3 Conclusion

The GMB feedback, conducted via telephone from September 2020 to May 2021, showed substantial gains in interventions targeting community engagement and improving staff capacity. Evidence of structures constructed by community members was shared with researchers. That notwithstanding, a greater percentage of progress has only gone through the engagement stage and was yet to see results. There is, therefore, the need for consistency in advocacies and engagements to achieve further results.

Partners such as CHPS+, CRS, ACEP and the MCHP programme continue to support CHPS activities in study districts. However, both CHPS+ and CRS folded up during this study, which posed a great worry to community stakeholders. For example, in Zantili, a rural ambulance donated by CRS suffered a dip in maintenance because the project ended. Similarly, in Bognayili, the community's collaboration with CHPS+ to improve infrastructure was unsuccessful and shed light on the need for self-sufficient communities. The study also found that CHV training and remuneration were not prioritised largely due to inadequate funds, hence their reliance on external support to fund conduct training.

Logistics and transportation remain a challenge largely because some of the procurement bottlenecks are associated with delays at the Regional Medical Store (RMS), which is far beyond the community/individual CHPS. Thus, the DHMTs participation could have helped clarify their efforts toward this intervention. Poor progress towards improving political commitment and realising more government funds for CHPS leaves much to be desired. A deliberate strategy to adequately engage duty bearers will improve CHPS functionality in the long run.

The refusal of key respondents (DHMT staff) to participate deprived the study of the DHMTs perspective of progress, including policy and other high-level decisions and challenges faced. The use of telephone interviews was convenient, but the poor quality of audio resulting from intermittent network connections meant that some vital

information might have been lost in the process. Again, the movement of workers from the communities and the replacement of new/different staff might have affected the institutional memory, with the remaining staff not privy to ongoing developments. This partly contributed to some of the ‘don’t know responses.

In sum, there were modest gains in several interventions; however key challenges including the pandemic restrictions contributed to making an already fragile health system more fragile. The trajectory of the country’s health system priorities in the coming years may rest on the system’s ability to manage the pandemic. Communities are making efforts to improve CHPS, which could be the key to ensuring resilience in the implementation of CHPS.

CHAPTER NINE: DISCUSSION

9.1 Introduction

This Chapter analyses the research findings in relation to the existing literature. It begins with a summary of the findings – highlighting the main outcomes for each research objective and then examines them in comparison with the relevant literature. A reflection on the concept of fragility and the conceptual framework is provided in Sections 9.4 and 9.5 respectively. Section 9.6 contains the empirically derived logic model. The Chapter concludes with a discussion of the implications of the research findings in section 9.7.

9.2 Summary of Main Research Findings

This research aimed to understand the factors constraining the effective implementation of CHPS in the fragile context of the Northern region of Ghana and identify strategies to address them by 1) mapping progress in CHPS implementation, 2) identifying barriers and enablers to CHPS implementation using the analytic framing of fragility; and 3) exploring potential systems interventions to enhance quality and utilisation of priority services in this context. While Ghana's CHPS programme has successfully contributed to improved service delivery, implementation and scale-up, challenges persist nearly two decades following its introduction, particularly in the Northern region.

The quantitative research aimed to answer the research question: what is the progress of CHPS in selected districts of the Northern region? The research analysed the DHIMS data from 2012 to 2017 to assess the progress of CHPS in selected districts of the Northern region using five core RMNCH indicators: ANC4+, PNC, Penta 3, FP and Home Visits. The findings from this phase were inconclusive due to missing data and unrealistic values, which prevented the study from establishing a connection between the impact of CHPS coverage on RMNCH indicators in the study areas. The trends and patterns of growth in the indicators were inconsistent, fluctuating, and sometimes contradictory across different levels of analysis. Although DHIMS was

introduced in 2012, the research highlights data management challenges such as missing data, duplications and extreme values that can affect the planning and logistics allocation for CHPS.

In the second phase of the research, interviews and FGDs aimed to answer the research question: What are the barriers and enablers to CHPS implementation using the analytic framing of fragility in these settings? The main findings from this research showed that overall, the Ghanaian Government played a major role in providing amenities such as schools and health centres, many of which were under-resourced due to factors such as inadequate funding and logistics, poor infrastructure, and poor leadership. Informants perceived health workers as competent but lacking essential logistics to effectively render health services, which created a vicious cycle of access barriers and a sense of mistrust among community members towards the health system and government (both at the central and sub-state levels). Amidst resource challenges, external partners played an essential role in offsetting some of the access barriers and included staff training and the supply of basic equipment.

In the third and fourth studies, the Group Model Building (GMB) sessions and follow-up interviews aimed to answer the research question: What are the potential systems interventions that might enhance the quality and utilisation of priority services in this context? A participatory research approach, using GMB meetings, was conducted with government officials, community health volunteers, and community members in Gushiegu and Kumbungu districts. The GMBs applied a systems-thinking perspective to identifying and understanding the drivers of fragility in the CHPS programme and to propose interventions for strengthening the community health system. The key findings from this study showed increased service provision and access across study districts due to the creation of more CHPS zones. There were also increased logistics and community engagement activities in zones implementing CHPS+ and other NGO interventions. However, there were perceived marginal improvements in overall development and community members' well-being across study districts owing to infrastructural advancements in roads, schools and CHPS compound construction. To promote CHPS effectiveness, stakeholders identified the need to improve political

commitment, strengthen the NHIS effectiveness, embark on community engagement and support, and strengthen health worker capacity (comprising of logistics and transportation, staff attitude, and CHPS infrastructure) to improve service delivery and access.

9.3 Interpretation of Study Findings

This research confirms the expanded coverage and reach of the CHPS programme across districts, as reported by existing literature (Elsey et al. 2023). Although the findings of the quantitative study are inconclusive, which makes it difficult to gauge the impact of CHPS on service indicators, existing studies show mixed results. Whereas some show a positive impact, others show a modest impact. For instance, Awoonor-Williams et al. (2013) found in their study that CHPS had a positive but reasonable impact on maternal health indicators such as ANC4+ and skilled delivery in three regions of Ghana, but not on child health indicators such as immunisation (Awoonor-Williams, Bawah, et al. 2013). Nyongator et al. (2005) made similar conclusions, noting that CHPS positively impacted MNCH indicators such as ANC4+, tetanus toxoid immunisation, and contraceptive use in one district of Ghana, but not in others such as PNC (Nyongator et al. 2005a). Indeed, Sakeah et al. (2014) found no significant impact on maternal health indicators such as ANC4+, skilled delivery, and PNC in two districts of Ghana, compared to non-CHPS areas (Sakeah et al. 2014).

In contrast, other studies show a rather strong connection between CHPS coverage and MNCH indicators. In 2013, for example, Awoonor-Williams et al. (2016) and Oduro-Mensah et al. (2013) demonstrated that CHPS was a catalyst in reducing maternal mortality through increased ANC4+, skilled delivery, PNC, family planning, and referral services at the community level (Awoonor-Williams, Bawah, et al. 2013; Oduro-Mensah et al. 2013). Alhassan et al. (2019) made similar conclusions, arguing that the programme positively impacted child health indicators such as immunisation coverage and under-five mortality through key activities (Alhassan et al. 2019). Increased coverage and the effective implementation of the programme's key activities such as community engagement and participation, health education, outreach services, and referrals were major determinants of this success.

The findings from the literature demonstrate that, indeed, CHPS can positively impact RMNCH indicators if implemented effectively and comprehensively at scale. They also show that progress varies across studies depending on the quality and coverage of CHPS implementation, as well as the availability and accessibility of other health services and resources.

Recognising that the findings from this quantitative research are inconclusive due to missing data and unrealistic values (indicators of more than 100%), the discrepancies between them and the existing literature can be explained by many factors. First, this study used DHIMS data as its main source of information for measuring RMNCH indicators, whereas those reviewed in the literature used population surveys or other research data as their primary or secondary data sources. As discussed throughout this document, DHIMS data have several limitations in terms of quality, reliability, validity, completeness, and accuracy, which may affect the measurement and interpretation of RMNCH indicators. Second, the positive association between CHPS coverage and improved RMNCH indicators in the literature were observed during implementation research where funding and other essential resources were readily available to implementers and frontline staff. In the implementation research by Awoonor et al. (2013), for example, these provisions were augmented with a leadership training programme (Awoonor-Williams et al., 2013b). While this demonstrates the ideal condition under which CHPS should work, the findings from this research show otherwise. Third, this study focused on the Northern region, which has specific characteristics and challenges that may influence CHPS implementation and impact. For instance, the region is one of the poorest, most deprived, most sparse in terms of settlement, and most conflict-prone in the country, which might make it more challenging to achieve desired targets.

The research found a mismatch between the expectations and realities of health workers in CHPS zones, as stakeholders, especially community members, viewed them as competent but lacking essential logistics. On one hand, CHPS workers are expected to provide comprehensive and integrated primary health care services to their

communities. On the other hand, they face various challenges such as staff shortages, lack of equipment and supplies, poor transportation as well as inadequate motivation and incentives. These challenges create a vicious cycle of access barriers and a sense of mistrust among community members in the health system and government, both at the central and sub-national levels. This argument is in line with the literature that highlights the importance of human resources for health and equipping staff with the required logistics and equipment as key determinants of health system performance (WHO 2010c; Wurie et al. 2016; Erlangga Id et al. 2019). The findings also reflect the theoretical framework of this study, which emphasizes the role of strengthening health workforce capacity by adequately training and equipping them to address issues of availability, accessibility, and quality of health workers.

The research showed that the Ghanaian Government was the main provider of basic amenities such as schools and health centres for the CHPS zones, especially in the context of this study, where in a decentralised-system, the lower-level government still relies on the central government subsidy to finance development activities. The GMBs specifically showed improvements in overall development and well-being across study districts owing to infrastructural advancements in roads, schools and CHPS compound construction. This demonstrates the Ghanaian Government has made some efforts to provide basic amenities for the rural communities where CHPS operates. The conclusions are also consistent with the literature that suggests that infrastructure development is essential for improving health outcomes and reducing poverty in low- and middle-income countries (Erlangga Id et al., 2019). Indeed, Hui et al. (2022) argued that national information and communication technology (ICT) infrastructure can overcome challenges with long distances and poor infrastructure and improve health in LMICs (Hui et al. 2022). Similarly, Banks et al. (2018) explored the relationship between poverty and disability in LMICs and concluded that conditions associated with poverty, including a lack of access to healthcare, inadequate water and sanitation, malnutrition and poor living conditions all have the potential to increase the risk of disability (Banks et al. 2018). The findings further support the study's theoretical framework that good stewardship and the willingness of the government to provide the basic needs of communities improves service quality. Nonetheless, in a

decentralised system, the Government must endeavour to distribute resources equitably as needed. Therefore, improving service delivery requires addressing the gaps and challenges in the health sector but also other determinants of health as well.

Despite the Ghanaian Government's contribution to basic amenities, this research found many of the basic amenities including schools and CHPS zones were under-resourced due to inadequate infrastructure and logistics, funding and poor leadership. This contributes to poor quality and accessibility of health services, which is a common challenge for primary health care delivery in under-resourced settings (Oduro-Mensah et al. 2013). The findings align with the theoretical framework of this study, which argues that good stewardship positively impacts staff capacity, social cohesion and trust for improved health outcomes. Indeed, good stewardship, which for this research means the government or political commitment to providing the basic needs of communities, is required to improve service gaps and provide essential services beyond health, such as education, water and sanitation. These have implications for trust and social cohesion, as well as community confidence in government at all levels. Nonetheless, the quest for good stewardship must be discussed in the specific context of the Ghanaian decentralisation.

As argued in the literature review Chapters, decentralisation in Ghana, sometimes better described as delegation⁵, is more politically driven. Progress has largely been interpreted as increased sub-national governments through the creation of more district assemblies rather than how well they function (Resnick 2017). Delays in the District Assembly Common Fund (DACF) disbursement and the sub-national level dependence on central government subvention for 69% of its resources to support development, for example, contribute to stewardship challenges observed in this research (Owusu-Mensah, 2015; Inkoom and Gyapong, 2016). Additionally, sub-national level overreliance on central government subvention for development impacts the position CHPS occupies in the primary healthcare system of Ghana. This dependence has the potential to reduce the autonomy and flexibility of the district and

⁵ Delegation according to the World Bank is the transfer of authority and responsibility for decision making, but not the transfer of resources (World Bank, 2012).

sub-district management to plan and implement CHPS according to the needs and preferences of their communities. Indeed, this partly explains the missing implementation milestones, such as staff training and effective community engagement in study areas. Similarly, inadequate and unpredictable resources, including the DACF, may hinder the sub-national units from implementing and scaling up CHPS. This can also undermine universal health coverage and overwhelm referral and tertiary health facilities. Finally, inadequate autonomy on district funds may limit the accountability and participation of the local actors, including the community members, especially when their health decisions are not always considered.

While corruption has notably posed detrimental effects on resources available for health and other sectors in Ghana and many parts of Africa, the government's continued debt repayment of loans borrowed from the IMF and World Bank constricts spending for poorer areas such as Northern Ghana, particularly for the health (Naher et al. 2020; Opoku et al. 2021; BBC 2023; IMF 2023). Since the 1960s, Ghana has made 17 different loan arrangements under the IMF's Extended Credit Facility (ECF), totalling \$5.6 billion as of June 2023 (BBC, 2023). Undoubtedly, these loans have contributed to development across all sectors including following the Covid-19 pandemic (IMF, 2023). In the northern regions, support from the Bretton Woods institutions has been directed toward poverty alleviation. For instance, this support is embedded in the Heavily Indebted Poor Countries (HIPC) funds, where special funds are contributed by the IMF and World Bank to mitigate the impact of the country's escalating debt (Afoom 2011). Nonetheless, the country's economic policies have not been immune to the influence of external donors and institutions, such as the World Bank and IMF. Unfortunately, this influence sometimes comes at the expense of the country's domestic priorities and sovereignty, largely due to the conditionalities associated with these loans. Experts argue that the Western-prescribed policies that have been devoid of local context have contributed to high inflation, increased interest rates, debt burden and a slowdown in poverty reduction (World Bank 2023b, 2023c). Some scholars argue that IMF's austerity measures have made it harder for governments to finance their social protection programmes and health sector needs particularly for maternal and child health, immunisation, and mental health (Thomson

et al. 2017; Tamale 2021). Undoubtedly, the ongoing debt repayments in the country contribute to stifling government spending in poorer areas, including northern Ghana, which has been underprivileged for many years. Existing policies have failed to address the structural causes of poverty and developmental challenges in northern Ghana which are linked to the historical divide between Ghana's North and South. These constitute the sources of fragility in research sites.

Amidst the service provision challenges identified in this research, external partners play a crucial role in mitigating certain barriers by providing funding, staff training, equipment, and other resources. This positive impact on the CHPS complements the Government's efforts. Furthermore, it aligns with the theoretical framework, which recognizes good stewardship as an enabler of health systems. Good stewardship specifically fosters collaboration and coordination among different actors within and outside the health system, critical for building health system resilience. Again, the finding is congruent with the literature that acknowledges the contribution of external partners to primary healthcare development in LMICs (Thomson et al. 2017; Druetz 2018). That notwithstanding, dependence on external partners can hinder health systems resilience. First, the activities of external partners can further fragment the existing system if they are not appropriately coordinated and aligned with national priorities. For example, Barr et al. (2019) found during the Ebola outbreak in Sierra Leone that external partners played a dominant role in setting the priorities, funding, and implementation of health system strengthening initiatives, which did not always align with the national health needs and capacities (Barr et al. 2019). The authors conclude that dependence on external actors undermines the ownership, accountability, and sustainability of health system strengthening efforts, and can weaken the health system's resilience to cope with future shocks (Barr et al. 2019). Although this research did not investigate factors contributing to the fragmentation of Ghana's health system and how external partners contribute to it, study informants from Jhpiego and the Ghana Health Service indicated that as of 2018, the Ghana Health Services had started to consolidate the activities of all private partners and external partners in CHPS. This consolidation aims to minimize fragmentation, misinterpretation of concepts, and incorrect implementation.

9.4 Reflection on the Concept of Fragility

The concept of fragility explored in this research enabled a holistic understanding of CHPS implementation challenges in study areas. As discussed in the literature review section of this thesis, existing definitions of fragility largely point to the failure or the lack of capacity and willingness of a state to honour its basic functions. Overall, this research concludes that inequitable distribution of resources and high poverty levels were the main sources of fragility in study sites. Other drivers of fragility include chronic stressors, inadequate financing, poor governance, as well as the poor capacity of the health system, as described by Diaconu et al., (2020).

First, chronic stressors are a result of years of neglect and limited investment in the health system, which has contributed to an under-resourced and underperforming CHPS programme. Years of continues debt repayment and poor governance such as corrupt practices, in the form of bribes and kickbacks for contracts and in building health facilities for example, continue to reduce government spending for the health sector, especially for this part of Ghana, as argued by Akeliwira (2022). This conclusion further resonates with findings by Witter et al. (2019) and the WHO (2010) that fragility resulting from leadership and governance challenges, particularly at the sub-state level, affects health systems effectiveness.

Secondly, fragility owing to the breakdown of trust between community members and the health system is embedded in service provision and access challenges, as well as users' perceived sense of neglect by the Government. In the context of the research findings, the breakdown of trust among community members owing to perceived neglect by the Government can erode social cohesion within the community, result in divisions and conflict, as well as weaken the collective identity of the community. The lack of trust can further hinder cooperation, collaboration, and collective action for development as noted by the OECD (2011) and Langer et al., (2017).

Thirdly, staff shortages and inadequate logistics compromise health service quality and contribute to fragility in research communities. As noted throughout this research, the CHPS programme lacks a comprehensive long-term investment plan – a financial

mechanism – to support its long-term growth. The absence of dedicated funding makes CHPS operationalisation dependent on external support, which aligns with findings by Scott et al. (2018a) and Pascal Saint-Firmin et al. (2021).

While many attribute fragility to the failure or the lack of capacity and willingness of a state (or even a decentralised one) to honour its basic functions, this research identifies that the failure of citizens to demand accountability (and basic services such as education and healthcare) from authorities is a symptom of fragility and should be embedded in its definition.

Consistent with the definition of fragility by the Health and Fragile States Network (2009), the research notes that the CHPS policy is well integrated into Ghana's health system and has strong partnerships with key stakeholders including external partners and academic institutions. For example, the programme currently serves as the first point of contact for community members. Health workers are formally trained and remunerated by the government of Ghana. To strengthen service delivery in communities, the government collaborates with health research institutions and external partners, such as the Korea International Cooperation Agency (KOICA), Johns Hopkins Program for International Education in Gynaecology and Obstetrics (JHPIEGO) and the U.S. Agency for International Development (USAID), to innovate around best practices that might improve the community health system's performance. Although these partnerships are essential for the programme's effectiveness, they can also create fragility as some external organisations set up separate structures, focusing on specific areas (such as how CHPS is implemented, the type of compound to construct for a CHPS zone) and sometimes ignoring national policies (Spicer et al., 2020). Thus, although all external bodies have permission from Government to implement their activities, these activities are not always aligned with the existing agenda. During the fieldwork for this study, CHPS stakeholders were conscious about this fragmentation and had started to initiate measures to minimise its impact. For example, at the time of the data collection, the CHPS+ project was mandated to operate within the Policy Planning Monitoring and Evaluation Division of the Ghana Health Service. Therefore, External can continue to support health

systems' resilience by aligning their programmes with the government's policies for the healthcare, effective communication, and regular monitoring of all stakeholders' activities as highlighted by Agyepong et al. (2021).

