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DETERMINANTS OF CONTINUITY OF CARE AMONGST PREGNANT WOMEN IN TWO MUNICIPAL HOSPITALS IN GREATER ACCRA REGION

BY

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DECLARATION

I, Dekpor Philip Kwaku, state that, except for the investigations of other people who were duly recognized, this thesis is the result of my own original research conducted and that it was not presented in whole or in part for a different degree in this respect.

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DEDICATION

I humbly dedicate this dissertation to Almighty God for guidance and how far He has brought me and to my mother, Madam Comfort Bosrotsi, for her support and love.

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ABSTRACT

Introduction: In the past two decades, maternal mortality ratio in Ghana has been on the decline but rather at a slow pace. Patronage of skilled birth assistance is still met with skepticism and this brings about gaps in maternity care. Pregnant women still seek care from the informal health sector while evidence suggests that some pregnant women changed their regular antenatal care provider during ANC and delivery. However, factors that influence continuity of care and the reasons for some pregnant women switching care provider during ANC and delivery have not been explored in Ghana. This research sought to find the determinants of Continuity of Care (CoC) amongst pregnant women and reasons pregnant women switch providers during ANC

Method: A systematic sampling method was used for this quantitative study. Questionnaires were administered to mothers attending postnatal clinics at La General Hospital and Lekma Hospitals in the La Dade Kotopon and Ledzokuku-Krowor Municipalities respectively. Usual Provider Continuity of Care (UPC) Index was calculated for each woman and Chi square, student t-test and logistic regression were used to determine associations of the various factors and continuity of care using STATA 15.

Results: There were 325 participants with age ranging between 15 to 49 years. A third had SHS education (33.9%), self-employed (53.5%) and with household income less than 1000 GH Cedi a month. Average UPC was 0.943 with 15.6% of the women switched providers during ANC while 84.3% maintained only one provider throughout the pregnancy. Performance of cultural rites after delivery (aOR=3.03, 95%CI=1.2-7.64), history of abortion (aOR=1.95, 95%CI=1.01-3.77) and absence of family members during ANC (aOR=2.62, 95%CI=1.28-5.34) were significantly associated with CoC after controlling for various factors in a multivariate analysis.

Conclusions: Though majority of participants had perfect CoC those who decided to switch care from their regular ANC provider, did so mostly due to self-made decisions.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ANC	Antenatal Care
CHPS	Community-based health planning services
CoC	Continuity of Care
GDHS	Ghana Demographic Health Survey
GHS	Ghana Health Service
GSS	Ghana Statistical Service
MFPC	Most Frequent Provider Continuity
MDG	Millennium Development Goal
MOH	Ministry of Health
MMR	Maternal Mortality Ratio
NHIA	National Health Insurance Authority
NHIS	National Health Insurance Scheme
SDGs	Sustainable Development Goals
TBA	Traditional Birth Attendance
UPC	Usual Provider Continuity
WHO	World Health Organization

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background

Continuity of Care is a "core value" of patient care, especially in primary care medicine. Continuity of Care involves particular healthcare providers and institutions giving treatment to patients at a consistent time and place. It can also involve a healthcare team that provides long term professional care to patients with effective communication and sharing of information. (Dreiher et al., 2012)

Continuity of care can also be defined as a relationship between a caretaker and a patient which is characterized by efficient patient-physician relationship including effective communications, mutual understanding, a sense of responsibility, trust-building and a better quality of life. It also includes a good sense of clinical identification, examination, diagnosis and treatment if illness. (Reid, Haggerty, & McKendry, 2002a). It has been observed that continuity of care helps with chronic illnesses and improves maternal care outcomes. Furthermore, continuity of care is associated with better out comes of patient with long standing illness and safe delivery by mothers. There is also higher adherence to medications, proper screening practices, enhanced precautionary medical services and follow-up review sessions. Also instances of recurrent hospital admissions emergency room (ER) visits and hospital stay duration is reduced. (Koopman, Mainous, Baker, Gill, & Gilbert, 2003).

The maternal mortality ratio in 2015 stood at 216 maternal deaths per 100,000 live births worldwide. In line with achieving SDG goals by 2030 which is achieving 70 maternal deaths, there has to been an annual reduction rate of 7.5%. This is more than double the annual rate

achieved between 2000 to 2015. Live births in 2016 was 78% and most benefitted from skilled care during delivery compared to the year 2000 which had 61% due to lack or reduced number of skilled personnels associated with births. Of the 78% live birth recorded globally, sub-Saharan Africa had the least with an abysmal 53% of live births. This shows there is a lot of work to be done with regards to reduction of maternal mortality ratio by the year 2030 (United Nations, 2017).

In terms of maternal mortality, Ghana has not made enough strides at reducing it. In 2013 when Ghana‟s population was over 25.9millon, the UN estimated Ghana had 3.100 dying of reasons related to pregnancy and childbirth. From 1990 to 2013 the maternal mortality fell from 760 to 380 per 100, 000 live births. It was projected to fall further to 358 per 100,000 live births in 2015 but this is inadequate compared to SDG target of 70 maternal deaths per 100,000 live births (Lalonde, 2016).

In 2007, The Ghana Maternal Health Survey showed that women who did not have skilled birth attendance during delivery did not find it necessary to attend ANC during pregnancy. i.e 32% of half the women interviewed Worthy of note, is the fact that those who fail to patronize any healthcare facility during ANC and delivery (home delivery) and those who do not find it necessary all end up delivering without the required healthcare supervision. This is a sad reality which merits an indepth understanding of the various factors impeding the utilization of facility based health services (Ghana Statistical Service, Ghana Health Service, & Macro International Inc, 2009).

Antenatal care coverage is high in Ghana and a lot of efforts by the government and Non-governmental organizations to keep it at that is always ongoing. The problem is that many

pregnant women seek healthcare from different sources resulting in different exposures to different health personnels. They change facilities due to negative perceptions and interpretations resulting from poor quality of services rendered to them at most health facilities they attended. Amongst the major factors is socio-cultural environment that plays a major for care seeking behavior. (Dako-gyek et al, 2013).

The discontinuous use or patronage of health facilities during pregnancy and delivery warrants an in-depth investigation into the various factors contributing to this gap created. Socio-cultural perceptions which in the long run determine whether a pregnant woman will use a health facility needs to be investigated. These perception include medical, spiritual and psychosocial. Previous studies have focused much attention on rural communities and left urban settings out (Gyimah, Takyi, & Addai, 2006).

However current studies show pregnant women both urban and rural and not patronizing healthcentres as expected of them (Young et al, 2012). Continuity of care can be used as a valuable tool in curbing possible increase in maternal mortality ratio being recorded. Therefore, this research sought to have a peri-urban insight on the contributory factors by focusing on the determinants of Continuity of Care amongst pregnant women in Accra.

1.2 Problem Statement

In 2015, 358 maternal deaths were recorded for every 100,000 live births in Ghana. With a SDG3 target of 70 maternal deaths per 100,000 live births, this is still considerably higher than expected (United Nations, 2017)

The Greater Accra Region recorded the highest maternal deaths in 2016, with bleeding and hypertension being the leading causes. In 2015, the Greater Accra region recorded 208 maternal deaths representing 117 per, 100,000 live births; while in 2014, it recorded 204 cases, representing 189.3 per 100,00 live births. A total of 955 maternal related deaths was recorded in Ghana in 2016 (GHS, 2016).

Also, current models for antenatal care desire a minimum of eight contacts with health personnel. This is recommended to improve women‟s experience of care and reduce perinatal mortality. A small group of health workers or midwives or doctors are encouraged to see a pregnant woman through her time of delivery, antenatal visits, intrapartum sessions and finally time of delivery. This would help reduce maternal mortality in different parts of the world. (World Health Organisation, 2014).

Unpublished results of a study in the Volta Region showed that 42% of pregnant women had multiple healthcare providers from conception to delivery. Also 26% of pregnant women switched from their regular ANC provider during delivery (Dery, 2017)

Most maternal deaths occur during labour and delivery and it is at ANC, labour and delivery stage that some women decide to switch care from their regular facility. Factors that influence continuity of care and the reasons why such women decide to switch care providers at the ANC are necessary to help deal with the maternal mortality in Ghana.

This study therefore sought to quantify the level of CoC during ANC, determine the proportion of pregnant women who switched their regular ANC provider during pregnancy, determine factors associated with switching providers during ANC and determine perception of continuity of care amongst pregnant women in two municipal hospitals in Greater Accra Region.

1.3 Justification

Maternal and child mortality is high in Sub – Sahara Africa, especially where most of the diseases or sickness should be preventable. When pregnant women report at the antenatal clinics and are screened, pregnancy related abnormalities would be detected and dealt with thereby reducing the chances for the mother losing her life and that of the baby. This will intend bring down the maternal mortality ratio to the barest minimum to achieve single digits where possible.

Maternal mortality rate (MMR) is the annual number of female deaths per 100,000 live births from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes. The MMR includes deaths during pregnancy, childbirth or within 42 days of termination of pregnancy, irrespective of the duration and the site of the pregnancy for a specified year (World Health Organisation, 2014). Ghana has made strides in reducing the MMR from 580 in 1990 to 358 in 2015. However, the maternal mortality ratio is still high as compared to countries such as Estonia 2, Greece 3, Sweden 4, Japan 5, USA 21, Tunisia 56 and Libya 58. These figures show there is the need to investigate further and find out the role CoC has to place in reducing the numbers especially in Ghana.

The Country Action Plan for Maternal Health and Ghana Health Service published the Millennium Development Goal Acceleration Framework in 2011. In the report, it was noted

Greater Accra Region was the only region with a worsened maternal mortality ratio since 1992. This was partially attributed to poor health seeking behaviour amongst pregnant women. The basis for this unexpected outcome is not well understood and needs to be considered. Data shows a similar trend of slow decline in all administrative regions, except in Greater Accra where the maternal mortality ratio has gone in the reverse direction (MOH, 2011).

Studies have shown that a lot of factors determine whether a pregnant woman will continue her ANC and delivery at the same health facility. These factors range from demographic factors, socico-economic factors, healthcare related factors, socio-cultural beliefs and knowledge about pregnancy related complications. These factors play a direct bearing on CoC of the pregnant woman at a particular health facility. This will in the long run help reduce maternal mortality in Ghana. With improved CoC at the same facility healthcare providers will be rendered the chance to monitor and keep to date the progress of each woman‟s pregnancy. It also gives the pregnant woman the needed confidence to confide in the health care providers. By so doing there is synergistic collaboration which in the long run helps improve pregnant women‟s health care and reduce pregnancy related mortalities and morbidities.

This research sought to find the determinants of Continuity of Care amongst pregnant women and reasons pregnant women switch providers during ANC in two municipal hospitals located in the La Dade Kotopon and Ledzokuku-Krowor Municipalities in the Greater Accra Region of Ghana.

1.4 Research Questions

1. What proportion of pregnant women attending ANC switch providers during ANC?
2. What are the factors associated with switching providers during ANC.
3. What are the perceptions of pregnant women regarding continuity of care during pregnancy

1.5 General Objectives

This study sought to find the determinants of Continuity of Care amongst pregnant women and reasons pregnant women switch providers during ANC in two municipal hospitals in the Greater Accra Region.

