

# Contextualizing the Impact of 'free' Maternal Healthcare Policy Implementation: An Intrinsic Case Analysis of Maternal Healthcare Utilization and Stillbirth in Ghana

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## Research article

**Keywords:** Stillbirth, utilization, maternal healthcare, contextual factors

**Posted Date:** November 9th, 2020

**DOI:** <https://doi.org/10.21203/rs.3.rs-103135/v1>

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# Abstract

**Background:** The inception of the 'Free' Maternal Health Care Policy (FMHCP) in Ghana since 2008 has seen drastic improvement in maternal healthcare utilization, particularly antenatal care uptake and skilled delivery utilization. However, its impact against late pregnancy outcomes has yet to be examined contextually.

**Purpose:** This study aimed to describe the implications of the 'free' policy funding constraints on maternal healthcare utilization and explain how factors play to contribute to stillbirth despite the increase in maternal healthcare utilization.

**Methods:** The study adopted an intrinsic-case study method using qualitative techniques to collect primary data through one-on-one interviews with service providers, and focus group discussions for pregnant women. The study then interviewed an expert in healthcare practice and policy implementation as a key informer to triangulate the data for analysis.

Deductive thematic analysis guided the approach to writing the report, where sub-themes also emerged inductively and are reported with verbatim quotes to aid explanatory power.

**Results:** The study found that within increased skilled attendance, comes top-up payments for medicines and laboratory services among pregnant women despite the policy being described as 'free'. The study also found that routine medicines such as folic acid, ferrous sulphate and multivitamin tablets are often in short supply in the 'free' policy credentialed facilities and affecting service provision and quality of care.

**Conclusion:** We conclude that the increase in maternal healthcare utilization do not necessarily translate to desired late pregnancy outcomes in its current form, particularly within the context of acute shortages of medicine commodities. The Ministry of Health and its agencies should perhaps set agendas to ensure regular supply of drug commodities in hospitals and health centers to boost quality of care.

## Background

Stillbirth is a critical healthcare index that has yet to receive adequate research and policy attention among many developing countries. Globally, 2.6million pregnancies end in stillbirths for one reason or the other since 2015 (1–3). Of these figures, 98% of stillbirth are accounted for by developing countries, particularly in south-east Asia and sub-Saharan Africa (4–6).

For example, in 2015, Nigeria's stillbirth rate was 42 per 1000 live births, whereas countries like Japan and UK records an estimated 2 per 1000 live births (7,8). About the same period 28 per 1000 live births was also reported in Ghana (9,10). Quality antenatal care has been proven to reduce stillbirth, yet within country disparities have rather restricted access to antenatal care to a few privileged to the detriment of the wider population in poor countries (11–15).

Therefore, pro-poor programmes and policies have since emerged of recent times as a way of bridging the access gap in order to achieve desired outcomes within a broader concept of the Sustainable Development Goal 3 (16–19).

In pursuit of a similar agenda, Ghana introduced the 'free' registration to the national health insurance scheme for all women who tested positive to pregnancy, to enjoy comprehensive maternal healthcare free of charge from accredited providers (20–22). The initiative had received financial pledge from the then UK government to the tune of £42.5 million. The policy has since survived a decade in its implementation and covered over 3million beneficiaries since its inception in 2008 (23).

Despite this intervention, stillbirth rates in Ghana have yet to drop significantly to acceptable level, if Ghana were to achieve the World Health Organization (WHO) target of 12 per 1000 live births by the year 2030. So far, studies on the 'free' policy impact have centered on skilled delivery utilization across districts and cross-country comparison of infant mortality in the West African sub-region (21,24).

In contrast, the policy's operationalization context relative to utilization and late pregnancy outcomes has yet to receive adequate attention to inform policy and practice. More so, a secondary analysis of Ghana demographic and health survey data for 2008 and 2014 reveals that while skilled delivery improves following the 'free' maternal healthcare policy initiative, stillbirth is unexpectedly also on the rise particularly among facility deliveries (25,26).

Hence, this study undertook a qualitative enquiry to contextualize the operational environment under which the 'free' policy thrives using one region of Ghana as an intrinsic case.

## Conceptual framework

In figure 1, this study conceptualized that situational factors undermine the operational capacity of the FMHCP in practice. The 'free' policy was intended to increase maternal healthcare utilization to bring about reduced rate of stillbirth as medium and long term goal. However, the NHIS is unable to leave up to its own 30days grace period within which claims should be paid to service providers for continuity of care in a provider purchaser split model (27).

Consequently, service providers engineer funding internal mechanism at the facility level to survive and this is against the backdrop of staffing inadequacies and mix, crowded by shortages of commodities and unwelcoming attitude of healthcare workers. Unapproved charges then surface in the form of top-ups and mini charges at the ward level for sanitary items like pads and rubber protectors.

And therefore, the policy user is confronted with payment requests due to the causalities played together by the policy and facility level factors. And yet, users are expected to deal the emerging charges with poverty factors. Hence, may not comply with treatment regimen and perhaps report to healthcare facilities late.

## Methods

### Study design

This study adopted a descriptive narrative method using qualitative technique to analyse data from the Upper Region of Ghana as an intrinsic case. Data collection was through one-on-one in-depth interviews (IDI) and conducted for hospital administrators, doctors and midwives, as well as focus group discussion (FGD) as carried out for pregnant women participants, the policy users.

### Study setting

The Upper East is one of the poorest regions of Ghana. It is located at the north-eastern corner of Ghana between longitude 0<sup>0</sup> and 1<sup>0</sup> West and latitude 10<sup>0</sup> 30' N and 11<sup>0</sup> N.

The region has a total land area of about 8,842sq km with Bolgatanga as its capital and an estimated population of a little over 1 million (28,29). As at 2013, the region had a national health insurance enrollment rate of 6.3% of its total population with a considerably good number of midwives compared to other regions of Ghana (30).

Ethnic groupings are sparsely distributed across the capital at the centre, Bawku areas to the east of the capital, and Navrongo areas to the west of the capital, thus, these points were the focus of the qualitative data and represent the region as a unit case within the larger cooperate Ghana.

### Population and sampling

Hospital administrators, doctors, midwives and pregnant women from the Upper East Region were targeted as an intrinsic-case for the study. The region was divided into three zones; Central zone (CZ), Eastern zone (EZ) and Western Zones (WZ), from which districts were selected from each of the three zones using a simple random sampling technique.

Thus, Bongo District was selected from the central zone, Zebilla District from the Eastern zone, whereas Kasena-Nankana Municipal was selected from the Western zone. One hospital and two health centers each were further selected purposively and conveniently as the final study sites from where the study participants were drawn.