9.5 Reflection on the Conceptual Framework

The conceptual framework underpinning this study concerns three main themes: 1) government stewardship, 2) health workforce capacity, and 3) community cohesion. The research hypothesised that good government stewardship (towards community development and ensuring that populations have adequate access to basic social amenities and primary services delivery) promotes CHPS effectiveness and strengthens cohesion. Fundamentally, the willingness and capacity of both the local and central Government as both contribute to development even in Ghana's decentralised system to provide basic services, including resourcing CHPS, advance service quality and impact trust.

To begin with, the framework enabled an understanding of the role of the CHPS workforce in the delivery of basic services at the community level. The perceived level of knowledge and person-centred care provided by CHWs in study districts highlight the relevance of soft skills in service provision and access. That notwithstanding staff shortages, inadequate logistics and training, and poor incentive packages for rural workers reduced staff commitment and hindered the effectiveness of CHPS. This framework is consistent with existing frameworks by Scott et al. (2018b); Smith et al. (2016), and Sunguya et al. (2017), who argue that equipping rural service centres incentivises health workers and increases productivity. In the Northern region, CHPS could be made more effective by enhancing staff capacity in terms of improved leadership, training (particularly on effective community engagement), increasing staff numbers and ensuring frontline staff are adequately equipped with logistics, equipment, and infrastructure. As CHPS zones cannot reduce maternal and neonatal mortalities in isolation from other levels of Ghana's primary healthcare system, existing structures must operate optimally by improving service quality and fostering a robust referral system to promote the continuum of care from communities to district and regional levels. Referral systems involving transportation and effective

communication systems, for example, should be strengthened to make the programme more viable (Kyei-Nimakoh et al., 2016). In study sites, rural emergency transport systems are key for improving referrals and fostering the continuum of care, which should be matched with community financing mechanisms to replace damaged equipment and manage operational costs as demonstrated by Alirigia et al., (2021).

The concept of **stewardship** explored in this research enabled a broader understanding of the Ghanaian government's commitment to providing the basic needs of community members. In line with the components of stewardship presented by Travis et al. (2002) and Chan et al. (2019), the CHPS programme is widely recognised by stakeholders as *a good policy*. *Intersectoral collaboration* among stakeholders such as external partners, NGOs, pharmaceutical companies, and community members (especially in places where they are effectively engaged) is a key attribute of good stewardship. This collaboration is, however, inadequate. For example, there is currently no robust collaboration between the programme and the private sector on key areas including emergency transportation. Again, the programme's collaboration with the NHIA does not adequately support the delivery of quality healthcare as recent lapses have contributed to logistics and training challenges (systems design lapses). The CHPS policy also lacks a *comprehensive vision for the future* in terms of its financial sustainability and resonates with findings by Nyonator et al., (2005), Stone et al., (2014) and Phillips et al. (2021). This is evident in the lack of dedicated funds, erratic government subvention (funding) and increasing dependence on external support for the programme's operationalisation. Government commitment to overall development in study communities lags behind other regions. Furthermore, recent cuts to primary healthcare financing coupled with National Health Insurance Scheme (NHIS) difficulties impact service provision and access. Akortsu & Abor (2011) and Awoonor-Williams et al. (2016) made similar conclusions, noting that delayed reimbursement was a disincentive for service providers to provide adequate quality care and reduced funding for PHC, particularly for preventive and promotive activities. In accordance with Chan et al., (2019), the CHPS policy lags in its current *rules and compliance enforcement*. Specific to the NHIS, there is currently no legislation to protect subscribers from the unexpected cost of service access amidst challenges.

Finally, the results of this research indicated that service data does not promote *intelligence and knowledge sharing*, which is necessary for good stewardship and a holistic understanding of the community health system. According to Travis et al. (2002), presenting service data in its comprehensive form, and ensuring that leaders have adequate access to quality data and understand their roles contribute to this intelligence. In contrast, the poor understanding of the CHPS implementation requirements and key roles among some sub-state actors, including political representatives, contribute to implementation challenges.

Underdevelopment and inadequate access to basic healthcare services cause community members to mistrust the government and is consistent with findings by Jenson, (2010) and Berkman & Kawachi, (2000). Promoting good government stewardship requires improving leadership, quality health information and continuous advocacy. These are consistent with existing systems strengthening frameworks.

9.6 Research Contribution to Literature

This study contributes to the existing literature on stewardship pitfalls (common challenges). It shows that poor accountability arises when citizens are unaware of or afraid to demand accountability.

The concept of **social cohesion** used in this study aimed to understand community members' access to basic services including healthcare, support for each other and trust in the health system and Government. Study communities had access to some basic amenities and health care, but factors including poor-quality services, inadequate referral transportation and the failure of the NHIS to offer financial protection to users impacted trust in the Government and health system, which are consistent with conclusions by Akazili et al., (2014); Kwarteng et al., (2019) and Okoroh et al., (2018). The perceived health and social inequality not only impact trust but also limits community members' contribution to CHPS. This is consistent with existing literature that weak social cohesion (between citizens and the state) limits growth (Langer et al., 2017; OECD, 2011).

The WHO health systems framework does not include community cohesion as its building blocks. Although the framework developed by Kruk et al. (2010) places cohesion as an output rather than an input, the empirically derived framework of this research argues that social cohesion should be both an input and output. Social cohesion (which is the norm among a community) can serve as an input for improving the health and well-being of a community that trusts, cooperates, and supports each other and minimizes inequalities and conflict (Catholic Relief Services 2020; Moustakas 2023). Social cohesion can also be an output - resulting from economic development, equality and justice, and quality healthcare and education, which can foster people's sense of belonging, effective participation, as well as social stability (Catholic Relief Services 2020; Moustakas 2023). In the context of research findings, cohesion between community members should be harnessed (community resources and demanding government accountability) to support CHPS or systems development. For example, in Bognayili, community members mobilised resources to construct a CHPS compound and embark on campaigns to demand government accountability over deplorable roads. Such cohesion is strengthened through proactive community leaders and youth, as well as community sensitisation through workshops and media campaigns, targeted at improving the communication on the needs of community members and cooperation on actions. Effective and sustained community and stakeholder engagement will foster social mobilisation, grassroots political engagement, and volunteerism for systems strengthening as argued by Awoonor-Williams et al. (2013a) and Bawah et al. (2019). In the case of CHPS, effective engagement with stakeholders, where local authorities, political leaders, community members, and other key stakeholders are involved in planning, implementing, and evaluating the community health services, will restore the programme's original agenda where community members are empowered to actively participate, plan and sustainably resource their community health systems. This kind of empowerment is also critical for promoting health systems' resilience and laying down the foundation for resilience as demonstrated by Kadetz (2018).

9.7 Empirically Derived Logic Model

Table 9.1: Logic model derived from the findings

Input	Output	Outcome	Impact
<ul style="list-style-type: none"> • Social cohesion • Community Advocacy • Timely reimbursement of NHIS • CHPS training for health workers, managers, and political leaders • Quality health data • Provision of infrastructure, equipment, supplies and drugs 	<ul style="list-style-type: none"> • Improved understanding of CHPS and roles at the sub-state actors • Increased GoG funding for CHPS • Timely NHA reimbursement • Improved staff motivation and numbers • Improved planning and resource allocation • Adequate logistics, equipment supplies and training • Proactive community and CSO 	<ul style="list-style-type: none"> • Quality service provision and access • Increased cohesion • CHPS embedded in the community. • Increased community contribution to sustainability • Increased trust in the health system and Government 	<ul style="list-style-type: none"> • Improved CHPS effectiveness • Improved RMNCH

Source: Author's construct

Key components of the above model (Table 9.1), gleaned from this research, resonate with those described in the CHPS implementation guidelines and existing HSS frameworks. The logic model generated from this research argues that certain pre-conditions are required to build a resilient community health system. This includes

adequate training (on CHPS concept and implementation), generating quality health data as well as engaging stakeholders and community members in a sustained manner. Apart from frontline staff, it is essential that managers and political leaders are also trained on the CHPS concept. This training is a crucial part of efforts to foster a shared understanding of implementation requirements and roles, particularly at the sub-state level. Such an initiative will enhance service provision and access, thereby bolstering the health and wellbeing of populations.

As shown in the logic model above, adequate, and equitable distribution of HRH that is fit-for-purpose and fit-for-service is an essential input for CHPS effectiveness. This means that health workers must have the required skills and knowledge to be more responsible for the health needs of populations (WHO, 2019). Deploying appropriate staff (CHOs, CHVs and other key staff such as community midwives as outlined in the current guideline) in their right numbers will enhance the delivery of quality services. This research challenges the findings of Phillips et al., (2018), who suggested that assigning CHOs from outside CHPS zones can enhance service efficiency. This research proposes that deploying CHOs to their native communities can address the HRH issues in study districts, which are related to low population density (large distances), poor road networks and insufficient staff accommodation.

Adequate infrastructure, equipment, supplies, and drugs (also outlined in the CHPS milestones) in zones will equip staff for the delivery of quality health services. This is however dependent on sufficient and consistent funding from the government (both at the central and local levels), NHIS disbursements and support from partners. Although these funding sources already exist, the study emphasises the need for sufficiency and consistency of disbursements. It is important to note that no fixed amount is suitable for all zones, as communities vary. Therefore, a basic fund should be readily available to procure key logistics and conduct activities such as home visits.

The above inputs, if implemented, will improve access to affordable quality healthcare, improve RMNCH indicators and increase trust in the health system and Government. Thus, adequate investments in training and procurement of key logistics, for example,

will strengthen the delivery of essential activities such as home visits and basic healthcare. Moreover, sustained community engagements and advocacy will increase community cohesion, promote CHPS embeddedness in communities and garner more resources at the local level for the programme's effectiveness. Ultimately, these will reduce fragility and promote resilience, critical for achieving the UHC agenda and improve RMNCH indicators.

Key components of the derived logic model are consistent with existing HSS frameworks by Kruk et al. (2010), Newbrander (2007) and Witter et al. (2019), who stress improving service quality, staff capacity, health information, access to essential medicines, and financing through public and private sector collaboration. Congruent with Witter et al. and the Health and Fragile States Network (2009), this study emphasises that effective community involvement, which includes mobilising local capacity, contributes to a health system's resilience, particularly in fragile settings. Involving community members in the design and implementation of the CHPS programme will fulfil the requirements of the CHPS policy, but also strengthen health systems to be more responsive to the needs of community members in the fragile context of the study sites. Involving community member in CHPS will help build trust and collaboration between the health system and the local population, which is crucial for effective emergency response (Haldane et al., 2019). Engaging community members in this manner will ensure that local knowledge and resources are harnessed to mitigate some of the identified challenges including the procurement of logistics and equipment (Haldane et al., 2019). Indeed, in the wake of pandemics, effective community engagement will promote effective health communication, by ensuring that outbreaks and emergency information are disseminated through trusted channels and that misconceptions are addressed promptly to minimise catastrophic outbreaks (Barker et al., 2020). Finally, holding regular meetings and consultations with community members about the CHPS programme will strengthen cohesion, and foster collective action among community members (Barker et al., 2020).

It is worth indicating that contrary to the health systems in fragility components described in Newbrander (2007), the insecurity ensuing from numerous conflicts in

the NR is not a major threat to CHPS effectiveness. This supports emerging literature that fragility can occur outside situations of conflict to include factors that may operate at the sub-state level (Diaconu et al., 2020). Thus, the presence of conflict or natural disasters does not always denote fragility, rather, sub-state level stressors such as poverty and years of neglect as demonstrated in this study can be key drivers.

In a nutshell, the empirically derived logic model and framework (See Figure 9.1) builds on the existing systems resilience frameworks by the WHO (2009b), Kruk et al. (2010) and Newbrander (2007, p. 4). The research, however, recognizes the importance of effective community engagement as an input which ensures that communities adapt and respond to shocks and stressors. Moreover, the framework argues that governments' commitment to provide basic services is a determinant of health systems' resilience.

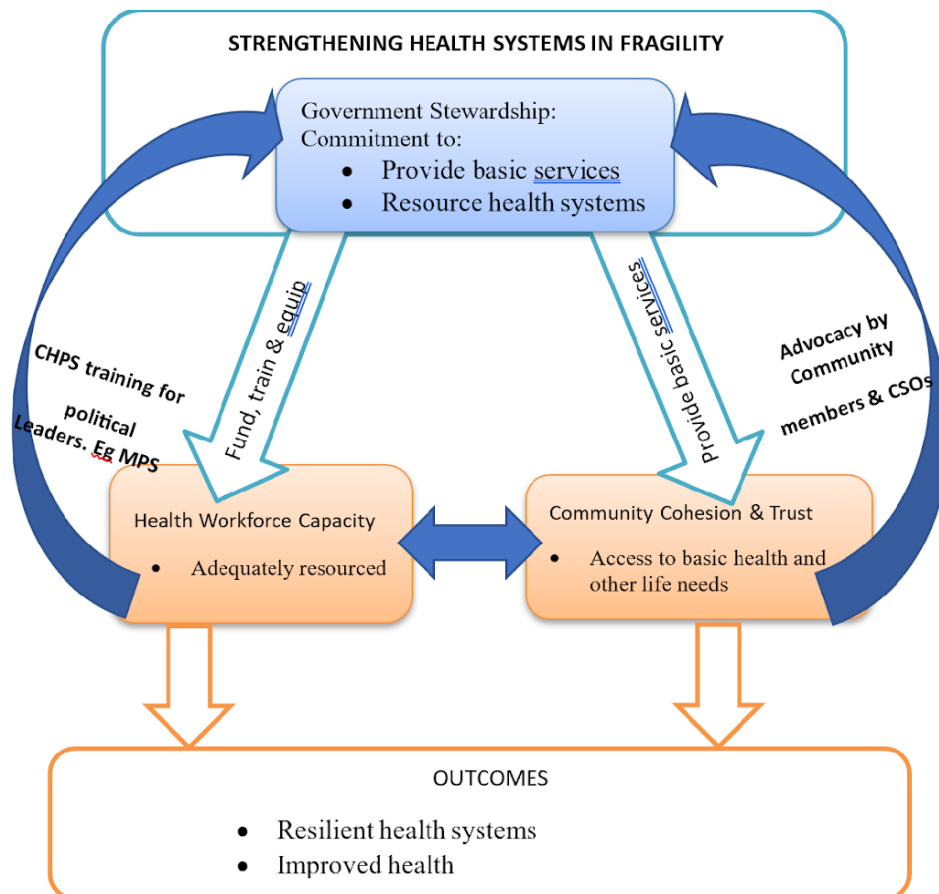


Figure 9.1: Empirically Derived Conceptual Framework

Source: Fieldwork

9.8 Implications of Research Findings

9.8.1 Health Systems Strengthening Through the Lens of Fragility

This research provides an alternative lens for understanding the health system challenges, particularly in stable countries. Discussions around systems challenges without considering the sources of fragility can have implications for achieving positive health outcomes and the SDGs. This research establishes that the Northern region is indeed poor, partly because of colonialism and decades of deprivation. Existing policies have failed to address the structural causes of poverty and developmental challenges in this area, largely linked to the historical divide between

the North and South, where development was more concentrated in the South. Indeed, the fragility of the study areas suggests that CHPS alone is not sufficient to improve RMNCH indicators unless it is augmented with other interventions or strategies to address the underlying determinants of maternal and child health, especially poverty. Greater attention should be focused on meeting the needs and preferences of different communities and groups within the Northern region, especially those who are most vulnerable or marginalized. In sum, understanding fragility can help advance the agenda for health systems strengthening.

The fragility of study areas and the spiralling economic crises of the country are partly caused by the continuous repayment of IMF and World Bank loans over the years. This argument challenges the assumption that involving international financial institutions in developmental agendas always leads to economic growth and stability. Therefore, there is the need for a more inclusive approach to development and cooperation in Ghana and other developing countries, with greater recognition and respect for domestic priorities. An inclusive approach to development and cooperation will minimise the impact of the country's continues external debt financing, allowing for more resource allocation for health and development especially in deprived areas such as the Northern region. For policy, the findings suggest that the Ghanaian Government should increase political commitment and support for CHPS, especially in terms of funding, policy implementation, and accountability.

9.8.2 Understanding Stewardship in the Light of Decentralisation, Neoliberal Policies and Corruption

The findings of this research identify the need for the Ghanaian Government to dedicate funding specifically for the CHPS programme as would be expected even with the government's decentralisation. This would ensure consistency in the implementation of activities and empower the local level to support the programme. For example, as the local level depends on government subvention (funding of up to 60%) to finance most of its activities at the district level, a dedicated fund for the CHPS programme would support the provision of appropriate infrastructure, equipment, supplies, transportation, and communication. The findings also underscore the

Government's responsibility at the national level to recruit, train, motivate, and incentivize health workers. This would enable them to provide quality and accessible health services to their communities, especially in line with the CHPS concepts and milestones. These notwithstanding, the impact of decentralisation, neoliberalism, and the perpetual debt repayment of IMF and World Bank loans further erodes good stewardship in study sites and affects how we understand stewardship and health system strengthening.

(Bahl and Bird 2018). Inadequate and unpredictable funding from the District Assembly Common Fund (DACF) make it challenging for district assemblies to adequately execute their responsibilities, such as supporting the functionality of CHPS zones. Moreover, the Government's ongoing debt servicing of IMF and World Bank loans, which began with the Structural Adjustment Programme (SAP), limits its spending on health and other development areas. These practices affect good stewardship and social cohesion, creating inequality and neglect. As this research shows, community members feel ignored by authorities because of poor basic services, including healthcare. Indeed, the allocation of resources along political party lines and corrupt practices such as embezzlement, bribery, and kickbacks pose detrimental effects on resources available for the health and other sectors (Akeliwira 2022).

Second, external partner support undoubtedly plays a significant role in effective CHPS implementation and positive health outcomes. However, this can pose challenges to Universal Health Coverage (UHC) and health systems' resilience by further causing fragmentation and dependency. Overreliance on external partners for implementing health programs, such as CHPS, can undermine ownership, accountability, sustainability, and resilience of the health systems (Bodkin and Hakimi 2020). As noted already, external partners may have different priorities and agendas than the national health authorities, which can create gaps or overlaps in service delivery. Partners may also impose certain requirements or restrictions on how their funds or resources are used, limiting the flexibility and autonomy of the health systems across countries such as the Global Fund to Fight AIDS, Tuberculosis and Malaria where funds were initially restricted to mitigating these diseases only to the neglect of

health systems challenges including inadequate staff (Hanefeld 2014). Their withdrawal of support without notice or consultation can disrupt the continuity and stability of the health system. This was a major concern for research informants during the phase four studies, as they seemed disappointed that the CHPS+ programme ended abruptly.

9.8.3 UHC; the Role of CHPS and NHIS

This research has implications for Ghana's progress in its Universal Health Coverage (UHC) agenda. The Sustainable Development Goals (SDGs), UHC, and Health for All agenda are far-fetched if the sources of fragility in study areas are not addressed. Indeed, Ghana's strategy for UHC includes the CHPS programme, the National Health Insurance Scheme (NHIS), and collaboration with external partners. As demonstrated throughout this research, however, these strategies face various challenges that limit their effectiveness and impact on UHC.

