Challenges to the Utilization of Community-based Health Planning and Services: the views of stakeholders in Yendi Municipality, Ghana

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Abstract

Background
The Community-based Health Planning and Services (CHPS) is a national health reform programme that provides healthcare at the doorsteps of rural community members, particularly, women and children. It seeks to reduce health inequalities and promote equity of health outcomes. The study explored challenges of the CHPS utilization following reports by the Ghana Statistical Service of poor clinic attendance and high maternal and child morbidities and mortalities in the Northern Region of Ghana.

Methods
This observational study employed qualitative methods to interview key informants covering relevant stakeholders. The study was guided by the systems theory. In all, 30 in-depth interviews were conducted involving 8 community health officers, 8 community volunteers, and 14 women receiving postnatal care in four (4) CHPS zones in the Yendi Municipality. The data were thematically analysed using Atlas.ti.v.7 software and manual coding system.

Results
The study found poor clinical attendance in the form of delays in seeking health care, low antenatal and postnatal care visits, barriers affecting the utilization of the CHPS compounds to include lack of transportation and poor road network, cultural beliefs such as taboos of certain foods and proof for women's faithfulness to their husbands as challenges of health facility utilization. Besides, the absence of health workers at the CHPS compounds such as the CHO, poor communication networks during emergencies when the ambulance service becomes inaccessible and lack of capacity by CHPS compound to sterilize some equipment. Furthermore, lack of incentives and adequate infrastructures like potable water and electricity, poor coordination of healthcare interventions and practices, lack of specialists and equipment as well as poor community engagement are major setbacks to the progress of the CHPS policy.

Conclusions
On clinical attendance, timing and number of antenatal and postnatal care visits, remain major concerns for the CHPS programme in the study setting. The barriers accounting for the low utilization of CHPS compounds are cost of referrals and cultural beliefs. There is an urgent need to address these challenges to improve the utilization of CHPS compounds and to contribute to achieving the sustainable development goals.

Keywords: Community-based Health Planning and Services, health inequality, implementation, challenges, clinic attendance.
Background
The Community-based Health Planning and Services (CHPS) is one of the prioritized policies to promote safe motherhood in rural Ghana [1]. The range of services rendered by the Community Health Officers (CHO) CHPS during labour and delivery include Antenatal Care (ANC), Postnatal Care (PNC) and emergency delivery services particularly during the second stage of labour [2]. With support from the local communities, the CHPS programme recruits, trains and deploys community health volunteers (CHVs) to provide family planning services to the communities and to refer beneficiaries to CHOs [3].

As a national health reform, the CHPS policy works in collaboration with the Ministry of Health, the communities with CHPS facilities and traditional institutions to seek volunteerism and resources to support the implementation of community-based primary healthcare programmes. The implementation is done by providing health services at the doorsteps of community members, particularly, the rural women. Such intervention enables the Ghana Health Service (GHS) to reduce health inequalities and promote equity of health outcomes [2, 3]. The CHPS intervention employs systematic plans to negotiate with the stakeholders; the local authorities, political leaders, and the community members through effective mobilization and community engagement [3].

There is general improvement in ANC, skilled delivery (SD), and PNC. However, this progress is not nation-wide because there are inequalities in accessing health information and services at the regional or district levels [4, 5]. The discrepancies in improvement has rather widened the health inequality gaps for people in different locations, thereby, resulting in unequal health outcomes [5]. In spite of the nation-wide success stories in SD, only few women in maternity who are in need of emergency obstetric care have access to it. This further widens the regional inequality gap [6]. As a safe motherhood intervention, the CHPS programme has been experimented and proven that the involvement of community health nurses, traditional leaders and community members in the provision and management of healthcare promotes male participation to a large extent. This improves maternal and child health outcomes thereby strengthening accountability for the benefit of the healthcare system [5]. Some of the challenges to the implementation of the CHPS programme are cultural factors, attitude of healthcare professionals, inadequacy of clinical resources, long distance to the facility and the associated cost. These are major issues that inform the choice of health facilities by pregnant women in the pregnancy-postpartum continuum [7]. Skill delivery care is a pre-requisite towards progress in maternal and child morbidities and mortalities particularly in the developing world [5]. Though the CHPS programme is a prioritized intervention designed to improve maternal and child health [1], the policy does not emphasize SD care as a core mandate of the CHPS compounds [8, 9]. The policy aims at providing SD care through adoption of community participation, promotional programmes and referral services [8, 10]. It also focuses on expansion of CHPS compounds to address challenges related to geographical access, and to remove financial and cultural hindrances to facility-based care [6].

