Report on malaria in Nigeria 2022
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### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HBHI</td>
<td>High Burden to High Impact</td>
</tr>
<tr>
<td>IPT</td>
<td>intermittent preventive treatment of malaria</td>
</tr>
<tr>
<td>ITN</td>
<td>insecticide treated nets</td>
</tr>
<tr>
<td>MIS</td>
<td>Malaria Indicators Survey</td>
</tr>
<tr>
<td>NMEP</td>
<td>National Malaria Elimination Programme</td>
</tr>
<tr>
<td>RDT</td>
<td>rapid diagnostic test</td>
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<tr>
<td>SMC</td>
<td>seasonal malaria chemoprevention</td>
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</table>
INTRODUCTION

The Federal Republic of Nigeria is a country in West Africa. It is situated between the Sahel to the north and the Gulf of Guinea to the south in the Atlantic Ocean. It covers an area of 923,769 square kilometres, and with a population of over 225 million, it is the most populous country in Africa. Nigeria borders Niger in the north, Chad in the north-east, Cameroon in the east, and Benin in the west. Nigeria is a Federal Republic comprising 36 States and the Federal Capital Territory, where the capital, Abuja, is located. The largest city in Nigeria is Lagos, the second-largest metropole in Africa.

Malaria is a major public health concern in Nigeria, with an estimated 68 million cases and 194,000 deaths due to the disease in 2021. Nigeria has the highest burden of malaria globally, accounting for nearly 27% of the global malaria burden. The risk of transmission exists throughout the country, all year round. However, the incidence of malaria is highest in the northern and north-eastern parts of the country. As one of the countries supported under High Burden to High Impact (HBHI) approach, Nigeria has been a leader in implementing data-informed strategies to tailor interventions subnationally. The country has also established an integrated national malaria data repository that is accessible at the local government level. A nationwide training exercise on the use of the repository for routine decision making was also implemented.

In May 2022, the country convened its local and external stakeholders for a “data deep-dive” week in Abuja to explore the progress the country has made in the use of strategic information to drive impact against malaria. One of the recommendations from this meeting was a request by the Nigeria National Malaria Elimination Programme (NMEP) to WHO to develop state-level malaria profile reports. With input from the NMEP and its partners, the WHO Global Malaria Programme and the Communicable and Non-Communicable diseases cluster of the WHO African Region have developed this Nigeria report.

The report presents an overview of the malaria situation across all States in Nigeria, focusing on population demographics, malaria interventions, climate and disease burden. For each State, the report presents trends in population, rainfall patterns, intervention coverage and use, malaria prevalence and incidence. Additionally, the number of malaria cases averted over time is presented. The year 2009 was selected as the baseline (or counterfactual in the absence of interventions) for computing cases averted, considering that this was the year the first mass bed net campaign was implemented in Nigeria. A summary section on the key contextual issues in each State is presented at the end of each State’s profile.
Progress

- Nigeria is the most populous country in Africa with a population of 225 million in 2021, increasing from 123 million people in 2000.

- WHO estimates that Nigeria had 68 million cases in 2021 accounting for 27% of the global burden, and 28% of the burden in the WHO African Region.

- WHO also estimates that the severe form of malaria has led to 194,000 deaths in 2021 alone, about 80% of these in children under the age of 5 years. This accounts for 31% of all malaria deaths globally and 40% in the WHO African Region.

- Despite the high burden and the challenges of the COVID-19 pandemic, malaria incidence has reduced by 26% since 2000, from 413 per 1000 population in 2000 to 306 per 1000 in 2021. In 2019 before the pandemic, malaria incidence was 302 per 1000 population.

- In the same period, malaria mortality rate (i.e. deaths per 1000 population at risk) fell by 55% from 2.1 per 1000 population in 2000 to 0.9 per 1000 population in 2021. Malaria mortality rate in 2019 was 1.2 per 1000 population.

- Data from household surveys show that malaria prevalence in children, assessed via microscopy and rapid diagnostic test (RDT), dropped from 27% and 45% in 2015 to 22% and 40% in 2021, respectively.

- From 2010 the year after the first mass campaign was implemented to 2021, an estimated 166 million malaria cases and 0.85 million malaria deaths were likely averted.
• To achieve these results, the Government of Nigeria and its partners, under the coordination of the National Malaria Elimination Programme (NMEP), have made considerable strides in scaling up preventive and curative interventions.

• Between 2009 to 2021, about 220 million insecticide treated nets (ITNs) were distributed in 37 States. The proportion of the population who slept under ITNs the night before the survey increased from 22.9% in 2010 to 36.4% in 2021. Percentage of children under the age of 5 who slept under an insecticide treated net (ITN) the night before the survey increased from 28.9% in 2010 to 41.2% in 2021.

• The coverage for the intermittent preventive treatment of malaria in pregnancy – receiving two or more doses of sulfadoxine–pyrimethamine (SP) – rose from 22% in 2015 to 26% in 2020, it declined to 23% in 2021.

• Nigeria has also implemented a considerable expansion of seasonal malaria chemoprevention (SMC) in children under the age of 5 years. In 2013, only an average of about 209 000 children had received SMC in only one State. By 2021, these had increased to about 24 million children in 18 States.