The NHIS aims to provide financial protection and access to quality healthcare services for all residents in Ghana. As demonstrated in this research, the NHIS's ineffectiveness poses a major challenge to achieving Universal Health Coverage (UHC) in Ghana. Specifically, delayed reimbursements impact health service delivery and access. It also fails to protect users from the financial burden of accessing care. These challenges have implications for UHC in Ghana as they compromise the quality, accessibility, affordability, and equity of healthcare services. Consequently, the trust and confidence of community members in the health system plummet, further deepening inequality that might heighten fragility in some settings. Community members may also be reluctant to contribute towards the health system's development. For example, during the Group Model Building sessions, where informants highlighted poor service conditions, such as 'incomplete health services', resulting in a lack of trust in the government and the health system. This, in turn, led to poor community ownership of the CHPS programme, and subsequently reduced support for its effectiveness.

The NHIS deficiencies, coupled with the challenges of CHPS implementation highlighted throughout this research, can pose further damaging effects on the UHC agenda. Moreover, Ghana, like many other Low and Middle-Income Countries (LMICs), faces health worker migration and continues to lose most of its highly trained health workforce to high-income countries. The exodus of specialist health workers, including midwives, registered nurses, and doctors to developed countries requires that more resources are dedicated to building community health systems to help minimize the need for advanced care where specialists are inadequate.

Finally, the significant gaps in data management, quality, and availability in study districts can further compromise CHPS effectiveness in terms of adequate planning and resource allocation for improved health service delivery and access.

9.9 Conclusion

The research shows that the Ghanaian Government (both at the national and local levels) is the main provider of basic amenities such as education and health, which includes CHPS compounds. The study further confirms an expanded coverage and reach of the CHPS programme across research districts, however, the quality of services delivered is of sub-standard. The qualitative data show that CHPS services are compromised by inadequate essential logistics, infrastructure and staff, which creates a sense of mistrust among community members towards the health system and the government. While the quantitative research findings are inconclusive, existing literature shows that CHPS can positively impact RMNCH indicators if implemented effectively and comprehensively at scale.

The concept of fragility, used in this research, has provided an alternative for understanding the health system challenges by using the fragility lens. This research has shown that the main sources of fragility affecting the effectiveness of CHPS in the NR are chronic stressors such as poverty, breakdown of trust, and staff, logistic and infrastructural shortages. The research adds that, fragility is not only a result of a state's inability or unwillingness to deliver basic services, but also a consequence of the citizens' lack of agency or capacity to demand them.

This research has implications for achieving Universal Health Coverage in Ghana. Both the NHIS and CHPS, which are the main strategies for achieving UHC in Ghana, have failed to provide adequate financial protection and access to quality healthcare services in the research sites. These failures undermine the UHC agenda and further expose the health system and research communities to fragility.

CHAPTER TEN: CONCLUSION AND RECOMMENDATIONS

10.1 Introduction

This final Chapter of the thesis reflects on the conclusions of the research and how they fit into the larger global health research context. It also details the strengths and weaknesses of the research as well as recommendations for policy, practice, and further research.

10.2 Summary of Key Findings in Relation to the Study Questions

Existing health systems frameworks have not fully incorporated the concept of fragility to understand the challenges of health systems, particularly in stable countries, affecting their resilience. This research investigated the challenges of implementing and scaling up the Community-based Health Planning and Services (CHPS) programme in the Northern region of Ghana.

Despite the exponential growth of CHPS in Ghana and its positive impact on primary healthcare delivery, there remain critical implementation gaps including inadequate infrastructure, low staff motivation, and inadequate funding. As different regions and leaders have different interpretations of key terms and concepts of the CHPS programme, implementation has differed across regions. The programme's scale-up and implementation challenges are more acute in the Northern Region (NR) of Ghana where poverty levels are high with limited access to education, health services, and key infrastructure. Despite the potential of CHPS to deliver key services to the region's most distant and deprived areas, barely half of CHPS zones are functional; meaning CHPS zones that they have achieved all the CHPS milestones, and that the CHO lives in the community (in a CHPS compound) or conducts outreach activities to offer a basic package of services to the people in the area (GHS 2016a).

The conclusions of this research support existing studies that the CHPS programme is widely recognised among stakeholder informants as a good programme because it extends health services to deprived areas and can help the country achieve its universal health coverage agenda. Recent infrastructural expansion, including the construction of new road networks and CHPS zones, has increased access to basic health care

services. This notwithstanding, the programme lacks a comprehensive investment plan – a financial mechanism – to support its long-term growth. Staff shortages and inadequate logistics and medicines further compromise health service quality. This health system fragility contributes to the breakdown of trust between community members and the health system and government and can erode social cohesion within the communities.

Fragility at the sub-state level is also a result of high poverty levels and years of neglect in research sites (as defined by Diaconu et al. (2020)). This research argues that the years of neglect in research areas are partly because of unfavourable historical, political and economic factors (such as colonialism and Structural Adjustments Programmes), which have contributed to extreme inequalities across sectors including health. Moreover, Ghana's decentralised system, where sub-national units rely on the central government for most of their funds for development, does not promote sufficient autonomy and flexibility for sub-national units to make decisions and policies. Addressing the drivers of fragility in study sites is an important first step to promoting the community health system's resilience.

10.3 Recommendations for Policy and Practice

To reduce the impact of fragility – driven by poor governance, inadequate funding and chronic stressors resulting from under-resourced and underperforming health systems following years of neglect, this research proposes the need for strengthening good stewardship through the following ways. First, strengthening good stewardship for CHPS effectiveness requires fostering collaboration and coordination among different actors within and outside the health system. This should be done in a manner that gives the sub-national units more autonomy over decision-making and resource allocation.

At the local level, authorities should take advantage of the Local Government Act 1993 to mobilise more local resources to support service delivery. The Act allows MMDAs to raise revenue at the local level for projects (Local Government Service Ghana, 1993). This is already done through fines, licenses, and permits, which are some means to raise resources at the local level. To do this more effectively in a predominantly

informal region, businesses, for example, should be registered and tracked to increase the tax base to raise more revenue for healthcare financing and increase universal health coverage. Here, quality data, generated from a robust routine data collection system, will inform resource allocation and other health decisions.

External support for CHPS is commendable, but this must be done in a collaborative and coordinated manner. Key actors including government agencies, civil society organizations, private sector partners, and donors must agree on a shared set of goals, strategies, resources, and responsibilities for the programme's implementation to minimise fragmentation and promote the community health system's resilience.

Secondly, promoting stakeholder participation in the planning, implementation and evaluation of the CHPS programme at all levels can garner support and resources for the programme's effectiveness. Effective and sustained community and stakeholder engagement is a useful way of mobilising community support and resources for improved health service delivery. This, however, requires that health workers organise effective and continuous engagement with community members on the community health system and how they might contribute to its sustenance as embedded in the CHPS policy and implementation milestones.

To engage the community and stakeholders more effectively, however, the community health volunteer concept of CHPS, where community members are identified and trained as non-salaried volunteers to support staff (GHS 2016a), needs to be improved. Volunteers are experiencing fatigue and dissatisfaction due to the lack of formal remuneration, equipment, and motivation, but are a valuable and low-cost resource that can enhance community involvement and resource mobilisation. Best practices from the Upper East region (UER) can inform the Northern region on mobilising local resources for strengthening the CHPS programme. In the UER, Regional and District Health Directors harnessed community support to rapidly scale up CHPS. Healthcare managers were trained to implement the CHPS guidelines in a consistent manner including by engaging community leaders and elders as well as local politicians to jointly plan health needs and raise resources for CHPS operation. Healthcare leaders in the UER showed great commitment and passion towards the scale-up of CHPS. This

was seen in how often they engaged local politicians and NGOs to support the funding of CHPS. District directors of health (who are mostly responsible for the CHPS scale-up) marshalled grassroots political support to finance the CHPS scale-up. Through constant lobbying, members of parliaments and other philanthropists provided additional support ranging from the construction of CHPS facilities to providing motorbikes for CHPS operations. Furthermore, communities donated interim structures for CHPS operation. These structures were then considered for replacement by local politicians (district assemblymen). These incremental steps build some sense of ownership among community members who feel responsible for keeping the health facility and health workers safe (Jones et al. 2017; Agalga et al. 2022).

A positive deviance situation (where community members produced good outcomes despite facing similar challenges as other communities) is worth highlighting from this research to support community mobilisation and resource generation is the case of the Bognayili community. Of all the communities visited, the community leveraged the power of cohesion among them to build and equip their community health facility to support healthcare delivery and access. In the Upper East region of Ghana where the CHPS programme has thrived compared to any other regions in the country, community engagement and ownership is a driving force for scale-up (Awoonor-Williams, Sory, et al. 2013).

Thirdly, the fragility of research areas can be reduced through transparent and accountability measures. This research shows that community members in the study sites want more political commitment to provide basic services, but they do not know how to hold the authorities accountable. Community members need to be engaged and empowered by health workers and CSOs to demand accountability from the authorities. For example, CSOs can raise awareness, foster dialogue, and hold public officials accountable to the needs of community members and the CHPS programme (McDonough & Rodríguez, 2020). This will foster the programme's effectiveness and promote development in the region.

As demonstrated throughout this research, the sub-standard health service delivery and access in research communities contribute to a perceived sense of mistrust in the health system and government. Diaconu et al. (2020) and others describe this as a breakdown of trust between community and health systems due to inadequate health services (Ager et al. 2019). To minimise the impact this has on the health and well-being of community members as well as promote social cohesion among community members, this research calls for health workers to adopt a comprehensive and integrated approach to primary health care delivery at the CHPS level, addressing the needs and preferences of their communities. To accomplish this, stakeholders need to establish a sustainable financial model for CHPS implementation, taking into account how decentralisation and the ongoing external debt payment of IMF loans affect development in the study sites and the country as a whole. It will equally involve having adequate and skilled CHOs in CHPS zones to provide basic and responsive care to study communities, especially those who are most vulnerable such as pregnant women and children under five years. Indeed, arguments that CHOs who work outside their hometowns facilitate the uptake of key services like family planning are valid. However, this research argues that posting CHOs to their own communities can minimise staff shortages in study areas where distances are wide. Similarly, the key activity of the CHO, home visits, should be strongly encouraged to provide targeted care and promote the early detection and referral of emergency conditions. Nonetheless, given the transportation challenges identified in this research, equipping CHPS zones alone will not be sufficient unless it is accompanied by a robust and affordable referral system to promote a continuum of care, avert unnecessary delays in seeking care, reduce preventable deaths and boost users' confidence in the health system. More essentially, increasing monitoring and the use of appropriate data capture and management tools should be encouraged especially at the community level to improve DHIMS data capture and use.

At the community level, stakeholders, particularly health workers can improve the cohesion and trust with community members by improving transparency and enhancing communication channels with community members in service provision as was demonstrated during the GMBs where community members' misconceptions

surrounding the National Health Insurance Scheme (NHIS) were dispelled. Furthermore, and as noted already, the CHPS strategy of involving community members in decision-making processes should be deepened to strengthen community cohesion and trust for CHPS effectiveness. This should be a concerted effort between all stakeholders including government officials, healthcare providers, CSOs and community members.

10.4 Recommendations for Further Research

Identified gaps in the DHIMS dataset suggest that the health system, particularly in the study areas, is not adequately supported with complete, well-documented and or reliable data for decision-making and policy formation. Several biases could account for the gaps recorded in the DHIMS 2 data. This includes recall and measurement bias (Khare and Vedel 2019; Goldacre et al. 2020). In the study context, recall bias could stem from community members' inability to appropriately recall and report their health service utilisation, thus leading to underreporting or overreporting. Similarly, people included in the data are sometimes not the true reflection of the population of interest, hence contributing to selection bias and skewed data on service use. Finally, there could be flaws in the DHIMS infrastructure or data collection and reporting tools that contribute to measurement bias and skewed service data. Improving the DHIMS technical infrastructure, such as data collection and reporting tools, is necessary to enhance data validity for decision-making purposes (Kayode et al. 2014; Amoakoh-Coleman et al. 2015). Data quality audits, spot checks, and statistical techniques such as weighting and regression can also help to ensure data accuracy (Amoakoh-Coleman et al. 2015; Khare and Vedel 2019). However, more research is needed on the data quality issues and solutions for DHIMS in the Northern region.

The role of public-private sector collaboration in strengthening health systems in fragile settings as noted by Witter et al. (2019) has not been sufficiently explored in the context of the CHPS programme (Witter et al. 2019). More research is needed to identify and assess existing or potential partnerships at the community level that can enhance health and well-being outcomes.

The COVID-19 pandemic greatly impacted potential systems interventions identified during the GMBs to enhance the quality and utilisation of priority services. Therefore, more research is needed to test the usefulness of these interventions for improving CHPS effectiveness and promoting the system's resilience. Furthermore, the enablers of CHPS effectiveness identified in this study should be tested in different contexts and settings for their practicability. More studies are also needed to examine the impact of CHPS on health outcomes and equity at the population level.

Finally, the Northern region receives a lot of external support from various non-governmental organisations and other development partners. However, the region still faces high poverty levels and severe challenges in service provision and access. More research is needed to examine how external support affects CHPS and how it can inform policy and strengthen the health systems.

10.5 Strengths of the Research

This research investigated the health systems challenges of the CHPS programme through the lens of fragility, which is a novel and relevant approach to understanding the complex and dynamic context of Ghana's community health system. As noted throughout this research, fragility is a concept that captures the vulnerability of a communities or health systems especially in relation to external shocks as well as government effectiveness and legitimacy. By applying the fragility lens to the CHPS programme, this research has identified key factors that affect the CHPS programme's effectiveness - such as financing, community engagement, and chronic stressors from colonial and neoliberal policies - that continue to deepen poverty and reduce health expenditure in study sites. It further provides insights into how these factors interact and influence each other in different settings and over time. By using the fragility lens, this research is able to generate context-specific and evidence-based recommendations for improving the CHPS programme and strengthening primary healthcare delivery in study sites.

Apart from enabling a shared understanding of challenges and enablers of the CHPS programme effectiveness, this study is one of few studies to convene a participatory

study involving key stakeholders, community members included, to understand the systems dynamics of the CHPS programme. The Ghana Essential Health Intervention Programme (GEHIP), for example, used a systems approach in its implementation research (Awoonor-Williams et al. 2013a). The suitability of the GMB methodology was particularly recognized by community members, who felt empowered to contribute to the primary healthcare discourse as they worked alongside other stakeholders to identify challenges and enablers of CHPS implementation and effectiveness and what interventions might promote the update of key services. Additionally, the methodology provided a platform for stakeholders to bridge key communication gaps, such as the authority responsible for NHIS failures. The platform was a turning point for communities to acknowledge and begin to assume their place in their own healthcare agenda.

10.6 Limitations of Research

The study acknowledges several limitations that should be considered when interpreting findings. The research was impacted by various limitations including incomplete and inaccurate data; the display of power dynamics between health workers and community members during group model building (GMB) sessions; the unavailability of participants to provide feedback on actions points from GMBs; and logistics challenges. As noted already, there were also substantive gaps in the quantitative assessment as most data were missing particularly around the period 2012-2015. This rendered the quantitative study inconclusive.

10.6.1 Limitation by Incomplete Service Data

Missing data and unrealistic values in the DHIMS 2 data reviewed made the quantitative findings of this research inconclusive.

10.6.2 Limitation by Power Dynamics

During GMB/participatory sessions, there was a display of power dynamics between informants in terms of freedom of communication, which might have biased responses. For example, health managers sometimes dominated discussions, occasionally intimidating community members and frontline staff during discussions. To minimise

bias and foster inclusive participation, community members were subsequently separated from health worker groups, allowing the two parties to deliberate on topics prior to broader discussions.

10.6.3 Limitation by Length of Study

The duration of GMBs might have affected the quality of responses, particularly towards the last few hours. Although the sessions were organised over two days in each district, each session lasted for about seven hours. The whole day and demanding sessions appeared challenging for some (mostly the elderly) towards the last few hours. To minimise the impact this had on the research, findings from the first day of the sessions were reviewed the next day, allowing participants to validate earlier responses and modify them where necessary.

10.6.4 Limitation by Missed Feedback

Some participants contacted for the GMB feedback study were unavailable, which might have deprived the study of a larger sample and broader perspectives on key findings. For example, the unavailability of DHA staff deprived the study of the DHA's perspectives on progress, including other policies and other high-level decisions at the managerial level that might have limited the achievement of proposed interventions. This notwithstanding, respondents provided feedback on progress with both (HW and CM) groups' interventions irrespective of which group they belonged, providing the opportunity to amend missing information, and validate findings.

10.6.5 Limitation by Measuring Tool

This study acknowledges that using a qualitative method alone does not completely measure staff knowledge levels. Although all respondents, including community members, agreed that CHPS staff were knowledgeable and capable of providing services, gauging this via the deployed qualitative techniques is inadequate.

10.6.6 Limited Generalizability

The small sample size used in this research limits its generalisability. However, key lessons from this study can inform CHPS implementation in the research sites.

10.6.7 Limitation by Online Study

The use of telephone interviews was convenient for the GMB feedback exercise, particularly during the COVID-19 pandemic and amidst lockdown measures. However, the poor quality of some audio recordings resulting from intermittent network connections meant that vital information might have been lost. Emotional and behavioural responses were also lost in the process. Finally, progress on some proposed interventions was partially impacted by the pandemic. For example, a temporary ban on public gatherings following the outbreak limited community resource mobilisation efforts.

10.7 Concluding Remarks

Promoting health systems resilience requires an understanding of not only the health systems challenges, but the sources of fragility that might impact the quality of primary healthcare at the community level. In the context of the Northern region of Ghana, health service delivery and access challenges are compounded by high poverty levels and years of under deprivation, which can be traced back to colonialism, neoliberal policies and a decentralised system that does not provide complete autonomy to sub-national units to be able to generate revenue and make decisions. The Northern region of Ghana has a unique geographical area where distances are extremely wide and road networks are poor. The Community-based Health Planning and Services (CHPS) programme can bridge the health access divide between rural and urban areas. Transportation challenges further call for the establishment of a robust referral system to minimise delays in accessing specialised services at the district and regional levels. Indeed, the activities of external partners must be streamlined with existing policies and programmes to minimise further fragmentation of the health system.

Addressing these challenges is relevant for improving health and making meaningful steps towards Ghana's UHC agenda. However, as the WHO Director-General, Dr Tedros Adhanom Ghebreyesus, stated in his October 19, 2021 speech on *building health systems resilience during COVID-19 and beyond*, building resilient health systems requires a bottom-up approach. A starting point to promote health systems

resilience amidst resource challenges is to promote effective community and stakeholder engagement to garner more support and generate local resources for the programme's effectiveness, improve service delivery and access, and promote social cohesion and trust among community members.

As countries strive to achieve the SDGs' universal health coverage (UHC) and reproductive, maternal, newborn, child and health (RMNCH) targets, multiple factors, including the recent COVID-19 pandemic, have undermined the gains made in these areas, especially in fragile settings. The pandemic has not only disrupted the delivery of primary health services but also reduced the resources available for healthcare financing. Investing in the effective implementation of community health programmes across the world, especially in LMICs, is crucial for recovering from the effects of the pandemic and making lasting gains in primary healthcare delivery.

