

**HEALTHCARE FINANCING AMONG WOMEN ATTENDING ANTENATAL CARE  
AND DELIVERY SERVICES AT THE FEDERAL UNIVERSITY TEACHING  
HOSPITAL, LAFIA NIGERIA**

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**ABSTRACT**

**Background:** Antenatal care (ANC) coverage indicates access and quality of health care during pregnancy, a recognized strategy for improving maternal and neonatal outcomes. This study determines the sources of healthcare financing among women attending ANC and delivery services.

**Methods:** A hospital-based study of women attending ANC at FUTH, Lafia. Ethical approval was obtained from the facility's Research Ethics Committee. Confidentiality of information collected was treated with utmost regard. A p-value of  $< 0.05$  was adjudged significant.

**Results:** Of the participants, 38.4% accessed the facility for ANC only. Most financed their ANC and delivery services through out-of-pocket payment, with only 17.3% vs 21.6% using the scheme, respectively. A third of the participants not on the scheme for ANC or delivery services claimed it was due to their status as housewives without a paying job, while their husbands are not covered as artisans. Most are encountering challenges in payment for ANC services, while 37.1% faced challenges in payment for delivery services. Most of the barriers to accessing ANC and or delivery services had to do with its stressful nature, and frequent out-of-stock syndrome.

**Conclusion:** The proportion of women attending ANC is abysmally low, with many more deliveries occurring at home. Most financed their care through out-of-pocket payments as they or their spouses are not covered by the health insurance schemes. The few on health insurance are not enjoying it due to the stress of clearance and the shortage of drugs. The coverage of the health insurance scheme and hindrances to its use should be enhanced and improved upon.

**KEYWORDS:** - Antenatal care, Delivery services, Healthcare financing, Lafia.

**1.0 INTRODUCTION**

**Background**

Antenatal care (ANC) is a valuable component of maternal healthcare, which aims at fostering the well-being of pregnant women and the health of their unborn children (WHO, 2015). Regular

ANC visit allows for the monitoring and supervision of pregnancy, helps with early detection and management of complications, as essential information and services are provided to the expectant mothers (Ajah et al., 2019). One notable barrier to accessing ANC services is the financial burden associated with healthcare expenses (Abubakar et al., 2017). In Low and Middle Income Countries (LMICs), many women and their families face challenges of ANC cost affordability, which includes fees for consultations, laboratory tests, medications, and transportation to healthcare facilities (Ajah et al., 2019) (Abubakar et al., 2017). These financial barriers can lead to a complete lack of or inadequate ANC utilization, putting both maternal and fetal health at risk (Say et al., 2014). Thereby, worsening the global maternal and neonatal mortality indices, more so in the LMICs.

Nigeria is a leading contributor to the high maternal mortality rate in Sub-Saharan Africa, with an estimated 59,000 annual maternal deaths and a maternal mortality rate of 545 per 100,000 (NPC/ICF, 2018). While Nigeria's healthcare indices are among the worst globally (Oladosun et al., 2021). Several reasons have been advanced for this high level of maternal mortality, including: poverty, ignorance, poor access to health facilities, cultural beliefs, attitude of healthcare workers, incessant strike action, and unpalatable experiences (Oladosun et al., 2021).

The use of interventions such as ensuring antenatal care attendance and having a skilled birth attendant at delivery services is limited in developing countries like Nigeria (Bolarinwa et al., 2021). The advent of the National Health Insurance Scheme (NHIS), now National Health Insurance Authority (NHIA) in Nigeria, is to cushion the financial burden of health care expenditure and to ensure Universal Health Coverage (UHC) for people at all levels (Bolarinwa et al., 2021) (Ezinne Orji et al., 2020). It is, however, poorly implemented and mostly underutilized (Ezinne Orji et al., 2020). The National Demographic Health Survey (NDHS) conducted in 2018 revealed that only 3% of the respondent that were employed and lived in the urban settlement had health insurance coverage (NPC/ICF, 2018). In addition, only 11% of women and 12% of men with more than secondary level of education have employer-based insurance coverage (NPC/ICF, 2018) (Aregbeshola & Khan, 2018). Health care financing in Nigeria has been strictly funded out of pocket, which has kept many families in poverty and total frustration (Aregbeshola & Khan, 2018) (Uzochukwu et al., 2015).

