Determinants of Antenatal Care Utilisation Among Pregnant Women in Nigeria

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Abstract. Maternal mortality remains a major public health and socio-economic challenge, with Nigeria contributing disproportionately to the global maternal death index. Although largely preventable, many women, especially in rural areas, face barriers such as limited access to skilled care, cultural practices, poverty, and inadequate health infrastructure. This study examines the determinants of antenatal care (ANC) utilisation among pregnant women in the Makurdi area of Nigeria, focusing on awareness, socioeconomic and health system factors, and cultural influences. The researchers used a descriptive survey design guided by the Health Belief Model (HBM). The researchers selected a sample of 300 pregnant women aged 18–45 years from a study population of 1,327 women registered for ANC. Data were collected through systematic and simple random sampling from three major facilities — Benue State University Teaching Hospital, Federal Medical Centre Wadata, and Bishop Murray Medical Centre — using a validated, structured questionnaire. Results show high awareness of ANC services, but utilisation is limited by socioeconomic constraints (spousal support, transport, and work schedules), health system challenges (accessibility and quality of facilities), and cultural beliefs (patriarchal control and religious restrictions). The study concludes that while ANC is essential, socioeconomic and cultural barriers in Nigeria, particularly in Makurdi, hinder effective utilisation. It recommends community-based education, financial support for ANC, improved healthcare facilities and staffing, and culturally sensitive programs that engage community leaders to address these barriers.

Keywords: Maternal Mortality; Antenatal Care; Socioeconomic Factors; Health System Determinants; Cultural Beliefs; Public Health; Healthcare; Health Belief Model; HBM; Makurdi.

INTRODUCTION

Maternal mortality remains a major global health challenge, with about 830 women dying daily from preventable pregnancy and childbirth complications. An estimated 99% of these deaths occur in low- and middle-income countries [1]. Nigeria accounts for about 19% of global maternal deaths, one of the highest burdens worldwide. In rural areas, up to 63% of births occur at home, and only 38% are attended by skilled personnel [2]. Despite multiple interventions, maternal mortality remains persistently high.

Antenatal care (ANC) is crucial to safe motherhood, as it provides risk identification, preven-

tion, and management of complications, as well as health education [2, 3]. ANC reduces anaemia, haemorrhage, convulsions, and obstetric morbidity while improving maternal and neonatal survival. WHO [2] and UNICEF [4] recommend at least eight ANC contacts: one in the first trimester, two in the second, and five in the third. Globally, 69% of women achieve at least four visits. Still, coverage is lower in West and Central Africa (56%) compared to Eastern Europe, Central Asia, Latin America, and the Caribbean (92%), as well as North America (99%) [2]. Maternal mortality remains highest in South Sudan (1,223 per 100,000 live births), Chad (1,063), and Nigeria (1,047) [53]. Although global maternal deaths declined by 2.1% between 2000 and 2020, progress is insufficient to meet the SDG target of 70 deaths per 100,000 live births by 2030.

ANC utilisation is shaped by sociodemographic factors (age, marital status, education, and wealth), clinical factors (parity and pregnancy history), and environmental factors (partner support, media exposure, facility distance, and geography). Women with lower wealth and education are less likely to access skilled care, whereas wealthier women are more likely to use institutional delivery [5, 6]. Nigerian adolescents face additional barriers, including stigma, cultural beliefs, and limited access to facilities, contributing to high maternal and neonatal morbidity [7, 8]. Regional disparities persist: 19% of Nigerian women aged 15–19 have begun childbearing, with 14% already mothers and 4% pregnant with their first child. The risk of pregnancy-related complications is one in 22 for Nigerian women, compared to one in 5,400 in high-income countries [9]. Similar inequalities in ANC use have been reported in Ghana and other African and Asian countries [10, 11].

Nigeria has introduced policies such as the Abiye program and Midwives Service Scheme (MSS) [12]. A biomedical focus and weak integration of cultural factors have limited their impact. The WHO's updated ANC policy in Nigeria recommends eight visits, including nutrition counselling and supplementation [13]. Yet, Nigeria still ranks fourth globally in maternal mortality and second in neonatal mortality. Evidence remains limited on how individual, household, community, and system-level determinants shape ANC uptake across regions, and whether the eight-contact model has improved equity among mar-

ginalised populations. This study addresses these gaps.

Statement of the Problem. Maternal health is central to women's reproductive well-being, yet Nigeria continues to record high maternal mortality. WHO recommends at least eight ANC contacts for optimal outcomes, but many Nigerian women initiate ANC late or attend fewer visits. Utilisation is influenced by maternal factors (education, marital status, age), wealth, parity, pregnancy complications, and environmental barriers such as partner support, media exposure, distance to facilities, and geography. Rural and low-income women face the most significant challenges.

Despite multiple interventions, the uptake of ANC remains inadequate. Analysis of the 2018 NDHS shows that while 74% of women received some ANC, only 11% achieved adequate care, with rural and northern regions lagging [14]. Although several studies have examined maternal healthcare in Nigeria, few focus on rural women, where mortality remains disproportionately high. Most research has centred on Western and Eastern regions, with limited evidence from North Central Nigeria, particularly the Makurdi area of Benue State. This study, therefore, evaluates the determinants of ANC utilisation among women in Makurdi.

