**A 10-YEAR PERIOD ANALYSIS OF MALARIA DISEASE IN AFRICA FROM 2007 TO 2017**

This is a Power BI interactive visualization and analysis of the malaria disease in Africa over a 10-year period (2007 -2017). Have a look at the visualization tools used, highlights, and insights that can help mitigate this rampant problem in Africa.

**Methods/Tools Used:**

1. Kaggle.com was the data source of my analysis.
2. Microsoft Power BI, an advanced statistics and analysis tool used in the business intelligence scope to drive helpful insights.
3. Line chart, which is a graphic tool used to present time series data. In this case, malaria occurrence rates over the 10-year period.
4. Pie chart and donut charts, which were to useful in presenting percentages of rural/urban populations and people with access to safely managed drinking water, respectively.
5. Bar and column charts, which aided in comparison of data. As in the bar chart for the top 10 countries that led in malaria incidence rates, and the column chart for the countries with most sick children receiving antimalarial drug treatment.
6. Choropleth map, which I used to show data organized by the top 5 African countries, where insecticide-treated bed nets are commonly in use for protection.

Key Highlights/Observation

1. Population in the rural region is 64% and 36% in the urban area, so the former is more populated. However, fewer people in the rural areas compared to the urban section have access to basic services like safely managed drinking water and proper sanitation.
2. There was a steady increase in the reported malaria cases, from 2007 to 2017. The sum of these cases cumulatively was 588 Million cases.
3. Additionally, the top three countries leading in malaria incidence rates (that is, per 1,000 population at risk) are:
4. Burkina Faso
5. Sierra Leone
6. Central African Republic
7. Sierra Leone (code SLE) reported highest number of children with a fever, who were treated with antimalarial drugs.
8. Ghana, however, was the best performing country with regards to IPT or Intermittent Preventive Treatment of malaria in pregnant women. Sudan performed the poorest in this metric.
9. Rwanda led in using insecticide-treatment bed nets. Equatorial Guinea, Djibouti, and Eswatini nations were at the bottom of this parameter though.

Call to Action / Recommendations

1. Enhance even supply of antimalarial drugs, especially to the vulnerable areas in rural regions and the countries reporting highest cases.
2. Improve basic amenities like safe water to drink and decent sanitation. Clean and hygienic living areas eliminate breeding grounds for mosquitos.
3. Investing in protective measures such as treated bed nets, insecticides, and mosquito repellents. These would be particularly of help if the less privileged could access them for free.
4. Intermittent Preventive Treatment or IPT should be made mandatory in every woman’s pregnancy journey to boost their health throughout.
5. Intensive public sensitization against malaria is also inevitable. It’s critical to educate people, especially in the marginalized regions on the importance of maintaining clean households, treating drinking water, taking antimalarial drugs when visiting mosquito-prone area, using insecticides, among other preventative measures. This will lead to a drastic declines in malaria cases and generally promote a healthy African society.