SCHOOL OF MEDICINE AND HEALTH SCIENCES

EVALUATION OF THE EFFECTIVENESS OF ANTENANTAL CARE SERVICES AT MWANJUNI HEALTH POST IN TEN MILES

BY

NIVEA CHULU

BSPH19217492

BSc PUBLIC HEALTH

SUPERVISOR: MR SAMUEL MWAMBAZI

A dissertation submitted to the University of Lusaka in partial fulfilment Degree in Bachelor of Science in Public Health

2023

DECLARATION

Nivea Chulu: BSPH19217492

I declare that this proposal is my creative work and to the best of my acquaintance has not been presented for a degree in any other institution.

Signature:  **Date: 15th May,2023**

Supervisor Name:Mr Samuel.A. Mwambazi

This dissertation has been submitted with my approval as a University of Lusaka (UNILUS) supervisor.

School of Medicine and Health Sciences, Department of Public Health

Signature:  **Date:15th May,2023**

.

DEDICATION

I dedicate my work to the Almighty God for His Grace and Mercy that HE has seen me through all the 4years I have been in school. I further dedicate this work to my Huband Eric Mwale, my daughters, Taonga, Lucia and Mercy Mwale for their support and time. My studies required me to work long hours, denying the time I needed to be with them. Despite this they were very supportive and indeed encouraged me to continue working on my project. I also dedicate my work to my brother Mason Chulu for helping me with academic work, mother Lucia Mukunto who helped me with cooking, my father Redson Chulu for his support in my education and my mother Esther Miti for my good upbringing.

ACKNOWLEDGEMENT

Eva Kangwa (Head of Department) Mrs Mubanga Phiri (Course Coordinator), Mr Samuel Mwambazi, (Supervisor) and Professor Eustakio Kazonga (Lecturer) These people have contributed greatly for my research to be successful. Their support ranges from facilitation, guidance and encouragement before, during and after the research.

I would also like to thank Mrs Banda (Sister In-charge) and nurses at Mwanjuni Health Post who facilitated the collection of Data that I used for my study.

CONTENTS

LIST OF TABLES

LIST OF ACRONYMS

ANC	Antenatal Care
UNILUSREC	University of Lusaka Research Ethics Committee
WHO	World Health Organisation

ABBREVIATIONS

HIV	Human Immune Virus
MoH	Ministry of Health
UN	United Nations
ZDHS	Zambia Demographic Health Surve

ABSTRACT

This study aimed to assess the effectiveness of antenatal care services provided to pregnant women at the Mwanjuni health post in ten Miles. It was directed by the following objectives: to investigate the relationship between ANC attendance and the antenatal care effectiveness, to investigate the influence of demographic factors such as age, education, marital status and employment on the ANC attendance, to determine the clinic's obstacles in attempting to provide the services, as well as the strengths and limitations of the current services being offered.

The study used an embedded research design and a mixed research approach to collect data from 23 pregnant women and 6 health workers. Data was obtained through a self-administered questionnaire for health workers and a semi-structured questionnaire for pregnant women. The data was analysed using the statistical package for social sciences (SPSS) Version.26. Correlation analysis, chi square tests and descriptive analyses were carried out to analyse the quantitative data while thematic analysis was used analyse qualitative data achieve the study's goals.

The study found that the antenatal care services provided were not consistently effective in meeting the needs of pregnant women, and some basic examinations were not always conducted. The findings indicate that the antenatal care services provided at Mwajuni health post need improvement in adherence to the WHO guidelines for antenatal care. Additionally, ANC attendance was found to be crucial for the effectiveness of ANC services.

Based on the study's results, it is recommended that Mwajuni health post ought to improve its adherence to the WHO guidelines, target education and employment opportunities for pregnant women in the community, and develop interventions to encourage pregnant women to attend ANC services regularly.

Key Words: Antenatal care, pregnant women, attendance, effectiveness

CHAPTER ONE

INTRODUCTION

1.0 Background/introduction

Globally, about 800 women each year die from diseases associated to pregnancy and childbirth that could be prevented (WHO, 2017). At the moment, antenatal care has been suggested as one way of reducing both maternal and new born deaths (WHO, 2005). While neonatal and infant mortality rates constantly stand at 24 /1,000 live births and 45 /1,000 live births, respectively, the maternal mortality ratio is still at 398 /100,000. ANC enables a pregnant woman privilege to services such as routine examinations, health education and promotion, immunizations, diagnostic tests, and treatments as well as in identifying early pregnancy-related risks and complication. (Gross *et al*., 2011). Moreover, WHO (2016) states that the full range of care should be provided during antenatal visits, including blood pressure checks, palpation, physical examination urine tests, iron-folic acid supplementation, tetanus vaccine, intermittent preventative therapy, deworming after the first trimester, and testing for HIV and syphilis. Even while some healthcare facilities report high ANC attendance, certain regions still do not provide all the components of ANC due to scarcity of resources, which include machinary, testing kits, and a competent health workforce. Current requests is to stress on the content and value of care rendered rather than just ANC attendance which is driven by the evidence showing a limited correlation between the usage of antenatal care services and mother and new-born survival. (Kyei et al, 2012). This is in view of the evidence that effectiveness of ANC depends on the value of care provided during each visit (Ejigu et al., 2013).

According to ZDHS (2007), In Zambia, maternal mortality is still a big concern. Pregnant women in Zambia are living better lives as a result of the health system's ongoing expansion of access to ANC services. As a result, the maternity and death rate has decreased from 591 /100,000 live births in 2007 to 198 /100,000 live births in 2014 (ZDHS, 2013/14). However the decrease is not considerable; hence attention should be paid to the calibre of ANC services as opposed to just getting prenatal care. In order to lower the rate of maternal mortality, interventions are being offered by the Ministry of Health (MoH). This was accomplished through the creation of ANC recommendations for a positive pregnancy experience. These recommendations are intended to

transform ANC into a single location for the delivery of services for tuberculosis, HIV, and malaria. The experience of a woman throughout pregnancy, labour, and the postpartum period is critical to transforming ANC and creating flourishing relations and communities (MoH,2018). Therefore, understanding women's perspectives on prenatal care services is essential for boosting the efficiency of healthcare delivery. This is especially true when focusing on the quality of ANC services in Zambia and other countries in terms of structures, processes, and outcomes. This will guarantee that strategies for enhancing care are complete from the perspective of the end user.

1.1. Statement of the problem

There has been general and continuing concern about rates of maternal and neonatal deaths and serious morbidity across the world (UN, 2018). Zambia has the highest maternal mortality rate of about 198/100,000 live births (ZDHS, 2014). In Zambia 94% of pregnant women attend ANC at least once. Moreover, maternal mortality is at 591 deaths per 100,000 live births. As a result of this, it has attracted on the call to focus on the quality of ANC services provided not only attending ANC. The chief common cause of maternal mortality includes, eclampsia, hypertension, sepsis, and haemorrhage, obstructed labour and unsafe abortion." Even though the number of ANC visits has increased, research found that 96% of pregnant women still had at least one ANC check-up (ZDHS, 2014). This reveals unequivocally that opportunities to use high-quality ANC services are lost. According to WHO recommendations, pregnant women should attend eight ANC appointments and receive all necessary care at each appointment to lower the risk of maternal problems. "On average 95% of pregnant women attend ANC at least during their pregnancy,24% start ANC in the first trimester and 56% have a minimum of 4 visits throughout their pregnancy (ZDHS,2013/14). The Ministry of Health is providing intervention to lessen maternal disease and death rate. This is done through the development of antenatal care guidelines for positive pregnancy experience. These services are aimed at redesigning antenatal care into combined service delivery point including Malaria, HIV and Tuberculosis (ZDHS 2014). According to the literature, every time a pregnant woman who comes for antenatal care should have basic tests done such as blood pressure, temperature, pallor, blood sugar, weight, urine testing, blood sugar testing, and abdominal examination testing should be performed. During pregnancy, HIV testing should be performed every three months. Intermittent Preventive Treating drug such as Fansida or Septrine and Anti-tetanus

toxoid should be given when they are due. Deworming drugs and supplementary drugs such as folic acid and ferrous sulphate tablets should supplied every visit for a month.