1.6 Specific Objectives

- To quantify the levels of CoC during ANC.
- Determine the proportion of pregnant women who switched their regular provider during ANC.
- Determine factors associated with switching providers during ANC.
- Examine the perceptions of continuity of care amongst pregnant women.

1.7 Conceptual Framework

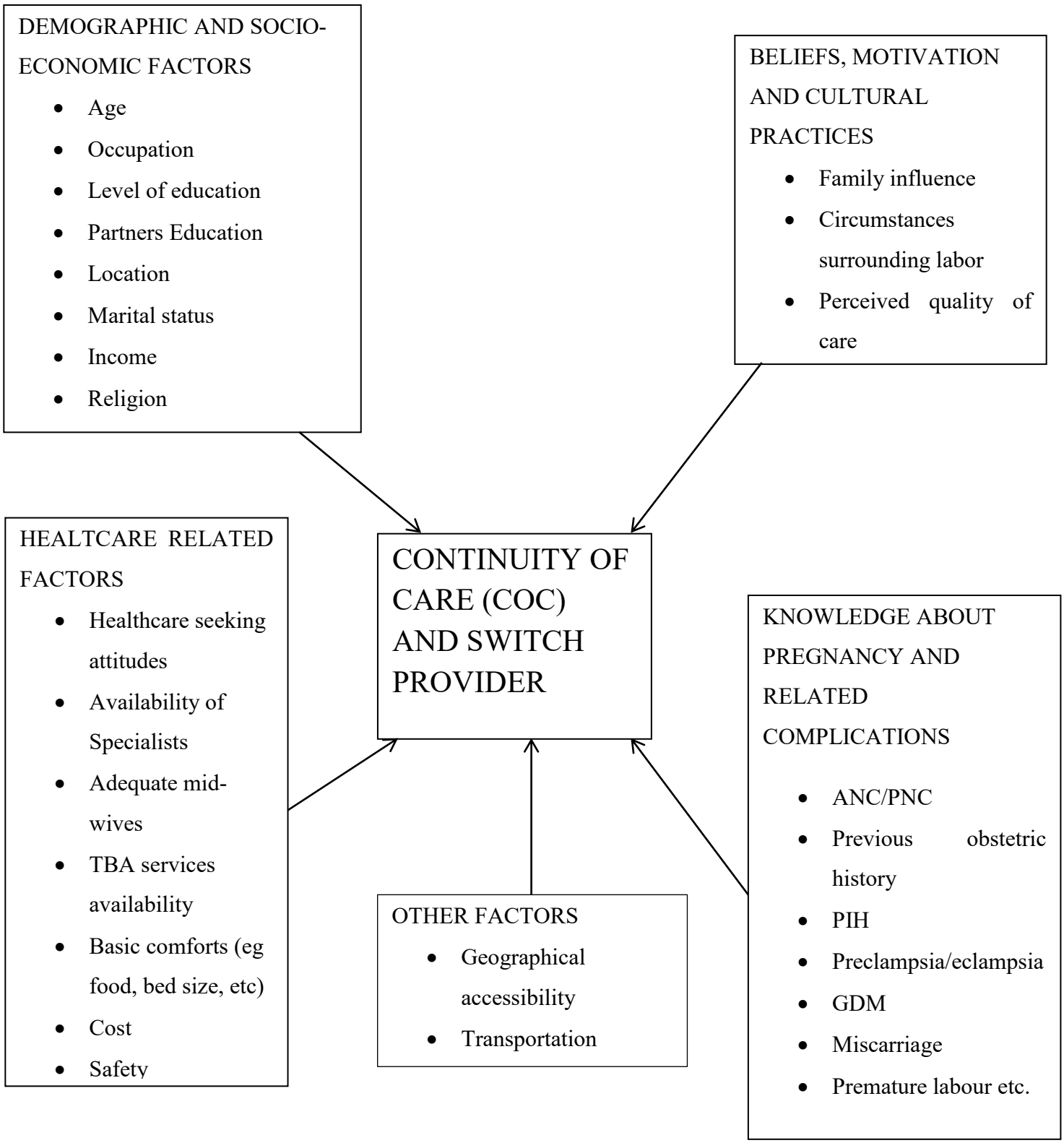

Figure 1. Conceptual Framework: determinants of continuity of care amongst pregnant women

Continuity of Care amongst pregnant women is influenced by several contextual and broad health related factors. The factors for this study have been compressed in a conceptual framework as shown in Figure 1 above.

The outcome or dependent variable is Continuity of Care (CoC). A lot of factors play a direct influence on CoC and these have been highlighted accordingly.

A pregnant woman‟s demographic and socioeconomic status plays a role in decision making when it comes to CoC. For age, a younger person might seek advice from and elder person. A person‟s occupation might influence decision making to continue or stop healthcare at a facility. A person‟s level of education, location, marital status and partner‟s educational background may also play a significant role in decision making pertaining to CoC.

A pregnant woman‟s beliefs and motivations have a direct bearing of CoC. Her religious affiliation, family influence (supportive care) and circumstances surrounding labour may also play a direct role. In addition her perceived quality of care she‟s getting from her present ANC will also have a direct bearing.

Her knowledge about pregnancy and its related complications can also play role in deciding to switch or continue care at her normal facility. Education at ANC or previous PNC, previous obstetric history and previous episodes of pregnancy related complications might influence decision to CoC.

Healthcare related factors such as health seeking attitude of pregnant woman, experience with previous consultations, availability of obstetricians and gynecologist, midwives and Traditional birth attendants (TBAs) at a health facility may also play a major role. In addition, the nature of the pregnancy (progressing normally or complicated) can also influence CoC. Basic comfort

needs such as type of food being served, bed size, absence of hot water for mother and baby also deter women from delivering at a particular health care facility.

Other factors that play a substantial role are Geographical accessibility and transportation. If the location of the pregnant woman is far from health facility she might opt for home birth or TBA near to her home. Bad road conditions also play a role in case of referrals if need be.

All these independent factors have been captured in Figure 1 to help us understand fully the problems associated with continuity of care.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction to Continuity of care and Types

Continuity of care is defined in primary care as a vital relationship between a patient and a single practitioner that extends or goes beyond specific occurrence of disease or illness. (Hjortdahl et al, 1990). It has to do with set out agreement or contract between a patient and health provider which creates a sense of loyalty and affiliation between both parties. (Haggerty et al., 2003). There are different types of affiliations of continuity of care. These are longitudinal, relational and personal. It helps to improve trust, communication and a sustained sense of responsibility between patient and practitioner (Crawford et al, 2004)

Two core elements are associated with continuity of care. This has to do with care over a particular period of time and focus on the patient as an individual. There are basically three (3) kinds of continuity of care: Relational, Management and Informational (World Health Organization (WHO), 2011) Each one of them plays a specific role and its importance is based on providers and the context of care, and can be analyzed based on disease focused perspective or person focused perspective.

- Informational continuity: Information can be person or disease focused. Information has to do with common facts or sequence linking care from one healthcare event to another or from one provider to another. A well-documented information has to focus not only on a patient‟s medical condition, but record issues concerning patient‟s values, preferences and context. It is responsible to bridge gaps between separate care events and ensuring services

are responsive to needs. This memory is usually accumulated by health providers who interact regularly with the patient (Haggerty et al., 2003).

- Management continuity: This is normally used to describe chronic or complex clinical illnesses that involve management from several providers who could potentially work at cross purposes. When services are delivered in a timely and complementary manner it can be described as continuity has been achieved. Shared management plans or care protocols facilitate management continuity, providing a sense of predictability and security in future care for both patients and providers. An important aspect of management is adapting care to possible changes in an individual‟s needs and circumstances. In management continuity both consistency and flexibility are crucial since long term effect is of importance. (Haggerty et al., 2003)
- Relational continuity: This bridges the gap between past and present care of patients. It also serves as a link between current care and future care. This practice is most valued in primary and mental healthcare in general. In circumstances whereby there is little expectation of establishing ongoing relationship with multiple caretakers or health professionals, a consistent core of staff provides patients with much needed sense of coherence, predictability and comfort. (Haggerty et al., 2003).

There is a high sense of satisfaction when continuity of care is carried out to its full effect. Continuity of care plays a major role in different spheres of patients‟ lives. Categories of patients affected are diverse including long standing chronic illnesses (especially elderly people), those taking many medications and individual with restricted social support in their homes and community at large. Illiterates are also covered since they have a low educational attainment.

Many patients are concerned about easy accessibility to healthcare facilities rather than having a good continuity of care (Van Servellen et al, 2006).

When there is a good bond between patient and health care provider it leads to improved relationship between patient and doctor thereby building up trust, better interactive understanding, effective relay of information, sense of adherence and desired healthcare outcomes. This includes proper examination , diagnosing and treatment if ailments (Sandal et al., 2013). Continuity of care is also associated with improvements in the management of patients with chronic diseases and the results of care for pregnant women, higher rates of compliance with medication, the performance of screening tests, the receipt of medical services preventive and follow-up visits, low hospital admissions, repetition of hospitalization, emergency visits (ED) and the duration of hospitalizations. It was observed for geriatric patients with chronic illness such as hypertension, diabetes, asthma, heart failure etc. and required a certain amount of hospitalization (Saultz & Lochner, 2005).

2.1 Maternal mortality issues worldwide and Ghana

Sub-Saharan Africa (SSA) shows a high predominance when it comes to maternal mortality issues. SSA accounts for about 62% of global maternal deaths. To illustrate better, 1 in 160 mothers in SSA are susceptible to maternal deaths compared to 1 in 3700 mothers in high income earning countries. It has also been observed that for each maternal demise or death, another 30 mothers suffer from pregnancy related co-morbidity (World Health Organization (WHO), 2015)

Most pregnancy and childbirth related deaths still account for the high maternal mortality index worldwide (especially direct consequences). The main causes are maternal hemorrhage, sepsis and hypertensive related complications. (Ronsmans & Graham, 2006).

Over the years, Ghana has adopted and implemented a number of schemes and measures targeted at improving the health of the mother and child in the country. Among them are the services of the National Policy on Population, Family Planning (FP) and Maternal and Child Health (MCH), the development of a national safe motherhood program, policies and standards for reproductive health services, prevention of mother-to-child transmission of HIV and Teenage reproductive Health (Odoi-Agyarko, 2003).

In terms of maternal mortality, Ghana has not made enough strides at reducing it. In 2013 when Ghana‟s population was over 25.9millon, the UN estimated Ghana had 3100 dying of reasons related to pregnancy and childbirth. From 1990 to 2013 the maternal mortality fell from 760 to 380 per 100, 000 live births. It was projected to fall further to 358 per 100,000 live births in 2015 but this is inadequate compared to SDG target of 70 maternal deaths per 100,000 live births by 2030 (Lalonde et al, 2016).

