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**ASSESSMENT OF QUALITY OF FOCUSED ANTENATAL CARE AT
MAAMOBI GENERAL HOSPITAL IN THE GREATER ACCRA
REGION, GHANA**

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DECLARATION

I hereby declare that this study report is the result of my own research, under the guidance of my supervisor. References made to the works of other researchers have duly been acknowledged. This dissertation has neither been presented in whole nor in part to any academic institution for the award of any degree.

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INTEGRI PROCEDAMUS

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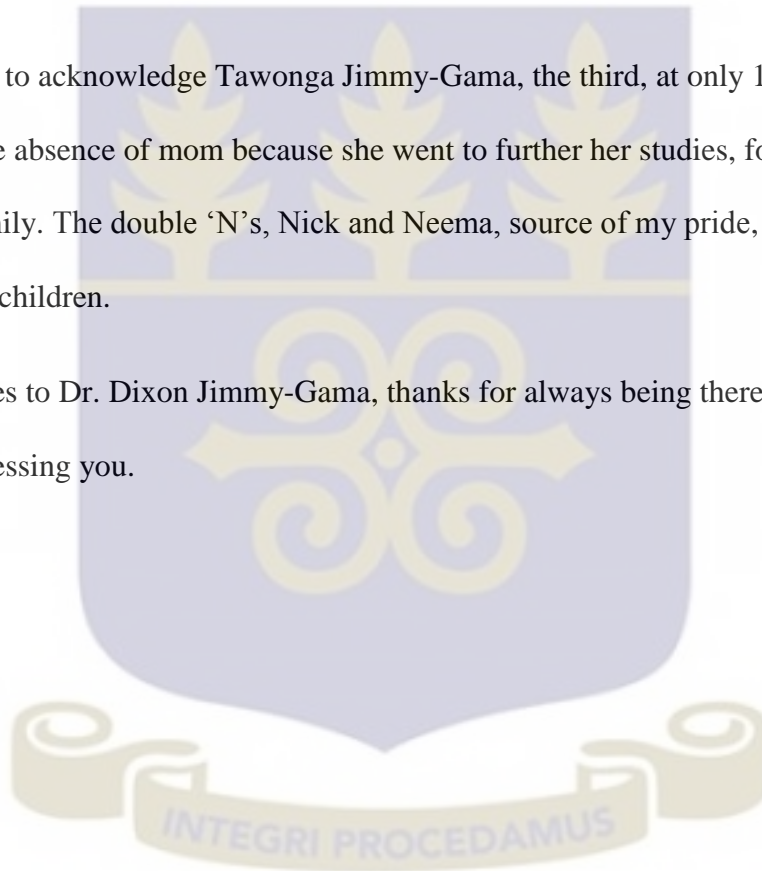
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DEDICATION

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ABSTRACT

Background: Quality of antenatal care (ANC) is important because it has profound effect on health status of both the mother and the baby. Studies have revealed that several factors contribute to poor quality of antenatal care services including inadequate resources, medical supplies and drugs and poor provider client relationship. In the Greater Accra region, little is known about the quality of antenatal care services provided to pregnant women. The aim of the study was to assess the provision of quality focused antenatal care (FANC) services at Maamobi General Hospital in Accra, Ghana. **Methods:** The study employed descriptive cross-sectional design. Data were collected from 413 pregnant women during exit interviews using semi-structured questionnaire. Observational checklist was used to assess infrastructure and health care workers' practices. Consecutive sampling was used to select pregnant women attending ANC services at the Maamobi General Hospital while convenient sampling was used for selecting health workers in the ANC department to participate in the study. Quantitative data was entered using SPSS version 20, then exported into Stata version 13 for analysis. Descriptive and inferential statistics were performed to describe the data and to find associations. **Findings:** The results showed that almost all (96.1%) respondents were satisfied with FANC services. Drugs, supplies for infection prevention and some FANC guidelines were available. History taking, clinical and laboratory investigations and head to toe examination of the clients were done on almost all the respondents. After controlling for other variables, adequacy of space at ANC ($p = 0.027$), explanation of physical examination findings to clients ($p = 0.001$) and ability to communicate in privacy ($p = 0.001$) were significantly associated with satisfaction with quality of FANC services. **Conclusion:** Quality of FANC services is good at Maamobi General Hospital. Nonetheless, there is need to provide FANC guidelines at ANC department.

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LIST OF ACRONYMS

AIDS	Acquired immunodeficiency syndrome
ANC	Antenatal care
ART	Antiretroviral Therapy
CHIPS	Community Health Improvement Services
FANC	Focused antenatal care
GDHS	Ghana Demographic and Health Survey
GHS	Ghana Health Service
GSS	Ghana Statistical Service
HIV	Human Immunodeficiency Virus
HMIS	Health management information system
ICF	Innovative Creative Foundation
IEC	Information, Education and Communication
IPTp	Intermittent Presumptive Treatment
MOH	Ministry of Health
NBS	National Bureau of Statistics
PMTCT	Prevention of mother to child transmission of HIV
SP	Sulfadoxine Pyrimethamine
STI	Sexually transmitted infection
TTV	Tetanus Toxoid Vaccine
UNFPA	United Nation Population Fund
UNICEF	United Nations Children Fund
USAID	United States Agency for International Development
VDRL	Venereal Disease Research Laboratory
WHO	World Health Organisation

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DEFINITION OF TERMS

Antenatal Care	Care provided to a pregnant woman throughout pregnancy either by a professional or non-professional worker.
Cronbach's alpha	The average value of the reliability coefficients one would obtain for all possible combinations of items or variables.
Focused Antenatal Care	Comprehensive care provided to pregnant women with a minimum number of four visits.
Parity	Classification of a woman with regard to number of children borne to her.
Privacy	A state of not being seen or heard by a person not expected to do so.
Process	Actual performance of an activity or set of activities.
Quality antenatal care	Care provided to a pregnant woman throughout pregnancy which should be compatible with the required standards.
Quality health care	Providing health services to individuals and communities to improve health outcomes which should be compatible with the required standards.
Quality	The degree to which a service meets the expectation of an individual or group.
Satisfaction	The extent to which a service meets the needs and expectations of a client.



CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Globally, complications due to pregnancy and child birth account for over half a million deaths for women of reproductive age. Most of these deaths occur in low and middle income countries (WHO, 2010). Quality antenatal care (ANC) is therefore important during pregnancy because it has profound effects on the health outcome of the mother and foetus (WHO 2004). Quality ANC is central to achieving the Millennium Development Goal (MDG) 5, to improve maternal health and MDG 4, to reduce child mortality (WHO, 2006). Studies have estimated that ANC alone can reduce maternal mortality by 20% given good quality and regular attendance (Nikiema, 2010). The objective of quality ANC is to prevent and manage health problems, provide appropriate information and advice to improve pregnancy outcomes (WHO, 2006).

In Ghana, antenatal care coverage is near universal. For example, the Ghana Demographic and Health Survey (GDHS) 2008 reports that over 95% of pregnant women in all 10 regions receive antenatal care (GSS, GHS & IFC, 2009). The GDHS 2008 states that the major objective of antenatal care is to identify and treat problems during pregnancy such as anaemia and infections. It is during an antenatal care visit that screening for complications and advice on a range of issues including birth preparedness, place of delivery, and referral of mothers with complications occur (GSS, GHS & ICF, 2009).

Quality ANC can be achieved through a planned set of actions designed to provide clients with the services they expect. Additionally, there's need for continuous assessment of the antenatal care services being provided. The success of ANC depends on client's perception of the quality of health care. Studies show that clients' perception of the quality of ANC does

not only ensure compliance but also re-enforces continuous utilization of the health facilities such as delivery and postnatal care services (Degley, 2012).

Thus, a woman's satisfaction with antenatal care services may have immediate and long-term effects on her health and subsequent utilization of the reproductive health services (Yohannes, Tarekegn, & Paulos, 2013). Quality ANC is the foundation of successful health outcome of a mother and baby if pregnant women receive a broad range of health promotion and preventive services (WHO, 2004). According to the World Health Organisation, provision of quality services is determined by compliance to available protocols and standards, outcome of care, patient satisfaction, availability of enough qualified personnel and availability of medical equipment and supplies (WHO, 2007).

In 2013, Pell and colleagues found out that provision of quality services in low and middle income countries is saddled with some difficulties (Pell et al., 2013). For instance, challenges of providing quality services are due to the lack of adequate resources among others (Pathmanathan et al., 2006). It is not surprising therefore that in real practice today, some women avoid accessing ANC services in some facilities due to perceived low quality of services and rather access from distant facilities and may end up paying more (Maquad, 2006).

While the number of ANC visits was the main emphasis for definition of quality ANC in the past, Villar and Bergsjö (2002), are of the view that quality of ANC is crucial rather than the quantity of visits. Focused antenatal care (FANC) model promoted by the WHO reflects this new understanding of the role of ANC (Villar and Bergsjö, 2002). Empirical studies conducted in Argentina, Cuba, Saudi Arabia and Thailand have proved that FANC was safe and highly sustainable, comprehensive, and effective (WHO 2002). Based on FANC trials, WHO in 2001 issued guidelines on this new model of ANC for implementation in developing

countries. The new FANC model reduces the number of required antenatal visits to four. There's provision of focused services that have been shown to improve both maternal and neonatal outcomes (Banda, 2013). Several low and middle income countries including Ghana have adopted the FANC model as their way of providing antenatal care services (WHO, 2005). For women whose pregnancies are progressing normally, WHO recommends a minimum of four ANC visits (FANC) with the first visit before 16 weeks, second visit between 24-28 weeks, third visit at 32 weeks and the last visit at 36 weeks (USAID/Population Council, 2006).

Access to quality FANC services can prevent maternal and neonatal morbidity and mortality (UNFPA, 2004). Focused antenatal care period clearly presents opportunities for reaching pregnant women with a number of interventions that may be vital to their maternal and infant health and well-being e.g. Tetanus Toxoid Vaccine (TTV), treatment of some health conditions i.e. malaria, anemia. Information is also provided during the period on maternal and neonatal health issues e.g. information about danger signs and symptoms during pregnancy, expectations during labour, birth spacing among others. Consequently, ANC period provides an entry point for HIV prevention and care, in particular for the prevention of HIV transmission from mother to child (Carroli et al., 2001).

Although studies have been conducted in other regions of Ghana, for example, Northern and Volta region about quality of antenatal care, little is known about the quality of ANC care in Greater Accra Region. This forms the basis for assessing quality of focused antenatal care at Maamobi General Hospital in Greater Accra Region.

1.2 Problem statement

Ghana, like many other developing countries has adopted the WHO model of provision of focused antenatal care to pregnant women. Survey results shows that some of the health facilities in Ghana are efficient and provide quality reproductive health services including FANC that meet the needs of the clients (MOH & GHS, 2007).

However, provision of quality health services for pregnant women has been a challenge in the developing countries including Ghana. Several factors have been associated with provision of unsatisfactory quality antenatal care. Among the reasons are inadequate medical resources, lack of adequate numbers of skilled staff, poor transportation and communication facilities, social status of the women, distance to a health facility and in availability of standard guidelines to follow during provision of care among others, which have greater impact on provision of maternal health services (Chamberlain, Watt, Mohide, Muggah, Trim & Kyomuhendo, 2007).

There has been a growing concern about quality of ANC services by pregnant women in the country as a result of poor provider-client relationship (MOH & GHS, 2007). However, recent research project conducted in selected health facilities in northern Ghana revealed that, overall, the quality of routine antenatal care services were satisfactory, but some critical gaps were identified including poor counselling and health education and lack of laboratory investigations (Duysburgh, Williams, Williams, Loukanova, & Temmerman, 2014).

The Ministry of Health (MOH) and Ghana Health Service (GHS) also noted that although the number of women using FANC is increasing, not all facilities do provide quality reproductive health services including FANC (MOH & GHS, 2007).

To monitor and improve efficiency in delivering of the ANC services, Ghana Health Service (GHS) recommends that members of health management team conducts monitoring and

evaluation exercise at least twice a year in each facility. However, available data from a study conducted in NKwanta South district showed that they were not able to conduct two support visits as expected (Degley, 2012).

In 2006, Government of Ghana introduced an exemption policy for all maternal health care services in order to increase access and utilisation of the reproductive health services in all public health institutions (Asante, Chikwama, Daniels, & Armar-Klemesu, 2007). The aim was to remove financial barriers for accessing maternal health services in order to reduce burden of maternal and neonatal morbidity and mortality (Witter, Diadhiou, Fawole, Hunyimbo, Sotiloye & Otolorin, 2008; Asante, Chikwama, Daniels, & Armar-Klemesu, 2007). However, antenatal care visits were not significantly associated with having insurance but facility deliveries (Singh et al., 2015). Evaluation of the policy revealed quality of clinical care provided was “consistently poor and was not affected by the implementation of exemption policy” (Ofori-Adjei, 2007, pp 3).

There is need to continuously evaluate the quality of ANC services so that the identified gaps are worked on to improve outcome of health status of mothers and their neonates. This forms the basis for the study to be conducted.



1.3 Justification for the study

Little is known about quality of ANC services offered to clients at Maamobi General Hospital. In addition, factors that are associated with quality of FANC are not well documented. As such, the study is important as it will elicit information on which organizational structure and ANC processes that will require improvement to improve quality of ANC services at Maamobi General Hospital.

The results of the study will guide on the adherence to locally adapted programmes and policies to improve quality in antenatal care provision. This study will also help to bridge the gap between clients' expectations and the actual services the facility provide. Finally, the results would also form baseline data for improving quality of ANC services at Maamobi General Hospital.

1.4 Objectives of the study

1.4.1 General Objective

To assess the quality of Focused Antenatal Care services offered to pregnant women at Maamobi General Hospital in the Greater Accra region.

1.4.2 Specific Objectives

- To assess health care workers' practices towards the provision of FANC services at Maamobi General Hospital.
- To identify structural factors in provision of quality FANC services to pregnant women.
- To determine the proportion of pregnant women who are satisfied with FANC services.
- To determine the relationship between pregnant women's socio-demographic characteristics and satisfaction with quality of antenatal care.

1.5 Research questions

1.5.1 Main research question

What is the quality of FANC services provided at Maamobi General Hospital in the Greater Accra Region, Ghana?

1.5.2 Sub-research questions

- What are the health care worker practices towards provision of FANC services at Maamobi General Hospital in Greater Accra region?
- What are the structural factors in provision of quality FANC services to pregnant women at Maamobi general Hospital?
- What proportion of pregnant women are satisfied with FANC services offered at Maamobi General Hospital?
- What is the satisfaction level of pregnant women about quality of FANC services offered at Maamobi general Hospital?
- Are sociodemographic characteristics associated with clients' satisfaction with quality of FANC services?

1.6 Conceptual framework

The study adopted the Donabedian (1988) model as the framework guiding the study. According to the framework, quality FANC can be achieved if there are appropriate structures for the provision of FANC services, appropriate processes are followed during FANC provision and outcome of FANC services. As such, the variables which the study will focus on are shown in Figure 1.1.