Despite all the efforts by the Government, there no information to indicate that somebody has done research at this health post. The problem is that according to the available literature, there is no information concerning the effectiveness of antenatal care services provided at Mwanjuni health post.

Without such studies, there would be a gap in our understanding of how well the clinic's services actually work**.**

1.2. Justification of the study

The "study is expected to provide information on the effectiveness of the antenatal services provided at the clinic and thus help to fill the gap and add to the body of knowledge regarding the situation at the clinic. The information may also be used by those who may be interested and want to intervene in the problem of ineffectiveness of antenatal care services among pregnant women.

1.3 General research objective

To evaluate the effectiveness of antenatal care services provided to pregnant women at Mwajuni health post at 10 miles in Chibombo.

1.4 Specific research objective

1. To determine the type of tests being done by the clinic for pregnant mothers.
2. Identify the strengths and weaknesses associated with the current services being provided to pregnant mothers.
3. To identify the challenges being faced by the clinic in trying to provide the services to pregnant mothers.

1.5. Research questions

1. What are the type of tests being done by the clinic for pregnant mothers?
2. What are the strengths and weaknesses of the current antenatal care services provided by the clinic to pregnant mothers?
3. What challenges does the clinic face in providing effective antenatal care services to pregnant mothers?

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

Under this chapter a thorough examination of primary and secondary studies is done. This chapter focuses on the phenomenon of antenatal care among mothers. It reviews the theoretical review and various empirical studies conducted on this topic.

2.1 Literature Review

Research that was carried out in Uganda by Joan et al. (2018), on component of antenatal care received by pregnant mother in fishing communities on Lake Victoria in Uganda with a study population of 486 pregnant women. The study found that out of 5 pregnant women who attended at least one antenatal care visit, only one received the seven measured ANC components (18.4%). Then 99.7% of pregnant women had at least one component, while about a third (28.5%) and two fifths (36.1%) were offered five and six components individually. The most common ANC components that was offered to these pregnant women was iron supplementation and the least was urine testing. For those that received three components of ANC, the common ones were iron supplementation, blood testing and tetanus vaccination injection. A fifth (20.3%) of women who started antenatal care early within 3 months of gestation received the entire ANC components. These findings appear to be constant with guidelines for the World Health Organization (WHO).

In a study that was done by Kyei et al. (2012) on quality antenatal care in Zambia, it found that there was a shortfall in the services offered throughout ANC. Out of 1299 health facilities offering ANC, just 45 (3% of Zambia's facilities) met the standards for the best level, while 608 facilities (47%) offered a reasonable level of service and 646 facilities (50%) fall into the category of inadequate level of service supply. For instance, the majority of ANC facilities offered intermittent prevention treatment for malaria, tetanus vaccine, and folate/iron supplements. Only one-third of ANC institutions provided services for HIV detection and prevention from mother to child. There were only 16% of ANC facilities which offered haemoglobin testing for the aim of diagnosing anaemia, and half (50%) of them provided rapid protein reaction test for screening syphilis. The majority of diagnosing tests, including blood pressure, urinalysis, and haemoglobin were not often available. Less than a quarter of ANC institutions performed urine protein testing, which is crucial for identifying pre-eclampsia. Additionally, the outcomes demonstrate that the antenatal care services offered did not fully satisfy all requirements in accordance with WHO criteria. It was

important to note that the study did not report the problem of measuring technology efficiency, which is what my study tries to do.

ZDHS in 2007 also carried out a survey and the report found that ANC interventions were usually received by pregnant women. Interventions such as Iron supplementation, weight measurement, Intermittent Preventive Treatment (IPT) of malaria, blood pressure measurement, and tetanus vaccination were each received by over 80% of women, while VCT for HIV was received by half, drugs for intestinal parasites by about a third, and only about a quarter of women reported that their urine had been tested. The majority of mothers had eight or more ANC interventions, followed by 40% by five to seven interventions and 12% by fewer than five. In general, 29% of mothers were presumed to have gotten the minimum amount of required antenatal care , which is at least four ANC consultations with a licensed healthcare professional and at least eight ANC interventions. Of the remaining 24% of mothers, 53% received good or moderate ANC. Only 8% of pregnant women visited ANC in the first trimester and received quality care.

Numerous significant ANC interventions that could contribute to improving maternal and new born health remains largely unachievable in Zambia. It was also shown that just 23% of ANC facilities had the competence to do a urine protein test, and only a small number of mothers reported having their urine examined. Further 17 percent of pregnant women did not have their blood pressure checked, which made it challenging to identify and treat hypertension in pregnancy the issues before they can progress to fatal eclampsia. Focused ANC's goal of early detection of complication and therapy is defeated by this because it is not done in the best way. As a result of this of , my survey aims to examine the availability of testing tools and the difficulties faced by medical personnel when offering existing services in healthcare facilities in order to identify any threat to the pregnancies as soon as possible.

According to research done by Katemba et al (2018) on evaluation of quality of antenatal services in selected health centres in Mumbwa and Lusaka districts of Zambia Pregnant women's Perspective. In total, 172 pregnant women receiving antenatal care were questioned; of them, 124 came from two urban health centres and 44 from two rural health centres. According to WHO (2001), antenatal visits should only involve procedures that are proven to be beneficial and directly related to the intended goal. A blood pressure reading, a urinalysis for bacteria and protein, a

syphilis and severe haemoglobin test, an HIV test, and blood workups are all required as part of these examinations.

With regard to the different types of observations carried out, the present findings revealed that all health facilities recorded at least 50% of all women having their blood pressure, weight and height measured. This is against the recommendation by WHO that all women should have their blood pressure checked, and urine and blood tested. Given that not all the women underwent a basic examination, such as taking their blood pressure, it is suggested that individuals with elevated blood pressure and those at risk of pre-eclampsia were overlooked, perhaps leading to a higher rate of morbidity and mortality. The current findings showed that none of the women from three of the four centres that were reviewed had all the tests accomplished. At the 4th centre 30% of the women interviewed had completed all the blood tests. Not all women had further tests such as protein in urine test, which is critical for identifying pre-eclampsia. By comparing the services provided at the four health institutions to each element of the WHO Antenatal care package, this study assessed the quality of ANC and looked content with its results. Concerning the percentage of pregnant women getting each type of care, the quality of care was assessed. This quality gap is a sign that there are still a lot of untapped potentials at antenatal care for providing efficient interventions to enhance mother and new-born health.

