

**UNIVERSITY OF GHANA, LEGON**

**SCHOOL OF PUBLIC HEALTH**

**COLLEGE OF HEALTH SCIENCES**

**PERFORMANCE OF COMMUNITY HEALTH WORKERS IN THE COMMUNITY  
HEALTH WORKER PROGRAMME IN UPPER MANYA KROBO DISTRICT OF  
GHANA: ROLE OF HEALTH SECTOR AND COMMUNITY**

**BY**

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**DECLARATON**

I, STEPHEN TETTEH MATEY, thereby declare that apart from other researchers' work that have been duly acknowledged, this thesis is my original work and it has not been presented elsewhere for another degree either in whole or in part.

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## **DEDICATION**

This work is dedicated to my dear wife Rebecca Matey, my brother Raymond Kofi Owusu, sister Lucy Asiamah, my friends Joana Baidoo, Gloria Owusu, Mawuena Asem, Afua Atuobi-Yeboah Tetteh, Gloria Ama Ansah and children Prince and John for their enormous support, sacrifice, understanding, patience, encouragement, and unconditional love throughout the MPH programme.

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## ABSTRACT

**Background:** The Alma-Ata declaration of 1978 promoted broader use of Community Health Workers (CHWs) to provide certain interventions and promote health behaviours at the community level. The Government of Ghana in 2016 launched the new Community Health Worker Program (CHWP). This was followed by recruitment, training and deployment of 20000 CHW to Community-based Health Planning and Services (CHPS) zones. Since the programme inception, the performance of CHWs and the possibility of implementing and sustaining large-scale CHW programmes have been a source of worry.

**Objective:** The research aimed at identifying the determinants influencing the performance of CHWs in Upper Manya Krobo District.

**Methods:** A descriptive cross-sectional survey using both quantitative and qualitative data collection methods were used. Purposive sampling method was used to identify the respondents. Quantitative data was collected from 45 CHWs while qualitative data was collected from 4 District Health Management Team (DHMT) members, a Regional CHPS Coordinator, a District Youth and Employment Agency (YEA) Coordinator and 25 Supervisors of CHWs and Community Health Committee leaders. Data was presented using tables, graphs and cross tabulation while inferential statistics were computed using odds ratio. The organizing themes from the qualitative data were analyzed using the thematic analysis approach as described by Attride-Stirling (2001). The coding of transcripts was guided by the initial list of organizing themes (deductive) which were modified and expanded based on information derived from reading the transcripts (inductive). After all the transcripts had been coded, there was a review of the generated codes. This was to ensure consistency in coding. The next stage of the analysis involved a more nuanced linkage of codes. This led to codes being assigned to the appropriate organizing themes. Representative quotes that best capture the ideas are presented for illustration.

**Findings:** Among all the demographic factors, it is only main source of income (OR: **16.111**, CI: 1.160-223.800  $p=0.038$ ) that was statistically significant in relation to the performance. Gender (OR: **1.06**, CI: 0.190-16.040  $p=0.947$ ) was not statistically significant in relation to the CHW performance, when adjusted for males, females had 1.3 odds of performing health care services compared to males (AOR: 1.337, CI: 0.115-16.428,  $p=0.800$ ). Majority of respondents 27(87%) said CHW functionality, start up and program management processes were never done with very few 4(13%) who acknowledged it was done sometimes, representing low fidelity. Performance of CHWs was very poor. On average the overall rate of CHWs with good performance at the CHPS zone was 5(11%). The adequacy of training was also not statistically significant (OR: **0.869**, CI: 0.153-4.928  $p=0.874$ ) to performance. Scheduled individual supportive supervision visits for the CHWs; one time (OR: **2.231**, CI: 0.193–25.721  $p=0.520$ ) to more than three times (OR: **0.935**, CI: 0.087-10.045  $p=0.956$ ) in general had no statistical significance to CHWs performance. Monthly meetings to discuss challenges and solutions (OR: **1.473**, CI: 0.208-10.448  $p=0.699$ ) does not have effect on CHWs performance. Remuneration such as cash payment (OR: **27.0**, CI: 0.952-766.122  $p=0.053$ ) generally showed no statistical significance to performance. However, majority 40 (91%) said the allowance they received is inadequate. There was no statistical significance with feedback reports (OR: **0.886**, CI: 0.101-7.762  $p=0.084$ ). However, the use of information for planning and addressing gaps found was significant to performance (OR: **0.081**, CI: 0.007-0.909  $p=0.042$ ). Community recognition (OR: **1.473**, CI: 0.208-10.448  $p=0.699$ ), family support (OR: **3.889**, CI: 0.176-85.870  $p=0.390$ ), and community support (OR: **1.377**, CI: 0.153-12.414  $p=0.776$ ) does not influence performance.

**Conclusion:** Performances of CHWs in Upper Manya Krobo district, Ghana in the delivery of health care services at CHPS zones were below average or poor. According to the study, with the exception of CHWs' main source of income, the demographic characteristics did not show statistically significant association with good performance. Health sector participation in the institutionalization and operation of the CHW programme was poor. Consequently, health sector factors were found to be negatively associated with good performance by CHWs. Moreover, community factors which are central in the performance of CHWs according to literature were found to be negatively associated with good performance in the study.

Implementation and realization of the key targets in rural setting is challenging therefore, stakeholders need to follow the CHWs guidelines developed. The findings from this research will be useful to researchers, programme implementers, policy makers, and communities in targeting interventions aimed at improving community development programmes, and finally improving the health status of communities.

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## LIST OF ACRONYMS

CHMC	Community Health Management Committee
CHPS	Community-based Health Planning and Service
CHWs	Community Health Workers
CHWP	Community Health Worker Programme
DHMT	District Health Management Team
FGD	Focus Group Discussion
GHS	Ghana Health Service
HIV	Human Immuno-Deficiency Virus
iCCM	Integrated Community Case Management
IDIs	In-depth Interviews
IPT	Intermittent Preventive Treatment
IQA	Implementation Quality Assurance
LMIC	Low and Middle Income Countries
MDGs	Millennium Development Goals
MoH	Ministry of Health
PHC	Primary Health Care
RHV	Routine Home Visit
SDGs	Sustainable Development Goals
TB	Tuberculosis
TBA	Traditional Birth Attendants
TTC	Time and Targeted Counseling
UMKD	Upper Manya Krobo District

UNICEF	United Nations Children's Fund
VHWs	Village Health Workers
WHO	World Health Organization
YEA	Youth Employment Agency

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background to the Study

Pregnant women and infants are at risk of dying from complications related to pregnancy, birth and often preventable diseases, predominantly in low and middle income countries (LMICs). Evidence suggests that programmes involving Community Health Workers are effective in improving the health of mothers and their infants although greater clarity is required on what makes the programmes successful and under what circumstances (WHO, 2007).

It is evident that CHWs can support in facilitating access and coverage of health services in hard-to-reach communities and can undertake activities that improve both maternal and child health outcomes. To achieve a universal coverage, CHWPs need careful planning, secured funding and active government leadership and community support. To perform their rolls effectively, CHWs need regular training, monitoring, mentoring and supportive supervision and reliable logistical support (Suthar et al., 2014). The *World Health Report 2006: working together for health* recognizes shortages of professional health workers as one of the key ingredients in the growing human resource crisis, particularly in low-income countries. One strategy to address this crisis is the use of CHWs (WHO, 2006). Many countries in Sub-Saharan Africa face the challenge of organizing health service delivery in a manner that provides quality and accessible health care to their populations against a background of limited resources. In response to these challenges, different governments have been implementing health sector reforms. Ghana, South Africa,

Kenya, and Uganda, have implemented national programmes for community health workers (WHO, 2010).

World Health Assembly in 1974 recognized the striking disparities in health and health services between countries. As a consequence, since the Alma-Ata Declaration in 1978 the need for greater support for CHW programme was revived in global health (Standing & Chowdhury, 2008). The One Million CHWs Campaign project worth US\$2.5 billion was announced in 2013 to enhance the capacity of CHWs to deliver healthcare services in sub-Saharan Africa (Singh & Sachs, 2015). The current move to recruit, train and deploy more CHWs to communities is in recognition of their role in sustaining the Millennium Development Goals (MDGs) gains, as well as ultimately achieving the more recent Sustainable Development Goals (SDGs). CHWs services are more needed in communities where facility-based health care services accessibility is limited (Bulingwa, 2008). For example, CHWs can increase access and use of health care services such as family planning and immunization (Bulingwa, 2008). CHWs have supported the implementation of interventions to reduce neonatal mortality such as improving antenatal and postnatal care visits, promotion of immediate and exclusive breastfeeding, appropriate care of the skin and umbilical cord, identification and referrer of sick newborns (Rahman *et al.*, 2010).

In Ghana, the CHWP was launched in 2016, CHWs were recruited, trained and deployed and ever since, there has not been a comprehensive report depicting assessment of their recruitment, training, deployment, remuneration, operations and constraining factors to their productivity in Ghana. However the use, efficiency, performance and reliability of CHW programmes is a

global debate (WHO, 2007). Therefore, it is imperative to assess the determinants influencing their performance. This research therefore seeks to address this knowledge gap.

## **1.2 Problem Statement**

It has been realized in recent times that it is near impossible in many developing countries to reach majority of the communities with facility-based health services. Capital budgets to construct facilities and recurrent budgets to pay for staff or supplies are inadequate. Most countries have thus expressed a commitment to the CHW programme, signing Charters, publishing policy statements, making declarations and launching the CHWP. Many have also set national goals and prepared programmes for the organization and management of their health systems on this basis. Thus the assumptions underlying PHC and the use of CHWs in Ghana are that CHWs would more successfully disseminate health information, and also that community participation is integral to the institutionalization and operation of CHWs programme at the community level (Opoku-Tuffuor, S. 1996).

The principles which formed the basis of the CHW approach were equity, intersectoral collaboration, community involvement, emphasis on prevention, and appropriate technology. It is for the realization of this broad objective that in 2015, World Vision International in Ghana undertook a large project to support the Ministry of Health (MoH) to create an innovative national curriculum which would serve to train a new generation of CHWs deployed across the country. The training curriculum comprised of three modules and was planned to be rolled out using a modular methodology following the recruitment and deployment of CHWs to hard-to-reach areas.

World Vision International in Ghana in collaboration with University of Ghana and McGill University in Canada has been implementing the Nutrition Links project in Upper Manya Krobo District (UMKD). The aim of the project was to improve physical, cognitive, social and economic well-being of rural families living in rural UMKD of Ghana through cross-sectorial programming in agriculture, nutrition and health. During the evaluation of the project, several concerns were raised by community members and health workers about the new Ghana CHW programme being implemented in the area. Specifically, there were questions about the recruitment, training, and deployment of CHWs to different communities as well as remuneration issues.

As the new CHW initiative had differed from previous community health volunteer approaches, especially in the mode of recruitment, and the recognition of this new cadre as a professional group, it is important to investigate the implementation status and training of CHWs and also the understanding and acceptability of the CHW programme to the district in question. This is an opportunity to further investigate the current status of functionality of the CHW programme. During the study, I will seek to assess functionality, implementation quality achieved, completion of the training program as designed, remuneration and methods used during the recruitment and deployment of CHWs to the CHPS zones.

Although Ghana's PHC programme in general and the Ghana CHWP in particular have been in operation for over 15 years and one and half years respectively, impressions one gather through the Nutrition Links project evaluation and regular visits to the communities within the UMKD (i.e. the project location) are that only few of the many trained CHWs and the old volunteers in

the area are still working. This notwithstanding, various successive governments and other non-governmental organizations working in the area of health and community development continue to lay emphasis on the need for CHWs as the key to Ghana's community health problems.

According to the Nutrition Links Project Monitoring Report (2017), there were only 45 active CHWs in the district even though about 95 people were trained and deployed in the area. The truth of the matter is that, while some old volunteers are crying foul for rejection in the Ghana CHWP, some CHWs recruited and deployed have vacated their duty post due to reasons to be examined in the upcoming study. This situation is not limited to the district; the country as a whole, this has caused World Vision International in Ghana and its partners, believing that "the whole concept of CHWP needs careful evaluation". This study conducted in the UMKD, to identify health sector and community-based factors that affect the performance of Community Health Workers in the UMKD in the Eastern Region. This is expected to serve as a reference point for nationwide evaluation of the CHWP in Ghana.

### **1.3: Justification of the Study**

A study carried out by Djukanovic and Mach (1975) as a joint project for WHO and the United Nations Children's Fund (UNICEF) underscore the lack of adequate health services in the hard-to-reach communities. They advocated the appointment of CHWs with broad backgrounds, and with a commitment to community participation. There was also the growing belief that people should have more say in decisions which would affect them and their families so intimately (Morley et al 1983). The implementation of Ghana's CHW programme is marked with uncertainties of sustained programme effectiveness. Despite the vast experience with CHW programme, relatively little scientific evidence is available to answer basic questions notably the determinants influencing the performance of CHWs.

Since the launch of the Community Health Worker (CHW) Program in 2016, recruitment, training and deployment of the CHWs to the CHPS zones to strengthen the health system, no comprehensive monitoring, mentoring and supportive supervision activities have been conducted. In view of the aforementioned information, there was the need to conduct a research on factors influencing the performance of community health workers in UMKD of Ghana and other confounding factors hampering the aim of strengthening communities in taking charge of their own health. The findings will support decision making on CHW programs.

Upper Manya Krobo District target was to establish 52 Community-based Health Planning and Services (CHPS) compounds and maintain the current CHWs by the end of 2018 against the current 35 CHPS compounds. The findings will enhance the overall objective of the district strategy of sending health care services to the door step of the people ultimately improving productivity and thus reduce child and maternal morbidities and mortalities.

#### **1.4 Research Questions**

1. What are the underlying factors associated with the participation of health sector in the institutionalization of CHW programme in the study area.
2. What are the underlying factors associated with the participation of health sector in the operations of CHW programme in the study area.
3. What are the community expectations in the CHW programme; the effect of these on the successes or otherwise of CHWs in the study area.
4. What are the CHW's own perceptions and experiences and how these inputs affect their work in the study area.

## **1.5: Hypothesis**

There are no demographic factors, health system and community-based factors influencing the performance of Community Health Workers in Upper Manya Krobo district.

## **1.6 Research Objectives**

### **1.6.1 General Objective**

The general objective was to identify health sector and community-based factors influencing the performance of Community Health Workers in the Upper Manya Krobo District.

### **1.6.2 Specific Objectives**

Specifically, the research will determine:

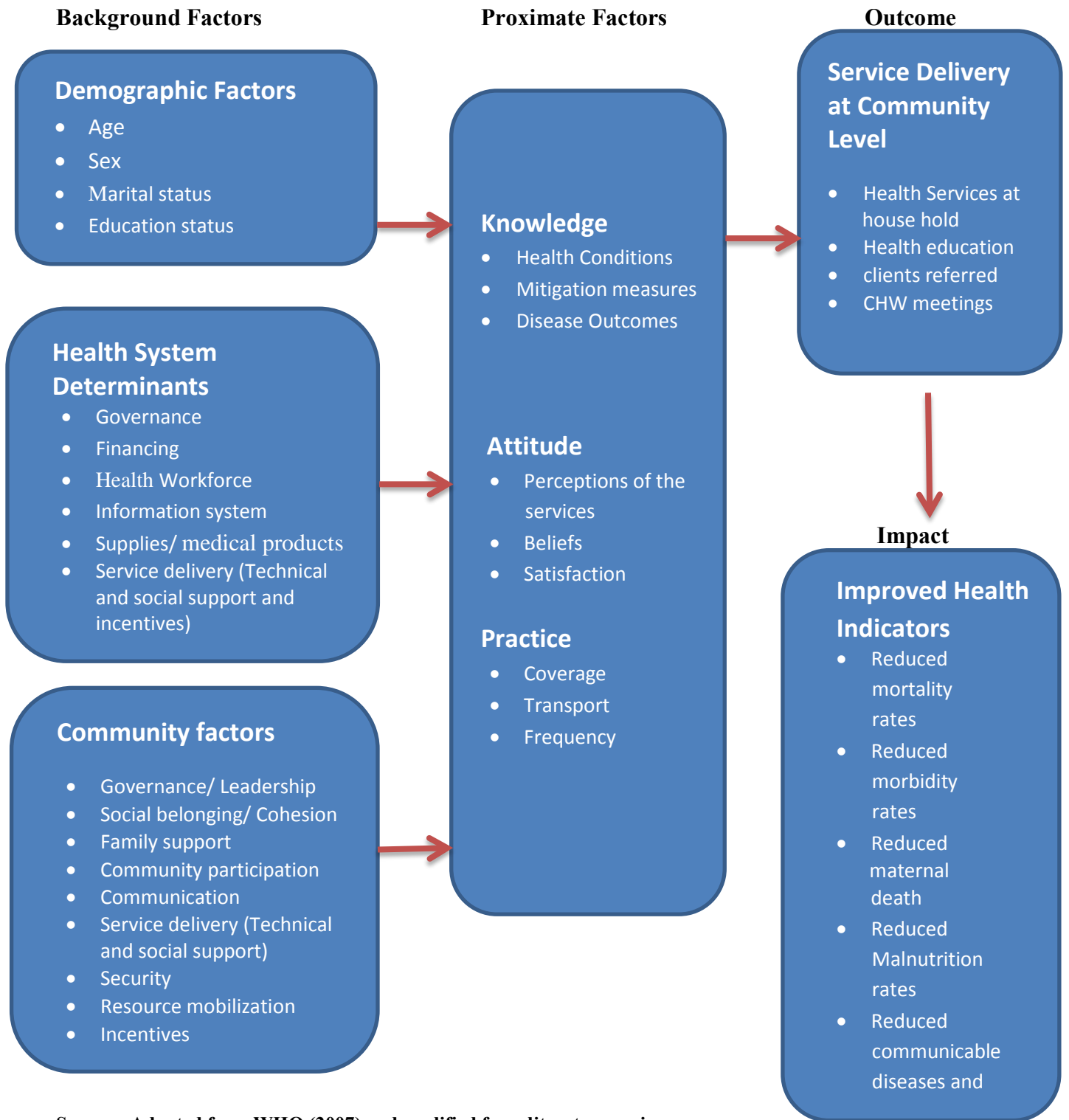
- The type and level of health sector participation in the institutionalization of CHW programme in the study area.
- The role of health sector in the operations of CHWs in the study area.
- The type and level of community expectation in the CHW programme; the effect of these on the successes or otherwise of CHWs in the study area.
- Community Health Workers' own experiences and perceptions and how these inputs affect their work in the study area.

## **1.7: Scope and Limitation**

The study encompassed the determinants that influence the performance of community health workers at Upper Manya Krobo District. Performance impact is a crucial benchmark for

program planners and administrators but needs specific definition, impact on what and over what period. Performance is discussed in relation to a range of impacts, including morbidity and mortality trends. However, performance analyses show that there are missing key components of CHW programmes that do not lend themselves to program goals, such as volunteerism, self-sacrifices, community norms and beliefs, reciprocity and duty. Although the performance of CHW is influenced by a wide range of provider's socio-demographic characteristics, economic and community factors; access to health logistics and infrastructural support are critical in the performance of CHW program, not only due to their apparent importance, but also because they are more easily quantifiable than measures such as client satisfaction, community recognition and community mobilization. However, there is a limited data on determinants that influence the performance in CHWs programmes to confirm these views in Upper Manya Krobo District in Ghana. Research limitations included: CHWs having competing tasks and working in many hard to reach communities. The research period coincided with the farming season, hence was difficult to get some of the Community Health Management Committee (CHMC) members but later arrangements were made to interview them very early in the morning before they head to their farms.

### 1.8: The Conceptual Framework of Factors that Influence the Performance of CHWs



Source: Adopted from WHO (2007) and modified from literature review

Figure 1.1: Analysis of factors that influence the performance of CHWs.

There has been a renewed interest in Community Health Worker programs in LMICs. Inadequate research evidence for effective planning and implementation of CHW programme to guarantee optimal and sustained performance of CHWs at scale persists. To advance learning and research and address this knowledge gap, the conceptual framework proposes hypothetical causal pathways to improved performance of CHWs. The logic model draws upon available research findings on CHWs in LMICs. WHO, 2007. The framework represents CHW performance in relation to the target roles and responsibilities of CHWs in a given context in three ways: outputs, outcomes, and impact. These roles and responsibilities are influenced by health sector and community level determinants.

Outputs are immediate measures of performance that occur at the level of the individual CHW. Some are indirect measures, such as cognitive (e.g. knowledge and skills acquisition) or affective (e.g., self-esteem, confidence, or personal satisfaction) CHW-level changes, while others are direct behavioral measures that occur at the interface of CHWs and clients, such as absenteeism, the quantity and quality of service delivery, responsiveness to clients, and productivity. Attrition and advancement are measures of CHW developmental changes over time.

Outcomes are intermediate measures, defined as CHW-attributable changes that occur among individual clients (e.g., health care-seeking behavior or health-promoting behavior in the home), as well as effects on communities and health systems (e.g., changes in social cohesion or cost savings to the health system, respectively). Impact refers to more distal measures, defined as CHW-attributable changes in health (e.g., morbidity and mortality) at the population level. WHO (2007).

Factors influencing the performance of CHWs in the CHWP can be generally categorized into three main categories: demographic, health sector and community level factors. Figure 1.1 is a framework, which shows the interconnectedness of the three categories. Governance, service delivery, financing, health workforce, information, medical products, technical support, social support and incentives constitute the health system factors whereas governance/ leadership, social belonging/ cohesion, family support, community participation, communication, security, resource mobilization, technical support, social support and incentives are the community system factors. These leads to CHW- level change which includes their attitudes, practices and knowledge about health conditions, mitigation measures, disease outcomes.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.0: Introduction

This chapter presents literature with regard to study objectives; demographic factors, health system factors and community factors reviewed in order to familiarize with the body of literature and identify any gaps based on which the study was conducted.