Qualified skilled health personnels who provide antenatal care during pregnancy of women help to curb the rate at which maternal mortality increases. This care is provided during pregnancy, during delivery and finally after she delivers i.e postpartum (within 42 days after delivery). A survey done by GDHS on women who gave birth five years prior to 2014 showed a lot of significant statistics. Majority (97%) of the women received some form of prenatal care from a certified health professional prior to the survey at least once. Additionally, 9 out of 10 women had 4 or more visits to their designated ANC clinic. Urban dwelling women were more likely to

received care from health personnel (99% and 96% respectively). Also 93% of urban dwelling women had 4 or more ANC visits compared to 82% recorded for rural dwellers. Over the past 2.5 decades the percentage of women receiving antenatal care before delivery has increased from 82% in 1988 to 97% in 2014 which was a significant and marked improvement. (Ghana Statistical Service, 2014).

A large proportion of maternal and neonatal deaths occur during the first 48 hours after delivery. Thus, prompt postnatal care (PNC) for both the mother and the child is important to treat any complications arising from the delivery, as well as to provide the mother with important information on how to care for herself and her child. After child birth it is recommended by safe motherhood programs to have a comprehensive review of women 48hrs after child birth (Ghana Statistical Service, 2014).

Significant factors that can prevent women from using health care services were found to be mostly structural factors. These included lack of economic or financial will power, transportation and supplies and general nonexistence of coordination in referral system between midwives at the community level (Ten Hoope-Bender, Liljestrand, & MacDonagh, 2006). Also, the study by Simkhada et al (2008) identified cultural beliefs and perceptions about pregnancy as key indicators deciding on whether mothers will attend ANC during pregnancy. This was a systematic review based on analyzing determinants of antenatal care in developing countries. Care of the pregnant woman is a multifaceted endeavour involving medical, psychosocial, economic and spiritual support (Simkhada, Teijlingen, Porter, & Simkhada, 2008)

Midwife-led continuity of care was associated with several benefits for mothers and babies, and had no identified adverse effects. The main benefits were a reduction in the use of epidurals, with

fewer episiotomies or instrumental births. Women‟s chances of being cared for in labour by a midwife she had got to know, and having a spontaneous vaginal birth were also increased (Sandall et al., 2013).

It was observed that there was no preterm birth or death of babies before 24 weeks gestation when they had the chance to pass through the hands of a skilled midwife. There was no significant difference between first and second trimester pregnancies (Sandall et al., 2013).

Ghana has not made sufficient progress in reducing maternal mortality. The United Nations estimates that in 2013, when it was estimated that the country's population is more than 25.9 million people, due to pregnancy and childbirth, 3,100 women died. Between 1990 and 2013, maternal mortality declined from 760 to 380 per 100,000 live births and is expected to decline. By 2015, the number of deaths per 100,000 live births is 358. However, this is still much higher than the SDG and MDG target of 190 per 100,000 live births.(United Nations, 2017).

The Greater Accra Region recorded the highest maternal deaths in 2016, with bleeding and hypertension being the leading causes. In 2015, the Greater Accra region recorded 208 maternal deaths representing 117 per,100,000 live births; while in 2014, it recorded 204 cases, representing 189.3 per 100,000 live births (GHS, 2016).

In 2011, the Ghana Health Service issued the Ghana Maternal Health Millennium Development Goals Acceleration Framework and National Action Plan. This report had Greater Accra Region being the only region to have a worsened state of maternal mortality since 1992. This outcome needs to be well understood and researched into since it might form the basis for understanding health seeking behaviours in that region of Ghana. Same data detected slow decline in maternal mortality ratio in the other administrative regions. (MOH, 2011).

2.2 Factors that influence health seeking behavior

Studies have shown a number of factors influence the continuity of care by pregnant women at a particular health facility. These factors include: socio-demographic background, beliefs and cultural practices, knowledge about pregnancy related complications, healthcare related factors and perception of continuity of care. The factors can further be expanded to place of residence, family decision-making regarding place of delivery, ANC attendance, socio-economic status (SES), trimester of pregnancy, age of woman, parity, transport, placenta disposal, delivery position, complication at last delivery, age of pregnancy, levels of education of the woman, religion and her partner, and valid health insurance (Ghana Statistical Service, 2014)

Demographic factors: Significant low parity index have been found to increase the patients probability of healthcare attendance (Magadi, Madise, & Rodrigues, 2000). Also young mothers with above average educational levels has been observed to increase ANC attendance (Gyimah et al., 2006). It is assumed a high maternal age is associated with accumulation of much needed experience to mark increased attendance to hospital care during pregnancy. On the contrary young mothers are being exposed to early education which preempts them to early exposure about maternal health issues and gives them a better understanding of the essence to visit the hospital more during pregnancy this helps them place more emphasis on modern medicinal practices.

Community beliefs and norms: Culture is the way a group of people live. Community beliefs tend to mould the mindset of the individual and give them a certain level of desire and exuberance to seek medical healthcare during pregnancy. These beliefs and norms are community bound and in turn shape the way a person will view their action or how even the general community views their action as being right or wrong. A lot of misconceptions and false

beliefs are associated with health facilities in India. This resulted in women not willing to trust the health facilities to safely deliver their children. This leads to reluctance to attend the needed ANC (Rutenberg and Watkins, 1997). A study of women in Zambia who considered themselves to be *'mbusas',* or traditional birth assistants (TBAs) advised labouring childbearing women on the appropriate cultural childbirth practices as well as proper ways of disposal of placenta and assisted with deliveries at home. They also advised women on the use of traditional medicine, for example, to widen the birth canal and to precipitate labour. If something went wrong during labour, they relied on traditional beliefs and witchcraft to explain the mishap and expected the woman in labour to confess her purported „bad" behavior (Maimbolwa, Yamba, Diwan, & Ransjö-Arvidson, 2003). According to Van Eijk *et al* (2006), 14% of women in their study desisted from seeking antenatal service and rather preferred making their own arrangement with TBAs or experienced old folks when the their time of delivery is due. If previous home deliveries occurred without any problem they would not see the need to deliver at the health facilities taking cost and distance to the facility in consideration.

Geographical distance: This plays a major role in accessing healthcare in general. It is a major deciding factor influencing choice of delivery centre or even whether to attend ANC during pregnancy from a study done in Uganda (Tegegne,et al, 2018). Also observed in Madagascar was a study whereby there was low patronage of health facilities by pregnant women of rural setting due to distance issues. The disparity in distance made it difficult for women to assess healthcare easily for those in the rural settings (Brinkerhoff & Keener, 2003).

Cost of health care plays a significant role as general fees hinder women"s use of reproductive healthcare, prevent them from delivering in health facilities and reduce the likelihood of seeking healthcare during complications (Reid, Haggerty, & McKendry, 2002b). Though regular fees

might be low or nonexistent, there may be informal or miscellaneous costs that are significant barriers to a pregnant woman accessing health care. These costs include transportation cost to health facility, food or lodging for the woman and accompanying relatives, medications and payments made to health personnel and staff at the health facility (Haggerty et al., 2003). Medical expenses account for the largest share of total costs; mainly Ghana‟s medicines and medical supplies and delivery costs. Payments related to spontaneous vaginal delivery account for at least 2% of annual household cash outlays for both households. In the case of obstetric complications, Benin‟s annual household cash outlay costs rose to 34% (Borghi, Ensor, Somanathan, Lissner, & Mills, 2006). Thus, childbearing has become a huge economic burden on people since scarcity of money can deter them from visiting healthcare during pregnancy.

Personnel attitudes: The general attitude or perceived attitude of health perssonels plays an important role in ANC attendance. Health facilities in Benin are noted for not allowing patients to ask questions about their health. They end up being rude or humiliating patients who ask too many question when they attend the clinic **(**Grossmann-Kendall, Filippi, De Koninck & Kanhonou, 2001).

Age of mother: It is believed the older a woman is the better she is at attaining the necessary experience in terms of knowledge. This then guides her to prefer going to the clinic when she gets pregnant. Due to recent increase in girl child education more younger aged mothers would be privileged to have firsthand information and thus avail themselves to health care facilities during pregnancy (Joseph Sina, Lucy Iyabo, & Ayodele, 2014).

Parity: Evidence supports that increase in order of pregnancy has a strong association with average ANC attendance at healthcare facilities (Lundberg & Svaleryd, 2016). Most first

pregnancies are met with a lot of safety and being on guard to prevent any miscarriage. This intend leads to the pregnant woman attending clinic regularly during her ANC. An individual‟s finances can be gravely affected with childbirth or more children. This puts a lot of stress on them financially and most women would not try going to hospital due to cost and would be time constrained to even attend the necessary number of ANC services. (Mungai, 2015)

Mother's education: a pragmatic impact of a woman‟s education is high likelihood of hospital attendance when pregnant. A better educated woman is aware of the pros and cons surrounding pregnancy and would try her best to avoid anything that would compromise her health during this period. She also has better information about the health services and her health problems and would encourage her to attend the hospital. Higher education is normally associated with high economic status and would aid the woman ignore cost and attend a health facility when pregnant with money not being a hindrance (Mungai, 2015).

Household income: most household have the husband being the bread winner. The higher the earning power of the husband the much likely the woman would attend ANC since cost will not be a reduced determinant The man‟s income and occupation determines the social status of the family as a whole in society. Attitudinal changed towards healthcare has generally been observed to be influenced by occupational status (Joseph Sina et al., 2014)

Information on health issues: Getting information about health issues can increase the utilization of your services. In developing countries, the media is the main source of information, including health information. Women who access more information about health issues through electronic and print media tend to make better use of health care than women who do not have access to information (Zhu et al., 2017)

Religion: This has been found to be strongly related to the patronage of pregnant women in medical institutions. It turns out that most Muslims do not have medical facilities during ANC or delivery. (Shariff, 2002). Other studies have however brought to light that religion has no significant role in determining utilization of these services in Ghana. (Overbosch, Nsowah-Nuamah, van den Boom, & Damnyag, 2004).

Cultural rites: In Ghana cultural rites performed after safe delivery brings a lot of prestige and honour to a woman who delivered. The outdooring ceremony is marked by gifts and merry making. The infertile woman normally urinates on the ground where the placenta was buried to help restore her fecundity. Studies also done showed a strong association between health seeking behaviors of pregnant women and cultural rites performed after delivery (Farnes et al, 2011)

2.3 Factors influencing Continuity of care

Each type of continuity of care is influenced by factors such as demographic factors, patient and healthcare professional factors, patient-healthcare professional relationships, inter-professional factors, role of receptionists and organizational factors.

Demographic factors: Most patients in the United States preferred sticking to one practitioner provided travelling to the health centre was accessible (McDougle, Gabel & Stone, 2005). This was contrary to a study in Australia where geographic distance was not the sole determinant when it came to patients being comfortable seeing the same practitioner (O"meale, Burley & Kelly, 2002). Those who change location often and most likely on the move have low inclination to keeping contact with the same practitioner (Alazri et al, 2007).

Patient and healthcare professional factors: patients sometimes are more inclined to choosing a particular healthcare provider due to the nature of their problem. Most female patients would want to see a female obstetric-gynecologist about issues pertaining to them (Fleming, 2000). If a patient has close affinity towards a particular doctor, they will prefer seeing them (Alazri et al, 2007). Study done in Netherlands showed that even though most patients saw their doctors regularly, they declined seeing them when it came to cases they deemed not serious (Schers et al, 2002). Also General Practitioners (GPs) who are full time at their facility experienced higher continuity of care with their patients as compared with those on part-time basis (Murray et al, 2000). Every General Practitioner see the need for continuity of care but its practicality is deemed unrealistic since GP availability cannot be guaranteed at any time. This can be addressed by other GPs in the same faculty i.e team continuity (Schatnner, 2001).