Petike (2014) carried out a study on focus antenatal care in Chibombo district. The study found that antenatal care Services provided by health facilities varied significantly depending on the size of the facilities. Due to a lack of resources, including staff, equipment, pharmaceuticals, and medical supplies, some clinics cannot provide the most basic services. With regard to the majority of the services that must be provided, these issues have made it challenging for healthcare facilities to do so. However, there was no information in the literature on the medical equipment that is supplied to health centres, how often it is serviced, or how soon after damage does it need to be replaced. It is critical to understand how quickly medical facilities can replace out-of-date equipment and replenish testing supplies. The ability of medical staff to use the new equipment and perform standard tests without running into any difficulties must also be determined. An effective technique to identify systemic inadequacies is to assess the degree of ANC provision at health facilities. This assessment can also be used as a evaluation tool to determine the national progress.

From the literature review, it can be observed that most of the researchers when carrying out their studies, they did not dwell much on the basic examination and some testing such as urine, blood sugar, haemoglobin levels and blood group that should be done during antenatal visits. This shows that there is lack of knowledge on WHO recommended guidelines of ANC in the provision of services during antenatal visits. However, there is no researcher that has done a study looking at the effectiveness of antenatal care services in 10 miles, Chibombo District. It is for this reason that has prompted me to carry out a study to provide information on the effectiveness of antenatal care services provided at Mwanjuni Health Post.

2.2. Theoretical Framework

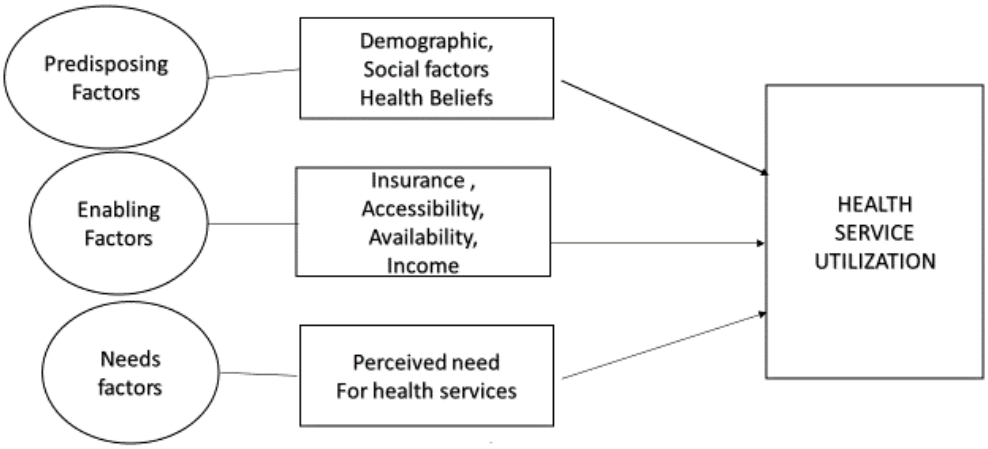
A significant public health issue is maternal mortality, which is mostly brought on by inadequate antenatal care services. This is as a result of a number of things such as, lack of resources which includes funds, infrastructure, medical staff, equipment and supplies. Additionally, failure to effectively monitor the policy on reproductive health. Pregnant women face numerous difficulties in receiving antenatal care at medical centres. To appreciate the issues that effect the use of antenatal care services by pregnant women, this research study will use the Behavioural model by Andersen (2003).

2.2.1 Behavioural model by Andersen

The Behavioural model by Andersen (2003) is a widely known framework for reviewing the usage of health services. It examines the predisposing, enabling, and needs factors, which together make up the three key influences on how people use health services. Age, gender, education level, and cultural attitudes are examples of demographic and social traits that predispose people to certain conditions. Income, geographic accessibility, insurance coverage, the accessibility of services close to the patient's home, and the relationship between the personnel and the patients are all enabling variables. The insight of health benefits, treatments, diagnostic skills, and health professionals' confidence are all needs-related issues.

The model seeks to meet requirements of the targeted people, enhance the value of health services delivered to them, protect them from health hazards, and make optimal use of the resources at its disposal by examining these three variables. The figure 1 below shows the Andersen Behavioural model.

Figure 1: Anderson's Behavioural model



Source: Anderson, 2003

The model suggests that the utilization of antenatal care services by pregnant women is influenced by their predisposing, enabling, and needs factors. Predisposing factors such as age, education, cultural beliefs, and social status, influence the perception of the importance of antenatal care services. Enabling factors such as the availability of services, financial accessibility, and transportation influence the ability of pregnant women to access antenatal care services. Needs factors such as the perception of health benefit and the confidence in health workers influence the utilization of antenatal care services.

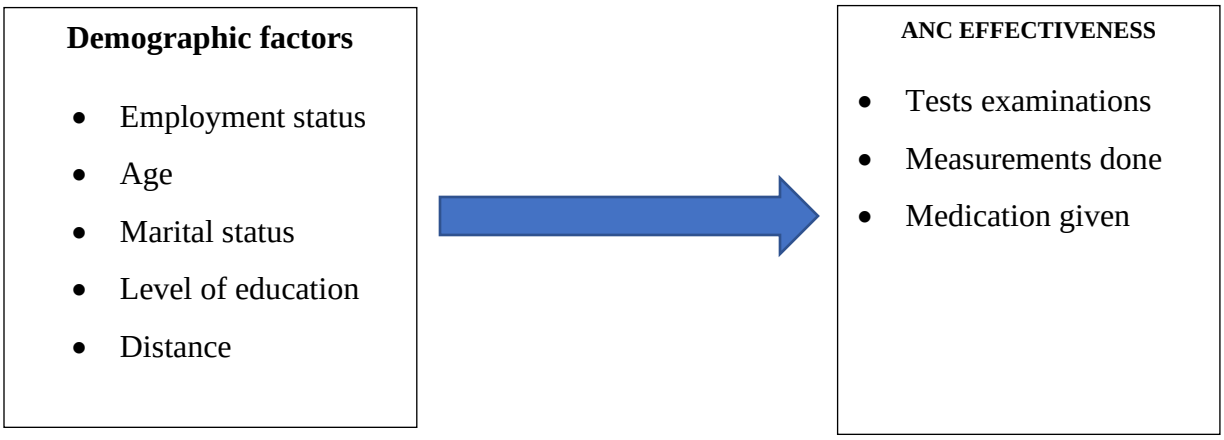
The Andersen Behavioural model provides a framework for understanding the factors that influence the use of antenatal care services by pregnant women. By analyzing these factors, this research study will identify the barriers to the use of antenatal care services and develop strategies to improve the superiority of prenatal care that is available, thereby reducing maternal mortality.

2.3 Conceptual Framework

The conceptual framework shows a visual display of the study's objectives and variables and how each relates to the dependent variable.

Independent Variables

Dependent Variable



Source: Author (2023)

The independent variable in this framework is ANC attendance, specifically looking at the time at which a woman starts attending ANC appointments. This variable is important because earlier attendance can lead to earlier detection and treatment of any potential health issues during pregnancy.

The intervening variables in this framework are demographic factors, which include employment status, age, marital status, and level of education. These factors can potentially affect how women access and utilize ANC services. For example, a woman who is employed may have less time available to attend ANC appointments, whereas a woman with a higher level of education may be more likely to seek out and utilize ANC services.