The targeted healthcare workers at post to the antenatal units and delivery wards in the selected facilities were then recruited conveniently for in-depth interviews. Pregnant women attending antenatal clinics in the selected facilities were also recruited using convenient sampling method for group discussions. The inclusion of service providers was to elicit their views and perspectives on workability of the FMHCP whereas, the inclusion of pregnant women was to gain policy-user experience and perception, to explore the idea of multiple realities (31).

The Regional Director of Health Service (RDHS) for Upper East Region was also purposively interviewed as an expert key informant to verification, and/or validate the field data, and this enriched data quality through the use of multiple sources, so called data triangulation.

## **Inclusion and exclusion criteria**

Only doctors and midwives of the selected hospitals/ health centers with at least 3 years working experience in the labour ward and antenatal unit were included into the study. On the other hand, pregnant women whose vital signs were considered abnormal, using parameters of the America Heart Association (table ...) were excluded from the study. Also, pregnant women < 16 years of age were considered minors and excluded from this study.

## **Tools and in-depth interview guides**

Indepth interview guides (attached as supplementary files) were developed for the purpose of one-on-one interviews with service providers and the director of health service as an expert participant. Fictitious cases were also developed for the focus group discussions (also attached as a supplementary file).

Participants attributes were also collected prior to interviews and group discussions using tool sheets developed for the purpose (attached as supplementary files). Tools and guides were pre-tested in facilities different from the study sites and subsequently approved by the Department of Health Policy Planning and Management, University of Ghana School of Public Health and then Ghana Health Service Ethics Review Committee.

## **Data collection**

Indepth interviews were one-on-one. All interviews were conducted with privacy as an ethical guide, doing so in doctors consulting rooms and midwives' palpation room. Interview with the RDHS was conducted in his office privately after booking appointment with him.

Interviews lasted between 1-2hours and all participants consented in writing. In total, 16 healthcare professionals participated in one-on-one interviews (details in Table 5). All interviews were audiotape recorded and later transcribed verbatim for the analysis.

Group discussions were held in the study site hospitals. Pregnant women aged 19-39 years participated in the FGDs and shared their experiences. Each group had 5 participants with 2 moderators, the Principal Investigator, and 1 research assistant. Conference rooms of the hospitals had air conditioning thus, providing a calm and quiet environment for a serene participation in discussions.

Discussions were also audio recorded and later transcribed. In each session, a registered nurse at the rank of a Senior Nursing Officer (SNO) checked and recorded the vital signs of all pregnant women participants to ensure that, all participants are in stable condition to participate in the discussion with minimal or no harm. All participants signed/thumb printed a consent form and was given copies to keep.

Table 1  
Study Participants

Method	Target	Size	Duration
KII	Regional Director	1	1hour+
IDI	Doctors	3	3hour
IDI	Midwives	12	12hour
IDI	H. Administrators	1	1hour
FGD	Pregnant women	25	3 hours
Total		42	20hours+

## Ethical approval

This study received ethical approval from the Ghana Health Service Ethics Review Committee (Reg. No. GHS-ERC: 002/04/19) and subsequently facility entrée approval from the Upper East Regional Health Directorate. Participants consented to participate through the signing/thumb printing of a consent form prior to participation in interviews and group discussions. This is supported by the Belmont's report <http://ohsr.od.nih.gov/guidelines/belmont.html> (retrieved on November 4, 2018) on participants' autonomy.

Study participants were given copies of signed consent form and information sheets and pregnant women who felt uncomfortable during discussions were encouraged to withdraw and referred to the facility clinician for assessment and support. Participants were told they have the right to withdraw from the study before or during data collection process and also had their identities concealed in the final report and also in this manuscript.

## Data analysis

Interviews were transcribed verbatim with an earpiece and typing the content out into Microsoft office word. Data transcription was in unison, person to person session and categorizing data into in-depth interviews, focus group discussions, and key informer interview. Transcripts were then edited, double-checked, and imported into INVIVO 10 for analysis.

Multiple reading and annotations grouped similar and dissimilar statements for ease of analysis and bringing significant statements under themes. Similar and dissimilar statements were coded and categorized. Each category was then reviewed carefully for relevance to the study objective and specified under the themes.

Significant statements were then highlighted and made reference to the 'free' policy in practice, either from the service provider perspective or the policy user experience. Statements that did not align themselves to either perspective were also grouped and thoroughly examined before exclusion. Relevant portions of the interviews are quoted verbatim in the results section to convey participants' impression and enhance the explanatory power, typical of thematic style analysis.

Table 10.4 presents a summary of the themes and the relevant corresponding quotes.

## **Trustworthiness**

The choice of purposive, but convenient sampling was deliberate to achieve trustworthiness through worthy acquisition of information for sound analysis. The inclusion of pregnant women, midwives and doctors (who work at the antenatal clinics and labour wards) added to data quality dimension which is critical to trustworthiness.

Also, the inclusion of Hospital Managers and expert Key Informer was relevant and added to verification, and confirmability. Data triangulation was achieved by the inclusion of data from multiple sources for analysis. The expert, who works in the Upper East Region as a director of health service enhanced data verification and validation.

Additionally, all participants consented in writing to give out information without coercion. In-depth interviews conducted in private rooms, as well as focus group discussions to achieve confidentiality with the firm assurance of the Principal Investigator to participants that information so obtained was solely for the purpose of research analysis and not third party use.

Prior to the study completion, this study protocol was peer reviewed by four different double blinded external reviewers and accepted for publication by Biomed Central Reproductive Health Journal.

## **Results**

### **Descriptive statistics**

In total, 42 healthcare workers and pregnant women participated in the study. Of this number 41% were service providers, 59% were pregnant women (the free policy users). Of the service providers, 65% were females, while 35% were males. The majority of service provider participants were midwives, 70.5%. This was not unexpected, giving they constitute the larger population of health professional directly linked to the 'free' maternal healthcare policy implementation.

Medical doctors at post to the antenatal clinics and the labour wards made up of 18%. The other participants were Hospital Administrators/Managers and a Regional Director of Health of Health Service. The mean age of pregnant women was 20.5 with 19 years' minimum age and 39 years' maximum. Over 90% of the pregnant women claimed they were married and had two or more children, while 76% of them responded that they were gainfully employed.

All pregnant women had their vital signs checked for normalcy and table 10.2 show that all participants recorded vital signs within a normal range. The mean temperature, pulse and respiration was 36.3 degree degrees Celsius, 86.12 beats per minute and 18.12 cycles per minute respectively.