Patient-healthcare professional relationship: Trust and confidence plays a major role in CoC. Patients who exhibit trust with their practitioners have constant and prolonged CoC with their practitioners (Levinson et al, 2002). High patient satisfaction index has been recorded for patients who experience relational and longitudinal continuity (Hjortdahl, & Laerum, 1992).

Inter-professional factors: there exist multiple providers of health and this makes continuity with one provider difficult. If there is good inter-organizational communications (continuity of information) amongst the facilities, it would enhance CoC (Fleming, 2000).

Role of receptionists: receptionist are at the forefront of most organizations. They tend to have first contact with patients. They give patients the first impression of what to expect from the facility. As an organization gets bigger and complex, it becomes more difficult to see the same doctor and criticism of receptionists become frequent. Receptionists need to a vital play by making sure patients see their desired practitioner (Alazri et al, 2007).

Organizational factors: The structure of an organization be it small or large plays a role in the longitudinal continuity. Most small health facilities experience higher CoC than larger health facilities (Van den Hombergh & Campbell, 2013). In countries which had patients registered to a particular GP (e.g., UK, Denmark, Netherlands), they experienced longitudinal CoC as compared to other parts of the world where healthcare is provided privately longitudinal continuity is not promoted (Alazri et al, 2007).

2.4 Continuity of care measures

After reviewing literature a lot of measures of continuity of care have been published but the most suited for this particular study is the Usual Provider Continuity (UPC)

This index estimates the proportion of visits to the pregnant woman‟s regular clinic out of all visits. The values for this index range from 0 (no visit to the regular clinic) to 1 (all visits made to the regular clinic). Since the pregnant women had no primary care providers, as it was not a requirement as at the time of the study for a patient to have a primary care provider, the most frequently visited provider was considered to be the regular provider (Reid et al., 2002b) A function was written using the formula below to estimate this measure.

i.e $= (n1 ,2 ,\ldots,nk)-1/(N-1)$

Where max (n1,n2, ... nk) is the number of visits to the provider with whom the woman had the greatest number of visits, and N is the total number of visits by the woman to all providers during the study period (Reid et al., 2002b)

CHAPTER THREE

3.0 METHODS

3.1 Study design

The study was a hospital based cross sectional survey. Postnatal mothers attending clinic during their puerperal period (post natal clinic) were selected from two municipal hospitals from 4th to 26th of June, 2018.

3.2 Study location

The study was conducted in La General Hospital in the La-Dade-Kotopon Municipality and LEKMA Hospital in the Ledzokuku-Krowor Municipality**.** The study sites are shown in figures 2 and 3.

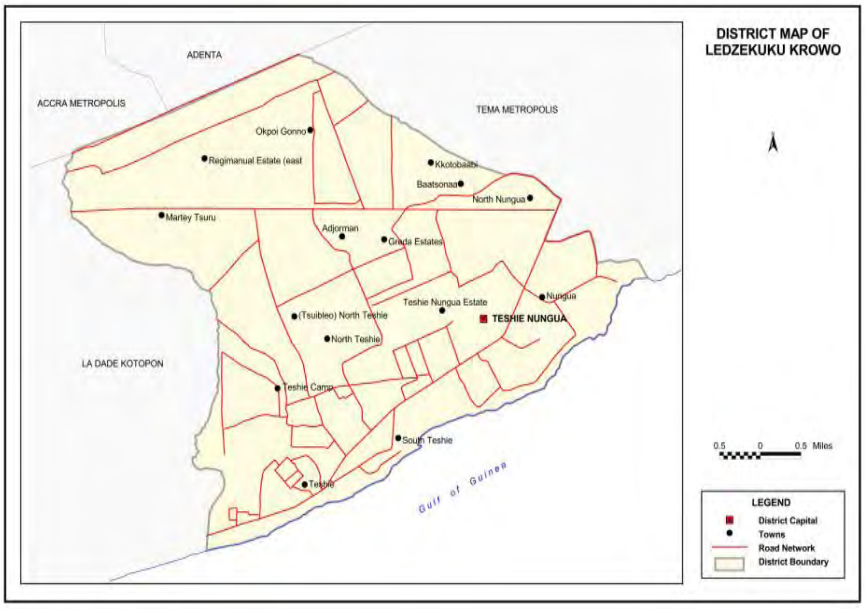

Figure 2: Map of Ledzokuku-Krowor Municipality (Ghana Statistical Service)

Figure 3: Map of La-Dade-Kotopon Municipality (Ghana Statistical Service)

LEKMA Hospital

- LEKMA is bounded on the south by the Gulf of Guinea and is wedged between the Accra Metropolitan Assembly on the west and Tema Metropolitan Assembly on the East.
- The hospital serves about 82 communities in the municipality with an estimated population of 230,000 (Ghana Statistical Service, 2014)
- It is a 100-bed capacity hospital that has all the units of a General Hospital including specialist services, laboratory and radiological facilities.
- LEKMA Hospital has in addition, a Malaria Research Centre and a Herbal Medicine Unit.

La General Hospital

- The district is bounded to the north and west by the Accra Metropolitan District, to the east by the Ledzokuku-Krowor Municipal District, and to the south by the Gulf of Guinea.
- The municipality has an estimated population of 183,528 (Ghana Statistical Service, 2014)
- The facility is a 161-bed capacity hospital that has all the units of a General Hospital including specialist services, laboratory and radiological facilities.

3.3 Study variables

The main dependent variable for this study was Continuity of Care (CoC).

The independent variables are as follows:

a. Demographic and socio-economic factors (age, occupation, marital status, level of education, level of education, level of partners education, ethnicity, religion, household income level)
b. Beliefs, motivation and Culture (family influence, circumstances surrounding labour, perceived quality of care, presence of family member at delivery, cultural rites at time of delivery, placenta burial site)
c. Healthcare related factors (availability of specialists, skilled midwives, TBA services available, basic comforts, satisfaction with services)

d. Knowledge of pregnancy and its related complications (ANC/PNC number of visits, previous obstetric history, if ever aborted, vaginal bleeds, loss of consciousness)
e. Perception about continuity of care (importance of seeing doctor/midwife, communication between patient and doctor/midwife, waiting time, confidence in doctor/midwife)

3.4 Sample size determination

Sample size was calculated using the formula

n = (z2pq)/d2, where

- Where Z = 1.96 with 95% confidence limit
- n: sample size for one sample
- p: estimated proportion of women who switched providers (prevalence:26%) (Dery, 2017)
- d: difference being measured (0.05 as the acceptable margin of error)
- q: 1-p = which is the probability of the event not occurring, in this case: 1 – 0.26 = 0.74
- The sample size was determined as follows:

  n = (z2p(1-p))/d2

  n= $\frac{(1.96)2 \times 0.26 \times 0.74}{(0.05)2}$

  N= 296

  Minimum sample size required is = 296

A non-response rate of 10% was compensated for by computing 10/100 x 296 = 29.6, which was added to the minimum sample size to give a total of 325.6. A final sample size of 326 patients was recruited for the study.

3.5 Sampling approach

Table 1: Sampling approach

Name of facility	Presumptive daily average attendance (>150/day)
La General Hospital	163
Lekma Hospital	163
Total	326

The average daily PNC attendance for women who delivered in the last 6 weeks at the hospitals is about 150. The study plan was to interview about 25 women per facility each day. It was done at the postnatal clinic in each hospital‟s specific clinic day. Two trained research assistants selected participants and explained to them the nature of the study and how beneficial it would be in reducing maternal mortality in Ghana. They were made to sit and sign the consent form and questionnaires were administered. Those who could not read or write had questionnaires being translated for them. A simple random sampling was used to select the first woman from the first 6 women and every sixth woman after that was selected systematically. The sampling interval was achieved by dividing 326(total sample size) by 25(number of women to be interviewed per day).

3.6 Inclusion criteria

Women between 15 to 49 years who delivered within the past 6weeks (puerperium) were included in the study.

3.7 Exclusion criteria

Those who did not attend ANC were not included.

Those who attended less than two ANC were excluded.

3.8 Data collection tools

A well-structured questionnaire with close ended questions and a few open ended questions was used. The main themes covered by the questionnaire included:

- Demographic and socio-economic factors:
- Beliefs, motivation and cultural practices
- HealthCare related factors
- Knowledge about pregnancy related complications
- Perception about continuity of care.

3.10 Data collection technique

Participants were interviewed on the field by two well-trained research assistants at the postnatal clinics at La General and LEKMA hospitals respectively.

The patient interviews lasted about 20 minutes each. Each of the data received was labeled to represent the individual. Respondents with the aid of trained assistants were required to tick appropriately in the required boxes next to each question under each them. They were also required to provide answers where available for open ended questions.

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3.11 Quality control

Research assistants were trained to adequately administer questionnaires. Questionnaires were critically examined at the end of each day. Data handled by the research assistants were cross checked for consistency and completeness by verifying by principal investigator. Research assistants also double checked data gathered by the principal investigator all with the aim of achieving accuracy.

The questionnaires were pre-tested in Mamobi General Hospital which has similar demographic characteristics with those of interest and all relevant concerns addressed. The filled questionnaires were kept safely in a cabinet under lock and key.

3.12 Data processing and analysis

Data collected from respondents were coded and entered into Microsoft Excel and later exported into Stata I/C version 15.0 for processing. Descriptive statistics was computed to summarize the characteristics of study participants. Chi Square test and student t test were used to determine association between each variable and Continuity of Care (the defined outcome of interest)

The results was analyzed and presented in the form of frequencies, means and proportions.

A bivariate analysis between the different variables against Perfect CoC was done and subsequent significant variables were used in a multivariable analysis. Further significant factors were determined and association between them and CoC was done using logistic regression.

To quantify the level of CoC, a variable was created called Most Frequent Provider Continuity (MFPC) i.e $MFPC$= max ($n1$,2 ,…,nk)−1/(N−1).

Where max (n1,n2, ... nk) is the number of visits to the provider with whom the woman had the greatest number of visits, and N is the total number of visits by the woman to all providers during the study period. Subsequent levels of poor (0.00-0.24), low (0.25-0.49), medium (0.50.74), high (0.75-0.99) and perfect (1.0) were then used to categorize the level of CoC.

3.13 Ethical issues

Ethical clearance was obtained from the Ghana Health Service Ethical Review Committee (clearance number GHS-ERC031/02/18). Permission was also obtained from the facilities and a written informed consent was obtained from all participants prior to enrolling them into the study and confidentiality were maintained at all levels of the study.

As the participants arrived at the facility, all potential participants were approached and informed that participation in the study was completely voluntary, refusal to participate would have no consequences and they could refuse to part-take in the study at any time. The quality of care they assessed would not be affected in any way should they refuse to take part in this study. Those who agreed to take part had their information entered in a quiet consulting room to ensure privacy. They were informed that all the information provided were confidential. It was entered into a laptop with a secured password from where data was analyzed.