The dependent variable in this framework is ANC effectiveness. ANC effectiveness is being measured by examining whether tests and examinations are conducted, measurements are taken, and medications are given during ANC appointments. These factors can be indicative of the quality of care provided during ANC appointments and may affect maternal and fetal health outcomes.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

In this chapter, the approach used to evaluate the efficiency of antenatal care services offered to expectant women at the clinic will be presented. A descriptive statistical study was used to evaluate the services provided. The study aimed to gather information from pregnant women and health workers to determine how effective the services were in meeting the needs of pregnant women attending the antenatal clinic.

3.1 Study approach

Both qualitative and quantitative approaches were adopted to conduct the research. The approach was based on a both closed and open-ended questionnaire for pregnant women attending the clinic. The questionnaire helped to obtain information on various aspects of the antenatal care services, including tests, examinations, and medications given to pregnant women. Closed and open ended questionnaire helped in capturing both quantitative and qualitative data.

3.2 Study Design

During the research, a case study design was used to gather data from pregnant women who attended antenatal visits and health workers offering services in the antenatal care department through a semi-structured questionnaire. An embedded research design that incorporates both qualitative and quantitative data was utelised.

3.3 Study Population

The study participants were recruited from the Mwanjuni health post and consisted of pregnant women coming for antenatal visits. All pregnant women attending antenatal care, whether in the first, second or third trimester, were approached, and only those who agreed to be interviewed were enrolled in the study. This approach helped to ensure that the sample was representative of the population being studied. Altogether there were 31 respondents at the time of data collection.

3.4 Sample size and sampling procedures

The determination of the sample size was based on the Yamane formula, which offers a straightforward approach when dealing with relatively small populations. The formula, n = N / (1 + N(e)^2), where n is the sample size, N is the population size, and e is the level of precision, was used to calculate the appropriate sample size for this study.

Therefore, sample size (n)= $31/1+31\ (0.5)^2 = 29$

The sample size for the study was, therefore, 29 people, including 23 pregnant mothers aged 15 to 45 attending the prenatal visit and 6 health workers providing antenatal care services at the Mwanjuni health post. Simple random sampling methods were used to select the respondents, ensuring that each member of the population had an equal chance of being selected. The sample size was small but sufficient to gather the data required for the study.

3.5 Data collection methods

Data was collected using a questionnaire. Health workers were given a self-administered questionnaire using semi-structured questions. Pregnant women were given a questionnaire to fill out, which helped the researcher obtain information on reasons why some basic examinations test were not done constantly. The questionnaire helped to get information on the efficiency of the antenatal care services provided.

3.6 Data analysis

The data obtained through the questionnaire was analysed using the statistical package for social sciences (SPSS) Version.23 to convert data to graphs showing the effectiveness of antenatal care services at Mwanjuni health post in 10 Miles. The study used t-test analysis to define the hypothesis, which helped to determine the efficacy of the prenatal care provided to pregnant women. The qualitative data of the research was analysed thematically.

3.7 Ethical consideration

The research proposal was submitted for ethical approval to the National Health Research Authority. The study was guided by ethical values, guaranteeing safety, voluntary participation, confidentiality, consent form, respect for dignity, honesty, and integrity. Before conducting the research, clearance was obtained from UNILUSREC. The ethical considerations ensured that the study was conducted in a responsible and transparent manner, protecting the rights of the study participants.

CHAPTER FOUR

RESULTS

4.0 Introduction

This chapter presents the analysis of the data collected from pregnant women and health workers in regards to antenatal care. The analysis includes the demographic characteristics of the pregnant women, their ANC attendance, and the factors influencing their ANC visits. The chapter also presents the responses of the health workers regarding the adequacy of ANC services and their recommendations for improving the service delivery.

4.1 Demographic Features of the Pregnant Women

The table below provides an overview of the sample's demographic characteristics and can be used to identify any patterns or trends in the data.

Table 1: Demographic information

Demographic Information	Frequency	Percentage
Age		
18	3	13.0%
19	2	8.7%
20	3	13.0%
21	1	4.3%
22	1	4.3%
24	1	4.3%
26	2	8.7%
28	1	4.3%
30	1	4.3%
31	2	8.7%
32	1	4.3%
35	1	4.3%
39	1	4.3%
42	1	4.3%
44	1	4.3%
Total	23	100.0%

Marital Status		
Married	16	69.6%
Not Married	5	21.7%
Divorced	1	4.3%
Total	23	100.0%
Education Level		
G7	2	8.7%
G8	2	8.7%
G9	8	34.8%
G10	2	8.7%
G11	1	4.3%
G12	8	34.8%
G5	1	4.3%
Total	23	100.0%
Employment Status		
Not Employed	12	52.2%
Self-employed	5	21.7%
Employed	4	17.4%
Total	23	100.0%

Source: Author, 2023

The table 1 above indicates the age range of the pregnant women in the sample is from 18 to 44 years old. The majority of the women are in their early twenties, with 13% of the sample being 18 years old, 13% being 20 years old, and 8.7% being 19 years old. The age distribution is relatively evenly spread out, with the exception of women in their thirties and forties, who make up a smaller portion of the sample.

The majority of the women in the sample (69.6%) are married, while 21.7% are not married and 4.3% are divorced. This indicates that a large proportion of the pregnant women are in committed relationships.

The education levels of the pregnant women in the sample vary. 34.8% of the sample has completed high school (G12), while 8.7% have completed grades 7, 8, or 10 (G7, G8, G10). 34.8% have completed grade 9 (G9), which is the highest level of compulsory education in some countries. The remaining 21.7% of the sample has completed either grade 5 (G5) or grade 11 (G11).

The majority of the pregnant women in the sample (52.2%) are not employed. 21.7% are self-employed, and 17.4% are employed. This suggests that many of the women are not currently in the workforce and may be relying on their partners or other sources of income to support themselves during their pregnancy.

4.2 Respondents' Medical Information

Table 4.2 presents the medical information of the respondents. It provides information on the number of tests conducted, measurements done, medication given, number of visits, and ANC (Antenatal Care) started by the pregnant women in the study. The table shows the frequency and percentage of respondents for each medical information category.

Table 2: Medical Information

Medical Information	**Frequency**	**Percentage**
Number of Tests		
6	11	47.8%
5	4	17.4%
4	5	21.7%
3	2	8.7%
2	1	4.3%
Measurements Done		
Weight / BP	23	100.0%
Medication Given		
4 Types	15	65.2%
3 Types	5	21.7%
5 Types	3	13.0%

Number of Visits		
2	10	43.5%
3	7	30.4%
4	3	13.0%
5	1	4.3%
1	1	4.3%
ANC Started		
2 Months	8	34.8%
5 Months	7	30.4%
3 Months	5	21.7%
4 Months	3	13.0%

Source: Author, 2023

This table shows that all 23 expecting mothers had their weight and blood pressure measured. The most common number of tests done out of six was six (47.8% of the women), and the most common number of visits was two (43.5%).

In terms of medication given, 65.2% of the women received four types of medication, while 21.7% received three types and 13.0% received five types.

The table also shows that ANC started at two months for 34.8% of the women, at three months for 21.7% of the women, at four months for 13.0% of the women, and at five months for 30.4% of the women.