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APPENDICES

1. Review of CHPS Data; Published Reports.

SOURCE	YEAR	FP (Any method all women)	ANC (% women-mothers)	ANC 4+ (% women)	PNC (% of births)	PENTA-3 (DPT/HepB/Inf) % of children 12-23mts – MICS)	HOME BIRTHS (% births)
GSS, 2012 (MICS 2011)	2011	20.1	90.4	75.1	61.5	91.7	61.5
GSS, 2015 (GDHS 2014)	2014	11.2	92	87.3	57.2	80.7	64.6
GSS, 2018 (GMHS, 2017)	2017	18.5	97.7		58.7		39.8
GSS, 2020 (GMHS 2019)	2019		91.8				

2. CHPS Indicators Reported in District Annual Reports.

Data year	Functional CHPS zone*		ANC4+		FP		Penta -3		PNC		Home visits	
	Gush	Kum	Gush	Kum	Gush	Kum	Gush	Kum	Gush	Kum	Gush	Kum
2012	9		53%		19.9		135.2		77.9			
2013			46.6		9.2		100		43.3			
2014		6	46.4		9.4		100		69.7			
2015	7		44.9	66	12.4	6.2	89.1		75.2	65		
2016	19	18	40.7	89	14.4	9	97.8		78.8	85		
2017	19	14; 24	51.1	91	13.8		133		87.5	90	12%	
2018		24		91		9				90		

3. DHIMS 2 Data on CHPS Indicators

Year	ANC Coverage			Percentage of ANC clients making 4th visit			Family Planning Acceptor rate (2012-2019)			OPD per capita			PNC Coverage			Number of children immunized by age 1 - Penta 3			Number of Home visits done by CHOs			
	NR	Kum	Gus	NR	Kum	Gus	NR	Kum	Gus	NR	Kum	Gus	NR	Kum	Gush	NR	Kum	Gus	NR	Kum	Gus	
2012	88.6	183.6	92.4	61.7	56.4	41.5	10.1	5.7	19.3	0.43	0.64	0.41	32	88		79886	5621	2064	395			
2013	110	194.3	140.7	57.8	66	33.7	13.5	5.5	25.8	0.58	0.73	0.83	56.7	61.7	29.2	81073	6251	2158	516			
2014	127	215.7	174.2	61.7	63.8	44.9	18	7.1	32.9	0.7	0.93	0.98	116.3	206.6	182.7	88650	8725	2301				
2015	124	202.3	205.8	62.4	64.8	33.5	17.4	7.6	22.5	0.64	0.72	0.82	104.9	159.2	142.5	84832	5120	2086				
2016	124	187.6	209.5	70.7	92.3	38.5	19.9	9	22	0.63	0.82	1.1	117.3	166.2	146.3	88619	4708	2549				
2017	120	178	178.6	71.5	85.2	55.3	22.7	9.3	22.5	0.58	0.88	0.82	122.2	175.6	151.1	99130	4339	2521				
2018	119	182.6	204.1	70.8	66.6	53	32	11.9	80.6	0.63	0.84	0.86	120.1	200	207.3	101471	4549	3208				
2019	115	181.3	210.3	73.9	66	57.8	33.4	10.3	105.8	0.62	0.87	0.87	105.4	179.3	197.4	102266	3938	3076				
2020	121	188.6	233.2	76	69.8	69.7	0.36		0.18	0.59	0.69	0.83	110.6	181.2	231.9	106038	4470	3504				
2021	107	91.2	198.7	86.6	85.7	81.9				0.55	0.32	0.85	104.9	75.6	237.5	112944	5085	3647				

4. In-depth Interviewees Background Information

SN		Sex	Age	Highest level of education	Professional training	Current Job Title	Number of years on Current Job	Facility	Date Interviewed
1	NJ004	F	Over 45	Tertiary	Public Health Nursing	Senior Technical Advisor for CHPS Implementation	6-10years	S4H	04/12/2018
2	VH007	M	26-30	Tertiary	Purchasing and Supply	Community health volunteer	1-2years	Voggu CHPS	16/11/2018
3	SK002	M	31-35	Tertiary	General Nursing	General nurse/Ag sub-district head	3-5years	Tibung	16/11/2018
4	CZ004	F	26-30	Tertiary	Community health nursing	CHO	1-2years	Voggu CHPS	16/11/2018
5	SU004	F	31-35	Tertiary	Midwifery	Midwife/ Sub-Municipal Head Gushiegu	1-2years	Sub-district	22/12/2018
6	CAJ003	M	31-36	Tertiary	Community health nursing	CHO (Senior Community Health Nurse)	1-2years	Zantili	18/12/2018
7	VA002	M	31-35	Tertiary	Accounting	Community health volunteer	10years	Cheshugu	17/12/2018
8	VY001	M	36-40	Tertiary	Child growth	Community health volunteer	10years	Bognayili	18/12/2018
9	DAY002	M	Over 45	Tertiary	Health promotion specialist	Municipal Director of Health Services	6-10years	Gushiegu	12/11/2018
10		F	18-25	SSS/SHS	Community health worker	Community health worker	1-2years		18/12/2018
11	DAH001	M	Over 45	Tertiary	Professional Teacher	DCE	1-2years	Kumbungu	13/11/2018

12	SB003	F	26-30	Tertiary	Midwifery	Staff Midwife /Ag In-charge	1-2years	Katani	14/11/2018
13	DM004	M	40-45	Tertiary	Teacher	DCE	1-2years	Gushiegu	16/11/2018
14	RD002	M	Over 45	Tertiary	Master of public health	CHPS coordinator	1-2years	RHD - Northern	17/11/2018
15	CW006	M	36-40	Tertiary	Community health nursing	CHO	3-5years	Galiwei CHPS	14/11/2018
16	SZ005	M	31-35	Tertiary	Nursing	Nurse - Sub-District Head	3-5years	Galiwei CHPS	14/11/2018
17		F	31-35	Tertiary	CHNursing	CHO (Senior CHN)	3-5years	Katani	14/11/2018
18	DJ003	F	Over 45	Tertiary	Public health nurse	DDHS	6-10years	Kumbungu DHA	13/11/2018
							Over		
19	VN006	M	Over 45	Middle	NA	CHV	10years	Zamashegu	19/12/2018
20	NNA001	M	Over 45	Tertiary	Physician	Consultant-Health Systems	1-2years	CHPS+	21/02/2019
21	CM005	F	26-30	Tertiary	Community health nursing	CHO	3-5years	Zamashegu	19/12/2018
						CHO (Senior Community			
22	CBI001	F	26-30	Tertiary	Community health nursing	Health Nurse)	3-5years	Chesugu	13/11/2018
						Physician assistant/sub-district			
23	SD001	F	26-30	Tertiary	Physician assistant	head	6-10 years	Gupanerigu	13/11/2018
							Over		
24	VM003	M	36-40	JHS	None	CHV	10years	Zantili	18/12/2018
25	VI004	M	26-30	SHS	None	CHV	6-10years	Tibung	17/11/2018
26	NJA002	M	Over 45	Tertiary	Medicine	PPMED Director, GHS	3-5years	GHS HQ	
27	NR006	M	Over 45	Tertiary	Master of Public Health	Technical Field Coordinator	1-2years	CHPS+	23/01/2019
28	CS002	M	26-30	Tertiary	Community health nursing	CHO (RCHN)	1-2years	Bognayili	13/11/2018
29	DS005	M	31-35	Tertiary	Health information	CHPS coordinator	1-2years	Kumbungu DHA	06/01/2019
30	DK006	M	36-40	Tertiary	Disease control	CHPS Coordinator	6-10years	Gushiegu	12/11/2018

31	VB005	M	18-25	SHS	None	CHV	1-2years	Katani	14/11/2018
32	NBB003	M	36-40	Tertiary	Public Health Nursing	National CHPS Coordinator	3-5years	Ministry of Health	03/12/2018
33	RAI001	M	Over 45	Tertiary	Administrator	Chief Director	6-10years	NRCC Jphieo - Maternal and Child Survival Program	10/02/2019
34	NW005	M	36-40	Tertiary	NGO	Senior Technical Specialist	3-5 years	Program	07/12/2018

5. List of FGD Participants

Date	ID	Sex	Age	Highest level of education	Professional training	Current Job Title	Number of years on Current Job
Zamashegu	19/12/2018						

Date	ID	Sex	Age	Highest level of education	Professional training	Current Job Title	Number of years on Current Job
	1	M	Over 45	Tertiary	Teacher	Teacher	over 10 years
	2	M	Over 45	None	None	Farmer	over 10 years
	3	M	36-40	None	None	Farmer	over 10 years
	4	M	Over 45	None	None	Chief	6-10 years
	5	M	Over 45	Tertiary	Teaching	Teacher	over 10 years
	6	M	26-30	Tertiary	Teaching	Teacher	1-years
	7	F	26-30	None	None	Farmer	over 10 years
	8	F	18-25	SHS	None	Farmer	1-years
	9	F	18-25	SHS	None	Farmer	1-years
	10	F	26-30	None	None	Farmer	over 10 years
	11	F	26-30	None	None	Farmer	over 10 years
Bognayili	18/12/2018						
	1	F	Over 45	None	None	Trader	3-years
	2	F	Over 45	None	None	TBA	Over 10 years
	3	F	Over 45	None	None	Farmer	Over 10 years

Date	ID	Sex	Age	Highest level of education	Professional training	Current Job Title	Number of years on Current Job
	4	M	31-35	None	None	Farmer	Over 10 years
	5	M	26-30	SHS	None	Driver	6-10 years
	6	M	26-30	None	Driving	Farmer	Over 10 years
	7	F	Over 45	None	None	Agro-processor	Over 10 years
	8	M	36-40	Primary	Capentary	Farmer	Over 10 years
	9	F	26-30	None	Seamstress	Seamstress	3-years
	10	M	36-40	SHS	None	Farmer	Over 10 years
Cheshugu	17/12/2018						
	1	F	Over 45	None	None	Trader	Over 10 years
	2	M	31-35	SHS	None	CHV	6-10 years
	3	F	31-35	SHS	Seamstress	Seamstress CHMC	6-10 years
	4	M	26-30	SHS	None	member	1-years
	5	M	31-35	none	None	farmer	Over 10 years

Date	ID	Sex	Age	Highest level of education	Professional training	Current Job Title	Number of years on Current Job
	6	M	Over 45	None	None	farmer	Over 10 years
	7	M	36-40	None	None	farmer	Over 10 years
	8	F	31-35	None	None	food vendor	Over 10 years
	9	F	Over 45	None	None	farmer	Over 10 years
	10	F	31-35	None	None	Farmer	Over 10 years
Voggu	16/11/2018						
	1	F	36-40	None	None	Farmer	Over 10 years
	2	M	31-35	None	None	Farmer	Over 10 years
	3	M	Over 45	None	None	Farmer	Over 10 years
	4	F	31-35	None	None	Farmer	Over 10 years
	5	M	31-35	None	None	Farmer	Over 10 years
	6	F	31-35	None	None	Farmer	Over 10 years
	7	F	36-40	None	None	Farmer	Over 10 years
	8	M	Over 45	None	None	Farmer	Over 10 years
	9	M	Over 45	None	None	Farmer	Over 10 years

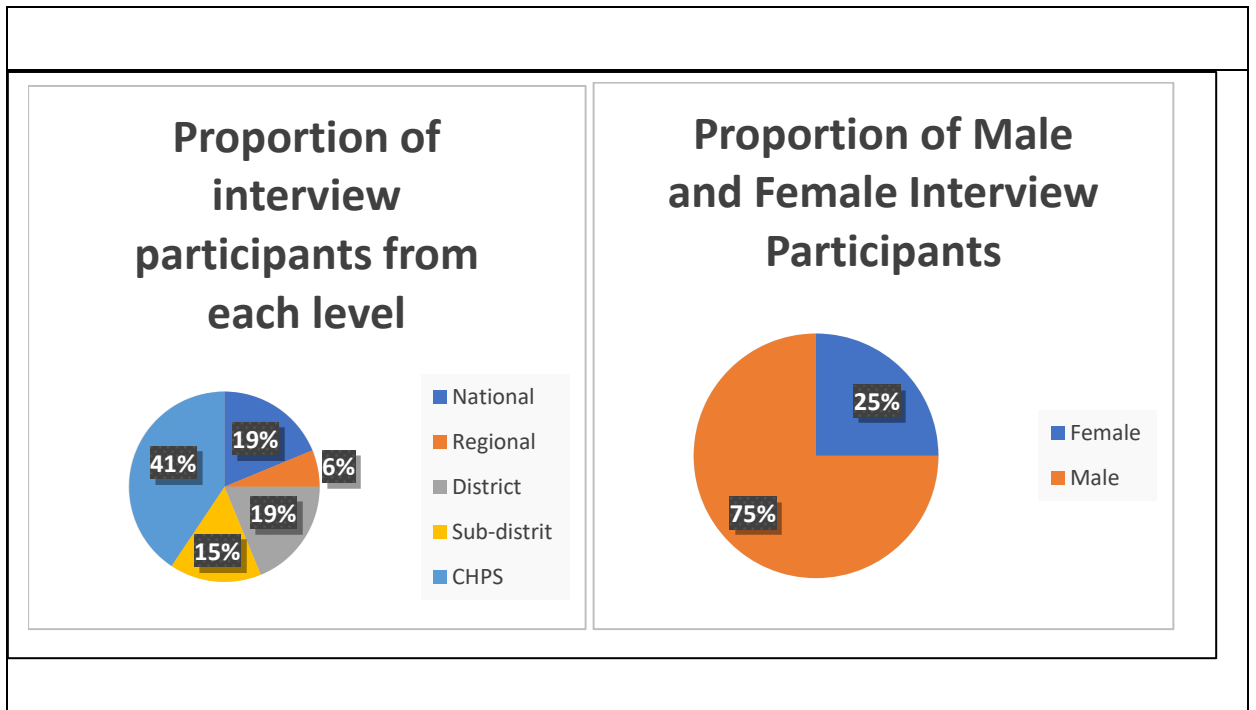
	Date	ID	Sex	Age	Highest level of education	Professional training	Current Job Title	Number of years on Current Job
Tibung	17/11/2018				Adult education	None	Trader	3-5 years
		1	F	31-35	education	None	Trader	3-5 years
		2	F	Over 45	None	None	Trader	3-5 years
		3	F	18-25	None	None	Farmer	Over 10 years
		4	F	18 - 25	Primary	None	Farmer	Over 10 years
		5	F	18-25	None	None	Farmer	Over 10 years
		6	F	26-30	Primary	None	Farmer	3-5 years
		7	M	18-25	None	None	Farmer	Over 10 years
		8	M	31-35	SHS	None	Farmer	Over 10 years
		9	M	Over 45	None	None	Farmer	Over 10 years
		10	M	18-25	None	None	Farmer	6-10 years
		11	M	31-35	SHS	None	Farmer	Over 10 years
Zanteli	18/12/2018							
		1	M	36-40	None	None	Farmer	Over 10 years

Date	ID	Sex	Age	Highest level of education	Professional training	Current Job Title	Number of years on Current Job
	2	F	31-35	None	None	Volunteer	6-10 years
	3	F	26-30	None	None	Trader	Over 10 years
	4	F	31-35	None	None	Farmer	Over 10 years
	5	F	26-30	None	None	Farmers	Over 10 years
	6	F	31-35	None	None	Farmer	6-10years
	7	F	26-30	Primary	None	Trading	6-10years
	8	M	Over 45	None	None	Farming	Over 10 years
	9	M	36-40	None	None	Farmer	Over 10 years
	10	M	36-40	None	None	Farmer	Over 10 years
	11	M	26-30	None	None	Farmer	Over 10 years
Galwei	19/12/2018						
	1	M	36-40	None	None	Farmer	Over 10 years
	2	F	Over 45	None	None	Farmer	Over 10 years
	3	F	26-30	None	None	Farmer	Over 10 years
	4	F	31-35	None	None	Farmer	Over 10 years
	5	F	31- 35	None	None	Farmer	Over 10 years

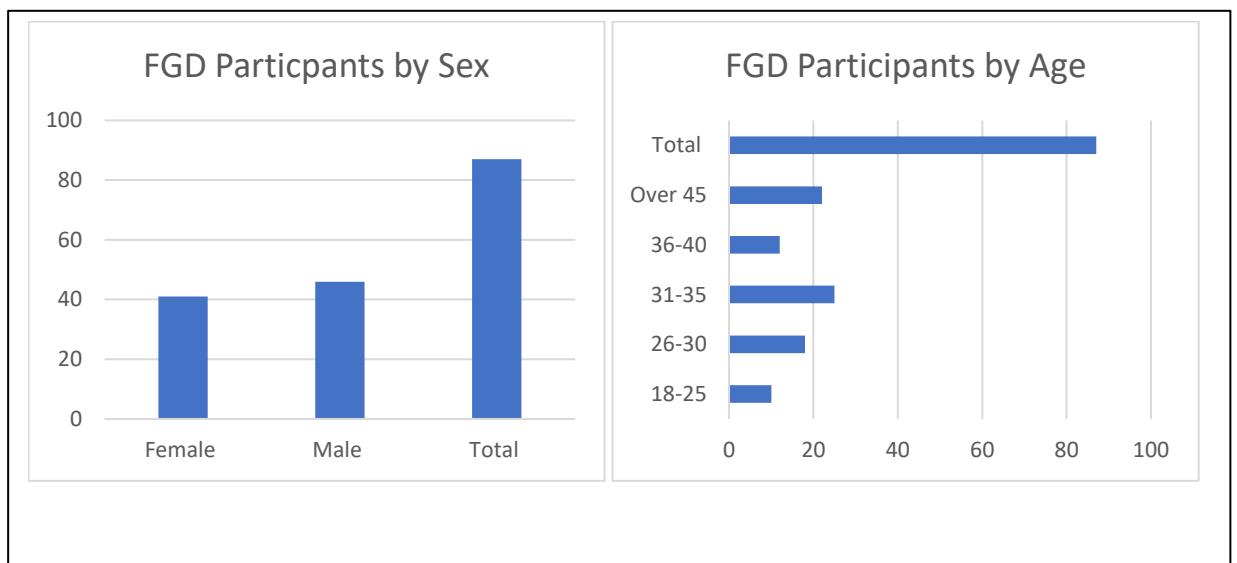
Date	ID	Sex	Age	Highest level of education	Professional training	Current Job Title	Number of years on Current Job
	6	M	18-25	Primary	None	Driver	3-5years
	7	M	18 - 25	None	Mechanic	Mechanic	3-5years
	8	M	18-25	None	None	Car washer	1-2years
	9	F	26-30	None	None	Trader	1-2years
	10	M	Over 45	None	None	Farmer	Over 10 years
	11	M	31-35	JHS	None	Farmer	Over 10 years
	12	M	31-35	None	None	Farmer	Over 10 years
	13	M	26-30	None	None	Farmer	Over 10 years
	14	F	31-35	None	None	Farmer	3-5years
	15	F	31-35	None	None	Trader	3-5years
Katani	18/12/2018						
	1	M	31-35	Tertiary	Teaching	Teacher	1-2years
	2	M	31-35	SHS	None	Volunteer	6-10years
	3	M	26-30	None	None	Volunteer	3-5years
	4	M	36-40	None	None	Farmer	Over 10 years
	5	M	Over 45	None	None	Farmer	Over 10 years