• Among children who were reported to have had a fever the two weeks preceding household surveys, about 63% sought care in 2021. The majority of children sought care in the private formal (31%) and informal sector (25%) while 45% sought care in the private sector.

• Among those who sought care for fever, the percentage who received a blood test increased from 6.5% in 2010 to 39% in 2021.

Challenges

• Despite the progress that Nigeria has achieved, the country is faced with several important challenges that hamper its fight against malaria.

• Overall, malaria continues to exert a huge burden on the people of Nigeria, especially its young children. WHO estimates that malaria accounts for 20% of all deaths in children under the age of 5 years in 2021.

• Like other high burden countries in the WHO African region, and despite the best efforts of the country and its partners, the disruptions to essential malaria services in Nigeria led to additional 480 000 malaria cases and 10 000 malaria deaths according to WHO estimates.

• Even before the pandemic, malaria cases and deaths, in absolute numbers, continued to rise since 2016. This is probably to a mix of reducing intervention coverage, the spread of insecticide resistance reducing the effectiveness of ITNs, humanitarian emergencies and relatively high population growth.

• While malaria cases decreased in 13 states since 2010, 24 States (Adamawa, Akwa Ibom, Bauchi, Bayelsa, Borno, Delta, Ekiti, Enugu, Federal Capital Territory, Gombe, Imo, Jigawa, Kaduna, Kano, Kebbi, Lagos, Niger, Ogun, Ondo, Oyo, Rivers, Sokoto, Yobe) have registered increases in malaria cases. Of these, Kano, Lagos States and Federal Capital Territory States were among the top three States where the estimated malaria incidence increased the most.
- In 2021, about 37% of children under the age of 5 years still do not receive care within two weeks of fever onset.

- Only a quarter of all children with fever get tested, and among those who seek care, only 39% are tested. Despite recent improvements, malaria parasitological diagnosis remains low in Nigeria, leading to inappropriate treatment of patients and irrational use of malaria drugs.

- In addition to consultation fees at public health facilities, the high use of the private sector highlights that there is a high out-of-pocket expenditure by households on fever, and by extension on malaria, care. Among low-income communities, such expenditure could be catastrophic and plunge them deeper into poverty impairing their ability to seek further health care.

- The low level of diagnosis also undermines the quality and reliability of malaria data reported through the health system.

- Direct budgetary support to Nigeria's malaria programme is mostly from external sources, in particular by the Global Fund that supports 13 States and the US President’s Malaria Initiative that supports 11 States.

- For many years the remaining 13 States did not have external donor support until the recent agreement with the World Bank and Islamic Development Bank to support these States.

- Of the US$ 3.84 billion investment in malaria since 2000, it is estimated that 21% (US$ 0.82 billion) were from domestic sources, excluding out-of-pocket expenditure by households, and the rest were from the Global Fund (40%, US$ 1.54 billion), US PMI (24%, US$ 0.92 billion), the World Bank (9.6%; US$ 0.37 billion), UK Aid (4%, US$ 0.15 billion) and remainder from other sources.

- While Nigeria has been at the forefront of using subnational data for effective malaria planning and implementation, the increasing budget constraints will require further prioritization. In addition, considerable increase in domestic funding is required. Synergies with other health programmes through improved integration will likely increase efficiency of implementation.

- Insecticide resistance, particularly to pyrethroids, threaten the effectiveness of ITNs to prevent malaria. While the country has gradually moved to use of new generation nets, these come at a higher cost. This will affect the ability to sustain the current levels of ITN coverage and reduce the budget for other essential malaria commodities.
NIGERIA

Estimated malaria incidence per 1000 population in 2021

Malaria prevalence (%) according to RDT in children under the age of five years, MIS 202

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>VALUE</th>
<th>UNIT</th>
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<tbody>
<tr>
<td>Estimated population in 2021</td>
<td>225 402 000</td>
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<tr>
<td>Malaria prevalence according to RDT</td>
<td>39.6</td>
<td>%</td>
</tr>
<tr>
<td>Malaria prevalence according to microscopy</td>
<td>22.3</td>
<td>%</td>
</tr>
<tr>
<td>Estimated malaria cases in 2021</td>
<td>67,965,000</td>
<td></td>
</tr>
<tr>
<td>Estimated incidence per thousand population in 2021</td>
<td>306.5</td>
<td>/1000</td>
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<tr>
<td>Persons with access to an insecticide-treated mosquito net (ITN)</td>
<td>43.1</td>
<td>%</td>
</tr>
<tr>
<td>Existing insecticide-treated mosquito nets (ITNs) used last night</td>
<td>75.1</td>
<td>%</td>
</tr>
<tr>
<td>Population who slept under an insecticide-treated mosquito net (ITN) last night</td>
<td>36.4</td>
<td>%</td>
</tr>
<tr>
<td>Children under 5 who slept under any net</td>
<td>42.3</td>
<td>%</td>
</tr>
<tr>
<td>Children under 5 who slept under an insecticide-treated net (ITN)</td>
<td>41.2</td>
<td>%</td>
</tr>
<tr>
<td>Advice or treatment for fever sought from a health facility or provider</td>
<td>62.8</td>
<td>%</td>
</tr>
<tr>
<td>Children with fever who had blood taken from a finger or heel for testing</td>
<td>38.7</td>
<td>%</td>
</tr>
</tbody>
</table>