#### 2.1: CHWs: An Overview of Concepts and Practice

The theory of using local people to provide some basic health care services at the community level from which they come from was dates back from 50-years ago (WHO, 2007). Prasad and Muraleedharan (2007) in a systematic review of theories, practices and policies on Community Health Workers, reports that they have progressed with community health care program. However, the commencement and practice of CHWs have changed immensely across countries, informed by their interest and economic ability. The roles and activities of community health workers are immensely varied since time immemorial, across programmes (WHO, 2007). The early works stresses the role of the Village Health Workers (VHWs), who provide other services in addition to health care. VHWs serves as advocates to communities by ensuring that people's rights are not trample upon. Social injustice were taken seriously and reported for appropriate redress. According to David Werner's eminent words, the community health worker is "deliverer" (Werner, D., 2011). This notion is reflected in the Alma Ata Declaration, which recognized CHWs as key stakeholders in the implementation of the comprehensive

primary health care (WHO, 2007). Examples of VHW initiatives in Africa driven by this rationale include Zimbabwe's and Tanzania's VHW programmes in their early phase. In Ghana, Community Health Workers, as envisioned in the document, *Ghana Community Health Worker Program Implementation Guideline* are the frontline resource persons for community-based health services. CHWs play a critical role in the overstretched health care system, filling the information and distribution gap between client wanting health options and the health facilities that provide a range of health care services to enormous populations (Estelle et al., 2012).

CHWs perform divers tasks that can be preventive and curative (WHO, 2007). They perform several duties including: health education, community-based growth promotion, time and targeted counselling, routine home visits, community mapping, household registration, registration of vital events, disease surveillance, environmental sanitation, provision of water supply, treatment of minor and common illness, communicable disease control, nutrition counselling, , maternal health, family planning, child health, community development, referrals, record keeping and data collection (Lehmann & Sanders, 2007). Studies recommend the modification of CHW roles; development of CHW implementation guidelines and tools (Swider, 2002).

## **2.2: CHW Demographic Characteristics that Influence Performances of CHW Programs**

A Community Health Worker (CHW) is any health worker delivering basic health care services at the community level with a minimal specific training and having no formal

professional education in the related field (Lewin et al., 2005). The capacity to sustain them is enhanced by their educational status, gender, age, ethnicity, religion, occupation, marital status, education and economic status which influenced their acceptability by communities they serve and effectiveness on the job. (Karabi *et al.*, 2001).

However, the socio-demographic characteristics, selection, training, deployment and regular supply of needed logistics for CHWs have varied across nations (Lehmann & Sanders, 2007). There has been different opinion from studies on whether socio-demographic characteristics are key determinants of CHWs' effectiveness (Lehmann & Sanders 2007). Understanding how the socio-demographic characteristics influence CHWs' performance in their line of duty is therefore of paramount interest mainly for the adoption of evidence based health care services at the community level (Ndedda, 2012).

The use of age as a requirement is less frequent in the literature, although adult age between 20 and 45 years are reported to be a requirement in a number of cases (WHO, 2007). History has shown that matured CHWs are more accepted and respected in their communities (Bhattacharyya et al., 2001). Simkhada et al., 2007 report that impact of age on CHWs performance is unclear and varying across studies.

The gender issue in general is influenced by cultural beliefs and practices. Among some communities such as the Somali, is a big challenge for a male CHWs to engage women on health issues (Bentley, 1989). Moreover, other areas reported refusal from husbands was a key barrier to the participation of women in health related activities. (Boerma et al., 2006).

Marriage and child bearing which is central to the traditional African culture, may serve as an additional burden on the CHWs, impeding their performance (Egwuatu & Umeora, 2007). Lehmann et al., 2005 report that women are more influenced by family issues than men but the impact on performance and job attrition is inconclusive.

Qualifications as a prerequisite is inconsistent (WHO, 2007). Most CHW programs require literacy as a criterion (Boerma et al., 2006). For instance, the current Ghana Community Health Worker Programme perked educational qualification at Senior High School level. Some programmes in Kenya (Kenyan AMREF) perked seven years of primary education as a criterion (Johnson and Khanna, 2004) while others did not consider literacy as a requirement (Kaseje et al., 1987). Some programmes do require the ability to read and write and communication skills (Ande, Oladepo, & Brieger, 2004). The notion is that the higher the formal educational level the more knowledgeable, hence the increased ability to perform. (Ouma *et al.*, 2005). Antwi *et al.*, 2013 report on the contrary in a study on factors influencing the delivery of intermittent preventive treatment of malaria in pregnancy in the Bosomtwe district of Ghana, there was no statistical significance between educational level and delivery of health care services.

### **2.3: Health System Determinants Associated with Performance of CHW at CHPS Zone.**

The importance of the role of the elements of health care system in relation to health care delivery in every country cannot be overemphasized. These elements have huge impact in the delivery of health care services (Shah *et al.*, 2007). Health decision support systems and enhancement in health informatics have enjoyed massive financial investments to improve health care delivery.

Reports and records-keeping are essential for establishing a good monitoring system (Jerden, Hillervik, Hansson, Flacking, & Weinehall, 2006). Notwithstanding, just a few studies indicated the importance of building healthy “interrelationships” among health professionals leads to an effective feedback and referral systems established (Bhattacharyya *et al.*, 2001). The critical issues that need to be examined are which mode of feedback mechanism work and how do CHWs utilize the feedback report (Arole, 2007).

The economic resources and political commitment greatly influence the level of attention CHW programme enjoyed in the design and implementation of CHW programmes (Haines and Lagarde, 2007).

The health care providers rely on the combination of financial and human resources, supplies, and delivering of services in a timely manner. Their role of governance and efficiency are supreme in health care service delivery (Lewis and Haukoos, 2006). Availability of logistics such as drugs, means and of transport may affect performances of CHWs, however few studies have assessed the impact of availability and accessibility of drugs and transport by community health workers (Haine and Lagarde, 2007).

Content, duration, organization and methods of training CHWs vary entirely across programmes. In countries such as India 3 months training is enough, while in other countries like Brazil about 6 to 8 months at the beginning of their career is adequate (Campos *et al.*, 2004; Leslie, 1985). The training of CHWs has been a key and major activity in most of the health programmes in Ghana based on the new Ghana CHWP manual. The CHWs manual

advocates for a three phases training with each phase followed by monitoring, mentoring and supportive supervision. As such, the minimum time frame for the completion of all three modules for the CHWs is no less than 26 weeks or six months, as per the programme design plan including 7-8 weeks classroom and 18 weeks supportive supervision and coaching. CHWs have been trained long before the Alma Ata meeting; however the basic issues such as content and duration of training and community involvement in the training is still in doubt. It is not surprise that different countries have different guidelines (Kaseje *et al.*, 2003). The empirical analysis of the duration, contents and methods of various training programs for CHWs and their impact on their performance remains insignificant (Prasad & Muraleedharan, 2007).

The role of Community Health Nurses for effective functioning of CHWs is crucial. They provide monitoring, mentoring and supportive supervision.

Human resource is one of the key elements of determining the performance of public health programs (WHO, 2006). However, studies on the quantitative links between health workers and service coverage rates are inadequate (Kruk *et al.*, 2009). Different studies reported differently on the impact of different categories of health work force in relation to other health system inputs particularly in developing countries (Kruk *et al.*, 2009).

Behaviour change takes time, hence it cannot be achieved in a short while (Orrell and Wilson, 2003). Therefore, to assess the role of CHWs as motivator there is need to evaluate the relative importance of the number of visits and frequency (Kruk *et al.*, 2009).

Establishment of strong and cordial relationship between the client and the service provide is needed for the delivery of sustained quality health care services (Orrell and Wilson, 2003). Notwithstanding, limited research is available on the provider-patient relationship and performance (Turin, 2010).

Availability and accessibility of transport options and distance traveled by CHW to provide health care services can have a huge influence on appropriate and timely delivery of health care services (Furuta and Salway, 2006). Despite general acknowledgements of its relevance, time and distance covered by a CHW is rarely considered in studies (Kabir, 2007; Gage and Guirlene, 2006).

Even though experience across countries differs there are two key commonalities that is the optimal population size that a CHW could cover and the optimal range of services that a CHW could deliver (Prasad and Muraleedharan, 2007). For instance in Sri Lanka, a CHW covers as small as 10 households offering a set of health services (UNICEF, 2004). On the other hand, in countries such as India, a CHW covers about 1000 households (UNICEF, 2004).

#### **2.4: Community Factors Influencing the Delivery of Health Service at CHPS Zone**

Several community socio-economic factors influence the performance of health care services (Addai, 2000). Decisions made by providers in relation to health care services are strongly influenced by the cultural and socio-economic dimensions in the community (Stephenson et al., 2005). The household leadership plays a key role in determining the uptake of health care services (Duong *et al.*, 2005). However, few researches have reported on the impact of family

and community support and provider's position within the household, in relation to performance of CHWs (Furuta and Salway, 2006). There are several processes through which a community could influence the performances of a CHW (WHO, 2006). However, the role of community factors on decision to offer and the uptake of health care services have been largely overlooked (Cheboi, 2011). Incorporating the role of community in the evaluation of performances of CHW will enable stakeholders to appreciate the influence of community factors to the uptake of health care services (Stephenson *et al.*, 2005).

The widely publicized views of all stakeholders on the patronization of health care services play an important role in uncertainty towards delivery and utilization of health care services (Frank, 2009). Socio-cultural and community leaders' opinion is particularly important in the demand and delivery of health care services at the community level.

According to Sathar, 2001, a study in Pakistan, for instance, reported that resistance by a husband and cultural prohibitions of a health care service were more important factors than fears of further worsening of disease status. Community lifestyle also greatly influences the delivery and health care seeking behavior of providers and community members (Shah *et al.*, 2007). Healthy communication comprises of different forms and it is essential for effective health care delivery. Its effectiveness depends on the structure, medium and process of communication for specific groups it is meant to inform. This includes government policy, health care ethics, structure and process, and the cultural acceptability within ethnic groups. Research on the relationship between these variables has been limited yet represents an important element of a national healthcare infrastructure and strategic plan that aims to bring quality and equity to

the health care for all (Calderón et al., 2007). The importance of personal safety and security in the provision and uptake of health care services cannot be overemphasized (Sibhatu *et al.*, 2008).

The extent of provider training has a huge impact on the delivery of health care services (Brabin *et al.*, 2009) however, researches on training of the health workforce are indecisive (Lindelov *et al.*, 2004). A research done in rural Kenya to evaluate the impact of health care workforce training on the use of intermittent preventive treatment (IPT) for malaria in pregnancy by (Ouma *et al.*, 2005) showed an increase in performance from 19% to 61% in 2002 and 2005 respectively after health care workers were retrained. However a research conducted in three health centers in Kampala, Uganda showed no statistical significant on malaria guidelines and treatment after training of health workers (Nankwanga and Gorette, 2008). In Ghana, a trial by the Navrongo Research center resulted in reduced child and maternal mortality, increased access to healthcare services and immunization coverage (Phillips JF et al., 2006). The results from this trial led to the conceptualization and implementation of the CHPS programme aimed at taking health care services to the door step of community members in Ghana. As a result of this success, Ghana's CHPS programme has been adjudged as one of the most successful community-based health programmes globally. (Awoonor-Williams JK, Feinglass ES, Tobey R et al., 2004), (Baatiema L, Skovdal M, Rifkin S, et al., 2013) and (Awoonor-Williams JK, et al., 2010).

Knowledge about the dangers and effect of sickness, inform our personal opinions on promotion and sustaining of any type of health care services and the intended benefits according to Kabir,

2007. Consequently, we need to assess the role of various forms of knowledge in delivery of health care services. Research findings on the factors influencing the delivery of health care services by community health workers are inadequate (Deventer and Radebe, 2009).

The tendency of clients to challenge the performances of CHWs may also contribute to their poor performances (Turin, 2010). Cultural orientation also affects the health seeking behavior of community members and this affect the performance of CHWs. This suggests that medical need is determined not only by the presence of physical disease but also by the cultural perception of illness (Addai, 2000). In communities where due to cultural prohibitions, women are not supposed to mix freely with men, hence performance of CHWs by opposite sex may be negatively affected. Few researches assessed beliefs and attitudes directly (Gabrysch and Campbell, 2009).

Generally job satisfaction, influenced by institutional factors, such as working environment, remuneration, conditions of service, management capacity and styles, professional advancement and work place safety is a major determining factor of health care service delivery (WHO, 2006).

Community health workers are members of the communities where they serve with families that depend on them financially. Currently, their job has gone beyond voluntary work because their services are being patronized by all stakeholders leaving them with no time to do anything on their own for economic gains. Hence their job is now full time resulting in most of them becoming unsatisfactory due to no or poor remuneration (Simkhada *et al.*, 2007).

## **2.5: Performance and Effectiveness of CHWs**

Effective community health worker programme requires guidelines with well-planned theoretical and practical training modules. Activities of CHWs are conducted at the community level under the monitoring, mentoring and supportive supervision of Community Health Nurses and Community Health Committee members (Karabi *et al.*, 2001). However studies have shown contrasting results on the performance of Community Health Workers (CHWs) (HENNET, 2010). Democratic Republic of Congo for example, activities of CHWs were found to show positive impact on malaria treatment (Kidane and Murrow, 2000). Moreover, large centrally managed CHWs programmes failed to perform (Friedman, 2004).

The contribution of Community Based Surveillance Volunteers, was vital in Ghana's current success in eradicating the guinea worm. (Glenshaw MT, Roy S, Ruiz-Tiben E, et al., 2009; World Health Organization, 2007). Ghana is guinea worm free currently. Reports from the GHS and other stakeholders have highlighted the vital roles played by CHWs in eradicating the guinea worm in Ghana. (Dil Y, Strachan D, Cairncross S, et al., 2012; Solomon AW, Akudibillah J, Abugri P, et al., 2001; McDonald M, Hunter J, Diallo DD, et al.; 2004; Hochberg N, Ruiz-Tiben E, Downs P, et al., 2008). Their roles included but not limited to community mobilization for awareness creation on the spread of the guinea worm, administration of palliative care, door-to-door distribution of drugs, referral to health centres for treatment, and distribution of water filters in communities (Cairncross S, et al., 1996 and Tayeh A, et al., 1996). The role of motivation in enhancing and sustaining the performance of CHWs has been indicated in most research works (Ballester, 2005). While some report that monetary incentives does increase retention of CHWs across countries (Karabi, *et al.*, 2001) other results show quite

varied experience. Problems associated with monetary incentives are quite enormous; money may not be enough, may not be paid regularly, or may stop altogether. However, there are some success stories of programs paying CHWs (Karabi, *et al.*, 2001). Avalanche of CHWs have benefited from in-kind incentives without any challenge. Consequently, non-monetary incentives are vital to the success of any CHW program (Prasad and Muraleedharan, 2007).

Relatively small things such as an identification cards that would enable them and immediate families enjoy prompt health care services at health facilities without joining a queue and opportunity for their children to gain admission to any health institution of their choice once they have the needed qualification can provide a sense of pride in their work and increased status in their communities. In the end, the performance of a CHW depends on their relationship with the community and social dimension of the communities they serve.

Different CHWs will need different types of motivation, depending on experience, other job opportunities available, the economic situation of the community and other factors as a result of some challenges confronting the institutionalization and operation of the CHW programme, both the performance and the feasibility of implementing and sustaining large-scale CHW programs have been called into question (Karabi, *et al.*, 2001). High attrition rates cause several challenges. Frequent turnover of CHWs result in a lack of stable relationships established among a CHW, community, and health system. Considerable investment made in each CHW, and program costs for identifying, selecting, training and deploying the CHW rise with high attrition rates. When CHWs vacate their posts, the opportunity is lost to build on their experience and further develop their skills over time through refresher training (Karabi, *et al.*,

2001).

## 2.6: Summary of Literature Review.

From the reviewed literature there is no decisive clear package of incentives which is successfully tailor made to motivate CHWs to continue performing. Rather, a complex set of factors affects CHW motivation and attrition, and how these factors play out varies considerably from country to country. There are a limited number of studies evaluating demographic characteristics of the community level health care service provider such as age but not by cohorts, gender and marital status. However several studies have examined the role of education status, residents; source of income; knowledge of the health provider and attitude and practice but these studies were limited to quantitative research and non on qualitative research design. On health system factors, there are so much literature on cost of financing but not on community based health care financing; quality of services; governance; accessibility and availability of drugs and supplies however the findings are inconclusive and varied. Studies on the role of monitoring, mentoring and supportive supervision and evaluation; communication and leadership; patient- provider relationship; area covered by community health worker are limited. The question of how to sustain a long-term CHW program and to retain CHWs requires additional investigation.

In community factors the role of religion; family support; recognition of health services; community participation and security have been examined but the results are inconsistent across studies. The role of alternative medicine; beliefs, traditions and norms; knowledge of community health worker and the service they offer; motivation and privacy and confidentiality have not been fully explored. The fact that the performance of the CHW depends almost entirely on his

or her relationship with the community is surprisingly often overlooked. There are several quantitative studies on the role of CHW's perception of health care services but limited qualitative research. This study therefore seeks to address this knowledge gap.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **3.0: Introduction**

This chapter shows the techniques and tools that were used to collect data from the study participants. It includes research design, study site, study variables, sampling techniques and sample size determination. In addition, it describes the research instruments used, data collection procedures, quality assurance, data processing and analysis, and ethical consideration.

#### **3.1: Research Design**

A cross sectional study design was used to determine health sector and community factors influencing the performance of Community Health Workers in the Community Health Worker Programme in Upper Manya Krobo District. This study design adopted both quantitative and qualitative methods of data collection. On the quantitative aspect, structured questionnaires were used to assess socio-cultural, economic, demographic characteristics, knowledge, attitudes and practices of CHWs. This approach was deemed most appropriate for the study because of its ability to bring out a diverse range of baseline information (Mugenda, 2008). On the qualitative aspect, key informant interviews and focus group discussion were employed to obtain opinion of the Regional CHPS Coordinator, DHMT members, Community Health Nurses who are heads of the CHPS zones, CHWs and the Community Health Committee Leaders on the factors affecting their performance. The approach was used because of its ability to bring out in-depth views to validate quantitative data obtained from the CHWs.

### **3.2: Study Site**

The study was conducted in Upper Manya Krobo District. It shares boundaries with Kwahu North, Fanteakwa, Yilo Krobo, and Lower Manya Krobo districts and the Volta Lake. The District has six sub-districts with an estimated population in 2017 of about 83,856 with Aseewa as the district capital. There are 198 operational communities with poor mobile communication. The District is predominantly rural and deprived. The people are mainly farmers, traders and fisher-folks.

The ethnic groups are mainly Krobos with Ewes scattered along the river banks and a few Akans. The settlement system is called Huzar and scattered on their farmlands. Inheritance is patrilineal. Chieftaincy is a highly respected institution and is the major medium of communication. A greater proportion of the road networks in the district are un-tarred. The main means of transport is by minibuses (Tro-Tro), taxis, and large mummy trucks.

The District health services are organized around one hospital, three maternity homes, four health centers and 25 CHPS compounds. The District Health Administration ensures that services provided are in accordance with the national policies and regional priorities. (Upper Manya Krobo District Profile, 2017).

### OPERATIONAL MAP OF UPPER MANYA KROBO DISTRICT



Figure 3.1: Map of Upper Manya Krobo district

### 3.3: Variables

The predictor variables included demographic characteristics (age, sex, marital status, educational status), economic status (employment, incentives, allowances, reimbursements), health system determinants (governance, financing, health workforce, information systems, scope of work, supplies, monitoring, mentoring and supportive supervision, training, refresher course, exchange visit, means of transport, certification) and community factors (governance/leadership, social belonging/ cohesion, resource mobilization, communication, family support and security).

The outcome variables included performance of CHWs which were assessed in terms of achievement against the set targets in a month as per the CHWP strategy.

### 3.4: Operationalization of the Variables

#### 3.4.1: Predictor Variables

These included all the variables in the three specific objectives (demographic, health systems and community factors) as explained below.

- **Age-** It is defined as age of the respondents in completed years.
- **Attitude-** Community perceptions of health services rendered to the community by the CHWs
- **Communication-** It is defined as channel of communication used by various health service providers at various level and community.
- **Community-** refers to people with a stake in health service provided by the CHWs at CHPS zone.

- **Financing** –It is defined as the source of monetary incentives provided to the CHWs to facilitate delivery of health care services at the CHPS zone.
- **Gender** - Whether men or women respondents.
- **Health Systems** – refers to issues of health workforce, information systems, supply of commodities, service delivery, financing and governance at CHPS zone.
- **Knowledge** - Understanding of disease conditions and their mitigation measures by CHWs
- **Level of Education** - As the highest attained formal education by the respondents.
- **Marital Status** - referred to family social status such as married, divorced or single respondents.
- **Participation** - is defined as people’s contributions towards the health agenda and this includes their roles and responsibility in promoting health.
- **Practices** - Health seeking behavior patterns amongst the community.
- **Religion** – Refers to the respondent’s particular system of belief.
- **Sex** – Sex orientation of the respondents ie ether being male or female
- **Source of Income** - Refers to whether the respondent is on any kind of employment or is a dependent.
- **Technical support** - Refers to the facilitative support given to CHWs by the relatives, community or district administration to enhance their performance per month.

### **3.4.2: Outcome Variables**

The outcome variables included performance of CHWs which were assessed in terms of achievement against the set targets in a month as per the CHWP strategy. These are;

- Number of community mapping conducted
- Number of household registration and household vulnerability assessment
- Number of community disease surveillance conducted
- Number of routine home visits (RHVs): household assessment and family health check
- Number of vital events conducted
- Number of emergencies managed and referrals done
- Number of home-based care conducted
- Number of timed and targeted counseling (TTC) conducted
- Number of mobile clinics support provided
- Number of monitoring of work done by volunteers
- Number of community-based treatment (iCCM) for diarrhea, malaria and respiratory infections conducted
- Number of community-based care for HIV and TB conducted.

### **3.5: Study Population**

All the 45 Community Health Workers with their 25 supervisors in the twenty-five functional CHPS zones which have been operational for the last six months in Upper Manya Krobo District were selected and included in the research. Four DHMT members who have been part of the CHWP were selected and included in the research. Twenty five community health

committee leaders were randomly selected to be part of the research. One Regional CHPS coordinator was selected and included in the research. One Youth and Employment Agency coordinator was selected and included in the research.