Informed Consent Process

Eligible Participants will be able to read consent form in English. Any question or clarification was answered by the interviewer. Informed consent covered all procedures, privacy and confidentiality, voluntary participation, withdrawal and who to contact in School of Public Health or the Ethical Review Committee to report complaints or concerns.

Privacy and confidentiality

Complete confidentiality of the study participants was assured. Names and personal identifiers of participants were not recorded anywhere on the questionnaire and data collection tools.

Data storage and security

After capturing of data, all questionnaires and data collection tools were stored in a file cabinet and securely locked. Data files captured into computer were also password protected.

Potential benefits

There are no direct benefits to participate in this study. Although participants may not directly benefit from being in this study, the results of the study would aid researcher understand reasons why pregnant women decide to switch providers. Participants were not given any form of payment or compensation.

Risk

It is believed there were none to minimal risks or discomforts from participating in this study.

Voluntary participation, withdrawal

Participation in this study was completely voluntary. A participant could decide to change her mind and stop at any time without penalty. Participant could also choose not to answer a question for any reason.

Conflict of interest

There is no conflict of interest on the part of the investigators for the study.

Data Ownership

The data will be owned by the School of Public Health, University of Ghana.

Dissemination of findings

The results of this research will be submitted to the School of Graduate Studies University of Ghana in partial fulfillment of the requirements for the award of a Master of Public Health Degree.

The findings will also be published in a reputable journal if possible.

CHAPTER FOUR

RESULTS

4.0 Introduction

This chapter presents the findings of the study. These findings have been organized into sections on the background characteristics of study participants, background into their beliefs and cultural practices, knowledge about pregnancy and related complications, ANC visitations, categorization of levels of continuity of care, proportion of those who had continuity of care, bivariate and multivariate analysis and their perception about continuity of care.

4.1 Background Characteristics of Participants

Table 2 describes the socio-demographic characteristics of the participants. There were 325 participants studied at the post natal clinic of La general and LEKMA hospitals respectively. The age range 20-29 had the greatest number of participants (161) representing 49.54% of the total number. This was followed by 30-39 with 139 representing 42.77% of total participants. Also about 59% of the women had secondary education. Tertiary were 31.7% and 4% had no form of formal education.

Most (73.54%) of the participants were married, 298 (91.7%) were Christians and 174 (53.5%) were self-employed. In terms of household income, 224 (70.7%) had earnings below one thousand Ghana cedis. The participants who had spontaneous delivery were 245(75.4%) while 80(24.6%) had caesarean section. Additionally, 182(56%) made at least 8 ANC visits before delivery.

Table 2a: Socio-demographic characteristics of participants

Socio-demographic	Number	Percentage
Age		
<20	17	5.2
20-29	161	49.5
30-39	139	42.8
40-49	8	2.5
Education		
Primary	10	3.1
JHS	82	25.2
SHS	110	33.9
Tertiary	103	31.7
Vocational	7	2.2
None	13	4.0
Partners Education level		
Primary	29	8.9
JHS	130	40.0
SHS	90	27.7
Tertiary	57	17.5
Vocational	9	2.8
None	10	3.1
Marital status		
Single	41	12.6
Married	239	73.5
Co-habiting	41	12.6
Separated/divorced	3	0.9
Widowed	1	0.3
Religion		
Christian	298	91.7
Muslim	23	7.1
Traditional	3	0.9
Other	1	0.3
Occupation		
Employed	112	34.5
Self employed	174	53.5
Unemployed	34	10.5
Other	5	1.5

Table 2b: Socio-demographic characteristics of participants

Socio-demographic	Number	Percentage
Household income		
< 1000	224	70.7
1100 – 2000	72	22.7
2100 – 3000	17	5.4
3100 – 4000	2	0.6
4100 – 5000	1	0.3
> 5100	1	0.3
Mode of delivery		
Spontaneous delivery	245	75.4
Caesarean section	80	24.6
ANC visit		
<8 visits	182	56
8 or more visits	143	44

Table 3 depicts the frequencies for the factors pertaining to beliefs, motivation and cultural practices from the participants. About two-thirds, 207(63.69%) reported that they made decisions themselves pertaining to final place of delivery. This was followed by their husbands 58(17.85%), both spouses 23(7.08%), and their mothers 26(8%) and their in-laws being 10(3.08%).

Most women had their family members being around during ANC i.e. 196(60.31%). About 103 (32.01%) had cultural rites performed after delivery while 222(68%) did not have any cultural rights performed for them after delivery. Majority of women had their placenta buried at the hospital 309(95%). Cultural rites represents outdooring ceremony and merry making done to celebrate the new born child.

Table 3: Beliefs, motivation and cultural practices

	Number	Percentage
Influence on final delivery place		
Self	207	63.69
Husband	58	17.85
Both	23	7.08
In-law	10	3.08
Mother	26	8
Presence of family member at ANC		
Yes	196	60.31
No	129	39.69
Cultural rites after delivery		
Yes	103	32.01
No	222	68.09
Site of placenta burial		
Hospital	309	95.08
Home	16	4.92

Table 4 shows the number of previous pregnancies and number of live births as reported by the participants. Participants who had one previous pregnancy were 106(32.6%) of the total number. This was followed by those with 2 births making up 27.1%. The highest number of pregnancy recorded was 7 by 1 person. Table 4 also has the number of live births delivered by all participants. Those with 1 birth had the highest of live births representing 38.6% of total participants. This was followed by those with 2 live births representing 27.8% of participants.

Table 4: Number of previous pregnancies and number of live births

Number of pregnancies (gravid)	**Frequency**	**Percentage %**	**Number of live births (parity)**	**Frequency**	**Percentage %**
0	26	8.00	0	19	5.86
1	106	32.62	1	125	38.58
2	88	27.08	2	90	27.78
3	73	22.46	3	64	19.75
4	22	6.77	4	20	6.17
5	5	1.54	5	3	0.93
6	4	1.23	6	2	0.62
7	1	0.31	8	1	0.31
Median: 2			Median: 2		

Table 5 represents categorization of ANC visits by pregnant women (i.e those who attended once, twice, thrice and ≥ four times). All attendants had more than two ANC sessions hence they all qualified for the study. Three participants i.e 0.92% had three times ANC attendance and 322 (99.08%) had four or more ANC attendance at their designated facilities

Table 5 also showed the number of visits to frequent provider. About 60.62% of women had most visits i.e 5-9 times with frequency of 197. It was followed by 22.46% with 10-14 visits, 16% with less than 5 visits and lastly 0.92% with 15-19 visits.

Table 5: Number ANC visits and Number of visits to frequent provider

Number of ANC visits	Frequency	Percentage
1	0	0.00
2	0	0.00
3	3	0.92
≥4	322	99.08
Number of visits to frequent provider	**Frequency**	**Percentage**
<5	52	16.00
5-9	197	60.62
10-14	73	22.46
15-19	3	0.92

4.2 Quantification of continuity of care

Table 6 represents the Usual Provider Continuity (UPC) used to quantify the continuity of care amongst the pregnant women. Out of 325 pregnant women the mean UPC was 0.943 with standard deviation of 0.14. This means about 94.3% of the pregnant women ANC visits were made to their regular ANC providers. Table 6 also represents the number and proportion of women by continuity of care measures. It was used to rank the level of continuity of care and compared caesarean section to vaginal delivery. Four (4) participants had low UPC (0.25-0.49) with none having caesarean section. For medium UPC (0.50-0.74) a total of 40 women were observed with 16 having caesarean section and 24 having vaginal delivery. Those with high UPC (0.75-0.99) were 7 and 6 vaginal delivery. Those with perfect UPC (1.0 rank) were 274 in number with 63 having caesarean section and 211 having vaginal delivery. The p value for the UPC was 0.079 making it insignificant.

Table 6: Number and proportion of women by continuity of care measures

User Provider Continuity(UPC)	**C-section**	**Vaginal Delivery**	**Total**	**P value**
UPC/MFPC				
Mean (SD)	0.93±0.02	0.95±0.01	0.94±0.14	0.252
Poor (0.00-0.24)	-	-	-	0.079
Low(0.25-0.49)	0(0.00)	4(1.63)	4(1.63)	
Medium (0.50-0.74)	16(20.00)	24(9.80)	40(12.31)	
High (0.75-0.99)	1(1.25)	6(2.45)	7(2.15)	
Perfect (1.0)	63(78.75)	211(86.12)	274(84.31)	
Total	80(100.00)	245(100.00)	325(100.00)	

4.3 Proportion of pregnant women who switched their regular ANC

Table 7 shows the proportion of women who switched from their regular ANC provider. Those who switched providers were 15.7% with confidence interval of 0.12-0.20 while 84.3% had perfect continuity of care (maintaining only one provider throughout the pregnancy) with a confidence interval of 0.80-0.88%.

Table 7: Proportion of pregnant women who switched their regular ANC provider

CoC	Number	Proportion	95% confidence interval	
No	51	0.1569231	0.12	0.20
Yes	274	0.8430769	0.79	0.87

Figure 4 shows the number of different facilities visited by the pregnant women while attending ANC. Majority of 274 (84.3) attended one facility while 46 (14.7%) switched between 2 facilities. Also observed were 4 women who switched between 3 facilities. A single or one person switched between 4 different facilities during her ANC period.

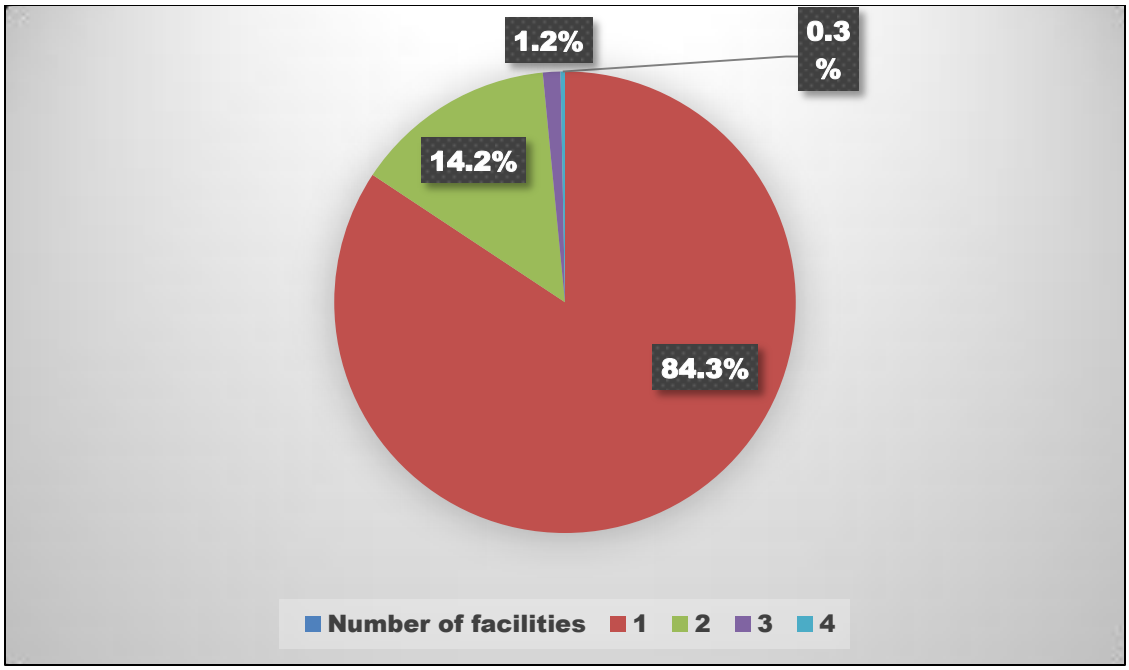

Figure 4: Number of facilities visited by pregnant women

Figure 5 below explains the reasons why the pregnant women switched healthcare providers.

