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# Access to Maternal Healthcare Services under the National Health Insurance Policy in the Upper West Region, Ghana

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## Abstract

Health insurance coverage provides the spring board for pregnant women to access and utilise maternal healthcare services. Yet, studies on health insurance coverage, access and utilisation of maternal healthcare are a handful. Consequently, this study examines women's access and utilisation of maternal healthcare services under the free maternal health policy in two districts in northern Ghana. The study adopted the mixed research approach with the aid of the cross-sectional design involving 212 respondents. An interview schedule was utilised in the collection of data. Percentages, Chi-square test for independence and Mann-Whitney U test as well as thematic analysis were used to analyse the data. The study revealed that 93.9% of the respondents had enrolled unto the national health insurance scheme and 98.6% of them went for antenatal care. Majority (66.5%) of them had facility-based delivery. However, 79.7% of them incur cost in seeking delivery care. In brief, health insurance coverage appears to contribute to improved access and utilisation of maternal healthcare services in the two districts. Nonetheless, the government should provide the basic items that are needed for delivery to lessen the cost burden associated with facility-based delivery.

**Keywords:** healthcare, health, insurance, maternal, Ghana

## 1. Introduction

Access to healthcare including maternal healthcare services drives public health policies across the globe [1–3]. According to Ribot [4], access connotes the ability to make use of a resource. In the field of maternal healthcare, access entails the ability of women to obtain prenatal, antenatal, facility-based delivery and postnatal services [5] since these services contribute to beneficial health outcome for both the baby, and mother. Hence, Krutilova [6] maintains that all individuals including women ought to have access to healthcare that meet their needs regardless of their economic, social and physical attributes. Yet, access to maternal healthcare services remains a major development challenge around the world and in Africa, the state of affairs is more disquieting [6]. In sub-Saharan Africa in particular, Twum et al. [7] posit that financial constraints tend to erect barriers to access healthcare for the less privileged, particularly women. As a result, Kibusi et al. [8] pointed out that

maternal mortality ratio in Sub-Saharan Africa continues to rise despite the many interventions such as health insurance.

Health insurance, therefore, comes in handy as it provides a mechanism for pregnant women to access and utilise maternal healthcare services. Ho [9] elucidates that health insurance protects the poor in particular against the risk of incurring medical and related financial costs at the point of service utilisation. In addition, Dalinjong et al. [10] emphasise that health insurance coverage allows all pregnant women to access maternal health services throughout pregnancy, childbirth, and post-delivery. Further, health insurance plays a critical role in improving maternal mortality ratio and related health outcomes [8]. Thus, governments have the responsibility to capture all persons including women under a health insurance scheme [11] to protect them against incurring financial cost at the point of maternal health services utilisation as insinuated by the social justice theory.

The social justice theory's core arguments centre on fairness and equality. As such, all people have a right to fair treatment and an equal share of the benefits of society [12] including health insurance coverage and consequently access to maternal health services. Also, Jost and Kay [13] elucidate that social justice ensures that societal benefits and obligations are shared in accordance with acceptable procedures, norms and rules that promote basic rights, liberties and entitlement of individuals and or groups within a society. Furthermore, social justice involves a fair and equal access to primary goods such as maternal healthcare services [14]. Bankson [15] contributes that social justice encourages the redistribution of goods and resources such as maternal health services in a way that improves the situations of the disadvantaged. In a nutshell, social justice is predicated on equal access and in the view of Nussbaum [16], efforts should be geared towards removing the obstacles that perpetuate differences, marginalisation or discrimination based on geographical location. Thus, health insurance coverage appears to provide a window of opportunity to reduce Out-of-pocket expenditure [17] and ease access to maternal healthcare services.

Access theory is hinged on the ability of the individual/or group to benefits from resources such as health insurance through acceptable processes [4, 18]. Ribot and Peluso [18] conceive access to mean the ability of the individual/or group to benefit from such things as material objects, persons, institutions, and symbols. Therefore, the central tenets of access theory are maintenance, and control which are mediated by institutional structures and processes [4] within a social system. According to Ribot [4], maintenance concerns expending resources for individual/or collective benefit, whereas power over others constitutes control. In addition, Ribot and Peluso [18] intimate that power constitutes the material, cultural and political-economic constituents within the social setup that spell out access to resources such as maternal healthcare. In brief, the expending of national resources in the form of free enrolment of pregnant women onto the national health insurance scheme [NHIS] seeks to guarantee access and utilisation of maternal healthcare services.

According to the World Health Statistics [19], 303, 000 women died as a result of pregnancy related causes in 2015. WHO further notes that 99% of the deaths occurred in low and middle-income countries (LMIC) and 64% of these deaths occurred in Africa. Previously, WHO [20] had estimated that Sub-Saharan Africa alone accounted for about 66% of global maternal related deaths. Specifically, Nigeria and India accounted for 19% and 15% respectively of global maternal deaths in 2015 [20]. Therefore, it is imperative for governments to ensure that women have access to quality care before, during and after childbirth since this will improve maternal mortality ratio [19]. Suffice it to say, the level of maternal mortality may have stimulated the formulation of sustainable development goals (SDGs)

since health is fundamentally linked to sustainable development. Specifically, goal 3 focuses on ensuring that all people including pregnant women enjoy healthy lives and wellbeing. Thus, governments are obliged to ensure the realisation of this important goal.