### **3.5.1: Inclusion and Exclusion Criteria**

**Inclusion criteria:** - CHWs who live in Upper Manya Krobo District were included in the research.

**Exclusion criteria:** - The CHWs who were seriously ill or not available were not included in the study.

### **3.6: Sampling Technique**

Purposive sampling technique was used. All the 25 functional CHPS zones with 45 CHWs, 25 supervisors and CHC leaders out of the 35 demarcated CHPS zones were selected to participate in the research. One Regional CHPS Coordinator, District YEA Coordinator and four DHMT members also participated.

### **3.7: Research Instruments**

Both quantitative and qualitative data collection tools were developed and used for the data collection exercise. A structured questionnaire was developed for collection of quantitative data. The questionnaire was pre tested in Yilo Krobo district before actual data collection to verify the validity and reliability before the actual study was done. The questionnaire was administered in English as the CHW could read and write English. FGD guide was developed for the CHWs who did not participate in the quantitative survey and was open ended. Key informant interview questionnaire was also developed for DHMT members, CHW's supervisors, CHC members, Regional CHPS coordinator and YEA coordinator.

### **3.8: Data Collection Techniques**

#### **3.8.1: Structured Interview Questionnaire**

The quantitative data was collected using a structured questionnaire administered to 45 CHWs. The guide covered sections on socio-demographic characteristics, Health system determinants, community factors as well as demography, knowledge, attitudes and practices of CHWs towards the effective delivery of health care services at community level. The interviews were conducted informally in a relaxed atmosphere. The research assistants checked the questionnaire for completeness and consistency from the responses at the end of each day.

#### **3.8.2: In-depth Interview**

This tool was used to collect data from 25 selected community health committee members to validate the information from CHWs and confirm services rendered to the community. This captured the client satisfaction on the services offered by CHWs.

#### **3.8.3: Implementation Quality Assurance**

This tool was used to collect data from key informants which included twenty five supervisors of the CHPS zones, one Regional CHPS Coordinator, one District YEA Coordinator and four DHMT members. It included information on health system and community factors influencing provision of health services offered by CHWs.

### **3.9: Quality Assurance**

The following precautions were put in place to ensure quality data:

The research instruments were pretested to check for correct wording, clarity and order of the questions. The research assistants were trained on the data collection techniques. The

researcher checked the completed questionnaire to ensure completeness and consistency in the information collected by the research assistants. Spot check of interview transcripts and translation were regularly conducted to ensure completeness of the transcription and accuracy of the translation for the qualitative data.

Data verification was done which was then followed with coding of all transcripts.

### **3.10. Pretest**

The questionnaire, in-depth interview (IDI) guide and Implementation Quality Assurance (IQA) tools were pre tested in Yilo Krobo district a neighboring district, before the actual survey to verify the validity and reliability of the research. The pretest exercise was to assess the research instruments to verify whether the questions to be asked would be useful in achieving the research objectives. Thereafter the tools were reviewed. The questionnaire, IQA and IDI guide was administered in English as the CHWs and key informants could read and write English.

#### **3.10.1: Validity**

Five research assistants were selected prior to the research. They were trained on how to use questionnaire, to avoid mistakes in recording, the meaning of each item of the questionnaire, and how to rephrase questions that respondents would find difficult to understand to reduce interview bias. All the questionnaires were checked for anomalies after administration.

#### **3.10.2: Reliability**

The reliability of the questionnaires/ data collection tools were assured by ensuring that the same structured questionnaire, IQA and IDI guide were used for all the respondents. The data

collection tools were administered in English since all the respondent speak and understand the language.

### **3.11: Data Processing and Analysis**

The quantitative data was cleaned, coded and entered in excel before it was imported into STATA version 15 for statistical analysis for significance at  $p < 0.05$ . Univariate analysis using descriptive statistics was used to find the means and standard deviations of the continuous variables and frequencies for categorical variables. Bivariate analysis using Fisher's exact Chi-square was used to ascertain the association between the outcome variables (performance of CHWs which was assessed in terms of achievement against the set targets in a month as per the CHWP strategy) and the predictor variables (socio-demographic, health systems and community factors). All statistical tests were run at a significant level of 5 percent. Multivariate analysis using multiple logistic regression was further performed to determine the association between the outcome and predictor variables at 95% confidence interval. Frequency distribution tables, bar charts, and histograms were used to present the data.

Qualitative data was analyzed using ATLAS.ti. software of version 7.5.7 applying content analysis technique. The audio tapes of the in-depth interviews were played and transcribed verbatim. The observation notes were typed out. Transcripts of the interviews, observations and notes were read over and over to obtain a sense of the whole: perspectives of research participants. Participant's responses were ordered and reduced into codes. The coded responses were then categorized by grouping codes, which share a common meaning Krippendorff, (1980) in (Graneheim & Lundman, 2003). Themes were then created to link the underlying meanings together. Summaries of the data were displayed in compilation sheets, diagrams, etc

to facilitate interpretation. Some results were also presented in verbal quotations, tables, pie charts.

### **3.11.1: Rating of Delivery of Health Services at the CHPS Zone**

The study used thirteen key indicators that measure overall performance of CHWs at the CHPS zone; number of community mapping conducted, number of registration of vital events conducted, number of RHVs: household assessment and family health check, number of community disease surveillance conducted, number of household registration and household vulnerability assessment, number of emergencies managed and referrals done, number of home-based care conducted, number of TTC conducted, number of mobile clinics support provided, number of monitoring of work done by volunteers, number of community-based treatment for diarrhea, malaria and respiratory infections conducted, number of Community-based care for HIV and TB conducted and number of Mobile clinics support provided. A code of one was allocated to every service offered above the given targets (yes=1) and zero for services delivered below given targets (no=0). A dichotomous outcome (performance of delivery of health services at the CHPS zone) was done by scoring thirteen target variables where one meant yes and zero meant no for delivery of health services at the CHPS zone as illustrated in table 3.2 below.

**Table 3.11.1: Rating scale for delivery of health services at CHPS zone**

Service	Achieved or not	
	Yes	No
Conduct community mapping	1	0
Conduct registration of vital events	1	0
Achieve routine home visits (RHVs): household assessment and family health check	1	0
Conduct community disease surveillance	1	0
Conduct household registration and household vulnerability assessment	1	0
Conduct management of emergencies and referrals	1	0
Provide Mobile clinics support	1	0
Providing community-based treatment for diarrhea, malaria and respiratory infections	1	0
Community-based care for HIV and TB	1	0
Conducted expected number of health education	1	0
Average number of working hours per week	1	0
Understand role clearly and targets	1	0
Conducted expected number of action planning meetings with community and monitoring work of volunteers	1	0

The overall results were computed for all the questionnaires and aggregate average results in percentage for ‘yes’ meant delivered services while ‘no’ meant no delivery of services. The performance was further categorized into poor and good. The scores between 1 to 7 and 8 to 13 meant poor and good performances respectively.

### **3.11.2: Implementation Quality Assurance**

The study used twenty nine quality standards that measured overall Implementation Quality Assurance (IQA) of the CHWP. Beside each essential element, there was a checklist of critical components of the essential element. As the assessment was conducted, the boxes that applied to the programme were checked. The overall IQA was the mean of individual IQA scores from all the essential elements. An overall IQA score of 1.5-2 indicated high fidelity; 1.0-1.4 indicated moderate fidelity; less than 1.0 indicated low fidelity. 0= not/never done, 1=sometimes done, 2=mostly done, 3=always done.

### **3.12: Ethical Considerations**

In complying with the national research standards, the researcher observed the code of ethics in the process of reviewing the relevant literature, data collection and writing of thesis. Authorization to conduct the research was obtained from Ethics Review Committee, Research and Development Division of the Ghana Health Service in Accra, the Upper Manya Krobo District Assembly, the District Health Directorate, community leaders, and community members as well. Community entry protocol was observed appropriately.

The data collection tools were administered in a conducive environment. The data was collected by trained research assistants, who were trained on research ethics to introduce themselves properly to the respondents and conduct themselves appropriately. Data was collected anonymously, without using the name of the interviewee in the questionnaire. The research participants were provided with the information about the research before any consent to participate was obtained. Informed participant's consent forms were provided to enable each participant to indicate their willingness to participate in the research by signing their consent.

However, participants who could not sign were made to thumbprint their consent. Participants were adequately informed about the study including adherence to confidentiality ethics.

#### **3.12.1: Possible Benefit**

Participants were informed that there was no direct benefit to them, however the information obtained would enable us understand factors influencing the performance of CHWs in the CHWP so that appropriate remedial measures would be implemented to address any challenges that would be found.

#### **3.12.2: Possible Risk and Discomfort**

Participants were informed that there was no risk associated with participation in the study as it employed only interactive methods of data collection except for a use up of participant time.

#### **3.12.3: Compensation**

Participants were informed that there was no monetary compensation as well as no cost to the research participants. However, they were thanked for being part of the research, which may ultimately improve on the performance of CHWs in the CHWP.

#### **3.12.4: Privacy and Confidentiality**

The interviews were conducted in a private setting such as a vacant room in the unit to ensure privacy of information given out. All information that was provided by the participants would not be disclosed to third party and their names would not appear in any report or publication. The audio tape and note pads that contained the information collected were stored safely in a locker and only the researcher had access to the information.

### **3.12.5: Dissemination**

The researcher would keep all the data collected for 5 years to allow for publication, after which it would be destroyed. Also the results from the research would be presented at professional meetings and published in scientific journals.

### **3.12.6: Voluntary Participation and Right to Leave the Study**

The consent forms were read aloud by research assistants to the respondents, in most cases respondents were given the form to read, whereupon the respondent signed or thumb printed the form if agreed to participate. The participants were assured that their participation in the research was not compulsory and they could withdraw from the research if they felt uncomfortable at any point for any reason without any consequences.

### **3.12.7: Financial Information**

The researcher has not received any external funding. Hence it was self-financed.

### **3.12.8: Conflict of Interest**

There was no known conflict of interest as far as the study was concerned.

## CHAPTER FOUR

### RESULTS

#### 4.1: Introduction

The findings of the research on the performances of community health workers in Upper Manya Krobo District (UMKD) are presented in this chapter. Detailed analysis of the data, interpretation and description of the results with regard to objectives and the research questions are given. The findings are based on information from questionnaires administrations from all the 45 CHWs, 4 DHMT, a YEA coordinator, a Regional CHPS coordinator, 25 CHOs, 25 Community Health Management Committee (CHMC) leaders and a focus group discussion and key informant interviews. A total target of 45 respondents (CHWs) participated in quantitative administration, given a response rate of 100%.

#### 4.2: The CHWs Own Experiences and its Effect on the CHW Programme

Community Health Workers own experiences and its effect on the CHW programme were assessed as follows:

##### 4.2.1: Demographic Characteristic of the Respondents

The total number of CHWs interviewed was 45. The demographic characteristics of the study population are as shown in Table 4.2.1. The median age for CHWs was 25 years (IQR 21-30). About sixty-two percent (62%) and thirty-three percent (33%) of the respondents were between the age bracket of 18 to 25 years and 26 to 35 years respectively while 2% of the respondents were between the age brackets of 36 to 49 years and over 50 years respectively.

Majority of the study participants 27 (60%) were males and on marital status; 35 (78%) were single, 9 (20%) were married while 1 (2%) were either widowed or separated. With respect to education, 42 (93%) had completed secondary education while 3 (7%) had started secondary school but could not complete. Forty-four of the respondents (98%) were Christians while 1 (2%) were Muslims as illustrated in table 4.2.1.

**Table 4.2.1: Demographic characteristics of study respondent**

<b>Characteristics</b>	<b>Frequency (n=45)</b>	<b>Percentage (%)</b>
<b>Gender</b>		
Male	27	60.0
Female	18	40.0
<b>Marital status</b>		
single	35	77.8
married	9	20.0
widowed/separated	1	2.2
<b>Education</b>		
Secondary completed	42	93.3
Secondary incomplete	3	6.7
<b>Occupation</b>		
None	10	22.2
Business	1	2.2
Employed	28	62.3
Farmer	6	13.3
<b>Religion</b>		
Christian	44	97.8
Muslim	1	2.2
<b>Main source of income</b>		
Salaried	31	68.9
Farmer	5	11.1
Self employed	3	6.7
Casual labor	2	4.4
Family support	4	8.9
<b>Average monthly income</b>		
<500.00	44	97.8
2001.00-2500.00	1	2.2
<b>Age</b>		
18-25 yrs	28	62.2
26-35yrs	15	33.4
36-49yrs	1	2.2
>50 yrs	1	2.2

Only 10 (22%) of the respondents were not engaged in other forms of employment while the majorities were engaged. Among the respondents engaged in other forms of employments, 1 (2%) were business people, 6 (13%) were farmers while 28 (62%) hustle in other employments. While majority of the respondents 41 (91%) were independent, only 4 (9%) of the respondents were still being supported by their families. Most respondents 44 (98%) earned a monthly income less than five hundred Ghana cedis (GH¢500.00) and 1 (2%) earned between GH¢ 2001.00 to GH¢2,500.009%.

#### 4.2.2: Demographic Factors in Relation to CHWs Performance at CHPS Zone

The demographic characteristics were determined by gender, marital status, education, occupation, religion, source of income, average monthly income and age. Among all these, it is only main source of income (OR: **16.111**, CI: 1.160-223.800 p=0.038) that was statistically significant in relation to the performance of CHW in delivery health services at CHPS zone as shown in table below.

**Table 4.2.2: Association of selected demographic factors with performance of CHWs**

Demographic Factors	Performance (n=45)		Bivariate analysis	
	Poor n (%)	Good (%)	OR (95% C.I.)	P value
<b>Gender</b>				
Male	24 (88.9)	3 (11.11)	Reference	
Female	16 (88.9)	2 (11.11)	1.06 (0.19-16.04)	0.947
<b>Marital status</b>				
Single	32 (91.4)	3 (8.6)	Reference	
Married	7 (77.8)	2 (22.2)	3.09 (0.508-18.853)	0.220
Widowed/Separate	1 (100.0)	0 (0.0)	3.09(0.105-91.384)	0.513

<b>Education</b>				
Secondary completed	38 (90.5)	4 (9.5)	Reference	
Secondary incomplete	2 (66.7)	1 (33.3)	5.13 (0.542-48.579)	0.154
<b>Occupation</b>				
None	9 (90.0)	1 (10.0)	Reference	
Business	0 (0.0)	1 (100.0)	19.0 (0.502-719.739)	0.112
Formal Employed	27 (96.4)	1 (3.6)	0.760 (0.068-8.507)	0.824
Farmer (peasant)	5 (83.3)	1 (16.7)	1.727(0.143-20.936)	0.668
<b>Religion</b>				
Christian	39 (88.6)	5 (11.4)	Reference	
Muslim	1 (100.0)	0 (0.0)	2.39 (0.086-66.389)	0.607
<b>Source of income</b>				
Salaried	14 (93.3)	1 (6.7)	Reference	
Farmer	3 (60.0)	2 (40.0)	6.905 (0.667-71.442)	0.105
Self employed	1 (33.3)	2 (66.7)	16.111 (1.160-223.800)	<b>0.038</b>
Casual labour	2 (100.0)	0 (0.00)	1.933 (0.060-62.171)	0.710
Family support	4 (100.0)	0 (0.00)	1.074 (0.037-31.258)	0.967
Volunteer	15 (100.0)	0 (0.00)	0.312 (0.012-8.285)	0.486
<b>Average monthly income</b>				
<500.00	39 (88.6)	5 (11.4)	Reference	
2001.00-2500.00	1 (100.0)	0 (00.0)	2.394 (0.086-66.389)	0.607
<b>Age</b>				
18-25 years	25 (89.3)	3 (10.7)	Reference	
26-35years	14 (93.3)	1 (6.7)	0.754 (0.100-5.673)	0.784
36-49years	0 ( 0.0)	1 (100.0)	21.857 (0.737-648.413)	0.075
50-59 years	1 (100.0)	0 (0.0)	2.429 (0.082-72.046)	0.608

Significant odd ratio values (unadjusted) in bold

#### 4.3.: Health Sector Participation in the Institutionalization of CHW Programme

The first objective of the study was to describe type and level of health sector participation in the institutionalization of CHW programme in the study area of Ghana. These factors essential elements which were assessed. The overall Implementation Quality Assurance (IQA) is the mean of individual IQA scores from all the essential elements. An overall IQA score of 1.5-2

indicates high fidelity; 1.0-1.4 indicates moderate fidelity; less than 1.0 indicates low fidelity. 0= not/never done 1=sometimes done, 2=mostly done, 3=always done. Majority of the CHW functionality, start up and program management processes were never done and sometimes done resulting in low fidelity as shown in table 4.3.1 below.

**Table 4.3.1: CHW functionality, start up and program management**

#	Quality standard	Explanation of variance
1.	CHW recruitment process is community-driven, transparent and engages all existing cadres without the creation of new ones.	27(87%) respondents said it was never done while 4 (13%) said it was sometime done representing low fidelity. This is because District Health Administration and community involvement was very poor.
2	CHW role is designed with clarity, including competencies with agreement of community, CHW, and health system.	28(90%) respondents said it was never done while 3 (10%) said it was sometime done representing low fidelity. This is because CHPS Coordinators, SDHMT and CHMT members were not involved
3	Training quality standards for ToF and CHW trainings were observed	27(87%) respondents said it was never done while 4 (13%) said it was sometime done representing low fidelity. This is because: <ol style="list-style-type: none"> <li>1. Facilitators were not trained</li> <li>2. CHOs and CHWs were not trained together</li> <li>3. All the stakeholders were not involved in the planning stage</li> <li>4. The duration for the training was only 11 days instead of 6 weeks.</li> <li>5. The training was not done in modular form. All the three modules were not covered. Especially the TTC module</li> </ol>

4	Initial CHW training is sufficient to prepare them for their role with appropriate time, trainers and practical training.	27(87%) respondents said it was never done while 4 (13%) said it was sometime done representing low fidelity. This is because: 1. The duration for the training was only 11 days instead of 6 weeks. 2. The training was not done in modular form. All the three modules were not covered. Especially the Time and Targeted Counselling (TTC) module 3. Competency based assessment for each CHW was not done. 4. There was no field practical 5. Training was not evaluated 6. Certificate of completion was not given
5	Ongoing training is planned to ensure necessary revision, skills-building and considering estimated attrition rates.	31(100%) respondents said refresher training trainings were never done because there was no plan for that.
6	Equipment and supplies are available and sufficient to deliver services including medicines, supplies, and job aids.	31(100%) respondents said the programme did not provide any logistics because it was never plan.
7	CHW supervisors are trained, equipped and supported to conduct regular supportive supervision with at least four contacts per year	4 (13%) respondents said it was never done, 11 (35%) said it was sometime done and 16 (52%) mostly done representing low and moderate fidelity respectively. This is because: 1. The duration for the training was only 11 days instead of 6 weeks 2. The training was not done in modular form. All the three modules were not covered. Especially the Time and Targeted Counselling (TTC) module 3. Competency based assessment for each CHW was not

		<p>done.</p> <p>4. There was no field practical</p> <p>5. Training was not evaluated</p> <p>6. Certificate of completion was not given</p>
8	<p>Individual supportive supervision is conducted <i>in situ at least 4 times a year and</i> are designed and implemented to identify and resolve individual performance quality.</p>	<p>4 (13%) respondents said it was never done while 27(87%) said it was sometime done representing low fidelity. This is because:</p> <ol style="list-style-type: none"> <li>1. Ghana Health Service do not conduct the monitoring as schedule.</li> <li>2. Currently it is YEA staff that conduct some monitoring</li> </ol>
9	<p>Monthly meetings take place amongst CHWs and their supervisors in which data is collected and utilized to improve implementation and accountability</p>	<p>4 (13%) respondents said it was never done while 27(87%) said it was sometime done representing low fidelity. This is because: the meeting is sometimes done but no data is collected and utilized to improve implementation</p>
10	<p>Individual Performance Evaluation occurs at least annually and is designed to fairly assess work and improve quality</p>	<p>4 (13%) respondents said it was never done while 27(87%) said it was sometime done representing low fidelity. This is because: community inputs/ feedback are sometimes incorporated and performance is recognized</p>
11	<p>Incentives - Standards and methods for performance-based incentives are ethical, non-competitive, sustainable, and under a unified policy</p>	<p>2 (6%) respondents said it was never done while 29(94%) said it was sometime done representing low fidelity. This is because:</p> <ol style="list-style-type: none"> <li>1. Communities sometimes provide feedback that are incorporated and performance is recognized</li> <li>2. Job tools were not provided exclusively for CHWs. They rely on tools at health facilities</li> </ol>

		3. Sometimes CHWs get paid for no work done
12	Community engagement and accountability structures are in place, functional and provide oversight to CHW activities.	<p>2 (6%) respondents said it was never done while 29(94%) said it was sometime done representing low fidelity. This is because:</p> <ol style="list-style-type: none"> <li>1. Community Health Management Committees sometimes provide feedback that are incorporated and performance is recognized</li> <li>2. CHMCs did not receive any orientation on the CHWP</li> <li>3. CHWs integrate their activities with that of health sector</li> </ol>
13	Referral system for emergency evacuations of cases is in place and referrals documented	<p>2 (6%) respondents said it was never done while 29(94%) said it was sometime done representing low fidelity. This is because:</p> <ol style="list-style-type: none"> <li>1. Referral system for emergency evacuations of cases is in place but referrals not documented</li> <li>2. Post-referral follow ups are rarely done</li> <li>3. Counter referrals are rarely completed for follow up visits</li> </ol>
14	Opportunity for advancement, growth, promotion and retirement for CHW is considered	<p>27(87%) respondents said it was never done while 4 (13%) said it was sometime done representing low fidelity. This is because:</p> <ol style="list-style-type: none"> <li>1. There is no policy in place that offers advancement to CHW who performed well.</li> <li>2. No plans for routine trainings</li> <li>3. Limited system for evaluating CHW performance.</li> </ol>
15	Documentation, Information Management is in place which is consistent, transparent and used for service improvements	<p>3 (10%) respondents said it was never done while 28(90%) said it was sometime done representing low fidelity. This is because:</p> <ol style="list-style-type: none"> <li>1. CHWs do not have reporting forms. Some bought their own note books for documenting some activities.</li> <li>2. They do not provide communities with data but do provide</li> </ol>

		<p>CHOs with limited data</p> <p>3. CHWs rarely participate in data-based problem solving</p>
16	<p>Long-term sustainable medical supply and restock strategies are established, and include quality, theft and stock out checking systems.</p>	<p>31(100%) respondents said there is no Long-term sustainable medical supply and restock strategies that include quality, theft and stock out checking systems.</p>
17	<p>Linkage to Health System</p>	<p>2 (7%) respondents said it was never done, 18 (58%) said it was sometime done and 11 (35%) said it was mostly done representing low and moderate fidelity respectively. This is because:</p> <ol style="list-style-type: none"> <li>1. The CHWP enjoy support from GHS</li> <li>2. The CHW do not have a reporting relationship with the local health authority</li> <li>3. There is limited interaction between the CHW, CHMC members and GHS.</li> </ol>
18	<p>Programme Performance Evaluation</p>	<p>31(100%) respondents said programme performance evaluation that give CHWs feedback on their performance has never been done</p>

Moreover, excerpts from Key Informant Interview suggest that the protocols for selection, training and deployment of CHWs were not followed. A member of DHMT (the District Nutrition Officer) summarized the situation as follow:

*Recruitment, training and deployment of CHWs to the CHPS zones were poorly done.*

*The training was not done in modular form, the two modules instead of three that were*

*used for the training were over summarized, the class room training also took 11 days instead of 6 weeks. Moreover, field practical was exempted.*

A Community Health Management Committee member also reported that they were excluded in the recruitment processes; the old volunteers were not given opportunity and they brought CHWs who were alien to their communities and later left the job.