Date	ID	Sex	Age	Highest level of education	Professional training	Current Job Title	Number of years on Current Job
	6	M	Over 45	None	None	Farmer	Over 10 years
	7	F	36-40	None	None	Farmer	Over 10 years
	8	F	Over 45	None	None	Cleaner	Over 10 years
	9	F	26-30	None	None	Seamstress	Over 10 years
	10	M	31-35	Tertiary	Teaching	Teacher	6-10years

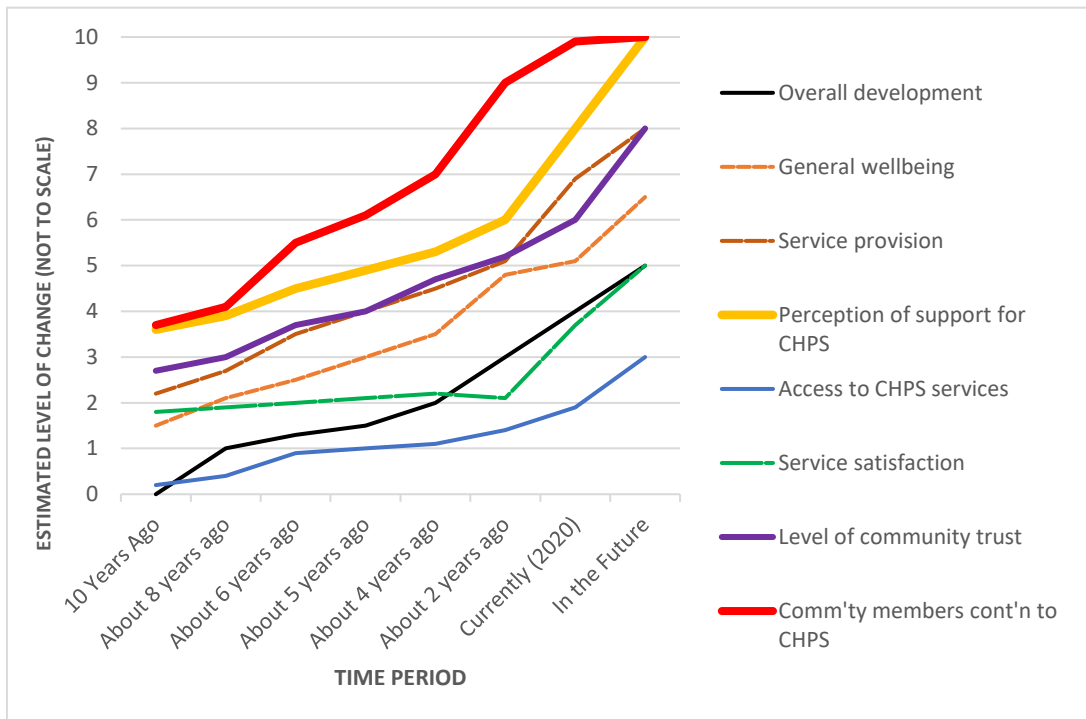
6. Interview participants by sex and level



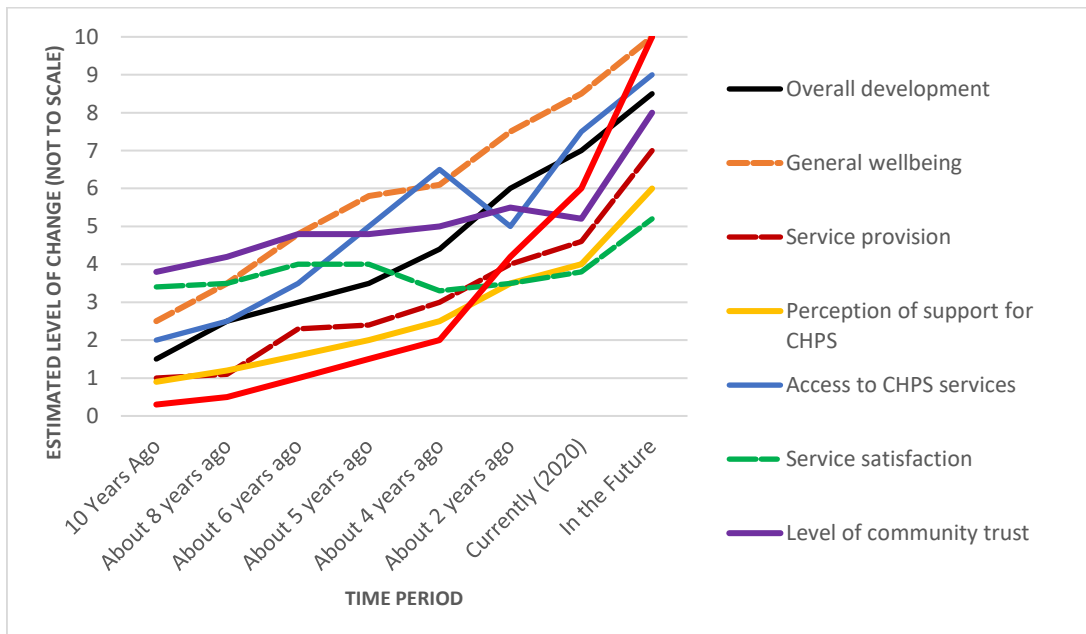
7. FGD Participants by Age and Sex



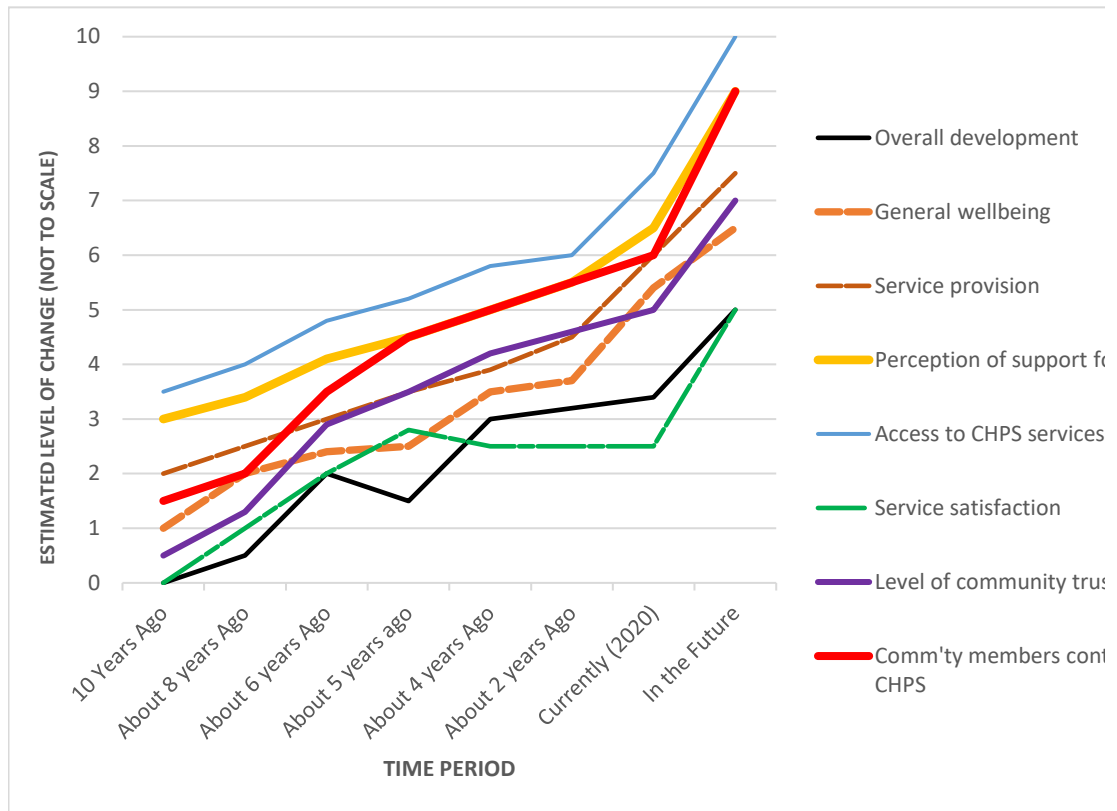
8. Reference Mode – Community Members, Gushiegu



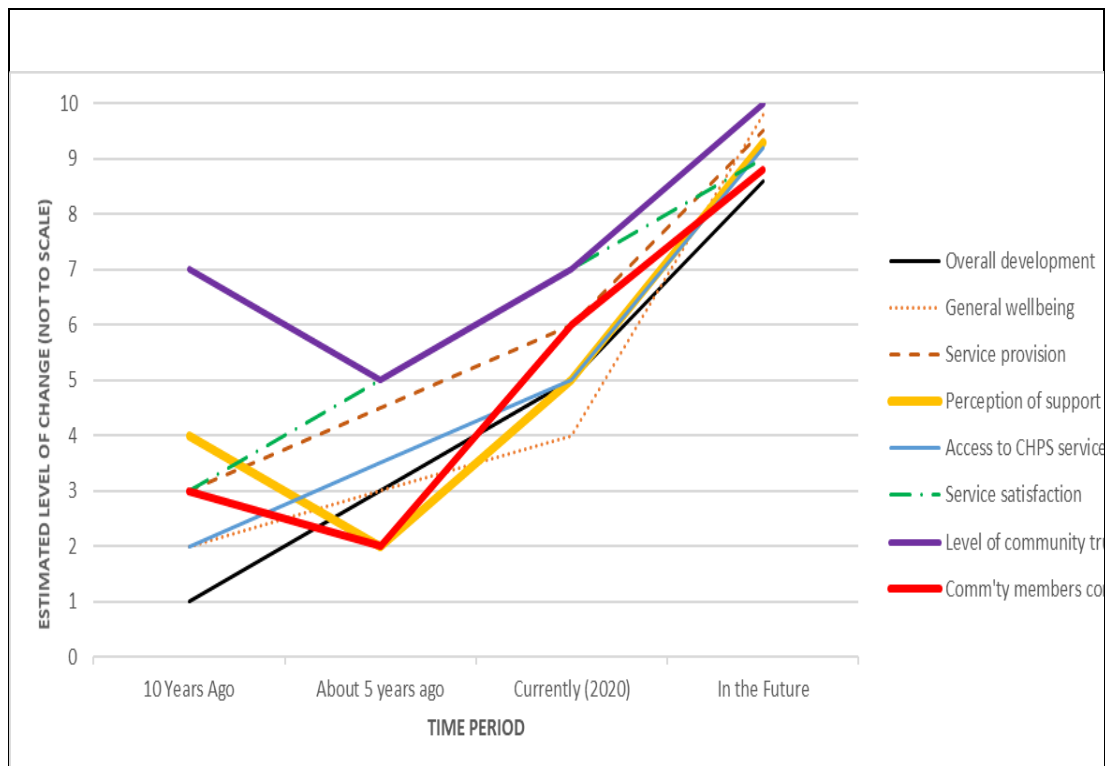
9. Reference Mode – Community Members, Kumbungu



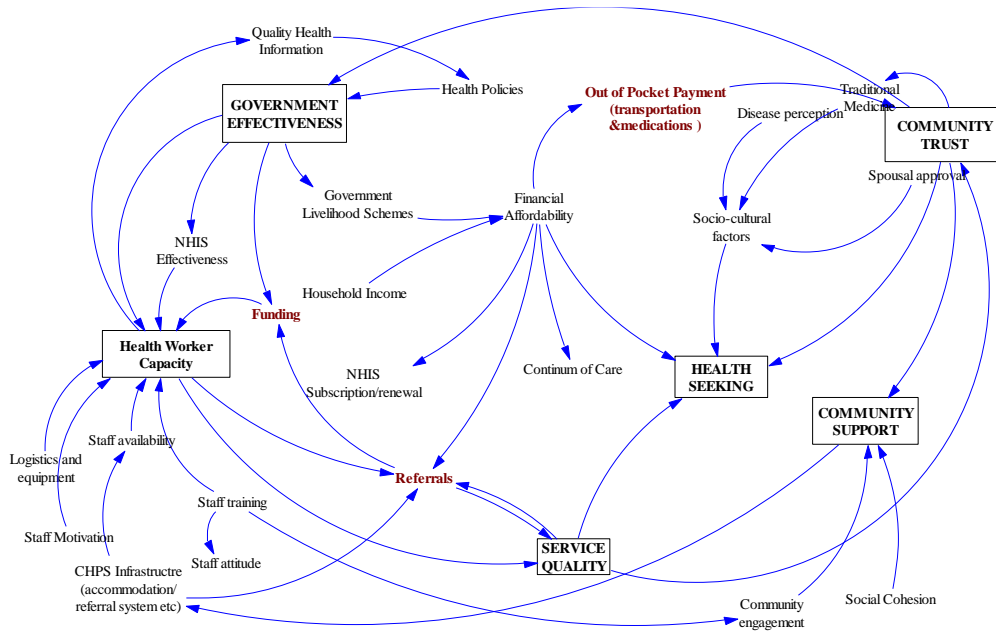
10. Reference Mode – Health Workers, Gushiegu



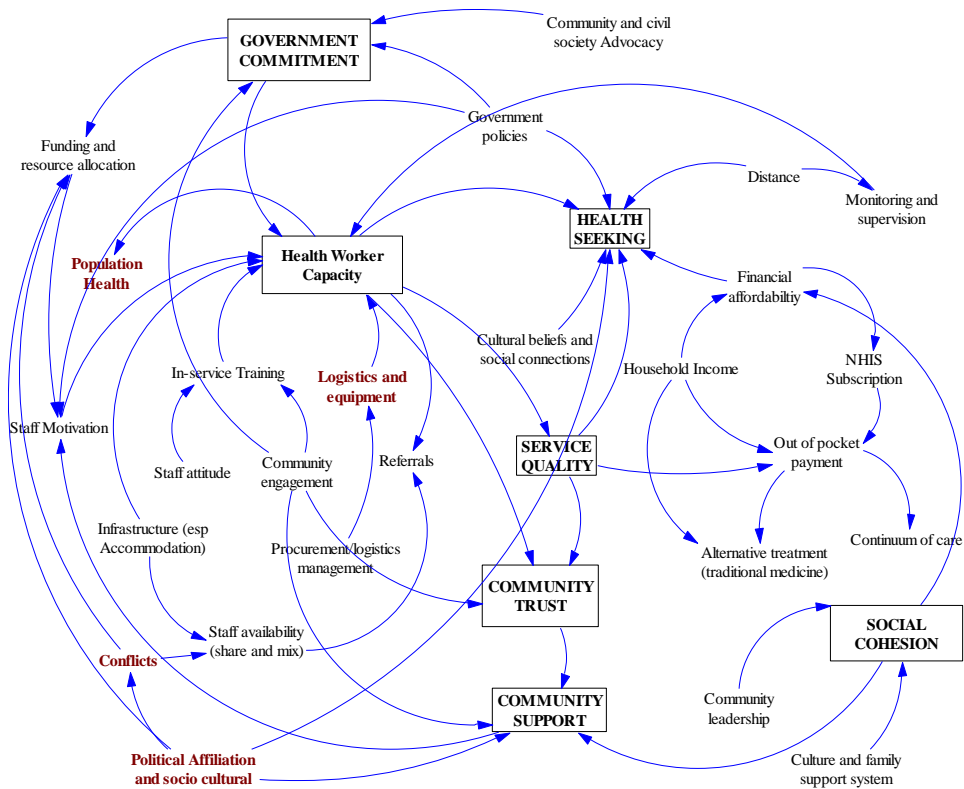
11. Reference Mode – Health Workers Kumbungu



12. Causal Loop Diagram, Gushiegu



13. Causal Loop Diagram, Kumbungu



14. Feasibility and Impact Framework – Health Workers Group, Gushiegu





Feasibility	Impact
Experience (something that has been done before)	It must be measurable
It must specific	Must have a goal
Must have the capacity to carry it out	It must be achievable
Tools must be available	It must have a large coverage (population and geographically)
There must be partnership	It must benefit the target beneficiaries
It must be part of national priority	It must be sustainable
It must be simple	

15. Feasibility and Impact Rankings – Health Workers, Gushiegu

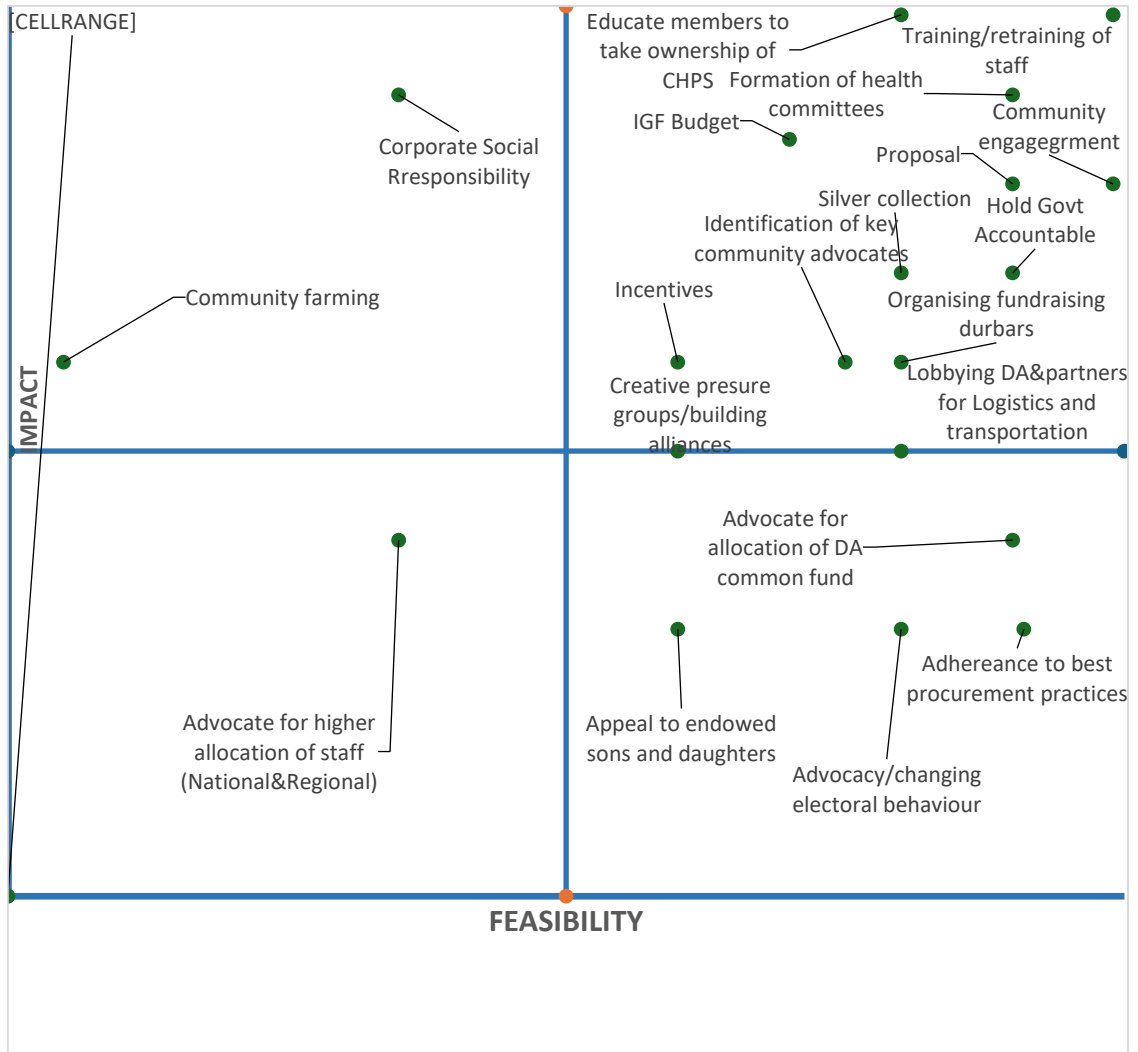
SN	Points of Fragility	Interventions	Impact and Feasibility ranking
1	Funding	Organise fund-raising durbars	HF/HI
		Write partnership proposals to NGOs and others	HF/HI
		Special Appeal to endowed sons and daughters	HF/LI
		Initiate communal farming projects	LF/HI
		Initiate silver collection from religious/worship centres (e.g. churches, mosques, etc.)	HF/HI
		Solicit corporate social responsibility from Telcos (e.g. MTN)	HF/LI
		Advocate for the allocation of DA common fund.	HF/LI
2	Human resource capacity	Share Numbers	
		Advocate for the allocation of more staff	LF/LI
		Provide incentives for staff retention (e.g. awards, cooking equipment, scholarships)	HF/HI
		Skill mix (distribution)	
3	Political commitment	Retrain and sponsor staff for special courses.	HF/HI
		Advocate for change in community electoral behaviour	HF/LI
		Empower community members to hold Government accountable	HF/HI