In 2003, Ghana introduced a NHIS as a measure to safeguard its population against out-of-pocket-payment at the point of accessing healthcare services [21] particularly maternal healthcare services. It is, however, important to note that the NHIS policy recognises that some sections of the society may not be able to make the minimum contribution to the scheme [22]. As a result, children under 18 years old, elderly above 70 years old, Social Security and National Insurance Trust (SSNIT) pensioners, pregnant women, and extreme poor do not pay the premium [22]. This signals that exemption of pregnant women from paying the premium seeks to do away with financial barriers to maternal healthcare services and thus, to reduce or eradicate pregnancy-related deaths.

However, in Ghana, a total of 955 women died from pregnancy related causes in 2016 [23]. Ghana Statistical Service (GSS), Ghana Health Service (GHS), and ICF [24] also report that pregnancy-related mortality ratio for Ghana hovers around 343 deaths per 100,000 live births. GHS [23] had earlier noted that Greater Accra recorded the highest number of maternal deaths and this can be attributed to the concentration of referral facilities in Accra. GHS adds that the Upper West Region accounted for only 2% of the total maternal deaths in Ghana [23]. Nevertheless, GHS [23] posits that the Upper West Region is characterised by scattered health facilities which contribute to poor access to healthcare. This begs the question of whether enrolment and exemption of pregnant women from the payment of the NHIS's premium guarantees access and utilisation of maternal healthcare service in the region.

The Wa West and Wa East districts are among the underprivileged in Ghana. In terms of health infrastructure and personnel, for instance, the Wa-West District is disadvantaged [25]. The District has one health centre and 27 community health planning services (CHPS) compounds that serve 81,348 people [25, 26] living in the 208 communities. The Wa East district also has its fair share of challenges. The district suffers from limited health facilities, insufficient health personnel, inaccessible communities, and poor road network [27]. This hints that perhaps the people and in particular pregnant women living in these districts may suffer deprivation and injustice as a result of the persistence of these challenges.

Still, studies that relate to access to maternal healthcare under Ghana's NHIS appear to ignore rural idiosyncrasies associated with access to maternal healthcare services. Using 2008 DHS data, Wang et al. [28] examine the impact of NHIS coverage on access to maternal healthcare services in Ghana and came to the conclusion that majority of pregnant women reported at least one antenatal care visit and facility-based delivery. The study presented a national picture but fell short of a discussion of access to maternal healthcare services in rural areas. In a related study, Twum et al. [7] investigated access to maternal healthcare services under NHIS's free maternal healthcare policy in relatively well-endowed urban towns of Kintampo and Jema. The authors reported that pregnant women who were covered under the free maternal healthcare policy completed the recommended four antenatal care visits and delivered in a health facility but did not go for postnatal care. Yet the study ignored rural anomalies, distance and waiting time at the facility as important ingredients of access to maternal healthcare.

This study contributes to knowledge, first, by shifting the fulcrum of analysis of access from property to maternal healthcare and secondly, it sheds light on how enrolment onto the NHIS contributes to access to maternal healthcare in the two rural districts in the Upper West Region. Therefore, the study seeks to address the

following objectives: (1) assess how NHIS underwrites access to maternal healthcare services, and (2) examine the utilisation of maternal healthcare services under the NHIS policy. The paper is divided into six sections. The section following this discusses the concepts that underpin the study. Next, a review of some empirical studies that relate to the subject matter of the paper is presented. The fourth section presents the methodology adopted for the study and the fifth section presents the empirical evidence of the study, while conclusions and policy implications constitute the final section.

## 2. Conceptual discussions

WHO [29] describes maternal health as the wellbeing of women before, during pregnancy, at childbirth and post-delivery. Therefore, maternal healthcare is concerned with providing pregnancy-related services to women and teen-age girls [24, 29]. Accordingly, maternal healthcare services include antenatal care (ANC), delivery care, and postnatal care (PNC) [24]. ANC denotes the care provided by skilled health workers to pregnant women and adolescent girls to ensure the best health conditions for the mother and baby [30]. Also, WHO notes that the uptake of ANC services enables skilled health personnel to identify risk, prevent risk and manage pregnancy-related diseases as well as engage in health education and promotion among pregnant women. Rutaremwa et al. [5] add that ANC attendance appears to help reduce stillbirths and neonatal death. Lincetto et al. [31] had earlier recommended that four ANC visits at specific intervals enable care givers to make essential interventions during pregnancy and subsequently during delivery.