Population count

Estimated malaria cases and incidence

Monthly rainfall
02 | Summary of results & country profile

Estimated malaria deaths and mortality rate

Diagnosis and treatment for malaria in children under 5 years

Malaria prevalence in children under 5 years

Cumulative estimated cases averted

Cumulative estimated deaths averted
Insecticide treated nets - mass campaign distribution

Access, coverage and use of ITNs

IPT1 and IPT2 coverage

Average number of children treated with seasonal malaria chemoprevention
PROFILE OF NIGERIA STATES
ABIA STATE

Population count

Estimated malaria cases and incidence

Monthly rainfall

Malaria prevalence in children under 5

Diagnosis and treatment for malaria in children under 5

Access, coverage and use of ITNs
Abia State is located in the South-Eastern region of Nigeria. It borders Enugu, Ebonyi, Imo, Cross River, Akwa Ibom, and Rivers States. The State capital is Umuahia while the largest city and commercial center is Aba. The State’s estimated population was 3.8 million in 2019 (1) and 4.4 million in 2022.

The State experiences two distinct seasons: the dry season (November to March) and the rainy season (April to October) (9), with annual rainfall averaging around 2,070.9 millimeters (3).

The State contributed an estimated 1.9% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 1.0 million to 1.3 million, the estimated incidence increased from 239.5 to 299.4 per 1000 population (4). Malaria prevalence by microscopy was 14.5% in 2021 (5).  

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2015. Since 2009, over 2.6 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys increased from 7.0% in 2015 to 15.3% in 2021. Care seeking among children with fever in the State hardly changed from 78.8% in 2015 to 79.1% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 13.6% in 2015 to 14.3% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy increased from 19.3% in 2015 to 31.8% in 2021 (5).

An estimated 3.4 million cases were averted between 2009 and 2015, and 6.3 million between 2009 and 2021.  

1 Malaria prevalence by microscopy data was not available for Abia in 2015.
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ADAMAWA STATE

**INDICATORS**

<table>
<thead>
<tr>
<th>Indicator</th>
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<tbody>
<tr>
<td>Estimated population in 2021</td>
<td>4,881,000</td>
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<tr>
<td>Malaria prevalence according to RDT</td>
<td>28.7%</td>
<td>%</td>
</tr>
<tr>
<td>Malaria prevalence according to microscopy</td>
<td>10.7%</td>
<td>%</td>
</tr>
<tr>
<td>Estimated malaria cases in 2021</td>
<td>1,339,000</td>
<td>/1000</td>
</tr>
<tr>
<td>Estimated incidence per thousand population in 2021</td>
<td>274.2</td>
<td></td>
</tr>
<tr>
<td>Year of most recent ITN campaign</td>
<td>2020</td>
<td></td>
</tr>
<tr>
<td>Year of preceding ITN campaign</td>
<td>2017</td>
<td></td>
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<tr>
<td>Persons with access to an ITN</td>
<td>73.9%</td>
<td>%</td>
</tr>
<tr>
<td>Existing ITNs used last night</td>
<td>84.8%</td>
<td>%</td>
</tr>
<tr>
<td>Population who slept under an ITN the night before the survey</td>
<td>67.5%</td>
<td>%</td>
</tr>
<tr>
<td>Children under 5 who slept any net</td>
<td>78.1%</td>
<td>%</td>
</tr>
<tr>
<td>Children under 5 who slept an ITN</td>
<td>78.1%</td>
<td>%</td>
</tr>
<tr>
<td>Proportion of febrile children in past 2 weeks for whom treatment was sought</td>
<td>65.6%</td>
<td>%</td>
</tr>
<tr>
<td>Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis</td>
<td>28.7%</td>
<td>%</td>
</tr>
</tbody>
</table>

**Malaria prevalence in children under 5 years**

- **Microscopy**
- **RDT**

**Diagnosis and treatment for malaria in children under 5 years**

- Treatment sought
- Blood tests among treatment seekers

**Access, coverage and use of ITNs**

- ITNs used out of ITNs available
- Use of ITNs among people of all ages
- Use of any net among children under 5
- Use of ITNs among children under 5
Adamawa State is located in the North-Eastern Region of Nigeria. It borders Borno, Gombe, Taraba states, and the Republic of Cameroon. The State features highlands, mountains, the Adamawa Plateau, and rivers such as the Benue and Gongola. The State’s estimated population was 4.5 million in 2019 (1) and 5.0 million in 2022.

The State experiences two distinct seasons: the dry season (November to April) and the rainy season (May to October) (9), with annual rainfall averaging around 1,074.9 millimeters (3).