4.3 The relationship between ANC attendance and ANC effectiveness

To perform tests to see if there is a relationship between ANC attendance and ANC effectiveness, correlation analysis was carried out. ANC attendance is the number of visits made by a pregnant woman to the antenatal clinic, while ANC effectiveness can be measured based on the number of tests, measurements, and medication given during those visits. Before relationship correlation, the following cross tabulation was done:

Table 3: Cross-tabulation of ANC Attendance and ANC Effectiveness

ANC Attendance	ANC Effectiveness	Count
Low (1-3 visits)	Ineffective (0-2 tests)	x1
Low (1-3 visits)	Moderate (3-5 tests)	x2
Low (1-3 visits)	High (6+ tests)	x3
Medium (4-6 visits)	Ineffective (0-2 tests)	x4
Medium (4-6 visits)	Moderate (3-5 tests)	x5
Medium (4-6 visits)	High (6+ tests)	x6
High (7+ visits)	Ineffective (0-2 tests)	x7
High (7+ visits)	Moderate (3-5 tests)	x8
High (7+ visits)	High (6+ tests)	x9

Source: Author, 2023

In the table above, two categorical variables were cross-tabulated: ANC Attendance (the number of visits made by pregnant women) and ANC Effectiveness (based on the number of tests conducted, measurements taken, and medications provided during visits). Here's the analysis:

ANC Attendance Categories: "Low (1-3 visits)": This category represents pregnant women who have made between 1 to 3 visits to the antenatal clinic. "Medium (4-6 visits)": This category includes pregnant women who have made between 4 to 6 visits. "High (7+ visits)": This category comprises pregnant women who have made 7 or more visits.

ANC Effectiveness Categories: "Ineffective (0-2 tests)": This category reflects the ANC visits where 0 to 2 tests were conducted, indicating lower effectiveness. "Moderate (3-5 tests)": Pregnant women in this category received between 3 to 5 tests during their ANC visits, suggesting moderate effectiveness. "High (6+ tests)": This category represents ANC visits where 6 or more tests were performed, indicating a high level of effectiveness.

Count (x1, x2, ... x9): Each count represents the number of cases that fall into the corresponding combination of ANC Attendance and ANC Effectiveness categories.

Table 4: The relationship between ANC attendance and ANC effectiveness

	No. of Visits	**No. of Tests Done**	**Measurements Done**	**Medication Given**
ANC Attendance	0.465	0.450	0.403	0.422
ANC Effectiveness	0.465	0.450	0.403	0.422

Source: Author, 2023

The correlation coefficients for all pairs of variables range from 0.403 to 0.465, indicating a moderate positive correlation between ANC attendance and ANC effectiveness.

The correlation coefficient between ANC attendance and the number of visits made is 0.465, which indicates a moderate positive correlation. This suggests that the more visits a pregnant woman makes to the antenatal clinic, the more likely she is to receive a higher number of tests, measurements, and medication, which in turn increases the effectiveness of the ANC services.

Similarly, the correlation coefficients between ANC attendance and the number of tests done, measurements taken, and medication given are all positive and indicate moderate positive correlations (0.450, 0.403, and 0.422 respectively). This suggests that as the number of visits made by a pregnant woman increases, so does the number of tests, measurements, and medication given during those visits, which leads to greater effectiveness of the ANC services.

4.3 Chi-square Test of Independence.

The chi-square test of independence was conducted to determine if there is a significant association between the categorical independent variables and the dependent variable (antenatal care). The outcomes of the chi-square test are presented in Table 4.3. Before the chi-square tests, the following is a table showing Cross-tabulation of Categorical Variables and Number of ANC Visits.

Table 5: Cross-tabulation of Categorical Variables and Number of ANC Visits

Marital Status	**No. of ANC Visits**	**Education Level**	**No. of ANC Visits**	**Employment Status**	**No. of ANC Visits**
Low (1-3 visits)	Count (x1)	Low (1-3 visits)	Count (x4)	Low (1-3 visits)	Count (x7)
Medium (4-6 visits)	Count (x2)	Medium (4-6 visits)	Count (x5)	Medium (4-6 visits)	Count (x8)
High (7+ visits)	Count (x3)	High (7+ visits)	Count (x6)	High (7+ visits)	Count (x9)

Source: Author, 2023

In the table 5, is a cross-tabulation of three categorical variables (Marital Status, Education Level, Employment Status) against the number of ANC Visits. The table indicates the counts (x1, x2, x3) of ANC visits for each category of marital status (Low, Medium, High). For instance, x1 represents the count of ANC visits for individuals with low (1-3) visits and low marital status. To analyze this relationship, a chi-square test of independence will be done in the next table.

Similar to the marital status analysis, this education variable shows the counts (x4, x5, x6) of ANC visits for each education level category. Concerning the Employment Status vs. No. of ANC Visits, the table presents the counts (x7, x8, x9) of ANC visits for different employment status categories.

The following is a chi-square test of independence to assess the relationship above.

Table 6: Chi-square Test of Independence

	Chi-Square	**df**	**p-value**
Marital Status	1.143	1	0.284
Education Level	0.026	1	0.872
Employment Status	1.378	1	0.240

p < 0.05, ** p < 0.01

Source: Author, 2023

The chi-square test of independence is used to determine whether there is a significant association between two categorical variables. In this case, the categorical independent variables are marital status, education level, and employment status, and the dependent variable is the number of antenatal care visits.

The results of the chi-square test are presented in Table 4.3. The p-values for marital status, education level, and employment status are 0.284, 0.872, and 0.240, respectively. None of these p-values are less than 0.05, which is the typical threshold for statistical significance. Therefore, we can conclude that there is no significant association between any of these categorical independent variables and the dependent variable of antenatal care visits.

4.4 Analysis of Variance (ANOVA)

An analysis of variance (ANOVA) was conducted to determine if there is a significant difference in the means of continuous independent variables between different categories of the dependent variable (antenatal care). The results of the ANOVA are presented in Table 4.4.

Table 7: Results of the ANOVA

Source	Sum of Squares	df	Mean Square	F-value	p-value
Marital Status	1.220	1	1.220	0.654	0.432
Education Level	0.280	1	0.280	0.151	0.704
Employment Status	1.360	1	1.360	0.732	0.406
Residual	44.693	18	2.483		
Total	47.553	21			

$p < 0.05$, ** $p < 0.01$

Source: Author, 2023

The ANOVA results indicate that there is no significant difference in the mean number of antenatal care visits based on marital status ($F(1, 18) = 0.654$, $p = 0.432$), education level ($F(1, 18) = 0.151$, $p = 0.704$), or employment status ($F(1, 18) = 0.732$, $p = 0.406$). The p-values for all three variables are greater than 0.05, which indicates that there is not enough evidence to reject the null hypothesis that there is no significant difference in the means of antenatal care visits between the different categories of each demographic variable.

In other words, these demographic factors do not appear to be significant predictors of the number of antenatal care visits. The largest source of variation in the data comes from the residual term, which accounts for 93.8% of the total variation. This suggests that there may be other factors beyond the demographic variables that are influencing the number of antenatal care visits.

4.5 Challenges, recommendations and strengths and weaknesses

The following table presents a summary of the challenges faced, recommendations made, and strengths and weaknesses identified in the provision of antenatal care services. The information was gathered from health workers who provide antenatal care services in the specified healthcare facility.