Delivery care means attention given to mother during labour and delivery to respond to problems that may arise during the process. The care provided to women and new-borns until discharge is crucial for their health after they leave the health facility [20]. Further, WHO [30] noted that delivery care reduces illness and death in mothers and their new-borns babies. PNC, on the other hand, involves the provision of a supportive environment in which a woman, her baby and the wider family can begin their new life together [32]. According to Charlotte et al. [33], PNC ensures continuity of care for mother and baby as well as help to support healthy behaviours. Thus, PNC contributes to the beneficial health outcome for the baby as well as the mother [5]. Timilsina and Dhakal [34] also note that PNC helps to assess the health status of mother and new-born so as to be able to institute a remedy to any defect and to formulate preventive measure that may become necessary. It is, however, important to state that access to maternal healthcare services plays a crucial role in the utilisation of these services.

Access to healthcare refers to the ability of a given individual or group to enter into a health care delivery facility [35] and utilise the available services. In other words, access to health care describes the relationship between need, provision and utilisation of health services [36]. Therefore, access to maternal healthcare entails the entry into and use of skilled services during pregnancy, delivery and post-delivery [37]. However, the costs associated with seeking maternal healthcare services may discourage pregnant women, particularly the poor, from receiving healthcare services promptly [38]. As such, in 2003, the NHIS was introduced in Ghana and subsequently, in 2008, a free maternal healthcare programme (FMHCP) was set in motion to alleviate the cost burden associated with seeking maternal healthcare [7]. As a result, pregnant women do not pay a premium for fresh registration or renewal of membership and processing fees [7].

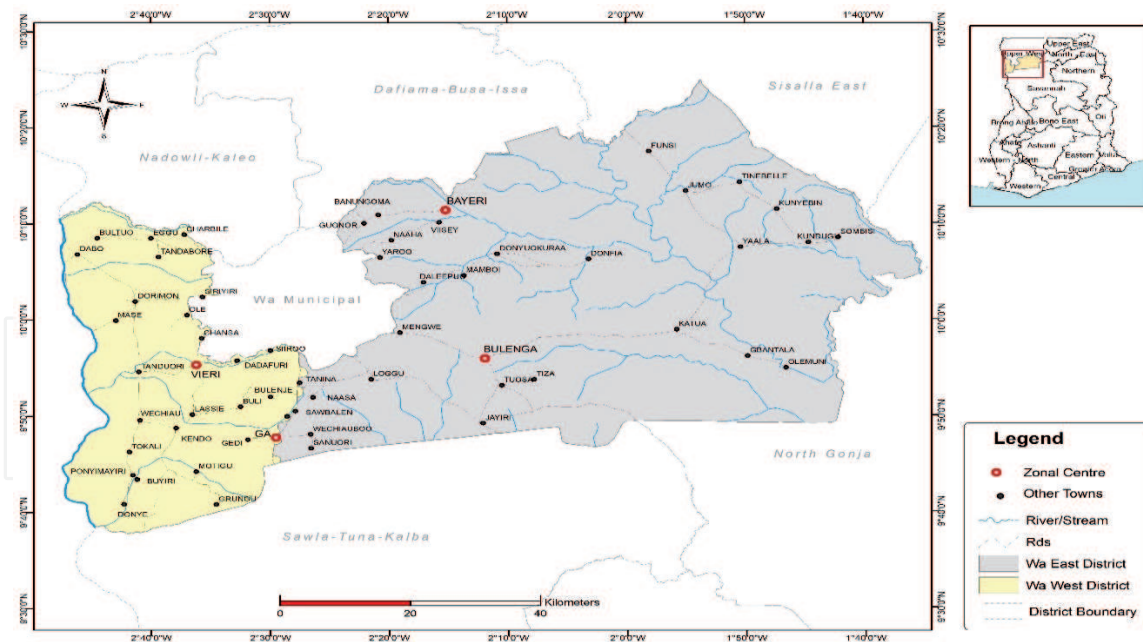
### 3. Empirical review

So far, our discussion is centred on the concepts that underpin the study. This section considers some empirical studies that have been carried out on health insurance and access to maternal healthcare services. Kibusi et al. [8] sought to find out whether health insurance coverage enabled pregnant women to utilise maternal health services in Tanzania. The study revealed that a small percentage of the respondents were covered by health insurance. Further, the results showed that the timing of the first ANC visit was also low and few women completed the recommended ANC visits. Yet, the authors found that majority of the respondents delivered at health facilities under skilled attendants and concluded that health insurance coverage was associated with the recommended timing of the first ANC visit as well as increases the chances for facility-based delivery. In Bangladesh, Banik [38] had earlier found that majority of pregnant women had their nearest health centre within a one-kilometre distance but had to wait for about an hour before being seen by the nurses or doctors. Also, decisions about seeking maternal healthcare services made by both husband and wife were higher compared to those made by husband or wife alone [38].

In a related study, Twum et al. [7] assessed the effectiveness of a free maternal healthcare programme under the NHIS in Ghana. The social justice and access theory undergird the study. The authors discovered that health insurance status of respondent played an important function in the use of maternal healthcare services and women with health insurance coverage had a better opportunity to use antenatal care, deliver at the facility and postnatal care compared with those who are not registered. Similarly, Dalinjong et al. [10] assessed the implementation of the free maternal health policy in rural Northern Ghana using the qualitative approach. The study found that women still paid for drugs, supplies, laboratory services including ultrasound scans and transport as well as the purchase of other items for childbirth. They also reported that distance and time taken to reach the nearest facility were impediments to seeking maternal healthcare. The next section of the paper discusses the study locations, sampling, data collection methods and instruments as well as data analysis techniques deployed in the study.