The State contributed an estimated 2.0% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 1.2 million to 1.3 million, the estimated incidence increased from 262.3 to 274.2 per 1000 population (4). Malaria prevalence by microscopy decreased from 34.7% in 2015 to 10.7% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2020. Since 2009, over 6.6 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys increased from 31.6% in 2015 to 67.5% in 2021. Care seeking among children with fever in the State increased from 55.5% in 2015 to 65.6% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 18.4% in 2015 to 28.7% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 27.9% in 2015 to 25.4% in 2021 (5).

The cumulative estimated cases averted between 2009 and 2021 was negative as there was an increase in cases during this period.2

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Key points

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2 No cases averted can occur when the estimated number of cases for several years after 2009 is higher than the number of cases estimated for 2009 (the baseline year for the calculation of cases averted).
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**INDICATORS**

<table>
<thead>
<tr>
<th>Indicators</th>
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<tr>
<td>Estimated population in 2021</td>
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<tr>
<td>Malaria prevalence according to RDT</td>
<td>33.5%</td>
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<tr>
<td>Malaria prevalence according to microscopy</td>
<td>30.1%</td>
<td></td>
</tr>
<tr>
<td>Estimated malaria cases in 2021</td>
<td>1,935,000</td>
<td></td>
</tr>
<tr>
<td>Estimated incidence per thousand population in 2021</td>
<td>300.3 /1000</td>
<td></td>
</tr>
<tr>
<td>Year of most recent ITN campaign</td>
<td>2022</td>
<td></td>
</tr>
<tr>
<td>Year of preceding ITN campaign</td>
<td>2018</td>
<td></td>
</tr>
<tr>
<td>Persons with access to an ITN</td>
<td>28.1%</td>
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<tr>
<td>Existing ITNs used last night</td>
<td>53.3%</td>
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</tr>
<tr>
<td>Population who slept under an ITN the night before the survey</td>
<td>17.8%</td>
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</tr>
<tr>
<td>Children under 5 who slept under any net</td>
<td>19.5%</td>
<td></td>
</tr>
<tr>
<td>Children under 5 who slept under an ITN</td>
<td>19.5%</td>
<td></td>
</tr>
<tr>
<td>Proportion of febrile children in past 2 weeks for whom treatment was sought</td>
<td>44.4%</td>
<td></td>
</tr>
<tr>
<td>Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis</td>
<td>11%</td>
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</table>

**Malaria prevalence in children under 5**

- **Microscopy**
- **RDT**

**Diagnosis and treatment for malaria in children under 5**

- **Treatment sought**
- **Blood tests among treatment seekers**

**Access, coverage and use of ITNs**

- **ITNs used out of ITNs available**
- **Use of ITNs among people of all ages**
- **Use of any net among children under 5**
- **Use of ITNs among children under 5**
Akwa Ibom State is located in the South-Southern Region of Nigeria. It borders Cross River to the east, Rivers and Abia to the west, and the Atlantic Ocean to the south. The State’s estimated population was 4.8 million in 2019 (1) and 6.7 million in 2022.

The State experiences two distinct seasons: the dry season (November to March) and the rainy season (April to October) (9), with annual rainfall averaging around 2,432.1 millimeters (3).

The State contributed an estimated 2.8% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 1.6 million to 1.9 million and the estimated incidence increased from 268.9 to 300.3 per 1000 population (4). Malaria prevalence by microscopy increased from 22.8% in 2015 to 30.1% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2022. Since 2009, over 10.6 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 36.8% in 2015 to 17.8% in 2021. Care seeking among children with fever in the State decreased from 70.5% in 2015 to 44.4% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis decreased from 15.5% in 2015 to 11.0% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 29.1% in 2015 to 26.5% in 2021 (9).

An estimated 4.0 million cases were averted between 2009 and 2015, and 7.6 million between 2009 and 2021.

Key points
ANAMBRA STATE

Report on malaria in Nigeria 2022

Population count

Estimated malaria cases and incidence

Estimated incidence per 1000 population

Monthly rainfall

Malaria prevalence in children under 5

Diagnosis and treatment for malaria in children under 5

Access, coverage and use of ITNs

<table>
<thead>
<tr>
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<tr>
<td>Malaria prevalence according to RDT</td>
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<tr>
<td>Malaria prevalence according to microscopy</td>
<td>5.4 %</td>
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<td>Estimated malaria cases in 2021</td>
<td>1,262,000</td>
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<tr>
<td>Estimated incidence per thousand population in 2021</td>
<td>199.7 /1000</td>
<td></td>
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<td>Year of most recent ITN campaign</td>
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</tr>
<tr>
<td>Year of preceding ITN campaign</td>
<td>2014</td>
<td></td>
</tr>
<tr>
<td>Persons with access to an ITN</td>
<td>18.5 %</td>
<td></td>
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<tr>
<td>Existing ITNs used last night</td>
<td>63.6 %</td>
<td></td>
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<tr>
<td>Population who slept under an ITN the night before the survey</td>
<td>10.3 %</td>
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</tr>
<tr>
<td>Children under 5 who slept under any net</td>
<td>20.4 %</td>
<td></td>
</tr>
<tr>
<td>Children under 5 who slept under an ITN</td>
<td>20.4 %</td>
<td></td>
</tr>
<tr>
<td>Proportion of febrile children in past 2 weeks for whom treatment was sought</td>
<td>88.5 %</td>
<td></td>
</tr>
<tr>
<td>Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis</td>
<td>8.7 %</td>
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</tr>
</tbody>
</table>
Anambra State is located in the South-Eastern Region of Nigeria. It borders Imo, Enugu, Kogi, Delta, and Rivers States, featuring a major trade center in Onitsha and significant economic, industrial, and agricultural activities. The State’s estimated population was 5.6 million in 2019 (1) and 6.5 million in 2022.