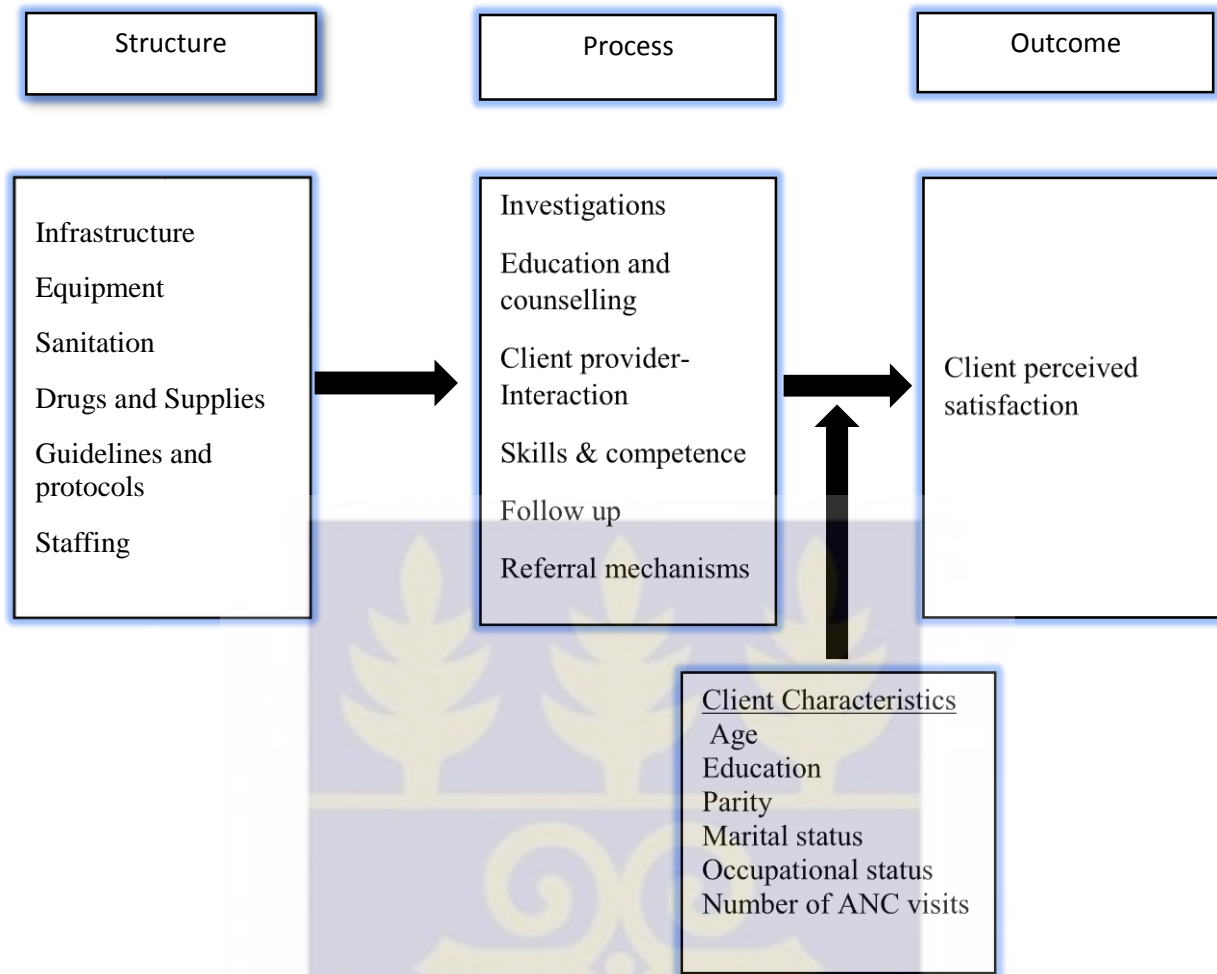


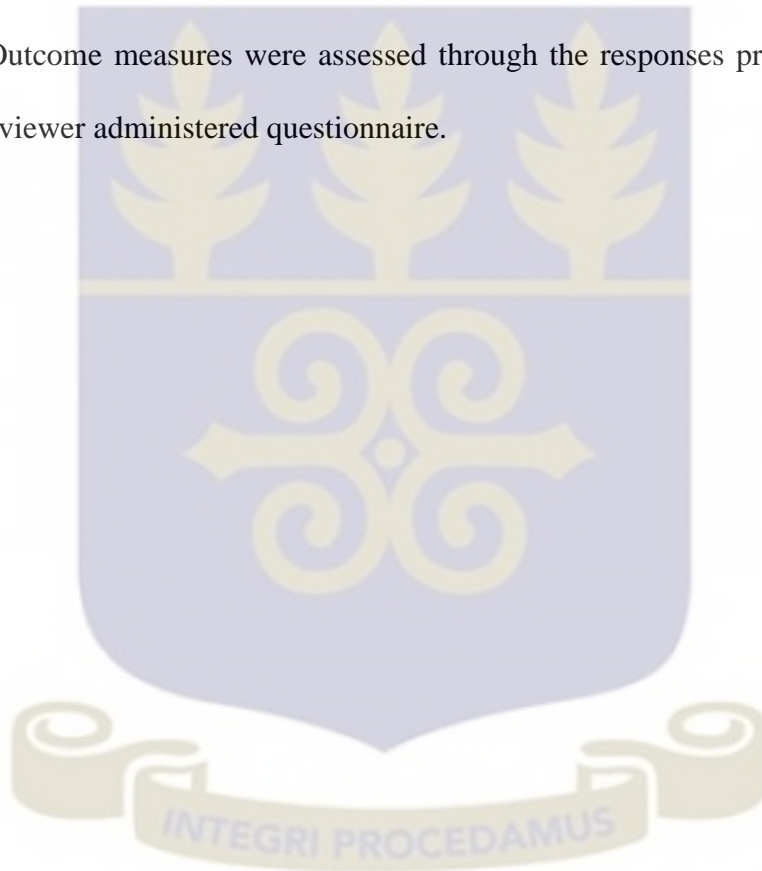
Figure 1.1: Conceptual framework of quality care and its attributes adopted from Donabedian (1988), with modifications.

Figure 1.1 presents the Donabedian framework, showing three elements of quality of care: structure, process and outcome. Structure refers to the conditions under which care is provided which have an impact on the quality of care. In this study structural attributes include; material resources (infrastructure, equipment, drugs and supplies) human resources (number and qualification of professionals) and availability of protocols, guidelines and standards on FANC. In the study the structures were assessed using a checklist.

Process refers to activities that constitute health care and interaction between client and health care worker. Process in this study includes provider-client interaction, information given to clients, technical aspects which includes history taking, physical examination (head to toe) and laboratory investigations (blood for VDRL, haemoglobin, and HIV, urine testing

for albumin). Process quality also looks at treatment prescription of prophylactic drugs and immunisation like (SP, Iron and TTV), provision and delivery of health promotion messages (specifically on importance of FANC, diet, breast feeding, family planning, preparation for delivery, obstetric complications).

Outcome quality according to Donabedian means changes (desirable or undesirable) in individuals and population that can be attributed to health care provided. For purposes of this study, outcome looks at pregnant women's perceived satisfaction with care received at the health facility. Outcome measures were assessed through the responses provided by clients through the interviewer administered questionnaire.



CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

In this section, literature review will be presented under the following headings:-

- Quality of health care.
- Overview of focused antenatal care
- Perception and satisfaction of quality antenatal care.
- Process attributes of quality care
- Organisational factors affecting provision of care.

2.2 Quality of health care

Quality health care means providing health services to individuals and communities to improve health outcomes which should be compatible with the new professional knowledge (USAID, 2005). Quality antenatal care implies the extent to which antenatal care resources and services correspond with antenatal standards of a particular country. Quality of care can be defined as “ the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge” (Mitchell, 2008, p.1).

According to Malawi National Reproductive Health Service Delivery guidelines, quality is “doing the best with the resources available for the mutual satisfaction of the provider, the recipient and community at large” (MOH, 2007, p.1) On the other hand, WHO describes a health care that provides quality of care in terms of improvements in six areas or dimensions of quality. The areas require that the care provided is:-

- Effective- delivering health services that results in improved health outcomes at individual as well as community level based on the needs.
- Efficient- delivering health services while maximising the use of available resources in order to avoid waste.
- Accessible- health services to be provided in a timely, geographically reachable setting where skills and resources are available to meet the needs of the people.
- Acceptable/patient centred- offering health services that takes into account the preferences of the users and the culture of a particular setting.
- Equitable- involves delivering health services in a fair manner despite the characteristics of individual patients/clients i.e. gender, race, socioeconomic status etc.
- Safe- the services being provided should minimise risks to the users (AbouZahr & Wardlaw, 2003).

Consequently, quality antenatal care “involves providing a minimum level of care to all pregnant women and their unborn babies and a higher level of care to those who need it. This should be done while obtaining the best possible medical outcome while providing care that satisfies women and their families and their care providers” (Pittrof, Campbell & Filippi, 2002, p.278).

In order for health workers to provide quality FANC services, there’s need for adequate and favourable infrastructure, necessary equipment and supplies, clinical skills acquired during training and practice, availability of guidelines, protocols and policies that guide provision of services and functional referral system that enables women with complications get treatment as early as possible.

2.3 Overview of focused antenatal care

Worldwide, about 70% of pregnant women have had at least one antenatal visit with a skilled health worker during pregnancy while in most developed countries, 98% of pregnant women have at least one ANC visit (WHO/UNICEF, 2006). Studies revealed that South Asia has the lowest levels of ANC attendance, where only 54% of pregnant women have had at least one ANC visit. In North Africa and Middle East, however, use of ANC by pregnant women was 65%. In Sub Saharan Africa, about 68% of women have had at least one ANC visit (Dyah & Rizal, 2002).

Focused antenatal care is an updated approach to ANC emphasizing on quality over quantity of visits where providers focus on assessments and actions needed to make decisions, and provide care for each woman's individual situation (USAID, 2005; Kinzie & Gomez, 2004). Quality of FANC provided to a pregnant woman depends on when the woman reports first for ANC (gestation in weeks at first visit) and how often the woman visits ANC for services. Early initiation and adequate number of visits to ANC by pregnant women is associated with full benefits of the antenatal care package (Sabla, 2011). Late initiation of ANC visits and low frequency limits the amount and quality of care provided to a pregnant woman (Magadi, 2000). Reports have shown that women who starts ANC early and make at least 4 ANC visits are more than three times on average more likely to deliver in a health facility under the supervision of a qualified personnel than those who visits ANC less frequently (WHO/UNICEF, 2006). Timely and adequate visits for ANC, therefore, avoids adverse pregnancy outcomes if pregnant women are provided with quality care during antenatal period.

Quality FANC is one of the effective ways for accelerating maternal and neonatal health. World Health Organisation standards for provision of effective ANC recommend that a pregnant woman receive at least four skilled assessments through focused antenatal care

involving interventions outlined in WHO ANC model (WHO, 2007). Table 2.1 illustrates FANC model outlining the visits with corresponding gestational age in weeks and interventions at each stage as outlined in WHO clinical guidelines.

The four recommended FANC visits are spaced at regular intervals throughout the pregnancy. The first visit is attended within the first 16 weeks, second visit: 16-28 weeks, third visit 28-32 weeks and the last visit 32-40 weeks (WHO, 2004; WHO, 2006). Depending on needs and condition of an individual pregnant woman, more ANC visits may be necessary.

Table 2.1: Focused antenatal care (FANC) model as outlined in WHO clinical guidelines.

First Visit (8-12 weeks)	Second Visit (24-26 weeks)	Third Visit (32 weeks)	Fourth Visit (36-38 weeks)
Confirm pregnancy and expected date of delivery, classify women for basic ANC (four visits) or more specialized care. Screen, treat and give preventive measures such as iron and folate supplements, tetanus toxoid vaccine (TTV) and Sulfadoxine Pyrimethamine (SP). Develop a birth and emergency plan. Advise and counsel on reproductive health, breastfeeding, tobacco and alcohol use.	Assess maternal and foetal well-being. Exclude pregnancy induced hypertension and anaemia. Give preventive measures such as iron supplements, IPTp, ART. Review and modify birth and emergency plan. Continue advising and counselling.	Assess maternal and foetal well-being. Exclude pregnancy induced hypertension, anaemia and multiple pregnancies. Give preventive measures such iron and second TTV administration. Review and modify birth and emergency plan. Continue advising and counselling.	Assess maternal and foetal well-being. Exclude pregnancy induced hypertension, anaemia, multiple pregnancy and mal-presentation. Give preventive measures such as iron supplements. Review and modify birth and emergency plan. Repeat advice given from previous visits.

Source: WHO 2002

The goal of focused antenatal care is to assist pregnant women to remain healthy throughout pregnancy period. This is done through identification of pre-existing health conditions that may affect outcome of pregnancies such as anaemia, malaria, HIV and other sexually transmitted infections (WHO, 2006). Focused antenatal care also offers a range of services to a pregnant woman such as health promotion and education on different topics on reproductive health including importance of FANC, danger signs in pregnancy, nutrition in pregnancy, breastfeeding, family planning and birth preparedness among others (WHO, 2006). Additionally, head to toe examination and investigations to rule out pre-existing as well as conditions that can arise during pregnancy among other services are offered during FANC. Furthermore, during the FANC period, a pregnant woman accesses prevention of mother to child transmission services (PMTCT) through HIV testing. ART drugs are thus provided to pregnant women found to be HIV positive (WHO, 2006; Carroli et al., 2001).

2.4 Perception and satisfaction with quality of focused antenatal care

2.4.1 Clients perspective of quality focused antenatal care

Studies have revealed that perception of quality antenatal care by pregnant women and their care providers may differ from one client to the other (Bowler et al., 2003). While pregnant women may be more concerned with other sensitive issues such as interpersonal relationships with care providers, type of information provided to clients by the health workers, their expectations during labour, providers are more interested in technical precision (Bowler et al., 2003; Aldana, 2001).

Study conducted by Benett (2004) has reported that pregnant women were satisfied with ANC services. Specifically, pregnant women were satisfied with interpersonal relationship between provider and client, the care that they received and the conducive environment where services were being offered (Benett, 2004). When pregnant women are satisfied with

ANC services, they will be willing to comply and continue with the services (Dyah et al, 2001; Fawole et al., 2008 & Webster et al., 2008).

However, other studies have indicated that women were not satisfied with ANC services (Oladapo, et al., 2008; Amooti-Kaguna B. & Nunwaha, 2002; Lowry, et al., 1997; & Mathole, et al., 2005). In most of these studies, clients reasons for dissatisfaction with the quality ANC included; long waiting time before consultations, inadequate supply of resources like drugs and negative attitudes of the health workers (Mgawadere, 2009 & Simkhada, et al., 2008). Compared to other elements of quality of ANC services in a study conducted in Nigeria, women were least pleased with integration of services and other necessary amenities especially sanitary facilities which were not built within the ANC clinic and shortage of skilled health care providers (Oladapo, Iyaniwura, & Sule-Odu, 2008).

In another study on perception and satisfaction with quality of ANC among pregnant women, however, about 8 in 10 of the study participants reported that the ANC services were good and majority of the pregnant women were satisfied with the overall quality of ANC services (Nwaeze, Enabor, Oluwasola & Aimakhu, 2013). On the other hand, in Kenya, more than half of the respondents by-passed municipal facilities for either the district or provincial facilities because of the perceived low quality of ANC services (Audo, Ferguson & Njoroge, 2005). In rural Uganda, most women reported overall satisfaction with the care they received at the ANC clinic even though their expression of satisfaction was vague like “ *I have not had any problem with this clinic*” (Care et al., 2012).

Client’s characteristics like age and social status plays a significant role in rating satisfaction of the ANC services (Olijira & Gabre-Selassie, 2001). For example, one study found that participants with tertiary level of education were less satisfied with the ANC services compared with women with secondary level and below (Nwaeze et al., 2013). However,

other studies could not find any association between client satisfaction, age and educational status (Turhal et al., 2002).

2.4.2 Health workers perception of focused antenatal care services

Health care workers perception of being supported in their work and attitudes towards service provision through supportive supervision and provision of adequate resources play a crucial role in influencing pregnant women utilization of FANC services (Services & Hughes, 2008).

In their study, Mathole et al., (2004) found that poor attitude of health care providers towards pregnant women contributed to low utilization of FANC services in Zimbabwe. Conversely, Yengo (2007) refuted the claim that health workers perception affects implementation and utilization of FANC in Tanzania. The author argued that health care workers perceive FANC as beneficial both to the pregnant woman and the unborn baby, but rather shortage of human and material resources impeded successful implementation of FANC services (Yengo, 2007).

In Ghana, a study conducted in the two districts of Upper East region found that quality of ANC was reasonably high with total score ranging from 72% to 80% (Duysburgh et al., 2014). Perceived quality of ANC services often becomes the key decision-making variable in situations where women have access to more than one facility. Perceived quality of antenatal care, therefore can affect the choice of the facility where women would go for their ANC services. In order to obtain the maximum benefits from investments in maternal health care services, the search for high quality antenatal care must reconcile the health care providers' as well as the women's perspectives (Oladapo et al., 2008).