### 4. Study methods

The study was conducted in Wa West and Wa East Districts in the Upper West Region. The Wa West District is home to 81,348 people with 50.5% being females and the rest being males with a Total Fertility Rate of 4.1. The district is entirely rural and is located in the western part of the Upper West Region. The district lies between longitudes 9°40'N and 10°10'N and latitudes 2°20'W and 2°50'W. The southern part of the district is bordered by Northern Region, Nadowli-Kaleo District to the north-west, Wa Municipal to the east and Burkina Faso to the west [25]. The District occupies nearly 1492.0 km<sup>2</sup> and its capital, Wechiau is about 15.0 km away from Wa the regional capital. On the other hand, the Wa East district lies between latitudes 9°55'N and 10°25'N and longitude 1°10'W and 2°5'W and covers a land area of about 4297.1 km<sup>2</sup>. The district capital, Funsu is about 115 km away from Wa and shares boundaries with West Mamprusi, West Gonja and the Sissala East district to the northwest, southeast and north, respectively. The district host about 72,074 inhabitants and 50.5% of them are males while the rest are females with a Total Fertility Rate of 3.9 [39]. **Figure 1** shows the zonal centres selected for the study.



**Figure 1.** Map of Wa East and Wa West show zonal centres sampled for the study. Source: adapted from GSS [25, 39].

The mixed research approach with the aid of the cross-sectional design which requires taking a snapshot of the phenomenon under consideration. However, the study was tilted towards the quantitative approach. The total number of households in the four sampled communities was 454. The sample size was computed using Yamane's statistical formula:  $n = \frac{N}{1 + N(e)^2}$ ; where n is the sample size, N is the size of the study population, and e is the margin of error [40]. In this study,  $N = 454$  and  $e = 0.05$ . The sample size was computed as:  $n = \frac{454}{1 + 454(0.05)^2} = 212$ . Therefore, the samples size for the study was 212 households.

The multi-stage sampling technique was deployed in selecting zonal centres, communities and households. First, Wa East district has four zonal centres: Funsi, Bulenga, Kulkpong, and Baayiri, whereas Ga, Gurungu, Vieri and Wechiau constitute the zonal centres for the Wa West District. Two zonal centres from each district (Bulenga, Baayiri, Vieri and Ga) (see **Figure 1**) were randomly selected to participate in the study. In each zonal centre, the names of the communities were compiled and one community was randomly selected. In all, four communities (Guonuo, Tampala, Ga, and Berenyasi) were randomly sampled for the study. Following on that one house was randomly selected and the subsequent houses were then systematically sampled after every fourth house. Finally, women within the reproductive ages of 15–49 years [41] who have had children between 2015 and 2019 were identified and interviewed. Interviewing was the method used to collect the data with the aid of an interview schedule which contained both open-ended and closed-ended questions. Descriptive statistics, chi-square test for independence, Man-Witney test and thematic analysis were deployed in the analysis of the data. The results were presented in tables, text and narration.

## 5. The evidence

### 5.1 Background characteristics of respondents

The results show that the maximum age of respondents was 42 years whereas the minimum age was 15 years with a median of 25 (Mean = 25.94; Std Deviation = 6.32;

Skewness = .749) with a quartile deviation of 4.5 years. This finding agrees with WHO [41] that reproductive age of women ranges between 15 and 49 years. The results also indicate that 93.9% of the respondents were married while the rest were single. As shown in **Table 1**, 48% of the respondents have no formal education whereas only 4.2% attained tertiary education. Also, 41% of them were engaged in farming and another 19.3% were indulged in petty trading while only 2.8% were involved in weaving as their means of living. This finding is consistent with GSS [25, 39] discovery that many people in both districts were illiterates and their main occupation is agriculture.

	Frequency	Percent (%)
<b>Educational attainment</b>		
No formal education	102	48.1
Basic	81	38.2
Secondary	20	9.4
Tertiary	9	4.2
Total	212	100
<b>Occupation of respondent</b>		
Farming	87	41
Petty trading	41	19.3
Housewife	34	16
Dress making	28	13.2
Weaving	16	7.5
Food vending	6	2.8
<b>Total</b>	<b>212</b>	<b>100</b>

Source: Field survey, 2019.

**Table 1.**  
 Educational achievement and occupational distribution of respondents.

## 5.2 Access to maternal healthcare

Access to maternal healthcare services was analysed first, on aggregate and later based on location. The results of the analysis show that 93.9% of the respondents had enrolled unto the national health insurance scheme whereas the rest had not registered to benefit from the exemption of pregnant women from paying the premium. Further analysis was conducted based on community of origin to determine whether differences exist with respect to enrolment unto the NHIS. The results indicate that 89.8% of the respondents had enrolled unto the NHIS in the Wa-East district, whereas 97.4% of them were registered with the scheme in the Wa-West district. This suggests that the Wa West district had more women registered under the NHIS than Wa East district. A chi-square test for independence (with Yates Continuity Correction) was carried out to determine whether there is an association between enrollment unto the NHIS and seeking maternal healthcare services. The test results revealed no significant association between registration for NHIS and seeking maternal health care [ $\chi^2 (1, n = 212) = 0.00, p = 1.00, phi = -0.03$ ]. This finding is in line with Twum et al.'s [7] discovery that in Ghana, pregnant women do not pay a premium for fresh registration or renewal of membership and processing fees.