The State experiences two distinct seasons: the dry season (November to February) and the rainy season (March to October) (9), with annual rainfall averaging around 1,667.3 millimeters.

The State contributed an estimated 1.9% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 1.0 million to 1.3 million, the estimated incidence increased from 171.4 to 199.7 per 1000 population (4). Malaria prevalence by microscopy decreased from 10.2% in 2015 to 5.4% in 2021 (5,6).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2022. Since 2009, over 8.1 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 24.1% in 2015 to 10.3% in 2021. Care seeking among children with fever in the State increased from 64.7% in 2015 to 88.5% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis decreased from 15.8% in 2015 to 8.7% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy increased from 20.8% in 2015 to 22.4% in 2021 (5–7).

An estimated 3.9 million cases were averted between 2009 and 2015, and 8.3 million between 2009 and 2021.

Key points
### Report on malaria in Nigeria 2022

#### BAUCHI STATE

- **Estimated population in 2021:** 7,683,000
- **Malaria prevalence according to RDT:** 59.6%
- **Malaria prevalence according to microscopy:** 31.7%
- **Estimated malaria cases in 2021:** 3,039,000
- **Estimated incidence per thousand population in 2021:** 395.6 /1000
- **Year of most recent ITN campaign:** 2018
- **Year of preceding ITN campaign:** 2014
- **Persons with access to an ITN:** 54.4%
- **Existing ITNs used last night:** 84.7%
- **Population who slept under an ITN the night before the survey:** 48.9%
- **Children under 5 who slept under any net before the survey:** 56.1%
- **Children under 5 who slept under an ITN:** 52.7%
- **Proportion of febrile children in past 2 weeks for whom treatment was sought:** 59.1%
- **Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis:** 60.2%

#### Malaria prevalence in children under 5

- **Malaria prevalence according to microscopy:**
  - 2014: 31.7%
  - 2018: 59.6%
  - 2021: 60.2%

- **Malaria prevalence according to RDT:**
  - 2014: 20%
  - 2018: 40%
  - 2021: 60%

#### Diagnosis and treatment for malaria in children under 5

- **Treatment sought:**
  - 2013: 10% of children who had fever in last 3 months
  - 2015: 25%
  - 2018: 50%
  - 2021: 75%

- **Blood tests among treatment seekers:**
  - 2013: 20%
  - 2015: 40%
  - 2018: 60%
  - 2021: 80%

#### Access, coverage and use of ITNs

- **ITNs used out of ITNs available:**
  - 2013: 10%
  - 2015: 20%
  - 2018: 40%
  - 2021: 80%

- **Use of ITNs among people of all ages:**
  - 2013: 10%
  - 2015: 20%
  - 2018: 40%
  - 2021: 60%

- **Use of any net among children under 5:**
  - 2013: 10%
  - 2015: 20%
  - 2018: 40%
  - 2021: 60%

- **Use of ITNs among children under 5:**
  - 2013: 10%
  - 2015: 20%
  - 2018: 40%
  - 2021: 60%
03 | Profiles of Nigeria states

Key points

Bauchi State is located in the North-Eastern region of Nigeria. It borders Kano and Jigawa to the north, Taraba and Plateau to the south, Gombe and Yobe to the east, and Kaduna to the west. The State’s estimated population was 7.5 million in 2019 (1) and 7.9 million in 2022.

The State experiences two distinct seasons: the dry season (November to May) and the rainy season (June to October) (9), with annual rainfall averaging around 889.3 millimeters (3).

The State contributed an estimated 4.5% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 2.5 million to 3.0 million, the estimated incidence increased from 358.0 to 395.6 per 1000 population (4). Malaria prevalence by microscopy increased from 19.6% in 2015 to 31.7% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2018. Since 2009, over 8.6 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 59.2% in 2015 to 48.9% in 2021. Care seeking among children with fever in the State decreased from 89.1% in 2015 to 59.1% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 8.0% in 2015 to 60.2% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 27.8% in 2015 to 23.8% in 2021 (5).

An estimated 5.5 million cases were averted between 2009 and 2015, and 11.4 million between 2009 and 2021.
Bayelsa State is located in the South-Southern Region of Nigeria. It borders Rivers State to the west, Delta State to the east, and the Gulf of Guinea to the south. The State’s estimated population was 2.4 million in 2019 (1) and 2.7 million in 2022.

The State experiences two distinct seasons: the dry season (December to April) and the rainy season (May to November) (9), with annual rainfall averaging around 2,701.6 millimeters (3).