Most of the recent studies place emphasis on assessing the nation-wide performance of the CHPS initiative. This paper was motivated by the observation of increasing concerns of widening inequalities at the sub-national level [11]. There is evidence that in situations where national maternal and newborn mortality rates have improved, there are
sub-groups where survival rates and access to services have not changed or even worsened over time [12, 13, 14, 15, 5]. Further, there have been reports on poor clinical attendance. This is associated with high maternal and neonatal morbidities and mortalities in the Northern Region of Ghana [16]. In this study, we explored explore the implementation challenges of the CHPS intervention from the views of women, CHVs, and CHO's. Given the urgency to accelerate the progress of the Sustainable Development Goal 5 – Achieving Gender Equality and Empowering Women and Girls towards 2030, this study is essential for informing health policy and practice developments for the improvement and sustenance of the well-being of women and their dependents.

The Systems Approach

In this study, we adopted the systems approach to explain how the various components of the CHPS system work together to produce positive maternal health outcomes. The basic orientation of this paper is that access to and proper utilization of CHPS facilities are outcomes of the interactions, interconnectedness, or interrelationships among various components of the healthcare system. This study explains that access to CHPS services and positive maternal health outcomes are cumulative effects of the interactions between or among various factors of the CHPS system.

The position of this theory is that the function of any part of a whole affects the function of every other part and the whole in general [17, 18]. This implies that the impact of any intervention or programme connected to the promotion of the CHPS policy affects every other intervention and the general outcome of CHPS. A system is considered as an entity made up of interrelated and connected parts [19, 17]. Therefore, rather than dealing with the CHPS compound and the various components in isolation as unrelated entities, the approach considers factors like transport, communication, health personnel among others as interrelated and interacting. In agreement with [18, 17], observed that systems of various orders are understood by investigating their respective parts as making a whole. Thus, analysing each component of CHPS policy in isolation of others will only produce results related to that part. However, a different response would be generated when their interrelationships are emphasized. Therefore, there is the need to view the CHPS policy with a holistic lens for proper assessment and evaluation to make appropriate recommendations for positive maternal outcomes. This will make it possible to identify and explain conditions that create health inequalities among various segments of the population in the CHPS zones.

Understanding each component of CHPS and its interrelationships with other factors is necessary for a holistic analysis of the outcome of CHPS policy. Thus, the various factors that determine access to CHPS are investigated and their impingement on maternal outcomes are discussed. The next level of this theory emphasizes communication and feedback on the function of the whole. This study takes the form of recommendations based on the findings for improvement of the CHPS programme. This will cause to establish equilibrium in the various levels and the whole in general for positive outcomes because there is a clear connection between inputs to the system and its performance [17, 20]. Thus, the various factors such as availability and commitment of healthcare professionals, transport and cultural beliefs among others work individually and collectively to affect access to CHPS and the expected outcomes.
Methods

Study design
This was an observational study that employed a qualitative method. It adopted the cross-sectional design to conduct key informant interviews involving 8 CHO(s), 8 CHVs and 14 women receiving postnatal care in four (4) selected CHPS compounds in the Yendi Municipality of the Northern Region, Ghana. In each CHPS compound, two community health volunteers (CHVs) were selected (male and female). While for the community health officers (CHO(s), only females were involved. This is because nearly all CHO(s) are females in the CHPS programme. For the mothers, their level of education was also considered in the selection and participation.