The following objectives will guide the study.

1) To assess the level of awareness of antenatal services by pregnant women in Makurdi Metropolis

2) To examine the socioeconomic factors influencing antenatal care utilisation among pregnant women in Makurdi Metropolis

3) To assess the health system factors in determining antenatal care utilisation among pregnant women in Makurdi Metropolis

4) To investigate the influence of cultural beliefs and traditions on antenatal care utilisation among pregnant women in Makurdi Metropolis

Conceptual Clarifications

Antenatal care. Antenatal care (ANC) refers to the care provided to pregnant women by skilled health professionals to ensure the health of both mother and child. According to the World Health Organisation [2], ANC provides evidence-based interventions and counselling to support a safe pregnancy and delivery. Holistic ANC includes screening and management of preeclampsia, ges-

tational diabetes, anaemia, and psychosocial issues such as intimate partner violence [15]. It also involves monitoring fetal growth, identifying complications, and promoting health through education on nutrition, substance avoidance, family planning, recognition of danger signs, and birth preparedness.

In practice, ANC visits include screening for hypertension, infections (HIV, syphilis, malaria), and anaemia; providing treatment or referral; nutritional support and micronutrient supplementation (iron and folate); preventive interventions such as tetanus immunisation and malaria prophylaxis; and psychosocial support on diet, breastfeeding, and family planning [2, 15].

ANC participation directly promotes safer deliveries, more facility-based births, and higher postnatal attendance [4]. Nutrition interventions, especially iron and folic acid supplementation, reduce newborn mortality by up to 40% (RR = 0.60, 95% CI: 0.54–0.68) [16]. High-quality prenatal care lowers newborn mortality by 41%, while psychosocial support reduces preterm birth and low birth weight. Telehealth interventions have also been shown to reduce NICU admissions in low-risk populations (relative risk, RR = 0.88; 95% confidence interval, CI: 0.75–1.03). Reflecting this evidence, WHO updated its recommendations from four to eight ANC contacts to reduce perinatal mortality and improve women's care experience [2].

Pregnant Women. Pregnancy is the period from conception to birth, typically lasting about 40 weeks, and involves significant physical, psychological, and emotional changes [17]. Outcomes may include live birth, miscarriage, stillbirth, or abortion. Common early signs are nausea, vomiting, frequent urination, appetite changes, and missed periods. Pregnancy is divided into three trimesters: the first with a higher miscarriage risk, the second with fetal development and movement, and the third focused on delivery. Fertilisation usually follows sexual intercourse but can also occur through assisted reproductive technologies [17].

Although pregnancy is a normal physiological process, it can present life-threatening complications such as severe bleeding, hypertension, seizures, infection, and reduced fetal movement [10]. It is therefore considered a critical period requiring protection and care. Pregnancy also brings psychosocial challenges, including mood shifts, anxiety, and identity changes ("matres-

cence"), with strong social support helping to buffer stress [18, 19].

Social determinants of health (SDOH) such as poverty, limited education, poor nutrition, inadequate shelter, and exposure to violence increase risks of miscarriage, preterm birth, and preeclampsia [20]. These stressors highlight pregnancy as a biopsychosocial state shaped by physiology, emotional health, and environment [21]. Some authors [22] describe the pregnant woman as a "unit of two"—mother and fetus—whose health and well-being are interdependent throughout pregnancy and the postpartum period.

Determinants of Antenatal Care Utilisation among Pregnant Women. Antenatal care (ANC) use remains uneven across African countries, including Nigeria, and varies by geography, age, education, and income. Younger women (under 20 years) and those with secondary education attend ANC more frequently than older or less educated women [23]. Education, income, and residence consistently predict ANC initiation and visit frequency [24–26]. Although WHO's Focused Antenatal Care (FANC) recommends at least four visits under the older guidelines and eight under the newer guidelines, coverage in many low- and middle-income countries remains low [27].

In Nigeria, ANC utilisation is still below target. Only 20.3% of women received eight or more visits, with wide urban–rural disparities (35.5% vs. 10.4%) [28]. Utilisation is associated with maternal autonomy, education, and health insurance, while access barriers persist in rural areas. Occupation, income, religion, and media exposure also influence use, with radio listening linked to rural uptake and TV or internet use to urban settings [4, 29].

Socioeconomic status remains a powerful determinant. Women and partners with secondary or tertiary education, formal employment, or higher household wealth are more likely to complete recommended visits [14, 28]. Shared decision-making between spouses also increases the use of ANC, whereas male-dominated decision-making reduces it.

Cultural and religious beliefs further shape ANC behaviour. Muslim and Christian women have higher attendance than those practising traditional religions [28, 30]. Ethnicity also matters: Yoruba women are more likely to use ANC than Hausa or Fulani women. Restrictive gender

norms, secrecy around pregnancy, and beliefs in witchcraft or destiny deter formal care [31, 32].