The domestication of the health insurance scheme led to the establishment of the Nasarawa State Health Insurance Scheme (NASHIA) through Law No. 10 of 2018 with the vision to ensure accessible, affordable, qualitative and sustainable health care services for all residents of the state, thereby taking away financial hardship of paying health care expenditure out of

pocket(NASHIA *Operational-Guideline*,2020).The impact of this domestication is yet to be seen in the state.

Healthcare financing is an important component of birth preparedness and complication readiness. In obstetric emergencies, lack of adequate funds for healthcare plays a vital role at all levels of delays, contributing to maternal mortality(Pacagnella et al., 2014).Understanding the sources of healthcare financing used by women attending ANC is essential for addressing these financial barriers and improving maternal health outcomes. By identifying the various means by which women and their families finance ANC services, healthcare systems can tailor interventions and policies to alleviate financial constraints, promote timely ANC visits, and ultimately reduce maternal mortality rates(Faye et al., 2011).

### **Statement of the problem**

Despite the recognized importance of ANC in improving maternal and neonatal outcomes, many women face significant challenges in accessing and utilizing these services. Financial constraints often play a pivotal role in limiting women's ability to seek timely and appropriate ANC. However, there is a limited understanding of the various sources of healthcare financing that women rely on when seeking ANC services in hospitals. This research seeks to address this knowledge gap.

### **Significance of the study**

Antenatal care (ANC) coverage indicates access and use of health care during pregnancy. The antenatal period presents opportunities for reaching pregnant women with interventions that may be vital to their health and well-being and that of their infants. Regular ANC is one of the indicators in the Global Strategy for Women's, Children's and Adolescents' Health (2016-2030) Monitoring Framework, and one of the tracer indicators of health services for the universal health coverage (SDG indicator 3.8)(Walsh et al., 2022). This study lies in its potential to inform policies and interventions aimed at improving maternal healthcare and reducing maternal mortality rates. By examining the sources of healthcare financing for ANC and delivery services among women.

### **Study specific objectives**

1. To determine the sources of healthcare financing of women attending ANC services at the Federal University Teaching Hospital (FUTH), Lafia.
2. To determine the sources of healthcare financing of women accessing delivery care services at the Federal University Teaching Hospital (FUTH), Lafia.
3. To determine the barriers and factors influencing their choices and healthcare-seeking behavior.

## 2.0 METHODOLOGY

### Study area

The study was conducted at the Obstetrics and Gynaecology Department of FUTH, Lafia, Nasarawa State. Lafia is the capital of Nasarawa State, situated in the North Central region of Nigeria, and has a population of 1,863,275 inhabitants according to the 2006 population census. FUTH is a tertiary health facility located in the state's capital, Lafia. Nasarawa South Senatorial District, Nasarawa state, North Central, Nigeria, with an average of 131,923 outpatients seen annually and with a 472-bed capacity. The hospital offers primary, secondary, and tertiary health care services and serves as a referral centre for patients of the State and the neighbouring FCT, Kaduna, Kogi, Benue, and Plateau states.

### Study population

The study design was hospital-based study of women of reproductive age (15 to 49 years) attending the Antenatal Clinic (ANC) at FUTH.

### Study design

This study was a cross-sectional study design.

### Sample size determination

Sample size was determined from the Cochran formula given as  $n = \frac{Z^2 pq}{d^2}$

n = Sample size desired

Z = Standard normal deviate at the required confidence level (1.96)

P = Proportion in the target population estimated to have characteristics of interest. For this study, it is estimated to be 20% (0.2) (NPC/ICF, 2018)

$$q = 1 - p = (1 - 0.2 = 0.8).$$

d = level of statistical significance (0.05)

Applying the formula, the sample size was determined as:

$$n = \frac{1.96 \times 0.2 \times 0.8}{0.05^2} = 245.9$$

$$n = 246$$

An additional 10% of the participants were assumed as non-response, missing or incomplete data was calculated as follows;

$$\text{Non-response} = 10\% \quad n = \frac{10}{100} \times \frac{246}{1} = 24.6$$

The total sample size was calculated as the minimum sample size plus the non-response as follows:

$$\text{Final sample size } N = n + \text{NRR} = 246 + 24.6 = 271$$

The sample size for the study was therefore 271

### **Sampling Technique**

A take-all sampling technique was used to recruit women who consented to the study.