Sampling approach and data collection
The purposive, quota, and snowball sampling techniques were used for the selection of participants. We purposively selected these categories of participants because they are the main actors or stakeholders in the CHPS programme. In each of the four (4) sub-districts in the Municipality, one CHPS compound was purposively selected. To ensure equity in representation, a quota sampling technique was employed to select participants based on their socio-demographic characteristics (e.g., age, location, and sex). Snowball sampling was used to identify and reach nursing mothers receiving postnatal care from the CHPS compounds in the various communities. For example, with the assistance of the CHVs, one nursing mother was used to reach others who were receiving postnatal care in her community. The interviews were conducted in the English Language using a tape recorder and transcribed for analysis. For participants who could not understand the English Language, the research employed a Dagbani dialect teacher for interpretation and the responses were later translated into English for transcription and data analysis.

Some of the questions asked during data collection were; 1). As pregnant women/mothers, what challenges do you face in using the CHPS compound in your community? Are you satisfied with the services provided by CHO(s) in your CHPS compound? If yes/no, could you give reasons for your answer? 2). Having been involved in volunteerism towards the progress of the CHPS compound, what do you see as implementation challenges to the programme? What problems do you face as volunteers in rendering your services? What do you think should be done to enable you to do your work well for the success of the CHPS programme? 3). Do the women in this area patronize the services of this CHPS compound? If no, why do you think they are not using the facility? What are the problems you face as CHO(s) in rendering your services?

Data analysis
Techniques such as verbatim quotes, inter-coder agreement, self-examination, member checks, and iterative questioning were used to ensure trustworthiness and dependability. The data were thematically analysed based on the judgment of the outcome of Atlas.ti.v.7 software and manual coding systems.
Ethical consideration

The data collection was carried out with ethical conscience in line with the local cross-cultural and cross-gender principles. The participants’ consent was sought for possible publication of the study outcome. They were also assured of anonymity and confidentiality.

Results

The background of participants was considered by the research during sampling and data collection levels.

Socio-demographic characteristics of key informants

The socio-demographic characteristics of the participants were considered during the sampling and data collection stages of the study. Of the 30 key informants, 46.7% (14) were ±35 years, 40.0% (12) were between 20 and 34 years and the remaining were below 20 years of age. The majority of the participants were females 86.7% (26). Of the 14 mothers, 4 had no formal education, 8 had education up to the level of Junior Secondary School and the remaining 2 participants had Senior Secondary/Vocational School education.

CHPS utilization access challenges

The participants reported that transportation was a barrier to the utilization of the CHPS facilities. Thus, a mother’s ability to use a motorbike is likely to facilitate the utilization of the CHPS compounds. For mothers who had access to or owned motorbikes, heavy rains and poor road networks were cited as challenges affecting utilization of the CHPS compounds. Some participants also reported the absence of the CHO at the health facility.

“Though I have a motorbike, I cannot even use it during the rainy season due to the nature of the road linking this community to the health facility. I may not be fortunate to meet CHO who can solve my problem. Sometimes, we are asked to go to Yendi Hospital when the health problem is complicated or absence of CHO” (Mother, 27 years).

For instance, some remote settlements have no access roads and means of transport to facilitate attendance to CHPS compounds. They reported that the ambulance service and communication network are poor. Some communities with access to good roads faced the problem of means of transport, with a worse situation for women in remote areas. In the study setting, it was reported that there are few commercial vehicles are running in some areas.

“You can see for yourself. The road linking this village to the next community with a CHPS facility is a footpath. When I was about to deliver, I was carried on a bicycle to the facility. The pain was too much I opted for walking but the distance to the facility was far. On the way, we had to branch to the house of a TBA for delivery” (Mother, 22 years)
This implies that one’s ability to afford transportation and the cost associated with clinical care may not lead to access to health care. But the nature of roads and lack of expertise in the CHPS compound may prevent access and utilization. Similarly, referrals to Municipal level health facilities may pose other challenges which lead to poor utilization of health care.