#### **4.4: The Influence of Health System Factors in CHWs Performance**

The second objective of the research was to determine the role of health sector in the operations of the CHW programme at CHPS zones. These factors such as trainings provided, duration of training, field practical, adequacy of trainings, field-based supervision of modules, agreement for progression of modules, supplies (equipment and drugs), seminars as refresher courses, scheduled supportive supervision, monthly meetings, Evaluation of performance, payments as rewards and use of feedback information.

##### **4.4.1: Types of Training and its Adequacy**

Type of trainings; Module 1(Community health basics) (OR: **3.791**, CI: 0.610-4.603 p=23.553) and Module 2 (Community based care) (OR: **2.852**, CI: 0.100-80.981 p=0.539) in general had no statistical significance to performance as shown in table 4.4.1.

Moreover, excerpts from Focus Group Discussion (FGD) suggest that training duration, content and tools to be used by CHWs to enhance their performances was inadequate with one FGD participant summing as follow:

*The training was for only 11 days with no field practical. The CHWs were not given the needed tools and medicines to work. Consequently, they just support the Community Health Nurses at the CHPS zones to conduct their routine work schedules this resulted in their inability to work effectively as designed by the CHW programme.*

The adequacy of training was also not statistically significant (OR: **0.869**, CI: 0.153-4.928 p=0.874) to performance.

**Table 4.4.1: Health system factors in relation to performance**

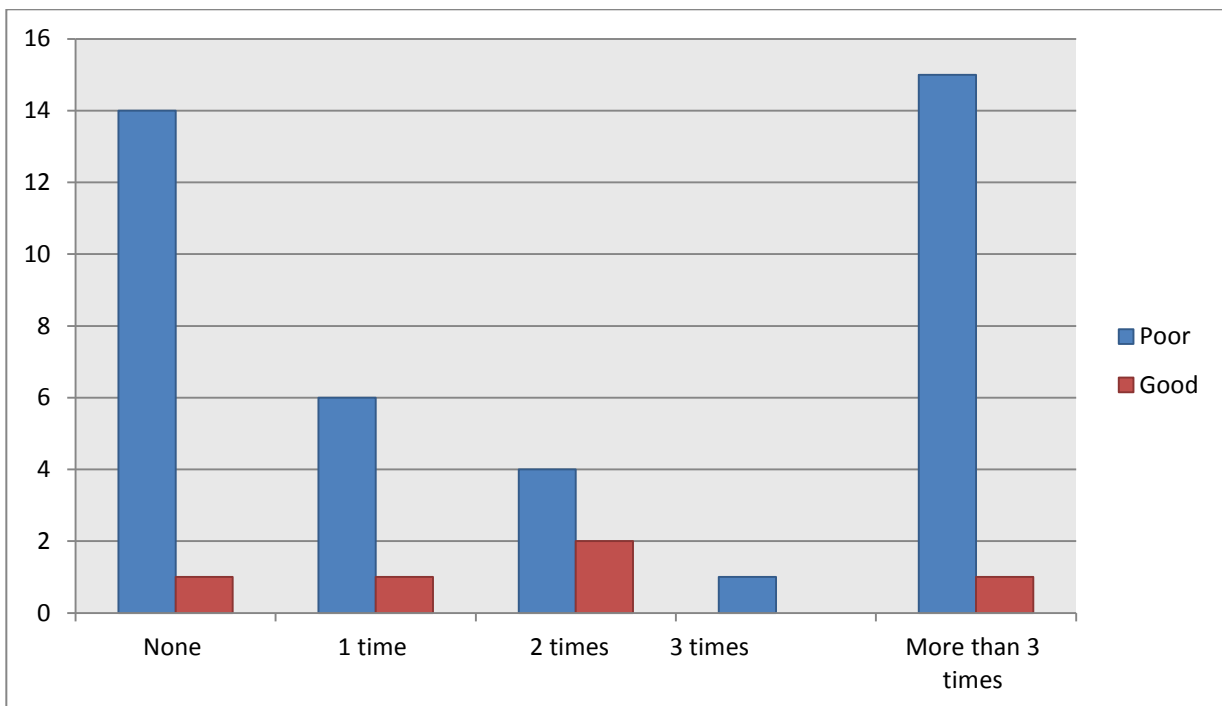
Factors	Performance of CHWs (n) (%) All * (n=45)		Bivariate analysis	
	Poor (%)	Good (%)	OR (95% C.I.)	P value
<b>Training Attended</b>				
Module 1(Community Health Basics)				
Yes	36 (90.0)	4(10.0)	Reference	
No	4 (80.0)	1 (20.0)	3.791 (0.610-4.603)	23.553
Module 2 (Community based care)				
Yes	34 (91.9)	3 (8.1)	Reference	
No	6 (75.0)	2 (25.0)	2.852 (0.100-80.981)	0.539
<b>Adequacy of training</b>				
Yes	22 (88.0)	3(12.0)	Reference	
No	18 (90.0)	2 (10.0)	0.869 (0.153-4.928)	0.874

#### 4.4.2: Schedule Individual Supportive Supervision Visit

Schedule Individual Supportive Supervision Visits for the CHWs in the last three months preceding the study such as only one time (OR: **2.231**, CI: 0.193-25.721 p=0.520), two times

(OR: **5.370**, CI: 0.547-52.709 p=0.149), three times (OR: **3.222**, CI: 0.087-119.736 p=0.526) and more than three times (OR: **0.935**, CI: 0.087-10.045 p=0.956) in general had no statistical significance to CHWs performance. Moreover, Fourteen (93%) of the respondents who received no schedule individual supportive supervision visits in the last three months preceding the study performed poorly. Six (86%), 4 (67%), 1 (100%) and 15 (94%) of the respondents who received one time, two times, three times and more than three times respectively schedule individual supportive supervision visits in the last three months preceding the study performed poorly as shown in figure 4.4.1.

### Schedule individual supportive supervision visit



**Figure 4.4.1: Graph of respondents' scheduled individual supportive supervision visit and performance**

One FGD member candidly commented....*Since their deployment to the CHPS zones, there has not been individual schedule supportive supervision activity.*

A member of DHMT (the District Health Administrator) reported that; *Since deployment of CHWs to the CHPS zones individual schedule supportive supervision activities were poorly done due to inadequate means of transportation. Hence they rely on monitoring report from their supervisors at the CHPS zones.*

#### **4.4.3: Monthly Meeting Activities**

The results from monthly meeting activities between supervisors and CHWs are as follows: discussion of challenges and solutions (OR: **1.473**, CI: 0.208-10.448 p=0.699), discussion of successes (OR: **1.704**, CI: 0.082-35.314 p=0.730), skills and knowledge development (OR: **0.418**, CI: 0.015-11.584 p=0.607), review of records (OR: **1.027**, CI: 0.046-22.685 p=0.987), participatory action planning (OR: **0.418**, CI: 0.015-11.584 p=0.607) and work schedule management (OR: **0.418**, CI: 0.015-11.584 p=0.607). Generally, monthly meeting activities show no statistical significance to CHWs performance. In furtherance, majority of CHWs; 31 (69%), 40 (89%), 44 (98%), 42 (93%), 44 (98%) and 44 (98%) did not participate in the following activities: discussion of challenges and solutions , discussion of successes , Skills and knowledge development, Review of records, participatory action planning and Work schedule management respectively as shown in the table below.

**Table 4.4.2: Health system factors in relation to performance**

Factors	Performance of CHWs (n= 45)		Bivariate analysis	
	Poor (%)	Good (%)	OR (95% C.I.)	P value
<b>Monthly meeting activities</b>				
Discussion of challenges and solutions.				
Yes	13 (92.9)	1 (7.1)	Reference	
No	27 (87.1)	4 (12.9)	1.473 (0.208-10.448)	0.699
Discussion of successes				
Yes	5 (100.0)	0 (0.0)	Reference	
No	35 (87.5)	5 (12.5)	1.704 (0.082-35.314)	0.730
<b>Skills and Knowledge development</b>				
Yes	1 (100.0)	0 (0.0)	Reference	
No	39 (88.6)	5 (11.4)	0.418 (0.015-11.584)	0.607
<b>Review of records</b>				
Yes	3 (100.0)	0 (0.0)	Reference	
No	37 (88.1)	5 (11.9)	1.027 (0.046-22.685)	0.987
<b>Participatory action planning</b>				
Yes	1 (100.0)	0 (0.0)	Reference	
No	39 (88.6)	5 (11.4)	0.418 (0.015-11.584)	0.607
<b>Work schedule management</b>				
Yes	1 (100.0)	0 (0.0)	Reference	
No	39 (88.6)	5 (11.4)	0.418 (0.015-11.584)	0.607

#### 4.4.4: Monthly Supervision Activities

Generally, monthly supervision activities between supervisors and CHWs showed no statistical significance to CHWs performance as showed by the results below: The main supervisor either DHMT or CHO (OR: **1.969**, CI: 0.071-54.796 p=0.690), CHWs had enough supervision (OR: **0.301**, CI: 0.015-5.961 p=0.431), feedback given after supervision (OR: **1.455**, CI: 0.253-8.363 p=0.674), evaluation of performance (OR: **1.105**, CI: 0.152-8.047 p=0.921) and feedback given after evaluation (OR: **1.249**, CI: 0.216-7.210 p=0.804). However, majority of CHWs 37 (82%) participated in the monthly monitoring activities as shown in the table below.

The District Youth Employment Coordinator reported that; *Since deployment of CHWs to the CHPS zones individual schedule monitoring and supportive supervision activities were not done until he assumed office in about a year ago. I now conduct monthly monitoring to be sure CHWs are at post and working before payments are made.*

A Community Health Management Committee (CHMC) member reported that; *they were not sensitized in CHWs work schedules, hence could not conduct any monitoring and supervision activity.*

**Table 4.4.3: Health system factors in relation to performance**

Factors	Performance of CHWs (n= 45)		Bivariate analysis	
	Poor (%)	Good (%)	OR (95% C.I.)	P value
<b>Mainly supervisor</b>				
CHOs	32 (86.5)	5 (13.5)	Reference	0.690
DHMT	8 (100.0)	0 (00.0)	1.969 (0.071-54.796)	
<b>Enough supervision</b>				
Yes	31 (86.1)	5 (13.9)	Reference	0.431
No	9 (100.00)	0 (00.0)	0.301 (0.015-5.961)	
<b>Feedback given</b>				
Yes	27 (90.0)	3 (10.0)	Reference	0.674
No	13 (86.7)	2 (13.3)	1.455 (0.253-8.363)	
<b>Evaluation of performance</b>				
Yes	31 (88.6)	4 (11.4)	Reference	0.921
No	9 (90.0)	1 (10.0)	1.105 (0.152-8.047)	
<b>Feedback given</b>				
Yes	16 (88.9)	2 (11.1)	Reference	0.804
No	18 (85.7)	3 (14.3)	1.249 (0.216-7.210)	

**4.4.5: Remuneration for Community Health Workers**

Remuneration to CHWs such as receive any cash payment (OR: **27.0**, CI: 0.952-766.122 p=0.053), kind of cash payment (OR: **0.351**, CI: 0.012-9.956 p=0.539), Payment adequate (OR: **8.999**, CI: 0.223-362.479 p=0.244) generally showed no statistical significance to CHWs

performance. However, majority of them; 40 (91%) the allowance they received is inadequate as shown in the table below.

**Table 4.4.4: Health system factors in relation to performance**

Factors	Performance of CHWs (n= 45)		Bivariate analysis	
	Poor (%)	Good (%)	OR (95% C.I.)	P value
<b>Receive any cash payment</b>				
Yes	40 (90.9)	4 (9.1)	Reference 27.0 (0.952-766.122)	0.053
No	0 (0.0)	1 (100.0)		
<b>What kind of cash payment</b>				
Salary	0 (0.0)	1 (100.0)	Reference 0.351 (0.012- 9.956)	0.539
Allowance	39 (90.7)	4 (9.3)		
<b>Payment adequate</b>				
Yes	3 (75.0)	1(25.0)	Reference 8.999 (0.223-362.479)	0.244
No	36 (92.3)	4 (7.7)		

A participant of FGD reported that; *The monthly allowance is woefully inadequate. Previously they were paid quarterly and sometimes there could be about six months outstanding. Currently things have improved, hence it is coming on monthly bases but one CHW is still having six months outstanding. This resulted in high dropout rate since we started with 91 CHWs but we are now left with 45.*

#### 4.4.6: Equipment, Training manuals, Job aids and Medicines Given

Equipment given to CHWs after training showed results as uniform and bag (OR: **1.145**, CI: 0.050-26.105  $p=0.932$ ), MUAC tape (OR: **0.344**, CI: 0.012-10.176  $p=0.537$ ) and thermometer (OR: **1.381**, CI: 0.162-11.744  $p=0.768$ ). Printed materials and job aids given showed results as CHW Participants manuals (OR: **8.778**, CI: 0.747-103.187  $p=0.084$ ) and CHW Monthly report forms (OR: **0.418**, CI: 0.015-11.484  $p=0.607$ ). Others are Insecticide Treated Nets (OR: **0.418**, CI: 0.015-11.484  $p=0.607$ ), Soap (OR: **0.418**, CI: 0.015-11.484  $p=0.607$ ), Availability of supplies and equipment needed (OR: **0.440**, CI: 0.016-12.212  $p=0.628$ ) and System for regular ordering of equipment and supplies (OR: **0.280**, CI: 0.033-2.399  $p=0.245$ ). Generally, the above health system factors show no statistical significance to CHWs performance. However, majority of CHWs; 30 (88%), 33 (97%), 19 (55%), 44 (98%), 44 (98%), 44 (98%), 42 (98%) and 41 (91%) did not receive the following: uniform and bag, MUAC tape, thermometer, CHW participants manuals, CHW monthly report forms, Insecticide Treated Nets and soap respectively as shown in the table below. Availability of supplies and equipment needed and system for regular ordering of equipment and supplies were also nonexistence.

**Table 4.4.5: Health system factors in relation to performance**

Factors	Performance of CHWs (n=45)		Bivariate analysis	
	Poor n (%)	Good n *(%)	OR (95% C.I.)	P value
<b>Equipment given</b>				
Uniform and bag				
Yes	4 (100.0)	0 (0.0)	Reference	
No	27 (90.0)	3 (10.0)	1.145 (0.050-26.105)	0.932
MUAC tape				
Yes	1 (100.0)	0 (0.0)	Reference	
No	30 (90.9)	3 (9.1)	0.344 (0.012-10.176)	0.537
Thermometer				
Yes	14 (93.3)	1 (6.7)	Reference	
No	17 (89.5)	2 (10.5)	1.381 (0.162-11.744)	0.768
<b>Printed materials and job aids given</b>				
CHW Participants manuals				
Yes	39 (90.7)	4 (9.3)	Reference	
No	1 (50.0)	1 (50.0)	8.778 (0.747-103.187)	0.084
CHW Monthly report forms				
Yes	1 (100.0)	0 (0.0)	Reference	
No	39 (88.6)	5 (11.4)	0.418 (0.015-11.484)	0.607

<b>Medicines given after training and deployment</b>				
Insecticide Treated Nets				
Yes	1 (100.0)	0 (0.0)	Reference	
No	39 (88.6)	5 (11.4)	0.418 (0.015-11.584)	0.607
Soap				
Yes	1 (100.0)	0 (0.0)	Reference	
No	39 (88.6)	5 (11.4)	0.418 (0.015-11.584)	0.607
<b>Availability of supplies and equipment needed</b>				
Yes	1 (100.0)	0 (0.00)	Reference	
No	37 (88.1)	5 (11.9)	0.44 (0.016-12.212)	0.628
<b>System for regular ordering of equipment and supplies</b>				
Yes	3 (75.0)	1 (25.0)	Reference	
No	37 (90.2)	4 (9.8)	0.28 (0.033-2.399)	0.245

A participant of FGD reported that; *They were not given any tools and medicines to work with. Hence, they just support the Community Health Nurses at the CHPS zones to conduct their routine work schedules this resulted in their inability to work effectively as designed by the CHW programme.*

#### 4.4.7: Reporting in Relation to CHWs Performance

Information is power, consequently this study looked at reporting issues such as how the CHWs write reports, the reporting structure, feedback reports, period of reporting, and how the CHWs use the feedback information in relation to the performance of CHWs in the delivery health service at CHPS zone. There was no statistical significance with report writing (OR: **2.303**, CI: 0.404-13.141 p=0.384) reporting structures (OR: **0.102**, CI: 0.007-1.389

p=0.087), and feedback reports (OR: **0.886**, CI: 0.101-7.762 p=0.084). However, use of information for planning and addressing gaps found was significant (OR: **0.081**, CI: 0.007-0.909 p=0.042) as shown in the table 4.4.6 below.

**Table 4.4.6: Health system factors in relation to performance**

Factors	Performance of CHWs (n= 45)		Bivariate analysis	
	Poor (%)	Good (%)	OR (95% C.I.)	P value
<b>Report writing</b> Yes No	25 (92.6) 15 (83.3)	2 (7.4) 3 (16.7)	Reference 2.303 (0.404-13.141)	0.348
<b>Reporting structure</b> CHC Health facility	1 (50.00) 24 (92.3)	1(50.0) 2 (7.7)	Reference 0.102 (0.007-1.389)	0.087
<b>Feedback reports</b> Yes No	15 (88.2) 10 (90.9)	2 (11.8) 1 (9.1)	Reference 0.886 (0.101-7.762)	0.913

<b>Use of information</b>				
Planning				
Yes	9 (90.0)	1 (10.0)	Reference	
No	11 (84.6)	2 (15.4)	1.377 (0.153-12.414)	0.776
Address gaps found				
Yes	5 (100.0)	0 (0.00)	Reference	
No	15 (83.3)	3 (16.7)	2.484 (0.109-54.182)	0.567
All the above				
Yes	2 (50.0)	2 (50.0)	Reference	
No	18 (94.7)	1 (5.3)	0.081 (0.007-0.909)	<b>0.042</b>
None				
Yes	3 (100.0)	0 (0.00)	Reference	
No	17 (85.0)	3 (15.0)	1.400 (0.058-33.587)	0.836

This finding was validated by FGD session, in which one member summarized the importance of reporting tools and feedback information in the statement; *We make reports periodically with our own note books and take it to the CHNs' office but mostly did not receive summarized feedback recommendation or briefs in a meeting on how to address job challenges. We were not given any reporting forms which make reporting difficult.*

The above statement which was confirmed by a Disease Control officer reported that: *The few CHW reports that come are very important to my office. They assist me to identify CHPS zones with high incidence of infections and prioritize them for interventions.*

#### **4.4.8: Areas of Training in Relation to CHWs Performance**

The other health systems factors such as training duration (OR: **0.207**, CI: 0.011-4.042 p=0.299), content of training (OR: **0.081**, CI: 0.001-5.732 p=0.248), curative services (OR: **0.366**, CI: 0.061-2.193 p=0.271), refresher course (OR: **1.316**, CI: 0.185-9.377 p=0.784) and

field practical (OR: **4.999**, CI: 0.528-47.345 p=0.161) were not statistically associated with the performance of CHWs. However, majority of CHWs; 33 (73%) said the training duration was good, 27 (60%) said training content was limited, 35 (78%) respondent reported curative services content was not adequate, 42 (93%) of respondent said field practical should be included in the next training and only 13 (29%) respondent said they received some form of refresher training at CHPS zone as shown in the table 4.4.7 below.