## Thematic Approach

Themes were deductive, using pre-defined phrases for the purpose of contextualization. However, sub-themes emerged inductively for flexibility of analysis. In all, 5 themes and 2 sub-themes capture the report, whereas figures 2, 3 and 4 are word cloud output of NVIVO 10 (attached as appendix).

## Pregnant women experience

Pregnant women participants disclosed that they regularly pay for laboratory services from start to confinement. Laboratory tests are unavoidable for expectant mothers, thus, out of pocket payment is not uncommon among pregnant women. Cost is incurred at the point of service delivery for a laboratory test. One of the pregnant women gave her an account as follows;

*"I went to the lab and paid 8.50 and 15Gh each. I did the lab up to three times. I also bought red and yellow drugs. My first test was expensive. They took blood for sickle cell....and this was done in a private lab. I paid Gh47...and then paid 20 for scan..." (PW2, FG1, Zebilla District)*

Cost reasons lead to concealment of ailment as a way of mitigating economic consequences. Financial difficulties also prevent others from accessing some of the recommended medicines, which potentially, could affect their health status and that of the unborn baby. A participant puts it thus;

*"...The lab fee is plenty so when you come and you want to complain they will let you pay more. So sometimes we don't say all our problems for fear that they might ask you to pay...I bought some and it is finished, but I have no money to buy yet." (PW6, FG4, Bongo District)*

Indeed, the cost of doing the test has been observed by the midwives as a challenge and hence influences their approach to assessing pregnant women so that they might not be overburden with the cost. This is a concern for users, as some feel, they deserve comprehensive obstetric care, regardless of cost. A focus group participant explains further;

*“Yes...there are some important test which is 50.00 which the midwives didn't tell her when she called one midwife, she asked why it was not done, and the midwives said that because of the high cost because the pregnant women always complain that they don't have money...” (PW5, FG3, Bongo District)*

Another critical experience shared by pregnant women is the purchasing of sanitary materials for delivery. Significantly, every health facility requires expectant mothers to have some sanitary pads purchased either commercially or from the midwives in the ward, also, pregnant women will have to purchase a rubber for the protection of their delivery bed. These are sold by midwives and is almost a model in all labor ward, regardless of one's NHIS status.

*“Rubber, chamber pot, soap (four), and I paid bed fees. This was 2017. They also said I should pay 20gh and I paid. I used the Dettol and I sent the soap home. The remaining Dettol the midwives took it. When I did deliver the baby had no problem...” (PW8, FG4, Bongo District)*

Pregnant women in the Zebilla District, however, testifies that pads availability in the ward for sale to pregnant women is a good arrangement and explained how pregnant women may even get to use delivery items and pay later. She said;

*“... The pads are very helpful to us ooo. If you don't have they will remove the pads for you... And later you can pay. They won't deny you...” (PW4, FG1, Zebilla District)*

Irregular supply of medicines in facility dispensary shops also creates a situation where the policy users almost always buy drugs from the market. Buying medicines is a well-documented experience among pregnant women. This observation has been reported comprehensively under the theme "shortages of medicines". However, a quote below from one of the pregnant women sums the rampant natures of asking private purchasing of drugs among the 'free' policy users.

*“...Whenever we come we have been buying the drugs. Most of the time when we come they do write for us to go and buy the drugs. The yellow and the red drugs, because they don't have them here...” (PW1, FG3, Bongo District)*

## **Service providers perspectives**

This theme is presented in two sub-themes, thus, service providers' perspectives on the 'free' maternal health care policy on utilization, and service provider perspectives on stillbirth in the health care facilities. Under each sub-theme, the expert view is reported as a validation to the field level data in an in-depth assessment.

### **1. Maternal healthcare utilization**

Services providers observed that pregnant women still report to healthcare facilities without active NHIS cards, a situation that compels healthcare professionals to intervene, in a form of negotiation, lobbying.

The doctors view these interventions as collaborative in the interest of the patient. In some instances, service providers have to employ plea strategies to facilitate access to the NHIS card.

*"Hmmm...Our collaboration with health insurance. A woman is highly pregnant, occasionally because the claims officers are friends, you call them and tell them...looking at this person right now, after delivery, the person will not be able to pay what you can do for me? Can I please let one of the nurses bring her so that you can register her for me?" (Doctor 1, IDI, UER)*

The one key reason for the 'free' policy introduction was to reduce financial burden, by eliminating the need for out of pocket payment. However, it was observed pregnant women are required to purchase certain items to facilitate their care. These items range from medicine to minor items like rubber and pads. The following quotes explain;

*..."There are few items that the midwives will write for you to bring. For instance, you will need a sanitary pad after you have delivered.... They may be some basic things that I cannot enumerate. Like they ask them to come with a certain rubber that the usually use to spread on the bed for you to deliver without coming into contact with but.... a few of them will come without a sanitary pad, so they [midwives] will ask them to pay for sanitary pads" (Doctor 1, IDI, UER)*

*"...Sanitary pads and rubber...and after they pay for vitamin k, which we give it to the child...that is when it normal delivery. When it is CS, antibiotic, cefuroxime, Amoxyclav, and Gentamycin. If it is not there they go to buy. It always happens that when they come and it is finished and the lorry that distributes the drugs is not yet in...." (Midwife 5, IDI, KNNM)*

It is not uncommon for pregnant women to be asked to purchase services outside the health facility, particularly, laboratory, and scan services. Typically, clinicians routinely put pregnant women expectant mothers on a certain drug to facilitate their care. Their efforts are frustrated by the lack of medicine and diagnostic services within healthcare facilities, thus, the easy approach for doctors and midwives seem to be reliant on private purchasing.

A Medical Superintendent of Bongo District Hospital, who also doubles as the doctor in charge of the labour ward had this to say:

*"...Our environment is not good. Personal hygiene is not so good. Unlike other places where they think that labour is a sterile procedure, here, we routinely put all our clients on antibiotic cover, whether you're on episiotomy, assisted delivery, or not." (Doctor 1, IDI, UER)*

The Regional Director of Health Services for the Upper East Region admitted that the policy implementation bottlenecks emerged and the senior management detected and attempted to deal with the issues. He explained it this way;

*"...women were being asked to buy the logistics...and we said no because, essentially this policy is to reduce financial burden if you ask women to come and ask them to buy this and that, and some of those*

*things were been sold in the ward, some of the women won't come again....so we said, no, the midwives, nurses or whoever should stop selling those things in the ward. In recognition of that, we put in the reward system." (RDHS, KII, UER)*

## 2. Stillbirth numbers on the rise

Service providers expressed worry about the increasing figures of stillbirth. However, they attributed the numbers to increased attendance and adequate record keeping. Study participants were of the view the increase utilization has also seen the record keeping prowess improved and hence muffles the impact of the 'free' policy in the Region, as though the policy is ineffective.