**Poor coordination of interventions**

In this study, we found that the maternal healthcare policy interventions such as the national ambulance service, safe motherhood protocol, national health insurance scheme, and medical supplies and health personnel are not well coordinated at the implementation level. These policies are developed and rolled-out without proper consideration of the implementation phase. They also reported of limited communication network which makes it difficult for women or their families to contact private transport operators, ambulance service providers, and the CHOs during emergencies. Apart from the municipal hospital which is a referral centre, none of the CHPS compounds has an ambulance for emergencies and referrals.

"... We do not have an ambulance for emergencies. Only the district hospital has it. Hmm, ... we are trying our best to save our fellow women during complications and emergencies." (Community Health Officer).

**Delays in seeking care**

The participants reported delays at the household and community levels due to cultural beliefs. At the health facility level, the safe motherhood protocol that is supposed to give priority to maternity cases was not functioning well. The majority of the women admitted to delays in seeking care due to poor clinical setup, the attitude of some professionals, and understaffing:

"When I got there (CHPS compound),... I further waited for close to an hour before a good person picked me and transported me to the hospital. I cried for 30 minutes and nobody came to me until I reached the crowning stage ... After delivery, they told me that the midwife and the doctor are engaged" (Mother, 35 years)

We also identified variation in policy and implementation practice between the National Health Insurance Scheme (NHIS) and safe motherhood protocol in the provision of medical services, particularly in the referral facilities. The majority of women reported having to pay unauthorized money for services that are covered by NHIS.

"I have an NHIS card but I was made to pay for a laboratory test. Is it not cheating? I do not know why they do not do what they promise in the NHIS policy." (Mother, 38 years)

When further inquired, we found that some of the health facility-based delays connected to the provision of medicines had to do with the procurement law that
restricted the process of acquisition of medical supplies. Some of the CHPS compounds are like the traditional birthing settings without any standardized equipment or materials to facilitate healthcare delivery. The services do not meet the healthcare needs of clients. For instance, they had no sterilizers and depended on the district hospital for such service. However, the women were comfortable with the CHOs in their communities compared to professionals in referral facilities due to familiarity with the setting.

"We always blame people for not using CHPS compounds, but sometimes they are justified. Tell me, is this place a health facility or a bedroom?" (Community Health Officer).

“One of our challenges is the lack of equipment and logistics. Sometimes, we do not have the basic items required for safe delivery. The mothers are asked to bring soap, disinfectants, and gloves. Even to sterilize some of the equipment, we have to send it to Yendi Municipal Hospital.” (Community Health Officer)

"I enjoy being assisted at delivery by CHO in this community compared to the midwives in the municipal hospital. The CHO's behaviour is closer to that of a TBA. They show love to us and they have understanding." (Mother, 28 years).

Cultural beliefs and practices
The participants reported that beliefs around pregnancy and childbirth are one major challenge to receiving CHPS services. This results in a dualism of care-seeking, which leads to poor clinical attendance, delays in seeking healthcare, and a low number of ANC visits. The health beliefs and practices were repeatedly reported as CHPS programme challenges by participants.

"I made two visits to the CHPS compound but when it was time for delivery, I delivered at home. Oh! I used medicines from the health centre alongside herbs from my mother in-law" (Mother, 34 years).

Due to fear of referrals from CHPS facilities to Yendi Municipal Hospital, some women avoided the CHPS services. The main reason for avoidance of referrals to intensive care is to ensure that tabooed foods are not received but prefer to receive treatment from the traditional practitioners based on their beliefs about the causes of pregnancy-related complications. Similarly, women who seek to prove their faithfulness and fidelity to the marriage, are encouraged to have home delivery. So that when they have prolonged labor or complications, the women may be forced to give confession to determine the paternity of the pregnancy. Also, women who received treatment from traditional practitioners before the pregnancy are made to deliver in their custody for rituals to be performed.