Table 8: Challenges, Recommendations made by Workers as well as Strengths and Weaknesses

Challenges Faced by Workers	Recommendations made by Health Workers	Strengths of the Institution	Weaknesses faced by the Institution
• Inadequate drugs and reagents • Shortage of staff • Frequent power cuts	• Put-up power backup • Employ more nurses • Supply enough drugs and reagents • Provision of all essential equipment	• They have reagents and modern equipment for measuring weight and blood pressure, • They have qualified personnel	• The inadequate provision of tests and medications • The lack of privacy during antenatal care visits • The poor communication between health workers and pregnant women

Source: Health worker, 2023

The findings from Table 3 suggest that there are several challenges faced by health workers who provide antenatal care services. These challenges include inadequate drugs and reagents, shortage of staff, frequent power cuts, inadequate provision of tests and medications, inadequate qualified personnel, lack of privacy during antenatal care visits, and poor communication between health workers and pregnant women.

To address these challenges, health workers have made several recommendations. These include putting up power backup, employing more nurses, supplying enough drugs and reagents, ensuring

that tests and medications are available and accessible, recruiting and training more qualified health workers, providing private spaces for antenatal care visits, and improving communication and patient education.

The institution has some strengths which include continuous availability of reagents and modern equipment for measuring weight and blood pressure; presence of qualified personnel; modern equipment for conducting tests, and a patient database to keep track of antenatal care visits.

However, the institution has some weaknesses, which include the lack of privacy during antenatal care visits. Additionally, there is inadequate provision of tests and medications and poor communication between health workers and pregnant women, which can lead to misunderstandings and incomplete patient education.

4.6 Summary of Findings

The study examined the effectiveness of antenatal care services provided to pregnant women at Mwajuni health post. The study found that while all pregnant women had their weight and blood pressure measured during their antenatal care visits, not all pregnant women received all the recommended tests and medications during their visits. The study also found that there is a moderate positive correlation between ANC attendance and ANC effectiveness, which suggests that pregnant women who attend ANC services regularly are more likely to receive a higher number of tests, measurements, and medication, leading to better outcomes for both the mother and the child. However, demographic factors such as age, education, marital status, and employment status did not significantly predict the number of antenatal care visits.

CHAPTER FIVE
DISCUSSION

5.0 Introduction

This chapter discusses the findings presented in chapter four and their implications for antenatal care services provided to pregnant women at Mwajuni clinic. The chapter starts by discussing the demographic characteristics of the pregnant women who participated in the study, followed by a discussion of the effectiveness of the antenatal care services provided at the clinic. The chapter also identifies the strengths and weaknesses of the services and the challenges faced by the clinic in delivering the services.

5.1 Demographic Characteristics of the Pregnant Women

The study found that the age of the pregnant women in the sample ranged from 18 to 44 years old, with the majority being in their early twenties. This is consistent with the findings of other studies conducted in similar settings (Nigussie et al., 2020; Woldeyes et al., 2017). The study also found that the majority of the women in the sample were married, had completed high school, and were not employed. These findings suggest that the clinic should consider targeting education and employment opportunities for pregnant women in the community.

5.1.1 Medical information

The study found that all pregnant women who participated in the study had their weight and blood pressure measured during their antenatal care visits. According to what I observed, height was not done to all the pregnant women due to lack of a stadiometer (equipment used to assess height). This is consistent with the World Health Organization's (WHO) guidelines for antenatal care, which recommend the measurement of weight and blood pressure at every antenatal care visit (WHO, 2016). However, the study found that some pregnant women did not receive all the recommended tests and medications during their antenatal care visits. For example, only 47.8% of the women received all six of the recommended tests, and 65.2% received four types of medication instead of the recommended five. These findings suggest that the clinic should improve its adherence to the WHO guidelines for antenatal care.

5.2 The relationship between ANC attendance and the antenatal care effectiveness.

The effectiveness of the ANC was measured in terms of number of tests done, measurements done and medication given, the results from the study suggest that there is a moderate positive correlation between ANC attendance and ANC effectiveness. This means that as the number of visits made by a pregnant woman to the antenatal clinic increases, the more likely she is to receive a higher number of tests, measurements, and medication, which leads to greater effectiveness of the ANC services.

The correlation coefficients between ANC attendance and the number of tests done, measurements taken, and medication given are all positive and indicate moderate positive correlations. This implies that pregnant women who attend ANC services regularly are more likely to receive a higher number of tests, measurements, and medication during those visits, which increases the effectiveness of the ANC services.

Therefore, the study results suggest that ANC attendance is an important factor in the effectiveness of ANC services. Pregnant women who attend ANC services regularly are more likely to receive a higher number of tests, measurements, and medication, which ultimately leads to better outcomes for both the mother and the child.

The findings from this study are consistent with the literature on the relationship between ANC attendance and the effectiveness of ANC services. Studies have shown that attending ANC services regularly can lead to better maternal and neonatal outcomes, such as reduced maternal and neonatal mortality rates, improved maternal health, and reduced incidence of low birth weight babies (World Health Organization, 2016).

One of the primary objectives of ANC services is to identify and manage pregnancy-related complications and risk factors. This can be achieved through regular ANC visits, which allow for early detection and management of pregnancy-related complications. Regular ANC attendance also provides an opportunity for health workers to educate pregnant women on healthy behaviors, such as good nutrition and the importance of attending ANC services regularly, which can lead to better outcomes.

In addition, regular ANC attendance is associated with increased utilization of delivery and postnatal care services, which also contribute to improved maternal and neonatal outcomes (Moth et al., 2011).

5.3 The influence of demographic factors such as age, education, marital status and employment on the ANC attendance.

The objective of the study was to investigate the influence of demographic factors such as age, education, marital status, and employment on the ANC attendance. The study used chi-square test of independence and ANOVA to determine if there is a significant association between these demographic factors and the number of antenatal care visits.

The chi-square test of independence results indicate that none of the demographic factors, including marital status, education level, and employment status, show a significant association with the number of antenatal care visits. Similarly, the ANOVA results show that there is no significant difference in the mean number of antenatal care visits based on these demographic factors.

Therefore, based on the study's results, it can be concluded that demographic factors do not significantly predict the number of antenatal care visits. The study suggests that other factors beyond the demographic variables may be influencing the number of antenatal care visits. These results may be useful in designing interventions to improve antenatal care attendance, particularly for pregnant women who do not attend antenatal care services regularly.

The findings of this study are consistent with some existing literature, which suggests that demographic factors may not be the primary determinants of ANC attendance. For instance, a study conducted in Uganda found that educational level, age, and marital status did not significantly predict ANC attendance (Kisuule et al., 2013). Another study conducted in Nigeria also reported no significant association between maternal age and ANC attendance (Aremu et al., 2017).

However, these results are conflicting with some that suggested that certain demographic factors may influence ANC attendance. For example, a study conducted in Ethiopia found that older age, higher education level, and being married were significantly associated with ANC attendance (Gebrekidan et al., 2018). Similarly, a study conducted in Nepal found that maternal education level and employment status were significant predictors of ANC attendance (Paudel et al., 2018).

This conflict in findings may be due to the fact this study used a small sample size. A small sample size can contribute to differences in findings because it may limit the statistical power of the study, making it difficult to detect significant associations between variables. The small sample size may have made it difficult to detect any significant associations between demographic factors and the number of antenatal care visits.