*"...In the region, when you look at the picture, despite the so many interventions, one will say SBs are still high. But when you look at it critically, it is the reporting which is also going up, so it makes you think that the policy is not helping..." (Doctor 1, IDI, UER)*

*"...We have a high rate. This time we are getting mothers who are coming with Intra-Uterine Fetal Death (IUFD). This year in particular we had 15 for the first 6months. When you compare, I will say because we are taking records, that is why the numbers are high...previously there was no documentation..." (Midwife 1, IDI, Zebilla District)*

Doctors and midwives also observed that macerated stillbirths were being reported more, which suggest that babies die in the womb in the house before they arrive at the facility, and hence, should not be blamed on the healthcare worker. Service providers were also of the view that pregnant women report to facilities late, probably due to previous experience and consequently, endangers the life of the unborn child.

*"...Actually, just this half-year, stillbirth numbers weren't encouraging. It was bad. We had 22, but 13 were macerated. Then we had 9 fresh stillbirths. This year theirr...the number has hiked..." (Midwife 1, IDI, Bongo District)*

*"...A few cases also dodge the hospital may they have two previous CS and knows that if they come to the hospital, there will be CS, so they avoid the hospital, when there are complications, then they quickly come..." (Doctor 1, IDI, UER)*

Poor health-seeking behaviors was also blamed in some quarters as the which cause rising stillbirth rates. A doctor was categorical that pregnant women don't comply with professional demands. He shares his experience and doing so, using the numbers of macerated babies (antepartum stillbirth) to justify.

*..."The health-seeking behavior is bad in general, otherwise he won't come and deliver macerated babies. And those once are even higher than the fresh stillbirth that we have...Some come and the issue of monitoring and they won't cooperate and you can just operate unless there is indication....so the attitude and the cooperation from the woman is there..." (Doctor 2, IDI, UER)*

Ambulance services come as a priority for transporting pregnant women, the absence of which has seen an increasing rate of motor kings transport use. Service providers hold a different view. Some women deliver on the motor king in the process, but the health workers believe there was more to delays than transport. Rather, the decision to go to a hospital is a hindrance for reasons unknown.

*"... they deliver in the motor king, we get a lot, but I think the delay in deciding to even go to the hospital is the issue. So if you look at it the period that the person is delivering on the road, it shouldn't be there. The farthest distance here is Zangbe-Yeri. The point is that there is no place around that it will take 3 hours to reach facility..." (Doctor 2, IDI, UER)*

A doctor also disclosed that in their attempt to finding answers, they discovered that some women were averse to vaginal examinations. Some pregnant women claim ignorance of the onset of labour and are suddenly caught in between home and hospital.

*"...and when they come we manage them at postnatal care.... they say they didn't know that labour had started, some say they don't want the examination. One woman was frank, she said when they come, they put fingers on her vagina and that one she doesn't like it..." (Doctor 2, IDI, UER)*

Essentially, the doctors and midwives shared that Ghana Health Service the mandatory auditing schedules for stillbirth has become routine and helpful, relative to addressing the gaps. A senior doctor puts it thus;

*"...Now, all SB are audited. Previously, we will say that it is SB and so what, life goes on, but when you look at what was happening before and what is happening, there is a great improvement...." (Doctor 1, IDI, UER)*

The RDHS had this to say when he was interviewed as a key informer in the UER

*"... substantial labour is still not monitored. Using partograph to monitor will tell you the condition of that baby. So that if you realize that the baby has difficulties, that baby can be delivered...a significant proportion is not monitored. Those women who are eligible, it should be 100%..." (RDHS, KII, UER)*

The expert views also suggest that some pregnancies arrive late to facilities and thus, running into complication and potentially increases the stillbirth rate. The expert appears to share the comments by the health care worker relative to macerated (intrapartum) stillbirth.

*"...Some of the referrals come when they have tried home and they are tired and the condition is getting worse, and they think that the baby is going to die at home and they send it to the facility. The baby might even be dead at home...." (RDHS, KII, UER)*

## **“Little Attention” for the little one**

Cultural dimensions describe the undesirable outcomes of stillbirth and perinatal deaths in the Upper East Region. Firstly, there is a culture of little interest in issues of stillbirth compared to maternal mortality. A

labour ward doctor explained that this is almost the norm and perhaps explains the urgency attached to stillbirth.

*"We don't pay attention to stillbirth as we do for maternal deaths. One mother will die and the whole hospital will here. I don't even know the stillbirths in the labour ward. They don't tell me...unless we are reporting. But when there is maternal mortality, eeeiii!" (Doctor3, IDI, UER)*

There is also the believe that human beings are not to be counted, and thus, mothers will give an inaccurate history to midwives, and this turn to affect the kind of care they receive.

*"Her record had wrong parity...they still have that notion that they don't count human being."*

Service providers also observed that pregnant women had a laid back attitude towards their unborn babies, with others ignorantly refusing surgery and losing their babies in the process. A midwife narrates her experience as follows:

*"... a woman came and the liquor was small, so the best we could do was CS. When we told them, they told us that if the water is not ok, can't you fetch water and add. They went home...came back some few days later and the baby was dead..." (Midwife 2, IDI, Zebilla District)*

"history taking is key," said a labour ward in-charge. However, certain restrictions played to prevent the realization of clean history from expectant mothers.

*"...taking history is key... The woman misled the midwives concerning her parity. We started inducing, and she raptured, then, we asked a relative (her daughter) and she said her mother had 6 children and 1 died. Such a person should be induced...we were misled." (Midwife 2, IDI, Bongo District)*

Findings from the focus group discussion also suggests that, healthcare workers pay little attention to the plight of pregnant women in labor. The discussions suggested that midwives are sometimes less interested in the welfare of the unborn babies. A participant had this to say;

*"...Sometimes you can be crying and they won't mind you. One time I was suffering and the midwives didn't bother to check on me. I said my baby is coming....by the time they came my baby was gone. They don't care about our babies..." (PW4, FG3, Bongo District)*

However, the expert argues that there is a causal relationship between stillbirth and maternal mortality, hence, it could not be the case that healthcare workers are not interested in the numbers of stillbirth. He explains;

*"We take it serious.... when a woman loses her baby, there is a good chance that she will get pregnant in the next 6 months. This increases the risk for maternal mortality. But when the baby is alive, it means the woman may go through 2 or 3 years before she gets pregnant. That way the chance of recording maternal mortality is significantly reduced. (RDHS, KII, UER)*

From the forgone, it means that not recording stillbirth reduces the risk of maternal mortality and thus, a good reason for equal attention to be given to stillbirth,

## Abdominal ultrasound scan

Service providers and pregnant women had a common response for this theme; ultrasound abdominal scan comes with a cost. Despite its inclusion in the free policy package. It is almost impossible to go through pregnancy to safe delivery without being told to go for an abdominal ultrasound scan. However, the challenge is the person to do the scan.