The State contributed an estimated 1.0% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 0.6 million to 0.7 million, the estimated incidence increased from 246.5 to 257.1 per 1000 population (4). Malaria prevalence by microscopy decreased from 31.4% in 2015 to 16.7% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2011. Since 2009, over 0.6 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 18.2% in 2015 to 17.9% in 2021. Care seeking among children with fever in the State decreased from 56.3% in 2015 to 52.2% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 11.9% in 2015 to 19.9% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy increased from 11.4% in 2015 to 20.2% in 2021 (5).

The cumulative estimated cases averted between 2009 and 2021 was negative as there was as an increase in cases during this period.
**Report on malaria in Nigeria 2022**

### BENUE STATE

- **Estimated population in 2021**: 6,627,000
- **Malaria prevalence according to RDT**: 34%
- **Malaria prevalence according to microscopy**: 17.6%
- **Estimated malaria cases in 2021**: 1,704,000
- **Estimated incidence per 1000 population in 2021**: 257.2
- **Year of most recent ITN campaign**: 2020
- **Year of preceding ITN campaign**: 2016
- **Persons with access to an ITN**: 58.3%
- **Existing ITNs used last night**: 87.2%
- **Population who slept under an ITN the night before the survey**: 56.6%
- **Children under 5 who slept under any net**: 57.6%
- **Children under 5 who slept under an ITN**: 57.6%
- **Proportion of febrile children in past 2 weeks for whom treatment was sought**: 73.1%
- **Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis**: 23.3%

#### Malaria prevalence in children under 5 years

- **Access, coverage and use of ITNs**
- **Distribution of ITNs used out of ITNs available**
- **Use of ITNs among people of all ages**
- **Use of ITNs among children under 5**
- **Use of any net among children under 5**
- **Use of ITNs among children under 5**

#### Diagnosis and treatment for malaria in children under 5 years

- **Proportion of febrile children who had fever in last 2 weeks**
- **Proportion of febrile children for whom treatment was sought**
- **Proportion of febrile children in past 2 weeks for whom treatment was sought and who received a finger or heel prick for malaria diagnosis**

#### Estimated population in 2021

- **Population in 2021**: 10,000,000
- **Population in 2020**: 10,000,000
- **Population in 2019**: 10,000,000
- **Population in 2018**: 10,000,000
- **Population in 2017**: 10,000,000
- **Population in 2016**: 10,000,000
- **Population in 2015**: 10,000,000
- **Population in 2014**: 10,000,000

#### Monthly rainfall

- **Rainfall (mm)**
  - January: 0
  - February: 0
  - March: 0
  - April: 0
  - May: 0
  - June: 0
  - July: 0
  - August: 0
  - September: 0
  - October: 0
  - November: 0
  - December: 0

#### Access, coverage and use of ITNs

- **ITNs used out of ITNs available**
- **Use of ITNs among people of all ages**
- **Use of any net among children under 5**
- **Use of ITNs among children under 5**
Benue State is located in the North-Central Region of Nigeria. It borders Nasarawa to the north; Taraba to the east; Kogi to the west; Enugu to the south-west; Ebonyi and Cross River to the south; and has an international border with the Republic of Cameroon to the south-east. The State’s estimated population was 5.8 million in 2019 (1) and 6.8 million in 2022.

The State experiences two distinct seasons: the dry season (November to March) and the rainy season (April to October) (9), with annual rainfall averaging around 1,314.5 millimeters (3).

The State contributed an estimated 2.5% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 1.5 million to 1.7 million, the estimated incidence increased from 240.3 to 257.2 per 1000 population (4). Malaria prevalence by microscopy decreased from 44.5% in 2015 to 17.6% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2020. Since 2009, over 8.4 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys increased from 24.6% in 2015 to 56.6% in 2021. Care seeking among children with fever in the State decreased from 81.3% in 2015 to 73.1% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 11.2% in 2015 to 23.3% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 22.4% in 2015 to 21.7% in 2021 (5).

An estimated 3.4 million cases were averted between 2009 and 2015, and 10.1 million between 2009 and 2021.
Borno State is located in the North-Eastern Region of Nigeria. It borders the Republic of Niger to the north, the Republic of Chad to the east, Adamawa and Gombe States to the south, and Yobe State to the west. The State’s estimated population was 5.8 million in 2019 (1) and 7.1 million in 2022.

The State experiences two distinct seasons: the dry season (October to May) and the rainy season (June to September) (9), with annual rainfall averaging around 660.0 millimeters (3).

The State contributed an estimated 2.9% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 1.6 million to 2.0 million, the estimated incidence increased from 260.7 to 288.5 per 1000 population (4). Malaria prevalence by microscopy was 5.6% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2011. Since 2009, over 1.8 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 57.5% in 2015 to 43.2% in 2021. Care seeking among children with fever in the State was 48.1% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis was 28.3% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy increased from 23.0% in 2014 to 26.1% in 2021 (5).3

An estimated 1.6 million cases were averted between 2009 and 2015, and 2.7 million between 2009 and 2021.