Health system factors, especially cost, distance, staff attitudes, and service quality, strongly influence utilisation. Women cite long travel times, high fees, and disrespectful providers as barriers [14, 33]. While initiatives like Nigeria's Midwives Service Scheme have expanded rural access, inequalities persist [4]. Insecurity in the northeast, particularly due to Boko Haram, continues to reduce ANC access and data coverage in affected areas [4, 13].

Theoretical Framework

Health Belief Model (HBM). This study adopts the Health Belief Model (HBM), initially developed in the 1950s by social psychologists Rosenstock, Hochbaum, Kegeles, and Leventhal at the U.S. Public Health Service. The model was first used to explain why few people utilised tuberculosis (TB) screening services despite the availability of mobile X-ray units [34]. Since then, HBM has been widely applied to understand a range of preventive and treatment behaviours, including vaccination uptake, disease prevention, symptom response, adherence to medical regimens, and other health-related practices [35].

In this study, HBM helps explain how pregnant women's perceptions influence their use of antenatal care (ANC). Women who believe they are vulnerable to pregnancy complications (perceived susceptibility) and view these complications as serious (perceived severity) are more likely to seek ANC services [36, 37]. Their confidence in accessing care (self-efficacy), their perception of the benefits or drawbacks of attending ANC, and external influences such as family, media, or community cues (cues to action) further shape their decisions.

METHOD

This study used a descriptive survey design conducted in Makurdi Metropolis, the administrative capital of Benue State, Nigeria. Located along the Benue River, Makurdi lies in Nigeria's Middle Belt and has an estimated population of 497,212 as of 2024, with a growth rate of 3.2%. The Tiv, Idoma, and Igede ethnic groups primarily inhabit the area, sustaining the local economy through agriculture and markets such as Wurukum and Modern Market. Major healthcare facilities included the

Benue State University Teaching Hospital, the Federal Medical Centre Wadata, and the Bishop Murray Medical Centre, where study participants were recruited [38–40].

The target population consisted of 1,327 pregnant women aged 18–45 years who were registered for antenatal care at these three facilities. A sample of 300 participants was determined using the Krejcie and Morgan (1970) formula, with systematic sampling allocating 100 participants per facility and simple random sampling ensuring equal selection within each.

Data were collected using a structured, self-administered questionnaire containing demographic items and Likert-scale questions. The instrument was validated by public health experts and pretested for reliability, yielding a Cronbach's alpha of 0.7 or higher. Trained fieldworkers assisted the researchers in collecting data. The researchers gathered primary data directly from respondents and obtained secondary data from relevant documents and literature.

Data were analysed using SPSS version 25, applying descriptive statistics (frequencies, percentages, means, and standard deviations). The researchers obtained ethical approval from relevant authorities, secured informed consent from all participants, and maintained confidentiality through coded responses to ensure anonymity.

RESULTS AND DISCUSSION

Table 1 presents the sociodemographic profile of respondents.

Table 1 – Demographic characteristics of respondents

Characteristic	Category	Frequency	%
Age group (years)	18–23	62	20.7
	24–29	112	37.3
	30–35	83	27.7
	36 and above	43	14.3
Marital status	Married	228	76.0
	Single	54	18.0
	Divorced / Separated	12	4.0
	Widowed	6	2.0
Highest education	No formal	27	9.0
	Primary	49	16.3
	Secondary	116	38.7
	Tertiary	108	36.0
Employment	Unemployed	97	32.3

Characteristic	Category	Frequency	%
status	Informal/Self-employed	122	40.7
	Formal	81	27.0
Parity (previous live births)	0	109	36.3
	1–2	127	42.3
	3–4	51	17.0
	≥5	13	4.3
Current trimester	First	73	24.3
	Second	142	47.3
	Third	85	28.3
Place of residence	Urban	196	65.3
	Periurban	78	26.0
	Rural	26	8.7
Religion	Christian	231	77.0
	Muslim	54	18.0
	Traditional/Other	15	5.0
Ethnicity	Tiv	187	62.3
	Idoma	69	23.0
	Igede	26	8.7
	Other	18	6.0
Each household	Less than 50,000	102	34.0
	60,000–100,000	96	32.0

Characteristic	Category	Frequency	%
reported its monthly income in NGN	100,000–500,000	68	22.7
	600,000 and above	34	11.3

Most were young women aged 24–29, predominantly married, and with at least secondary education. Employment was largely informal, although a notable proportion of the population was unemployed. Parity varied, but many had one or two live births. Nearly half of the women were in their second trimester at the time of the survey. The majority resided in urban areas, identified as Christian, and belonged to the Tiv ethnic group. Household income was generally low, with many earning below ₦100,000. Overall, the data suggest that ANC utilisation in Makurdi is shaped by sociodemographic factors, particularly age, marital status, education, and income, with young, married, urban women with higher levels of education more likely to access services.

