OBSERVATION DOCUMENT

Observation:

From the malaria report analysis, below are the list of my observations

1. Congo, Dem Republic had the highest case of malaria infestation in Africa with a total case sum of 17M, Table 1.1 shows the top countries with malaria cases in Africa

Country	Number of Malaria Cases
Congo, Dem Republic	17M
Nigeria	12M
Uganda	12M
Burkina Faso	10M
Mozambique	10M
Burundi	9M

Table 1.1

2. The total number of Malaria cases for the year 2007 to 2017 is 588M
3. Incidence of malaria per 1000 population of children taking anti-malaria drugs is 3.685k (3.4%)
4. There was over a hundred million cases of malaria from the year 2016 to 2017 but in the early 2000's the number of cases where not so high
5. Ghana has the highest percentage for intermittent preventive treatment of malaria in pregnant women with 60%. Other countries are listed below

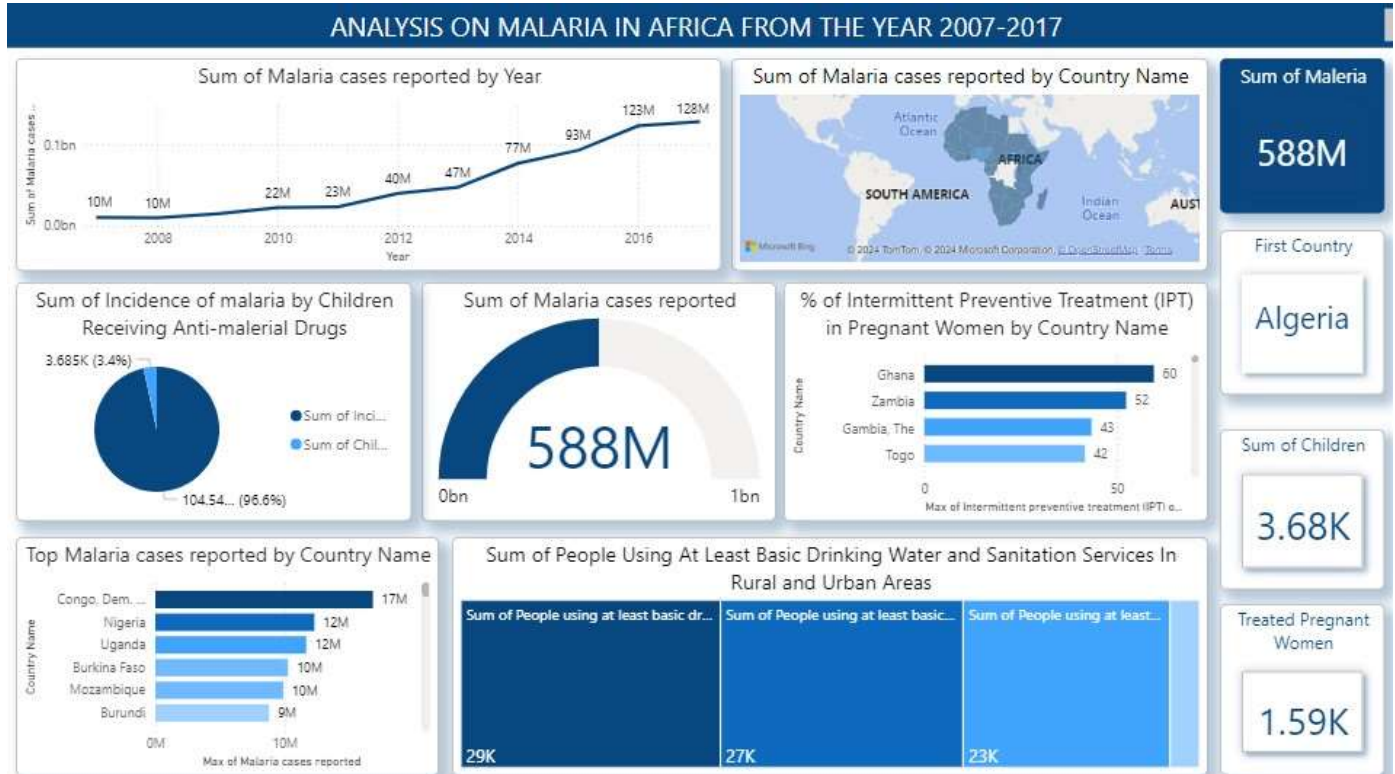| COUNTRY	TOP COUNTRIES FOR PREVENTIVE TREATMENT IN PREGNANT WOMEN
Ghana	60%
Zambia	52%
Gambia	43%
Togo	42%

Table 1.2

Methods and Tools

1 **Data Source:** Dashboard showing malaria data for 2007, including maps and interactive visualizations.
2 **Analysis Tools:** Geographic mapping, bar and pie charts, and a dynamic incidence gauge were employed for insights.

Power BI, Word Document, Data Visualization.

REPORT DOCUMENT

Summary of Findings:

Malaria is a common disease in Africa. The disease is transmitted to humans through infected mosquito bites. Although you can take preventive measures against malaria, it can be life-threatening. This dataset includes the malaria cases in African countries, he incidence at risk and the data on preventive treatments against malaria.

Content:

This dataset includes data on all African countries from the year 2007 to 2017. Each country has a unique ISO-3 country code and the dataset includes the latitude and longitude point of each country as well. The dataset includes the cases of malaria that have been reported in each country and each year as well as data on preventive measures that have been taken o prevent malaria.

Visual Aids

1   Graphs:

2   Pie Chart: Incidence of malaria by children receiving anti-malaria drugs

3   Map: Geographic clustering of malaria cases in Africa

4   Bar Chart: Top six countries with reported high cases of malaria

Recommendations

1. **Invest in Data-Driven Interventions:**

   a. Build capacity for better data collection and monitoring of malaria cases, insecticide usage, and access to healthcare services.

   b. Use predictive analytics to identify trends and allocate resources effectively.

2. **Improve Access to Basic Water and Sanitation Services:**

   a. Enhance infrastructure for basic drinking water and sanitation services, especially in malaria-prone regions.

   b. Prioritize funding and support for initiatives aimed at improving hygiene to reduce breeding grounds for malaria vectors.

3. **Expand Antimalarial Drug Distribution:**

   a. Strengthen distribution networks to ensure greater coverage among vulnerable populations, particularly children in urban and rural areas.

   b. Implement educational campaigns to promote drug compliance and awareness of preventive measures.

4. **Scale-Up Insecticide Usage:**

   a. Focus on areas with high malaria incidence, particularly in Uganda and Togo, where reported cases are the highest.

   b. Conduct further studies to determine the effectiveness of current insecticide programs and optimize deployment strategies to address observed fluctuations in case reduction.

5. **Community Engagement and Education:**

   a. Conduct localized awareness campaigns to educate communities on malaria prevention methods, such as using insecticide-treated bed nets.

   b. Engage local leaders to promote the adoption of basic hygiene practices and access to healthcare facilities.