*"...If the scan in the facility is working, you also have free scan services without paying anything, but, we need to have a sonographer..." (Doctor 1, IDI, UER)*

*"...For scan, we don't have a sonographer, but we have a scanning machine in the maternity ward, which we do a quick scan and make a decision, but when others come and cannot afford you do it for them or when you have an emergency. Here, we are only two [doctors], I can't even go on leave...there're some if you think they can afford.... you send them to town..." (Doctor 2, IDI, UER)*

*"...We have a scan but we don't have a sonographer, so much of the scan done outside. So that one is a very big challenge. The other one too is that because we are only two [doctors] for the hospital, we don't get time to scan for them. It is the emergency ones that we can, but most of them will have to go outside [for scan] ..." (Doctor 3, IDI, UER)*

All 3 study site hospitals had no trained sonographers. The absence of one meant that checking the status of the unborn baby has become more of a commercial service that pregnant women must pay for regardless of the free policy status. Pregnant women went to town at some point in their pregnancy, for a scan at a fee ranging between \$5.00 and \$7.00.

*"...I did two scans, one here, one outside the hospital. When I did the scan here I didn't pay, but the one outside I paid GH₵25..." (PW4, FG3, Bongo District)*

Apart from gestational age estimation and expected date of delivery for preparations of confinement, an ultrasound scan determines the level of amniotic fluid within the uterus, for clinicians to decide whether or not, a pregnant woman can have normal delivery. Within the context of quality and affordability, pregnant women will need this kind of service to be available. However, the account of one midwife suggests otherwise;

*"Early and late scan helps a lot. Through that one, we can use to calculate the estimated gestation for them and to know when the person is likely to deliver and also determine post maturity. You may ask a woman to go and do a scan and it will take the whole week." (Midwife 3, IDI, Zebilla District)*

Curiously, some pregnant women do not trust the results of some scan output in the hospitals, in which case, they seek for a second opinion from the private ultrasound providers. The health care professionals are aware of this practice. A doctor and pregnant woman account triangulates;

*"...But there are some you do the scan for them alright, but they don't believe what you are saying so you have to go for a second opinion in for them to believe. So they go to town..." (Doctor3, IDI, UER)*

*"...I'm sorry the machine they are using, is faulty, one time I was told they were a problem so I should go and do it outside when I went they were many pregnant women there and when I did the scanning, my baby was ok..." (PW3, FG3, Bongo District)*

The Key Informer, however, averred that healthcare facilities in the region have been given ultrasound scan machines and users trained, thus, it is expected that mothers will benefit from abdominal scan without cost. He explains that with the help of Non-governmental organizations such as KIOCA, the UER should have no complaint about ultrasound abdominal scan. His account is diverse to the picture gathered from the field.

*"...For the scan, I think we have made tremendous improvements. Apart from every hospital having scan services, even the lower-level facilities have scan machines. Last year we had 14 portable scans. Those were bought by KOICA. If you go to Paga now, they have a portable one with a screen like iPad, so the midwives will just do the scan for you..." (Regional Director, KII, UER)*

This is rather a case of downstream policy implementation challenges, which may not be known by the top-level management.

## **Routine Drugs & Antibiotics**

Study participants had one language to this; medicines, more than any other, are in short supply in accredited facilities, and this was attributed to the irregular payment of claims by the national health insurance claims. Pregnant women are told to buy for themselves. A medical superintendent shares his frustrations;

*"...when you visit the facility and certain medication is not available, they are written for you in a prescription. When you take the prescription, then you may be forced to procure those drugs with cash. So far as our facility is concern...at the time you delivered if a medication is not available...we put it on a prescription for you to find a pharmacy shop to procure..." (Doctor 1, IDI, UER)*

*"...sometime we do have challenges from the acquisition of drugs from the Regional Medical Stores or suppliers.... Most often we have methyldopa, but if it is not there, we add another drug (nifedipine). Sometimes we don't have these drugs..., then they will have to go out and buy outside..." (Doctor 2, IDI, UER)*

*"...The issue has to do with drugs. The challenge here is that most of the time the hospital runs out of stock. When they run out of stock, the patient must buy. From our setting here because of the poverty level, most of them cannot afford the drugs..." (Doctor 3, IDI, UER)*

The midwives echoed the difficulty in getting drugs at the facility level, and some of these drugs are giving to the newborn.

*"...and after that, they pay for vitamin k, which we give to the child...that is when it is a normal delivery. When it is a Cesarean section, antibiotics like Cefuroxime, Amoxycyclav, and Gentamycin are ordered by the doctor. If it is not there they go to buy..." (Midwife 2, KNNM, UER)*

Apart from vitamin K which must necessarily be paid for, antibiotics are often purchased as prophylaxis for mothers who may have gone through a surgical procedure during delivery. Then there is iron III, the absence of which causes anaemia in pregnancy. Iron III is routinely given to pregnant women as a supplement, during antenatal days to safeguard anemia in pregnancy.

Within this context, pregnant women are left to buy for themselves, and the uncertainty may lead to some pregnant women reporting to the hospital with anaemia, an antenatal clinic In-charge explains;

*"...the difficulty is the delay in claims. When the dispensary does not have hematinic (iron III), you ask them to go and buy, it is a problem.... what about if she comes for ANC and you write for her and in the end she goes and not buy? She will come back with anaemia..." (Midwife 3, IDI, Bongo District)*

A doctor disclosed that drug efficacy issues also contribute to the syndrome of private purchasing among pregnant women. Some preferences are not in the hospital's dispensary shops.

*"...we use Antibiotic and pain killers for Cesarean Section. Then we also have hematinic. The better once, usually we want them to buy those outside.... eeh! And IV fluids too. There are certain times we go virtually down, they have to buy virtually everything" (Doctor 3, IDI, UER)*

Drugs supplied by hospitals under the national health insurance scheme are deemed cheap and not potent. NHIS simply do not pay enough for drugs of generic products. Pregnant women buy those at their own cost, and this also fuels the rate of private purchasing of drugs. This assertion from the doctors and midwives is supported by the pregnant women account during the group discussions.

*"...Whenever we come we have been buying the drugs. Most of the time when we come they do write for us to go and buy the drugs. The yellow and the red drugs, because they don't have them here..." (PW1, FG1, Bongo District).*

## **Discussion**

Principally, the impression of service providers is one of an increased antenatal care uptake and facility delivery utilization among pregnant women. This is consistent with earlier studies (24,32–34).