Table 2 – Awareness of Antenatal Services by Pregnant Women in Makurdi Metropolis

No	Item	N	Mean	SD	Remark
1	I am aware that antenatal care helps detect pregnancy complications.	300	4.21	0.87	High Awareness
2	I am aware of the recommended number of antenatal visits.	300	3.33	1.02	Moderate
3	I am aware that antenatal services provide health education.	300	4.13	0.91	High Awareness
4	I know that antenatal care includes nutritional counselling.	300	3.87	0.98	Moderate
5	I am aware that blood tests are part of antenatal care.	300	4.33	0.82	High Awareness
6	I know that antenatal care helps reduce maternal mortality.	300	4.19	0.88	High Awareness
7	I am aware of the availability of free/subsidised antenatal services.	300	3.21	1.05	Moderate
8	I know that antenatal services involve tetanus immunisation.	300	3.73	1.01	Moderate
9	I am aware that antenatal visits involve monitoring fetal growth.	300	4.11	0.92	High Awareness
10	I know that booking antenatal care early is essential.	300	4.27	0.84	High Awareness

Table 2 shows that respondents demonstrated a strong understanding of the clinical and preventive functions of antenatal care, particularly its role in identifying complications, conducting blood tests, enabling early intervention, and reducing the risks of congenital disabilities. Awareness was more moderate for areas beyond clinical care, such as the recommended number of visits, nutrition counselling, vaccination programs, and tetanus immunisation. Overall, the results indicate that pregnant women in Makurdi are well-informed about the lifesaving and complication-preventing benefits of ANC, although knowledge of broader supportive services is less consistent.

Table 3 – Socioeconomic Factors Influencing Antenatal Care Utilisation Among Pregnant Women in Makurdi Metropolis

No	Item	N	Mean	SD	Remark
1	I attend antenatal care because my husband supports my decision.	300	3.21	1.33	Agreed
2	My level of education influences how frequently I attend antenatal visits.	300	3.33	1.21	Agreed
3	I sometimes miss antenatal care because my workplace schedule is tight.	300	2.87	1.18	Neutral
4	I rely on advice from elders in my family before attending antenatal care.	300	2.65	1.27	Disagreed
5	I attend antenatal care because my friends and peers encourage me.	300	2.92	1.21	Neutral

No	Item	N	Mean	SD	Remark
6	My access to transportation determines whether I keep antenatal appointments.	300	3.45	1.19	Agreed
7	I feel motivated to attend antenatal care when health workers treat me with respect.	300	3.68	1.12	Agreed
8	I sometimes skip antenatal visits because I lack household help to manage chores.	300	2.73	1.31	Neutral
9	My exposure to health information through the media influences my use of antenatal care.	300	3.56	1.25	Agreed
10	I sometimes miss ANC appointments because I cannot afford the hospital registration and drug fees.	300	2.9	1.18	Agreed

Table 3 highlights the socioeconomic factors influencing ANC use in Makurdi. Spousal support, education, access to transport, respectful treatment by health workers, and media exposure emerged as essential facilitators of attendance. In contrast, work schedules, reliance on elders' advice, and peer influence were largely neutral, while financial constraints such as household debt and the cost of care posed notable barriers. Overall, ANC utilisation is shaped by a mix of supportive and limiting socioeconomic conditions, with encouragement from spouses, education, and accessible, respectful healthcare standing out as the strongest drivers.

Table 4 – Health System Factors Influencing Antenatal Care Utilisation among Pregnant Women in Makurdi

No	Item	N	Mean	SD	Remark
1	I find it challenging to attend ANC because the wait at the clinic is always too long.	300	3.3	1.21	Agree
2	My experience at the hospital shows that healthcare workers sometimes treat me with little respect.	300	2.7	1.09	Neutral
3	I feel encouraged to use ANC services because the midwives always explain things clearly to me.	300	3.8	1.12	Agree
4	My decision to attend ANC is often influenced by the distance of the health facility from my home.	300	3.5	1.33	Agree
5	I feel safer attending ANC in private clinics than government hospitals because of better attention.	300	3.1	1.26	Neutral
6	I attend ANC regularly because I trust the quality of equipment and drugs used at the facility.	300	3.4	1.07	Agree
7	I sometimes skip ANC visits because health workers ask me for unofficial payments.	300	2.5	1.15	Disagree
8	My comfort with ANC services depends on whether the clinic environment feels clean and welcoming.	300	3.9	1.08	Agree

Table 4 highlights health system factors influencing ANC use in Makurdi. Long waiting times and the distance to facilities were significant barriers. In contrast, effective communication by midwives, trust in the quality of drugs and equipment, and clean, welcoming facilities strongly encouraged attendance. Other factors, such as ill-treatment by providers, preference for private facilities, and informal payments, were rated neutrally. Overall, ANC utilisation is shaped by both structural barriers and service quality, with respectful communication and facility standards motivating use, but long waits and distance limiting access.