**Table 4.4.7: Areas of training in relation to performance**

Factors	Performance of CHWs (n= 45)		Bivariate analysis	
	Poor (%)	Good (%)	OR (95% C.I.)	P value
<b>Training</b>				
Training duration				
Yes	28 (84.9)	5 (15.2)	Reference	
No	12 (100.0)	0 (0.0)	0.207 (0.011-4.042)	0.299
Content of training				
Yes	18 (100.0)	0 (0.00)	Reference	
No	22 (81.5)	5 (18.5)	0.081 (0.001-5.732)	0.248
Curative services				
Yes	8 (80.0)	2 (20.0)	Reference	
No	32 (91.4)	3 (8.6)	0.366 (0.061-2.193)	0.271
Refresher course				
Yes	12 (92.3)	1 (7.7)	Reference	
No	28 (87.5)	4 (12.5)	1.316 (0.185-9.377)	0.784
Field practical				
Yes	38 (92.7)	4 (9.8)	Reference	
No	2 (66.7)	1 (33.3)	4.999 (0.528-47.345)	0.161

#### 4.5: Community Factors Associated with the CHW Performance

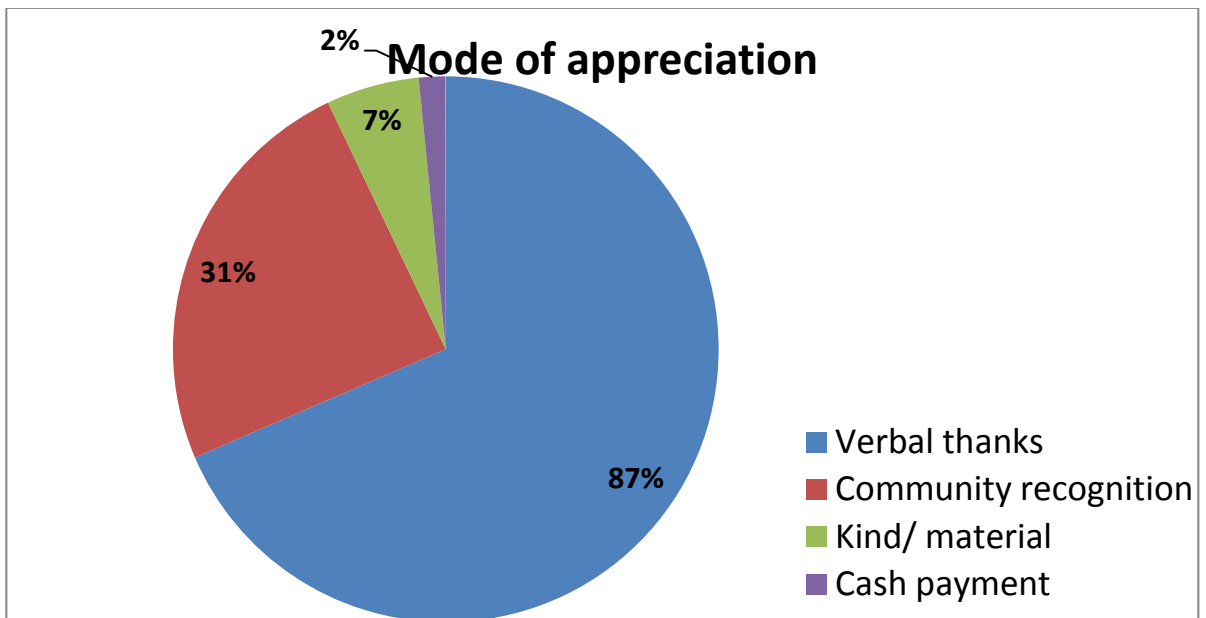
The type and level of community expectation in the CHW programme and the effect of these on the successes or otherwise of CHWs in the study area were assessed as: Community expectations met, community recognition, incentives, family support, community support, selection of CHWs, involvement of CHMC in CHWs supervision and meeting activities, norms, values and recognition, and security. The bivariate results are explained while multinomial results are shown in the table below.

**Table 4.5.1: Community factors in relation to performance of CHWs**

Community Factors	Performance (n=45)		Bivariate analysis	
	Poor n (* %)	Good n (%)	OR (95% C.I.)	P value
<b>CHW Works meet community expectations</b>				
Yes	39 (90.7)	4 (9.3)	Reference	
No	1 (50.0)	1(50.0)	8.777 (0.747-103.187)	0.084
<b>Means of Appreciation</b>				
<b>Thanking you</b>				
Yes	34 (87.2)	5 (12.8)	Reference	
No	6 (100.0)	0 (0.0)	0.483( 0.024 - 9.827)	0.636
<b>Tokens, chicken, food</b>				
Yes	3 (100.0)	0 (0.0)	Reference	
No	37 (88.1)	5 (11.1)	1.027( 0.046 - 22.685)	0.987
<b>Cash payment</b>				
Yes	1(100.0)	0 (0.00)	Reference	
No	39 (88.6)	5 (11.4)	0.418 (0.151 - 11.584)	0.607
<b>Community recognition</b>				
Yes	13 (92.9)	1 (7.1)	Reference	
No	27 (87.1)	4 (12.9)	1.473(0.208 - 10.448)	0.699

<b>Source of support</b>				
Spouse				
Yes	1(100.0)	0 (0.00)	Reference	
No	19 (86.4)	3 (13.6)	0.538 (0.018 - 16.083)	0.721
Family				
Yes	7 (100.0)	0 (0.00)	Reference	
No	13 (81.3)	3 (18.8)	3.889 (0.176 - 85.870)	0.390
Community				
Yes	9 (90.0)	1(10.0)	Reference	
No	11 (84.6)	2 (15.4)	1.377 (0.153 - 12.414)	0.776
District administration				
Yes	3 (75.0)	1 (25.0)	Reference	
No	17 (89.5)	2 (10.5)	3.333 (0.033 - 3.415)	0.355
<b>Who selected the CHW</b>				
Community/ CHC	3(100.0)	0(0.00)	Reference	
YEA	34 (89.5)	4 (10.5)	1.769 (0.233-13.458)	0.582
MOH/GHS	4 (100.0)	0 (0.00)	0.714 (0.030-16.922)	0.835
<b>Active CHMC that take part in your supervision</b>				
Yes	13 (92.9)	1 (7.1)	Reference	
No	27 (87.10)	4 (12.90)	1.473 (0.208-10.448)	0.699
<b>Communication with CHMC</b>				
Less than twice a year	7 (100.0)	0 (0.00)	Reference	
Twice a year or more	9 (90.00)	1 (10.0)	2.368 (0.084-66.883)	0.613

Forty three (96%) respondents said their works meet community expectations and among these respondents, only 5 (11%) meet the threshold of performance (good) of delivery of health services at the CHPS zone while 9 (90%) from 10 respondents who did receive community support did not perform. The highest mode of appreciation was in verbal thanks 39 (87%), community recognition 14 (31%), kind/ material 3 (7%) and least cash payment 1 (2%) as illustrated in figure 4.5.1



**Figure 4.5.1: Mode of community appreciation**

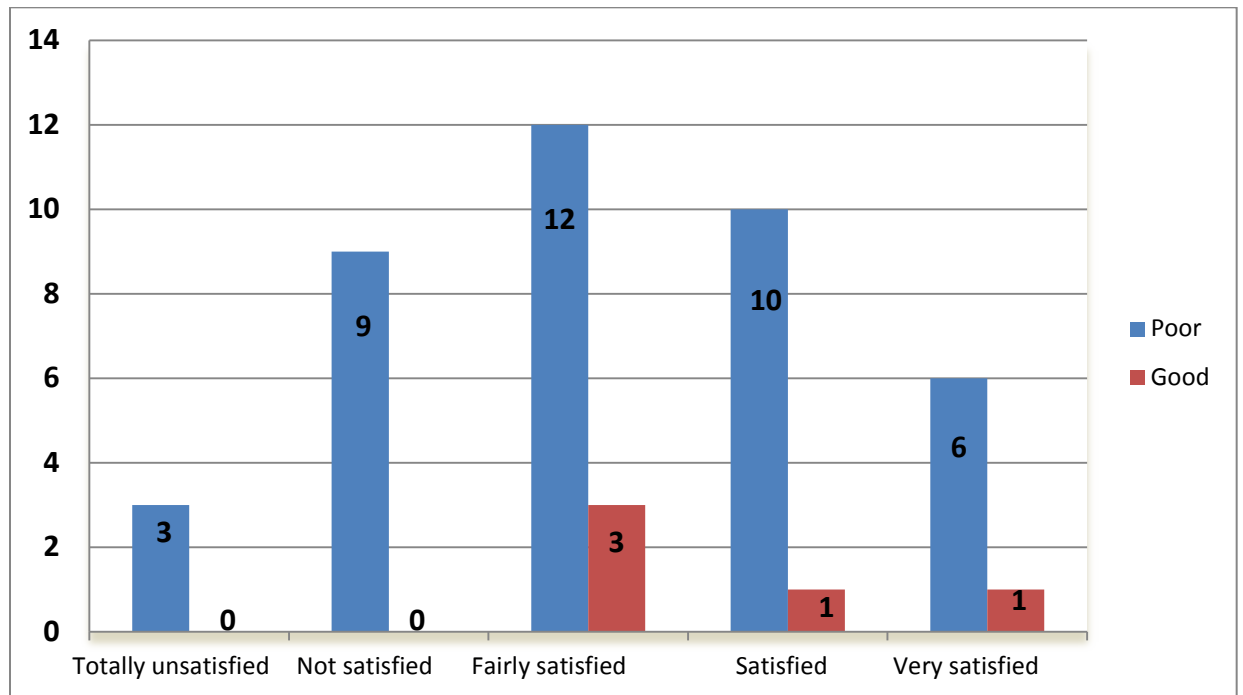
From bivariate analysis community expectations met (OR: **8.777**, CI: 0.747-103.187 p=0.084), community recognition (OR: **1.473**, CI: 0.208-10.448 p=0.699), family support (OR: **3.889**, CI: 0.176-85.870 p=0.390), community support (OR: **1.377**, CI: 0.153-12.414 p=0.776), selection of CHWs (OR: **1.769**, CI: 0.233-13.458 p=0.582) and involvement of CHMC in CHWs supervision and meeting activities (OR: **2.368**, CI: 0.084-66.883 p=0.613) had no statistical significance in relation to performance of CHWs in delivery of health services.

#### 4.5.1: Overall Rates of CHWs Performances at CHPS Zone

Forty five (45) CHWs drawn from Upper Manya Krobo district participated in the study. On average the overall rate of CHWs good performance at the CHPS zone in the district was 5 (11%). Majority of CHWs 40 (88.9%) performance were rated poorly to all the key targets of CHWs performance such as understand role and targets clearly, achieved targeted household visit and expected household assessment, conducted expected number of health education, referred expected number of patients, average number of working hours per week achieved, conducted community mapping, conducted expected number of action planning meetings with community and monitoring the activities of volunteers. Others are conducted expected number of community-based disease surveillance and expected number of household registration, had list of priority households, conducted expected number of outreach activities or mobile clinics at the CHPS zone in Upper Manya Krobo district.

#### 4.5.2: Job Satisfaction in Relation to Performance

Forty three (96%) of the respondents understood their roles clearly. Rate of satisfaction by CHWs showed those not satisfied as (OR: **0.368**, CI: 0.006-22.388 p=0.634), fairly satisfied (OR: **1.959**, CI: 0.081-47.674 p=0.679), satisfied (OR: **0.999**, CI: 0.033-30.618 p=1.000) and Very satisfied (OR: **1.615**, CI: 0.051-51.106 p=0.786). Generally job satisfaction had no statistical significance to CHWs performance. Moreover, all the 9 respondents (100%) who were not satisfied with their job performed poorly, 12 (80%) CHWs who were fairly satisfied with their job performed poorly, 10 (91%) CHWs who were satisfied performed poorly and 6(86%) who were very satisfied performed poorly as shown in figure 4.4.



**Figure 4.5.2: Graph of respondents' job satisfaction to performance**

#### **4.5.3: Community Factors (constraint parameters) in Relation to Performance of CHWs**

Lack of supplies 36 (80.0%), lack of transport 41 (91.1%) and financial constraints 30 (66.7%) were highlighted by the respondents as daily challenges with the least been inadequate community support 3 (6.7%). Constraints such as lack of supplies (OR: **0.301**, CI: 0.015-5.962 p=0.431), lack of transport (OR: **0.280**, CI: 0.033-2.399 p=0.245), financial constraints (OR: **0.150**, CI: 0.008-2.895 p=0.209) and community support (OR: **0.195**, CI: 0.021-1.843 p=0.154) had no statistical significance to CHWs performance. Moreover, most respondents 40 (89%) who suffered from all the four constraints performed poorly as shown in table 4.5.2.

**Table 4.5.2: Community factors in relation to performance of CHWs**

Community Factors	Performance (n=45)		Bivariate analysis	
	Poor n (* %)	Good n (%)	OR (95% C.I.)	P value
<b>Constraints</b>				
Lack of supplies				
Yes	31 (86.1)	5 (13.9)	Reference	0.431
No	9 (100.0)	0 (0.0)	0.301 (0.015-5.962)	
Lack of transport				
Yes	3 (75.0)	1 (25.0)	Reference	0.245
No	37 (90.2)	4 (9.8)	0.28 (0.033-2.399)	
Community support				
Yes	2 (66.7)	1 (33.3)	Reference	0.154
No	38 (90.5)	4 (9.5)	0.195 (0.021-1.843)	
Financial constraint				
Yes	25 (83.3)	5 (16.7)	Reference	0.209
No	15 (100.0)	0 (0.0)	0.150 (0.008-2.895)	

#### 4.5.4: Respondents' Duration of Practice

Three (7%) of the respondents have been CHWs for less than six months. Whereas majority 42 (93%) practiced as CHWs for six months and above. Respondents' period of practices as CHW was not statistically significant (OR: **0.055**, CI: 0.005-0.545 p=0.013) with performance.

#### 4.5.5: Multiple Logistic Regression Model Analysis

A multiple logistic regression analysis using the backward conditional method was performed on multiple factors to eliminate confounding factors and examine the effect of the three predictive factors which only one was significantly associated (independently) with performance of CHWs in delivery of health care services at CHPS zone at bivariate

analysis as presented in the table 4.4.6. None of the three factors were found to predict performance of CHW in delivery of health care services at CHPS zone among the CHWs (Table 4.5.3). Females had 1.3 odds of performing health care services compared to males (AOR 1.337, CI: 0.115- 16.428, p=0.800).

**Table 4.5.3: Multiple logistic regression analysis results for independent variables**

Variables	Levels	Exp ( $\beta$ )	95%CI for Exp ( $\beta$ )		P value
			lower	Upper	
Gender	Male	Ref	-	-	-
	Female	1.337	0.115	16.428	0.800
How does the information you get assist you as a CHW	Planning	Ref	-	-	-
	Address gaps	2.184	0.026	180.934	0.729
	All the above	0.397	0.007	21.845	0.652
Job satisfaction	Totally unsatisfied	Ref	-	-	-
	Not satisfied 2	0.355	0.006	22.825	0.626
	Fairly satisfied 3	1.625	0.040	65.710	0.797
	Satisfied 4	0.587	0.005	62.695	0.823
	Very satisfied 5	1.301	0.223	74.262	0.899

**Exp ( $\beta$ ) (AOR);** adjusted odds ratio. Dependent variable: (1 = yes (performer as a CHW), 2= No (non-performer as CHW)).

The use of feedback information was not statistically significant and when adjusted for use of feedback report for planning, the odds of using the feedback information report to address gaps was also not statistically significant with performance (AOR 2.184, CI: 0.026-180.934, p=0.729). Moreover, Job satisfaction was not statistically significant and when adjusted for totally unsatisfied, the odds of not been satisfied (AOR 0.355, CI: 0.006-22.825, p=0.626), fairly satisfied (AOR 1.625, CI: 0.040-65.710, p=0.797), satisfied (AOR 0.587, CI: 0.005-62.695, pp=0.823) and very satisfied (AOR 1.301, CI: 0.223-74.262, p=0.8999) were all not statistically significant with performance.

## CHAPTER FIVE

### DISCUSSION

#### **5.0: Introduction to the Discussion**

This chapter discusses the findings of a study conducted to ascertain the determinants of performances of community health workers in Upper Manya Krobo District in the Eastern Region of Ghana. This section brings together the quantitative and qualitative findings of the study and interprets them in accordance to the literature reviewed as well as researcher's observations. The findings were analyzed according to the research questions and objectives. The outcomes of the research were further compared with other similar studies highlighting differences and similarities.

#### **5.1: Overall Performance of CHWs in the Delivery of Health Services at CHPS Zones**

Apparently from the study findings, the performances of Community Health Workers in the delivery of health service at CHPS zones in the Upper Manya Krobo District of Ghana were poor. Out of forty five (45) Community Health Workers who participated in the study, only 5 CHWs (11.1%) were rated as having good performance in the delivery of health services at the CHPS zones. This trend of poor performance was replicated among almost all the CHWs who participated in the study. Performance ( health service delivery) rates were also poor in all the CHPS zones per month (conducted expected number of action planning meetings with community and monitoring work of volunteers , conducted expected number of community-based disease surveillance, conducted expected number of household registration, had list of priority households, conducted expected household assessment, number of referred patients, house hold visited, CHWs meetings) except health education which the CHWs

registered average performance. These poor rates applied to all the CHPS zones. This was in conformity with study conducted by Bulingwa, 2008. Since CHWs conduct only preventive services such as community education, household registration and sensitization during household visit, according to Salmen, 2002 this approach may reduce the confidence of the community on CHWs which in-turn reduce effectiveness in attaining targets of referring patients and household visit. At the same instance availability of logistics, accessibility, privacy, personal security, diversity, cultural and social dynamics confound the attainment of these targets whereas health education forums can be conducted through social and religious gatherings and church group meetings, (Salmen, 2002) and (Bulingwa, 2008).

## **5.2: Influence of Demographic Factors in CHWs Performance**

This study found out that among the following: gender, marital status, education, occupation, religion, source of income, average monthly income and age it is only main source of income that was statistically significant in relation to the performance of CHW in delivery health services at CHPS zone. This is in contrast with the study by Bulingwa, 2008 which found out that female CHWs, age categories of less than 20 and above 50 years, widows and separated CHWs, and Muslims were all associated with performance. It is only years in services, occupation, monthly income, education and source of income that did not influence performance of CHWs. In furtherance, age did not affect the performance of CHWs however young (less than 20 years) and elderly CHWs (over 50 years) were highly graded in performance than the middle aged. This finding on older age performance agrees with (Yoshito *et al.*, 2012) in a cross sectional survey on factors affecting the performance of CHWs in Kisumu West, Kenya who concluded that older CHWs were more likely to give

good performance. This is due to the fact that older CHWs have limited competing jobs, consequently are more committed to their job than the younger ones. Communities therefore welcome them which motivate them to deliver while the younger ones are enthusiastic and eager to perform in the first job assignments. The middle aged CHWs are busy taking care of their young families, struggling to achieve socially expected ambitions and other community demands. However this contradicts with a study by (Ndedda, 2012) in Busia on social demographic determinants of CHWs performance where CHWs aged 30-40 years were more active.

According to this study, there was no statistically significant association between gender and good performance. This agrees with the study from Uganda (Kallander *et al.*, 2006) which found that gender is not statistically significant with performance. Furthermore, according to Prasad and Muraleedharan, 2007 in a systematic search of literature review of concepts, practice and policy on CHWs reports that female CHW workers are able to deliver health care services more effectively than their male colleagues. This is because females are passionate about family and children welfare notwithstanding other equally important tasks in the households and community than males.

CHW's educational level showed no statistical significant with CHWs performance. This agrees with a study from Kenya which showed that CHW's level of education had no statistical significant with CHWs performance. CHWs with tertiary education and above were less performing compared to those with secondary level of education and below (Bulingwa, 2008). This also concurs with a study from Uganda which showed education is irrelevant on CHWs ability to perform (Kallander, *et al.*, 2006). Another research finding also explained

that CHWs with higher educational qualifications have aspirations for other higher employment and therefore may not have total commitment. Moreover, CHWs with lower educational status could stay for a longer period of time (Ande, Oladepo, & Brieger, 2004) and thereby deliver better health care services to the community. Therefore job prospects for CHWs do influence their performance. However this contrast with some findings from a research in the United States of America by Ballester, 2005 which reported a significant drop out of CHWs due to lack of job prospects. This finding suggest that low literacy or illiterate community members should not be marginalized during selection and deployment of CHWs agreeing with the Sarididi study (Kaseje *et al.*, 1987) in which formal education was not a prerequisite for becoming CHW.

There is no statistically significant association between marital status and CHWs performance. This finding agrees with that of Ndedda, (2012) in a Cross-Sectional Study in Busia District, Kenya on “Effects of Selected Socio-Demographic Characteristics of Community Health Workers on Performance of home Visits during Pregnancy” which did not find any association of marital status with CHWs performance.

Religion as a factor showed no statistically significant association with good performance. The importance of religion was also discussed by Gilson et al., 1989 who found that, although religion was a significant factor, it was difficult to keep track of the direct role of CHWs religion with performance (Gilson et al., 1989).

Association to institution nominating the CHWs for employment was not significant but those selected by YEA performed more than those nominated by Ghana Health Service.

This conforms to what Ofosu-Amaah (1983) found in her study of the literature available in 1983 that “turn-over of CHWs is high for a number of reasons, the most important being poor selection and affiliation”.

CHW’s occupation and monthly average income were not statistically significant with performance with exception of main source of income (farmer) which was significant with performance. This can be ascribed to the fact that the study was conducted in peri-urban setting where some CHW have additional source of income or are supported by families to make ends meet or do other tasks to supplement their income. This agrees with the study in Kenya by (Bulingwa, 2008) where respondent’s main source of income, occupation and monthly average income were not important statistically with performance.

Majority of the respondents’ had served for more than six months as a CHW. Years of services as CHW have no statistical significance on performance. This conforms to Ndedda, (2012) study with findings which stated that knowledgeable CHWs were most effective at meeting client needs and satisfactions both of which are most important for uptake of improved behaviour and demand creation for services.

### **5.3: Health Sector Participation in the Institutionalization and Operation of CHW Programme**

Institutionalization of the CHW programme was poorly conducted. Community Health Worker recruitment process which should be community-driven, transparent and engage all existing cadres without the creation of new ones was poorly done. CHW role is designed with clarity,

including competencies with agreement of community, CHW, and health system was poorly done. Training quality standards for Trainer of Facilitators and CHWs training were also poorly conducted. Initial CHW training was insufficient to prepare them for their role with appropriate time, trainers and practical training. Facilitators were not trained in the modules and CHWs were trained in two summarized modules and for 11 days instead of three full modules and two weeks respectively.

Moreover, ongoing training was ill planned, hence ensuring necessary revision, skills-building and considering estimated attrition rates was limited. Equipment and supplies were unavailable to ensure delivering of quality health services including medicines, supplies, and job aids. Training for CHWs' supervisors was limited in content and duration, hence limited supportive supervision conducted. Individual performance evaluation should occur at least, annually and is designed to fairly assess work and improve quality but none has been conducted since the inception of the programme about two years ago. Incentives; standards and methods for performance-based incentives should be ethical, non-competitive, sustainable, and under a unified policy but reports showed that CHWs who have vacated their post were still receiving their allowance initially but seems it has ceased currently.

Furthermore, community engagement and accountability structures such as CHMCs were not involved in the planning, recruitment, training and deployment of the CHWs. Meanwhile, they are supposed to be functional and provide oversight to CHW activities. Referral system for emergency evacuations of cases was not properly placed and little referrals done, not documented.