Although some pregnant women report to the healthcare facilities without valid national health insurance cards, services are nonetheless rendered and their cards subsequently renewed for claims. This negotiation skills of midwives was envisaged in the original guideline of the 'free' maternal healthcare policy and demonstrates the role of service providers in ensuring a successful implementation of the policy (34,35).

However, one thing was clear for pregnant women respondents during the focus group discussion (FGD). Nearly every pregnant woman paid some amount of money for some sort of laboratory tests in the hospital, abdominal scan services outside the hospitals, or for drugs in the region of \$10 to \$25.00. This is consistent with the findings of Dalinjong, Wang and Homer who reported an overall mean out of pocket expenditure of GH¢17.50 and GH¢ 33.00 among women who accessed ANC service and facility delivery respectively under the FMHCP in northern Ghana (36,37).

As cost mitigation, midwives pick and choose what test should be ordered at a particular visit to manage unbearable cost. Anyhow, the actions of the midwives necessarily do not safe the situation and may affect the outcomes of pregnancy, as some underlying conditions among pregnant women may be missed regardless of the increase in utilization.

Rubber protectors, sanitary pads and detergents are sold to pregnant women in the labor wards like a model, to aid infection prevention measures and cleanliness. This is similar to the findings of earlier studies (36,38). Another phenomenon observed was that Folic Acid, ferrous sulphate (iron tablets) and multivitamin are routine drugs served at antenatal clinics as supplements to prevent anemia among pregnant women (39–41). These are constantly in short supply and probably affect the outcomes of pregnancies in the midst of the policy.

Vitamin K, an anticoagulant used by midwives and doctors to tackle bleeding tendencies during childbirth is also paid for as cash in the hospitals or purchased from commercial dispensary shops. Similar to the finding of Mensah and others, mothers are required to purchase these supplements from the open market and are exposed to fake products and poverty constraints (42). Also, Kone and others argued that in a situation of inadequate routine drug supplements for pregnant women then fetal fatal outcomes are not unexpected (43).

In another study in China, Qu and others reported that folic acid intake of at least 1 to 3 months was associated with reduced stillbirth (44). This suggest that when pregnant women are put in a situation where they will have to find their own routine medicines then there is an increased risk of some not completing the required duration of supplement intake and therefore carries increased odds of having stillbirth.

The RDHS disclosed that all hospitals including selected health centers in the Region have “portable tablet like scans” which has the ability to show results on screen to aid the practice of midwifery in the region. However, few midwives are conversant with the machine. The medical doctors also argue that

their numbers do not allow them to scan services to every pregnant woman, except emergency ones. Hence, women resorted to private scan service providers.

Of these challenges infection, anemia, preterm delivery and low birth weight cannot be ruled out among pregnant women despite increase ANC uptake and skilled delivery services among the FMHCP beneficiaries (10,45,46). The consequences are that the increase in utilization do not necessarily translate to desired outcomes of reduced stillbirth rate and hence poses a constraint to the attainment of the 12 per 1000 lives target as set by WHO (8,47).

Even though a key driver to the 'free' policy was the desire to eliminate out of pocket expenditure at the point of service delivery, pregnant women largely paid for service at every stage of their care and this is consistent with the finding of earlier studies by Health Partners Ghana and also consistent with the work of Dalinjong and others (24,36,37).

Inadequate medicine issues also confronted midwives and doctors and they dealt with this challenge by simply asking pregnant women to pay "something" for medicine or are told to buy for themselves elsewhere, despite the policy being described as 'free'. It appears pervasive, but is suggestive of a policy with a critical contextual challenge that require further attention. It is reflective of the general perception of quality issues that confronted the implementation of NHIS at its initial stages (11,48,49).

It is also consistent with existing studies on health insurance and quality of care and suggest that on the average a pregnant woman may opt for quality healthcare delivery rather, than free healthcare (11,50,51). Roos and others argued that, inadequate use of ultrasound, poor access to emergency obstetric care (EmOC) and poor quality antenatal care to detect and treat underlying conditions such as malaria, syphilis, and hypertension presents a consequential effect on stillbirth (3).

In the account of the FGD participants, midwives have sometimes paid a death ear to their plight only to realize rather late that their "cry" was genuine and could have saved a dying baby if a little more attention was given. This explains a situation where a woman is in pain during labour and suspect that the baby is "coming", yet a midwife probably 'ignored' her for some reason.

It bothers on attention and quality of care and perhaps echoes the inadequate staffing concerns among midwives in other studies (11,52). Staffing challenges is even more pronounced in the case of professional sonographers which also explains why a pregnant woman would have to do ultra-sound abdominal scan from private vendors rather than in NHIS accredited facilities.

Service providers argue that due to increased attendance and improved record keeping the high figures of stillbirth are misinterpreted. They also observes that macerated (antepartum) stillbirths are the most commonly reported, but not fresh (intrapartum) stillbirth (53–55).

This means that unborn babies probably die in utero at home long before reaching the hospital, a situation the midwives presumes have nothing to do with healthcare facility level factors. On the contrary,

if a pregnant woman loses her unborn child while at home it perhaps raises concerns over health system responsiveness and effectiveness (11,56).

Again, the position held by service providers is inconsistency with the findings of Haws *et al.*, and Menezes *et al.*, who reported that antepartum stillbirth, characterized by maceration is common among mothers with underlying pregnancy conditions (16,57).

Even so, Menezes *et al.*, (2009) argues that the remedy to reducing antepartum stillbirths is quality of antenatal care, where mothers with possible underlining conditions are picked and monitored carefully to avoid complication to the mother and the unborn child. This is supported by other studies in the area (7,16,47,58).

Vaginal examination during labour also came out, albeit unclear as the possible cause of late reporting by pregnant women in labour. It probably reinforces the need for skilled training on vaginal examination for skilled birth attendants to mitigate painful and uncomfortable effects of among pregnant women and expectant mothers (59).

In the expert opinion, unravelling a true picture of stillbirth outcomes will require content analysis of stillbirth medical records of facilities deliveries to ascertain the state in which the cases arrived in order to ascertain and communicate the true picture of what may have contributed to the disparity of high stillbirth among facility deliveries.

On the average the NHIS pays nearly \$20.00 per pregnancy and about \$30.00 per normal vaginal delivery to service the cost of antenatal care and facility delivery utilization provided accredited service if pregnant women were to make the recommended 4 minimum visit per pregnancy and gave birth in a healthcare facility by spontaneous vaginal delivery (SVD).