2.5 Process attributes of quality focused antenatal care

2.5.1 Technical competence of the health workers

According to the Donabedian model of quality of care, the role of health workers' skills and practices when providing care to pregnant women can affect quality of ANC services as well. A study conducted in Vietnam reported that quality of antenatal care services was affected by poor staff skills (Graham, et al., 2001). On the other hand, a study which assessed quality of antenatal care in Southwest Nigeria revealed that majority of pregnant women who took part in the study were satisfied with the basic competency levels of their care providers (Oladapo, et al., 2008). If health workers do not have adequate skills and competencies to provide quality antenatal care to pregnant women, they are likely to miss important health problems which can jeopardize the life of mother and unborn child (Banda, 2013).

Staffing levels can also affect provision of quality ANC. According to Mrisho et al., (2007) reduced number of health workers offering ANC as compared to number of pregnant women requiring the services can affect the skills. This is because health workers will work with the aim of finishing the workload, hence, compromising the skills which can be interpreted as incompetence (Mrisho et al., 2007). In Jamaica and other countries, problems to antenatal care and delivery include staff shortages as vacancy rates for midwives were as high as 45% to 70% (UNFPA, 2005; Conrad et al., 2012). Allocation of more staff to antenatal clinics by managers would ensure provision of quality ANC services (Mgawadere, 2009; Conrad et al., 2012).

However, negligence by some health workers in the course of service provision also has an effect on the quality of care provided to pregnant women. Conrad et al., (2012) supports the above statement through a multicentre study conducted in Tanzania, Uganda and Burkina Faso where health care workers did not comply with the procedures stipulated in WHO FANC guidelines when providing services to pregnant women even though the guidelines

were available. This had a tremendous effect on the utilization of FANC by pregnant women (Conrad et al., 2012). If health workers do not follow FANC guidelines, important determinants of woman's pregnancy outcome can be missed.

In Tunisia, none of the women were checked for anaemia by health providers in the antenatal clinic in a study that assessed quality of reproductive health services. Only one third of the study participants were weighed and had their blood pressure checked (Al-qutob, Mawajdeh, Nawar, Saidi, & Raad, 1998). These findings highlight the need for health workers to follow clinical guidelines and protocols during provision of FANC services. In another study in rural Uganda which looked at missed opportunities when providing antenatal care services, results showed that checking for blood pressure and client's weight by health workers was not routinely done even though the equipment were available. Nonetheless, more than three quarters of the clients who participated in the study had their blood pressure checked and about 7 in 10 had their weight checked (Care et al., 2012). Procedures which do not require equipment like checking for anaemia and oedema were also not performed on routine basis (Conrad et al., 2012). Pre-eclampsia and eclampsia, a major cause of maternal morbidity and mortality globally usually manifests through pedal oedema initially. Failure to pick up the oedema at the earliest time possible by health workers through negligence may cause serious effects on the mother and unborn baby (Oladapo et al., 2008). The health workers, however, explained that they were not able to check blood pressure, anaemia, oedema and weight for all pregnant women because of high volume of clients against staffing levels and equipment availability.

A reviewed article on a study in northern Ghana on quality of antenatal care, technical competence scored an average of 58.5% from the two districts where the study was conducted. Laboratory examinations conducted on pregnant women during ANC, counselling provided to pregnant women and management and treatment of the existing conditions scored

poorly. Furthermore, history taking was also described as weak (Duysburgh et al., 2014). This can be attributed to inadequate skills by health care providers as a result of inadequate training or lack of refresher courses to upgrade staff skills in some instances (MOH, 2005). Upgrading health care providers' skills and competence usually has an impact in improving maternal health care services (Mintz et al., 2000).

2.5.2 Interpersonal relationships

Quality service is better measured from a consumer point of view, and in this case, pregnant women are the recipients of care. Thus, the review of the literature includes interpersonal relationship between health workers and clients. A good client-provider relationship creates a lasting impression on clients about quality of the services offered at a particular facility and may motivate the clients to continue accessing the services from the same facility. According to Aldana (2001), the behaviour that health workers portray to clients like politeness and respect as they are rendering health services has been shown to be a predictor as far as client satisfaction is concerned (Aldana, 2001).

There is evidence that a good client-health worker interaction during ANC period will result in favourable pregnancy outcomes for the women (Dahlem, Villarruel, & Ronis, 2014). This can be attributed to women being aware of what is expected during ANC period hence may demand for the services and eventually receive appropriate care.

In northern part of Ghana, there was good client-provider relationship which reflected the patient centred care. The results indicated that health workers were friendly to clients, privacy was maintained during service provision and health workers showed respect towards clients (Duysburgh et al., 2014). Conversely, another study revealed that many women complained that health workers were not explaining laboratory findings to them as they expected. Whereas more than half (57%) of the respondents were greeted at the reception, 8% of the

respondents indicated that procedure was not explained to them prior to physical examination. Less than one-tenth of the respondents were able to recall that a midwife taught them about the danger signs in pregnancy (Conrad et al., 2012). In another study, women who were treated poorly by the health workers during antenatal period were discouraged from delivering at a health facility (Lowry et al., 2005).

In Jordan and Tunisia, pregnant women expressed dissatisfaction with the level of privacy especially in Ministry of Health facilities. Health workers did not treat the clients with warmth and openness, pregnant women were not given adequate time to ask questions, air their thoughts and complaints. One third of the respondents reported that they undressed while doors were not locked and screens rarely pulled by midwives to provide privacy (Al-qutob et al., n.d. 1998 & Pembe et al., 2010). However, according to Kongnyuy and colleagues, the unfriendly behaviour that nurses and midwives portray when offering health services may be influenced by high workload and shortage of staff (Kongnyuy et al., 2009).

In Kenya, slightly less than half (47%) of the pregnant women bypassed the municipal facilities to the district hospitals because of poor staff attitude at ANC clinic in a study that looked at quality of health services and its utilisation of reproductive health services (Audo et al., 2005; Mathole, Lindmark, Majoko & Ahlberg, 2004). Whereas in Nigeria, 85.6% of the respondents expressed that good interaction with health workers determined their perception and satisfaction of the services. According to Nwaeze et al., (2013), however, 72% of the clients who rated nurses attitude as poor reported that they were satisfied with ANC services (Nwaeze et al., 2013). In another country, less than one tenth of the respondents reported displeasure with ANC services and majority expressed satisfaction with ANC services in relation to the respect and politeness that health workers portrayed to clients (Oladapo et al., 2008).

In southern part of Malawi, women perceived good reception and respect as having received quality ANC services (Kumbani, Chirwa, Malata, Odland, & Bjune, 2012). However, in the same study women were not satisfied with the care provided because there was minimal communication between health workers and clients during ANC service provision. Health workers were not explaining the findings to clients after examination, clients were only given drugs and told the date for the next visit (Kumbani et al., 2012). The inability to explain examination findings by health workers may result in non-compliance of clients to important instructions due to lack of understanding of their situation.

2.5.3 Information and counselling

Communication and provision of information are essential elements during provision of all health services including antenatal care (Oladapo et al., 2008). Studies have demonstrated that information provided to women during antenatal period contributes to maternal satisfaction with the services. Furthermore, most women expressed that they were given adequate information as to what is expected of them during pregnancy, labour and experiences of being a parent (Schmied, Mayors, Wills, & Cooke, 2002; Oladapo et al., 2008).

In Tanzania, pregnant women indicated that health education was provided during initial visits. However, birth preparedness was never mentioned during provision of health talks but rather when a health worker is conducting head to toe examination (Gross, Armstrong Schellenberg, Kessy, Pfeiffer, & Obrist, 2011). This supports what Nikiema and co-workers found after analysing demographic and health surveys. Results indicated that in 15 of the 19 sub-Saharan countries, less than 50% of all women attending ANC recalled having received information about danger signs and complications during pregnancy (Nikiema, Beninguisse & Haggerty, 2009). Lack of adequate and proper education to pregnant women may lead to

non-compliance to health instructions as women may lack adequate knowledge on what is expected of them.

However, reports of some studies show that health workers were able to provide adequate information to pregnant women on some areas while neglecting other important areas during prenatal period. In Uganda, the organization of the group health education sessions did not ensure women's access to information on all topics relevant to ANC. Topics mainly focused on covering HIV related issues (Sarker, Papy, Traore, & Newhann, 2009).

In another study, slightly less than half (47%) of pregnant women attending antenatal care services recall having been informed of the danger signs in pregnancy (NBS & ORC, 2005). This is in line with what Pembe et al., (2010) found in the study which looked at quality of antenatal care. In that study, pregnant women were not informed of danger signs in pregnancy (Pembe et al., 2010). Similarly in Ghana, health providers were able to give adequate information to pregnant women on continuity of services, however, counselling on danger signs scored low ranging from 46%-57% (Duysburgh et al., 2014).

Some women reported that they were not given any information by health workers on various aspects of health in relation to the development of their unborn baby. Only a quarter (25%) of respondents were given information on how they can recognize oedema which may be a sign of malnutrition, anaemia or pre-eclampsia (Oladapo et al., 2008). Cervical cancer as a reproductive health issue was least discussed. This was mentioned in 65.7% of the respondents who took part in the study (Nwaeze et al., 2013).

While there are situations where health workers focus on specific health education areas, some important areas are neglected. In Uganda, pregnant women repeatedly reported that they did not receive any pregnancy related health education, only other topics were taught. But, providers always gave the clients a return date (Conrad et al., 2012).

On the contrary, some literature support the fact that health care providers do provide information through health education. A study on perception of women about ANC in Nigeria revealed that on average 81.3% of the respondents were satisfied with the topics presented during antenatal care (Nwaeze et al., 2013). In Australia, nurses/midwives were believed to be important sources of information because they are mostly involved in ANC. The advice given was most likely to be followed by pregnant women (Harrison, Buttner & Nowak, 2005). Provision of necessary and adequate information to pregnant women is useful because it helps women to follow instructions during pregnancy and prepare themselves for delivery (Fabian, Radestad & Waldenstrom 2005).

2.6 Organisational factors affecting provision of antenatal care

2.6.1 Policies, guidelines and protocols

Organisational factors also play a role in provision of quality antenatal care. Availability or non-availability of policies, protocols and standards pertaining to provision of reproductive health standards including ANC can affect quality of care provided. The standards act as a guide to health workers while providing the services. Compliance on the use of the available protocols and guidelines contributes to provision of quality care (WHO, 2007). On the other hand, the quality of the care provided can be compromised by non-use of the available standards.

An exploratory study on antenatal care in practice showed that provision of FANC was affected by poor implementation of FANC guidelines by the health workers (Gross et al., 2011). Services in the ANC department were not offered according to FANC guidelines. Out of the 38 WHO recommended services to be offered to pregnant women under history taking, physical examination, laboratory examination, drug/immunisation and health education, 12

were not given to any woman, 18 services were provided to 3%- 58% of pregnant women and 8 services to over 80% of the pregnant women (Gross et al., 2011).

2.6.2 Drugs and supplies

One study revealed that quality of ANC was affected by shortage of supplies such as drugs and inadequate stationary (AbuBakar et al., 2006). The above corresponds with the findings of a study conducted in the Volta region of Ghana which looked at quality of ANC in Nkwanta south district. Results showed that clients were not satisfied with erratic supply of some drugs among other factors (Degley, 2012). Inadequate supply of drugs and other required medical supplies affects provision of quality antenatal care. Conditions like anaemia in pregnancy has profound effect on the outcome of the pregnancy if not corrected through iron and folate supplementation antenatally (WHO, 2007). However, some studies have shown some level of satisfaction as far as availability of supplies are concerned. In selected primary healthcare facilities in Ghana, Burkina Faso and Tanzania studies revealed that about 8 in 10 (81%) respondents were satisfied with availability of essential equipment, drugs and medical supplies (Williams & Mpembeni, 2014). The availability of supplies like syphilis and HIV testing kits, essential drugs and logistics are essential for effective management of ANC services (Lincetto, Mothebesoane-anoh, Gomez, & Munjanja, n.d.).

2.6.3 Staffing levels

Staffing levels in ANC department has a direct impact on provision of quality ANC (Hughes, 2008 & Gross et al., 2011). A department with few health workers in relation to the case load will usually have its quality of services being offered questionable. Most often ANC providers are overburdened and it becomes difficult to provide supportive services for special groups of women like single mothers, adolescents, female victims of domestic violence.

These special groups usually have increased risk of low birth weight, stillbirths, child abandonment and neglect (Lincetto et al., n.d.). Studies support that quality of care is compromised with shortage of health personnel. This has been expressed in literature by clients and health providers. In Zimbabwe, health workers expressed concern over shortage staff among other resources which contributed to provision of low quality ANC services (Mathole et al., 2005 & AbuBakar et al., 2006). In an effort to improve provision of quality ANC, shortage of trained staff needs to be addressed as well (Gross et al., 2011).

Inadequate skills while providing reproductive health services can affect quality of care provided. Several factors lead to skills inadequacy, among them is lack of training on the FANC guidelines (Gross et al., 2011; Conrad et al., 2012). Inadequate staff training and/or lack of refresher courses to upgrade staff skills, lack of orientation on FANC of new staff allocated to ANC departments, poor staff supervision, underpayment, over working might also lead to substandard care (Mgawadere, 2009; Birungi, 2006 & Conrad et al., 2012). In Zimbabwe, lack of adequate skills by health workers contributed significantly to maternal deaths (Fawcus, 1998).

2.6.4 Role of infrastructure in provision of antenatal care

Infrastructure plays an important role in provision of quality ANC. According to the framework adopted in this study, areas under infrastructure to be reviewed include constellation of the services, space where ANC services are provided including waiting area and client flow, sanitation issues and displaying of IEC materials.

Infrastructural problems in provision of antenatal services have been stated as one of the major shortfalls in providing quality ANC in developing countries (Douglas, et al., 2007). In Tunisia, one study that assessed quality of Reproductive Health services revealed that services were provided in old buildings in half of all the clinics included in the assessment

(Al-qutob et al., 1998). In contrast, all private clinics assessed in the study were cleaner as compared to only one of MOH clinics. The above findings concur with Mathole (2005) in a qualitative study. Health workers expressed concern over dilapidated condition of the facility which compromised cleanliness of the facility thereby contributing to provision of low quality ANC services (Mathole et al., 2005).

Sanitation can determine a woman's continued utilisation of the services at the same facility. Women are very sensitive to the physical environment of health facilities and may not be motivated to continue seeking services in untidy health care delivery centres (Sardasht, Shourab, Jafarnejad, & Esmaily, 2013). Unclean environment can also affect quality of the services provided as women might prefer to access services to other facilities with better environment. Additionally, continuous monitoring of clients through follow up visits helps to identify problems that would arise during pregnancy for early interventions (WHO, 2008).

Recently, there were mixed findings about the state of general infrastructure in a study which was conducted in the Volta region, Ghana. The district hospital and mission hospital buildings were rated as good on average by respondents, while the CHIPS and Health Centres scored poorly. In the same study, sanitation and cleanliness was again rated as very good for the district hospital and mission hospital (Degley, 2012).

Integration of other reproductive health services where ANC is provided enhances proper management because of maximum contact between health services and the pregnant woman (Zanconato, Msolomba, Guarenti, & Franchi, 2006). Studies have shown that women are lost to follow up in the process of seeking services from a different department for other prevalent conditions while receiving the ANC. Therefore, it is more beneficial to the woman if ANC is integrated with other programs which would require follow up visits (Zanconato et al., 2006). In Nigeria, women were least pleased with sanitary facilities where toilets were not readily

available in the ANC department, women had to access them from other departments (Oladapo et al., 2008).



CHAPTER THREE

3.0 METHODOLOGY

3.1 Introduction

This chapter describes the research methodology. Areas covered include the study location/area, type of study, study population, variables and description of the variables, description of the created outcome variable used to measure quality of care, sampling procedure including the study participant's selection criteria, data collection tools and finally data management and data analysis. Additionally, ethical considerations pertaining to the study, pretesting of the study instruments, data collection tools and study limitations are discussed in this chapter.