#### **5.4: Role of Health Systems Factors in Delivery of Health Services at CHPS Zones**

These factors such as trainings provided, duration of training, field practical, adequacy of trainings, field based supervision of modules, agreement for progression of modules, supplies (equipment and drugs), seminars as refresher courses, scheduled supportive supervision, monthly meetings, evaluation of performance, payments as rewards and use of feedback information were the variables taken into consideration in measuring this factor. Type and adequacy of training, duration and field practical, content and tools to be used for practice in general had no statistical value with the performance of CHWs. This is in contrast with another study done in Kenya (Bulingwa, 2008) as well as Uganda and Malawi on non-randomized community trials according to WHO, 2007. Refresher course was not really considered necessary; however those who participated in Integrated Community Case Management, Mother-to-Mother Support Group formation and Community-Based Growth Promotion trainings as on-the-job training courses were more performing than those who had not had any on-the-job training. These findings conform to a survey on CHWs performance in Kenya which suggested that refresher course was not important however those who attended Infant and Young Child Feeding counselling as refresher course were more performing than those who had not attended any refresher course (Bulingwa, 2008). This findings is not in conformity with a national survey on CHWs in the US which proposed that refresher course enable CHWs overcome difficulties in understanding disease conditions (Kash, May, & Tai-Seale, 2007).

Remuneration as a motivation to performance was not statistically significant; however functional allowance which is adequate and regular encouraged the CHWs to perform.

According to Bulingwa, 2008 two thirds of those who received functional allowance scored highly in the delivery of level one health services. This agrees with a WHO article ID: BLT.11.086710. Motivation was the key challenge impeding the delivery of health services at the CHPS zones among the CHWs. This agrees with a study in Kenya by (Bulingwa, 2008) on factors influencing the performance of CHWs. Moreover this also support a study in Nigeria according to Khan *et al.*, 2006 on reasons for high CHWs attrition rate; poor remuneration, lack of support for personal development and inadequate monitoring and supervision. The subject of motivation may be the reason why CHWs performed poorly in targets requiring personnel input and performed creditably in targets with public input such as health education forums.

Surprisingly, continuous refusal to deploy supplies had no statistical significance in delivery of health services at the CHPS zones, but overall contributed. This may justify the poor rate of performance by CHWs since supplies enhances service delivery and at the same time explain why services based on knowledge dissemination are rated highly than supply based. This may be because the CHWs use home visit to address individual services while public messages are disseminated through different channels. This support the study by Bulingwa, 2008 that constant receipt of supplies had no statistical significance in delivery of level one health services with equal proportion of those who received constant supplies and those who did not, not performing.

Reporting and the use of feedback report were not statistically significant with CHWs performance. Those who reported not using the information for planning and addressing gaps found had good performance. This contradicts a study by Bulingwa, 2008. According

to the study, CHWs who reported weekly had good performance than those who reported daily or monthly. CHWs who reported weekly performed, probably the feedback they received was frequent and addressed each individual challenges encountered in the course of their work while those who reported monthly performed poorly due to delay of feedback which would have addressed their challenges and those who reported daily were mainly committed to the reports rather than delivery of services. This feedback information assisted the respondents to address gaps within their mandate. Other studies from elsewhere such as Columbia have also shown that “feedback and rewards from the community” are more significant in the overall motivation and performance of CHWs (Robinson & Larsen, 1990). Moreover, this feedback was technically based since it was reported to supervisors but the role of the community remains limited since their involvement in the implementation of the CHW programme is poor.

Monthly supervision and number of supervisory visits per month showed no statistical significance to CHWs performance. Both the supervised and none supervised CHWs performed equally. However mentoring and supportive supervision increased CHWs confidence and motivation. This conforms to a study by Bulingwa, 2008. According to the study supervision and number of supervisory visits per month had no significant value in relation to delivery of health services. Both none supervised and supervised CHWs rated equal in performance. Moreover, monitoring, mentoring and supportive supervision increased CHWs morale and confidence. Similarly, this confirms with another study conducted by WHO, 2009 in Ethiopia on community based distributors of contraceptives.

### **5.5: Community Factors in Relation to CHWs Performance in Health Service Delivery**

Community factors included the following: expectations met, community recognition, incentives, family and community, selection of CHWs, involvement of CHMCs in CHWs supervision and meeting activities, norms, values and recognition and security. Most respondents' work met community expectation. Hence rewarded by verbally thanking them and in some occasions in kind. There was a similar performance among those who received support and those who did not. Community recognition, incentives; means of appreciation and source of support had no statistical significant with CHWs performance at CHPS zones. This conforms with another study done in Kenya where majority of the CHWs reported receiving community support with most being appreciated in kind. There was similar a performance among those who received support and those who did not. Appreciation by community, incentives; means of appreciation and source of support had no positive impact with CHWs performance at community level (Bulingwa, 2008). In furtherance, it also agrees with another study done in Bangladesh where CHWs felt that they are needed and treasured by the community (Rahman et al., 2010). However sustaining the motivation of CHWs to perform adequately with commitment, remain a critical challenge as the experimentation in Parinche (FRCH-PUNE Project) (Antia & Bhatia, 1993) and SEARCH (Shankar 2011) (Bang et. al., 1994) (Gryboski et al., 2006) which reported that it is the degree of confidence and trust of the community members that CHWs have gained over a period of time that propelled them to work.

Communication is vital in the performance of CHWs; for example performance rate increased with number of Community Health Management Committee meetings attended in a month.

This agrees with the acknowledgement and emphasizes in the research reports that the success

of CHW programmes is contingent on consistent and reliable support and communication (Bhattacharyya et al., 2001). It is equally acknowledged, however, that improper communication is often among the weakest links in CHW programmes (Ofosu-Amaah, 1983). It also concurs with (Bulingwa, 2008) that communication is crucial in the performance of CHWs; for instance performance rate increased with number of *Barraza's* one attended in a month.

Acceptance and safety are essential factors in service delivery issues which directly translate to CHWs performance. This can be attributed to the fact the delivery of services relies on some other factors not only community appreciation. Uniforms and badges enhanced cordial reception which facilitates easier and faster entry to the community. Accessibility is a cross cutting challenge reported by the respondents. Finding people in their house day time is a huge challenge during the farming season and visiting them in the evening is unrealistic due to cultural restrictions unless it is communally announced and done in groups.

The language barrier was a problem to some CHWs who do not hail from the area but nepotism is not a common feature, they accept and invite all CHWs to their homes. Religious practices and perceptions are a big challenge in adoption of a basic community health strategy such as family planning and treatment of some ailments. For instance some traditions and religions agree that the treatment of psychological ailments is the preserve of the spiritual churches while others complicate adoption of feeding practices. This study also reports that the use of alternative medicine including the services of Traditional Birth Attendants is common and wide spread in informal areas of this study. These practices and subscriptions to alternative medicine may compliment and at the same complicate the

uptake of CHWs services. This may be because the community will consult the community health workers when their first line treatment (alternative medicine) fails. This agrees with (Bulingwa, 2008) that religious practices and perceptions are a big challenge in adoption of a basic community health strategy such as family planning and use of latrine. For instance some traditions religion restricts the sharing of latrines by elders and children while others complicate adoption of feeding practices.

## CHAPTER SIX

### CONCLUSIONS AND RECOMMENDATIONS

#### 6.0. Introduction

This chapter presents the conclusions and recommendations of the study on determinants of performances of community health workers in Upper Manya Krobo District in the Eastern Region of Ghana.

#### 6.1. Conclusions

The conclusion is presented thematically based on the major variables that were examined. The study findings indicated that the performances of Community Health Workers in Upper Manya Krobo district of Ghana in the delivery of health care service at the CHPS zones was poor. Only five (11%) CHWs had good performance in all the thirteen parameters as follows: understand role clearly and targets, achieved targeted household visit, conducted expected number of health education, referred expected number of patients, average number of working hours per week, conducted community mapping, conducted expected number of action planning meetings with community and monitoring work of volunteers, conducted expected number of community-based disease surveillance, conducted expected number of household registration, had list of priority households, conducted expected number of routine household visit, conducted expected number of outreach activities or mobile clinics and conducted expected household assessment.

From the study, with the exception of their main source of income, CHWs' of young and old, gender, marital status, education, occupation, religion and average monthly income did

not show statistically significant association with good performance.

Health sector participation in the institutionalization and operation of the CHW programme such as CHW recruitment process, training, deployment, provision of needed logistics, remuneration, continuous capacity building, monitoring, mentoring and supportive supervision were poorly conducted. The content and duration of training, field practical, refresher course, remuneration as motivation, CHW's duration of practice, reporting and use of feedback information were found to have no impact on the performance of CHWs in the study. Moreover, job satisfaction was negatively associated with good performance by CHWs..

For the community factors; community expectations met, community recognition, family and community supports, involvement of Community Health Management Committee, incentives, means of appreciation, religious practices and perceptions, acceptability and accessibility were found to be negatively associated with good performance in the study.

## **6.2: Recommendations**

Recommendations are specified for policy makers, employers, CHWs and for further research.

### **6.2.1: Policy Recommendation**

- Since the old and energetic volunteers are enthused about the CHW programme, and academic level does not influence performance, this study

recommends a policy-shift to encourage and give the old volunteers equal opportunity to be enrolled onto the CHW programme.

- Since the CHWs need the requisite logistics to provide adequate health care services, this study recommends a policy-shift to compel the government to make the needed logistics available and accessible to the CHWs.

### **6.2.2: Programs Level**

- From this study the implementation and realization of the key CHWs programme targets in the study area is challenging. This may be because the laid down protocol for recruitment, training and deployment of CHWs to the CHPs zones were circumvented. The key stakeholders led by the Ministry of Health and Ghana Health Service, Youth and Employment Agency, District, Municipal and Metropolitan Assemblies, NGOs and community leadership need to follow the implementation guidelines developed.
- Since accessibility, acceptability and safety are key elements in attaining CHW programme set targets in the district and the majority of the people are attached to their religion and traditions, this study proposes enhancing partnership with local religious leaders, traditional authorities, security groups, civil society organizations, NGOs and household heads in the implementation of CHW programme. Joint works plans need to be developed to facilitate cooperation.
- There is a need to revamp and train all the Community Health Committees in CHW programme as they play a vital role in monitoring and supportive supervision CHWs in the delivery of health care services at the CHPS zones.

- The strong role of customs, values, practices, traditions and traditional medicine in the management of common ailments calls for public intervention programmes on the dangers and consequences of the retrogressive cultures which employ unconventional methods.
- The use of traditional medicine should be critically evaluated and its positives incorporated into community health strategy.
- Partnership as an approach of improving CHW performance among all stakeholders is recommended as the way forward.

### **6.3: Suggestions for Further Research**

- This study was based on rural setting. Hence there is need to conduct a similar study in both peri-urban and urban settings and compare findings with those found in this study.
- Since the use of traditional medicine is prevalent in Upper Manya Krobo district, it's worth assessing the trend, practices and the results of this traditional medicine or practices and to ascertain the extent to which this has affected the health seeking behaviour among inhabitants of Upper Manya Krobo district. This may explain the uptake of unskilled delivery service in communities among others.
- The role of community feedback would be crucial in delivery of health care services when explored further. Therefore a study should be done to assess the CHWs' information system. Further studies comparing the same intervention delivered by different types of health care workers would help determine whether the CHW adds exceptional benefit to the health care delivery system.

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## APPENDICES

### **Appendix A: Respondents' Consent Form**

**Title of research activity:** Performance of Community Health Workers in the Community Health Worker Programme in Upper Manya Krobo District of Ghana: Role Of Health Sector and Community.

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### **PURPOSE**

Government of Ghana in 2016 launched the new Community Health Worker Program (CHWP). This was followed by recruiting, training and deployment of about 20000 CHWs to Community-based Health Planning and Services (CHPS) zones. Since the program inception, both the performance of CHWs as change agents and the feasibility of implementing and sustaining large-scale CHW programs have been called into question. The purpose of this research is to identify health sector and community-based factors influencing the performance of Community Health Workers in the Upper Manya Krobo District (UMKD) of Ghana. The information we gather through the research of the CHWP will improve both the current and future programmes.

## **DESCRIPTION OF PROCEDURES**

You are being asked to participate because either (i) you work in a governmental, non-governmental, or private sector institution and your work influence the performance of CHWs in UMKD, (ii) you are a leader or a member of a community that receives services from these CHWs and participates in their meetings, or (iii) you are a CHW in the Community Health Worker Programme.

You are being asked to participate in an interview or in a group discussion; the same topics will be discussed in both. The interview will take about one hour. The group discussion will be with up to 10 people discussing the topics among themselves and will take up to two hours. The questions will include (i) The selection criteria applied for CHWs, (ii) The type and level of health sector participation in the institutionalization of CHW programme, (iii) The role of health sector in the operations of CHWs, (iv) The type and level of community expectation in the CHW programme and the effect of these on the successes or otherwise of CHWs, and (v) CHW's own experiences and perceptions and how these inputs affect their work in the study area. I am interested in hearing what worked and what did not work well in the new CHWP and how we can maintain the programme?

I will make arrangements to visit you at your convenience for a one-to-one interview or to participate in the group discussion.

### **Possible Risks and Discomforts**

There are no foreseeable risks for you. All individual information is confidential and will not be shared with anyone, including your employer or community members.

### **Possible Benefits**

If you decide to participate in this research there is no direct benefit to you. By participating, you are helping to strengthen CHWP that will help to improve the services that communities receive.

### **Confidentiality**

All information from the interviews will be confidential, which means that we will not tell anyone what you say or give out any information about you. Only the researchers will have access to this information. You will not be named in any oral or written reports and no reference will be made that could be linked to your information. No report will be made concerning your participation to your employer or community.

During the focus groups, all participants will be asked not to talk to others about anything said in the discussions. By agreeing to participate, you agree to not talk to others outside this event about anything said. Nevertheless, we cannot assure you about the confidentiality held by other participants of the group discussions.

Written copies and the tape recordings will be stored in a protected computer and a locked cabinet in the University of Ghana until the data entering is completed. Only the research supervisory

staff will have access. Tape recordings will be destroyed after the study is complete. Data will be reported as a summary, and no names will be used. Selected quotes may be used but without names. We will assure that nothing that is published can be linked to you.

### **Compensation**

There is no monetary compensation and there are no costs to you for participating in this evaluation.

### **Voluntary Participation and Right to Leave the Research**

You are invited to participate in this research and your participation is voluntary. Your institution has agreed that your participation is voluntary. You may refuse to answer any of the questions and you may withdraw from the research, at any time without any consequences. Please feel free to ask questions at any time regarding this study. You will be given a copy of this consent form.

### **Contacts for Additional Information**

If you have any questions, at any time, about the research or the procedures used, you may contact any of the following individuals.

<p>Stephen Tetteh Matey School of Public Health College Of Health Sciences</p> <p>University of Ghana, Legon Dept. of Population, Family and Reproductive Health Email: mateystephen2005@yahoo.com Tel: 233-242-203583</p>	<p>Alfred Edwin Yawson, PhD School of Public Health College Of Health Sciences</p> <p>University of Ghana, Legon Dept. of Epidemiology and Disease Control Email: aeyawson@yahoo.com Tel: 233-244662711</p>
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## Your Rights as a Participant

This research has been reviewed and approved by the Institutional Review Board of Noguchi Memorial Institute for Medical Research (NMIMR-IRB). If you have any questions about your rights as a research participant you can contact Miss Hannah Frimpong, Administrator, Ghana Health Service Ethical Review Committee, – (0507041223/0243235225) as the review and approval of the study was done by them.

## VOLUNTEER AGREEMENT

The above document describing the benefits, risks and procedures for the performance of Community Health Workers in the Community Health Worker Programme in Upper Manya Krobo District of Ghana: role of health sector and community study. The research has been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I understand that I have the right to withdraw from the study at any time without in any way affecting my future medical care. I agree to participate as a volunteer and I understand that the principal investigator will contact me and I will be asked to participate in the research activities.

I agree that my information may be used anonymously in the research: \_\_\_\_\_ YES \_\_\_\_\_ NO

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name (PRINT) and signature of volunteer

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

\_\_\_\_\_

\_\_\_\_\_

Date

Name and Signature of Person Who Obtained Consent

**Appendix B: QUESTIONNAIRES**

**QUESTIONNAIRE ON PERFORMANCE OF COMMUNITY HEALTH WORKERS IN  
THE GHANA COMMUNITY HEALTH WORKER PROGRAMME IN UPPER MANYA  
KROBO DISTRICT**

**May, 2018**

**Identification Details**

**Region:**..... **District:** .....

**CHPS Zone:** .....

**Name of Interviewer:** ..... **Sign:** .....

**Date:** .....

This questionnaire is meant to collect information that would be useful in evaluating the implementation of Community Health Worker Programme. Any information provided by you will be held private and confidential and would not be disclosed to any person. Analysis of the questions from the questionnaire will be done together with others to ensure anonymity. You are required to answer all the questions to the best of your knowledge. Thank you for willing to participate.

**CODE** \_\_\_\_\_

**SECTION A: SOCIO-DEMOGRAPHIC CHARACTERISTICS**

**1. Sex**

- (a) Male [ ] (b) Female [ ]

**2. Marital status**

- (a) Single [ ] (b) Married [ ] (c) Widowed/Separated [ ]

**3. Educational Level**

- (a) Primary Completed [ ] (b) Primary Incomplete [ ] (c) Secondary Completed [ ]  
(d) Secondary Incomplete [ ] (e) Tertiary [ ] (f) None [ ]  
(g) Others specify.....

**4. Occupation**

- (a) None [ ] (b) Business [ ] (c) Formal employment [ ]  
(d) Farmer (peasant) [ ] (e) Farmer (Large scale) [ ]  
(f) Others (specify).....

**5. Religion**

- (a) Christian [ ] (b) Muslim [ ] (c) African Traditional Religion [ ]  
(f) Others, specify.....

**6. What is your main source of income?**

- (a) Salaried [ ] (b) Farmer [ ] (c) Self-employed [ ]  
(d) Casual Labour [ ] (e) Supported by Family [ ]  
(f) Others, Specify.....

**7. What is your Monthly income in Ghana Cedis**

- (a) Below 500 [ ] (b) 500 – 1000 [ ] (c) 1001 -1500 [ ]  
(d) 1501 – 2000 [ ] (e) 2001 – 2500 [ ] (f) 2501 – 3000 [ ]

- (g) 3501 – 4000 [ ]      (h) Above 4000 [ ]

**SECTION B: SELECTION CRITERIA APPLIED**

**8. Years of service as a health volunteer in this community before becoming a CHW**

- (a) Less than six months [ ]      (b) six months -1Year [ ]      (c) 1 -2 Years [ ]  
(d) 3 -4 Years [ ]      (e) Above 5 Years [ ]

**9. Literacy: Can the selected CHW read, write and operate a mobile phone (i.e., trainable)**

- (a) Yes [ ]      (b) No [ ]

**10. Connection to community: Do you live in or in close proximity to the community you serve (applies to communities whose candidates aren't up to the required numbers)**

- (a) Yes [ ]      (b) No [ ]

**11. Language abilities: Did the Selected CHW fluent in the local language and English**

- (a) Yes [ ]      (b) No [ ]

**12. Credibility: Did the Selected CHW acceptable to the community, passing as credible in a public forum without any criminal and behavioral records**

- (a) Yes [ ]      (b) No [ ]

**13. Application: Did the Selected CHW submit an application, shortlisted, screened and interviewed**

- (a) Yes [ ]      (b) No [ ]

**14. Endorsement: Was the Selected CHW endorsed by a community committee involving CHMC, SDHMT and YEA representative**

- (a) Yes [ ]      (b) No [ ]

**15. Age**

- (a) Below 18 years [ ]      (b) 18-25 Years [ ]      (c) 26-35 Years [ ]  
(d) 36-49 Years [ ]      (e) 50-59 Years [ ]      (f) 60 + Years [ ]

**SECTION C: HEALTH SYSTEM FACTORS**

**16. How long have you practiced as a CHW**

- (a) Less than six months [ ]      (b) six months -1Year [ ]      (c) 1 -2 Years [ ]  
(d) 3 -4 Years [ ]      (e) Above 5 Years [ ]

**17. Have you attended any training as a Community Health Worker?**

- Yes [ ]      No [ ]

**18. If yes,**

**(i) Which one?**

- (a) Module 1(Community Health Basics [ ]      (b) Module 2 (Community based care) [ ]  
]      (c) Module 3 (Time and Targeted  
Counsel) [ ]  
(d) Others, specify.....

**(ii) For how many days was the class room training for each model?**

- (a) 1 week [ ]      (b) 2 Weeks [ ]      (c) 2 Weeks [ ]      (d) 3 Weeks [ ]

**(iii) For how many days was the field based training for each model?**

- (a) 1 week [ ]      (b) 2 Weeks [ ]      (c) 3 Weeks [ ]  
(d) 4 Weeks [ ]      (e) 5 Weeks [ ]      (f) 6 Weeks [ ]  
(g) Others, specify.....

**(iv) Field based supervision of module 1 activities?**

- (a) Yes [ ] (b) No [ ]

**(v) Agreement for progression of module 1 (CHMC & supervisor meeting)?**

- (a) Yes [ ] (b) No [ ]

**(vi) Field based supervision of module 2 activities?**

- (a) Yes [ ] (b) No [ ]

**(vii) Agreement for progression of module 2 (CHMC & supervisor meeting)?**

- (a) Yes [ ] (b) No [ ]

**(viii) Field based supervision of module 3 activities?**

- (a) Yes [ ] (b) No [ ]

**(ix) Agreement for progression of module 3 (CHMC & supervisor meeting)?**

- (a) Yes [ ] (b) No [ ]

**(x) Who trained you as a Community Health Worker?**

- (a) GHS [ ] (b) YEA [ ] (c) WVI [ ]  
(d) Others, specify.....