In total, nearly \$43million and over \$70million has been spent on the FMHCP since 2008, and perhaps more, if caesarean delivery was considered. In a developing country like Ghana, such colossal amount of investment should yield the desired results with pointers to the achievement of sustainable development goal 3. Increase monitoring during labour is desirable, and training need assessment on labour management are critical for midwives. Deliberate policy development to arrest the increasing numbers of newborn deaths will mitigate the burden of stillbirth among families and communities large (8,12,19).

As a limitation, this study was conducted in only one region of Ghana. However, the FMHCP is a nationwide programme and used in 15 other regions. Hence, the conclusion reached in this piece may be transferred with caution.

Again, as public health policy in a developing country context, the 'free' policy is viewed more with political lens. Consequently, participants may have shared their views with a certain political orientation. This is difficult to verify and may have skewed the results of this study.

Methodologically, this study perhaps could have benefitted from the inclusion of NHIS scheme managers for their perspectives on the performance of the FMCHP. However, funding and time constraints did not permit a broader scope of the study and limits the results accordingly.

Nevertheless, this is the first kind of a study that investigated the context under which the 'free' policy operate and perhaps adds a deeper understanding to the outcomes being observed in the face of the 'free' policy. This study was also strong in its in-depth analysis of a case within a broader case, seeking to explain the phenomenon of increase stillbirth within increased skilled delivery utilization.

The study also produced a framework of policy implementations challenges in developing country setting, an uncommon academic pursued in developing countries. The conceptual framework perhaps could serve as a hypothesis for future testing. Yet, another strength of this study was its health system approach to analyzing public health policy effect on stillbirth, a largely neglected area of research in sub-Saharan Africa.

## **Conclusion**

Top-up payment was common among the study site facilities, and almost a model, albeit unapproved. Perhaps, it is a stop-gap measure to tackling acute shortages of routine drugs, antibiotics, and also keep basic laboratory service running in the midst of slow reimbursement of NHIS claims. Also, the absence of trained sonographers in the hospitals puts all pregnant woman through some unintended cost sharing practice.

The net effect is that; pregnant women are required to pay out-of-pocket despite the widely publicized 'free' maternal healthcare policy. It implies that mothers may miss out on critical treatment regimen which possibly explains the rising numbers of stillbirth even though skilled delivery utilization has drastically improved. On the other hand, antenatal care clinic attendance and facility delivery utilization may suffer at first hand due to lack of trust and increasing monetary demands on pregnant women.

As a recommendation, the Ministry of Health Ghana and its agencies should initiate steps to train professional sonographers and dispatch them to healthcare facilities. This is critical to bridge the human resource gap relative to pregnancy care. Also, the FMHCP is riding on the back of the NHIS. The scheme successes or otherwise are crucial for the survival of the 'free' policy. By implication, funding interventions are necessary to addressing timely and regular claims payment issues to avoid public mistrust on the function of the FMHCP.

Quality of care issues has also been exposed in the findings of this study, suggesting that healthcare facilities need to up their game to meet the increasing pregnancy and newborn care pressure. However, further study is necessary to declassify 'bad' cases of stillbirths that are unrelated to facility births.

## **List Of Abbreviations**

**ANC** - Antenatal Care

**CHAG** - Christian Health Association of Ghana

**CZ** - Central Zone

**EZ** - Eastern Zone

**FGD** - Focus Group Discussion

**FMHCP** - Free Maternal Health Care Policy

**GDHS** - Ghana Demographic and Health Survey

**GHS** - Ghana Health Service

**H** - Hospital

**HC** - Health Centre

**IDI** - In-depth Interview

**ILF** - Individual-Level Factors

**KII** - key informant interview

**MOH** - Ministry of Health

**NA** - Not Applicable

**NHIA** - National Health Insurance Authority

**NHIS** - National Health Insurance Scheme

**RD** - Regional Director

**SLB** - Street-Level Bureaucracy

**UER** - Upper East Region

**WHO** - World Health Organization

**WZ** - Western Zone

## **Declarations**

# **Ethics approval and consent to participate**

This study received approval from the University Ghana Graduate School Research Committee and ethical clearance from the Ghana Health Service Ethical Review Committee with approval no. GHS-ERC 002/04/19. All study participants consented to participate in the study by signing/thumb printing a consent form.

## **Consent for publication**

Not applicable

## **Availability of data and materials**

Data can be made available upon a reasonable request to the corresponding author.

## **Competing interests**

The authors declare that they have no competing interests.

## **Funding**

This study did not receive external funding support. However, JA is a recipient of the GETfund scholarship award for full tuition fee as a PhD Candidate in Public Health, University of Ghana. Yet, GETfund had no role in the designing or implementing of this study.

## **Authors' contribution**

JA conceived, designed, and prepared the manuscript. PA reviewed the conceptual framework and contributed to the discussion. GCA worked on the methodology and the final manuscript. DD reviewed the literature and contributed to the discussion. SAA coordinated and collected data. All Authors read and approved this protocol.

## **Acknowledgment**

The authors acknowledge the work of earlier researchers on the area, from whom literature is drawn to enrich the discussion. We also acknowledge the cooperation and support of Ghana Health Service and the Directors who granted entrée to hospitals and health centers for this study.