Twenty three (45.10%) of the pregnant women who switched was as a result of referral, 25(49.02%) switched based on self-made decision and 3(5.88%) switched based on friend and family recommendation.

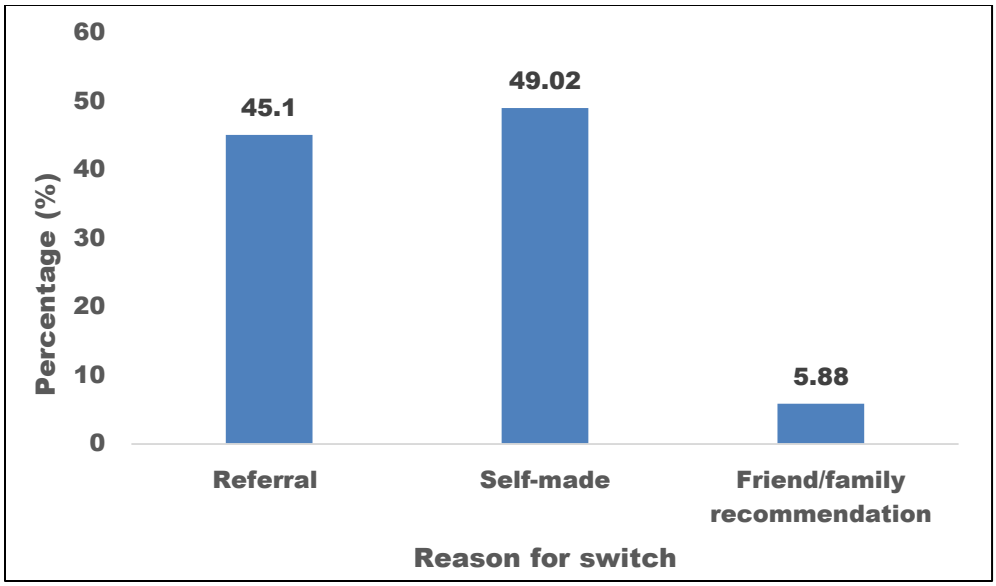

Figure 5: Reasons for pregnant women switching care

4.3 Factors associated with switching providers during ANC and Continuity

Table 8 presents a chi square analysis examining the continuity of care and the response of pregnant women pertaining to the beliefs, motivation and cultural practices. Influence on final delivery place was not significantly associated with Perfect CoC. Among those with perfect CoC, 64.23% decided on their own their final place of delivery.

Presence of family member during ANC was not significantly associated with Perfect CoC. Cultural rites performed after delivery was significantly associated with Perfect CoC with a P value of 0.024. Site of Placenta burial was not associated with CoC.

Table 8: Perfect Continuity of Care pertaining to beliefs, motivation and cultural practices

Beliefs, Motivation and Cultural practices	**CoC**		**Chi (x2)**	**P value**
	No	Yes		
Influence on final delivery place			1.6867	0.891
Self	31(60.78)	176(64.23)		
Husband	8(15.69)	50(18.25)		
Both	4(7.84)	19(6.93)		
In-law	2(3.92)	8(2.92)		
Mother	6(11.76)	20(7.30)		
Presence of family member at ANC			2.6709	0.102
Yes	36(70.59)	160(58.39)		
No	15(29.41)	114(41.61)		
Cultural rites after delivery			7.4430	0.024*
Yes	8(15.69)	95(34.67)		
No	43(84.31)	178(64.96)		
Site of Placenta burial			1.2016	0.753
Hospital	50(98.04)	259(94.53)		
Home	1(1.96)	13(4.74)		
Other	0(0.00)	1(0.36)		

***p<0.05 shows statistical significance**

Table 9 represents Perfect CoC pertaining to knowledge about pregnancy and related complications. The question of whether one had ever aborted was significantly associated with perfect CoC with a P value of 0.021. Among those with perfect CoC, 71.17% have never aborted a pregnancy compared with 52.9% for those that switched.

The question of whether one ever had still birth was not significantly associated with perfect CoC with a P value of 0.708. The question of whether one had ever had pregnancy related complication was also insignificant with a P value of 0.324.

Table 9: Perfect Continuity of care pertaining to knowledge about pregnancy and related complications

Variable	COC		Chi (x2)	P value
	No	Yes		
Ever aborted			7.6972	0.021*
Yes	23(45.10)	78(28.47)		
No	27(52.94)	195(71.17)		
No response	1(1.96)	1(0.36)		
Still birth			0.708	0.708
Yes	12(23.53)	54(19.71)		
No	38(74.51)	217(79.20)		
No response	1(1.96)	3(1.09)		
Complications			0.9713	0.324
Yes	18(35.29)	117(42.70)		
No	33(64.71)	157(57.30)		

***p<0.05 shows statistical significance**

Table 10 represents a chi square distribution table examining the continuity of care and the response of the pregnant women pertaining to the health care related. About 18 (35.29%) of the pregnant women who switched providers described their general health currently as very good compared to 109 (39.93%) for those with perfect CoC.

Again, the average number of ANC visits for those who had perfect CoC was 7.89±7.54, which was significantly higher than those who did not have perfect CoC (6.76±2.39). Other variables under healthcare related factors including health insurance sign up, health insurance status, type of insurance, facility type of ANC attended, first ANC visitation, delivery at health facility, delivery by someone, mode of delivery and outcome of delivery were not significantly associated with perfect CoC.

Table 10: Perfect Continuity of care pertaining to healthcare related factors

	CoC		Chi (x2)	P value
	No	**Yes**		
Current health status			2.2867	0.515
Very good	18(35.29)	109(39.93)		
Good	31(60.78)	109(39.93)		
Fair	2(3.92)	23(8.42)		
Poor	0(0.00)	1(0.37)		
Gen health time of delivery			0.5049	0.973
Very good	13(25.49)	72(26.28)		
Good	32(62.75)	164(59.85)		
Fair	6(11.76)	36(13.14)		
Poor	0(0.00)	1(0.36)		
Very poor	0(0.00)	1(0.36)		
ANC attendance			2.9310	0.087
Yes	47(92.16)	266(97.08)		
No	4(7.84)	8(2.92)		
Health insurance sign up			1.1378	0.286
Yes	51(100)	268(97.81)		
No	0(0.00)	6(2.19)		
Health insurance status			1.1420	0.285
Active	51(100)	267(97.80)		
Not active	0(0.00)	6(2.20)		
Type of insurance			1.0074	0.604
NHIS	50(98.04)	266(97.44)		
No insurance	0(0.00)	4(1.47)		
Private insurance	1(1.96)	3(1.10)		
Facility type ANC attended			4.6641	0.198
Public hospital	46(90.20)	262(95.62)		
Private hospital	3(5.88)	9(3.28)		
Mission hospital	2(3.92)	2(0.73)		
Non/other	0	1		
First ANC visitation			5.0875	0.079
1st trimester (0-3 months)	27(52.94)	175(63.87)		
2nd trimester (4-6months)	22(43.14)	97(35.40)		
3rd trimester (7+ months)	2(3.92)	2(0.73)		
***Number of ANC visits**	6.76±2.39	7.89±7.54	-	0.005*
Delivery at health facility			1.1341	0.287
Yes	50(98.04)	259(94.53)		
No	1(1.96)	15(5.47)		
Delivery by someone			2.6560	0.265
Yes	20(39.22)	87(31.75)		
No	30(58.82)	167(60.95)		
Don't know	1(1.96)	20(7.30)		
Mode of delivery			2.4777	0.115
Spontaneous vag. Delivery	34(66.67)	211(77.01)		
Caesarean section	17(33.33)	63(22.99)		
Outcome of previous delivery			0.3367	0.845
Live birth	50(98.04)	265(96.72)		
Still birth	1(1.96)	8(2.92)		
Baby died within a week	0(0.00)	1(0.36)		

***p<0.05 shows statistical significance**

Table 11 represents a binary logistic regression output for continuity of care. The logistic regress ion used continuity of care as the dependent variable and used cultural rites beliefs, history of abortion, number of ANC visits, presence of family member during ANC, first ANC visit, mode of delivery and amount of time wasting as the independent variables.

The women who had cultural rites performed immediately after delivery were 3.03 (CI: 1.2-7.64, p=0.019) times more likely to have perfect CoC, compared to those women who did not perform cultural rites immediately after delivery after adjusting for all other factors. After adjusting for other factors, respondents who have never aborted were 1.95(1.01-3.77, p=0.046) times more likely to have perfect CoC as compared to those that have ever aborted.

The odds of CoC for the women who responded "No" when asked if they require the presence of family during ANC was 2.62(1.28-5.34, p=0.008) higher than those who responded "Yes". Other factors considered were number of ANC visits, time of first ANC visit (2nd and 3rd trimester), mode of delivery and amount of waiting time (long and excessive) which had P values of 0.170, 0.863, 0.087, 0.330, 0.360 and 0.244 respectively. They were all not significant and hence did not play a role in CoC.

In a summary, Cultural rites performed, History of abortion and Absence of family during ANC were the only significant factors in determining the CoC of pregnant women in the hospitals.

Table 11: Factors associated with perfect continuity of care (multivariate analysis)

Variables	Crude OR (95% CI)	P value	Adjusted OR	P value
Cultural rites (Yes)	2.85(1.29-6.31)	0.010	3.03(1.2-7.64)	0.019*
History of abortion				
No	2.06(1.12-3.8)	0.020	1.95(1.01-3.77)	0.046*
Number of ANC visits	1.19(1.051.35)	0.007	1.12(0.95-1.31)	0.170
Presence of family during ANC				
No	1.71(0.89-3.27)	0.105	2.62(1.28-5.34)	0.008*
First ANC visit				
1st trimester	ref			
2nd trimester	0.68(0.36-1.25)	0.220	0.94(0.47-1.87)	0.863
3rd trimester	0.15(0.02-1.14)	0.067	0.16(0.019-1.30)	0.087
Mode of delivery				
Caesarean section	0.59(0.31-1.14)	0.118	0.71(0.36-1.42)	0.330
Amount of time waiting				
adequate	Ref			
Long	0.621(0.33-1.15)	0.134	0.73(0.361.43)	0.360
Excessive	2.5(0.56-11.07)	0.228	2.46(0.50-12.04)	0.244
adequate	Ref			
Long	0.621(0.33-1.15)	0.134	0.73(0.361.43)	0.360
Excessive	2.5(0.56-11.07)	0.228	2.46(0.50-12.04)	0.244

OR: odds ratio

4.4 Examination of perceptions of continuity of care amongst pregnant women

Table 12 elucidates the perceptions of care amongst pregnant women at ANC. It explains that 47.08% of the pregnant women had a preferred doctor and midwife and 41.23% of them said that they saw and spoke to their preferred doctor or midwife all the time. However, 44.00% of the pregnant women did not really mind when asked about the importance of seeing their preferred doctor or midwife. Majority (56.31%) of the pregnant women indicated the doctor and midwife should know all about their health when it comes to the most important aspect of seeing them.