"When we make referrals, some of the women refuse the referral services for fear of caesarean section. They prefer to receive herbal treatment or to avoid forbidden food that may be provided at the referral health facilities." (Community Health Officer)
"When I got pregnant, my husband told me that it was my former boyfriend who was responsible for the pregnancy. This generated a misunderstanding between us. So, he neglected me. When I was in labour, I decided to go for skilled delivery but my husband refused and invited a traditional birth attendant to the house to assist at delivery to make me confess in the event of prolonged labour or placenta retention. ... but I gave birth easily." (Mother, 40 years).

"Both my husband and the herbalist insisted that I should give birth in the custody of the herbalist for necessary rituals to be performed before, during, and after delivery." (Mother, 30 years).

**Lack of incentives**

The community health volunteers (CHVs) and community health officers (CHOs) who participated in this study complained of a lack of incentives to motivate their activities. The CHVs were married men and women with family responsibilities. The need to cater to their families did not allow them to give proper attention and commitment to the volunteer activities. While the CHOss had problems with housing, potable water, and reliable electricity which hindered their activities. As workers in deprived communities, they did not have any incentives as motivation.

"We are doing voluntary work but people think we are paid. We leave our farms and spend time on this voluntary service, but we do not even get common thank you." (CHV, aged 46).

"I have been working at this facility for the past 3 years. We do not have proper housing here and the materials needed to facilitate our work are also lacking. For electricity and water, the least said about them the better" (Community Health Officer).

**Lack of specialists and equipment**

Health facilities are required to be equipped with standardized items for maternal and child healthcare. We found the CHPS compounds did not have adequate human and material resources for effective and efficient healthcare delivery. For instance, none of the four (4) health facilities had laboratory equipment and specialists to deal with pregnancy-related complications. Though these services are provided in the municipal hospital, the poor road network and nonavailability of ambulances and other means of transport as well as the cost involved making it difficult to utilize healthcare services for a healthier life. Thus, mothers who cannot afford referral costs ignored skilled care and resorted to traditional birth attendants (TBAs) and herbalists. According to the CHOss, certain services are beyond the mandate of the CHPS compounds. Thus, CHOss only provide services when they are mandated and provided with human and material resources.
"Some of the health workers are very good, but some women and their husbands would rather go for TBAs' services in the event of serious complications for nature to decide. Those who can afford are asked to go to Yendi Hospital for expert care. Because in this village no matter what they will ask you to go to Yendi for laboratory tests or to see a doctor." (Male Community Health Volunteer, 45 years).

"Yes, we are limited in providing healthcare. So we give first aid in some instances and refer patients to specialists at Yendi. Probably due to the cost involved, most of the women do no go." (Community Health Officer, 24 years).

**Poor community engagement**

We also found that the engagement of community members particularly men in the CHPS programme as outlined in the policy is very poor. The CHVs and women reported that they hardly met with the staff of Ghana Health Service for the CHPS initiative development programmes.

"When they established this CHPS compound, they promised us regular programmes and meetings but they do not come. So they expect us to stop our work and follow something that they do not value themselves?" (CHV, aged 34).

The CHVs and mothers reported that the CHOa are duty conscious and have good working relationships with community members. They worked closely with the TBAs to facilitate clinical attendance of pregnant and newborn mothers and referrals of cases beyond their capability to the municipal hospital.

"For the two times I visited the CHPS compound, I realised that the health workers here are hardworking and friendly. They relate well with us the women especially when we come for clinical care. They normally go round to talk to pregnant women especially to come for check-up ... Yes, they respect people well." (Mother, 28 years).

**Discussion**

Healthcare services utilisation is a complex phenomenon that requires the function of all actors for positive outcomes. The progress of the CHPS policy can be improved with a multi-dimensional approach in implementation by considering the linkages with interventions like transport system, national ambulance service, health insurance, and provision of qualified personnel and medical supplies amongst others.