We sought to find out whether respondents paid money to be registered under the NHIS in the sampled communities. The results showed that 75% of the respondents mentioned that they did not pay money to register under the scheme while the rest indicated that they paid money to register at the time they were pregnant. This means that the 25% who paid money to be registered under the scheme did not go to any health facility to confirm their pregnancy before they went for the NHIS registration. This is because a confirmation of the pregnancy is required by the NHIS to exempt a pregnant woman from premium payment. The results further indicate that in the Wa East District, 70.4% of the respondents noted that they did not pay money to be registered whereas the rest of them stated that they paid money to be registered. On the other hand, 78.9% of the respondents in the Wa West District reported that they did not pay money to register under the NHIS while the rest specified that they paid money to register under the NHIS. This hints that government expenditure on the exemption of pregnant women from paying the premium amount to the proposition of a key tenet of the access theory that concerns expending resources for individual/or collective benefit [4].

The distance of the nearest health facility from the sampled communities was considered. The results indicate that the minimum distance was 1 km whereas the maximum distance to the nearest health facility was 17 km with a mean of 6.5 (Median = 6.2; Quartile Deviation = 3; Skewness of 0.94) and an associated Standard Deviation of 5.22. The distance of the nearest health facility was also examined based on location and the results in the Wa East district indicate that the longest distance to the nearest health facility was 17 km while the shortest distance was 6.2 km and a median of 6.2 (Mean = 9.8; Std Deviation = 5.2 Skewness = 0.697) and with an associated quartile deviation of 5.4. However, in the Wa West District, the minimum distance to the nearest health facility was 1 km radius whereas the maximum distance was 12 km and a median of 1 (Mean = 3.7; Std Deviation = 3.2; Skewness = 0.41) with a related quartile deviation of 3. Comparing the medians, it is noticed that the median distance for Wa East is higher (6.2 km) than that of Wa West with a value of 1 km. This is inconsistent with Banik's [38] finding that the majority of pregnant women had their nearest health centre within a one-kilometre distance in Bangladesh. This difference is probably attributed to the variation in economic resources between Ghana and Bangladesh.

The amount of time spent travelling to a health facility to access healthcare has implication for the utilisation of services at the health facility. Therefore, the time spent to reach the nearest health facility was analysed first at the aggregate level and later based on location. The results indicate that the least time spent to reach the nearest health facility was 30 min or less whereas the maximum time spent was 3 h with a median of 45 min (Mean = 59.7; Std Deviation = 41.7; skewness = 1.54) and with an associated quantile deviation of 15. In the Wa East District, the maximum time spent to reach the nearest health facility was 3 h while the minimum time was 45 min and a median of 1 h (Mean = 86; Std Deviation = 42; Skewness = 1.18) and a corresponding quantile deviation of 45. On the contrary, the shortest time spent to reach the nearest health facility in the Wa West District was 30 min or less whereas the longest time was 2½ h and a median of 30 min (Mean = 43; Std Deviation = 25.9; Skewness = 2.92) and an associated quartile deviation of 15. Juxtaposing the medians, it is realised that the median time spent to reach the nearest health facility in the Wa East District is more than that of the Wa West District. This signals that women in the Wa East District spend more than travelling to the nearest health facility than their counterparts in the Wa West District. This finding contradicts Nussbaum [16] view that efforts should be geared towards removing obstacles that perpetuate differences, marginalisation or discrimination based on geographical locations to ensure equal access to resources.

Waiting time at the facility before respondents were attended to was also considered. On aggregate, the results indicated that the median time spent waiting was 1 h and the minimum time was 30 min or less, while the maximum time was 3 h (Mean = 62; Std Deviation = 35.31; Skewness = 1.15) with an associated quartile deviation of 30. The data was further disaggregated based on location. The results show that in the Wa East, the maximum time respondents waited to be attended to was 3 h whereas the minimum time was 30 min or less with a median of 1 h (Mean = 55.7; Std Deviation = 34.9; a skewness = 1.77) and with a related quartile deviation of 15 min. On the other hand, the longest time spent waiting to be attended to in the Wa West was 3 h while the least time was 30 min and a median of 1 h (Mean = 67; Skewness = 0.73; Std Deviation = 34.7) and a corresponding quartile deviation of 19. Matching the medians, it is noted that there is no difference in the amount of time spent waiting to be attended to at the health facility in the two districts. The time spent at the health facility could be a disincentive for women to seek maternal healthcare if they have other activities to undertake. This finding confirms Banik [38] calculation that majority of pregnant women had to wait for about an hour before being seen by the nurses or doctors in Northern Bangladesh.