Table 5 – Influence of Cultural Beliefs and Traditions on ANC Utilisation among Pregnant Women in Makurdi

No	Item	N	Mean	Std. Deviation	Remark
1	I sometimes rely on traditional birth attendants because my mother believes they understand pregnancy better than hospitals.	300	21.4	6.2	Disagree
2	My husband insists I should first seek blessings from elders before	300	33.1	7.4	Agree

No	Item	N	Mean	Std. Deviation	Remark
	attending antenatal care.				
3	I feel hesitant to disclose my pregnancy early because of cultural taboos in my community.	300	28.7	5.9	Agree
4	My belief in traditional herbs sometimes causes me to delay going for antenatal check-ups.	300	24.2	6.5	Disagree
5	I consider attending antenatal care only after completing family rituals.	300	19.6	5.4	Disagree
6	I feel more comfortable listening to older women's advice than that of medical doctors during pregnancy.	300	31.3	6.8	Agree
7	My cultural belief discourages me from visiting the clinic during the first trimester.	300	27.9	6.0	Neutral
8	I sometimes think going to church/mosque prayers for protection is more critical than hospital visits.	300	29.5	7.1	Agree
9	My community discourages me from mixing modern medicine with traditional practices during pregnancy.	300	23.7	6.6	Disagree
10	I feel pressure from my family to follow cultural traditions even when I want to attend antenatal care regularly.	300	32.6	7.3	Agree

Table 5 illustrates how cultural beliefs and traditions shape ANC use in Makurdi. While reliance on traditional carers and delaying care for ceremonies were largely unsupported, patriarchal and family pressures remained strong, with many women reporting the need for elders' blessings or adherence to tradition before attending ANC. Women often delayed disclosing pregnancy or attending first-trimester visits because of cultural taboos, spiritual beliefs and generational norms, such as reliance on prayer or respect for older women, further influenced their decisions. In contrast, the declining influence of traditional herbs and openness to blending modern and traditional practices suggest a gradual shift toward biomedical care. Overall, cultural norms, patriarchal control, confidentiality concerns, and religious practices remain significant barriers to timely ANC utilisation.

The fact that use of antenatal care in Makurdi is exceedingly biased towards married, young, urban women who have at least secondary education only mirrors the uneven availability of maternal care. That is, no woman can use these devices evenly. They are mostly educated, married, urban dwellers. Education plays a crucial role here. An educated woman can understand her care needs, make wise choices, and make appropriate care decisions. Women educated up to secondary level or beyond not only appreciate the rationale for the ANC but also have self-confidence and the ability to negotiate with health workers and hospitals, which can be challenging institutions. Marriage also provides a sense of security. In most societies, a married woman receives both economic support from her husband and social acceptance to participate in the ANC.

In contrast, unmarried women may be stigmatised if they try to access the services. Being located in urban areas also makes it more accessible. For the women of Makurdi, healthcare information reaches them more widely through TV, radio, social media, and word of mouth; roads are better, and health centres are closer. Put all those together, and you get a "perfect" picture of women most likely to be abusing the ANC; this is supported by [28], which assumes educational levels and living in an urban setting as determinants of ANC utilisation, whereas [41] also holds marital status as the final determinant of ANC utilisation.

The pregnant women in Makurdi are well educated about the benefits of ANC, which is evidence that health education campaigns, provider information and communication, and media are effective. Indeed, awareness does not equate to practice, and the gap between the two is a significant challenge. Access to mass media is another major challenge. Including social media has proven to influence media users, which explains why the media is often utilised in behaviour-influencing campaigns, including health campaigns [42]. However, most women who are aware of the lifesaving potential of the ANC are still prevented from regular use by barriers such as finance, time-consuming household duties and rigid work schedules. The findings reveal that the gap between use and awareness in Makurdi mirrors that in India, where general awareness of ANC did not lead people to attend visits as recommended, highlighting the limited impact of awareness-raising as a stand-alone approach.

Financial issues are bound to be the greatest obstacle to the ANC being utilised in Makurdi. Maternal health care is declared to be free by the Nigerian government at the level, but indirectly, the women pay excessive amounts. Transport costs, a day's wages, and the loss of children and household chores all add up. For women who bake at home and earn their own income, working without paid leave means that each clinic visit results in a loss of pay, and multiple visits become too expensive. This is consistent with [31], which confirms that indirect and hidden costs remain a potent disincentive to accessing healthcare in Nigeria. At the same time, [40] provides evidence that Ethiopian covered women are more likely to utilise ANC services, indicating that insurance provides financial security. The health system creates a barrier to use by excluding the medicine. Most clinics are understaffed, overcrowded and poorly equipped. They wait for hours and even an entire day to learn of stockouts or crumbling facilities [44], which aligns with descriptions of genuine health care access as "effective coverage," where the service is accessible, of good quality, acceptable, and timely. The patriarchal system, religion and cultural beliefs still dominate the ANC women's conduct in Makurdi.

Despite increased awareness, the majority of women have not yet gained the freedom to decide when and where they receive care, as husbands or older relatives typically make these decisions. These observations align with broader trends across Sub-Saharan Africa. According to [45], patriarchal control is a contributory factor to the delayed enrollment of women in the ANC in Kenya despite individual women's desire. In Makurdi, widespread perplexity at first-trimester visits, based on witchcraft or evil spirits, deters early-term visits, and several religious groups encourage the utilisation of faith healing over medical treatment. So, combine the fact that men usually control domestic funds and women's mobility is typically limited, and you can see why it is not easy. Authors [46] argue that the firmly embedded social and cultural limitations continue to prevent access to maternal health care, even within urban areas where services are comparatively accessible.