Irrespective of other background variables, the data showed a poorer attendance for women from remote communities without CHPS compounds as compared with their counterparts who had CHPS compounds in their communities. This was attributed to transportation challenges. The provision of healthcare facilities without corresponding provision of transport or ambulance services means women's movement to seek maternity services will be restricted. The various actors of the healthcare system should consider the
inter-connectedness of NHIS, safe motherhood protocol, regular supply of equipment/medicines as well as the availability of qualified medical personnel for positive outcomes. These are important components of the healthcare system that should work together to make progress because their functions or effects have a cumulative effect on the outcome of the CHPS policy. Therefore, when any of these is/are not functioning well, the provision of healthcare services will not meet the expected outcome.

Another key issue worth noting is that the CHPS compounds were not equipped enough with the required facilities, equipment, supplies, and human resources to meet the maternal health needs of the communities. They were not in the best position to provide Skilled Delivery (SD) care and emergency obstetric care (EoC). Though these services are not part of the core operational duties of the CHPS initiative, being the first point of contact in the healthcare system's structure, CHPS compounds need to be equipped and empowered to provide such services if maternal health is to be improved.

The National Health Insurance Scheme (NHIS) was initiated to address the financial challenges [21] and CHPS was to make basic services available at the doorsteps of clients (22). However, findings from this study concur with previous studies [23, 24] that the introduction of NHIS has generated a collection of unauthorized fees in the facilities from policyholders for services covered by the policy. Again, disbursement of NHIS claims and bureaucracy in procurement were key challenges to professionals in the acquisition of medical supplies. The affordability of healthcare services by the women was through the use of NHIS cards or cash payment for the non-insured. However, particularly in the referral facilities, some policy holders had no access to care for services covered by NHIS unless they paid for such services. This rather gave wider coverage of services to the rich which conflicts with the aim of the policy and synonymous with the cash and carry system that NHIS replaced. This sustains previous study findings in developing countries that the introduction of health insurance with free maternity care has resulted in the collection of unofficial fees in health institutions [12, 23]. Procurement difficulties were observed to be the cause of delays in the provision of medical supplies which resulted in artificial shortages. This forced the professionals in some instances to ask clients to purchase medicines from private pharmacy shops. Procurement is one of the most cited healthcare barriers accounting for 65% in developing countries [25]. This calls for a re-examination of the procurement law for the healthcare system to remove the associated barriers for timely skilled therapy to be effected.

It was evident that women in remote areas continue to give birth at home without assistance from the CHO's, which sustains the argument that there is an increased but inequitable access to CHPS services to the disadvantage of remote communities without CHPS compounds [26, 5]. The cordial relationship between CHO's and CHV's enhanced clinical services utilisation by women in the CHPS compounds and the nearby conventional facilities. The CHO's worked closely with the CHV's to actively provide SD care through referrals and encouraging women to receive skilled care at the conventional facilities. Skilled care has the potential to reduce neonatal mortality by 25% and the provision of basic emergency obstetric care and comprehensive neonatal care can reduce these deaths by 40% and 85%, respectively [9]. However, the CHPS initiative was limited in operation because they lacked expertise and did not have the mandate by the provision of the policy to offer such services. To improve and sustain the well-being of rural women, the CHPS policy needs revisitation to include all components of maternity care and
deploy experienced or well-equipped personnel to the CHPS compounds. Previous research has identified human resource challenges in CHPS zones as a key factor that explains the low uptake of skilled maternity care in marginalised rural communities [6]. This means quality and uptake of skilled care could be improved significantly in CHPS zones with skilled midwives [27, 28]. The challenges with the transport system and the national ambulance service call for the use of properly trained CHOs to provide SD care within the communities they serve, particularly where access to health facilities is constrained.