### **Inclusion criteria**

All patients undergoing ante-natal care, post-natal care, and post-natal ward care were enrolled during the period of study.

### **Exclusion criteria**

All patients who declined to give consent were excluded from the study.

### **Ethical consideration**

Ethical clearance was obtained from the Research Ethics Committee of FUTH Lafia. Confidentiality of information collected was treated with utmost regard.

### **Method of data collection**

A structured interviewer administered questionnaire was used to collect the data. Consent was sought from the Head of Obstetrics and Gynecology department FUTH Lafia Nasarawa, A trained research assistant was recruited for data collection from the participants after due explanation of the study and consent given to proceed. The respondent information was strictly kept with utmost confidentiality and that the patient can withdraw from the study at any point in time. The questionnaire had sections that assess the respondents' socio-demographic characteristics, Antenatal Care (ANC) Services, Delivery Services, and Challenges and Barriers from ANC, post-natal clinic, and post-natal ward.

### **Data Analysis**

The data obtained was entered and analyzed with statistical software SPSS (Version 23). Frequencies and percentages were computed for categorical variables, while means and standard deviations were computed for continuous variables. A P value of < 0.05 was adjudged significant. Results obtained after analysis were presented in tables and charts.

### 3.0 RESULTS/FINDINGS

#### Socio-demographic and other characteristics of the participants

The mean age of the study population was  $28.9 \pm 5.4$  years. Of the 271 participants that were interviewed in this study, most (52.8%) were between the ages of 19 to 29 years, while only small proportions (3.7%) were 40 years and above. Most of the participants (97.0%) were married, with 57.6% practicing the Islamic faith. More than half of the participants (53.9%) had a tertiary level of education, while 4.1% had no formal education. A large proportion (47.6%) of participants was in business, 24.7% were civil servants, while 4.4% were peasant farmers. While a quarter, 25.8% of the respondents were Hausa, 18.5% were Eggon, with the others accounting for 19.9%.

Based on the type of services sought by the participants, 38.4% accessed the facility for only ANC, while 61.6% accessed health facilities for ANC and delivery services. Findings further revealed that more than two-thirds of the respondents (70.5%) registered for ANC in the second trimester of pregnancy. Also, while most seek care at the FUTH, few others seek further care in the Police clinic and Kowa hospital as a back-up in case of strike action **Table 1**.

**Table 1: Socio-demographic and other characteristics of the participants**

Characteristics	Frequency	Percentage (%)
<b>Mean age</b>	$28.9 \pm 5.4$ years	
<b>Age (years)</b>		
19 – 29	143	52.8
30 – 39	118	43.5
>40	10	3.7
<b>Marital status</b>		
Single	6	2.2
Married	263	97.0
Widow	2	0.8
<b>Religion</b>		
Christianity	115	42.4
Islam	156	57.6
<b>Educational level</b>		
None	11	4.1
Primary	18	6.6
Secondary	96	35.4
Tertiary	146	53.9
<b>Occupation</b>		
Unemployed	23	8.5
Civil servants	67	24.7
Business	129	47.6

Farmer	12	4.4
Housewives	40	14.8
<b>Ethnicity</b>		
Hausa	70	25.8
Igbo	35	12.9
Yoruba	7	2.6
Alago	25	9.2
Kanuri	30	11.1
Eggon	50	18.5
Others	54	19.9
<b>Type of services the patient sought</b>		
ANC	104	38.4
ANC and Delivery services	167	61.6
<b>Time of pregnancy booking</b>		
First trimester	58	21.4
Second trimester	191	70.5
Third trimester	22	8.1
<b>Health facility used during last pregnancy</b>		
FUTH only	267	98.6
FUTH and Kowa	2	0.7
FUTH and Police clinic	2	0.7

#### Sources of healthcare financing for antenatal care (ANC) and delivery services

Most of the participants in this study, 86 (82.7%), financed their ANC through out-of-pocket payment (either self or through the spouse), with only 18 (17.3%) of the respondents using the health insurance (NHIA or NASHIA). Of the 167 women who accessed ANC and delivery services at the health facility, 131 (78.4%) of the women paid out-of-pocket for their delivery services, while 21.6% were covered under health insurance (NHIA or NASHIA), Table 2 below.