CONCLUSIONS

Antenatal care, or ANC, is the universally accepted lifeline that saves mothers and babies by preventing morbidity and mortality through early identification of complications before they can blossom and by promoting healthy birth outcomes. However, in Nigeria, where maternal health markers are some of the worst in the world despite the cacophony of free maternal health initiatives, the path to care is typically a maze of socioeconomic and cultural issues needing skilful unscrambling. Antenatal clinic attendance and utilisation in Makurdi reflect the joint strands of education, marriage, and urban residence, but are negated by deeply ingrained sociocultural barriers. Married, educated, urban women are informed and available but are deterred by financial barriers, hidden fees, and underequipped health facilities. Firm patriarchal norms, restrictive religious prohibitions and mythic culture also cast shadows upon women's freedom in utilising the ANC. Knowledge, while prevalent, tends to remain silent in practice; unless firm interventions are made to break economic shackles, mend health systems in shambles, and break the grip of gender and cultural barriers, the gap between awareness and consistent use of ANC will remain a river too wide to wade across. To address this, we recommend utilising aggressive media strategies to increase awareness of ANC, given the media's far-reaching impact [47].

Based on the foregoing, we made the following recommendations.

1) Health authorities in Makurdi must provide ongoing community-based education through interactive sessions, peer groups, and home visits to translate high awareness of antenatal services into regular, early, and repeated visits.

2) The Benue State Ministry of Health and local governments should eliminate hidden costs by providing transport vouchers, conditional cash transfers, or community-based health insurance to make antenatal care more affordable for poor women.

3) Health and government actors must improve infrastructure, hire more staff, ensure regular drug supplies, and implement efficient appointment systems to increase the quality and accessibility of antenatal care.

4) Policymakers, traditional leaders and religious groups ought to work together in designing culturally appropriate programs that engage men and community opinion leaders to turn around patriarchal norms and religious restrictions on antenatal care.

REFERENCES

1. Daily Trust. (2021). Why Nigeria's Maternal Mortality is Amongst the Highest In The World. Retrieved from https://dailytrust.com/why-nigerias-maternal-mortality-amongst-highest-in-the-world/

2. WHO. (2025). Maternal mortality. Retrieved from https://www.who.int/news-room/fact-sheets/detail/maternal-mortality

3. Narain, S., & McEwan, A. (2023). Antenatal assessment of fetal well-being. *Obstetrics Gynaecology & Reproductive Medicine, 33*(8), 217–224. doi: 10.1016/j.ogrm.2023.05.002

4. UNICEF. (2024). Antenatal care is essential for protecting the health of women and their unborn children. Retrieved from https://data.unicef.org/topic/maternal-health/antenatal-care/

5. Alukagberie, M. E., Elmusharaf, K., Ibrahim, N., & Poix, S. (2023). Factors associated with adolescent pregnancy and public health interventions to address in Nigeria: a scoping review. *Reproductive Health, 20*(1). doi: 10.1186/s12978-023-01629-5

6. Shibre, G., Zegeye, B., Idriss-Wheeler, D., & Yaya, S. (2020). Factors affecting the utilisation of antenatal care services among women in Guinea: a population-based study. *Family Practice, 38*(2), 63–69. doi: 10.1093/fampra/cmaa053

7. Oluseye, A. O. (2021). *Exploring the lived experiences of unmarried young mothers in South-Western Nigeria.* (Thesis; The Open University UK)

8. Bintabara, D., & Mwampagatwa, I. (2023). Socioeconomic inequalities in maternal healthcare utilisation: An analysis of the interaction between wealth status and education using population-based surveys in Tanzania. *PLOS Global Public Health, 3*(6), e0002006. doi: 10.1371/journal.pgph.0002006

9. Fagbamigbe, A. F., Olaseinde, O., & Fagbamigbe, O. S. (2021). Timing of first antenatal care contact, its associated factors and state-level analysis in Nigeria: a cross-sectional assessment of compliance with the WHO guidelines. *BMJ Open, 11*(9), e047835. doi: 10.1136/bmjopen-2020-047835

10. Lateef, M. A., Kuupiel, D., Mchunu, G. G., & Pillay, J. D. (2024). Utilisation of antenatal care and skilled birth delivery services in Sub-Saharan Africa: A Systematic Scoping review. *International Journal of Environmental Research and Public Health, 21*(4), 440. doi: 10.3390/ijerph21040440

11. Samuel, M. M., James, G., & James, A. A. (2024). Utilisation of maternal healthcare services and maternal mortality among women in rural communities in Nasarawa state, Nigeria. *Polac Economic and Management Sciences Journal, 4*(1),

12. Ajayi, A. I., & Akpan, W. (2020). Maternal health care services utilisation in the context of 'Abiye' (safe motherhood) programme in Ondo State, Nigeria. *BMC Public Health, 20*(1). doi: 10.1186/s12889-020-08512-z

13. Ikemeh, C., Adeyemi, A. O., Arogundade, K., Frerichs, L. M., Shea, C. M., & Trogdon, J. G. (2025). Assessing the antenatal care-seeking determinants associated with the penetration of the WHO eight-visit antenatal care policy across states in Nigeria. *BMC Pregnancy and Childbirth, 25*(1). doi: 10.1186/s12884-025-07713-x