SN	Points of Fragility	Interventions	Impact and Feasibility ranking
4	Community engagement in CHPS	Create or build alliances with pressure groups and civil society organizations to demand accountability	HF/HI
		Form health committees	HF/HI
		Identify opinion leaders (focal persons) to lead advocacy	HF/HI
5	Transportation and logistics	Educate communities on CHPS to promote ownership and support.	HF/HI
		Lobby NGOs, government, partners, etc. for logistics and equipment	HF/HI
		Include logistics and transportation needs to the IGF budget line	HF/HI
		Ensure adherence to best procurement procedures and practices.	HF/LI

Key:

	High feasibility, high impact		High feasibility, low impact
	Low feasibility, low Impact		Low feasibility, high impact

16. Feasibility and Impact Rankings in Graphics – Health Workers, Gushiegu



16. Feasibility and Impact Framework – Health Workers Group, Kumbungu

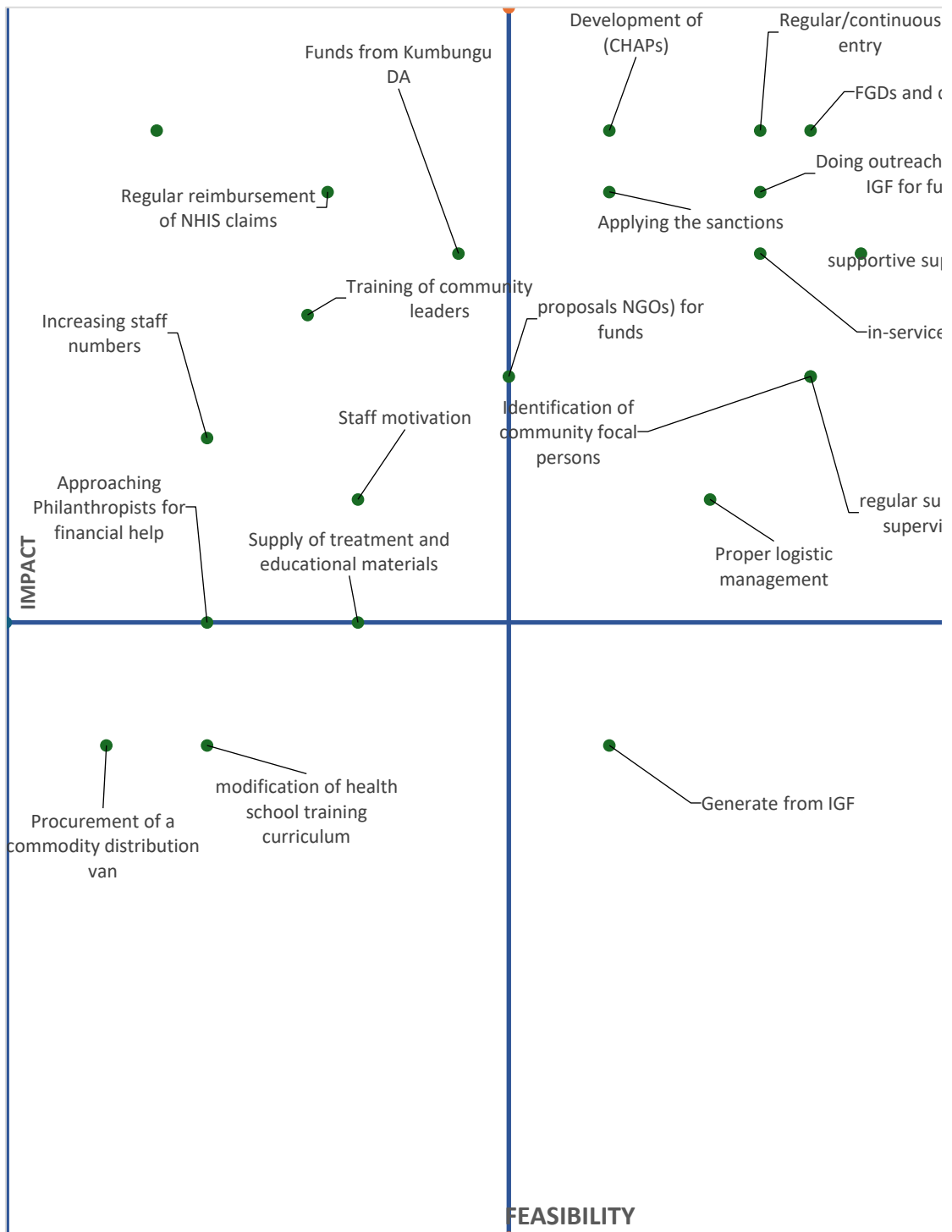
FEASIBILITY	IMPACT
--------------------	---------------

The intervention has to be realistic	The intervention must lead to improvement in the quality of health of the people
It has to be time-bound	It must lead to positive/the desired behaviour change
It must be measurable	It must lead to the desired results
Cost effective	It must lead to client satisfaction
There must be resources to implement it	
It must be specific	

17. Feasibility and Impact Rankings – Health Workers, Kumbungu

SN	Point of fragility	Intervention	Impact/Feasibility Ranking
1	Health worker capacity	Conduct regular in-service training	HF/HI
		Modify health school training curriculum	LF/LI
		Conduct supportive supervision	HF/HI
		Supply treatment and educational materials (e.g. posters, protocols, etc.)	LF/LI
2	Community engagement and ownership	Conduct regular/continuous community entry	HF/HI
		Train community leaders	LF/HI
		Organise of Focus Group Discussions (FGDs) and durbars	HF/HI
		Develop Community Health Action Plans (CHAPs)	HF/HI
		Identify community focal persons to help make engagements	HF/HI
3	Funding	Write proposals to Non-governmental Organisations (NGOs) for funds	LF/HI
		Generate funds from Internally-Generated Fund	HF/LI
		Approach philanthropists for financial help	LF/HI

18. Feasibility and Impact Rankings in Graphics – Health Workers, Kumbungu

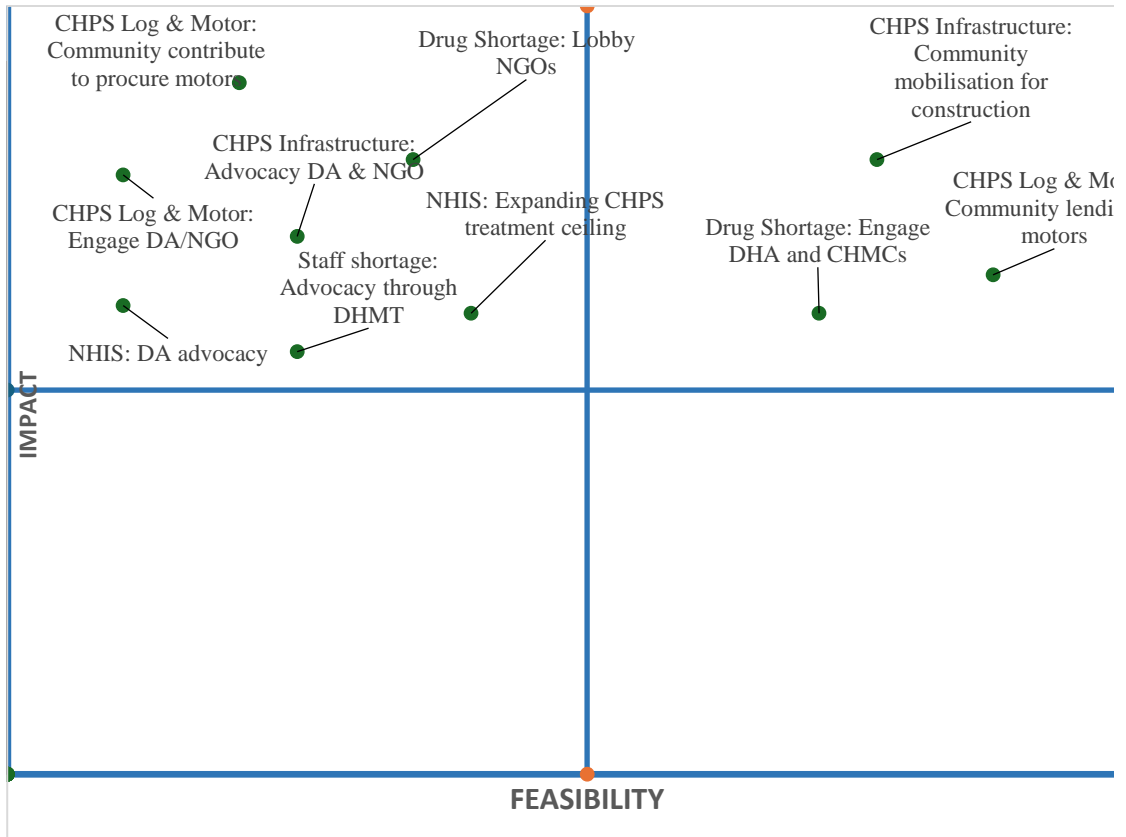


19. Feasibility and Impact Rankings – Community Members, Gushiegu

SN	Points of Fragility	Interventions	Impact and Feasibility
1	CHPS Infrastructure	Advocacy through Assembly/NGOs	LF/HI
		Mobilise communities to initiate construction	HF/HI
2	NHIS Management/Effectiveness	Advocate Assembly to expand CHPS NHIS ceiling	LF/HI
		Advocacy through DHMT to post more staff (midwives)	LF/HI
3	Staff Shortage	Increase financial clearance for recruitment	LF/HI
		Engage CHMCs/DHD on drug shortages	HF/HI
4	Drug Shortage	Lobby NGOs for drug support	LF/HI
		Engage DA and NGO to support	LF/HI
5	Inadequate CHPS logistics (Motorbikes)	Community support through lending of motorbikes for service delivery	HF/HI
		Community contributes to procure motorbikes	LF/HI

	High feasibility, high impact		High feasibility, low impact
	Low feasibility, low impact		Low feasibility, high impact

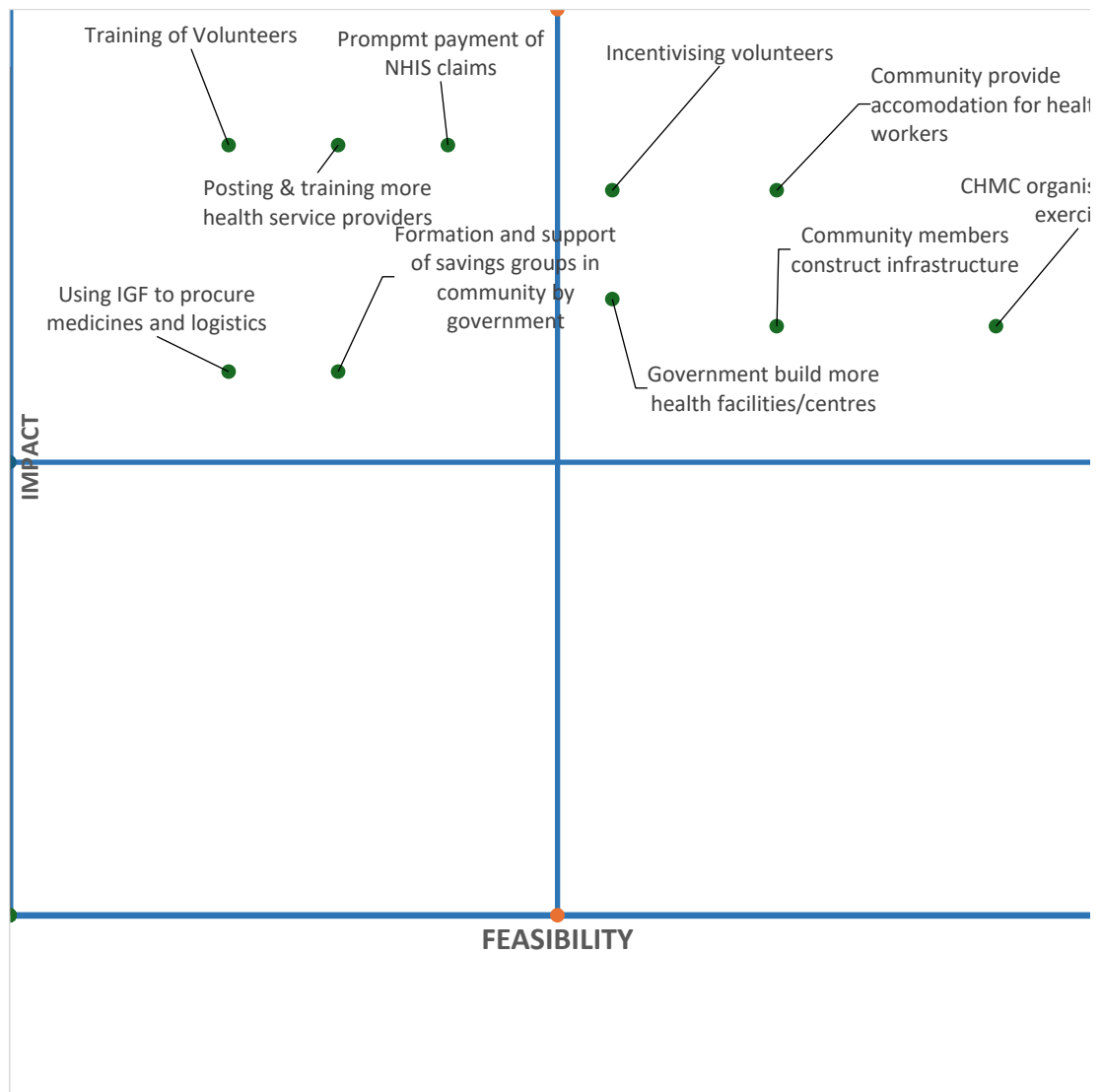
20. Feasibility and Impact Rankings in Graphics–Community Members, Gushiegu



21. Feasibility and Impact Rankings – Community Members, Kumbungu

SN	Points of Fragility	Interventions (Actions to take)	Impact/Feasibility Ranking
1	Role of Community Health Volunteer (CHV)	Organise continuous training for CHV	LF/HI
		Provide incentives (soap, support in menial works) to the CHV	HF/HI
2	Human Resource (shortage of Health Workers)	Mobilise community to provide accommodation for Health Workers	HF/HI
		Advocate and lobby Government through DHMT to train and post more Health Service Providers	LF/HI
3	Insufficient Medicines/Logistics	Advocate for National Health Insurance Authority (NHIA) to pay Claims promptly	LF/HI
		Community Health Management Committee (CHMC) in collaboration with District Health Management Team (DHMT) use Internally Generated Fund (IGF) to Procure essential Medicines and Logistics	LF/HI
4	Government Support	Advocate and lobby District Assembly (DA) to form Savings Groups	LF/HI
		Assembly Member to lobby government through District Assembly (DA) to construct standard Community Health and Planning Services (CHPs) compounds with staff accommodation	HF/HI
5	Community Support	Community Health Management Committee (CHMC) and Assembly Member to organise clean-up exercises	HF/HI
		Community Health Management Committee (CHMC) Mobilise community to provide some CHPs Infrastructure such as pavilions, toilets etc.	HF/HI
	High feasibility and high impact	Low feasibility with high impact	

22. Feasibility and Impact Rankings in Graphics – Community Members, Kumbungu



23. Combined Interventions and Rankings for Kumbungu and Gushiegu

Point of Fragility	Combined Interventions – Kumbungu and Gushiegu districts			
	Highly impactful and highly feasible	LF/HI	HF/LI	LF/LI
1. Health Worker	1. Conduct regular in-service training....kw 2. Conduct supportive supervisions.....kw			1. Modify health school training curriculumkw 2. Supply treatment and educational materials (e.g. posters, protocols, etc.)kw
a. Availability Medicines	Drugs/ 1. Engage CHMCs/DHD on drug shortages.....gc 2. Ensure proper logistics management ...kw		1. Lobby NGOs for drug support.....gc 2. Ensure timely NHIS reimbursement...kw 3. Advocate for National Health Insurance Authority (NHIA) to pay Claims promptlykc 4. Community Health Management Committee (CHMC) in collaboration with District Health Management Team (DHMT) use Internally Generated Fund (IGF) to Procure	1. Procure commodity distribution van...kw

Point of Fragility	Combined Interventions – Kumbungu and Gushiegu districts			
	Highly impactful and highly feasible	LF/HI	HF/LI	LF/LI

essential Medicines and Logistics
.....kc

b. Logistics and Transportation

1. Community support through lending of motorbikes for service delivery.....gc
2. Include logistics and transportation needs to the IGF budget linegw
3. Lobby NGOs, government, partners, etc. for logistics and equipment....gw

1. Engage DA and NGO to support....gc
2. Community contribute to procure motorbikes.....gc

1. Ensure adherence to best procurement procedures and practices....gw

c. CHPS infrastructure

1. Mobilise communities to initiate construction.....gc

1. Advocacy through Assembly/NGOs.....gc

Point of Fragility	Combined Interventions – Kumbungu and Gushiegu districts			
	Highly impactful and highly feasible	LF/HI	HF/LI	LF/LI
d. Staff inadequacy	1. Retrain and sponsor staff for special courses.....gw 2. Provide incentives for staff retention (e.g. awards, cooking equipment, scholarships)....gw 3. Mobilise community to provide accommodation for Health Workerskc	1. Advocacy through DHMT to post more staff (midwives)gc 2. Increase financial clearance for recruitment.....gc 3. Advocate and lobby Government through DHMT to train and post more Health Service Providers.....kc		1. Advocate for the allocation of more staffgw
e. Staff attitude	1. Train staff on the code of conduct of health workers...kw 2. Regular supervision by community health management committee (CHMC) sub-district, district and regional leadership...kw 3. Sanction staff for unprofessional behaviour...kw	1. Minimize political interference in the management of CHPS staff....kw 2. Motivate staff (including cash and non-monetary incentives)kw		
f. CHV training	1. Provide incentives (soap, support in menial works) to the CHV ...kc	1. Organise continuous training for CHVkc		