### 5.3 Utilisation of maternal health services

The utilisation of antenatal care services helps reduce stillbirths and neonatal death as well as prevents and manage risk associated with pregnancy [5, 30]. In this respect, the utilisation of maternal healthcare services was analysed. On a whole, the results show that 98.6% of the respondents went for antenatal care during the last pregnancy while the rest did not attend because they had not registered under NHIS. Out of the 98 respondents in the Wa East District, 99% stated that they attended ANC and 98.2% of the 114 respondents in the Wa West District mentioned they attended ANC. Further, we wanted to know whether respondents completed the compulsory ANC attendance. The results at the aggregate level indicated that 86.9% of the respondents completed the recommended ANC attendance, whereas the rest did not complete the required attendance. The data was further disaggregated based on district of origin to determine whether differences existed as regards ANC attendance in the two districts. The results showed that 79.6% of the respondents in the Wa East district completed the recommended four ANC attendances, while the rest did not. Conversely, 93% of the respondents indicated that they completed the four mandatory ANC attendances in the Wa West District while the remainder did not fulfil it. This compares with the findings made by Wang et al. [28] that the majority of pregnant women reported at least one antenatal care visit in Ghana.

WHO [30] notes that the early uptake of ANC services enables skilled health personnel to identify risk, prevent risk and manage pregnancy-related diseases as well as engage in health education and promotion among pregnant women. As such, it is important to know when the first ANC was initiated. The results (**Table 2**) indicate that 29.2% of the respondents initiated the first ANC attendance during the first month of the pregnancy while 24.5% of them initiated it during the second month of the pregnancy and another 18.9% started attending ANC during the third month of their last pregnancy. The results further showed that an accumulated 1.9% of the respondents initiated after the seventh month of their last pregnancy. This signals that the majority of the respondents sought antenatal care early. This implies that they are likely to avoid pregnancy related complications and have safe delivery. The results of the current study appear to disagree with the finding made by Kibusi et al. [8] that timing of the first ANC visit was also low and few women completed the recommended ANC visits.

The month of the pregnancy in which the first ANC was initiated was examined based on location. As shown in **Table 2**, 33.7% of the respondents in Wa East initiated ANC attendance during the first month of the pregnancy whereas 20.4% started attending ANC during the second month and another 13.3% of them initiated ANC visits during the third month of their last pregnancy and the rest started attending ANC from the fourth month forward. Similarly, in the Wa West District, majority of the respondents initiated ANC attendance during the first 4 months of their last pregnancy. The results noted that 28.1% of the respondents in the district mentioned that they initiated ANC during the second month of their last pregnancy whereas 25.4 started attending ANC during the first month and another 23.7% of them stated that they began attending ANC during the third month of their last pregnancy. The rest initiated their first ANC visit from the fourth month onwards. This hints that more women in Wa East District initiate early ANC attendance than their colleagues in the Wa West District.

Month	Aggregate		Wa East		Wa West	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
First month	62	29.2	33	33.7	29	25.4
Second month	52	24.5	20	20.4	32	28.1
Third month	40	18.9	13	13.3	27	23.7
Fourth month	32	15.1	16	16.3	16	14
Fifth month	16	7.5	11	11.2	5	4.4
Sixth month	6	2.8	3	3.1	3	2.6
Seventh month	1	0.5	0	0	1	0.9
Eighth month	2	0.9	2	2	0	0
Ninth month	1	0.5	0	0	1	0.9
<b>Total</b>	<b>212</b>	<b>100.0</b>	<b>98</b>	<b>100</b>	<b>114</b>	<b>100</b>

Source: Field Survey, 2019.

**Table 2.**  
*Distribution of the first month ANC was initiated.*

The NHIS policy exempts women from paying the minimum contribution to the scheme [23]. In this regard, it is vital to know whether pregnant women made payments before they sought antenatal care. The results indicated that 58.5% of the respondents mentioned that they did not pay for anything during antenatal care whereas a smaller proportion (41.5%) stated that they made payment during ANC attendance. The data was further disaggregated based on the district of origin. The results showed that 55.1% of the respondents in the Wa East district noted that they pay for services when they sought for antenatal care whereas the rest indicated that they did not pay for anything when they sought antenatal care services. As regards Wa West District, 70.2% of the respondents said that they did not pay any money during antenatal care while the rest mentioned they paid money during the time they attended antenatal care. This hints that more women in the Wa East District paid money for services during antenatal care than their counterparts in the Wa West District. The respondents indicated that they purchased items such as drugs, scan, and laboratory test. The results compare with the findings reported by Dalinjong et al. [10] that women still paid for drugs, supplies, and laboratory services including ultrasound scans in rural northern Ghana.