**Table 2: Sources of healthcare financing of antenatal care (ANC) and delivery services**

Characteristics	Frequency	Percentage (%)
<b>Means of ANC financing</b>		
Out of pocket	86	82.7
Husband	62	72.1
Self	24	27.9
Health insurance	18	17.3
<b>Means of delivery services financing</b>		
Out of pocket	131	78.4
Husband	64	48.9
Self	67	51.1

Health insurance

36

21.6

### Factors influencing non-utilization of health insurance for healthcare financing among women attending ANC in FUTH

A third of the participants who are not on health insurance for ANC services in this study attributed it to being a housewife without a paying job, while about a quarter said their husbands are artisans. Similarly, about a third of the participants who are not on health insurance for delivery services in this study attributed it to being a housewife without a paying job, while close to one-fifth said their husbands are artisans. Others are as depicted in Table 3 below.

**Table 3: Factors influencing sources of healthcare financing among ANC women in FUTH**

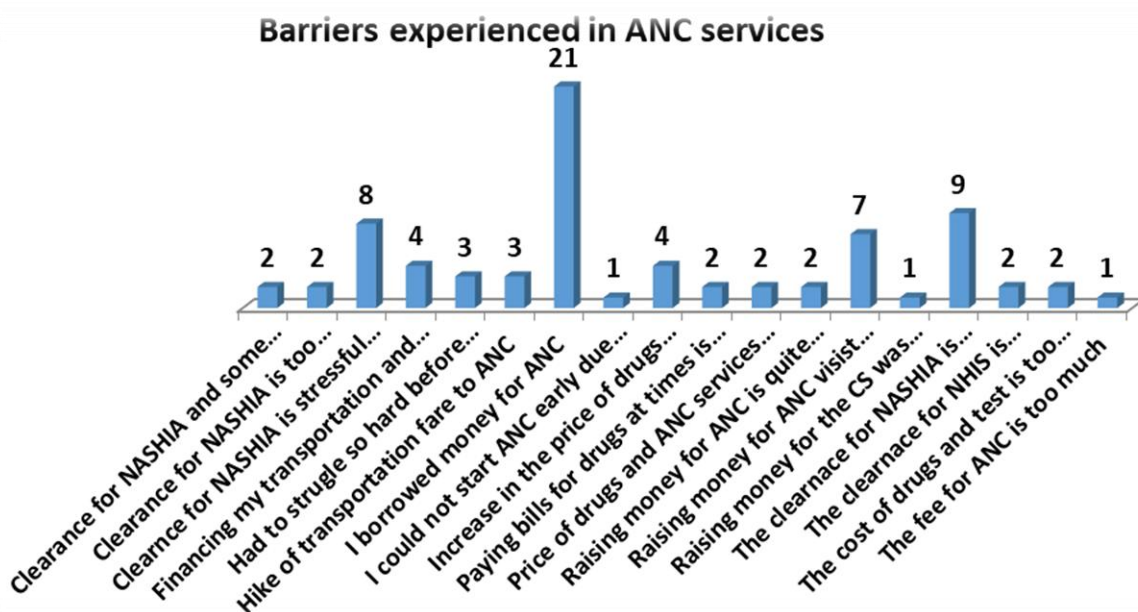
Characteristics	Frequency (n)	Percentage (%)
<b>Choice of ANC financing</b>		
I am a full-time housewife with no job	28	32.6
It is my husband's responsibility	5	5.8
Husband is an artisan	21	24.4
Not enjoying the health insurance coverage due to the lack of commodities	14	16.2
Discounted health expenditure	9	10.5
I am a beneficiary of health insurance	9	10.5
<b>Choice of delivery services financing</b>		
I am a full-time housewife with no job	39	29.8
It is my husband's responsibility	7	5.3
Husband is an artisan	26	19.8
Not enjoying the health insurance coverage due to the lack of commodities	20	15.3
Discounted health expenditure	24	18.3
I am a beneficiary of health insurance	15	11.5

