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## **Malaria and Pregnancy: Incidence of Malaria Among Pregnant Women Attending Antenatal Care at Primary Health Care Dawaki, Bwari Area Council, FCT-Abuja, Nigeria from 2023 to 2024**

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### **Abstract**

This retrospective study investigates the prevalence of malaria among pregnant women attending antenatal care at Primary Health Care Dawaki in Bwari Area Council, FCT-Abuja, Nigeria, from January 2023 to December 2024. The study aims to determine the incidence of malaria, identify associated complications, and evaluate the knowledge and practices of pregnant women regarding malaria prevention and treatment. A total of 1,256 pregnant women were included in the study, with 678 (54%) diagnosed with malaria. The majority of cases occurred during the second (45%) and third (38%) trimesters of pregnancy. Malaria was associated with complications such as anemia (62%), low birth weight (28%), and preterm birth (18%). While 72% of women were aware of malaria prevention methods, only 48% reported consistent use of insecticide-treated bed nets (ITNs), and 58% received the recommended doses of intermittent preventive treatment in pregnancy (IPTp). The findings highlight the urgent need for improved malaria prevention and control strategies targeting pregnant women in this region.

**Keywords:** Malaria, Pregnancy, Antenatal Care, Dawaki, Bwari Area Council, FCT-Abuja, Nigeria.

### **Introduction**

**Background:** Malaria is a life-threatening disease caused by Plasmodium parasites transmitted through the bites of infected female Anopheles mosquitoes. Pregnant women are particularly vulnerable to malaria, which can lead to severe complications for both the mother and the developing fetus. In sub-Saharan Africa, malaria during pregnancy is a major public health concern, contributing to high rates of maternal and infant morbidity and mortality.

**Research Objectives:** This study aims to investigate the prevalence of malaria among pregnant women attending antenatal care at Primary Health Care Dawaki in Bwari Area Council, FCT-Abuja, Nigeria, from 2023 to 2024. The specific objectives are:

1. To determine the incidence of malaria among pregnant women attending antenatal care at Primary Health Care Dawaki.
2. To identify the age distribution and trimester of pregnancy during which malaria infections occur.
3. To assess the complications associated with malaria during pregnancy, including anemia, low birth weight, and preterm birth.
4. To evaluate the knowledge and practices of pregnant women regarding malaria prevention and treatment.

**Significance of the Study:** Addressing the high incidence of malaria in pregnancy is crucial for improving maternal and fetal health outcomes and guiding the development of effective prevention and control strategies. This study provides valuable insights into the burden of malaria among pregnant women in the Dawaki community, which can inform targeted interventions and resource allocation to reduce the impact of malaria on maternal and child health.

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## Literature Review

Malaria during pregnancy is a pressing public health issue, particularly in sub-Saharan Africa, where the disease burden is disproportionately high. According to Desai et al. (2018), malaria in pregnancy is associated with severe maternal and fetal health outcomes, including increased risks of maternal anemia, placental parasitemia, low birth weight, and preterm delivery. The World Health Organization (2020) further underscores that malaria contributes significantly to maternal morbidity and mortality, with estimates suggesting that approximately 10,000 women and 200,000 infants die annually due to complications related to malaria in pregnancy.

The effectiveness of preventive measures such as intermittent preventive treatment in pregnancy (IPTp) and insecticide-treated bed nets (ITNs) has been highlighted by Rogerson et al. (2018). These interventions are crucial in reducing the incidence of malaria among pregnant women. However, Eisele and Larsen (2017) emphasize that despite these strategies, many women still lack access to adequate antenatal care, which limits their ability to receive necessary malaria prevention and treatment.

Cultural barriers and health system inadequacies also play a significant role in the prevalence of malaria during pregnancy. Uneke (2017) points out that misconceptions about malaria and its treatment can deter pregnant women from seeking timely medical care. This is compounded by economic factors; as noted by Ajumobi and Aworinde (2018), the financial burden of malaria treatment can prevent women from accessing essential healthcare services.

Furthermore, the impact of malaria extends beyond immediate maternal health risks. Studies indicate that children born to mothers with malaria during pregnancy face heightened risks of congenital malaria, anemia, intrauterine growth restriction, and low birth weight. Schantz-Dunn and Nour (2020) assert that these adverse outcomes can lead to long-term developmental issues in affected children. The evidence suggests that addressing malaria in pregnancy requires a comprehensive approach that includes improving healthcare access, enhancing public awareness about prevention strategies, and addressing socio-economic barriers.

## Methodology

**Research Design:** This retrospective study collected data on the incidence of malaria among pregnant women attending antenatal care at Primary Health Care Dawaki from January 2023 to December 2024.

**Sampling Techniques:** The study population included all pregnant women who visited the health facility during the study period. No sampling was conducted, as data was collected on all eligible participants.

## Data Collection Method

Data was collected on the number of malaria cases, age distribution of affected pregnant women, and the trimester of pregnancy during which the infection occurred. Malaria diagnosis was based on microscopic examination of blood smears or rapid diagnostic tests (RDTs).

Information on malaria-related complications, such as anemia, low birth weight, and preterm birth, was also gathered. Interviews were conducted with pregnant women to assess their knowledge and practices regarding malaria prevention and treatment.

## Data Analysis Procedures

Descriptive statistics were used to analyze the collected data. The incidence of malaria was calculated as the proportion of pregnant women diagnosed with malaria out of the total number of women attending antenatal care. The age distribution and trimester of pregnancy during which malaria infections occurred were analyzed using frequency distributions. The prevalence of malaria-related complications was calculated as the percentage of affected women out of the total number of malaria cases. Responses from the interviews were analyzed qualitatively to identify common themes and patterns in knowledge and practices related to malaria prevention and treatment.

## Demographic Characteristics of Pregnant Women with Malaria.

Characteristics	Number of Women
Total women	1,256
Malaria cases	678
<b>Age</b>	
15-19 years	122
20-24 years	217
25-29 years	190
30-34 years	102
34-39 years	47
<b>Trimester</b>	
First	
Second	305
Third	258
<b>Complications</b>	
Anemia	420
Low Birth Weight	190
Preterm Birth	122

The table presents the demographic characteristics of 1,256 pregnant women who attended antenatal care at Primary Health Care Dawaki in Bwari Area Council, FCT-Abuja, Nigeria, from January 2023 to December 2024. Of these women, 678 (54%) were diagnosed with malaria.

The age distribution of the affected women shows that the majority were in the 20-24 years age groups. The majority of malaria cases occurred during the second trimester (45%) and third trimester (38%) of pregnancy.

## Results

**Presentation of Findings:** During the study period, a total of 1,256 pregnant women attended antenatal care at Primary Health Care Dawaki. Of these, 678 (54%) were diagnosed with malaria. The age distribution of affected pregnant women was as follows: 15-19 years (18%), 20-24 years (32%), 25-29 years (28%), 30-34 years (15%), and 35-39 years (7%). The majority of malaria cases occurred during the second trimester (45%) and third trimester (38%) of pregnancy.

The study also found that malaria during pregnancy was associated with several complications. Of the 678 malaria cases, 420 (62%) were complicated by anemia, 190 (28%) resulted in low birth weight, and 122 (18%) led to preterm birth. Interviews with pregnant women revealed that 72% were aware of malaria prevention methods, such as the use of insecticide-treated bed nets (ITNs) and intermittent preventive treatment in pregnancy (IPTp). However, only 48% reported consistent use of ITNs, and 58% received the recommended doses of IPTp.

### Data Analysis and Interpretation

The high prevalence of malaria among pregnant women attending antenatal care at Primary Health Care Dawaki highlights the urgent need for improved malaria prevention and control strategies in this region. The study findings are consistent with previous research indicating that pregnant women, particularly those in their second and third trimesters, are at increased risk of malaria infection and associated complications (Desai et al., 2018; Rogerson et al., 2018).

The study also identified gaps in knowledge and practices related to malaria prevention among pregnant women. While most women were aware of preventive measures, a significant proportion did not consistently use ITNs or receive the recommended doses of IPTp. This underscores the importance of strengthening health education and promoting the uptake of evidence-based interventions to protect pregnant women from malaria.

### Discussion

**Interpretation of Results:** The findings of this study demonstrate the high burden of malaria among pregnant women attending antenatal care at Primary Health Care Dawaki in Bwari Area Council, FCT-Abuja, Nigeria. The prevalence of malaria (54%) is significantly higher than the national average of

23% reported by the 2018 Nigeria Demographic and Health Survey (National Population Commission & ICF, 2019). The study also highlights the substantial impact of malaria on maternal and fetal health, with high rates of anemia, low birth weight, and preterm birth among affected women.

**Comparison with Existing Literature:** The study results are consistent with previous research conducted in sub-Saharan Africa, which has consistently shown that malaria in pregnancy is a major contributor to maternal and infant morbidity and mortality (Desai et al., 2018; Rogerson et al., 2018). A systematic review by Desai et al. (2018) found that malaria in pregnancy was associated with a 2.5-fold increased risk of maternal anemia, a 19% increased risk of low birth weight, and a 20% increased risk of preterm delivery. Another study by Rogerson et al. (2018) emphasized the importance of IPTp and ITNs in reducing the burden of malaria among pregnant women, with IPTp reducing the risk of placental malaria by 31% and low birth weight by 21%.

**Implications of Findings:** The findings of this study have important implications for public health interventions, healthcare practices, and policy development in Nigeria. The high prevalence of malaria among pregnant women in the Dawaki community underscores the need for targeted efforts to improve malaria prevention and control in this region. Strategies should focus on increasing access to and utilization of evidence-based interventions, such as ITNs and IPTp, as well as strengthening health education and community engagement to promote malaria awareness and prevention practices among pregnant women.

Healthcare providers should be trained to promptly diagnose and effectively manage malaria in pregnancy, ensuring that all pregnant women attending antenatal care are screened for malaria and receive appropriate treatment. Policymakers should prioritize the development and

implementation of

comprehensive malaria control strategies that address the unique needs and vulnerabilities of pregnant women, including the provision of free or subsidized ITNs and IPTp.

### Conclusion

**Summary of Key Findings:** This retrospective study found a high prevalence of malaria (54%) among pregnant women attending antenatal care at Primary Health Care Dawaki in Bwari Area Council, FCT-Abuja, Nigeria, from 2023 to 2024. The majority of cases occurred during the second and third trimesters of pregnancy and were associated with complications such as anemia (62%), low birth weight (28%), and preterm birth (18%). While most women were aware of malaria prevention methods, consistent use of ITNs and receipt of recommended IPTp doses were suboptimal.

**Contributions to the Field:** This study contributes to the existing knowledge on malaria in pregnancy by providing valuable insights into the burden of the disease among pregnant women in the Dawaki community. The findings highlight the urgent need for improved malaria prevention and control strategies targeting pregnant women in this region, which can inform the development of effective interventions and guide healthcare practices.

### Recommendation For Further Research

Future research should focus on conducting longitudinal studies to better understand the long-term impact of malaria on maternal and child health outcomes. Intervention studies evaluating the effectiveness of tailored malaria prevention and control strategies in reducing the burden of the disease among pregnant women are also needed. Community-based initiatives aimed at increasing awareness and promoting the uptake of evidence-based interventions should be implemented and evaluated to inform future policy decisions.

### Reference

- Desai, M., ter Kuile, F. O., Nosten, F., McGready, R., Asamoah, K., Brabin, B., & Newman, R. D. (2018). Epidemiology and burden of malaria in pregnancy. *The Lancet Infectious Diseases*, 7(2), 93-104.
- National Population Commission (NPC) [Nigeria] and ICF. (2019). *Nigeria Demographic and Health Survey 2018*. Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF.
- Rogerson, S. J., Desai, M., Mayor, A., Sicuri, E., Taylor, S. M., & van Eijk, A. M. (2018). Burden, pathology, and costs of malaria in pregnancy: new developments for an old problem. *The Lancet Infectious Diseases*, 18(4), e107-e118.
- World Health Organization. (2020). *World malaria report 2020*. Geneva: World Health Organization.
- Eisele, T. P., & Larsen, D. A. (2017). Malaria in pregnancy: A review of the current state of knowledge. *American Journal of Tropical Medicine and Hygiene*, 97(3), 571-583.
- Uneke, C. J. (2017). Malaria and pregnancy in sub-Saharan Africa: A review of the current situation. *Journal of Vector Borne Diseases*, 54(2), 93-103.
- Federal Ministry of Health, Nigeria. (2019). *National malaria strategic plan 2019-2023*

8. Oguike, M. C., & Ntadom, G. (2020). Malaria in pregnancy: A study of its prevalence and effects on birth outcomes in Nigeria. *Journal of Pregnancy*, 2020.
9. Afolabi, B. M., & Salako, L. A. (2017). Malaria in pregnancy: A review of the current situation in Nigeria. *African Journal of Reproductive Health*, 21(2), 53-62.
10. Okell, L. C., & Griffin, J. T. (2018). Modelling malaria in pregnancy. *Trends in Parasitology*, 34(11), 933-944.
11. Ahmed, A. M., & Adam, G. K. (2020). Malaria in pregnancy: Knowledge, attitudes, and practices among pregnant women in Abuja, Nigeria. *Journal of Public Health and Epidemiology*, 12(2), 1-9.
12. Adesina, O. A., & Oladimeji, A. M. (2019). Malaria and anaemia in pregnancy: A study of their relationship in Nigerian women. *Journal of Clinical Sciences*, 16(2), 123-129.
13. National Malaria Elimination Programme, Nigeria. (2020). *Malaria surveillance report 2020*.
14. Ajumobi, O., & Aworinde, D. O. (2018). Malaria and pregnancy outcomes: A systematic review. *Journal of Pregnancy and Child Health*, 5(3), 1-9.