A neglected and essential influence of maternal healthcare services utilisation is the power of culture [29, 30]. The CHPS policy recognises cultural beliefs and practices, and actively engages communities particularly traditional authorities in community sensitization programmes. However, the findings show that this has not received comprehensive attention at the implementation level. Culture is the foundation of every society and behavioural changes must take place through culture [31]. For the modern healthcare system to be accepted and received, the perpetrators of culture, particularly men should be part of the change process and be accountable for the outcomes. Community engagement and participation are critical in facilitating a sustainable primary healthcare system [3]. The inclusion of traditional leaders in CHPS implementation will promote acceptance and sustainable use of orthodox healthcare services [32; 33]. It is an essential strategy to educate people of different backgrounds through needs assessment on the causes and effects of some medical conditions that require professional intervention [22].

Workers in deprived communities should be motivated with incentives such as decent housing, electricity, and potable water supply. It is a commitment to accept postings to rural areas where most basic life necessities are lacking. The recommendation for improving housing conditions for CHOs since 2011 is yet to be implemented in many CHPS zones in the region [22; 33]. Over the years, effort in developing volunteers has not been as consistent as that in developing the CHO component of the strategy [22]. This is partly because the CHVs are not motivated enough for people to be attracted and committed to volunteerism, which is an additional responsibility apart from their economic activities.

**Conclusions**

Though a promising initiative, the study discovered a lack of a comprehensive approach in the implementation of CHPS policy. The study indicated that implementation of the CHPS policy did not give particular attention to the effects of the functions of the individual components or actors of the healthcare system and their cumulative effects on the CHPS policy outcome. It needs to be highlighted that the implementation of CHPS policy needs to be approached with holistic and systemic lenses. The initiative, therefore, requires proper coordination of all actors and emphasis on the interrelatedness of other policy interventions of the healthcare system to bridge the equity gap in access to healthcare regardless of the location and socio-economic backgrounds of women.

The Ministry of Health and the Ghana Health Service should consider the cumulative effect of other healthcare actors and interventions in health promotion planning and implementation programmes. Thus, the achievement of the Sustainable Development
Goal of improvement and sustenance of women's well-being by 2030 requires re-visitation and reformatiation of the CHPS policy by looking at the interconnectedness of all aspects of the healthcare system for equilibrium to be established. This would make healthcare services more accessible and acceptable to the women and their families for positive maternal outcomes.

**Abbreviations**

ANC  Antenatal Care  
CHPS  Community-Based Health Planning and Services  
CHOs  Community Health Officers  
CHVs  Community Health Volunteers  
EoC  Emergency Obstetric Complication  
GHS  Ghana Health Service  
GSS  Ghana Statistical Service  
GoG  Government of Ghana  
MoH  Ministry of Health  
NHIS  National Health Insurance Scheme  
TBA  Traditional Birth Attendant  
PNC  Postnatal Care  
SD  Skilled Delivery  
SDG  Sustainable Development Goal  
UN  United Nations

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**Authors’ contribution**
BB designed the study, collected and transcribed the data. AMA and BB drafted the report. ANM and AMA helped to interpret and analyse the data and redrafted the manuscript. All authors revised the manuscript, read and approved the final manuscript.

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**Availability of data and materials**
The topic is culturally sensitive so the raw data would not be deposited in publicly available repositories to ensure confidentiality but are available from the corresponding author on reasonable request.

**Declarations**

**Ethics approval and consent to participate**
The study was subjected to thorough ethical examination by experienced professors in the field at the Faculty of Social Sciences and Humanities, and the School of Graduate Studies, Universiti Malaysia Sarawak, Malaysia (UNIMAS). The study was scrutinised by Post-Graduate Research Committee of UNIMAS from the proposal stage to data collection and analysis stages and all necessary research protocols were followed and
approved by the committee and UNIMAS Graduate School. Permission was also granted by the Ghana Health Service to carry out the research. Both written and verbal informed consent were obtained from the community leadership and the study participants by assuring confidentiality and informing them about the purpose of the research. As a culturally appropriate approach, all the methods were executed in accordance with the Ghanaian cross-cultural and cross-gender ethical principles as well as research guidelines from University Malaysia Sarawak with the consent of the Municipal Directorate of Ghana Health Service.

Consent for publication
Not applicable

Competing interest
We declare that we have no competing interests

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