5.4 The strengths and weaknesses associated with the current services being provided

The strengths identified include the availability of reagents and modern equipment for measuring weight and blood pressure, as well as the presence of qualified personnel. These are essential factors in providing quality antenatal care services. These strengths are consistent with the findings of other studies that have identified the availability of health workers and the provision of free antenatal care services as important factors that influence the use of antenatal care services (Nigussie et al., 2020; Woldeyes et al., 2017).

However, the institution has some weaknesses, which include the lack of privacy during antenatal care visits. Additionally, there is inadequate provision of tests and medications and poor communication between health workers and pregnant women, which can lead to misunderstandings and incomplete patient education.

5.5 The efforts made by the authorities to address challenges being faced by the clinic in trying to provide the services

To address these challenges, health workers have made several recommendations, including putting up power backup, employing more nurses, supplying enough drugs and reagents, ensuring that tests and medications are available and accessible, recruiting and training more qualified health workers, providing private spaces for antenatal care visits, and improving communication and patient education. These recommendations can go a long way in addressing the challenges faced in the provision of quality antenatal care services.

It is important to address the challenges identified to ensure that pregnant women receive the best possible care, leading to improved maternal and child health outcomes. The strengths identified can also be leveraged to provide high-quality care to pregnant women.

CHAPTER SIX
CONCLUSIONS AND RECOMMENDATIONS

6.0 Introduction

This chapter provides a summary of the study's findings and presents conclusions and recommendations based on the results. The chapter also suggests areas for future research.

6.1 Conclusions

Based on the findings of the study, it can be concluded that the antenatal care services provided at Mwajuni health post need improvement in adherence to the WHO guidelines for antenatal care. The study also highlights the importance of ANC attendance in the effectiveness of ANC services and the need to encourage pregnant women to attend ANC services regularly. The study suggests that demographic factors may not be the primary determinants of ANC attendance and that other factors beyond demographic variables may be influencing the number of antenatal care visits.

6.2 Recommendations

Based on the study's findings, the following recommendations are suggested:

1. Mwajuni health post should improve its adherence to the WHO guidelines for antenatal care to ensure that all pregnant women receive all the recommended tests and medications during their antenatal care visits.

2. The clinic should consider targeting education and employment opportunities for pregnant women in the community to improve their socio-economic status, which may encourage them to attend ANC services regularly.

3. Mwajuni clinic should develop and implement interventions to encourage pregnant women to attend ANC services regularly, such as community-based health education programs, reminders, and incentives.

6.3 Limitations of the Study

The study has some limitations that may affect the generalizability of the findings. The study relied on self-reported data, which may be subject to recall bias and social desirability bias.

6.4 Areas for Future Research

Future research could explore the effectiveness of interventions to encourage pregnant women to attend ANC services regularly, the factors beyond demographic variables that influence the number of antenatal care visits and ANC attendance, and the effectiveness of antenatal care services provided at other health facilities in the community.

REFERENCES

World Health Organisation (2017).Maternal Mortality. Available from: https://www.who.int/news-room/fact-sheets/detail/maternal-mortality [accessed 25 January 2019]

Kyei, N. Chansa, C. & Garbrysch, S. (2012). Quality of antenatal care in Zambia: A national assessment. BMC pregnancy child birth.

World Health Organisation (2019). Maternal Mortality: Levels and trends from 2000-2017.Geneva.

Barma, B. Saha, J &Chonhan, P. (2020). Impact of education on the utilization of maternal health care services: An investigation from National family health survey. India

Dandeebo, G & Galaa, S.Z. (2019). Improving access and utilization of Maternal Healthcare services through focused antenatal care in Rural Ghana.

World Health Organisation. (2018). WHO Recommendation on antenatal care for a positive pregnancy experience. Geneva.

Ministry of Health Zambia. (2017). Reproductive, Maternal, New born, Child and Adolescent Health and Nutrition, Communication and Advocacy Strategy.

Chama, C, Chiliba, M & Koch, S.F. (2015). Utilization of focus antenatal care in Zambia: Examining individuals and community level factors using multilevel analysis Health policy plan.

Katemba, B.M, Bwembya, P, Hamoonga, T. E, Chola, M & Jacobs, C. (2018). Demand side factors associated with quality antenatal care services. A case study of Lusaka District. Zambia.

Azizi, A. S, Ahmed, D. A & Bano, A.G. (2018). Factors affecting utilization of antenatal care among pregnant women. A literature review pregnancy neonatal Med.India.

Mueni, E. (2016). Implication of new WHO antenatal guidelines on maternal mortality Africa Institute for Development Policy.

Menon, J.A Musonda, V.C.T & Glazebrool, C. (2018) Perception of care in Zambian women attending antenatal community antenatal clinics. Available from: https://www.researchgate.net/publication/257787993. [accessed15 July,2020]

Zambia Demographic Health Survey. (2013/14). Preliminary report on maternal morbidity and mortality rate. Ministry of Health, Lusaka.

APPENDIX

LETTERS

SCHOOL OF MEDICINE AND HEALTH SCIENCES LEOPARDS HILL CAMPUS
Plot No. 37413, Off Alick Nkhata Mass Media. P. O Box 36711, Lusaka.
Phone: +260211258505, 258409 Fax +260211233409; Cell +260976075850,961917862,
E-mail:unilus@zamnet.zm,ictar@zamnet.zm

SCHOOL OF MEDICINE AND HEALTH SCIENCES RESEARCH ETHICS COMMITTEE

Ref no: IORG0010092-2023/047

Date: 15th DECEMBER, 2022

NIVEA CHULU - BSPH19217492

Re: RESEARCH TITLE: EVALUATION OF THE EFFECTIVENESS OF ANTENANTAL CARE SERVICES AT MWANJUNI CLINIC IN TEN MILES

The above research was submitted to the research ethics committee for review. The study has no major ethical problems and is approved subject to the following:

1. The study cannot be changed without express permission of the UNILUS Research ethics committee
2. Approval from the Lusaka District health Management or equivalent health authorities should be sought.
3. The study tools should be added.
4. An informed consent form should be attached and filled by all study participants (If dealing with primary data)
5. The risks and benefits should be included in the consent form.
6. Ensure before commencement that approval is sought from ZNHRA Congratulations and the committee wishes you success in your work.

Prof Kasonde Bowa
MSc(Glasgow),M.Med(UNZA),FRCS(Glasgow),FACS,FCS,DPH(LSTMH),MPH(UCL)
Chairman- UNILUS REC

Professor of Urology and Consultant Urologist
Executive Dean
University of Lusaka and University Teaching Hospital School of Medicine and Health Sciences.

SCHOOL OF MEDICINE AND HEALTH SCIENCES LEOPARDS HILL CAMPUS

Plot No. 37413, Off Alick Nkhata Mass Media. P. O Box 36711, Lusaka.
Phone: +260211258505, 258409 Fax +260211233409; Cell +260976075850,961917862,
E-mail:unilus@zamnet.zm,ictar@zamnet.zm Date:

15th DECEMBER, 2022

……
……..
……..