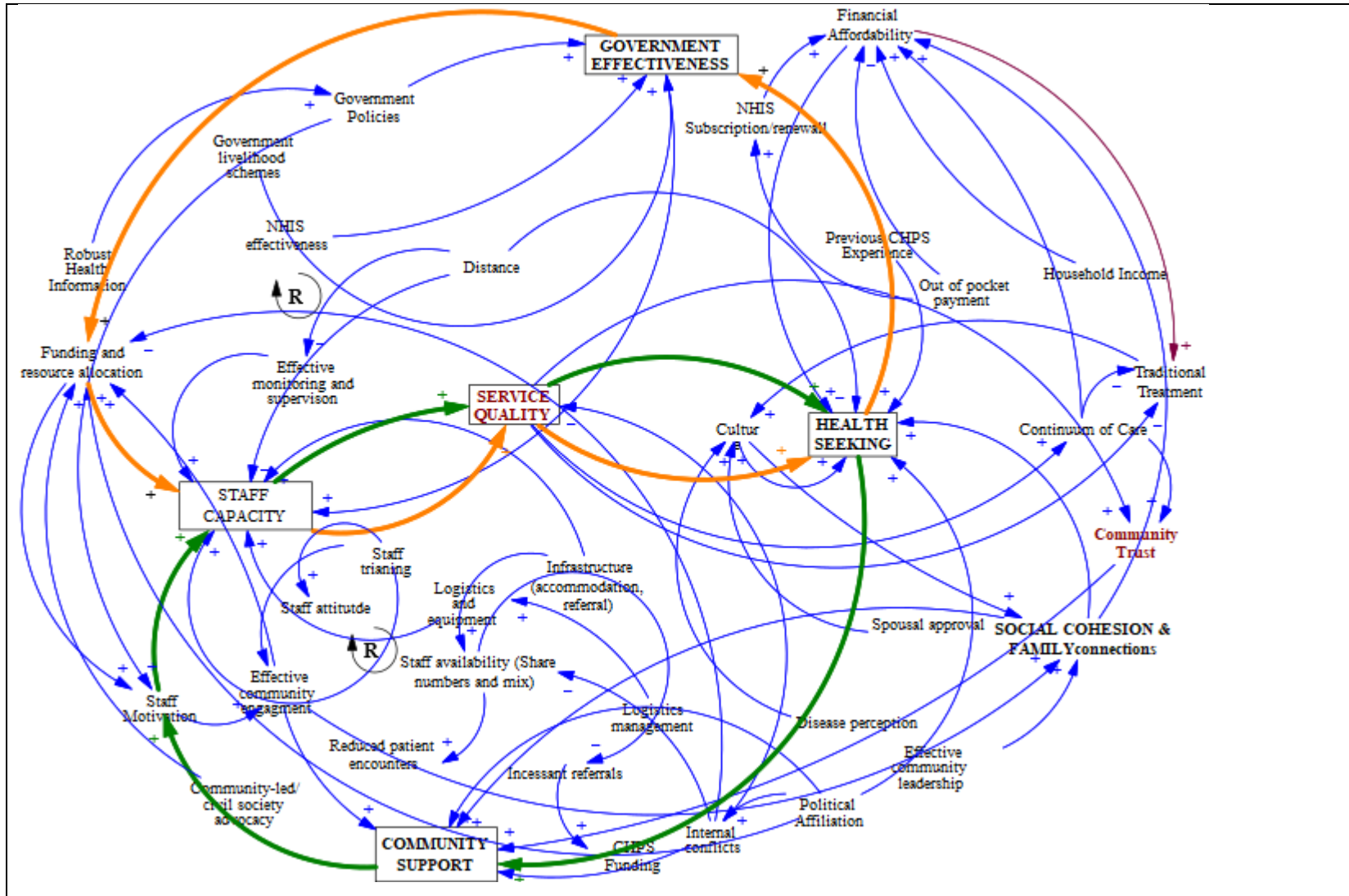
Point of Fragility	Combined Interventions – Kumbungu and Gushiegu districts		
	Highly impactful and highly feasible	LF/HI	HF/LI
2. Community engagement and support	1. Form health committees....gw 2. Identify opinion leaders (focal persons) to lead advocacygw 3. Educate communities on CHPS to promote ownership and support.gw 4. Conduct regular/continuous community entry.....kw 5. Organise of Focus Group Discussions (FGDs) and durbars.....kw 6. Develop Community Health Action Plans (CHAPs).....kw 7. Identify community focal persons to help make engagements.....kw 8. Community Health Management Committee (CHMC) and Assembly Member to organise clean-up exercises.....kc 9. Community Health Management Committee (CHMC) Mobilise community to provide some CHPs	1. Train community leaders.....kw	

Point of Fragility	Combined Interventions – Kumbungu and Gushiegu districts		
	Highly impactful and highly feasible	LF/HI	HF/LI
	Infrastructure such as pavilions, toilets etc.....kc		

Point of Fragility	Combined Interventions – Kumbungu and Gushiegu districts			
	Highly impactful and highly feasible	LF/HI	HF/LI	LF/LI
3. Funding	1. Organise fund-raising durbars.....gw 2. Write partnership proposals to NGOs and others....gw 3. Initiate silver collection from religious/worship centres (e.g. churches, mosques, etc.).....gw	1. Initiate communal farming projects.....gw 2. Write proposals to Non-governmental Organisations (NGOs) for funds....kw 3. Approach philanthropists for financial help.....kw 1. Advocate for government’s financial allocation through the District Assembly.....kw	1. Special Appeal to endowed sons and daughtersgw 2. Solicit corporate social responsibility from Telcos (e.g. MTN)....gw 3. Advocate for the allocation of DA common fund.....gw 4. Generate funds from Internally-Generated Fund.....kw	
4. NHIS challenges		1. Advocate Assembly to expand CHPS NHIS ceilinggc		

Point of Fragility	Combined Interventions – Kumbungu and Gushiegu districts			
	Highly impactful and highly feasible	LF/HI	HF/LI	LF/LI
5. Service access	1. Conduct outreaches (using IGF for fuel)...kw	1. Advocate for government and NGOs to build CHPS, roads, and buy equipment and motorbikes.....kw 2. Increase staff numbers....kw		
6. Political commitment/ government support	1. Empower community members to hold Government accountable.....gw 2. Create or build alliances with pressure groups and civil society organizations to demand accountability ...gw 3. Assembly Member to lobby government through District Assembly (DA) to construct standard Community Health and Planning Services (CHPs) compounds with staff accommodation.....kc	1. Advocate and lobby District Assembly (DA) to form Savings Groups.....kc	1. Advocate for change in community electoral behaviour....gw	

25. The Relationship Between Government Effectiveness, HW Capacity and Community Cohesion/Trust in a Combined GMB Model



24. GMB Causal Loop Variable Definitions

SN	Variable	Definition
1	CHPS funding	This is funding allocated for CHPS development either by the central or sub-level government.
2	Community support	Support provided by community members (individually or in groups) in kind or cash to support CHPS development including health workers' sustenance.
3	Community trust	This is the perceived level of confidence community members bestow in health workers as competent to support their healthcare needs.
4	Community-led/civil society advocacy	Advocacy campaigns initiated by CSO or community members to demand government accountability or request support in an area of health service delivery and access.
5	Continuum of care	The ability of residents to continue to seek healthcare at a higher level without suffering catastrophic health costs.
6	Culture	This is the way residents live and in relation to health can be attributed to who their first point of contact is when they are sick, who gives permission to access care and how resources are mobilised for healthcare delivery.
7	Disease perception	Community members' perception of the cause of diseases.
8	Distance	Distance in relation to the length of travel.
9	Effective community engagement	When community members are actively engaged on issues relating to their health, particularly in terms of their role and contributions.
10	Effective community leadership	The ability of community leaders to engage and mobilise community members on health and other developmental initiatives.
11	Effectiveness of monitoring and supervision	Regular visits embarked on by supervisors to CHPS facilities.
12	Financial affordability	The ability of residents to pay for health care either through OOP or NHIS.
13	Funding and resource allocation	Financial and non-financial materials provided to CHPS zones to support the delivery of basic services.

14	Government effectiveness	Central and sub-level government responsiveness to requirements of CHPS facilities and the overall needs of community members.
15	Government livelihood schemes	Existing schemes such as cash transfers to the aged.
16	Government policies	Policies and programmes introduced by the government to improve service delivery and access such as the free maternal health programme and CHPS policies.
17	Health seeking	Community members' decision to access care at the CHPS level.
18	Household income	Total monetary and non-monetary earnings by all members of a household in a given year.
19	Incessant referrals	Many referrals within a short period..
20	Infrastructure (accommodation, referral)	The availability of adequate infrastructure such as staff accommodation and CHC to support the delivery of service at the CHPS level.
21	Internal conflict	This is conflict resulting from factors such as chieftaincy and political disputes.
22	Logistics and equipment	The availability of essential devices, drugs and other supplies for health service delivery.
23	Logistics management	Planning, implementing, and managing the flow of goods and services for health service delivery.
24	NHIS effectiveness	The ability of the NHIS to reimburse facilities in a timely manner.
25	NHIS subscription/renewal	Residents' ability to afford NHIS subscription or renewal fees.
26	Out-of-pocket payment	When community members finance their healthcare costs out of their pockets.
27	Political affiliation	The political party specific residents belong to.
28	Previous CHPS experience	Resident's experience with the quality of health care provided at the CHPS level.
29	Reduced patient encounters	The number of community members able to access health care due to the presence/absence of a CHPS worker.

31	Robust Health information	Quality of service data generated.
32	Service Quality	Perceived service satisfaction by users particularly the ability of providers to respond to the needs of users.
33	Social cohesion and family connections	Shared norms and trust among community members.
34	Spousal approval	When wives require their husband's approval to access care.
35	Staff attitude	The perceived behaviour of health workers towards community members. This might include cultural acceptance, respect and being non-judgmental.
36	Staff availability (share numbers and mix)	Number of health workers available and in their right numbers.
37	Staff capacity	Staff are adequately equipped and trained to provide service.
38	Staff motivation	Both intrinsic and extrinsic motivations of health workers.
39	Staff training	Whether staff are adequately trained in CHPS and other key areas to provide quality healthcare.
40	Traditional treatment	Treatment options at the community level other than CHPS. This might include services from herbalists and traditional healers.

25 Rich Pictures from GMBs



26. GMB Feedback Participants List

Gushiegu	
Participant portfolio	Response code
Coordinator	0
DA Mem	1
HW-CHO	1
Vol	1
HW	1
Vol	1
HW	1
Vol	1
HW	1
Vol	0
Total	8
Kumbungu	
Cord	0
DA	1
HW	1
Vol	0
HW	1
Vol	1
HW	1
Vol	0
HW	1
Vol	1
Total	7

27. Study Information Sheet

My name is Esther Azasi, and I am a postgraduate student from the School of Health Sciences at Queen Margaret University in Edinburgh, Scotland. As part of my degree course, I am undertaking a research project for my Honours dissertation. The title of my project is: Strengthening Health Systems in the Fragile Context of Northern Ghana: a study of Community-based Health Planning and Services (CHPS) Effectiveness.

This study will investigate factors constraining the implementation and effectiveness of CHPS in the fragile context of the Northern region of Ghana and identify strategies to address them. Specific objectives are to (i) map progress in the implementation of CHPS in selected Districts of the Northern region; (ii) identify barriers and enablers to CHPS implementation in these settings using the analytic framing of fragility; and (iii) use the above analyses to explore potential systems interventions to enhance quality and utilization of priority services in this context.

The findings of the project will contribute to strengthening CHPS implementation in fragile settings, as well as contribute to growing literature on health systems strengthening in fragile settings.

The study is being funded by the Queen Margaret University's Bursary and Santander. You are being selected as a key informant in the study given your in-depth knowledge and the role you play in CHPS implementation in Ghana.

If you agree to participate in the study, you will be asked to sign a consent form and respond to a set of questions.

Risks associated with this study are minimal and include sacrificing your time and being tape recorded. You will be free to withdraw from the study at any stage and you would not have to give a reason.

The procedure should take no longer than 2 hours and will be conducted at your office premises to ensure privacy and confidentiality. Recordings will be adequately stored on a database provided by QMU to ensure respondents' confidentiality. Once recordings are transcribed and coded, they will be destroyed. All data, including yours, will be anonymised as much as possible, but you may be identifiable from tape recordings of your voice. Your name will be replaced with a participant number, and it will not be possible for you to be identified in any reporting of the data gathered.

The results may be published in a journal or presented at a conference to a larger audience.

If you would like to contact an independent person, who knows about this project but is not involved in it, you are welcome to contact Dr Karen Diaconu. Her contact details are given below.

If you have read and understood this information sheet, any questions you had have been answered, and you would like to be a participant in the study, please now see the consent form.

Contact Details of Researcher
Esther Azasi

Contact Details of Ethics Committee
Member:

Postgraduate Student, School of Health
Sciences
Queen Margaret University, Edinburgh
Queen Margaret University Drive
Musselburgh
East Lothian EH21 6UU
Email / Telephone: eazasi@[qmu.ac.uk](mailto:eazasi@qmu.ac.uk) /
+447568683932

Contact Details of Independent Advisor
Dr Karen Diaconu
Research Fellow School of Health Sciences –
Institute for Global Health and Development
Queen Margaret University, Edinburgh
Queen Margaret University Drive
Musselburgh
East Lothian EH21 6UU
Email: KDiaconu@qmu.ac.uk /
Telephone: +44 (0) 131 474 0000 (ask for
Karin Diaconu when prompted)

Hannah Frimpong
GHS-ERC Administrator
Office: +233 302 681109
Mobile: 233 (0) 243235225 or
0507041223
Email: Hannah.Frimpong@ghsmail.org

28. Interview Consent Form

CONSENT FORM FOR IN-DEPTH INTERVIEWS

I have read and understood the information sheet and this consent form. I have had an opportunity to ask questions about my participation. I also grant permission to be tape-recorded.

I understand that I am under no obligation to take part in this study.

I understand that I have the right to withdraw from this study at any stage without giving any reason.

I agree to participate in this study.

Name of participant:..... Signature of
researcher:.....

Signature of participant:.....

Date:.....

Date:.....

Contact details of the researcher

Contact Details of Ethics
Committee:

Esther Azasi

Postgraduate Student, Division, School
Queen Margaret University, Edinburgh
Queen Margaret University Drive

Musselburgh

East Lothian EH21 6UU

Email / Telephone: EAzasi@qmu.ac.uk / 0507041223

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Hannah Frimpong

GHS-ERC Administrator

Office: +233 302 681109

Mobile: 233 (0) 243235225 or

Email:

Hannah.Frimpong@ghsmail.org

29. Interview and CM Guides

A. DIRECTOR GENERAL, GHANA HEALTH SERVICE (Was not available)

Measures health workforce capacity, political will and CHPS effectiveness

1. How does the office of the Director General ensure quality and equitable healthcare to all regions of Ghana?
2. Please give me a short overview of the CHPS strategy and what it aims to achieve.
3. How relevant is this initiative to primary healthcare advancement in Ghana?
4. How relevant is this initiative to achieving the Universal Health Coverage Agenda of SDG 3.8
5. The implementation of Ghana's CHPS lies within the purview of the GHS. What is your role in CHPS implementation, and are there any specific resources your outfit deploys in support of CHPS rollout and development?
6. Who are the other key players in CHPS?
7. How would you say CHPS is progressing currently?
8. How would you describe the country's political commitment and involvement with CHPS?
9. Regarding human resources, does the country have enough competent CHOs in the system?
10. What would you say is your greatest concern regarding CHPS implementation? *(Probe for issues regarding funding, political will, human resources, community legitimization service effectiveness, etc.)*
11. It has been nearly 20 years since the deployment of CHPS; what would you say is the reason for the slow progress in some settings?
12. The Northern region is one of the least in terms of CHPS advancement, although they have demanding health needs. Why is this case?
13. There is a new school of thought in global health research that posit that not paying attention to the provision of basic services such as security, healthcare, sanitation, and education can trigger fragility... i.e. conflict and other disasters. Please, what do you make of this?
14. Finally, how can the country catalyse the scale-up of CHPS, especially in deprived settings, as a measure of reducing fragility?
15. Do you have any other thing to share with me?

B. PPMED DIRECTOR, GHANA HEALTH SERVICE

Should measure health worker capacity, CHPS effectiveness, community cohesion

1. Can you kindly share what the office of the PPMED is responsible for?
2. What is an effective CHPS system, and what do we hope to achieve with this as a country?
3. How relevant is this initiative to primary healthcare advancement and to achieving the UHC agenda in Ghana?
4. The implementation of Ghana's CHPS lies within the purview of the PPMED-GHS. What is your role in CHPS implementation, and are there any specific resources your outfit deploys in support of CHPS rollout and development?
5. Enablers
6. What are the enablers of CHPS as a concept?
7. Regarding enablers, how would you say CHPS is progressing currently?
8. Would you say CHPS has been effective in achieving set targets?

Political commitment

9. How would you describe the country's political commitment and involvement with CHPS?

Human resource

10. Regarding human resources, does the country have enough community health workers with the required skills to man the system?

Community legitimization

11. What do you make of community outreach and home visiting services, which are the core responsibilities of community health officers?
12. Have community members been supportive of CHPS now as before?
13. What are some of the current challenges of community mobilisation, if any?

Challenges

14. What would you say is your greatest concern regarding CHPS implementation? (*Probe for issues regarding funding, political will, human resources, community legitimization service effectiveness, etc.*)
15. It has been nearly 20 years since the deployment of CHPS; what would you say is the reason for the slow progress in some settings?
16. The Northern region is one of the least in terms of CHPS advancement, although they have demanding health needs. Why is this case?

Understanding fragility

17. There is a new school of thought in global health research that posit that an inadequate supply of basic amenities such as security, healthcare, sanitation and education is a trigger of fragility, i.e. conflict and other disasters. Please, what do you make of this?
18. By the end of 2015, the Upper East region was the only region that made great improvements towards MDGs 4 and 5. How do you explain the resilience of a small yet poor region like the Upper East?

Recommendations

19. Finally, how can the country catalyse the scale-up of CHPS, especially in deprived settings, as a measure of reducing fragility?
20. Do you have any other thing to share with me?

C. CHIEF DIRECTOR, MINISTRY OF HEALTH (*KI not available. Reassigned to CHPS Coordinator*)

1. Can you kindly share what the office of the Chief Director is responsible for?
2. Can you please give me a short overview of what the CHPS strategy is and what it aims to achieve?
3. How is the Ministry of Health involved in the rollout and expansion of CHPS to all Ghanaian communities?
4. How relevant is this initiative to primary healthcare advancement in Ghana?
5. How relevant is this initiative to achieving the Universal Health Coverage Agenda of SDG 3.8
6. Issues of funding seem to be a key topic in terms of CHPS rollout and expansion. How is the government ensuring the availability of consistent and

reliable funding for CHPS operation, given there are no dedicated funds for CHPS?