**(xi) Have you attended any other refresher Course?**

- (a) Yes [ ] (b) No [ ]

**(xii) If yes, for how long**

- (a) < 1 Week [ ] (b) 1 Week [ ] (c) > 1 Week [ ] (d) N/A [ ]

**(xiii) Name the refresher course attended**

- (a) Home Based Care [ ] (b) Prevention of Mother- To- Child Transmission [ ]  
(c) People with Disabilities [ ] (d) Reproductive Health [ ]

- (e) Infant and Young Child feeding [ ] (f) Breast feeding [ ] (g) N/A [ ]

**19. Do you feel that the training that you have undergone is adequate for you to perform your duties as a CHWs?**

- (a) Yes [ ] (b) No [ ]

**20. Which areas do you feel should be improved in the training**

- (a) Duration of training [ ] (b) The content of the training [ ]  
(c) Areas covered to include curative services [ ]  
(d) Introduction of refresher courses [ ]  
(e) Others, specify.....

**21. How many times in the last three month have you received a scheduled individual supportive supervision visit in your community/catchment area?**

- (a) None [ ] (b) 1 time [ ] (c) 2 times [ ] (d) 3 times [ ]  
(e) More than 3 times [ ]

**22. In the last supportive supervision visit you received, which of the following activities were conducted (*tick all that apply*)**

- (a) Observation of a household visit [ ] (b) Case spot checks [ ]  
(c) Coaching or mentoring [ ] (d) Skills development (demonstration or teaching)  
[ ]  
(e) Knowledge development (review of material) [ ] (f) Data tallying or review of records [ ]  
(g) Supply/resource checks [ ] (h) Trouble shooting or problem solving. [ ]  
(i) Action planning [ ] (j) Work schedule management [ ]

**23. Group supervision/ monthly meetings -In the last three months how many times has a scheduled group supervision or meeting taken place?**

- (a) Never (skip 18) [ ]                      (b) None in the last 3 months [ ]  
(c) Once in the last 3 months [ ]            (d) more than once in the last 3 months [ ]

**24. Group supervision / monthly meeting activities. In the last group meeting you attended, which of the following activities took place?**

- (a) Discussion of challenges and solutions. [ ]                      (b) Discussion of successes [ ]  
(c) COMM debriefing [ ]                      (d) Skills development (demonstration or teaching) [ ]  
(e) Knowledge development (review of material)[ ] (f) Data tallying or review of records[ ]  
(g) Trouble shooting or problem solving [ ]                      (h) Participatory action planning [ ]  
(i) Work schedule management [ ]

**25. Who is mainly involved in supervising you?**

- (a) CHOs [ ]                      (b) DHMT [ ]                      (c) R H M T [ ]  
(d) NHMT [ ]                      (e) NGOs [ ]

**26. Do you feel that the supervision you get is enough?**

- (a) Yes [ ]                      (b) No [ ]

**27. Do you get feedback from your supervisor?**

- (a) Yes [ ]                      (b) No [ ]

**28. In your opinion does your supervisor give you adequate support and attention?**

- (a) Yes [ ]                      (b) No [ ]

**29. Has your performance been evaluated by your supervisor since you started working as a CHW?**

- (a) Yes [ ] (b) No [ ]

**30. If yes were you given feedback (written performance evaluation)?**

- (a) Yes [ ] (b) No [ ]  
]

**31. (i) Do you receive any cash payment?**

- (a) Yes [ ] (b) No [ ]

**(ii) If yes above from who**

- (a) GOG [ ] (b) NGO/Donors [ ] (c) Community [ ]  
(d) Others, specify .....

**(iii) What kind of cash payment do you receive?**

- (a) Salary [ ] (b) Stipend [ ] (c) Allowance [ ]  
(d) Others specify .....

**(iv) How often is it paid**

- (a) Daily [ ] (b) Weekly [ ] (c) Monthly [ ] (d) After a meeting [ ]  
(e) Others specify.....

**(v) Do you feel that the payment is adequate for the work that you do as a CHW?**

- (a) Yes [ ] (b) No [ ]

**32. Which of the following in kind incentives are you receiving currently?**

- (a) Community recognition [ ] (b) Management of a commodity kit [ ]  
(c) Training Supervision [ ] (d) Career advancement opportunities [ ]  
(e) Tokens [ ] (f) Chickens, [ ] (g) Provision of a bicycle [ ]

(h) Others specify.....

**33. Which of the following incentives do you think would motivate you the most as a CHW?**

- (a) Salary /stipend [ ] (b) Allowance/Reimbursement [ ]  
(c) Provision of supplies and commodities [ ]  
(d) Intensive training and refresher courses [ ] (e) Recognition by the community [ ]  
(f) Others specify.....

**34. In your opinion a CHW should be**

- (a) A volunteer entirely [ ] (b) Receive a salary [ ] (c) Receive a stipend [ ]  
(d) Get allowances [ ] (e) Receive any kind incentives [ ]  
(f) Others, specify.....

**35. Who would you recommend to deal with the remuneration of a CHW?**

- (a) YEA [ ] (b) GOG/MOH [ ] (c) Community [ ]  
(d) Donors [ ]  
(e) Others, Specify .....

**36. Where you given equipment and supplies after training and deployment?**

- (a) Yes [ ] (b) No [ ]

**37. Which of the following equipment you were given after training and deployment?**

- (a) Rain coats [ ] (b) Rain boots [ ] (c) Bicycles (where terrain permits) [ ]  
(d) Uniform & Badge (ID) and bag [ ] (e) Pulse & Respiratory timer [ ]  
(f) Length mat [ ] (g) Mobile Phone [ ] (h) MUAC tape [ ]  
(i) Thermometer [ ]

**38. Which of the following printed materials and job aids you were given after training and deployment?**

- (a) CHW Participants manuals (3 modules) [ ] (b) Family Health Cards [ ]  
(c) Food diaries [ ]  
(d) Counselling cards: Community health basics, Community based care and ICCM and Timed and targeted Counselling [ ] (e) Job aids (all three modules) [ ]  
(f) CHW Community Register book [ ] (g) CHW Monthly report forms [ ]  
(h) Referral and counter referral forms [ ] (i) CHW notebook/diary [ ]

**39. Which of the following medicines you were given after training and deployment?**

- (a) Oral Rehydration Salt Sachet [ ] (b) Zinc Sulphate 20mg Tablets [ ]  
(c) Chlorine (water purification) tab [ ] (d) ACT- Artesunate 50mg+Amodiaquine 153mg [ ]  
(e) ASAQ / Artemether +Lumefantrine dispersible tabs [ ]  
(f) Long Lasting Insecticide Treated Nets (LLITN) [ ]  
(g) Rapid Diagnostic Test – malaria [ ] (h) Paracetamol 500mg Tablets [ ]  
(i) Amoxicillin 125mg /5mls or 250mg dispersible tabs [ ]  
(j) First Aid kit [ ] (k) Retinol (Vit. A) 200,000 i.u. Capsules [ ]  
(l) Plumpynut (packet) [ ]  
(m) Male condom Pieces [ ] (n) Female condom Pieces [ ]  
(o) Sputum collection containers [ ] (p) Ziplock for sputum [ ]  
(q) Examination Gloves [ ] (r) Soap [ ]

- 40. Have you experienced any stock outs of medicines lasting 4 weeks or more since you began your service?** a) Yes [ ] (b) No [ ]
- 41. Do you have the supplies and equipment you need to provide the services you are expected to deliver?** (a) Yes [ ] (b) No [ ]
- 42. Is there a system in place regarding your regular ordering of equipment and supplies**  
(a) Yes [ ] (b) No [ ]

### INFORMATION SYSTEM AND FLOW

- 43. Do you write reports on what you do for the community?**  
(a) Yes [ ] (b) No [ ]
- 44. If yes, where do you take your reports?**  
(a) CHC [ ] (b) CHEW [ ] (c) Health Facility [ ] (d) All of the above [ ]
- 45. Where do you record your reports?**  
(a) Paper [ ] (b) Note book [ ] (c) Register [ ] (d) Chalk board [ ]  
(e) CHW Log book [ ] (f) None [ ]
- 46. How often do you submit your reports?**  
(a) Daily [ ] (b) Weekly [ ] (c) Monthly [ ] (d) Quarterly [ ]  
(e) Annually [ ] (f) Never [ ]
- 47. Do you share your reports with the other CHWs and CHCs before submitting?**  
(a) Yes [ ] (b) No [ ]
- 48. Do you get a feedback after reporting?**  
(a) Yes [ ] (b) No [ ]

**49. How does the information you get assist you as a CHW**

- (a) Planning [ ] (b) Address gaps found [ ] (c) All the above [ ] (d) N/A [ ]

**SECTION D: COMMUNITY FACTORS**

**50. Do you feel that what you do as a CHW meets the expectations of the community?**

- (a) Yes [ ] (b) No [ ]

**51. If yes, how does the community appreciate your work?**

- (a) Thanking you after serving them [ ] (b) Tokens, chicken, food [ ]  
(c) Cash payment [ ] (d) Community recognition [ ]  
(e) Other specify.....

**52. As a CHW do you get any support to facilitate you work**

- (a) Yes [ ] (b) No [ ]

**53. If Yes, from who**

- (a) Spouse [ ] (b) Family [ ] (c) Community [ ]  
(d) Provincial administration [ ]

**54. Who selected you as a community Health Worker?**

- (a) Community/ CHC [ ] (b) YEA [ ] (c) MOH/GHS [ ]  
(d) Others specify .....

**55. Community engagement: is there an active CHMC that take part in your supervision or reporting?**

- (a) Yes [ ] (b) No [ ]

**56. If yes – how frequently do you have contact with the CHMC?**

- (a) Less than twice a year [ ] (b) Twice a year or more [ ]

**SECTION E; PERFORMANCE OF CHW IN HEALTH SERVICE DELIVERY AT  
COMMUNITY LEVEL**

**57. Do you understand your role clearly and the targets that you are required to meet on monthly basis?**

- (a) Yes [ ] (b) No [ ]

**58. How many households did you visit last month?**

- (a) 1-5 [ ] (b) 6-10 [ ] (c) 11-15 [ ] (d) 16-20 [ ]  
(e) 21-25 [ ] (f) Over 26 [ ]

**59. How many health education forums did you conduct last month?**

- (a) None [ ] (b) Only one [ ] (c) two to four [ ]  
(d) five and above [ ]

**60. Do you refer clients for health services you do not or cannot provide?**

- (a) Yes [ ] (b) No [ ]

**61. If yes, do you complete a referral form for the client to take to the facility?**

- (a) Yes [ ] (b) No [ ]

**62. Do you receive counter-referrals from the facility to instruct you to provide follow up care at home?**

- (a) Yes [ ] (b) No [ ]

**63. If yes: for what types of service/client:**

- (a) HIV care [ ] (b) Non-communicable disease care [ ]  
(c) TB D o t [ ] (d) Elderly home based care [ ]

(e) CMAM / malnutrition [ ]

(f) Others specify .....

**64. How many hours per week do you work on average? Of those hours how many are spent in each area?**

(a) \_\_\_\_\_ hours/ week total (b) \_\_\_\_\_ hours doing household visits

(c) \_\_\_\_\_ hours at CHPS compound

**Since becoming a CHW, which of the following activities have you completed, and how many times?**

**Observe: Ask to see the community register to validate the frequency of activities they are reporting**

**65. Community mapping** – a comprehensive assessment of community infrastructure and resources

(a) Never [ ] (b) At least once [ ] (c) 6-monthly [ ]

(d) 3-monthly [ ] (e) Monthly or more [ ]

**66. Community sensitization** meetings and/or action planning to inform the community about the CHW program and its activities

(a) Never [ ] (b) At least once [ ] (c) 6-monthly [ ]

(d) 3-monthly [ ] (e) Monthly or more [ ]

**67. Community-based surveillance** of notifiable diseases, births & deaths

(a) Never [ ] (b) At least once [ ] (c) 6-monthly [ ]

(d) 3-monthly [ ] (e) Monthly or more [ ]

**68. Household registration (all households):** how many times have you completed full

registration of all permanent residents in your area?

(a) Never [ ] (b) At least once [ ] (c) 6-monthly [ ]

(d) 3-monthly [ ] (e) Monthly or more [ ]

**69. House Hold vulnerability assessment:** How many times have you assessed households for “priority” status due to one or more vulnerability factors?

(a) Never [ ] (b) At least once [ ] (c) 6-monthly [ ]

(d) 3-monthly [ ] (e) Monthly or more [ ]

**70. Do you have a list of all priority households??**

(a) Yes [ ] (b) No [ ]

**71. Routine Household Visit:** Household assessment- How often have you completed assessments of household resources and conditions?

(a) Never [ ] (b) At least once [ ] (c) 6-monthly [ ]

(d) 3-monthly [ ] (e) Monthly or more [ ]

**72. Family health check:** how often have you assessed all household members over the age of 1 year?

(a) Never [ ] (b) At least once [ ] (c) 6-monthly [ ]

(d) 3-monthly [ ] (e) Monthly or more [ ]

**73. Home based care for malnutrition-** CMAM follow up for children who are malnourished

(a) Never [ ] (b) At least once [ ] (c) 6-monthly [ ]

(d) 3-monthly [ ] (e) Monthly or more [ ]

**74. How many cases in total?**

(a) 1-5 [ ] (b) 6-10 [ ] (c) 11-15 [ ] (d) 16-20 [ ]

(e) More than 20 [ ]

**75. TTC visits for pregnancy and infant care**

- (a) Never [ ] (b) At least once [ ] (c) 6-monthly [ ]  
(d) 3-monthly [ ] (e) Monthly or more [ ]

**76. How many TTC cases in total?**

- (a) 1-5 [ ] (b) 6-10 [ ] (c) 11-15 [ ] (d) 16-20 [ ]  
(e) More than 20 [ ]

**77. Assisting mobile clinics**

- (a) Never [ ] (b) At least once [ ] (c) 6-monthly [ ]  
(d) 3-monthly [ ] (e) Monthly or more [ ]

**78. Treatment of diarrhea, malaria, pneumonia in children under five years**

- (a) Never [ ] (b) At least once [ ] (c) 6-monthly [ ]  
(d) 3-monthly [ ] (e) Monthly or more [ ]

**79. HIV and/or TB care including treatment support and defaulter tracing**

**Verify: home based care register**

- (a) Never [ ] (b) At least once [ ] (c) 6-monthly [ ]  
(d) 3-monthly [ ] (e) Monthly or more [ ]

**80. How many HIV/TB cases in total?**

- (a) 1-5 [ ] (b) 6-10 [ ] (c) 11-15 [ ] (d) 16-20 [ ]  
(e) More than 20 [ ]

**81. Routine Household Visit: Household assessment - what do you assess during these visits?**

- (a) Water & sanitation access [ ] (b) Hygiene /handwashing facilities [ ]  
(c) Bednet usage [ ] (d) Food security and family diet [ ]

(e) Child safe/child friendly home [ ]

**82. Family health check:** what do you check during these FHCs and who do you provide service

for? **Children aged 1-5 years:**

(a) MUAC and growth monitoring [ ] (b) Complementary feeding [ ]

(c) Vitamin A/deworming (given) [ ] (d) Vaccines, bednets and hygiene [ ]

**Older children, teens and adults:**

(a) Older children and adolescent health (parental education) [ ]

(b) Adult health: sexual health and family planning needs [ ]

(c) Elderly health, disability and home based care needs [ ]

**83: Do you provide oversight or supervision of any of the volunteers in the CHPS zone?**

(a) Yes [ ] (b) No [ ]

**84. In the last one month have you missed any CBGP activities?**

(a) Yes [ ] (b) No [ ]

**85. If yes what was the main reason for you failing to attend the CBGP?**

(a) Financial constraints [ ] (b) Long walking distances [ ]

(c) Sickness [ ] (d) No reason [ ]

(e) Others specify.....

**Knowledge of Disease Conditions**

**86. Mention 3 commonest Diseases in this community unit**

(a) Malaria [ ] (b) URTI [ ] (c) Amoeba [ ] (d) Diarrhoea [ ] (e) Pneumonia [ ]

(f) Others Specify .....

**87. Why did you become a CHW?**

- (a) Felt the need to assist the Community [ ]
- (b) Encouragement by the community [ ]
- (c) Encouragement by the family members [ ]
- (d) Hope for recognition in the community [ ]
- (e) Hope for payment of a salary, stipend or in kind tokens [ ]
- (f) Hope for advancement of career in the medical field [ ]

**88. Would you encourage anybody to enroll as a CHW?**

- (a) Yes [ ]
- (b) No [ ]

**89. On a scale of 1 to 5 how would you rate your job satisfaction as a CHW in relation to your initial expectation?**

- (a) Totally unsatisfied (1) [ ]
- (b) Not satisfied 2 [ ]
- (c) Fairly satisfied 3 [ ]
- (d) Satisfied 4 [ ]
- (e) Very satisfied 5 [ ]

**90. What major constraints do you face as a CHW?**

- (a) Lack of supplies [ ]
- (b) Lack of transport [ ]
- (c) Lack of support from the community [ ]
- (d) Lack of supervisors support [ ]
- (e) Financial constraints [ ]

**91. Have you ever felt like dropping out from your CHW roles?**

- (a) Yes [ ]
- (b) No [ ]

**92. What in your opinion is the main reason that would make a CHW to stop being active?**

- (a) Discouragement by family members [ ]

(b) Inadequate compensation for work done [ ]

**93. On average, how many days in a month do you give to community health work?**

(a) 0 – 5 [ ] (b) 6 – 10 [ ] (c) 11 – 15 [ ] (d) 16- 20 [ ]

(e) 21- 25 [ ] (f) 26 – 30 [ ]

**Thank you so much for taking your time to answer my questions**

**APPENDIX C: In-Depth Interview Guide For Community Health Management Committee Leaders.**

**1. Do you know of CHWs**

(a) Yes [ ] (b) No [ ]

**2. Are you served by one**

(a) Yes [ ] (b) No [ ]

**3. Do you know he/her by name-**

(a) Yes [ ] (b) No [ ]

**4. Which services does she/he give you**

(a) Health education [ ] (b) Curative services [ ]

(c) Promotive services [ ] (d) Inspection services [ ]

**5. How regular does he /she visit you**

(a)Daily [ ] (b) Weekly [ ] (c) Monthly [ ] (d) Quarterly [ ] (e)

Annually [ ] (f) Never [ ]

**6. What are the current challenges in the design and implementation of the new CHW program?**

.....

.....

.....

.....

**7. How have existing community-based volunteers and their activities been integrated with new program?**

.....  
.....  
.....  
.....

**8. What are the perceptions and beliefs of the community members about the new CHW program?**

.....  
.....  
.....  
.....

**9. Are you satisfied by her/his services**

(a) Yes [ ] (b) No [ ]

**Thank you for your participation**

**Appendix D: Focused Group Discussion Guide for CHWS**

**FGD number:** .....

**District:** .....

**Sub-district:** .....

**CHPS Zone:** .....

**Interviewer code:** .....

**Date of FGD:** .....

We are conducting a study on the Performance of CHWs in health services delivery in Upper Manya Krobo district. We will be asking you different issues about your overall experience, challenges and possible recommendations, in your work as CHWs.

**In general what factors influence your performance as CHWs?**

1. Are there personal/family attributes which influence your work? e.g. marriage
2. How effective is governance of Health service delivery at CHPS zone?
3. Are there Community factors which influence your Performance (cultures-norms traditions, beliefs and security)?
4. Kindly comment on the support, supervision, training, supplies and financing your receive as CHWs
5. Any others issues?

**I thank you most sincerely for sharing your opinion**

## **Appendix E: In-Depth Interview Guide for Health Staff and Staff Of YEA**

### **Key Informant Guide**

#### **Introduction:**

I am a student from University of Ghana doing a research on the performance of Community Health Workers in Upper Manya Krobo district. An important part of the research is to understand the environment in which the CHWs are operating, as well as what the community's strengths and challenges are. We are interviewing key resources persons in the community as part of an information-gathering process. The themes that emerge from the interviews will be used to generate information for mitigation process. The interviews will be strictly confidential and will only take 45 minutes. With your consent I request to start the interview.

#### **Information about the CHPS program**

1. Number of functional CHPS compounds\_\_\_\_\_
2. Total number of communities\_\_\_\_\_
3. Total number of CHWs recruited under the program\_\_\_\_\_
4. Number of non-functional CHPS compounds\_\_\_\_\_
5. Number of hard to reach communities\_\_\_\_\_
6. Number of CHWs recruited who have completed training\_\_\_\_\_
7. Number and % of hard to reach communities covered by trained and active  
CHW\_\_\_\_\_

### **Question**

What do you think are the factors influencing the Performance of CHWs in health services delivery in Upper Manya Krobo district?

- i. What achievements have been made to date in rolling out the CHW program in your district?
- ii. What is still left to do?
- iii. What are the perceived benefits of the new program amongst CHPS program Stakeholders?
- iv. What are the current challenges in the design and implementation of the new CHW program?
- v. How have existing community-based volunteers and their activities been integrated with a new program?
- vi. What are the perceptions and beliefs of the community members about the new CHW a program?
- vii. How is the cadre being managed and supervised in the field? What data/reports are being a collected and how are these being used?

### **Closing Remarks**

Are there other people you think we should talk to concerning the same? Have we covered everything you think is important?

### **Debriefing:**

Thank you very much for your time. Your knowledge and insights will be very helpful and valuable. When the process is complete, the researcher would be happy to share a summary of the findings. Would you like to receive a copy?

**Thank you again**

**Appendix F: Questionnaire on Implementation Quality Assurance for DHMT, SDHMT, Cho and Yea Members Involved In Management and Start Up of the Program.**

<b>Programme site:</b>		<b>District/Region:</b>	
<b>Name of Person Completing the Tool:</b>	<b>Title:</b>	<b>Type of Assessment:</b> <input type="checkbox"/> Self-Assessment <input type="checkbox"/> Third Party <input type="checkbox"/> Mixed	<b>Date of Assessment (mm/dd/yyyy):</b>
<b>Length of programme implementation:</b> <input type="checkbox"/> < 6 months <input type="checkbox"/> 6 - 12 months <input type="checkbox"/> > 12 - 24 months <input type="checkbox"/> > 24 months		<b>Level of Assessment (e.g. what level is this assessment being conducted):</b> <input type="checkbox"/> Programme site <input type="checkbox"/> ADP <input type="checkbox"/> District/Regional <input type="checkbox"/> National	

Instructions on how to determine IQA score:

Beside each essential element, there is a checklist of critical components of the essential element. As you go through your assessment, check the boxes that apply to the programme. The overall IQA is the mean of individual IQA scores from all the essential elements. An overall IQA score of 1.5-2 indicates high fidelity; 1.0-1.4 indicates moderate fidelity; less than 1.0 indicates low fidelity. 0= not/never done 1=sometimes done, 2=mostly done, 3=always done

**CHW functionality, start up and program management**

To be completed by the DHMT, SDHMT, CHO and YEA members involved in management and start up of the program.