14. Adedokun, S. T., Uthman, O. A., & Bisiriyu, L. A. (2023). Determinants of partial and adequate maternal health services utilisation in Nigeria: analysis of a cross-sectional survey. *BMC Pregnancy and Childbirth, 23*(1). doi: 10.1186/s12884-023-05712-4

15. McCauley, H., Lowe, K., Furtado, N., Mangiaterra, V., & Van Den Broek, N. (2021). What are the essential components of antenatal care? A systematic review of the literature and development of signal functions to guide monitoring and evaluation. *BJOG an International Journal of Obstetrics & Gynaecology, 129*(6), 855–867. doi: 10.1111/1471-0528.17029

16. Albarqi, M. N. (2025). The Impact of Prenatal care on the Prevention of neonatal Outcomes: A Systematic Review and Meta-Analysis of Global Health Interventions. *Healthcare, 13*(9), 1076. doi: 10.3390/healthcare13091076

17. Bishnoi, S., Yadav, P., & Malik, P. (2020). Care during pregnancy – A review. *In book: Research Trends in Home Science and Extension, 4* (pp.57-74). AkiNik Publications doi: 10.22271/ed.book.960

18. Al-Mutawtah, M., Campbell, E., Kubis, H., & Erjavec, M. (2023). Women's experiences of social support during pregnancy: a qualitative systematic review. *BMC Pregnancy and Childbirth, 23*(1). doi: 10.1186/s12884-023-06089-0

19. Ekelöf, K., Tangen, G. A., Nyström, C. D., Löf, M., & Thomas, K. (2025). Mental well-being during pregnancy and the transition to motherhood: an explorative study through the lens of healthcare professionals. *BMC Pregnancy and Childbirth, 25*(1). doi: 10.1186/s12884-025-07894-5

20. Girardi, G., Longo, M., & Bremer, A. A. (2023). Social determinants of health in pregnant individuals from underrepresented, understudied, and underreported populations in the United States. *International Journal for Equity in Health, 22*(1). doi: 10.1186/s12939-023-01963-x

21. Pascual, Z. N., & Langaker, M. D. (2023). *Physiology, pregnancy.* StatPearls Publishing.

22. Bhumi, M. A., & Chajhlana, S. P. S. (2018). Knowledge of obstetric danger signs among pregnant women attending the antenatal clinic at the rural health training centre of a medical college in Hyderabad. *International Journal of Community Medicine and Public Health, 5*(6), 2471. doi: 10.18203/2394-6040.ijcmph20182179

23. Owoseni, J. S. (2016). Factors affecting the utilisation of antenatal care among pregnant women in Moba LGA of Ekiti State, Nigeria. *International Journal of Traditional and Complementary Medicine, 1*(1), 20–30.

24. Saad–Haddad, G., DeJong, J., Terreri, N., Restrepo–Méndez, M. C., Perin, J., Vaz, L., Newby, H., Amouzou, A., Barros, A. J., & Bryce, J. (2016). Patterns and Determinants of Antenatal Care Utilisation: Analysis of National Survey Data in Seven Countdown Countries. *Journal of Global Health, 6*(1). doi: 10.7189/jogh.06.010404

25. Mgata, S., & Maluka, S. O. (2019). Factors for late initiation of antenatal care in Dar es Salaam, Tanzania: A qualitative study. *BMC Pregnancy and Childbirth, 19*(1). doi: 10.1186/s12884-019-2576-0

26. Rwabilimbo, A. G., Ahmed, K. Y., Page, A., & Ogbo, F. A. (2020). Trends and factors associated with the utilisation of antenatal care services during the Millennium Development Goals era in Tanzania. *Tropical Medicine and Health, 48*(1). doi: 10.1186/s41182-020-00226-7

27. Jiwani, S. S., Amouzou-Aguirre, A., Carvajal, L., Chou, D., Keita, Y., Moran, A. C., Requejo, J., Yaya, S., Vaz, L. M., & Boerma, T. (2020). Timing and number of antenatal care contacts in low and middle-income countries: Analysis in the Countdown to 2030 priority countries. *Journal of Global Health, 10*(1). doi: 10.7189/jogh.10.010502

28. Adewuyi, E. O., Auta, A., Adewuyi, M. I., Philip, A. A., Olutuase, V., Zhao, Y., & Khanal, V. (2024). Antenatal care utilisation and receipt of its components in Nigeria: Assessing disparities between rural and urban areas—A nationwide population-based study. *PLoS ONE, 19*(7), e0307316. doi: 10.1371/journal.pone.0307316

29. Ntoimo, L. F. C., Okonofua, F. E., Ekwo, C., Solanke, T. O., Igboin, B., Imongan, W., & Yaya, S. (2021). Why women utilise traditional rather than skilled birth attendants for maternity care in rural Nigeria: Implications for policies and programs. *Midwifery, 104*, 103158. doi: 10.1016/j.midw.2021.103158