3.2 Study design

This was a descriptive cross-sectional study. The study used mixed methods of data collection comprising quantitative and observation techniques to collect data to assess quality of FANC services.

3.3 Study area/location

The study was carried out at Maamobi General Hospital in the Greater Accra Region of Ghana. Maamobi General Hospital was built in 1969 as a polyclinic, it was upgraded to a sub-district hospital in July 2011. It is located at Maamobi in the Ayawaso North Sub-Metro (Figure 3.1). The hospital has a bed capacity of 71, of which 38 are in maternity department. The bed occupancy rate for 2013 was 44% (Performance review report, 2014). The hospital offers antenatal care services every working day, and on average, 90 pregnant women visit maternal and child health department daily for ANC services.

The range of services provided at the hospital include maternal and child health, general medical care, disease control and surveillance, dental, ear nose and throat, eye care, nutrition rehabilitation and other support services.

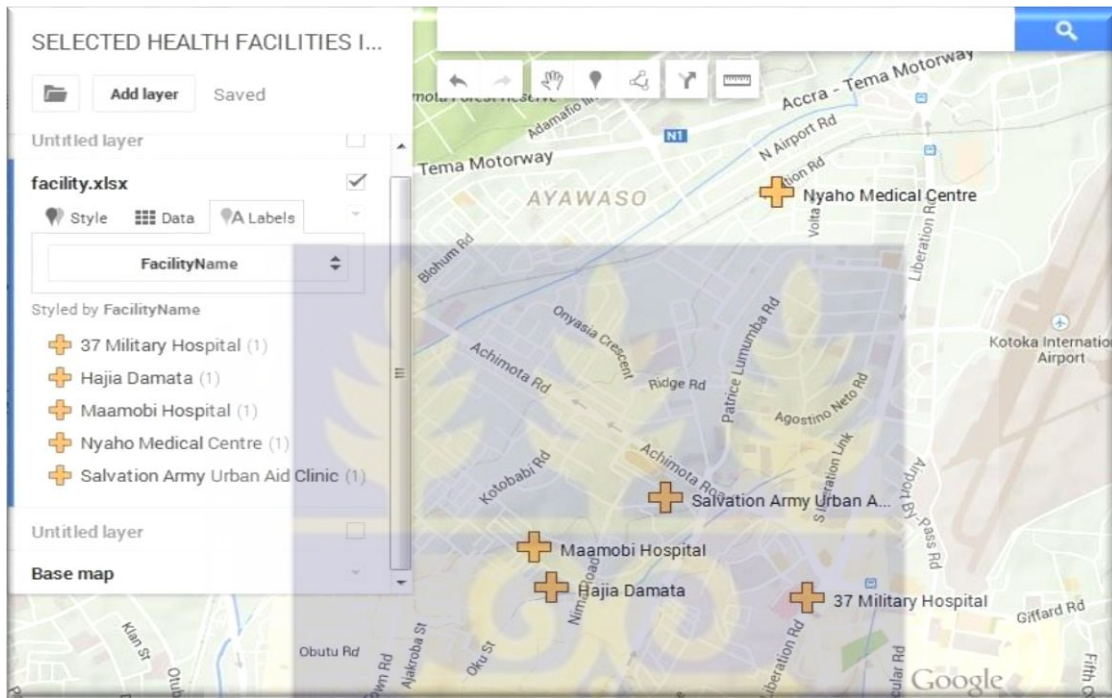


Figure 3.1: Map of Ayawaso Sub- metro showing Maamobi General Hospital.

3.4 The study population

The study population was all pregnant women between 15-49 years who visited the facility during the period of data collection and health care providers working at ANC clinic.

3.5 Sample size calculation

The minimum sample size required for the quantitative component of the study was calculated using the formula by Lwanga and Lemeshaw, (2005) as follows:

$$n = \frac{z^2 * p(1-p)}{d^2}$$

Where:-

n= sample size

z= standard deviation at 95% confidence interval (standard value = 1.96)

p = estimated proportion of clients satisfied with ANC services

d = desired precision

Since there was no previous related study that estimated the proportion of clients satisfaction of ANC services, 50% was assumed as was done in previous studies (Degley, 2012). Furthermore, a 5% precision was assumed. Thus, substituting these parameters in the formula, the sample size was computed as follows:-

$$n = \frac{(1.96)^2 * 0.5 * 0.5}{(0.05)^2} = 384$$

The sample size was adjusted upwards by 5% non-response rate resulting in a final sample size of 403.

However, practically data collection took place between 18th and 29th May, 2015. In all, a maximum sample size of 413 pregnant women attending ANC services at Maamobi General Hospital were interviewed. In addition, four midwives were observed for the qualitative component of the study.

3.6 Inclusion criteria

- All pregnant women between 15-49 years who have had at least 2 ANC visits.
- Health workers providing ANC services at the study site during period of data collection.

3.7 Exclusion criteria

- All pregnant women less than 15 years and older than 49 years attending ANC at the study site during data collection period.
- All pregnant women attending ANC for the first time.
- Pregnant women who had been referred from other facilities.
- Health workers (midwives) on holiday during data collection period.

3.8 Sampling procedure

The study site was purposely sampled considering availability of ANC services and accessibility by the researcher.

Pregnant women were selected using consecutive sampling method during the antenatal clinic days until the estimated sample size of 413 was achieved. Consecutive sampling was used considering the period of data collection, the sample size and layout of the ANC clinic.

Four midwives were conveniently sampled for the observation component of the study taking into consideration with the number of midwives in the department and their availability during data collection exercise.

3.9 Study variables

The dependent variable was quality of FANC and the predictor variables are socio-demographic characteristics, interpersonal relationships, availability of guidelines and policies, structure where ANC services are provided including sanitary facilities, adherence to set reproductive health standards and availability of drugs and supplies.

3.10 Description of variables

The dependent variable, quality of FANC services was a composite variable comprising various measures of satisfaction as reported by pregnant women. The overall rating of quality care was categorised as poor (not satisfied) and good (satisfied). The independent variables included socio-demographic characteristics like age, pregnant woman's educational status, religion, parity, marital status, occupational status and number of visits for ANC services. All the socio-demographic variables were measured directly on the questionnaire. Provider- client relationship was also assessed. Variables assessed through observations included health care practices, infrastructure including sanitary facilities, drugs and supplies, infection prevention measures and availability of policies, guidelines and protocols. The data collection tool has the values for the responses on each of the predictor variables (Appendix iii).

3.11 Description of the created dependent variable

Quality of care was measured using a created composite binary outcome variable "satisfaction". This composite variable, satisfaction was coded as 0 = Not satisfied and 1= Satisfied.

Eleven variables measuring various aspects of satisfaction were used to create a composite variable "satisfaction". The eleven variables were providers' readiness to listen to clients' problems; provision of quality care by staff; cleanliness of facility; comfort of the waiting area; waiting time before attended to; privacy during physical examination; enough time to ask questions; involvement in decision making; confidentiality of personal information; overall satisfaction with FANC and quality of care received on a particular visit. Each of the eleven variables was rated on a 4-point Likert scale with 1 = Not satisfied, 2 = somewhat satisfied, 3 = Satisfied and 4= Very satisfied. The Cronbach's alpha statistic was used to test

for the internal consistency and reliability of the variables that were summated to form a composite variable for measuring client's satisfaction.

Preliminary assessment of the intraclass correlation coefficients among the eleven variables showed that two variables did not correlate well with the overall scale. Consequently, these two variables were dropped because they did not contribute to the measurement of the construct; satisfaction with quality care. The final reliability analysis on the remaining nine variables produced a Cronbach's alpha coefficient of 0.701. Thereafter, the nine variables were summed up to generate a composite variable called 'satisfaction' that was used to measure respondents overall rating of quality care. The theoretical range of the 'satisfaction' variable was 9-36, but the actual scores ranged from 19-36. The scores were then dichotomised using median split. Thus scores of 19-27 were categorized as not satisfied (poor quality) while scores of 28-36 were tagged satisfied (good quality). This new variable was then used to further analyse the data.

3.12 Training of data collectors

A two-day training was organised for the data collection team. The team comprised four research assistants and one supervisor. The training involved the following:-

- General overview of the study including explanation the study objectives.
- Going through the questionnaire step by step for in-depth understanding of the study variables.
- Performance of role plays simulating the data collection process in local language.

3.13 Data collection tools

The tools used to collect data were a pre-coded structured questionnaire and an observation checklist.

The questionnaire had 43 items under seven sub-titles which included socio-demographic characteristics, health providers' competence, drugs and supplies, infrastructural factors, provider-client interaction, satisfaction and overall rating of quality of FANC services. The questionnaire sought information on background of clients, parity, number of visits to ANC clinic and type of history taken by providers among others. Furthermore, type of physical examinations done on the client, tests done, health education topics given and how they rated the care they received was also included to measure respondents' perception and satisfaction with ANC services.

About 40% of the questions required "yes" and "no" answers. About a quarter of the questions required respondents to rate satisfaction on a 4-point Likert scale from "not satisfied" to "very satisfied" with 1=not satisfied, 2= somewhat satisfied, 3= satisfied and 4= very satisfied. Some questions that sought to measure dimensions of quality were ranked "poor" to "very good" with 1= poor, 2= fair, 3= good and 4= very good.

The researcher collected data on health workers' practices and structural facilities using an observational checklist which was adopted from the Ghana Health Service Reproductive Health Standards. The checklist had two parts: the first part covered areas on general infrastructure including sanitation, lighting, space, availability of coaches and chairs. It also had a section containing infection prevention measures that were available like hand washing procedures, sterilisation process and wastes disposal standards and practices among others. The last part of the checklist on infrastructure was aimed at identifying availability of standards, protocols and guidelines in relation to FANC. Visual observations of healthcare

workers providing antenatal services during antenatal clinic was done using part two of the same checklist.

3.14 Data collection techniques

The trained research assistants collected data through face-to-face interviews with respondents using a pre-coded structured questionnaire, after getting consent. Healthcare practices and structural facilities were assessed using observations.

3.15 Data collection procedure

Information on socio-demographic characteristics, perception and satisfaction with the quality of FANC services provided was collected from pregnant women in form of exit interviews using a pre-coded structured questionnaire.

The research assistants targeted women after they are done with the services, from each of the four examination rooms, to seek permission to collect data. A screening question preceded the interviews to exclude clients who had come for ANC visit for the first time. After getting consent from clients with two or more ANC visits, a pre-coded questionnaire was then administered to individual clients.

Research assistants used designated places, usually corners of the ANC clinic, away from other clients and health workers because there were no other rooms that could be used for data collection. The supervisor also took part in data collection mainly targeting clients who were ready to leave the facility while research assistants were still collecting data from other respondents.

Observations using a checklist was used to assess health care worker practices and infrastructural factors towards provision of FANC services. Observations involved going

round the clinic assessing infrastructure, checking for availability of infection prevention facilities, observing a midwife collecting history from pregnant women, checking of urine for protein, acetone and glucose and conducting physical assessment on pregnant women among other observations.

3.16 Quality control

The following quality control measures were employed to ensure validity and reliability of data.

- A two day intensive training was organized for the data collectors.
- The researcher supervised and monitored activities of the research assistants to make sure that data were collected as planned.
- Filled questionnaires were scrutinized on the field and checked by the supervisor and researcher for completeness and accuracy on daily basis.
- Questionnaires that were not properly filled to generate data for the main variables of interest were discarded, and not used for further analysis.
- Data were cleaned to eliminate any irregularities.

3.17 Data processing and analysis

The quantitative data were manually entered using the Statistical Package for Social Science (SPSS) version 20. Data were cleaned by running preliminary frequencies of all the variables to check for entry inaccuracies. All incorrectly coded data were double checked with the questionnaire after which all wrong entries were corrected. Data were then exported into STATA Version 13 for analysis.

Descriptive statistics were performed and results were presented in percentages, frequencies and tables. The independent variables include socio-demographic characteristics of respondents like age, marital status, education, occupation and parity among others.

Chi-square tests and logistic regression reporting odds ratios, were used to measure association between dependent (satisfaction with quality of FANC) and independent variables age, marital status, educational status, occupational status among others. Adjusted Odds ratio (AOR) and their 95% confidence intervals were used to assess the strength of association. In all, statistical analyses, a p-value of 0.05 was used to determine statistical significance.

In the results section, quantitative findings, a major contribution to the measurement of quality FANC have been presented by complimenting with observational findings.

3.18 Ethical considerations

Before the study was carried out, all necessary ethical issues were considered as outlined below:-

- Ethical clearance was sought from the Ghana Health Service Ethical Review Committee (Protocol ID NO: GHS-ERC 60/02/15) (Appendix v).
- A written permission was obtained from the Regional Health Directorate, District Director for Health Services of Ayawaso Sub-Metro district and the Medical Superintendent of Maamobi General Hospital. (Appendix vi & vii).
- Informed consent was obtained from the study participants prior to data collection. Before taking consent, the research team explained to study participants what the study was all about, the processes involved during data collection, the associated risks and benefits of participating in the study. In addition, participants were offered the

opportunity to ask questions before consent was obtained either by signing the consent form or providing a thumb print (Appendix I).

- If a participant was not able to read the consent form herself, a witness signed on the same consent form indicating that she or he was bearing witness that everything about the study was explained to the participant prior to getting the consent to participate in the study (Appendix I).
- Confidentiality and anonymity of the study participants' was also maintained by using identity numbers on the questionnaires other than participant's names.
- Data were analysed at aggregate level and no participant's name would be linked with the results. The completed forms were kept under lock and key, and were only accessible to the team involved in the data management process.

3.19 Pre-testing of the questionnaire

Pre-testing of the questionnaire was done by randomly selecting a few pregnant women and health workers from the University Hospital, Legon. The main purpose of the pre-test was to ensure readability and comprehension of the questions. Feedback from pre-test was used to revise the questionnaire as appropriate. The questionnaire was then corrected to ensure that the questions provided the desired answers. This guaranteed the validity of the tool which was used for data collection in the study. Research assistants were recruited and trained for 2 days and took part in this pilot study to ensure that they gained competency and administer the questionnaires in the right way. This guaranteed reliability of the research tool.

CHAPTER FOUR

4.0 RESULTS

4.1 Introduction

This chapter presents the findings of a study which aimed at assessing the quality of FANC. The results are presented as percentages, frequencies and tables.

4.2 Characteristics of women receiving focused antenatal care services

The socio-demographic characteristics of women interviewed at Maamobi General Hospital are presented in Table 4.1. A total of 413 pregnant women participated in the study. Their ages ranged from 16 to 45 years with a mean age of 28.9 years ($SD = \pm 6.0$ years). Greater than half of the respondents (56.9%) were between 25 to 34 years old while youths (15-24 years) accounted for almost a quarter (24.4%) of the respondents.

With respect to education, the majority (70.7%) of respondents have had secondary education while about 5% of respondents had no formal education. About 8 in 10 (88.6%) respondents were married while a small proportion (1.2%) were either divorced or separated. Christianity (63.9%) was the dominant religion among respondents and majority (35.4%) were institutions (Table 4.1).

About 4 in 10 (42.6%) of the respondents have had more than four ANC visits while more than half (52.8%) of the clients visiting the hospital for ANC services have given birth almost twice. Almost 2 in 10 women who participated in the study, started ANC services and history taken from another facility and had their subsequent ANC visits at the study site (Table 4.1)

Table 4. 1: Socio-demographic characteristics of respondents

Variable	Frequency (N=413)	Percent (%)
Age (years)		
15-24	101	24.5
25-34	235	56.9
35-44	76	18.4
45 and above	1	0.2
Highest level of Education		
No formal education	23	5.6
Primary Education	39	9.4
Secondary Education	292	70.7
Tertiary Education	59	14.3
Marital Status		
Married	366	88.6
Single	40	9.7
Divorced/Separated	5	1.2
Widowed	2	0.5
Religion		
Muslim	149	36.1
Christian	264	63.9
Occupation		
Student/Apprentice/Unemployed	86	20.8
Trader	127	30.8
Self-employed (tradesperson)	148	35.8
Govt./private employee	52	12.6
Number of ANC visits		
2nd visit	37	9.0
3rd visit	85	20.6
4th visit	115	27.9
More than four visits	176	42.6
Parity		
First pregnancy	125	30.3
≤ 2 births	218	52.8
≥ 3 births	70	16.95

4.3 Process attributes of quality care

4.3.1 Health care worker practices?

Results on history taking during antenatal care services indicated that almost three quarter of the respondents (74.6%) had their personal history taken by health providers while breastfeeding history was least collected from about a third (30%) of pregnant women (Table 4.2). On the other hand, observation findings indicated that health care workers collected all types of history from all observed clients. Table 4.2 shows proportion of pregnant women reporting specific history taken by health care providers.