3 Lack of IPTp coverage data of the year 2015 and 2020 for Borno State.
CROSS RIVER STATE

Report on malaria in Nigeria 2022

INDICATORS | VALUE | UNIT
--- | --- | ---
Estimated population in 2021 | 4,442,000 | |
Malaria prevalence according to RDT | 40.6% | |
Malaria prevalence according to microscopy | 23.6% | |
Estimated malaria cases in 2021 | 1,283,000 | |
Estimated incidence per thousand population in 2021 | 288.8 /1000 | |
Year of most recent ITN campaign | 2019 | |
Year of preceding ITN campaign | 2015 | |
Persons with access to an ITN | 41.8% | |
Existing ITNs used last night | 66.9% | |
Population who slept under an ITN the night before the survey | 30.6% | |
Children under 5 who slept under any net | 38.7% | |
Children under 5 who slept under an ITN | 38.7% | |
Proportion of febrile children in past 2 weeks for whom treatment was sought | 58.4% | |
Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis | 25.3% | |

Malaria prevalence in children under 5

Diagnosis and treatment for malaria in children under 5

Access, coverage and use of ITNs
Cross River State is located in the South-Southern Region of Nigeria. It borders Benue, Ebonyi, Abia, the Republic of Cameroon’s Sud-Ouest Province, Akwa-Ibom, and the Atlantic Ocean. The State’s estimated population was 4.2 million in 2019 (1) and 4.6 million in 2022.

The State experiences two distinct seasons: the dry season (November to April) and the rainy season (May to October) (9), with annual rainfall averaging around 2,284.6 millimeters (3).

The State contributed an estimated 1.9% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 1.1 million to 1.3 million, the estimated incidence increased from 271.2 to 288.8 per 1000 population (4). Malaria prevalence by microscopy decreased from 26.1% in 2015 to 23.6% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2019. Since 2009, over 5.2 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 49.6% in 2015 to 30.6% in 2021. Care seeking among children with fever in the State decreased from 61.8% in 2015 to 58.4% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 17.5% in 2015 to 25.3% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy increased from 25.6% in 2015 to 31.2% in 2021 (9).

An estimated 1.9 million cases were averted between 2009 and 2015, and 4.8 million between 2009 and 2021.

**Key points**

- Cross River State is located in the South-Southern Region of Nigeria. It borders Benue, Ebonyi, Abia, the Republic of Cameroon’s Sud-Ouest Province, Akwa-Ibom, and the Atlantic Ocean. The State’s estimated population was 4.2 million in 2019 and 4.6 million in 2022.
- The State contributes an estimated 1.9% of Nigeria’s 68 million malaria cases in 2021. From 2018 to 2021, estimated cases increased from 1.1 million to 1.3 million, the estimated incidence increased from 271.2 to 288.8 per 1000 population. Malaria prevalence by microscopy decreased from 26.1% in 2015 to 23.6% in 2021.
- The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2019. Since 2009, over 5.2 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 49.6% in 2015 to 30.6% in 2021. Care seeking among children with fever in the State decreased from 61.8% in 2015 to 58.4% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 17.5% in 2015 to 25.3% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy increased from 25.6% in 2015 to 31.2% in 2021.
- An estimated 1.9 million cases were averted between 2009 and 2015, and 4.8 million between 2009 and 2021.
Population count

Estimated malaria cases and incidence

Malaria prevalence in children under 5

Diagnosis and treatment for malaria in children under 5

Access, coverage and use of ITNs

INDICATORS

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>VALUE</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated population in 2021</td>
<td>6,596,000</td>
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</tr>
<tr>
<td>Malaria prevalence according to RDT</td>
<td>18.9%</td>
<td></td>
</tr>
<tr>
<td>Malaria prevalence according to microscopy</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>Estimated malaria cases in 2021</td>
<td>1,598,000</td>
<td></td>
</tr>
<tr>
<td>Estimated incidence per thousand population in 2021</td>
<td>242.3/1000</td>
<td></td>
</tr>
<tr>
<td>Year of most recent ITN campaign</td>
<td>2022</td>
<td></td>
</tr>
<tr>
<td>Year of preceding ITN campaign</td>
<td>2019</td>
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</tr>
<tr>
<td>Persons with access to an ITN</td>
<td>43%</td>
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<tr>
<td>Existing ITNs used last night</td>
<td>53.8%</td>
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<tr>
<td>Population who slept under an ITN the night before the survey</td>
<td>26.2%</td>
<td></td>
</tr>
<tr>
<td>Children under 5 who slept under any net</td>
<td>28.1%</td>
<td></td>
</tr>
<tr>
<td>Children under 5 who slept under an ITN</td>
<td>28.1%</td>
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</tr>
<tr>
<td>Proportion of febrile children in past 2 weeks for whom treatment was sought</td>
<td>42.6%</td>
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<tr>
<td>Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis</td>
<td>49.1%</td>
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</tr>
</tbody>
</table>

Report on malaria in Nigeria 2022
Delta State is located in the South-Southern Region of Nigeria. It borders Edo to the north, Anambra and Rivers to the east, and Bayelsa to the south, while the Bight of Benin covers about 160 kilometers of the State’s coastline to the west. The State’s estimated population was 5.3 million in 2019 (1) and 6.8 million in 2022.