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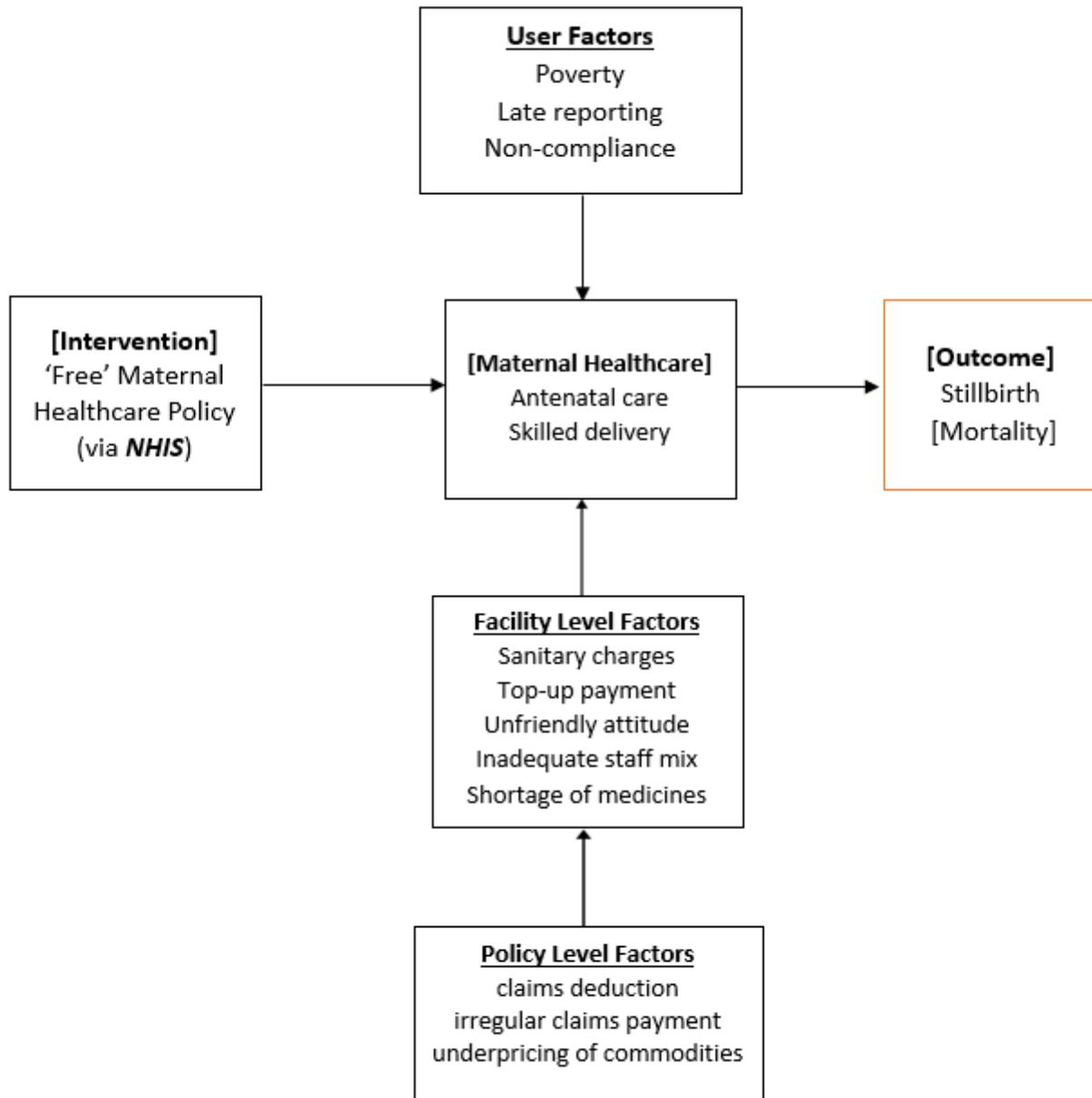
## Tables

Table 2  
Demographic Characteristics of Service  
Provider Respondents

<b>Sample Characteristic</b>	<b>Frequency (%)</b>
<b>Participant</b>	
Service Providers	17 (40.5%)
Pregnant women	25 (59.5%)
<b>Total</b>	<b>42 (100%)</b>
<b>Profession</b>	
Midwife	12 (70.5%)
Doctor	3 (17.6%)
Regional Director	1 (5.8%)
Administrator	1 (5.8%)
<b>Total</b>	<b>17 (100%)</b>
<b>Age</b>	
Mean	37.7 years
Range	28-53 years
<b>Gender</b>	
Male	6 (35.3%)
Female	11 (64.7%)
<b>Total</b>	<b>17 (100%)</b>
<b>Experience</b>	
>10years	4 (23.5%)
6-10yeas	7 (41.2%)
3-5years	6 (35.3%)
<b>Total</b>	<b>17 (100%)</b>

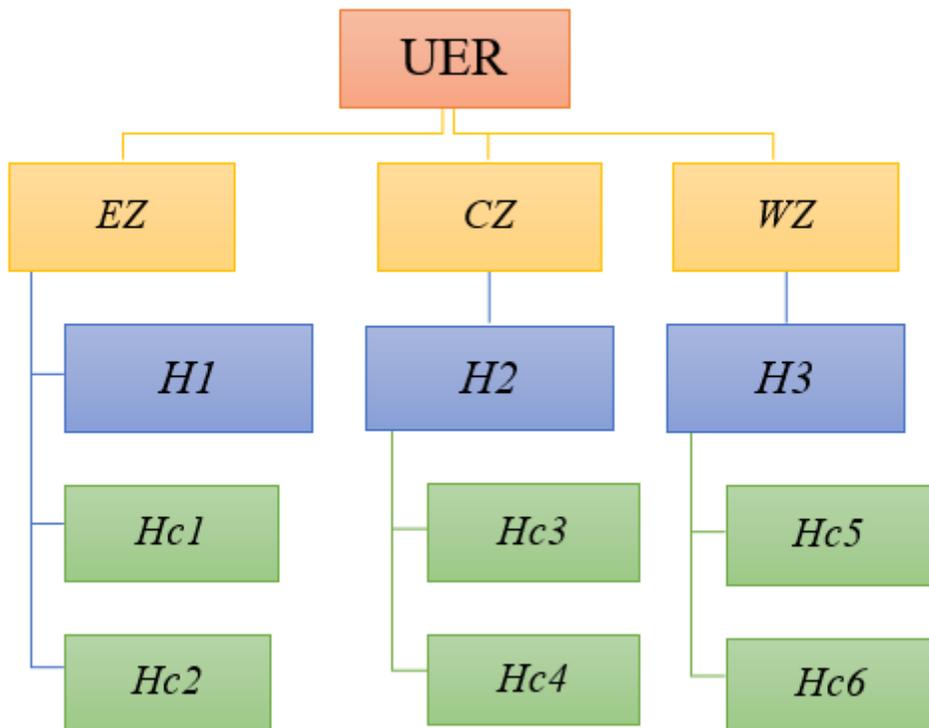
Table 3  
Demographic Characteristic of Pregnant  
Women Respondents

<b>Sample Characteristic</b>	<b>Frequency (%)</b>
<b>Age</b>	
Mean	20.56 years
Range	19-39 years
<b>Marital Status</b>	
Married	24 (96 %)
Not married	1 (4 %)
<b>Employment Status</b>	
Employed	19 (76%)
Unemployed	6 (24%)
<b>Parity</b>	
Prime parity	2 (8%)
Multiparty	23 (92%)
<b>Vital Signs</b>	
<i>Temperature</i>	
Mean	36.3
Range	35.6-37.1
<b>Pulse</b>	
Mean	86.12bpm
Range	82-103bpm
<i>Respiration</i>	
Mean	18.36cpm
Range	14-22cpm
<i>Blood pressure</i>	
Mean	98.4/62.2
Range	90/60-121/84



**Figure 1**

Contextual factors affecting the 'free' maternal healthcare implementation



**Figure 2**

Qualitative data collection tree