Table 4.2: Percentage of women reporting specific history taken by health care provider

History type	No (%)	Yes (%)
Personal history	31 (9.1)	308 (90.9)
Social history	66 (19.5)	273 (80.5)
Family history	71 (20.9)	268 (79.1)
Medical history	120 (35.4)	219 (64.6)
Surgical history	130 (38.4)	209 (61.6)
Obstetric history	162 (47.8)	177 (52.2)
History of current pregnancy	144 (42.5)	195 (57.5)
Breastfeeding history	216 (63.7)	124 (36.3)

Table 4.3: Percentage of women who reported specific physical examination done by health worker

Examination type	No (%)	Yes (%)
Blood pressure	23 (5.6)	390 (94.4)
Weight	9 (2.2)	404 (97.8)
Pallor	164 (39.7)	249 (60.3)
Oedema	303 (73.4)	110 (26.6)
Breast	315 (76.3)	98 (23.7)
Fundal height	130 (31.5)	283 (68.5)
Foetal presentation	157 (38.0)	256 (62.0)
Listen to foetal heart sound	106 (25.7)	307 (74.3)

Table 4.3 presents proportion of women who reported specific physical examination done by health worker. Weight and Blood pressure were the physical examinations done on almost all women at 97.8% and 94.4% respectively. Less than a quarter (23.7%) reported that breast examination was done while slightly more than a quarter (26.6%) indicated that providers checked oedema of the legs.

Observational evidence largely supports the qualitative findings. All the health workers observed checked blood pressure and weight of all the clients. However, not all the midwives performed complete physical examinations. For example, it was observed that none of the midwives checked clients' conjunctiva and palms for pallor (signs of anaemia); and legs for varicosities (abnormally distended veins). In addition, no midwife was observed inspecting and/or palpating the breast to check for breast conditions and abnormalities; and condition of nipple in preparation for breastfeeding. All midwives conducted abdominal examination but they all concentrated on estimating fundal height using tape measure and listening to the foetal heart. Checking presentation of the foetus and engagement of presenting part was done by two of the four midwives.

Checklist also assessed hand washing practices. It was found out that only one midwife out of four washed hands after examining a client.

4.3.2 Provision of information and provider- client interaction

The study also aimed at finding out perception of women on information provided to them in relation to pregnancy. Majority (95.4%) of respondents reported that diet and nutrition related topics were mostly discussed during health education than other topics. However, the least discussed topics were effects of sexually transmitted infections (34.6%) and human immunodeficiency virus (38.1%) on the pregnant woman and unborn child. Table 4.4 shows number of topics discussed as perceived by respondents. However, findings from actual

observation showed that health education sessions were routinely conducted on Tuesdays every week to discuss different topics in relation to pregnancy and its complications. According to reproductive health standards, midwives were supposed to provide relevant information to pregnant women before physical examination, but observations revealed that midwives spent little time with clients and barely discussed any topic with them.

Table 4.4: Proportion of women reporting health education topics discussed

Health education topic	No (%)	Yes (%)
Pregnancy process	135 (32.8)	276 (67.2)
Diet	19 (4.6)	394 (95.4)
Personal Hygiene	78 (18.9)	335 (81.1)
Danger signs in pregnancy	110 (26.6)	303 (73.4)
Exclusive breastfeeding	148 (35.8)	265 (64.2)
Smoking/Drug abuse	189 (45.8)	224 (54.2)
Effects of STI	270 (65.4)	143 (34.6)
Effects of HIV	256 (62.0)	157 (38.0)
Plans for delivery	166 (40.2)	247 (59.8)

Table 4.5: Women's perception of health worker skills and interpersonal aspects of antenatal care received

Interpersonal relations	No (%)	Yes (%)
Treated with respect	39 (9.4)	374 (90.6)
Protected your privacy	14 (3.4)	398 (96.6)
Explanation of findings	27 (6.5)	386 (93.5)
Examination to your satisfaction	8 (1.9)	405 (98.1)
Enough time to ask questions	79 (19.1)	334 (80.9)
Involved in decision making	83 (20.1)	330 (79.9)

Table 4.5 shows women's perception of health worker skills and interpersonal aspects between providers and clients' during ANC. In general, women's perception of health worker skills and interpersonal relationship with providers was good. Almost all (98.1%) of the respondents reported that they were examined by health care providers to their satisfaction;

96.6% reported that privacy was observed during physical examination and more than three quarter (79.9%) were involved in decision making about their care. Confirming the responses from clients on provision of privacy, observations showed that privacy during physical examination was provided in all examination rooms. In each room a screen is placed for the purposes of client examination, to prevent intrusion by other clients and members of staff who may walk in at any time.

4.4 Structural factors

4.4.1 Laboratory tests done on respondents

About 9 in 10 respondents reported that their urine was tested for protein at each ANC visit (Figure 2). Furthermore, haemoglobin and HIV testing was reported to be done routinely on over 80% of respondents. The test that was reported least (52.3%) by pregnant women was Rhesus factor (Figure 4.1). Observation findings also showed that all observed pregnant women's urine were tested for sugar, protein and acetone.

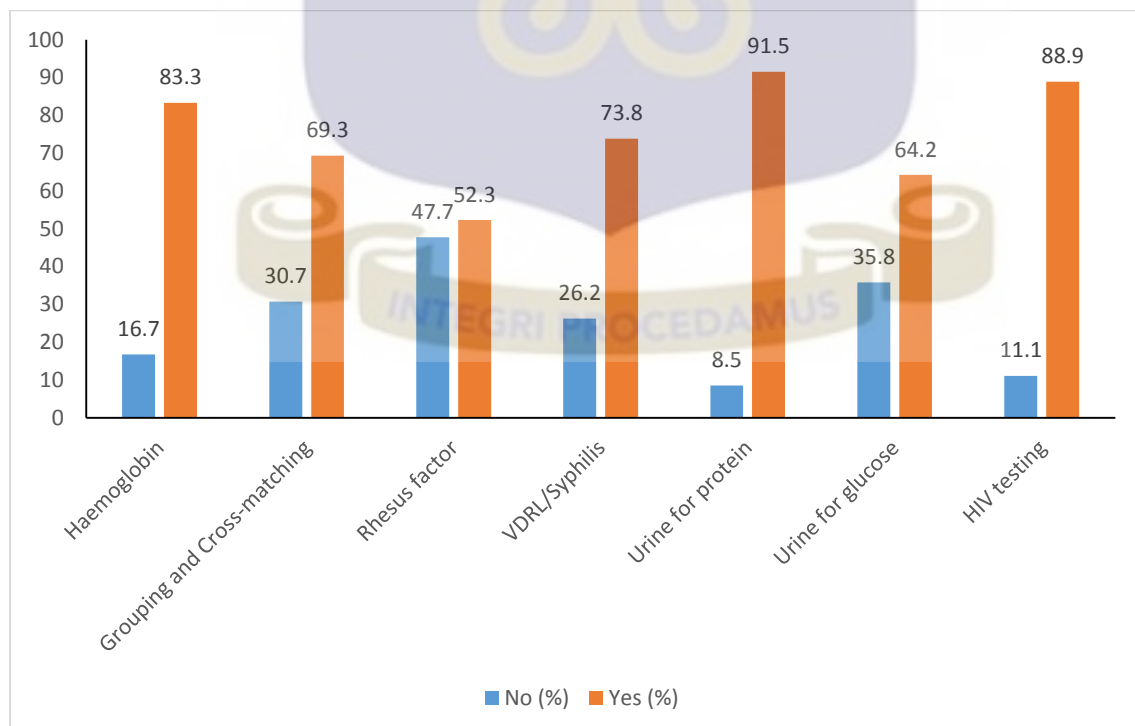


Figure 4.1: Proportion of respondents reporting laboratory tests done

4.4.2 Provision of drugs and immunisation by health workers

On drugs and immunisation, generally, majority of respondents reported that health workers provided drugs and Tetanus toxoid vaccine to them. For example, about 9 in 10 women (90.8%) reported that they were given iron tablets, more than three quarter (79.4%) reported were given folic acid and over 80% agreed that they took SP in the presence of a health worker at the facility. Tetanus toxoid vaccine was reported to be given to almost 8 in 10 (79.8%) women.

In support of the quantitative findings, observations indicated that all the drugs and supplies like syringes and IV fluids were available but at a pharmacy in the labour ward which is located adjacent to ANC clinic. Any client requiring emergency attention for example treatment for convulsions, is rushed to labour ward for management.

4.4.3 Findings on infrastructure at antenatal care department

An observation to assess infrastructure to compliment on respondents views indicated that FANC services were provided in four separate consultation rooms. Each room was equipped with an examination couch, working table and 3 chairs, a screen, waste bins for dry and infectious wastes, sharp containers and hand washing materials. Waiting area for clients was spacious in relation to an average of ninety clients per day, with benches and chairs and was generally clean. However, toilets for clients were untidy, could not flush because water was just being pumped into the building. Despite waste bins with liners being available in clients' toilets, used sanitary pads and toilet papers were found on the floor in the toilet facilities and inside the squat pan and could not be flushed away.

Infection prevention measures were good as required, decontamination, sterilisation and waste management were done according to standards.

4.4.4 Availability of guidelines and policies

On availability of policies, guidelines and protocols, the checklist revealed that guidelines on management of malaria were available in two of the consultation rooms, hand washing and HIV testing in pregnancy guidelines were in all the consultation rooms. IEC materials on different topics were displayed in all strategic areas in the ANC department. However, guidelines, standards and protocols on FANC, PMTCT, and management of pre/eclampsia, reproductive health and infection prevention (apart from hand washing) were neither displayed nor present at the clinic.

4.5 Results on perception of quality attributed variables

On average, about 8 in 10 (82.7%) respondents reported that they were satisfied with ANC services based on selected quality attributable variables (Table 4.6). Nearly all respondents (96.6%) expressed satisfaction with privacy provided to them during physical examination; about 9 in 10 (90.8%) were satisfied with cleanliness of the facility while less than one fifth (16.2%) were satisfied with waiting time.

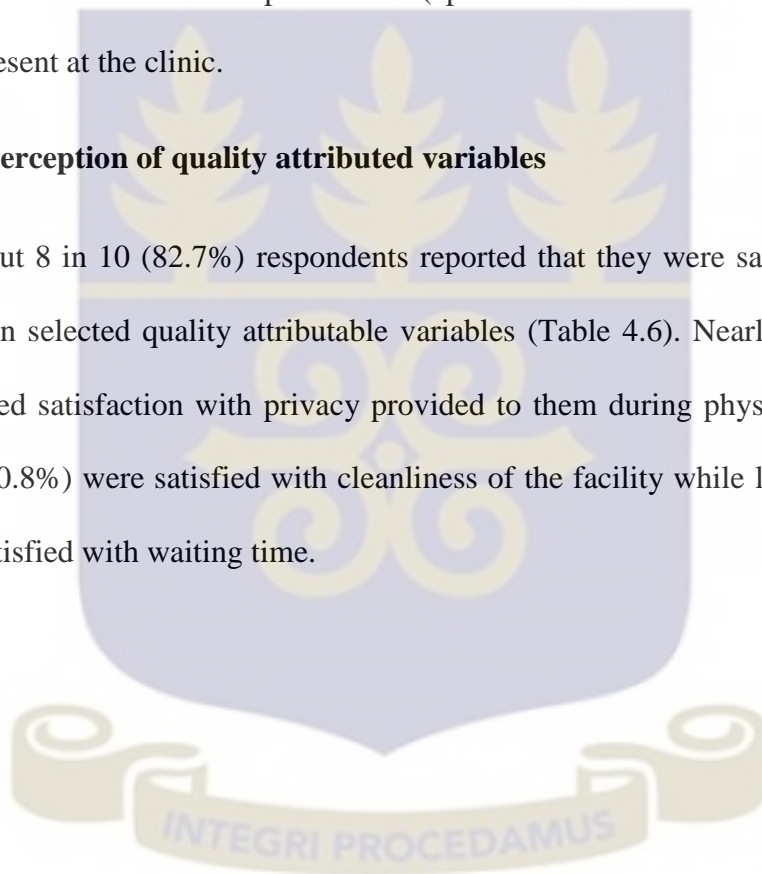


Table 4.6: Results of respondents' quality attributed variables on satisfaction with ANC services

Variable	Not	Somewhat	Satisfied	Very
	Satisfied	Satisfied		Satisfied
	n (%)	n (%)	n (%)	n (%)
Readiness of staff to listen to clients problems	3 (0.7)	44 (10.7)	302(73.6)	62 (15.0)
Clients satisfaction with quality of care provided by staff	2 (0.5)	42 (10.2)	320(77.5)	49 (11.9)
Clients satisfaction with cleanliness of facility	0 (0)	38 (9.2)	329(79.7)	46 (11.1)
Clients satisfaction with comfort of waiting area	23 (5.6)	38 (9.2)	309(74.8)	43 (10.4)
Clients satisfaction with waiting time	178(43.1)	168 (40.7)	42 (10.2)	25 (6.1)
Clients satisfaction with respect to privacy during physical examination	1 (0.2)	13 (3.2)	319(77.4)	79 (19.2)
Clients satisfaction with having enough time to ask questions	9 (2.2)	70 (17.0)	296(71.7)	38 (9.2)
Clients satisfaction with involvement with decision making	11 (2.7)	72 (17.4)	252(61.0)	78 (18.9)
Clients satisfaction with how their information was kept confidential	1 (0.2)	4 (1.0)	288(69.7)	120 (29.1)
Clients satisfaction with care received on day of visit	3 (0.7)	19 (4.6)	312(75.5)	79 (19.1)
Overall rating of satisfaction with ANC services	4 (1.0)	44 (10.7)	292(70.0)	73 (17.7)

4.6 Determinants of pregnant women's satisfaction with quality of focused antenatal care

The quality of care was classified into poor and good using satisfaction variable (section 3.11). Quality of FANC services was rated good as evidenced by overall generated variable "satisfaction" rate of 96.1% (Table 4.7). The satisfaction variable was cross-tabulated with the respondents' sociodemographic characteristics variables and the results are presented in Table 4.7.

All clients' sociodemographic characteristics had no significant effects on quality of FANC services (Table 4.7). From the cross-tabulation results, majority (>90%) of respondents belonging to different categories under sociodemographic characteristics (range = 92% to 100%) reported that they were satisfied with quality of FANC services. For example, 96.6% of respondents belonging to 25-34 age group; 97.4% of respondents aged 35-44 years and youths (91.4%) were satisfied with the services. Chi-square analysis showed that age had no significant effect on quality of ANC services [$\chi^2 (3) = 1.640; p = 0.650$].

Consequently, level of education had no significant effect on FANC services although nearly all respondents with primary education (97.4%) and tertiary education (96.6%) were satisfied with FANC services. On the contrary, very few (3.4%) respondents with tertiary education expressed dissatisfaction [$\chi^2 (3) = 0.279; p = 0.964$].

However, unlike sociodemographic characteristics, other selected perception predictor variables were significantly associated with satisfaction of care using chi square test. Explanation of physical examination findings to client ($p \leq 0.001$), adequacy of space at ANC ($p = 0.029$), clients being treated with respect by health care providers ($p = 0.026$), communication with providers in privacy ($p \leq 0.001$), ability to visit facility again for ANC services ($p \leq 0.001$) and ability to deliver the baby at the study site ($p = 0.013$) were all significantly associated with satisfaction of quality care. These variables, therefore, were run in the binary logistic regression model, reporting crude and adjusted odds ratio to test for the strength of association (Table 4.8).