PERMISSION FOR **NIVEA CHULU - BSPH19217492 TO** CONDUCT A RESEARCH STUDY AT YOUR FACILITY/ INSTITUTION/ORGANIZATION

Reference is made to the above subject matter

The University of Lusaka, School of Medicine and Health Sciences here by requests for permission for **NIVEA CHULU** Public Health Student to conduct research at your facility/ institution/ organization, entitled**; EVALUATION OF THE EFFECTIVENESS OF ANTENANTAL CARE SERVICES AT MWANJUNI CLINIC IN TEN MILES.** The research is in partial fulfillment of the requirements for the degree of Bachelor of Science Public Health. This is purely for academic purposes and information gained in such a way will not be used in the public domain without prior authorization from the institutions/ organizations involved.

The research topic has been cleared by the University of Lusaka, School of Medicine and Health Sciences Research Ethics Committee as per the attached copy. Data collection is expected to be done from **1st January, 2023 to 31st March, 2023**.

The University of Lusaka avails itself of this opportunity to review to your office the assurances of its highest considerations and looks forward to your timely and favorable response.

Prof Kasonde Bowa
MSc(Glasgow),M.Med(UNZA),FRCS(Glasgow),FACS,FCS,DPH(LSTMH),MPH(UCL)
Chairman- UNILUS REC
Professor of Urology and Consultant Urologist
Executive Dean University of Lusaka and University Teaching Hospital School of Medicine and Health Sciences.

NATIONAL HEALTH RESEARCH AUTHORITY

Lot No. 18961/M, off Kasama Road, Chalala, P.O. Box 30075, LUSAKA

Tell: +260211 250309 | Email: znhrasec@nhra.org.zm | www.nhra.org.zm

Ref No: NHRA00004/24/02/2023 **Date: 24th February, 2023**

The Principal Investigator,
Nivea Chulu,
University of Lusaka, **Lusaka, Zambia.**

Dear Ms. Chulu,

Re: Request for Ethical Clearance and Authority to Conduct Research

The National Health Research Authority is in receipt of your request for ethical clearance and authority to conduct research titled **"Evaluation of the Effectiveness of Antenatal Care Services at Mwanjuni Clinic in 10miles."**

I wish to inform you that following submission of your request to the Authority, our review of the same and in view of the ethical clearance, this study has been **approved** on condition that:

1. The relevant Provincial and District Medical Officers where the study is being conducted are fully appraised;
2. Progress updates are provided to NHRA bi-annually from the date of commencement of the study;
3. The final study report is cleared by the NHRA before any publication or dissemination within or outside the country;
4. After clearance for publication or dissemination by the NHRA, the final study report is shared with all relevant Provincial and District Directors of Health where the study was being conducted, University leadership, and all key respondents.

Yours sincerely,
NATIONAL HEALTH RESEARCH AUTHORITY

Research instruments

CONSENT FORM

I …… consent voluntarily to participate in the study and understand that I have the right to end the interview at any time and to choose not to answer particular questions that are asked in the questionnaire. I have no objection to participating to this research and append my signature below. Signature of Participant …….. Date …….

Questionnaire for Selected Pregnant Women

I am a undergraduate student at University of Lusaka studying Degree programme in Public health.

I am undertaking research to **evaluate the effectiveness of antenatal care services "the case study of Mwanjuni health post".**

I am pleased to have chosen you as a participant in this research. You are therefore requested to take part by answering questions in this questionnaire. Note that this research is purely academic and all your responses will be used for the purpose of academic and nothing else.

Personal Information

Date…../……/…….

Age ……..

Marital Status ……

Education level……..

Employment Status……

How many children do you have?.....

Information on Antenatal Visits

Is this your first time attending antenatal clinic? Yes { } No { }

How many times have you attended antenatal clinic during this pregnancy?.....

At how many weeks or months of the current pregnancy did you start attending your antenatal clinic?.....

On your first visit did the health workers do the following types of blood test on you?

a) HIV test Yes { } No{ }
b) Syphilis test Yes { } No { }
c) Malaria test Yes{ } No{ }
d) Haemoglobin test Yes{ } No{ }
e) Random Blood sugar? Yes{ } No{ }
f) Urine Test Yes { } No { }

Which of the above test were done today?.....

Did the health worker do physical examination on you? Yes{ } No{ }

Were the following measurements done on you?

a) Weight Yes{ } No{ }
b) Height Yes { } No { }
c) Blood pressure Yes{ } No{ }

Each time you come for antenatal clinic do health workers provide you with all the above examination? Yes{ } No{ }

Have you been given any of the following medicine when you come for antenatal clinic visit:

a) Ferrous Sulphate Yes{ } No{ }
b) Folic Acid Yes{ } No{ }
c) Deworming tablets Yes{ } No{ }
d) Fansida tablets Yes { } No{ }
e) Tetanus Vaccine Yes { } No { }

What do you think are the challenges health workers are facing not for them to provide you with adequate antenatal care services that are required during your pregnancy?

……
……
……
……
……
……
……

What do you think should be done to improve antenatal care services at Mwanjuni health post?.....
.....
.....
.....
.....
.....

Questionnaire for Health workers

I am a undergraduate student at University of Lusaka studying Degree programme in Public health.

I am undertaking research to **evaluate the effectiveness of antenatal care services "the case study of Mwanjuni health post".**

I am pleased to have chosen you as a participant in this research. You are therefore requested to take part by answering questions in this questionnaire. Note that this research is purely academic and all your responses will be used for the purpose of academic and nothing else.

Information on Antenatal Care Services

1.On average how many mothers attend antenatal clinic in a week?

2.How many times in week do you have antenatal clinic?

a) Once a week

b) Twice a week

c) Three times a week

d) Everyday

3.Do you have had at times attended to a pregnant mother with complications? {Yes} {No}

4.When do you refer pregnant mothers with complications?

5.Do you have all the equipment to use during antenatal clinics? {Yes} {No}

6.How frequent are this equipment checked and serviced?

a) Once a month

b) Quarterly

c) Yearly

d) None

7.Do you have a laboratory? {Yes} {No}

8.Do you always have reagents to do all the test? Yes { } No { }

9.Are you able to do all the antenatal tests? {Yes} {No}

10.Do you at any time runout of required drugs to give pregnant women during antenatal care visit?Yes { } No { }

11.How many nurses are there at this clinic?

12.How many are midwives?

13.What challenges do you face when offering antenatal care services?

……
……
……
……
……14.What can be done to improve antenatal care service delivery at this clinic?

……
……
……

Date:…….

GANTT CHART JUNE 2022- JUNE 2023

ACTIVITIES	RESPONSIBILITY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
Submission nof research topic	Nivea													
Preparation of research proposal	Nivea													
Submissioin of research proposal	Nivea													
Presentation of research proposal	Nivea													
Ethical clearance	Ethics committee													
Preparation and validation of semi-structured inteview guide	Nivea													
Visit to study site	Nivea													
Data collection	Nivea													
Data compilation, analysis and report writing	Nivea													
Submmission of Dissertation	Nivea													
Presentation of Dissertation	Nivea													

BUDGET

ITEM	DETAILS	TOTAL COST (ZMK)
Printing and photocopying	Interview Guides and Questionnaires	200
Printing and binding	Final Report/ Dissertation	400
Transport and Lunch	For Data collection	1000
Communication	Talktime and Internet bundles	700
Stationery	Pens, paper, books	150
Total		**2450**