Also, 58.15% of the pregnant women described the amount of time spent during their ANC visits as “Adequate”. Also, 57.85% of the pregnant women strongly agree that they have confidence in the professionals at ANC.

Another 53.54% of the pregnant women strongly agreed that they were given the opportunity to ask questions at ANC. Lastly, majority (90.15%) of the pregnant women indicated that they would recommend their ANC facilities to others.

Table 12: Perception of continuity of care amongst pregnant women

Variable	Frequency (%)
Preferred Doc/midwife	
Yes	153(47.08)
No	**172(52.92)**
Importance to see preferred doc/midwife	
very important	135(41.54)
Fairly important	47(14.46)
Don‟t really mind	**143(44.00)**
How often speak to doc/midwife	
Almost or always	**121(37.23)**
Some of the time	72(22.15)
Never or almost never	37(11.8)
Does not matter to me	95(29.23)
When see preferred doc/midwife	
All the time	**134(41.23)**
For some aspect of my health	50(15.38)
For chronic health problems	31(9.54)
For emotional problems	2(0.62)
Doesn‟t matter to me	108(33.23)
Most important aspect of seeing preferred doc/midwife	
Know me as a person	103(31.39)
Know all about my health	**183(56.31)**
Coordinate my care with the hospital	39(12.00)
Waiting time	
Adequate	**189(58.15)**
long	104(32.00)
excessive	32(9.85)
Confidence in professional at ANC	
Strongly disagree	18(5.54)
Somewhat disagree	8(2.46)
Neutral	81(24.92)
Somewhat agree	30(9.23)
Strongly agree	**188(57.85)**
Given opportunity to ask questions	
Strongly disagree	19(5.85)
Somewhat disagree	18(5.54)
Neutral	56(17.23)
Somewhat agree	58(17.85)
Strongly agree	**174(53.54)**
Recommendation of regular ANC	
Yes	**293(90.15)**
No	14(4.31)
Undecided	18(5.54)

CHAPTER FIVE

DISCUSSION

5.0 Introduction

This section discussed the findings of the study in line with the objectives and how they relate to the results. The objectives were to quantify the level of continuity of care, determine the proportion of pregnant women who switched their regular ANC provider before delivery, determine the factors associated with switching providers during ANC and determine the perception of continuity of care amongst pregnant women who attended ANC at LEKMA and La General hospitals.

5.1 Quantification of level of continuity of care

Usual Provider Continuity (UPC) was used to quantify the continuity of care amongst the pregnant women. Out of 325 pregnant women the mean UPC was 0.943 with standard deviation of 0.14. This means about 94% of the pregnant women‟s ANC visits were made to their regular ANC providers. Comparing this study to one done in the Volta region (VR) of Ghana, it was found that UPC was 0.82 ±0.25 (Dery, 2017) using data claims. This meant in Volta region, 82% of the pregnant women‟s ANC visits were made to their regular ANC providers compared to 94.3% in Greater Accra region (GAR). Both regions had high rank indices (between 0.75-0.99). The healthcare facilities in Accra are many and well equipped with lots of attending personnel as compared to those in the Volta region. Greater Accra being more urbanized than Volta region would make most women have better education than their counterparts. The distance from locality to healthcare facility is far better in Greater Accra than that of Volta region because of the improved road network. The study in the VR used claims based data that had

records on the visits while this study used self-reported visits information from the pregnant women. Dreiher et al., (2012) also recorded UPC of 0.75 in a study done in Isreal.

There was no association between mode of delivery (vaginal and caesarean section) and CoC in this study. This was contrary to other studies that found a strong association between mode of delivery and CoC (McLachlan et al., 2012; Sandal et al., 2016): Wong, Browne, Ferguson, Taylor, & Davis, 2015).

5.2 Proportion of pregnant women who switched their regular ANC provider

The study revealed that 84.3% of pregnant women had perfect CoC, maintaining only one provider throughout ANC. The rest ranged from poor to high CoC. Again Dery in 2017 found 58% of women having perfect CoC in VR compared to 84.3% in this study.

Studies also done by Bourgeis et al (2010) and Raven et al (2016) showed 31% and 61% of pregnant women switching care respectively during ANC. This was done in hospitals at Massachusetts and Medicaid beneficiaries in the United States. The percentage of those who switched in this study seems to be lower than those already reported. This might be due to study being done in an urban setting with all its availability of healthcare resources and healthcare professionals. Also this study might be subject to recall bias whereas the study done in VR was done using NHIS claims data so if a pregnant woman used another facility that did not use NHIS she would not be captured. This might account for further disparity in results.

Out of the 51 who switched, most changed between two facilities and doing so by self-made decisions. Some of these pregnant women believe changing facilities would help complement each facility in order to achieve the same expected result of safe delivery (Dako-gyeke et al, 2013). Most of them experiment between facilities without knowing the essence or implication

on CoC. A possible explanation is they switch because they think the services are the same and do not want to retain the same doctor or midwife since it is of no importance. Another possible explanation is that those who switched based on referral was due to them developing a pregnancy related complication. Instances such as development of gestational diabetes mellitus, pregnancy induced hypertension, pre-eclampsia etc. would justify their referral. Hence, their referral was done by the subsidiary health facility.

Relational continuity was affected in that pregnant women were not given the chance to continue with their regular care takers which would have improved on interaction, communication and trust (Sandall, 2013; Sandall et al., 2016; Williams et al., 2010; Wong et al., 2015). It is hence ideal that a pregnant woman is to be delivered by the same group of midwives and doctors who cared for her during ANC to help have a better understanding of her situation. The women themselves did not help in this cause because a greater number of them did not see the essence having a preferred midwife or doctor throughout the pregnancy.

Cost and transportation did not play a role in their decision to switch facilities as observed by Borghi et tal, 2006 and Peltzer et tal, 1996. This might be attributed to the women‟s nearness to their various facilities. Majority of the women had National Health Insurance scheme coverage and that might have covered for most hospital bills.

Another point worth noting is the setting of LEKMA and La General Hospitals. They both have public health facilities that advocate patient continuity of care especially through their presentations at the outpatient departments. Both hospitals also have specific obstetric and gynecological days whereby specific specialist and midwives avail themselves to see patients. These two situations also helped in achieving the perfect CoC score of 84%.

5.3 Factors associated with switching providers during ANC

The significant associations found were as follows: Cultural rites after delivery, History of abortion and Number of ANC. Other factors that were of relevance from literature but not significant were Presence of family members during ANC visits, First ANC visit (i.e. 1st trimester, 2nd trimester or 3rd trimester), Mode of delivery (caesarean section or vaginal delivery) and Amount of waiting time.

Factors that influenced CoC amongst pregnant women in this study were Cultural rites after delivery, previous history of abortion and presence of family members during ANC. Women who had cultural rite done after delivery(i.e outdooring ceremony and merry making done to celebrate the new born child) were 3 times more likely to have perfect CoC than those who did not have the ceremony done. A possible explanation is that, most women look up to the congratulatory ceremonies and rites performed after successful delivery. They do not wish to miss out on them so they stay prudent to hospital visits i.e CoC until they finally deliver. They do not want any complication associated with their pregnancy. The study done by Farnes et al (2011) found a strong association between pregnant women‟s health seeking behavior and cultural rites performed after delivery. This concurs with this study since those women who had cultural rites performed were three times more likely to have CoC.

Women who had no history of abortion were 2 times more likely to have perfect CoC than those with previous abortions or miscarriages. A possible explanation could be that most women who had previous abortions were prone to having miscarriages and other complications during pregnancy. Studies by Tsartsara et al(2006); Côté-Arsenault et al (2006) showed women with a previous history of abortion especially spontaneous miscarriages always made it a point to be at

their ANC regularly. These women mostly suffered from pregnancy specific anxiety especially in the first trimester of pregnancy. They hence frequently sought after medical care for reassurance. Similarly, those with no prior history of abortion do not want to fall to similar circumstances hence they make sure to attend the requisite ANC visits to have safe delivery. They hear about stories on how previous abortions might lead to further future pregnancies. In order to avoid similar circumstances they desist from aborting and stay prudent to ANC services throughout their pregnancy.

The participants who did not have any family member present or accompanying them during their ANC were two times likely to have CoC. This was surprising because positive patient outcomes, including accelerated recovery time, increased reports of comfort and decreased duration of hospital stay are the ultimate goals of hospital care. Research shows that patient outcomes are impacted greatly by family presence (Mccabe, 2014). The results from this study proved otherwise because the absence of family members during ANC was associated with increased CoC. A perceived explanation could be that most families have become nucleated and superstitious. Most do not want extended family involvement in their issues especially those pertaining to pregnancy and child birth. They mostly associate miscarriages to witchcraft and evil spirits who do not wish them well. This might be the reason why they refuse to involve their family members. Patients also have high standards for confidentially of information regarding their pregnancy status. They do not want any family member tracking and having information about their pregnancy. This especially happens in urban settings where nuclear family households are becoming a normal trend.

5.4 Perception about Continuity of care

This was done to see how pregnant women perceived continuity of care. It was done in a customer service feedback survey form. It was observed that most pregnant women did not have a preferred doctor they see regularly. They also didn‟t mind if they did not see their preferred doctor but ideally they all preferred to see their preferred doctor or midwife all the time. This has massive implication because it shows the pregnant women do not see the need of seeing the same doctor or midwife to achieve CoC. This leads to them seeing other doctors or even attending other clinics since they think those health professionals are also well equipped and would automatically be abreast with their pregnancy state. This gap needs to be addressed because tracking and treatment of complications by specialized health professional becomes difficult especially if proper records are not documented in their ANC booklet. It also affects coordination of patient information and results between health care providers.

Most of the women found the waiting time at the hospital “adequate” and most think they were given the opportunity to ask questions by attending doctor or midwife. This was important information because it means the healthcare professionals were seeing the pregnant women in a timely manner without them feeling time was being wasted. When a pregnant woman is made to ask all questions pertaining to her health she is made to fill fulfilled and helps to build on interpersonal relation, trust and effective communication between the pregnant woman and health professional. This should be encouraged more since it helps improve CoC. Evidence shows that patients are less likely to be dissatisfied if their waiting time is within 30 minutes (Ahmad et al, 2017). The time spent before seeing the doctor was adequate which meant patients spent approximates less than 30mins.

Studies by Kistiana, 2009; Shariff & Singh, 2002 showed that access to information on health issues grossly boosts utilization of health services. This concurs with the study because more than half claimed to have had enough information regarding their pregnancy and were given the due opportunity to ask questions.