### Potential barriers and challenges faced by women in financing their antenatal care and delivery services

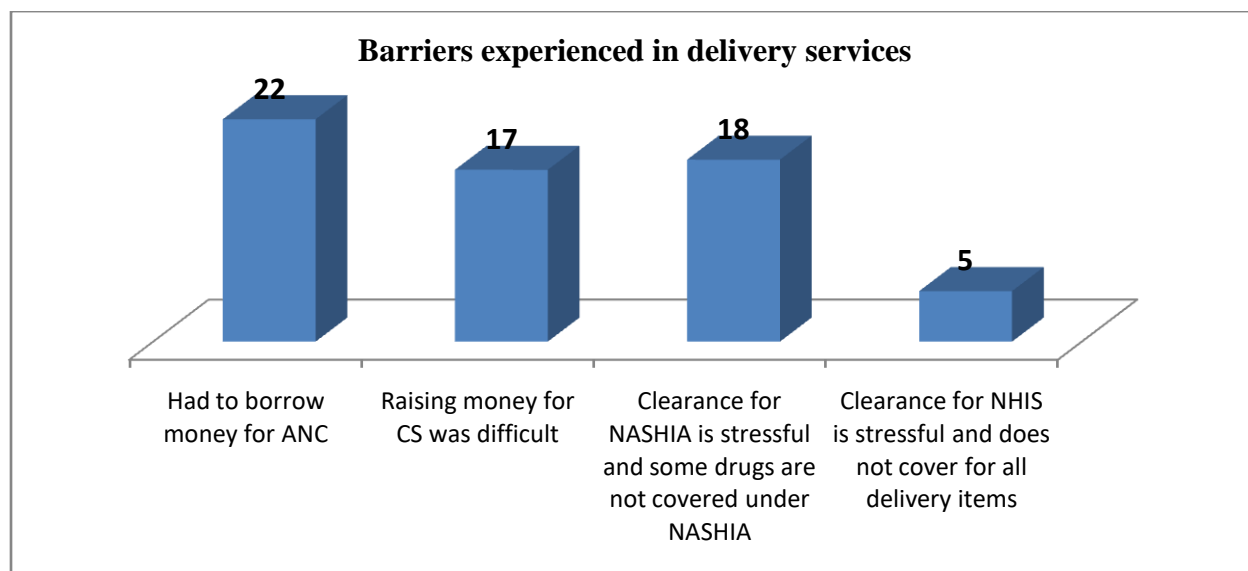
Most women (73.1%) affirmed that they are encountering challenges in payment for their ANC services, while 62 (37.1%) agreed they faced challenges in payment for their delivery services. Most of the challenges to accessing delivery services had to do with the stressful nature of NASHIA and the frequent out-of-drugs syndrome, as well as having to borrow money, as shown in Table 4 below.

**Table 4: Potential barriers and challenges faced by women in financing their antenatal care and delivery services**

Characteristics	Frequency	Percentage (%)
<b>Did you encounter any barriers in financing ANC</b>		
Yes	76	73.1
No	28	26.9
<b>Did you encounter any barriers In financing delivery services</b>		
Yes	62	37.1
No	105	62.9
<b>Potential barriers to financing delivery services</b>		
Had to borrow money for ANC	22	35.5
Raising money for CS was difficult	17	27.4
NASHIA clearance is stressful, and some drugs are not covered for	23	37.1

**Figure 1: Barriers experienced in ANC services**

Most respondents reported the need to borrow money for ANC, stress of health insurance clearance, high cost of transportation, and cost of drugs as factors limiting their access to ANC services Figure 1.



**Figure 2: Barriers experienced in delivery services**

Most participants reported that borrowing money for ANC, difficulty in securing health insurance clearance, and in raising money for likelihood of caesarean section as impediments to accessing healthcare facilities for delivery services Figure 2.