30. Oladele, R., Ojo, E., Okoduwa, G. E., Olajide, O. A., Olufadewa, I., & Adesina, M. (2024). Utilisation of antenatal care by young mothers and adolescents in Nigeria. *Deleted Journal, 21*(1). doi: 10.1186/s12982-024-00335-2

31. Opara, U. C., Iheanacho, P. N., & Petrucka, P. (2025). Visible and invisible cultural patterns influencing women's use of maternal health services among Igala women in Nigeria: a focused ethnographic study. *BMC Public Health, 25*(1). doi: 10.1186/s12889-025-21275-9

32. Igbokwe, C. C., Ihongo, J. T., Abugu, L. I., Iweama, C. N., & Ugbelu, J. (2024). Influence of cultural beliefs on the utilisation of integrated maternal, newborn, and child health services in Benue State, Nigeria. *Cureus*. doi: 10.7759/cureus.52808

33. Abimbola, J. M., Makanjuola, A. T., Ganiyu, S. A., Babatunde, U. M. M., Adekunle, D. K., & Olatayo, A. A. (2017). Pattern of utilisation of ante-natal and delivery services in a semi-urban community of North-Central Nigeria. *African Health Sciences, 16*(4), 962. doi: 10.4314/ahs.v16i4.12

34. Glanz, K., Rimer, B. K., & Viswanath, K. (2015). *Health Behaviour: Theory, Research and Practice.* John Wiley & Sons.

35. Zampetakis, L. A., & Melas, C. (2021). The health belief model predicts vaccination intentions against COVID-19: A survey experiment approach. *Applied Psychology Health and Well-Being, 13*(2), 469–484. doi: 10.1111/aphw.12262

36. Gautam, N., Dessie, G., Rahman, M. M., & Khanam, R. (2023). Socioeconomic status and health behaviour in children and adolescents: a systematic literature review. *Frontiers in Public Health, 11.* doi: 10.3389/fpubh.2023.1228632

37. Ruggeri, S. Y., Emerson, A., & Russell, C. L. (2023). A concept analysis of routines for improving health behaviours. *International Journal of Nursing Sciences, 10*(3), 277–287. doi: 10.1016/j.ijnss.2023.06.004

38. Ngobua, S. J., Omuemu, V. O., Ande, A. B., Olaleye, O. S., Awunor, N. S., & Ieren, I. I. (2024). Adolescent reproductive health care services: knowledge, perspectives, and challenges among service providers in Makurdi, Benue State, Nigeria. *African Journal of Reproductive Health, 28*(10), 131–140. doi: 10.29063/ajrh2024/v28i10.13

39. Asaju, K., & Tachia, J. (2025). Effect of Insecurity on Economic Development in the Makurdi and Guma LG Areas of Benue State. *SSR Journal of Arts, Humanities and Social Sciences*

40. Shaibu, O., Omokaro, G. O., Onyamoche, E. P., Tafese, G. T., Nafula, Z. S., Niambe, O. K., & Nnoli, E. C. (2025). Assessment of urbanisation's environmental impact in Makurdi Metropolis, Benue State, Nigeria. *International Journal of Environmental Impacts, 8*(2), 393–400. doi: 10.18280/ijei.080218

41. Merga, B. T., Raru, T. B., Deressa, A., Regassa, L. D., Gamachu, M., Negash, B., Birhanu, A., Turi, E., & Ayana, G. M. (2023). The effect of health insurance coverage on antenatal care utilisation in Ethiopia: evidence from a national survey. *Frontiers in Health Services, 3.* doi: 10.3389/frhs.2023.1101164

42. Madu, U. A., & Nworie, C. S. (2022). Influence of Ethnocentric Billboard Advertising Messages on Product Consumption in Nigeria: A Study of Hero Lager. *Path of Science, 8*(5), 7001–7011. doi: 10.22178/pos.81-13

43. Bashir, S., Ansari, A. H., & Sultana, A. (2023). Knowledge, Attitude, and Practice on Antenatal Care Among Pregnant Women and Its Association With Sociodemographic Factors: A Hospital-Based Study. *Journal of Patient Experience, 10*. doi: 10.1177/23743735231183578

44. Kruk, M. E., Gage, A. D., Joseph, N. T., Danaei, G., García-Saisó, S., & Salomon, J. A. (2018). Mortality due to low-quality health systems in the universal health coverage era: a systematic analysis of amenable deaths in 137 countries. *The Lancet, 392*(10160), 2203–2212. doi: 10.1016/s0140-6736(18)31668-4

45. Oluoch, F., Ayodo, G., Owino, F., & Okuto, E. (2020). Modelling the impact of travelling time on the utilisation of maternity services using routine health facility data in Siaya County, western Kenya. *American Journal of Geographic Information Systems, 9*(1), 1–12. doi: 10.5923/j.ajgis.20200901.01

46. Mshelia, S. E., Analo, C. V., & Booth, A. (2020). Factors influencing the utilisation of facility-based delivery in Nigeria: a qualitative evidence synthesis. *Journal of Global Health Reports, 4*. doi: 10.29392/001c.17961

47. Madu, U. A. (2021). Effectiveness of social media in unifying fragmented Nigerian societies. *Path of Science, 7*(12), 3001–3010. doi: 10.22178/pos.77-5