Table 4.7: Determinants of pregnant' women's satisfaction with quality of FANC services (Overall rating)

Sociodemographic variables	Not satisfied n (%)	Satisfied n (%)	p-value
Age Category			
15-24	6 (5.9)	95 (94.1)	0.650
25-34	8 (3.4)	226(96.6)	
35-44	2 (2.6)	74 (97.4)	
45 and above	0 (0)	1 (100)	
Marital status			
Married	15 (4.1)	350(95.9)	0.964
Single	1 (2.5)	39 (97.5)	
Divorced/Separated	0 (0)	5 (100)	
Widowed	0 (0)	2 (100)	
Level of education			
No formal education	1 (4.4)	22 (95.7)	0.910
Primary Education	1 (2.6)	38 (97.4)	
Secondary Education	12 (4.1)	279(95.9)	
Tertiary Education	2 (3.4)	57 (96.6)	
Religion			
Muslim	3 (2.0)	145(98.0)	0.144
Christian	13 (5.0)	251(95.1)	
Occupation			
Student/Apprentice/Unemployed	2 (2.3)	84 (97.7)	0.670
Trader	7 (5.5)	120(94.5)	
Self-employed (tradesperson)	5 (3.4)	142(96.6)	
Govt./private employee	2 (4.9)	50 (95.1)	
Number of ANC visits			
2nd visit	3 (8.1)	34 (91.9)	0.261
3rd visit	5 (6.0)	79 (94.1)	
4th visit	4 (3.5)	111(96.5)	
More than four visits	4 (2.3)	172(97.7)	
Parity			
first pregnancy	7 (5.6)	118(94.4)	0.543
≤ 2 births	8 (3.7)	209(96.3)	
≥3 births	2 (1.5)	68 (98.5)	
Total	16 (3.9)	396 (96.1)	

4.7 Logistic regression analysis of predictor variables of client satisfaction with quality of FANC

After controlling for other variables, three variables were significantly associated with quality of FANC in the binary logistic regression model: explanation of physical examination findings to clients ($p \leq 0.001$), adequacy of space at ANC ($p = 0.027$) and privacy during communication with health care provider ($p = 0.001$) (Table 4.8).

Clients who reported that physical examination findings were explained by health care providers were more than ten times likely to report satisfaction with quality of care as compared to those who reported to the contrary (AOR = 11.90; 95% CI: 3.32-42.81).

Furthermore, availability of adequate space at ANC increased the odds of reporting satisfaction with quality ANC. For example, the women who reported that space was adequate at ANC were nine times more likely to be satisfied with ANC services than those who reported that space was not adequate (AOR = 9.02; 95% CI: 1.29-63.25).

Similarly, the ability of a health care provider to communicate with a client in privacy was a predictor of satisfaction with ANC services. Compared to women who reported that they were not able to communicate with providers in privacy, those who reported that they were able to communicate with health care workers in privacy had more than eight times the odds of reporting satisfaction with quality of ANC services (AOR = 8.83; 95% CI: 2.52- 30.93).

On the other hand, the ability of a client to be treated with respect lost its significance ($p = 0.227$) after adjusting for adequacy of space at ANC, ability of health care provider to explain physical examination findings to client and ability to communicate in privacy.

Table 4.8: Showing findings on strength of association between selected predictor variables of satisfaction with quality ANC.

Variable	Satisfied n (%)	Odds ratio (CI)	p-value	Adjusted (CI)	OR	p-value
Explanation of physical findings by the health worker						
No (ref)	21 (77.8)					
Yes	375 (97.4)	10.71(3.55-32.30)	0.000	11.90 (3.32-42.81)		0.001
Adequacy of space at ANC						
No (ref)	11 (84.6)					
Yes	384 (96.5)	4.99 (1.01-24.66)	0.049	9.02 (1.29-63.25)		0.027
Clients treated with respect by the health worker						
No (ref)	34 (89.5)					
Yes	362 (96.8)	3.55 (1.09-11.61)	0.036	2.38 (0.58-9.73)		0.227
Communication with providers in privacy						
No (ref)	29 (82.9)					
Yes	365 (97.3)	7.55 (2.56-22.25)	0.000	8.83 (2.52-30.93)		0.001
Client to visit facility again for ANC						
No (ref)	2 (50)					
Yes	394 (96.6)	28.14(3.69-214.53)	0.001	-		-
Client to deliver current pregnancy at this facility						
No (ref)	9 (81.8)					
Yes	387 (96.5)	6.14 (1.21-31.11)	0.028	-		-

CHAPTER FIVE

5.0 DISCUSSION

5.1 Introduction

This chapter discusses the findings in the light of the study objectives.

5.2 Satisfaction with quality of ANC

Provision of quality ANC to pregnant women is an important determinant of pregnancy outcome. Pregnant women's perception and satisfaction or dissatisfaction with ANC services indicates their judgement about the strengths and weaknesses of the services. The study aimed at assessing the quality of FANC services through evaluating perception of clients and their level of satisfaction with ANC services.

The study found that majority of respondents were between 25-34 years. This is expected because it is the common and ideal age for child bearing. In addition, most of the respondents had secondary education and above. Female education empowers women, improves wealth and reduces gender disparity which improves accessibility of ANC services (Joshi, Torvaldsen, Hodgson, & Hayen, 2014). Previous studies supports that education promotes attitudes that are favourable to the use of health care services and empowers women to access such care (Furuta & Salway, 2006). Other authors in developing countries have also reported that women with secondary education or higher are more likely to attend antenatal care than women with no formal education (Carroli et al., 2001). This is congruent with the results of another study (Habib, Hanafi, & El-Sagheer, 2011). The findings reinforces the need to promote women education with the resultant effect of improving maternal and neonatal health outcomes through utilisation of ANC services.

However, Oladapo and Osiberu found that socio-demographic characteristics were not associated with the satisfaction with antenatal care quality (Oladapo & Osiberu, 2009). The study showed similar findings where sociodemographic characteristics were seen to have limited impact on pregnant women perception and satisfaction with antenatal care. This entails that more focus should be geared towards improving health system factors to improve quality of ANC services.

The overall level of satisfaction with quality of care in this study is 96.1%. This is similar to findings of a quality of FANC study conducted in Volta region of Ghana which reported an overall satisfaction of 94% (Degley, 2012). However, other studies have reported lower rates of satisfaction with ANC services. For example, in Ethiopia, the satisfaction was rated at 82.9% while in Northern Ghana total quality score for ANC was 75% (Yohannes, Tarekegn, & Paulos, 2013; Duysburgh et al., 2015). The trend in different study findings shows that quality of care is higher in city and urban settings as compared to rural facilities. This can be attributed to availability of adequate staff, materials and infrastructure in urban facilities.

Findings from the present study showed that majority of pregnant women were satisfied with the quality of services rendered at ANC and they were willing to visit the facility again for ANC and deliver their babies at the same facility. These findings are supported by other studies where pregnant women level of satisfaction with ANC was high at 81.1% (Nwaeze et al, 2013; Lamadah & Elsadah, 2012). Another study in Nigeria also reported that over 95% of pregnant women were satisfied with the care they received at ANC, would use the same facility to seek services with future pregnancies and they would recommend it to their friends (Fawole, Okunlola, & Adekunle, 2008). The high level of satisfaction with quality FANC services in this study may have resulted from good client-provider relationship and information provided to clients which improved their involvement in ANC.

Despite a higher proportion of women expressing satisfaction with ANC services, there were some inconsistencies between the provided care and clients' perception of the services they received. This is in tandem with what was observed in a study by Oladapo et al, (2008). On the other hand, pregnant women in this study could express satisfaction with ANC services because either they lack knowledge about what they should expect at ANC or they would express satisfaction because they wanted to please the interviewer or could mean clients were avoiding the risk of being denied services during next visit, worry that they might be withheld or reprimanded by health workers in future or may fear to complain about quality care due to cultural reasons as described by other researchers (Yohannes et al., 2013).

More than 80% of the respondents in this study were not satisfied and considered the waiting time before consultation to be long. These results may be due to shortage of health workers, too many activities taking place at ANC before actual physical examination process starts. Even though Degley, (2012) and Mgawadere, (2009) had similar findings in their studies conducted in Ghana and Malawi respectively, these findings are not in agreement with what Fawole et al., found (2008) in Nigeria. Again, the results of both Simbar (2010) and Sardasht et al, (2013) showed that minimum satisfaction was related to waiting time (Sardasht et al., 2013 & Simbar, 2010). Furthermore, in Kenya, more than half of respondents in intervention facilities were dissatisfied with waiting time for all recommended FANC visits (Birungi, 2006). Clients may perceive waiting time to be very long because they might not be aware of the package of services rendered to a single woman on a clinic day. Therefore, educating woman on package of services at ANC would make a difference in perception about waiting time. Perceived long waiting time can act as a barrier to continued utilisation of FANC services.

5.3 Association between selected perception variables and satisfaction with quality of care

Adequacy of space at ANC, explanation of physical findings to clients and ability to communicate in privacy were significant determinants of satisfaction with quality ANC in this study; there was a similar pattern in some studies and a contrast with others.

Limited space acts as a hindrance in accessing quality health services during pregnancy (UNFPA, 2004). In Ethiopia, respondents who expressed satisfaction with space and comfort of waiting area were more than seven times likely to express satisfaction with ANC services as compared to those who reported that space was not adequate (Yohannes et al., 2013). Lack of adequate space where women can comfortably sit in their pregnant state is a risk factor to satisfaction with the services and may lead to non-attendance of ANC for services.

The study also found out that explanation of physical examination findings given by providers was significantly related to satisfaction with ANC services. Similar findings were reported in Kenya (Birungi, 2006). Kumbani et al, (2012) had also similar findings in their qualitative study where non-provision of information after physical examination was associated with women reporting unsatisfactory care (Kumbani et al., 2012). On the contrary, in one study in Ghana, explanation of findings to clients was not significantly related to satisfaction with quality care (Degley, 2012). The difference in findings may be due to the location of the study sites. The latter study involved rural facilities while the present study was conducted at a city-based district hospital. Thus, the rural- urban difference explains the differences in the findings. However, explanation of examination findings to clients can lead to clients' participation and compliance with the services and promote adherence to advice provided by health care provider.

Provision of privacy during examination and communication was significantly associated with good care (Kumbani et al., 2012). In their qualitative study, women reported that they

were quietly spoken to by health care providers in order to maintain privacy. This is similar to the findings in the present study where nearly all (97.3%) of respondents were satisfied with privacy. Degley also reported a significant relationship between health workers communication in privacy and satisfaction with quality of FANC services as expressed by majority (91.6%) of married women (Degley, 2012). These findings stress on the need to provide and maintain privacy during examination and communication with clients to maintain their dignity.

5.4 Health care worker practices

Findings in this study revealed that health workers at ANC took personal, social, past medical and surgical history, obstetric history and history of current pregnancy on most of the eligible pregnant women. This means that health workers were following standards laid out by WHO on type of history to be collected from pregnant women. Furthermore, all pregnant women's blood pressure and weight were checked. Similar findings on history taking were reported in Malawi (Mgawadere, 2009). History taking promotes planning for individualized care. Availability of human resource, equipment like blood pressure machines and following of FANC guidelines could compel health workers to check clients' vital signs.

However, only one out of four of the midwives observed conducting physical assessment on clients washed her hands after examining client. Lack of hand washing increases the risk of cross-infecting the clients because disease causing organisms can pass from one pregnant woman to another through health workers hands, or from pregnant woman to the health worker and vice versa (Hughes, 2008). The findings matched with another study which assessed pregnant women's satisfaction with the services and reported that hand washing had lowest scores (Mahmoud, Ghani, & Berggren, 2011). Similarly, in Armenia, less than quarter (13%) of midwives were able to wash hands with soap and water and dry them (Fort &

Voltero, 2004). Another study has shown an association between increased caseload, infections and transmission of microorganisms resulting from poor adherence to hand hygiene practices (Hughes, 2008). Increased caseloads can make health workers concentrate on providing services at the expense of preventing infections.

Furthermore, all midwives observed conducting physical examination, did not check clients' conjunctiva and palms for pallor, legs for oedema and varicosities and breast for abnormalities; nipple in preparation for breastfeeding. This causes a serious concern because anaemia and oedema (only clinical sign of pre-eclampsia) are some of the causes of morbidity and mortality for pregnant women in most developing countries including Ghana. Conrad and colleagues also found out that procedures such as checking for oedema or anaemia that require no equipment were also not performed routinely by health workers (P. Conrad et al., 2012). Studies conducted in Tanzania earlier, also reported omissions during physical examination of a pregnant woman (Boller et al., 2003; Urassa et al., 2002). Furthermore, Fort and Voltero reported that less than half (44.9%) of midwives were able to check for oedema and varicose veins on clients legs (Fort & Voltero, 2004). These omissions can lead to undiagnosed hypertensive disorders and anaemia resulting into poor maternal and neonatal health outcomes (Duley, 2009; Steer, Little, Kold-Jensen, Chapple, & Elliott, 2004). Therefore, measures should be put in place so that health workers follow procedures during head to toe examination of pregnant women. Locally adapted and evidence based checklists with a list of all necessary steps to be followed could be of use to guide health workers (Hohenfellner, 2009).

On the contrary, Zanconato and colleagues found that more than half (58%) of women were checked for oedema (Zanconato et al., 2006). In Saudi Arabia, clinical signs of anaemia were the most commonly performed tasks on 43% of all ANC visits while breast examination was done on less than one tenth (9%) of the initial ANC visits (Habib et al., 2011). The reason for

not checking the legs for oedema in this study as stipulated in the WHO standards of FANC might be due to the fact that health workers rely on results from pregnant women's urine which is checked at every visit for protein, sugar and acetone to detect any deviation from normal readings.

5.5 Clients perception about interpersonal relationship

In this study, the overall perception of interpersonal relationship with healthcare providers was good. For example, about 9 in 10 women reported that they were treated with respect, their privacy was protected, examination findings were explained to them and they were examined to their satisfaction (Table 4.5). Good provider-client relationship is a strong predictor of satisfaction with quality of health care services (Birhanu, Assefa, Woldie, & Morankar, 2010). Similar findings were reported in Tanzania (Boller, Wyss, Mtasiwa, & Tanner, 2003). Other authors have also reported that more than three quarter of the respondents were very satisfied with provider-client interaction (Lamadah & Elsadah, 2012 &). Hansen and colleagues presented nearly similar ratios (Hansen et al., 2008). However, other studies reported contrary findings. In Istanbul, there were frequent communication problems in public facilities between clients, their families and health care providers (Bulut, Nalbant, & Molzan, 2010) Similarly, in Malawi, health care providers at a district hospital were reported to be unfriendly and unwelcoming (Mgawadere, 2009). In another study, women who were treated poorly by the health care provider were discouraged from delivering at the same facility (Hansen et al., 2008).

Good provider- client interaction would ensure continued utilisation of services by clients because of the trust developed between two parties.

5.6 Infrastructural factors

The observational checklist revealed that ANC clinic was clean, had adequate space which was equipped with chairs and tables, waste bins for dry and infectious wastes, sharp

containers and hand washing materials. The toilets for clients and health workers were available as well. In support of the findings, Lamadah and Elsadah also reported availability of chairs, tables and toilets in the waiting area (Lamadah & Elsadah, 2012). In contrast, Mgawadere (2009) reported that women had to wait for the services outside the examination room on the ground due to lack of proper structure and there was no specific toilet for antenatal women. Pregnant women were using a general toilet at the facility which was about 100 meters away from the room used for ANC (Mgawadere, 2009).

However, in this study, toilets for clients were untidy and could not flush due to lack of water at that particular time. Similar findings were reported in other studies conducted by Mashego, (2002) and Mgawadere, (2009) in which toilets were very untidy. Furthermore, in Nigeria, one study reported that over 60% of respondents were not satisfied with the conditions of water supply, toilet and bathroom facilities (Nwaeze et al., 2013). Lack of water supply could compromise cleanliness of the facility and promote nosocomial infections.

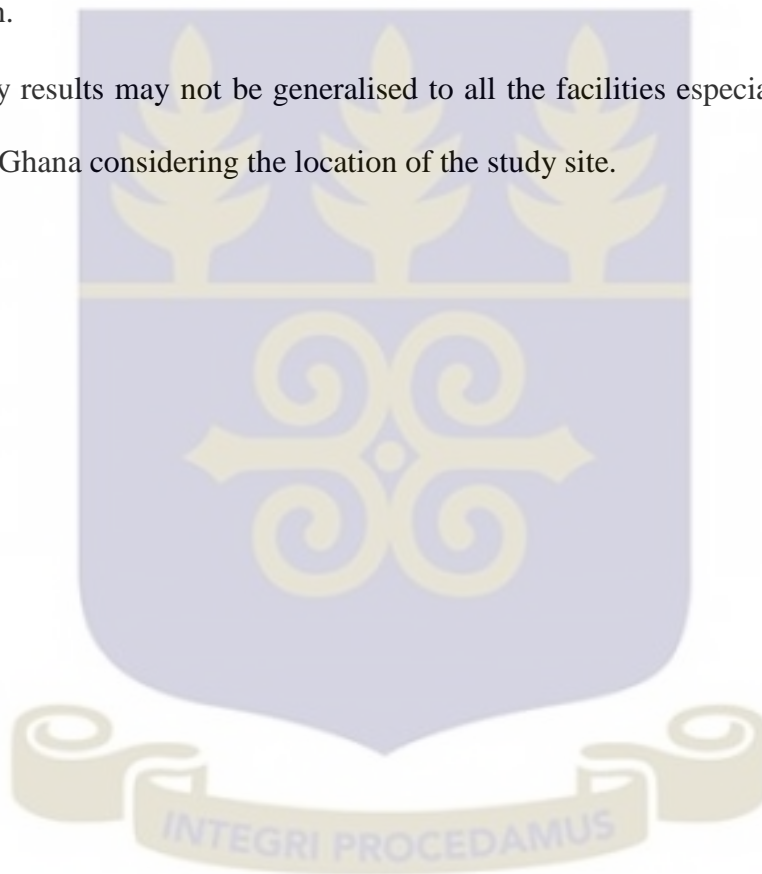
5.7 Availability of guidelines and policies

Even though some guidelines on ANC were available, guidelines on FANC, PMTCT, and management of pre/eclampsia, reproductive health and infection prevention (apart from hand washing) were neither displayed nor present at the clinic. The findings on non-availability of some of the ANC guidelines may likely lead to non-compliance to procedures during service provision thereby affecting pregnancy outcomes. National policies and locally adapted guidelines should be in place to remind health workers on what is expected of them during service provision and protects the right of women to access quality ANC services (Lincetto et al., n.d.).

5. 8 Study limitations

The major study limitations for this study were:-

- Interviews conducted right within ANC building might have led to respondents expressing satisfaction about ANC for fear of being denied services during next visit. However, interviewers explained on anonymity, confidentiality of the responses and that information provided will not affect future care to minimise the mentioned limitation.
- The study results may not be generalised to all the facilities especially those in rural locale in Ghana considering the location of the study site.



CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

The study findings revealed that quality of focused antenatal care at Maamobi General Hospital was good.

Furthermore, majority of respondents reported that interaction between health workers and clients was good. For example, history taking was done on most of the clients, clients' were treated with respect and they were willing to visit facility again for ANC. Vital signs like blood pressure and weight were reported to be conducted on almost all women. Thus, availability of resources (staff, material and infrastructure) and ability for health care providers to follow guidelines during provision of FANC services as stipulated in the WHO FANC package contributed to provision of quality care at the study site.

However, the study also demonstrated that long waiting time contributed to dissatisfaction with FANC services. Furthermore, despite the fact that health care workers performed well on physical examination, checking conjunctiva and palms for physical signs of anaemia and swelling of veins on the legs was not commonly done. Also, non-availability of important guidelines on PMCTC, FANC and management of pre-eclampsia could compromise provision of quality FANC services.

Adequacy of space at ANC, explanation of physical examination findings to clients and provision of privacy during examination and communication contributed to satisfaction with FANC services.

6.2 Recommendations

From the study findings, the following recommendations are made:

- Nursing managers need to ensure that all guidelines pertaining to FANC are available at the clinic, in each consultation room for reference.
- Hospital managers should organize continued in-service trainings for health care workers at ANC to improve providers' practices.
- A process review of ANC delivery to determine reasons behind long waiting time and act on them. With support, an in charge of the clinic/ANC department can review the ANC process.
- Further studies on FANC employing surveys, observations, review of records (client's booklet), in depth interviews with health workers and focus group discussions with women should be conducted to have a complete overview of quality FANC services.

self-employed as compared to 12.6% who were employed either by government or private



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Appendices

Appendix i: Consent form for Pregnant Women

Research Title: An assessment of the quality of focused antenatal care at Maamobi General Hospital in Greater Accra region, Ghana.

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General Information about the study

This is a research study being undertaken by graduate student of the School of Public Health, University of Ghana, as part of the requirements for the Master of Public Health degree. The study seeks to assess pregnant women perception of quality of focused antenatal care, structural factors and health care workers' practices affecting provision of focused antenatal care at Maamobi General Hospital. Quality of antenatal care is important because it has effects on health status of both the mother and the baby. Studies have revealed that several factors contribute to poor quality of ANC services including inadequate resources, medical supplies and drugs and poor provider client relationship. In the Greater Accra region, little is known about the quality of ANC services provided to pregnant women. The aim of the study is to assess factors that affect provision of quality FANC services here at Maamobi General Hospital in Accra.

Procedures

Pregnant women aged 15- 49 years who are attending ANC services at this facility will be included in the study. The study will involve answering questions from a questionnaire about perception of quality of focused antenatal care provided at the General Hospital. If you are eligible and agree to participate, you will be required to respond to some questions. We will ask you questions about your background and a set of questions on how you perceive quality of FANC services. The interview is expected to last 50 minutes.

It will be appreciated if you could participate in this study. This is purely academic research which forms part of my work for the award of a Master's Degree in Public Health.

Risks and Discomforts

The procedures involved in this study are non-invasive and will not cause any discomfort to you as a participant. However, we will ask some information about your background, health and social wellbeing. If you feel uncomfortable to respond to some of the questions, you are free to skip the questions you are not comfortable responding to.

Possible benefits

There is no direct benefits to the participant of the study. However, the information you will provide, will contribute to overall knowledge about quality of FANC offered at this facility. Results of the study may be used to improve antenatal care at the General Hospital.

Voluntary participation and right to refuse

Your participation in this study is voluntary. During the interview you can choose not to answer any individual question or all the questions. Additionally, you are at liberty to withdraw from the study at any time. However, I will encourage you to fully participate in the study since your opinions are important in helping us to assess the quality of ANC provided at this General Hospital.

Anonymity and Confidentiality

You are assured that whatever information is provided on the questionnaire will be handled with strict confidentiality. Your name or personal identification information will not be published in any report. Information submitted would not be shared with anybody who is not part of the study. Some staff of the research team may sometimes review the research records, but no unauthorized individual(s) will be able to access your information.

Compensation

There is no compensation for participating in this study. However, we will be give you light refreshments to commend you for the participation in the study and also helping us with information on perception of quality of FANC at this General Hospital.

Contact for Additional Information

If you have questions later, you may contact:

Emily M. Gondwe
Department of Population, Family and Reproductive Health
University of Ghana School of Public Health
College of Health Sciences
P. O. Box LG 13, Legon
Mobile: 0503545265
Email: enyagondwe@gmail.com

Your rights as a Participant

If you have any questions about your rights as a research participant, you can contact the Administrator of the Ghana Health Service Ethical Review Committee at the following address:

Hannah Frimpong
GHS-Ethical Review Committee
Research and Development Division
Ghana Health Service
P. O. Box MB 190, Accra
Office: 0302 681 109
Mobile: 024 451 6482
Email: Hannah.Frimpong@ghsmail.org

VOLUNTARY CONSENT

I _____, declare that the above document describing the purpose, procedures as well as risks and benefits of the research titled “AN ASSESSMENT OF QUALITY FOCUSED ANTENATAL CARE AT MAAMOBI GENERAL HOSPITAL” has been thoroughly explained to me in English/Twi/ Ga language. I have been given the opportunity to have any questions about the research answered to my satisfaction. I hereby voluntarily agree to participate as a subject in this study.

Signature or Mark of Participant

_____/_____/_____
Date

If participant cannot read the form themselves, a witness must sign here.

I, _____ was present while the purpose, procedures as well as risks and benefits were read to the participant. All questions were answered and the participant has voluntarily agreed to participate as a subject in this research study.

.....
Signature of Witness

_____/_____/_____
Date

Interviewer’s statement:

I, _____, certify that the nature and purpose, the potential benefits and possible risks associated with participating in the study have explained to the above individual in the English/Twi/Ga language. The participant has freely agreed to participate in the study.

.....
Signature of person who obtained consent

_____/_____/_____
Date

Appendix ii: Consent form for Health Workers in ANC department

Research Title: An assessment of the quality of focused antenatal care at Maamobi General Hospital in Greater Accra region, Ghana.

Principal Investigator:

Emily M. Gondwe, Department of Population, Family and Reproductive Health, School of Public Health, College of Health Sciences, University of Ghana, P. O. Box LG 13, Legon
Contact: Mobile 0503545265; Email enyagondwe@gmail.com

General Information about the study

This is a research study being undertaken by graduate student of the School of Public Health, University of Ghana, as part of the requirements for the Master of Public Health degree. The study seeks to assess pregnant women perception of quality of focused antenatal care. Structural factors and health care workers' practices affecting provision of focused antenatal care at Maamobi General Hospital will also be assessed. Quality of antenatal care is important because it has effects on health status of both the mother and the baby. Studies have revealed that several factors contribute to poor quality of ANC services including inadequate resources, medical supplies and drugs and poor provider-client relationship. In the Greater Accra region, little is known about the quality of ANC services provided to pregnant women. The aim of the study is to assess factors that affect provision of quality FANC services here at Maamobi General Hospital in Accra.

Procedures

Health workers working in ANC department will be asked to participate in the study. The study will involve answering questions from an interview guide about quality of focused antenatal care. An observational checklist will also be used to collect data on structural factors that affect provision of ANC services. If you agree to participate, you will be required to respond to some questions. We will ask you questions about your background and on factors that affect provision of ANC services. The interview is expected to last 40 minutes.

It will be appreciated if you could participate in this study. This is purely academic research which forms part of my work for the award of a Master's Degree in Public Health.

Risks and Discomforts

The procedures involved in this study are non-invasive and will not cause any discomfort to you as a participant. However, we will ask some information about your background and organisational factors that affect provision of quality FANC. Should you feel uncomfortable to respond to some of the questions, you are free to skip some of the questions you are not comfortable responding.

Possible benefits

There is no direct benefits to the participant of the study. However, the information you will provide, will contribute to overall knowledge about quality of FANC offered at this facility. Results of the study may be used to improve antenatal care at the General Hospital.

Voluntary participation and right to refuse

Your participation in this study is voluntary. During the interview you can choose not to answer any individual question or all the questions. Additionally, you are at liberty to withdraw from the study at any time. However, I will encourage you to fully participate in the study since your opinions are important in helping us to assess factors affecting quality of ANC provided at this General Hospital.

Anonymity and Confidentiality

You are assured that whatever information is provided on the questionnaire will be handled with strict confidentiality. Your name or personal identification information will not be published in any report. Information submitted would not be shared with anybody who is not part of the study. Some staff of the research team may sometimes review the research records, but no unauthorized individual(s) will be able to access your information.

Compensation

There is no compensation for participating in this study. However, we will be give you light refreshments to commend you for the participating in the study and also helping us with information on factors affecting quality of FANC services at this General Hospital.

Contact for Additional Information

If you have questions later, you may contact:

Emily M. Gondwe
Department of Population, Family and Reproductive Health
University of Ghana School of Public Health
College of Health Sciences
P. O. Box LG 13, Legon
Mobile: 0503545265
Email: enyagondwe@gmail.com

Your rights as a Participant

If you have any questions about your rights as a research participant, you can contact the Administrator of the Ghana Health Service Ethical Review Committee at the following address:

Hannah Frimpong
GHS-Ethical Review Committee
Research and Development Division
Ghana Health Service
P. O. Box MB 190, Accra
Office: 0302 681 109
Mobile: 024 451 6482
Email: Hannah.Frimpong@ghsmail.org

VOLUNTARY CONSENT

I _____, declare that the above document describing the purpose, procedures as well as risks and benefits of the research titled “AN ASSESSMENT OF QUALITY FOCUSED ANTENATAL CARE AT MAAMOBI GENERAL HOSPITAL” has been thoroughly explained to me in English language. I have been given the opportunity to ask any questions about the research answered to my satisfaction. I hereby voluntarily agree to participate as a subject in this study.

Signature of Participant

_____/_____/_____
Date

Interviewer’s statement:

I, _____, certify that the nature and purpose, the potential benefits and possible risks associated with participating in the study have explained to the above individual in the English language. The participant has freely agreed to participate in the study.

.....
Signature of person who obtained consent

_____/_____/_____
Date



Appendix iii: Structured questionnaire

Respondent ID

--	--	--

UNIVERSITY OF GHANA-SCHOOL OF PUBLIC HEALTH

AN ASSESSMENT OF QUALITY OF FOCUSED ANTENATAL CARE AT MAAMOBI GENERAL HOSPITAL, GREATER ACCRA REGION

Interview date: ___/___/___

Name of Interviewer: _____ --

No.	QUESTIONS	RESPONSES
1	What is your age? (in completed years)	[] []
2	What is your marital status? (Circle one)	1. Married 2. Cohabitation 3. Single/Never married 4. Divorced/Separated 5. Widowed
3	What is your highest educational level? (Circle one)	1. No formal Education 2. Primary/Basic 3. Middle/JHS 4. Secondary/SHS 5. Tertiary
4	What is your religious affiliation? (Circle one)	1. Muslim 2. Christian 3. Traditionalist 4. Other specify ...
5	What is your occupation? (Circle one)	1. Student 2. Apprentice 3. Unemployed 4. Farmer 5. Trader 6. Self employed 7. Government employee 8. Other specify.....
6	Is this your first pregnancy ? (circle one)	1. No 2. Yes
7	About how many times have you visited this facility with this pregnancy? (circle one only)	1. 2nd visit 2. 3rd visit 3. 4th visit 4. Other specify.....
8	How many births (Parity) have you given to before? (circle one only)	1. Once 2. Twice 3. Three times 4. Four times 5. More than four times 6. Not applicable
Providers competence		
9	(a) Did you start ANC clinic (initial visit) at this facility?	1. No 2. Yes
		History type
		No
		Yes

No.	QUESTIONS	RESPONSES		
	(b) If yes, what history did the care provider take from you when you came to the clinic during initial visit? (Probe and circle as many as possible)	1. Personal history	1	2
		2. Social History	1	2
		3. Family history	1	2
		4. Medical history	1	2
		5. Surgical history	1	2
		6. Obstetric history	1	2
		7. History for current pregnancy	1	2
		8. Breast feeding	1	2
10	What examinations does the health care provider perform on you during your stay with her in the room? (Probe and circle as many as possible)	1. Blood pressure 2. Weight 3. Pallor 4. Oedema 5. Breast 6. Fundal height 7. Foetal presentation 8. Listen to foetal heart sound		
11	Were the laboratory tests done when you last visited this facility? (circle one)	1. No 2. Yes 3. N/A		
12	If yes, were the following tests done on you? (circle all that apply)	1. Haemoglobin 2. Grouping and cross matching 3. Rhesus factor 4. VDRL/Syphilis 5. Urine for Protein 6. Urine for glucose (Sugar) 7. HIV testing		
13	Were you given any of the following drugs and immunization ? (Probe and circle as many as possible)	1. Multivitamins (with Iron) tablets 2. Folic Acid 3. IPT/SP/Fansidar 4. TT immunization (Tetanus vaccine)		
14	Have you been educated on any of the following at this facility? (Probe for and circle as many response given)	1. Process of pregnancy and its complication 2. Diet 3. Personal hygiene 4. Danger signs in pregnancy 5. Exclusive breast feeding 6. Harmful habits e.g. drug abuse, smoking, taking traditional medicine 7. Schedule for next visit 8. Plan for postpartum(after-delivery) 9. Effects of STI 10. Effects of HIV 11. Plans for delivery		
15	How will you rate the readiness of the staff to listen to your problems ? (circle one only)	1. Not at all 2. Fairly ready 3. Ready 4. Very ready		