#### 4.0 DISCUSSION

The mean age of this study population was  $28.9 \pm 5.4$  years. It is similar to the earlier finding from the same centre by the same authors (Ahmed et al., 2021). Our finding is equally similar to the report of Magaji et al (Magaji et al., 2025) in Sokoto, North-western Nigeria, and that by Johnson et al (Johnson et al., 2018) in Itu, South-south Nigeria. This is not surprising as it is the age at which most women of reproductive age group have their babies (Federal Ministry of Health and Social Welfare & National Population Commission, 2024).

Less than half of the participants in this study only accessed healthcare while pregnant for antenatal care (ANC) alone. The reason for this low patronage is attributed to factors such as transportation cost, cost of laboratory investigations, and drugs, as well as the hectic processing of health insurance clearance. This is comparable to the findings from Adedokun and Uthman using the National Demographic and Health Survey (NDHS) 2013 data (Adedokun et al., 2017). In addition, the positive perception and cordiality enjoyed by the Traditional Birth Attendants (TBA) who are familiar and cost less for the clients may be other reasons why pregnant women will attend ANC at the health facility but deliver their baby (ies) with the TBAs (Oluwole et al., 2024). Furthermore, most women in this current study attends antenatal care only in a public health facility, this is similar to the report of Ilesanmi et al (Ilesanmi et al., 2023) using the NDHS 2018 data.

In contrast, Egharevba et al (Egharevba, MD, MPH et al., 2017) in South-eastern Nigeria found 75% deliveries in their faith-based healthcare. Their report was, however, based on the newborn attending the immunization clinic in the centre who had retrospectively delivered in the facility. A critical analysis of the number of women who attended antenatal care revealed that less than a quarter of that cohort delivered at their facility. Oyedele et al (Oyedele, 2023) found close to half of those who had ANC at their facility subsequently delivered with them. The disparity may be attributed to the retrospective nature of this study which used an average from three NDHSs (2008 – 2018).

Findings further revealed that more than two-third of the respondents (70.5%) registered for ANC in the second trimester of pregnancy. This delay in booking for antenatal care and continued care may be due to the high adherence to culture and lack of autonomy for decision making by most women as reported in an earlier study (Hassan & Basirka, 2021). Oluwole et al (Oluwakemi et al., 2024) reported findings similar to ours in a study across selected Primary Healthcare Centres (PHCs) in Lagos.

Most of the participants in this study pay for their ANC as well as delivery services through out-of-pocket payment (either self or through their spouse), with only about one-fifth of them using the health insurance (NHIA or NASHIA). Reasons given for not being on health insurance range from being a housewife without a paying job, while others opined that their husbands are artisans, hence not a beneficiary for the scheme at the moment. Findings from the present study are similar to the report of Orji et al (Ezinne Orji et al., 2020) in a study conducted at Nnewi and Awka, South-east Nigeria. Our finding is similar to the publication by Abdus-Salam et al (Abdus-Salam et al., 2021) at the University College Hospital, Ibadan who reported a slightly higher third of their participants. We were on health insurance. The little difference observed is probably due to the study location, study design (four-year trend), and a higher sample size. Although most of our study participants had a tertiary level of education, their exposure occasioned by culture and lesser autonomy, as alluded to earlier, could also be a factor.

## **5.0 CONCLUSIONS**

1. The proportion of women attending ANC for skilled birth preparation is abysmally low in this study.
2. The majority of these few ANC attendees deliver outside the health facility.
3. Most participants financed their healthcare needs through out-of-pocket payment as they were not on health insurance, largely because they were mostly artisans or because women considered healthcare provision to be their husbands' responsibility.
4. The few that are on health insurance are not enjoying it due to the stress of health insurance clearance, out-of-stock drugs, high cost of medicines, and transportation.

## 6.0 RECOMMENDATIONS

1. Advocacies, health education, and more awareness should be instituted and intensified where necessary to increase hospital deliveries by skilled birth attendants.
2. More people, including market women, housewives, and artisans, should be enrolled in the health insurance schemes.
3. The bottle-neck issues delaying the issuance of clearance/codes to beneficiaries should be promptly addressed.
4. Out-of-stock syndrome of medicines in the hospital should be eradicated or reduced to the barest minimum.

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