More than half (57.85%) of the participants claim they strongly agree in having confidence in the health professionals attending to them at the ANC. This is a good sign which makes patients believe in the skills and capabilities of their health professionals. It also becomes antagonistic since these same patients will decide to switch facilities thinking the standard of care will be the same everywhere. This breaks the CoC chain which had been started at a particular facility.

Lastly, majority of the pregnant women depicted that they would recommend the ANC facilities to others. Most pregnant women were satisfied with the services rendered out to them and would encourage others to experience the same.

From data gathered, perceptions about CoC generally is poor amongst pregnant women attending the hospitals. They do not see the essence of starting and finishing ANC attendance at the same facility. They have no idea as to the long term effects of having CoC at one facility. Implications on maternal mortality, safe delivery of babies and quality of care seem to have no importance to them due to this inadequate knowledge of the importance of continuity of care. Education should therefore be paramount in effecting a change of mind and attitude to help them stop their switching practices and adhere to one facility throughout ANC.

5.5 Limitations of the study

The following are the limitations of the study:

1. This was a cross-sectional study, so findings reflect only what was going on at that point in time.
2. Recall bias and attempts to please the healthcare provider may have influenced patients‟ responses to the questions
3. The study was conducted in government hospitals that accepted NHIS cards mostly. Assumptions about those who attend private hospitals cannot be made based on this study.

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.0 Introduction

This study sought to find the determinants of Continuity of Care amongst pregnant women and reasons pregnant women switch providers during ANC in two municipal hospitals in the Greater Accra Region.

6.1 Conclusions

The findings from the study showed that;

a. Majority of the participants had continuity of care during their ANC visits.
b. A proportion of 15.7% switched facilities during ANC and mostly due to Self-made decisions.
c. The factors that influenced CoC amongst pregnant women were Cultural rites performed after delivery, previous history of abortion and presence of family members during ANC. i.e Those who had cultural rite beliefs were 3times likely to have CoC. Pregnant women who had no history of abortion had increased odds of CoC. The absence of family members during ANC was associated with increased CoC.
d. Most pregnant women do not have a preferred doctor they see during ANC and don't see the importance of seeing the same doctor at ANC. Majority have confidence in the health professionals working at their ANC facilities and would highly recommend their ANC facilities.

6.2 Recommendations.

- Majority of participants had CoC, hence pregnant women should be encouraged to by doctors, midwives and public health personnel to keep up with the practice of sticking to one health facility or practitioner if possible.

- Doctors, midwives, public health personnel and media houses should educate patients and pregnant women about the need for continuity of care and how it helps to improve quality of care.

- Further studies should be made into why Cultural rites performed after delivery, previous history of abortion and presence of family members during ANC influenced continuity of care.

- The MoH and NHIA should be entreated to provide a policy that ensures patients (especially pregnant women) have primary care providers who will be responsible and accountable for coordinating the care that a pregnant woman receives during pregnancy and delivery. There is no such policy to the best of my knowledge. The closest policy so far was the NHIS capitation that was piloted in 2012 in the Ashanti Region.

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APPENDIX B: QUESTIONNAIRE

DETERMINANTS OF CONTINUITY OF CARE AMONGST PREGNANT WOMEN IN TWO MUNICIPAL HOSPITALS IN GREATER ACCRA REGION

Instruction: Tick the relevant option and write in the space provided on the right

Introduction

I am Philip Kwaku Dekpor of the School of Public Health, University of Ghana with a team of researchers. We are conducting a study in your community about "Determinants of continuity of care amongst pregnant in two municipal hospitals in Greater Accra. You will be required to answer a few questions about yourself. The data collected will be kept confidential. The findings will be helpful in putting measures in place to control the disease in the community. The interview will last about 10 – 15 minutes.

……..

Date of Interview

Date…….. Participant ID:

PART A: SOCIO-DEMOGRAPHIC BACKGROUND

1. Age: 1.<20 [ ] 2. 20-29 [ ] 3.30-39 [ ] 4.40-49 [ ]
2. Level of education 1. Primary [ ] 2. JHS [ ] 3. SHS [ ] 4. Tertiary [ ] 5. Vocational [ ] 6.None [ ]
3. Level of partners education 1. Primary [ ] 2. JHS [ ] 3. SHS [ ] 4. Tertiary [ ] 5. Vocational [ ] 6. None [ ]
4. Marital status: 1. Single [ ] 2. Married [ ] 3. Cohabiting [ ] 4.Separated/divorced[ ] 5. Widowed [ ]
5. Ethnicity: 1. Akan [ ] 2. Ga/ Ga Adangme [ ] 3. Ewe [ ] 4. Other, specify [ ]
6. Religion: 1. Christian [ ] 2. Muslim [ ] 3. Traditional [ ] 4. Other, please specify [ ]
7. Occupation: 1. Employed [ ] 2. Self Employed [ ] 3. Unemployed [ ] 4. Other : ……..
8. Household Income level (GH cedi): 1. <1000 [ ] 2. 1100- 2000 [ ] 3. 2100-3000 [ ] 4. 3100-4000 [ ] 5.4100-5000 [ ] 6. > 5100 [ ]

PART B: BELIEFS, MOTIVATION AND CULTURAL PRACTICES

1. Who influenced you on your final place of delivery? 1. Self [ ] 2. Husband [ ] 3.Both husband and wife [ ] 4. In law [ ] 5. Mother [ ]
2. Did you require the presence of a family member during ANC? 1.Yes[ ] 2.No [ ]

3.Was there any Cultural rites performed immediatley after delivery? Yes [ ] 2. No [ ]

4.Where did you have your placenta buried? 1. Hopsital [ ] 2. Home [ ] 3. Other [ ]

PART C: KNOWLEDGE ABOUT PREGNANCY AND RELATED COMPLICATIONS

1. Number of previous pregnancies: …….
2. Number of live births: ……
3. Ever aborted 1. Yes 2. No 3. No response
4. Ever had still birth 1. Yes 2. No 3. No response

5. Ever reported 1 or more serious complications: 1. Yes [ ] 2. No [ ] If yes please state: 1. Swollen feet: [ ] 2. Abdominal pain: [ ]3. Vaginal bleeding [ ] 4. Losing consciousness [ ] 5.convulsions [ ] 6. Other……
PART D: HEALTH CARE RELATED FACTORS
1. How would you describe your general health currently? 1 Very good [ ] 2 Good [ ] 3 Fair [ ] 4 Poor [ ] 5 Very poor [ ]
2. How would you describe your general health at the time of pregnancy/delivery? 1 Very good [ ] 2 Good [ ] 3 Fair [ ] 4 Poor [ ] 5 Very poor [ ]
3. Are you signed up for any health insurance scheme? Yes [ ] No [ ]
4. What was the status of your insurance as at the time of delivery? : Active [ ] Not Active [ ]
5. What insurance do you have? 1. NHIS [ ] 2. No Insurance [ ] 3. Private Insurer [ ]
6. Which facility type did you attend your ANC? 1. Public hospital [ ] 2.private hospital [ ] 3. Mission hospital [ ] 4.Non/other [ ]
7. When did you go for your first ANC visit? 1. 1st trimester (0-3months [ ] 2. 2nd trimester (4-6months) [ ] 3.3rd trimester (7+ months) [ ]
8. In all how many ANC visits did you attend before delivery?.....
9. In all how many different facilities did you visit during ANC?.....
10. If visited more than 1 facility, why did you change facilities? 1. Referral [ ] 2. Self-made decision [ ] 3. Friend/ family recommendation [ ] 4. Cost [ ] 5. Transportation difficulties [ ] 6. Other (please specify):……..
11. Which facility was your regular ANC provider? Name:…….
12. How many times did you visit this facility for ANC? ……
13. Was this facility a; 1 Hospital [ ] 2. Health Center [ ] 3 Clinic [ ] 4 Maternity Home 5 CHPS [ ]
14. Did you deliver at a health facility? 1. Yes [ ] 2. No [ ] If yes, Which facility did you deliver at ? Name:……..

15. Were you delivered by somebody (midwife, nurse, doctor etc) that you know personally or met during the ANC period?
1.Yes [ ] 2.NO [ ] 3.Dont Know [ ]

16. If delivery was at a different facility, why did you switch health facility during delivery?
1. Referral [ ] 2. Self-made decision [ ] 3. Friend/ family recommendation [ ] 4.Cost [ ]

5. Transportation difficulties [ ] 6. Other (please specify):……..

17. Did you visit the facility where you delivered at least once during ANC before delivery?
1 Yes [ ] 2 No [ ]

18. Was the delivery by a: 1. Spontaneaous vaginal delivery [ ] 2. Caesarean section [ ]

19. What was the outcome of your previous delivery? 1. Live birth [ ] 2. Still Birth [ ]
3. Baby died within a week after delivery [ ] 4.other……..

PART E: PERCEPTION OF CONTINUITY OF CARE

1. Do you have a doctor/midwife you always prefer to see? 1. Yes [ ] 2. No [ ]

2. How important to you is it that you see your preferred doctor/midwife
1.very important [ ] 2.fairly important [ ] 3.don‟t really mind [ ]

3. How often do you speak to or see the doctor/midwife you prefer? (tick one)
1. Almost or always [ ] 2. Some of the time [ ] 3.Never or almost never [ ] 4. It doesn‟t matter to me [ ]

4. What is your view on that amount of waiting time ANC at your regular ANC facility?

1 Adequate [ ] 2 Long [ ] 3 Excessive [ ]

5. During ANC, when do you like to see your preferred doctor/midwife (circle as many as apply)
1.All of the time [ ] 2.For some aspects of my health – (but I see other doctors/nurses for other things)[ ] 3. For health problems I‟ve had a long time [ ] 4.For emotional problems or similar concerns [ ] 5. It doesn‟t matter to me [ ]

6. What is the most important aspect of seeing the doctor/midwife you prefer during ANC? (tick one)
1.They know me as a person [ ] 2.They know all about my health [ ] 3.They co-ordinate my care with the hospital and other agencies [ ]

7. Do you feel you were told about all the information regarding your pregnancy? (tick one) 1.Almost or always [ ] 2.Some of the time [ ] 3.Never or almost never [ ] 4.It doesn‟t matter to me [ ]
8. If you cannot see the doctor/midwife you prefer what do you do? (tick one) 1.Book the next available and suitable appointment with them? [ ] 2.Phone another time? [ ] 3.Book with another doctor ? [ ] 4.Try and leave them a message? [ ] 5.I don‟t have a preferred doctor [ ]
9. Do you have confidence in the health professionals present at your regular ANC facility (tick one) 1. Strongly disagree [ ] 2.Somewhat disagree [ ] 3.Neutral [ ] 4.Somewhat agree [ ] 5.Strongly agree [ ]
10. Were you given opportunity by health care providers to ask questions about your pregnancy? (tick one) 1.Strongly disagree [ ] 2.Somewhat disagree [ ] 3.Neutral 4.Somewhat agree [ ] 5. Strongly agree
11. Would you recommend your regular ANC facility to someone? 1.Yes [ ] 2.No [ ] 3. Undecided [ ]
Name and Signature of Interviewer …… Phone number of Interviewer …… Date……..