No.	QUESTIONS	RESPONSES
16	How will you rate quality of care provided by staff at this facility? (circle one only)	1. Poor 2. Fair 3. Good 4. Very good
17	Did the health care provider explain the findings or tell you what was wrong with you? (circle one)	1. No 2. Yes
18	Did the health worker explain findings to you in an easy to understand language ? (circle one)	1. No 2. Yes
19	In your opinion, did the health care provider examine you to your satisfaction ? (circle one)	1. No 2. Yes
20	In your opinion, was the health care provider's skills and knowledge adequate to provide care? (circle one)	1. No 2. Yes
Drugs and supplies		
21	Were you given some medications (SP/Fansidar) to take under the observation of the health care provider? (circle one)	1. No 2. Yes
22	Apart from SP/Fansidar, were you given or prescribed other medications ? (circle one)	1. No 2. Yes
23	Were the instructions clear about the drugs you were given or prescribed? (circle one)	1. No 2. Yes
Infrastructural factors		
24	How would you rate the cleanliness of this facility? (Circle one only)	1. Not clean 2. Fairly clean 3. Clean 4. Very clean
25	In your opinion, was the health care provider's equipment adequate for your antenatal care services? (circle one)	1. No 2. Yes
26	In your opinion, is the space adequate for offering of ANC services (circle one)	1. No 2. Yes
27	How would you rate the comfort of the waiting area ? (circle one only)	1. Not comfortable 2. Fairly comfortable 3. Comfortable 4. Very comfortable
Provider-client interaction		
28	How would you rate the amount of time you waited before being attended to? (circle one only)	1. very long waiting time (more than one hour) 2. Long waiting time (30min-one hour) 3. Not long waiting time(20-30min) 4. No waiting time(less than 20 min)
29	Normally, have you been treated with respect by members of staff? (circle one only)	1. No 2. Yes
30	How would you rate the way your privacy was respected during physical examination ? (circle one only)	1. Poor 2. Fair 3. Good 4. Very good

No.	QUESTIONS	RESPONSES
31	How would you rate your experience of getting enough time to ask questions about your care/problems if any? (circle one only)	1. Poor 2. Fair 3. Good 4. Very good
32	To what extent have you been involved in making decisions about your antenatal care? (circle one only)	1. Not involved at all 2. Somewhat involved 3. Involved 4. Very involved
33	Were you able to communicate with providers in privacy (circle one only)	1. No 2. Yes
34	How would you rate the way your personal information was kept confidential? (circle one only) i.e. client folders, laboratory results etc.	1. Poor 2. Fair 3. Good 4. Very good
If the answer to question 27-33 is poor/no/not involved, ask the following question In your own opinion, you think you were NOT treated well by health workers because of your? (circle one for Q34 - 38)		
35	Age	1. No 2. Yes
36	Parity (Number of births)	1. No 2. Yes
37	Social class	1. No 2. Yes
38	Type of problem or illness	1. No 2. Yes
39	Missing appointment date	1. No 2. Yes
Satisfaction		
40	Overall, how would you rate your level of satisfaction with ANC services at this facility?(circle one only)	1. Not satisfied 2. Somewhat satisfied 3. Satisfied 4. Very satisfied
Rating Quality of ANC		
41	In general how would you rate the quality of care you have received during today's visit? (circle one only)	1. Poor 2. Fair 3. Good 4. Very good
42	Would you want to come to this facility again before you deliver? (circle one)	1. No 2. Yes
43	Would you like to deliver your baby at this facility? (circle one only)	1. No 2. Yes

I would like to thank you for your time.

Appendix iv: Observation checklist

An assessment of quality of focused antenatal care at Maamobi General Hospital, Greater Accra Region.

Interview/Observation date: ____/____/____

Name of Observer/ Interviewer:

No.	Item	No	Yes	Remarks
PART A: FACILITY AND SUPPLIES				
1	General infrastructure			
	Cleanliness of the building	1	2	
	Space available in the waiting area	1	2	
	Cleanliness of examination area	1	2	
2	Facilities sanitation			
	Cleanliness of – bathrooms	1	2	
	-Toilets	1	2	
	-Sluice rooms	1	2	
3	Privacy	1	2	
4	Adequate light	1	2	
5	Availability of tables, chairs for daily activities	1	2	
6	Adequacy of examination coaches	1	2	
7	Infection Prevention measures taken			
	Hand washing	1	2	
	Decontamination	1	2	
	Cleaning	1	2	
	High level disinfection	1	2	
	Sterilization	1	2	
	Alcohol spirit swabs present	1	2	
	Antiseptic hand rub present	1	2	
	Gloving	1	2	
	Waste disposal (according to standards?) -sharps in sharp containers -wet waste in a bin with liner -dry waste disposed separately	1	2	
8	Availability of Drugs and supplies			
	Anticonvulsants i.e. Diazepam	1	2	
	Magnesium Sulphate	1	2	
	Anti malarials	1	2	
	Ferrous sulphate	1	2	
	Folic Acid	1	2	
	Albendazole	1	2	
	I.V fluids	1	2	
	Needles and syringes	1	2	
	Availability of cleaning materials	1	2	
	Stationery	1	2	
	Disinfectants	1	2	

No.	Item	No	Yes	Remarks
	Sterile gloves	1	2	
	Disposable gloves	1	2	
	Heavy duty gloves	1	2	
	Soap for hand washing	1	2	
9	Availability of Policies, guidelines and protocols			
	FANC guidelines	1	2	
	PMTCT guidelines	1	2	
	Management of malaria in pregnancy	1	2	
	Management of pre/eclampsia in pregnancy	1	2	
	Reproductive health standards	1	2	
	Infection prevention guidelines	1	2	
	HIV testing in pregnancy	1	2	
10	IEC materials displayed	1	2	
PART B: OBSERVATION OF ANTENATAL CARE PROCESS				
	List number of health workers allocated to ANC clinic by cadre/post			
	Designation of Antenatal service provider			
11	Does the midwife start clinic according to displayed schedule?	1	2	
	Does the midwife greet client respectfully?	1	2	
	Client registered using HMIS	1	2	
	Comprehensive history taking	1	2	
	Social history	1	2	
	Family history	1	2	
	Past medical/ surgical history	1	2	
	Past obstetric History	1	2	
	Past breast feeding history	1	2	
	Information of present pregnancy	1	2	
12	Observation and clinical investigation			
	checks blood pressure	1	2	
	checks weight	1	2	
	observes gait	1	2	
	Prepares materials necessary for examination Ensures	1	2	
	Ensures privacy	1	2	
	Prepares client for physical exam(explains to client)	1	2	

No.	Item	No	Yes	Remarks
	Washes hands before examination	1	2	
13	Conducts head to toe examination	CIRCLE THE APPROPRIATE OBSERVED		
	Head	1	2	
	Conjunctiva for pallor	1	2	
	Neck	1	2	
	Hands	1	2	
	Legs for varicosities and pedal oedema	1	2	
	Vulva inspection for soft tissue	1	2	
	Genital ulcers	1	2	
	Vaginal discharge	1	2	
	Bleeding	1	2	
14	Abdominal Examination	CIRCLE THE APPROPRIATE OBSERVED		
	Inspects abdomen for any abnormalities	1	2	
	Estimates fundal height	1	2	
	Checks foetal presentation	1	2	
	Checks engagement of presenting part	1	2	
	Listens and counts foetal heart sounds	1	2	
	Conducts pelvic assessment (cephalo pelvic relationship at 36 weeks of gestation for primigravida.	1	2	
	Communication with client throughout the procedure and gives her feedback on findings of physical, obstetrical and any other procedures done	1	2	
15	Laboratory Investigation	CIRCLE THE APPROPRIATE OBSERVED		

No.	Item	No	Yes	Remarks
	Blood for			
	- Haemoglobin	1	2	
	- Grouping and cross matching	1	2	
	- Rhesus factor	1	2	
	- VDRL(syphilis)	1	2	
	Urine for			
	- Protein	1	2	
	- sugar	1	2	
	-Acetone	1	2	
16	Breast Examination	1	2	
	Inspection			
	Palpation	1	2	
	Preparation for breast feeding	1	2	
17	Drug & Vaccine Administration	CIRCLE THE APPROPRIATE OBSERVED		
	• SP(IpT-P)	1	2	
	• Folic acid	1	2	
	• Iron sulphate	1	2	
	• Tetanus Toxoid Vaccine	1	2	
	• Sterile procedure followed	1	2	
18	Information and counselling given to client before being examined on any of the following:-	CIRCLE THE APPROPRIATE OBSERVED		
	• Process of labour	1	2	
	• Diet/nutrition	1	2	
	• Minor disorders	1	2	
	• Personal hygiene	1	2	
	• Danger signs in pregnancy	1	2	

No.	Item	No	Yes	Remarks
	• Exclusive breast feeding	1	2	
	• Harmful habits	1	2	
	• Smocking	1	2	
	• Drug abuse	1	2	
	• Alcoholism	1	2	
	• Traditional herbs to induce labour	1	2	
	• Plans for place of delivery	1	2	
	• Post natal care	1	2	
	• Schedule for next visit	1	2	
	• Effects of STI, /HIV/AIDS	1	2	
19	Does the midwife refer at risk client with abnormal findings to next level of care?	1	2	
20	Does the care provider schedule and communicate to client date of next visit?	1	2	
<p>INTERVIEWER: PLEASE RE-VISIT ALL QUESTIONS LEFT BLANK. MAKE SURE ALL QUESTIONS HAVE BEEN FILLED.</p>				



Appendix v: Ethical approval letter

GHANA HEALTH SERVICE ETHICAL REVIEW COMMITTEE

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



*My Ref. :GHS-ERC: 3
Your Ref. No.*

Research & Development Division
Ghana Health Service
P. O. Box MB 190
Accra
Tel: +233-302-681109
Fax + 233-302-685424
Email: Frimpong@ghsmail.org Hannah.

23rd March, 2015

Gondwe Emily
School of Public Health
University of Ghana
Legon, Accra

ETHICAL APPROVAL - ID NO: GHS-ERC: 60/02/15

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

“Assessment of Quality of Focused Antenatal Care at Maamobi General Hospital in Greater Accra Region, Ghana”

This approval requires that you inform the Ethical Review Committee (ERC) when the study begins and provide Mid-term reports of the study to the Ethical Review Committee (ERC) for continuous review. The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Please note that any modification without ERC approval is rendered invalid.

You are also required to report all serious adverse events related to this study to the ERC within seven days verbally and fourteen days in writing.

You are requested to submit a final report on the study to assure the ERC that the project was implemented as per approved protocol. You are also to inform the ERC and your sponsor before any publication of the research findings.

Please note that this approval is given for a period of 12 months, beginning March 23rd 2015 to March 22nd 2016.

However, you are required to request for renewal of your study if it lasts for more than 12 months.

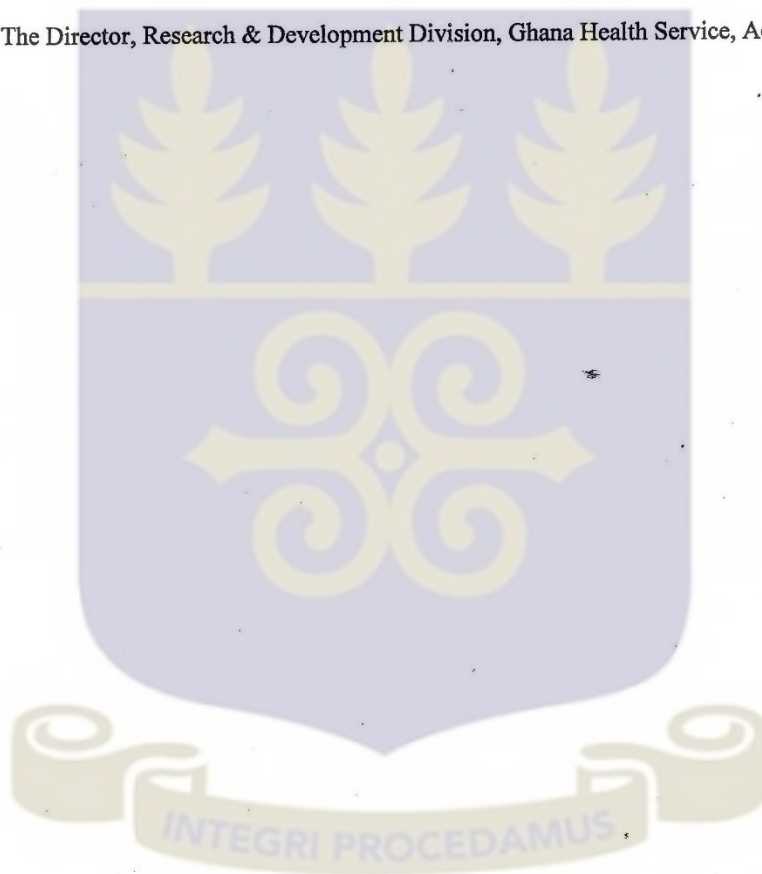
Please always quote the protocol identification number in all future correspondence in relation to this approved protocol

SIGNED.....



DR. CYNTHIA BANNERMAN
(GHS-ERC CHAIRPERSON)

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



Appendix vi: Approval letter from Regional Health Directorate

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

*My Ref No GAR ADM. 03
Your Ref. No.*



Ghana Health Service
Greater Accra Regional Health
Directorate
P O Box 184
Accra.

MAY 19, 2015

Tel.0302 – 234225

THE MEDICAL SUPERINTENDENT
MAAMOBİ GENERAL HOSPITAL
GHANA HEALTH SERVICE,
ACCRA

INTRODUCTORY LETTER - MS EMILY GODWE
UNIVERSITY OF GHANA – SCHOOL OF PUBLIC HEALTH

This serves to introduce to you the above named student who has been granted permission to use your facility for her Research on the topic; "Quality of Focused Antenatal Care in Greater Accra Region.

Attached is an introductory letter from the university for your perusal.

Please assist her.

Thank you.

A handwritten signature in black ink, appearing to read "Peter Mensah", is written over a large, faint watermark of the University of Ghana crest.

MR PETER MENSAH
AG. REGIONAL DIRECTOR OF HEALTH SERVICES
GREATER ACCRA REGIONAL HEALTH DIRECTORATE
ACCRA

Appendix vii: Introductory letter from the District Directorate

==

*In case of reply the
Number and date of this
letter should be quoted.*

My Ref. :AM/
Your Ref. No.



Metro Health Directorate
Ghana Health Service
Private Mail Bag TUPM 14
TUC Post Office
Accra

Tel: (Main Line) 233-21-665879
(Direct Line) 233-21-687000
(Fax) 233-21-680575
Email:
accrametrohealthdirectorat@yahoo.com

October 13, 2014

The Sub-Metro Director
Ayawaso Sub-Metro
Accra

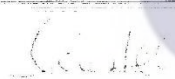
Dear Sir/Madam,

LETTER OF INTRODUCTION

MS EMILY GONDWE

With reference to the attached letter introducing the above-mentioned Master of Public Health Student of School of Public Health, you are kindly requested to accord her the necessary assistance to enable her undertake her research work.

Thank you.


DR GEORGE MENSAH
ACCRA METRO DIRECTOR OF HEALTH SERVICE

INTEGRI PROCEDAMUS