#	Quality standard	Check the box <input checked="" type="checkbox"/> for those that are present in the model.	IQA	Explanation of variance
1.	<b>CHW recruitment process is community-driven, transparent and engages all existing cadres without the creation of new ones.</b>	<input type="checkbox"/> All existing health volunteer cadres were given opportunity to be recruited <input type="checkbox"/> Recruitment processes were clear and transparent <input type="checkbox"/> Criteria for selection were available all throughout recruitment process <input type="checkbox"/> All key stakeholders (GHS, SDHMT, YEA and CHOs) were involved in selection of candidates <input type="checkbox"/> All candidates were interviewed and scored according to the criteria given <input type="checkbox"/> CHPS coordinators and CHMCs participated in the approval of candidates selected		

2	<p><b>CHW role is designed with clarity, including competencies with agreement of community, CHW, and health system.</b></p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Written description of the new CHWs were provided to all key stakeholders including CHPS coordinators, SDHMT members, CHMC members and CHW candidates prior to recruitment</li> <li><input type="checkbox"/> Written appointment letters and conditions of service were provided to CHWs before appointment</li> <li><input type="checkbox"/> Communities were consulted on the roles of new CHW and candidates</li> </ul>		
3	<p><b>Training quality standards for ToF and CHW trainings were observed</b></p>	<p><b>3a. District level ToF</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Number of trainers is no less than two for each ToF of 20 Facilitators</li> <li><input type="checkbox"/> Ratio of trainers to facilitators should be 1:10 to ensure competencies are achieved.</li> <li><input type="checkbox"/> Training of facilitators is no less than ten days in total</li> </ul> <p><b>3b. Training of CHWs and their supervisors</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> All CHOs/ CHW supervisors were trained together with CHWs</li> <li><input type="checkbox"/> CHW training classroom sizes should not exceed 30,</li> <li><input type="checkbox"/> Ratio of participants to facilitators not more than 1:15</li> <li><input type="checkbox"/> All facilitators had completed a ToF</li> </ul> <p><b>3c. Concurrent support for implementation</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Implementation is concurrent the training</li> <li><input type="checkbox"/> Clear leadership of training by the DHMT</li> <li><input type="checkbox"/> NGOs and stakeholders oriented before training and providing support for implementation</li> </ul> <p><b>3d. Structure and duration of the CHW training program</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Training involved 3 modules with field supervision between each module</li> <li><input type="checkbox"/> Classroom training was a minimum of 6 weeks</li> </ul>		

		<ul style="list-style-type: none"> <li><input type="checkbox"/> CHOs conduct supervision visits after every module</li> <li><input type="checkbox"/> CHMCs met CHOs to review CHW progress before module progression</li> <li><input type="checkbox"/> Training and certification should be completed by all CHWs within a year</li> </ul>		
4	<b>Initial CHW training is sufficient to prepare them for their role with appropriate time, trainers and practical training.</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> All CHWs completed the training within 1 year from selection</li> <li><input type="checkbox"/> Training was conducted in a modular format (3 modules)</li> <li><input type="checkbox"/> A minimum of 2 weeks classroom training was done for each module (6 weeks minimum overall)</li> <li><input type="checkbox"/> Competency based assessments were done by each CHW at the end of classroom training</li> <li><input type="checkbox"/> Supervisors undertook field observations between modules</li> <li><input type="checkbox"/> Results of training competency assessments were recorded</li> <li><input type="checkbox"/> CHWs received certification on completion</li> <li><input type="checkbox"/> Training was evaluated and CHWs were satisfied with the training that they received</li> </ul>		
5	<b>Ongoing training is planned to ensure necessary revision, skills-building and considering estimated attrition rates.</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Refresher training plans for at least <i>four days per year</i> throughout the project cycle.</li> <li><input type="checkbox"/> Reselection and attrition rates are predicted at least 10%, and budgeted for 10% retraining of new volunteers per year.</li> </ul>		
6	<b>Equipment and supplies are available and sufficient to deliver services including medicines, supplies, and job aids.</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Existing supply chains for medical procurement are utilised and strengthened</li> <li><input type="checkbox"/> Stocks and job aids quality assessed at supervision at <i>least twice per year</i></li> <li><input type="checkbox"/> All equipment and supplies listed in the implementation guidance have been provided at program start up</li> <li><input type="checkbox"/> No significant stock outs (&gt;1 month) have been experienced by CHWs</li> </ul>		

7	<p><b>CHW supervisors are trained, equipped and supported to conduct regular supportive supervision with at least four contacts per year</b></p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Supervisors have completed basic competence training on the programme model and are selected as those with a background in the technical area of implementation.</li> <li><input type="checkbox"/> Individual CHW have <i>at least four</i> face-to-face contacts with supervisor per year, in the community where they are working.</li> </ul>		
8	<p><b>Individual supportive supervision is conducted <i>in situ</i> at least 4 times a year and are designed and implemented to identify and resolve individual performance quality.</b></p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Individual in situ supervisions take place at least once every 3 months</li> <li><input type="checkbox"/> Supervisors are trained using the supervision manual and methodologies</li> <li><input type="checkbox"/> Supervisors are well known to CHWs and communities</li> <li><input type="checkbox"/> Supervisors have and use basic supervision tools (checklists)</li> <li><input type="checkbox"/> Consistently meet with the community and make home visits with the CHW or provide on-the-job skill building</li> <li><input type="checkbox"/> Activities of supervision:             <ul style="list-style-type: none"> <li>○ Performance audit: record review and data: Data related to the key performance indicators are collected in individual supervisions (% completion of visits, male involvement, referral follow up support, registration in early pregnancy)</li> <li>○ Observation of service delivery: home visits done with CHW, providing skills coaching through observation at least twice a year.</li> <li>○ Case assessment: Home-visits of recorded cases are done by the supervisor to spot check for service quality, especially for treatment cases and adverse events are done four times per year.</li> <li>○ Coaching or mentoring:</li> </ul> </li> </ul>		

		<p>opportunities for skills development is done through demonstration of good practice or teaching at every supervision</p> <ul style="list-style-type: none"> <li>○ Supply/resource checks: including verification of</li> <li>○ storage conditions, removal of outdated stock and update of stock records</li> <li>○ Knowledge development: review of material</li> <li>○ Work schedule management</li> </ul>		
9	<p><b>Monthly meetings take place amongst CHWs and their supervisors in which data is collected and utilized to improve implementation sand accountability</b></p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Group supervision / meeting activities take place once per month involving CHWs are their supervisors</li> <li><input type="checkbox"/> CHMCs are engaged in these meetings at least 2 times a year</li> <li><input type="checkbox"/> Group supervision activities including the following activities: <ul style="list-style-type: none"> <li>○ Submission of monthly reports</li> <li>○ Analysis of data using threshold scorecards</li> <li>○ Identification of 3-4 improvement focus areas</li> <li>○ Discussion of challenges or adverse events</li> <li>○ Discussion of successes</li> <li>○ Skills and knowledge development: demonstration or teaching</li> <li>○ Participatory action planning</li> <li>○ Work schedule management</li> </ul> </li> </ul>		
9	<p><b>Individual Performance Evaluation occurs at least annually and is designed to fairly assess work and improve quality</b></p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> At least once per year, a minimum of 4 goal indicators of coverage are tracked through time-series at individual CHW level</li> <li><input type="checkbox"/> Community inputs are incorporated and performance is recognised.</li> <li><input type="checkbox"/> Includes evaluations of service delivery and coverage or monitoring data</li> <li><input type="checkbox"/> Includes community feedback on CHW performance</li> </ul>		
10	<p><b>Incentives - Standards and</b></p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Financial compensation are developed in collaboration with MoH</li> </ul>		

	<b>methods for performance-based incentives are ethical, non-competitive, sustainable, and under a unified policy</b>	<p>and partners in line with local or national policies/practices.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Community involved in incentives and provides feedback on performance that is taken into consideration.</li> <li><input type="checkbox"/> No payment for services is applied.</li> <li><input type="checkbox"/> Job tools (eg, phones, bicycles) are provided for exclusive use of CHW and are documented and transparent.</li> </ul>		
11	<b>Community engagement and accountability structures are in place, functional and provide oversight to CHW activities.</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> All projects have a functional CHMC or equivalent group who are actively overseeing CHWs.</li> <li><input type="checkbox"/> CHMCs are involved in feedback review of CHW supervision at least twice per year (CHW debriefing sessions).</li> <li><input type="checkbox"/> CHMC receive an orientation training at start-up including program objectives, activities, reports and their role in supporting CHWs</li> <li><input type="checkbox"/> A system to measure CHMC involvement is in place.</li> <li><input type="checkbox"/> Community-wide meetings to discuss and sensitise on CHW initiatives take place at least <i>once per year</i>.</li> <li><input type="checkbox"/> CHWs meet to integrate their activities with other community health actors once every six months.</li> </ul>		
12	<b>Referral system for emergency evacuations of cases is in place and referrals documented</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> A facilitated referral system is in place and referrals and evacuations are recorded.</li> <li><input type="checkbox"/> Post-referral follow-up visits by CHWs are conducted for all emergency evacuations.</li> <li><input type="checkbox"/> Counter-referrals are completed by health facilities to instruct CHWs on community based follow up for sever or chronic illness.</li> </ul>		
13	<b>Opportunity for advancement, growth, promotion and retirement for CHW is</b>	<p><b>The CHW program:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Offers advancement to CHWs who perform well and who express an interest in advancement</li> <li><input type="checkbox"/> Routinely provides training opportunities to help CHWs learn</li> </ul>		

	<b>considered</b>	<p>new skills and advance their roles</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Has a clear, transparent and fair system to assess CHW performance and achievement for advancement purposes</li> </ul>		
14	<b>Documentation, Information Management is in place which is consistent, transparent and used for service improvements</b>	<p><i>The CHW program:</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Has CHWs document their visits and provide data on standardized formats and this is consistently done to a high standard</li> <li><input type="checkbox"/> Ensures supervisors monitor quality of documents, discuss them with CHWs, and provide help when needed</li> <li><input type="checkbox"/> Provides CHWs and communities with data summaries</li> <li><input type="checkbox"/> Involves CHWs in data-based problem solving</li> <li><input type="checkbox"/> Data submitted to health facility/authority on a quarterly basis.</li> </ul>		
15	<b>Long-term sustainable medical supply and restock strategies are established, and include quality, theft and stock out checking systems.</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Projects utilise and strengthen existing supply chains rather than establish parallel mechanisms.</li> <li><input type="checkbox"/> Stocks of medicines and supplies at all levels of the system monitored regularly (through routine information system and supervision), including medical stock quality controls at least twice per year.</li> <li><input type="checkbox"/> A system for preventing misuse of medicines is in place with more than one person overseeing the medical stocks (e.g. a two-key box system).</li> </ul>		
16	<b>Linkage to Health System</b>	<p><i>The CHW program:</i></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Is provided comprehensive support by the health system through its consistent participation in, provision of and joint monitoring of: training, supervision, referral, equipment and supplies, incentives, performance evaluation, advancement, reporting, and use or sharing of data</li> <li><input type="checkbox"/> CHW has a direct reporting relationship to the local health</li> </ul>		

		<p>authorities.</p> <p><input type="checkbox"/> CHW community management structures and district health teams should interact at least twice yearly and exchange data/reports</p>		
17	<b>Programme Performance Evaluation</b>	<p><b><i>CHW program performance evaluation:</i></b></p> <p><input type="checkbox"/> Is conducted yearly and covers CHW activities</p> <p><input type="checkbox"/> Includes CHW functionality or IQA and time-series programmatic data.</p> <p><input type="checkbox"/> Assesses CHW achievements against program indicators and outcomes</p> <p><input type="checkbox"/> Includes an evaluation of the quality of service delivery provided by CHWs and the community and health facility staff give feedback</p> <p><input type="checkbox"/> CHWs are provided feedback on how they are performing</p> <p><input type="checkbox"/> CHW program is realizing at least 75% of its targets</p> <p><input type="checkbox"/> Report findings are shared at local, regional and national levels with partners.</p>		
	<b>OVERALL IQA</b>			

**Packages of care: Quality standards for CHW health activities**

To be completed by the CHW supervisors and trainers, CHWs and community members.

#	Quality standard	Essential elements	IQA	Explanation of variance
1	<b>Community mapping is conducted annually</b> with support of the CHO/CHMC	<input type="checkbox"/> CHW catchment areas mapped at start up and key community resources are identified <input type="checkbox"/> CHOs and CHMC support and participate in community resource mapping <input type="checkbox"/> Key community figures are engaged in community resource mapping <input type="checkbox"/> Community catchment area and map are updated annually		
2	<b>Community disease surveillance (CDS) is routinely done and reported regularly</b>	<input type="checkbox"/> Notifiable diseases are screened for during routine visits, and on request from individuals and families with suspected illness. <input type="checkbox"/> CHWs are competent to identify and report key epidemic diseases: cholera, measles, AFP, haemorrhagic fever, NTDs and those targeted for eradication. <input type="checkbox"/> CHWs report notifiable diseases immediately to facilities		
3	<b>Household registration (HR) and household vulnerability assessment is completed for all homes in the CHW catchment area and updated 6 monthly</b>	<input type="checkbox"/> Full registration on entry, updated 6-monthly RHVs <input type="checkbox"/> CHW registers all household members residing permanently in their catchment area and provide this information to the CHO to support them in maintaining an up-to-date community register for the CHPS zone. <input type="checkbox"/> Full registration is completed on program start up and updated every six months <input type="checkbox"/> A <i>household vulnerability assessment</i> is conducted at registration and a list of <i>priority households</i> (i.e. those meeting one or more criteria for prioritisation) is submitted to the CHPS coordinator. <input type="checkbox"/> Vulnerability information remains confidential		
4	<b>Registration of vital events (births/deaths) is conducted as soon as CHW learns of</b>	<input type="checkbox"/> CHWs visit homes following a birth or death, when informed of an event, or during the 6-monthly update of the register. They will record circumstances of birth and death and report to the CHO in order to help monitor improvements in vital data for the district.		

	events and reported to the CHPS zone monthly			
5	<p><b>Routine home visits (RHVs):</b> are conducted every six months and comprise a comprehensive <i>Household assessment and Family Health Check involving all key family members</i></p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> RHVs are conducted every 3-6 month as standard and 1-2 monthly for identified priority families</li> <li><input type="checkbox"/> A comprehensive <i>Household Assessment is conducted including conditions/resources</i> for HH health including: <ul style="list-style-type: none"> <li><input type="checkbox"/> household hygiene practices</li> <li><input type="checkbox"/> sanitation and environmental health</li> <li><input type="checkbox"/> family nutrition and food security</li> <li><input type="checkbox"/> Access to safe water access</li> <li><input type="checkbox"/> disease prevention measures: bednets, clean cookstoves, handwashing facilities</li> <li><input type="checkbox"/> child safety and nurturing home</li> </ul> </li> <li><input type="checkbox"/> <i>Family Health Check</i> is conducted to assess and educate families on health practices for: <ul style="list-style-type: none"> <li><input type="checkbox"/> children under five years including GMP, MUAC screening</li> <li><input type="checkbox"/> older children and adolescent health</li> <li><input type="checkbox"/> adult health: sexual and reproductive health and family planning needs</li> <li><input type="checkbox"/> Elderly health, disability and home based care needs</li> </ul> </li> <li><input type="checkbox"/> RHVs are always conducted in the presence of household head, elders and caregiver with an emphasis on inclusion of men</li> <li><input type="checkbox"/> CHWs use dialogue counselling to uncover barriers to practices and negotiate feasible solutions.</li> <li><input type="checkbox"/> Family Health cards are used to record outcomes of the assessment and actions agreed by family are recorded on the back of the card and signed by a Household Head.</li> <li><input type="checkbox"/> Distribution of products is included in the RHV as appropriate e.g. LLITNs, family planning commodities, vitamin A/deworming for children aged 1-5 years.</li> <li><input type="checkbox"/> CHW record the outcomes of the RHV on the Household register.</li> </ul>		

6	<p><b>CHWs are managing emergencies and referrals in their catchment zones, enabling emergency transport and providing 48-hour follow up at home</b></p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Families in the CHW catchment area have access to the CHW’s contact details day and night for emergency support</li> <li><input type="checkbox"/> CHWs are trained to provide first-line assistance, contact emergency services, and support the family to refer the patient, as well as writing a referral note.</li> <li><input type="checkbox"/> CHW write a referral note to the facility</li> <li><input type="checkbox"/> For emergency referrals the CHWs conduct home visits follow up within 48 hours of referral to assess recovery and to collect the counter-referral form.</li> </ul>		
7	<p><b>Home-based care (HBC) for moderate and severely of malnourished children on a routine basis as directed by CMAM outpatient care unit accordingly to quality standards</b></p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> CMAM and OTP facilities counter-refer CMAM cases to the CHW for home based support using counter-referral forms</li> <li><input type="checkbox"/> CHWs conduct weekly home visits for severe cases and moderate cases</li> <li><input type="checkbox"/> CHWs developed a ‘food diary’ with the families when the child is ready to begin transitioning back to family foods, in which accessible foods from 4 star diet are included</li> <li><input type="checkbox"/> CHW track growth, MUAC, dietary diversity, meal frequency, RUTF use, breastfeeding, clinic attendance and any complications</li> <li><input type="checkbox"/> CHWs counsel on feeding, play and child development, warmth and hygiene for the SAM/MAM child</li> <li><input type="checkbox"/> CHWs record their activities on a home-based care register</li> </ul>		
8	<p><b>Timed and targeted counselling visits (TTC) for maternal, newborn and infant care are conducted according to schedule, using the TTC quality</b></p>	<p><b>8a. TTC visits are conducted according to the schedule and messages are timed appropriately from pregnancy to one years of life</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The 1<sup>st</sup> visit is conducted as early as possible and before 4 months – at least one visit</li> <li><input type="checkbox"/> 2<sup>nd</sup> and 3<sup>rd</sup> visits are conducted between 6 and 9 months – at least 2 visits</li> <li><input type="checkbox"/> First week of life (0-7 days) – at least 2 visits</li> <li><input type="checkbox"/> Infant care phase (1-5 months) – at least 2 visits</li> <li><input type="checkbox"/> Child care phase (6-12 months) – at least 2 visits</li> </ul>		

	standards	<p><b>8b. Correct counselling methodology is applied during home visits for TTC (dialogue and individual barrier analysis).</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> All TTC target families possess a Family Health Card</li> <li><input type="checkbox"/> During visits CHWs identify which practices are done and marks the FHC correctly</li> <li><input type="checkbox"/> During visit CHWs identify individual level barriers to practices using dialogue.</li> <li><input type="checkbox"/> Health information is delivered as stories and key messages using counselling cards</li> <li><input type="checkbox"/> Feasible solutions are negotiated and written on the back of the FHC</li> </ul>		
		<p><b>8c. The key family influencers are included in counselling, and ensuring male partner/birth supporter involvement where possible</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> During visits CHWs makes sure to involve male partner/birth supporter where possible</li> <li><input type="checkbox"/> Male involvement is being monitored as a key performance indicator</li> <li><input type="checkbox"/> Key supporters are also engaged (e.g. mother in law and grandmother)</li> </ul>		
		<p><b>8d. More vulnerable mothers and infants are receiving more frequent home visits according to need (responsive care strategy), conducted at least monthly</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Adolescent mothers</li> <li><input type="checkbox"/> HIV positive mothers</li> <li><input type="checkbox"/> Mothers with chronic health problems or needing mental health/psychosocial support</li> <li><input type="checkbox"/> Low birth weight babies are visited weekly until they achieve normal weight</li> <li><input type="checkbox"/> HIV exposed infants, and infants with disability/congenital malformation or malnutrition</li> </ul>		
9	<p><b>Mobile clinics support</b></p> <p>According to CHPS zone schedule</p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> CHWs are informed of mobile clinics dates and locations and are responsible for informing communities</li> <li><input type="checkbox"/> CHWs support in preparing location and materials, providing on-site support for weight/growth monitoring as well as ensuring community members are identified</li> </ul>		

<p><b>10</b></p>	<p><b>Monitoring the work of volunteers</b> CHWs may take on some mentoring /supervision of volunteers.</p>	<p><input type="checkbox"/> Health volunteers who continue in their roles and are providing support as defined by the district health authority, CHWs, once trained, can receive additional training from the district to provide mentoring for volunteers, and consolidate data.</p>		
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**Appendix G: Institutional Review Board (Ghana Health Service) Authorization**

**GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE**

*In case of reply the number and date of this Letter should be quoted.*



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9<sup>th</sup> May, 2018

MyRef. GHS/RDD/ERC/Admin/App  
Your Ref. No.

18/201

Stephen Tetey Matey  
University of Ghana  
School of Public Health  
Legon, Accra

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol.

GHS-ERC Number	<b>GHS-ERC023/03/18</b>
Project Title	Performance of Community Health Workers in the Community Health Worker Programme (CHWP) in Upper Manya Krobo District of Ghana: Role of Health Sector and Community
Approval Date	9 <sup>th</sup> May, 2018
Expiry Date	8 <sup>th</sup> May, 2019
GHS-ERC Decision	<b>Approved</b>

**This approval requires the following from the Principal Investigator**

- Submission of yearly progress report of the study to the Ethics Review Committee (ERC)
- Renewal of ethical approval if the study lasts for more than 12 months,
- Reporting of all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.
- Submission of a final report **after completion** of the study
- Informing ERC if study cannot be implemented or is discontinued and reasons why
- Informing the ERC and your sponsor (where applicable) before any publication of the research findings.

Please note that any modification of the study without ERC approval of the amendment is invalid.

The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol

SIGNED.....  
DR. CYNTHIA BANNERMAN  
(GHS-ERC CHAIRPERSON)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra