**Anaemia Health Analysis Report**

**1. Introduction**

Anaemia is a persistent public health concern with serious consequences for women and children. It weakens immunity, reduces productivity, increases the risk of maternal and perinatal mortality, and slows socioeconomic development. In low-resource settings, anaemia is often caused by poor nutrition, malaria, early pregnancies, and inequities in access to healthcare and education.

This analysis was carried out using anaemia-related health data, focusing on key determinants such as age at first birth, education level, mosquito-net usage, haemoglobin levels, residence, and wealth index. The results aim to guide health-sector decision-making and program design.

**2. Objectives**

The main objectives of this analysis were:

1. To assess the distribution of anaemia across different demographic groups (age at first birth, age groups, residence, education, and wealth levels).

2. To identify socioeconomic and environmental factors associated with anaemia, including malaria prevention practices (mosquito-net use).

3. To highlight high-risk groups most affected by anaemia.

4. To generate actionable recommendations that can inform programmatic interventions and resource allocation in the health sector.

**3. Stages of Data Analysis**

3.1 **Data Collection**

Data were extracted from anaemia prevalence and health indicator records.

Key variables included age, education, residence, wealth index, mosquito-net use, and haemoglobin levels.

**3.2 Data Cleaning and Preparation**

Checked for completeness, duplicates, and consistency.

Categorized haemoglobin levels:

Severe (<7 g/dL)

Moderate (7–9.9 g/dL)

Mild (10–11.9 g/dL)

Standardized socioeconomic and demographic groupings.

**3.3 Data Exploration**

Generated descriptive statistics (counts) for each category.

Compared anaemia prevalence across subgroups.

Identified patterns and disparities.

**4. Key Findings**

**4.1 Age at First Birth**

Highest cases among women giving birth at 18–24 years (757) and below 18 years (482).

Very low among women giving birth at 30 years and above (17).

➡ Early pregnancies are strongly associated with higher anaemia burden.

**4.2 Education**

Women with no education (particularly in rural areas) recorded the highest anaemia cases.

Cases decreased progressively with higher education.

➡ Education is protective against anaemia through better knowledge and health-seeking practices.

**4.3 Mosquito-Net Usage**

989 cases among net user’s vs 434 cases among non-users.

➡ Suggests high malaria burden in areas where nets are widely distributed, rather than ineffectiveness of nets.

**4.4 Haemoglobin Levels by Age Group**

Moderate-to-severe anaemia was concentrated among women aged 20–34 years.

➡ Reproductive age women face the highest risk due to nutritional demands of pregnancy and childbirth.

**4.5 Residence**

Rural women: 1,694 cases vs Urban women: 745 cases.

➡ Rural populations face systemic disadvantages in healthcare access and nutrition.

**4.6 Wealth Index**

Anaemia was highest among the poorest (239) and poorer (217) households.

Minimal cases in the richest group (12).

➡ Poverty is a significant determinant of anaemia.

**5. Programmatic Recommendations**

1. **Address Early Pregnancies:** Strengthen reproductive health services, school health education, and family planning programs.

2. **Rural Health Interventions**: Expand outreach services and supply rural clinics with iron/folate supplements and diagnostic kits.

Deploy community health workers to support screening and follow-up.

3. **Poverty and Nutrition Support:** Implement food fortification (iron-fortified flour, cereals, and cooking salt).

Provide social protection programs (cash transfers or nutrition vouchers) for the poorest households.

**4. Malaria–Anaemia Integration**

Distribute mosquito nets alongside iron supplementation and deworming drugs.

Increase malaria testing and preventive treatment among pregnant women.

**5. Education and Behaviour Change**

Promote awareness on iron-rich diets and cooking practices that improve absorption.

Incorporate anaemia prevention into school and community programs.

**6. Conclusion**

This analysis highlights that young mothers, women with no education, rural residents, and the poorest households are the most affected by anaemia. These groups face multiple overlapping vulnerabilities, making them priority targets for intervention.

By addressing the social, economic, and health determinants of anaemia through integrated strategies nutrition, reproductive health, malaria prevention, rural service delivery, and poverty alleviation the health sector can significantly reduce anaemia prevalence and improve maternal and child health outcomes.