7. How would you say CHPS is progressing currently?
8. What would you say is your greatest concern regarding CHPS implementation? (*Probe for issues regarding funding sources, effectiveness, etc.*)
9. Are CHPS compounds well-resourced? How can the current HR needs of CHPS be fulfilled?
10. It has been nearly 20 years since the deployment of CHPS; what would you say is the reason for the slow progress in other settings, such as the Northern region?
11. There is a new school of thought in global health research that posit that the absence of basic services such as health services can breed fragility where communities become prone to disasters or even get involved in uprisings. What do you make of such arguments?
12. Are there any recommendations for improving CHPS effectiveness in communities?
13. Do you have any other thing to share with me?

D. CHPS COORDINATOR MINISTRY OF HEALTH

Should measure health worker capacity, CHPS effectiveness, community cohesion

1. Please give me a short overview of Ghana's CHPS strategy and what it aims to achieve.
2. How relevant is this initiative to primary healthcare advancement and to achieving the Universal Health Coverage Agenda of SDG 3.8
3. The policy directive of Ghana's CHPS lies within the purview of the Ministry of Health. What is your role in CHPS implementation and rollout, and are there any specific resources your outfit deploys in support of its development?
4. Who are the major players in CHPS?

Enablers

5. What are the enablers of CHPS as a concept?
6. Regarding enablers, how would you say CHPS is currently progressing?
7. Would you say CHPS has been effective in achieving set targets?

Political commitment

8. How would you describe the country's political commitment and involvement with CHPS?

Human resource

9. Regarding human resources, does the country have enough community health workers with the required skills to man the system?

Community legitimization

10. What do you make of community outreach and home visiting services, which are the core responsibilities of community health officers?
11. Have community members been supportive of CHPS now as before?
12. What are some of the current challenges of community mobilisation, if any?

Challenges

13. What would you say is your greatest concern regarding CHPS implementation?
14. (Probe for issues regarding funding, political will, human resources, community legitimization service effectiveness, etc.)
15. It has been nearly 20 years since the deployment of CHPS; what would you say is the reason for the slow progress in some settings?
16. The Northern region is one of the least in terms of CHPS advancement, although they have demanding health needs. Why is this case?

Understanding fragility

17. There is a new school of thought in global health research that posit that an inadequate supply of basic amenities such as security, healthcare, sanitation and education is a trigger of fragility, i.e. conflict and other disasters. Please, what do you make of this?

Recommendations

18. Finally, how can the country catalyse the scale-up of CHPS, especially in deprived settings, as a measure of reducing fragility?
19. Do you have any other thing to share with me?

E. INTERVIEW WITH NORTHERN REGIONAL MINISTER OR MUNICIPAL CHIEF EXECUTIVE – MINISTRIES

Measures political commitment, financing, security and provision of basic amenities

1. Can you please give me an overview of the office of the Regional Minister?
2. What are the kinds of services your outfit provide to community members? Probe for key services such as Water, Sanitation, Schools, hospital, security
3. How do you determine a community's need for a particular service, and how are they chosen to benefit from a given intervention?
4. It appears the Northern region is quite a fragile setting compared to other regions of Ghana. How would you describe the current security situation of the region?
5. When would you say are the most fragile seasons?
6. Would you say the majority of the populace has equal access to events such as census and voter registration exercises?

7. How do you ensure peace and stability in fragile communities within the region?
8. In terms of primary healthcare, how would you say the region is fairing and what role does your office play in promoting adequate healthcare access, especially in deprived settings?
9. CHPS is a national strategy and yet has no funds set aside for implementation and rollout. Why is this case?
10. Is there anything different your outfit is doing to ensure the programme reaches all populations?
11. What are some of the challenges your outfit encounter in your bid to provide basic services?
12. There is a new school of thought in global health research that posit that not paying attention to the provision of basic services such as security, healthcare, sanitation, and education can breed fragility... i.e. conflict and other disasters. Please, what is your stake in this?
13. How can we improve the political will towards expanding CHPS and strengthening healthcare?
14. Finally, are there any other things you would like to share?

F. CHIEF EXECUTIVE DIRECTORS, NORTHERN REGION

Measures political commitment, financing, security and provision of basic amenities

1. Can you please give me an overview of the office of the District Chief Executive?
2. What are the kinds of services your outfit provide to community members? Probe for key services such as Water, Sanitation, Schools, hospital, security
3. How do you determine a community's need for a particular service, and how are they chosen to benefit from a given intervention?
4. It appears the Northern region is quite a fragile setting compared to other regions of Ghana. How would you describe the current security situation of the region?
5. When would you say are the most fragile seasons?
6. Would you say the majority of the populace has equal access to events such as census and voter registration exercises?
7. How do you ensure peace and stability in fragile communities within the region?
8. In terms of primary healthcare, how would you say the region is fairing and what role does your office play in promoting adequate healthcare access, especially in deprived settings?
9. CHPS is a national strategy and yet has no funds set aside for implementation and rollout. Why is this case?

10. Is there anything different your outfit is doing to ensure the programme reaches all populations?
11. What are some of the challenges your outfit encounter in your bid to provide basic services?
12. There is a new school of thought in global health research that posit that not paying attention to the provision of basic services such as security, healthcare, sanitation, and education can breed fragility... i.e. conflict and other disasters. Please, what is your stake in this?
13. How can we improve the political will towards expanding CHPS and strengthening healthcare?
14. Finally, are there any other things you would like to share?

G. HEALTH DIRECTOR, NORTHERN REGIONAL HEALTH

DIRECTORATE

1. Please give me a short overview of Ghana's CHPS strategy and what it aims to achieve.
2. How relevant is this initiative to primary healthcare advancement and to achieving the Universal Health Coverage Agenda of SDG 3.8
3. What is the role of your office in CHPS implementation and rollout, and are there any specific resources your outfit deploys in support of its development?
4. Who are the major players in CHPS at the regional and community levels?

Enablers

5. What would you say are the enablers of CHPS as a concept?
6. Regarding enablers, how would you say CHPS is currently progressing?
7. Would you say CHPS has been effective in achieving set targets?
8. Political commitment
9. How would you describe the country's political commitment and involvement with CHPS?

Human resource

10. Regarding human resources, does the country have enough community health workers with the required skills to man the system?

Community legitimization

11. What do you make of community outreach and home visiting services, which are the core responsibilities of community health officers?
12. Have community members been supportive of CHPS now as before?
13. What are some of the current challenges of community mobilisation, if any?

Challenges

14. What would you say is your greatest concern regarding CHPS implementation?
15. (Probe for issues regarding funding, political will, human resources, community legitimization service effectiveness, etc.)

16. It has been nearly 20 years since the deployment of CHPS; what would you say is the reason for the slow progress in some settings?
17. The Northern region is one of the least in terms of CHPS advancement, although they have demanding health needs. Why is this case?

Understanding fragility

18. There is a new school of thought in global health research that posit that an inadequate supply of basic amenities such as security, healthcare, sanitation and education is a trigger of fragility, i.e. conflict and other disasters. Please, what do you make of this?

Recommendations

19. Finally, how can the country catalyse the scale-up of CHPS, especially in deprived settings, as a measure of reducing fragility?
20. Do you have any other thing to share with me?

H. CHPS COORDINATOR, NORTHERN REGIONAL HEALTH

DIRECTORATE

1. Please give me a short overview of Ghana's CHPS strategy and what it aims to achieve.
2. How relevant is this initiative to primary healthcare advancement and to achieving the Universal Health Coverage Agenda of SDG 3.8
3. What is the role of your office in CHPS implementation and rollout, and are there any specific resources your outfit deploys in support of its development?
4. Who are the major players in CHPS at the regional and community levels?

Enablers

5. What would you say are the enablers of CHPS as a concept?
6. Regarding enablers, how would you say CHPS is currently progressing?
7. Would you say CHPS has been effective in achieving set targets?

Political commitment

8. How would you describe the country's political commitment and involvement with CHPS?

Human resource

9. Regarding human resources, does the country have enough community health workers with the required skills to man the system?

Community legitimization

10. What do you make of community outreach and home visiting services, which are the core responsibilities of community health officers?
11. Have community members been supportive of CHPS now as before?
12. What are some of the current challenges of community mobilisation, if any?

Challenges

13. What would you say is your greatest concern regarding CHPS implementation?
14. (Probe for issues regarding funding, political will, human resources, community legitimization service effectiveness, etc.)
15. It has been nearly 20 years since the deployment of CHPS; what would you say is the reason for the slow progress in some settings?
16. The Northern region is one of the least in terms of CHPS advancement, although they have demanding health needs. Why is this case?

Understanding fragility

17. There is a new school of thought in global health research that posit that an inadequate supply of basic amenities such as security, healthcare, sanitation and education is a trigger of fragility, i.e. conflict and other disasters. Please, what do you make of this?

Recommendations

18. Finally, how can the country catalyse the scale-up of CHPS, especially in deprived settings, as a measure of reducing fragility?
19. Do you have any other thing to share with me?

I. DISTRICT DIRECTORS OF HEALTH SERVICES – KUMBUNGU AND GUSHIEGU

1. Please give me a short overview of Ghana’s CHPS strategy and what it aims to achieve.
2. How relevant is this initiative to primary healthcare advancement and to achieving the Universal Health Coverage Agenda of SDG 3.8
3. What is the role of your office in CHPS implementation and rollout, and are there any specific resources your outfit deploys in support of its development?
4. Who are the major players in CHPS at the regional and community levels?

Enablers

5. What would you say are the enablers of CHPS as a concept?
6. Regarding enablers, how would you say CHPS is currently progressing?
7. Would you say CHPS has been effective in achieving set targets?
8. Political commitment
9. How would you describe the country’s political commitment and involvement with CHPS?

Human resource

10. Regarding human resources, does the country have enough community health workers with the required skills to man the system?
11. Community legitimization
12. What do you make of community outreach and home visiting services, which are the core responsibilities of community health officers?

13. Have community members been supportive of CHPS now as before?
14. What are some of the current challenges of community mobilisation, if any?

Challenges

15. What would you say is your greatest concern regarding CHPS implementation?
16. (Probe for issues regarding funding, political will, human resources, community legitimization service effectiveness, etc.)
17. It has been nearly 20 years since the deployment of CHPS; what would you say is the reason for the slow progress in some settings?
18. The Northern region is one of the least in terms of CHPS advancement, although they have demanding health needs. Why is this case?

Understanding fragility

19. There is a new school of thought in global health research that posit that an inadequate supply of basic amenities such as security, healthcare, sanitation and education is a trigger of fragility, i.e. conflict and other disasters. Please, what do you make of this?

Recommendations

20. Finally, how can the country catalyse the scale-up of CHPS, especially in deprived settings, as a measure of reducing fragility?
21. Do you have any other thing to share with me?

J. SUB-DISTRICT HEADS

1. Please give me a short overview of Ghana's CHPS strategy and what it aims to achieve.
2. How relevant is this initiative to primary healthcare advancement and to achieving the Universal Health Coverage Agenda of SDG 3.8
3. What is the role of your office in CHPS implementation and rollout, and are there any specific resources your outfit deploys in support of its development?
4. Who are the major players in CHPS at the regional and community levels?

Enablers

5. What would you say are the enablers of CHPS as a concept?
6. Regarding enablers, how would you say CHPS is currently progressing?
7. Would you say CHPS has been effective in achieving set targets?
8. Political commitment
9. How would you describe the country's political commitment and involvement with CHPS?

Human resource

10. Regarding human resources, does the country have enough community health workers with the required skills to man the system?

Community legitimization

11. What do you make of community outreach and home visiting services, which are the core responsibilities of community health officers?
12. Have community members been supportive of CHPS now as before?
13. What are some of the current challenges of community mobilisation, if any?

Challenges

14. What would you say is your greatest concern regarding CHPS implementation?
15. (Probe for issues regarding funding, political will, human resources, community legitimization service effectiveness, etc.)
16. It has been nearly 20 years since the deployment of CHPS; what would you say is the reason for the slow progress in some settings?
17. The Northern region is one of the least in terms of CHPS advancement, although they have demanding health needs. Why is this case?

Understanding fragility

18. There is a new school of thought in global health research that posit that an inadequate supply of basic amenities such as security, healthcare, sanitation and education is a trigger of fragility, i.e. conflict and other disasters. Please, what do you make of this?

Recommendations

19. Finally, how can the country catalyse the scale-up of CHPS, especially in deprived settings, as a measure of reducing fragility?
20. Do you have any other thing to share with me?

K. COMMUNITY HEALTH OFFICERS OR CHPS WORKERS

1. Can you please share some of your roles as a community health officer in this community?
2. Please tell me the kind of health services rendered by this CHPS facility (probe for basic health service delivery, including outreach services)
3. What would you say are the challenges you face on the job?
4. What skills/competencies do you require to carry out these activities?
5. Are there any special skills you need in order to deliver specific services required by community members?
6. Would you say you have been well-equipped to undertake such activities?
Probe for the availability of resources such as:
7. adequate training , infrastructure and Supervision
8. How often do you receive supervision for your work?
9. How regular are supplies and equipment replenished/replaced, and how does that affect your caregiving tasks?
10. Who are the major stakeholders of this CHPS facility, and what roles do they play?

11. Are there particular challenges you face in working collaboratively with these stakeholders
12. How is your relationship with community members?
13. How do community members feel about the services you offer?
14. Are you accepted and respected by the community and the formal health system, and would you say that is motivation enough to deliver on your tasks?
15. How is the Government (or local government) supportive of CHPS?
16. What are your recommendations for improving health worker capacity in CHPS?
17. Are there any health services that you think will be relevant to community members that should be made part of your service package?

L. COMMUNITY HEALTH VOLUNTEERS

1. Can you please share some of your roles as a Community health volunteer in this community?
2. What skills/competencies do you require to carry out these activities?
3. Are there any special skills you need in order to deliver specific services required by community members?
4. Would you say you have been well-equipped to undertake such activities?
Probe for the availability of resources such as:
5. adequate training
6. Infrastructure and
7. Supervision
8. How often do your supervisors receive supervision for your work?
9. How regular are supplies and equipment replenished/replaced, and how does that affect your caregiving tasks?
10. Who are the major stakeholders of this CHPS facility, and what roles do they play?
11. Are there particular challenges you face in working collaboratively with these stakeholders
12. How is your relationship with community members?
13. How do community members feel about the services you offer?
14. Are you accepted and respected by the community and the formal health system, and would you say that is motivation enough to deliver on your tasks?
15. How is the Government (or local government) supportive of your work?
16. What would you say are the challenges you face on the job?
17. What are your recommendations for improving community health volunteer capacity in CHPS?
18. Are there any health services that you think will be relevant to community members that should be made part of your service package?

M. COMMUNITY MAPPING SESSIONS

Mapping

1. Can you illustrate the layout of your community on this piece of paper? (*Ensure community members include key features and structures such as police station, health post, school etc.*)
2. Which basic services do you have access to in this community?
3. Please ensure that the items mentioned are represented on your map
4. Can you establish a relationship between these basic services and their providers? For example, who supported the construction of school infrastructure in the community?
5. How would you describe these services? Are they adequately provided, and are they reaching intended beneficiaries?
6. Please indicate on your map an estimated number of users of each service
7. What are some of the challenges you encounter in your bid to access any or all of these services?
8. How often/frequent are violent crimes in your neighbourhood?
9. If they ever occur, what types of crimes are prevalent in your setting?
10. What are the common reasons cited for this unrest, if any?
11. What have authorities done about them?
12. Are there any incidences of lynching or street justice in your community, and what would you say are their causes?
13. Overall, would you say basic services in this community are adequate?

CHPS: Zooming in on healthcare,

14. Can you tell me some of the pressing healthcare needs of community members?
15. Would you say that these services are readily available to community members?
16. What are some of your responsibilities as key stakeholders of CHPS in your community?
17. With reference to the Community Health Officers, would you say they are able to deliver all the services you indicated earlier?
18. If yes, why?
19. If no, why not? (*Ideas to look out for include the social status of the CHO, modes of communication, ability to cater to community health and non-health needs and the community's own prior experiences with other health interventions, including their perceptions of the state*)
20. How is your relationship as community members with health staff?
21. Probe for issues relating to trust such as: honesty, communication, confidence and competence, respect (positive attitudes, thoroughness, technical competence and institutional support for fair treatment)
22. Factors that might influence trust in patient-provider trust:
23. Workers' personalities and past experiences

24. Do you have some personal experiences related to the above to share with the research team?

Trust and the STATE

25. Who would you say are Government's representatives in your community?

26. Can you share some of the state-provided resources in this community?

27. Do you feel satisfied with these services?

28. How do you hold government stakeholders accountable for services required of them?

29. What recommendations do you have for strengthening health services and other basic services in the community?

30. Is there any health service that you wish you were receiving in your community?

30. GMB Feedback form

GMB FEEDBACK FORM									
Gushiegu Community Members									
Name of Respondent:									
Time of Call:									
Call Duration:									
SN	Points of Fragility	Interventions	Impact and Feasibility	Progress made				Challenges	Interviewer's comments
				Some progress	Good progress	No progress	Don't know		
1	CHPS Infrastructure	Advocacy through Assembly/NGOs	LF/HI						
		Mobilise communities to initiate construction	HF/HI						
2	NHIS Management/Effectiveness	Advocate Assembly to expand CHPS NHIS ceiling	LF/HI						
3	Staff Shortage	Advocacy through DHMT to post more staff (midwives)	LF/HI						
		Increase financial clearance for recruitment	XXX						

4	Drug Shortage	Engage CHMCs/DHD on drug shortages	HF/HI						
		Lobby NGOs for drug support	LF/HI						
5	Inadequate CHPS logistics (Motorbikes)	Engage DA and NGO to support	LF/HI						
		Community support through lending of motorbikes for service delivery	HF/HI						
		Community contribute to procure motorbikes	LF/HI						

Name of Interviewer:

Signature:

31. Ethical Approval QMU



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**.

Section B: Research details

B1.Title of study:
Strengthening Health Systems in the Fragile Context of Northern Ghana: A Study of
Community-based Health Planning and Services (CHPS) Effectiveness

B2.Expected start date: September, 2017

B3.Expected end date: September, 2020

B4.Protocol or proposal version:
(please follow naming format – Health Systems in Fragile Context of Northern Region,
Ghana_20180710_1

B5.Protocol date: 31st March, 2018

B6.Details of any grants/funding/financial support for the project from within/outside QMU:

- The study is sponsored by QMU Bursary and Santander Student
- Santander Universities funding

B7.Do you plan at any stage of the project to undertake research involving adults lacking capacity to consent for themselves?

Yes No

Answer Yes if you plan to recruit living participants aged 16 or over who lack capacity, or to retain them in the study following loss of capacity. If you answered yes, please refer to the online training module by University of Leicester and University of Bristol on 'Adults lacking capacity to consent for research' for further information:

<https://connect.le.ac.uk/alctoolkit/>

Your research may require approval by an authorised Research Ethics Committee (e.g. NHS Research Ethics Committee). If in doubt, please contact QMU Research Ethics Panel for further advice (ResearchEthics@qmu.ac.uk).

B8.Do you plan to include any participants who are children?

Yes No

Answer Yes if you plan to recruit participants aged under 16. Please also ensure that question F6 is answered.

B9.Do you plan at any stage of the project to work with human tissue samples (or other human biological samples) and data?

Yes No

If you answered Yes to question B9, please also ensure that Section G is completed. To obtain a copy of Section G, please email ResearchEthics@qmu.ac.uk.