Access to maternal healthcare services entails the ability of women to obtain prenatal, antenatal, facility-based delivery and postnatal services [5, 37]. Therefore, it is important to know whether respondents delivered at a health facility. On aggregate, the results indicate that 66.5% of the respondents mentioned that they delivered at a health facility while the rest did not. With respect to the districts, the result show that 81.6% of the respondents in the Wa West District delivered at a health facility whereas the rest did not. On the other hand, 51% of the respondents in the Wa East District they delivered at a health facility against 49% of them who did not deliver at a health facility. This suggests that more women had facility-based delivery in the Wa West District than in the Wa East District. Kibusi et al. [8] findings that majority of the respondents delivered at health facilities under skilled attendants is consistent with the results of this study.

Those who did not deliver at a health facility mentioned reasons for their inability to deliver at the nearest health facility. The absence of health personnel at the facility at the time they were ready to deliver was cited as a prime factor. They indicate that when they were due to deliver, they made it to the health facility but upon arrival the health personnel were not at post to assist them deliver. Also, some respondents explicate that the time of delivery came at midnight and thus they could not wait and travel to the nearby health facility. Another set of respondents asserted that there was no means of transport to convey them to the nearest health facility. The quotation taken from field notes in the Wa West District illustrates the situation of some pregnant women:

*“The unborn baby started disturbing me at about 2:30 pm and I reported it to my mother-in-law. Some few minutes later, she brought a tricycle to convey me to the nearest health facility (at Kataa) which is 6.2 km away from our community. Upon arrival at the health facility, we were informed that the health personnel were not at post to attend to us. We had to return to our community and I delivered just at the entrance to my room” [42-year old woman, July 7, 2019].*

The quotation shed light on the difficult situation some pregnant women had to go through to deliver their babies. This finding is in contravention of the key tenet of the access theory that maintains that individuals/or group such as pregnant women should be able to benefit from material objects, persons and institutions such as health facilities and personnel [18] without hindrance. This finding equally disagrees with the social justice theory that proclaims that all individuals including pregnant women have the right to societal benefits such as access to health facilities and in accordance with acceptable procedures, norms and rules that promote basic rights, liberties and entitlement of individuals and or groups as well as improves the situations of the disadvantaged within a society [13, 15].

Ghana introduced a free maternal healthcare programme (FMHCP) under the NHIS in 2008 to alleviate the cost burden associated with seeking maternal health-care [7]. In this respect, it is crucial to know whether women incur cost in seeking delivery care at the health facilities. The result shows that 79.7% of the respondents indicated that they incur cost in seeking delivery care whereas the rest mentioned that they did not incur cost in seeking delivery care at health facilities. The data was further disaggregated based on district of origin. Out of the 98 respondents in the Wa East District, 68.4% mentioned they incur cost when seeking delivery care whereas the rest did not. Similarly, the results indicate that 89.5% of the 114 respondents stated that they incurred cost when they sought delivery care while the rest did not in the Wa West District. According to the respondents, the cost element includes soap, sanitary pad, hand gloves, detergents, blade, bucket, and rubber sheet. This signals that more women in the Wa West district incurred cost during

delivery compared to their counterparts in the Wa East District. This finding contradicts the assertion that health insurance protects the poor in particular against the risk of incurring medical and related financial costs at the point of service utilisation [9].

The cost involved in seeking delivery care was, therefore, examined. The cost here does not include service cost but rather the cost of detergents (Dettol anti-septic, soap and parozone bleach) and other materials such as rubber, blade, hand gloves etc. The detergents are usually collected by the health facilities from the pregnant women and used to clean and disinfect the labour ward after delivery. The least cost involved in seek delivery care was GH¢10.00 whereas the highest was GH¢400 with a median of GH¢40 (Mean = 57.64; Std Deviation = 69.23; Skewness = 3.4) and a related quartile deviation of 17.5. The data was further disaggregated based on location and the result indicated that in the Wa East District, the maximum cost was GH¢400.00 while the minimum was GH¢10.00 with a median of 35 (Mean = 59.55; Std Deviation = 82; Skewness = 3.5) and with an associated quartile deviation of 12.5. On the other hand, the lowest cost involved in seeking delivery care in the Wa West District was GH¢10 whereas the highest cost was GH¢345.00 and a median of GH¢45 (Mean = 56.60; Std Deviation = 61; Skewness = 3.06) and a corresponding quartile deviation of 18. Balancing the medians, it is realised that the median cost in Wa West is higher than the median cost in Wa East. Also, a Mann-Whitney U Test was conducted to test for differences in the cost of delivery care in the two districts. The test revealed no significant difference in the cost of seeking delivery care for Wa East ( $Md = 35, n = 45$ ) and that of Wa West ( $Md = 45, n = 82$ ),  $z = -0.715, p = 0.475$ . This finding agrees with Dalinjong et al. [10] assertion that pregnant women still purchase certain items for childbirth under the free maternal health policy in rural Northern Ghana. However, some of the respondents admitted that the cost of these items required for delivery sometimes deters them from going to the health facilities for delivery due to the high poverty levels in the study areas. This partly explains why some women still deliver at home.

Charlotte et al. [33] intimated that PNC ensures continuity of care for mother and baby as well as helps to support healthy behaviours. Thus, PNC contributes to the beneficial health outcome for the baby and the mother [5]. In this regard, it is important to know whether women continued seeking PNC. The results of the study noted that 91.5% of the respondents mentioned that they attended PNC while the rest stated that they did not attend PNC. In addition, the data was disaggregated based on location and the results indicate that majority of the respondents (81.6%) in the Wa East District attended PNC but the rest mentioned that they did not. In the Wa West District, however, all respondents stated that they attended PNC. The results of this study contradict the discovery made by Twum et al. [7] that women did not go for postnatal care. The probable reason for the difference in these findings is that our study area is rural where the nurses visit the communities for PNC whereas Twum et al. [7] conducted their study in an urban setting.

Health insurance coverage appears to provide a window of opportunity to reduce or eliminate Out-of-pocket expenditures at the point of service utilisation [17]. In this regard, it is prudent to determine whether women incurred cost when seeking PNC. The results denoted that 75% of the respondents stated that they did not incurred cost while the rest mentioned they expended money when they sought for PNC. Furthermore, the data was segregated based on location to determine whether differences exist between the districts as regards cost incurred during PNC. The results showed that in the Wa East District, 68.4% of the respondents stated that they did not incur cost when they sought for PNC while the rest mentioned that they expended money. As regards the Wa West District, majority (80.7%) of the respondents indicated they did not make payment during PNC whereas the rest

signalled they incurred expenditure. Those who admitted they made payments alluded to contribution to construct a delivery room and paying for the security of the health facility.

The person who makes the decision to seek maternal healthcare tends to influence attendance. As such, it is crucial to know whether the wife alone, the husband only or a joint decision influenced the utilisation of maternal healthcare services. The results (**Table 3**) indicate that majority of the respondents (54.2%) mentioned that it was the wife who initiated the decision to seek maternal healthcare services while 24.5% of them indicated that the decision was jointly made by the husband and wife. The data was also disaggregated based on district of origin to determine whether differences exist between the two districts. The results show that 35.7% of the respondents in the Wa East District indicated that it was the wife who took the initiative while 34.7% mentioned that the decision was jointly made. With respect to the Wa West District, 70.2% of them indicated that the decision was taken by the wife and another 15.8% stated that the man and wife jointly took the decision to seek maternal healthcare services. This finding does not fall in line with that of Banik [38] who reported that decisions about seeking maternal healthcare services made by both husband and wife were higher compared to those made by husband or wife alone. The contradiction in these findings could be due to cultural differences between Ghana and Bangladesh.

Spouse	Aggregate		Wa East		Wa West	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Wife	115	54.2	35	35.7	80	70.2
Joint	52	24.5	34	34.7	18	15.8
Husband	45	21.2	29	29.6	18	14
<b>Total</b>	<b>212</b>	<b>100</b>	<b>98</b>	<b>100</b>	<b>114</b>	<b>100</b>

*Source: Field Survey, 2019.*

**Table 3.**  
*Distribution of decision about seeking maternal healthcare services.*

## 6. Conclusions and policy implications

Health insurance coverage appears to contribute to improved access and utilisation of maternal healthcare services. In this respect, majority of the respondents had enrolled unto the NHIS in both districts even though some pregnant women paid for the registration and renewal of their cards which was inappropriate since it was supposed to be free for them. Equally, women largely sought for antenatal and post-natal care during pregnancy and after delivery respectively. Furthermore, some pregnant women incurred cost at the point of registration or renewal of their NHIS cards. Still, some pregnant women deliver at home due to lack of transport, unavailability of health personnel, and the timing of delivery. In addition, a significant proportion of the pregnant women who sought delivery care spend money to purchase certain items at health facilities or from the market before they are admitted to deliver. Moreover, the decision to utilise maternal healthcare services was made mostly by the women themselves.

Together, a number of steps can be taken to ensure the full realisation of providing free maternal healthcare to all women. First, it will be prudent for the government to station at least one trained health personal particularly midwives

in all communities to provide delivery services to pregnant women. Second, the government, through the District Health Directorate should provide the basic items that are needed to provide safe and smooth delivery at the health facilities. Third, the communities should be encouraged to provide a communal means of transport to convey pregnant women who are due for delivery to nearby health facilities. Fourth, management of the NHIS in collaboration with the health personnel should embark on continuous sensitization of women on the need to always visit a health facility to confirm their pregnancy before they register or renew their NHIS cards so as to benefit from the free maternal healthcare policy of government. Above all, the District Health Directorates should monitor the movement of health personnel to ensure that at least one personnel (especially the Midwives) is always at post to provide maternal health services for women.

## Acknowledgements

We indebted to our research assistants, Mr. Josephat Derbile and Mr. Galaa Mwinbuobu Vitus who are teaching assistants in the Department of Governance and Development Management of the University for Development studies for their hard work and commitment during the data collection stage of the study. Indeed, you demonstrated commitment in spite of the short time we had to collect the data. We are grateful to you. We are also thankful to Dr. Moses Naiim Fuseini and Afia Dankwah Dentaa of the School for Development Studies, University of Cape Coast for proof reading the manuscript and offering invaluable suggestions to help improve the manuscript.

## Conflict of interest

We wish to declare that none of the authors have any conflict of interest in connection with this study.

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