The State experiences two distinct seasons: the dry season (December to February) and the rainy season (March to November) (9), with annual rainfall averaging around 2,088.8 millimeters (3).

The State contributed an estimated 2.4% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 1.4 million to 1.6 million, the estimated incidence increased from 238.4 to 242.3 per 1000 population (4). Malaria prevalence by microscopy decreased from 20.4% in 2015 to 10.0% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2022. Since 2009, over 4.9 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys increased from 18.1% in 2015 to 26.2% in 2021. Care seeking among children with fever in the State decreased from 65.7% in 2015 to 42.6% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 12.3% in 2015 to 49.1% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 14.8% in 2015 to 13.1% in 2021 (5).

An estimated 0.9 million cases were averted between 2009 and 2015, and 0.6 million between 2009 and 2021.
**EBONYI STATE**

Report on malaria in Nigeria 2022

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### Estimated Incidence

<table>
<thead>
<tr>
<th>Year</th>
<th>Estimated Incidence per Thousand Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2021</td>
<td>317.5 /1000</td>
</tr>
</tbody>
</table>

---

### Access, Coverage and Use of ITNs

<table>
<thead>
<tr>
<th>Year</th>
<th>ITNs used out of ITNs available</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>100.0</td>
</tr>
<tr>
<td>2015</td>
<td>150.0</td>
</tr>
<tr>
<td>2018</td>
<td>200.0</td>
</tr>
<tr>
<td>2021</td>
<td>300.0</td>
</tr>
</tbody>
</table>

---

### Monthly Rainfall

- **Jan:** 0.1
- **Feb:** 0.2
- **Mar:** 0.2
- **Apr:** 0.2
- **May:** 0.3
- **Jun:** 0.2
- **Jul:** 0.2
- **Aug:** 0.2
- **Sep:** 0.2
- **Oct:** 0.2
- **Nov:** 0.2
- **Dec:** 0.2

---

### Diagnosis and Treatment for Malaria in Children Under 5 Years

- **2013:**
  - Treatment sought: 20.0%
  - Blood tests among treatment seekers: 0%

- **2015:**
  - Treatment sought: 22.5%
  - Blood tests among treatment seekers: 0%

- **2018:**
  - Treatment sought: 25.0%
  - Blood tests among treatment seekers: 0%

- **2021:**
  - Treatment sought: 27.5%
  - Blood tests among treatment seekers: 0%

---

### Malaria Prevalence in Children Under 5 Years

- **Microscopy:**
  - 2015: 35.0%
  - 2018: 35.0%
  - 2021: 35.0%

- **RDT:**
  - 2015: 25.0%
  - 2018: 25.0%
  - 2021: 25.0%
Ebonyi State is located in South-Eastern Region of Nigeria. It borders Benue, Cross River, Enugu, and Abia, featuring Cross Niger transition forests, drier Guinea forest–savanna mosaic. The State’s estimated population was 3.0 million in 2019 (1) and 3.4 million in 2022.

The State experiences two distinct seasons: the dry season (November to February) and the rainy season (March to October) (9), with annual rainfall averaging around 1,719.9 millimeters (3).

The State contributed an estimated 1.5% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased remained at around 1.0 million, the estimated incidence increased from 298.1 to 317.5 per 1000 population (4). Malaria prevalence by microscopy decreased from 30.0% in 2015 to 25.7% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2022. Since 2009, over 4.1 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 50.0% in 2015 to 48.1% in 2021. Care seeking among children with fever in the State decreased from 73.0% in 2015 to 72.0% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 7.0% in 2015 to 27.4% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 23.9% in 2015 to 22.2% in 2021 (5).

An estimated 1.6 million cases were averted between 2009 and 2015, and 4.1 million between 2009 and 2021.
Report on malaria in Nigeria 2022

EDO STATE
Key points

Edo State is located in the South-Southern Region of Nigeria. It borders Kogi, Anambra, Delta, and Ondo, with the Niger River along its eastern edge. The State’s estimated population was 4.5 million in 2019 (1) and 5.0 million in 2022.

The State experiences two distinct seasons: the dry season (November to March) and the rainy season (April to October) (9), with annual rainfall averaging around 1,577.2 millimeters (3).

The State contributed an estimated 1.8% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases remained at around 1.2 million, the estimated incidence decreased from 266.3 to 246.9 per 1000 population (4). Malaria prevalence by microscopy increased from 18.6% in 2015 to 22.6% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2017. Since 2009, over 3.3 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys increased from 10.7% in 2015 to 12.3% in 2021. Care seeking among children with fever in the State was 64.1% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis was 36.5% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy increased from 16.2% in 2015 to 20.4% in 2021 (5).

An estimated 1.8 million cases were averted between 2009 and 2015, and 4.5 million between 2009 and 2021.
EKITI STATE

Report on malaria in Nigeria 2022

INDICATORS

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
<th>Unit</th>
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</thead>
<tbody>
<tr>
<td>Estimated population in 2021</td>
<td>3,792,000</td>
<td></td>
</tr>
<tr>
<td>Malaria prevalence according to RDT</td>
<td>36.5</td>
<td>%</td>
</tr>
<tr>
<td>Malaria prevalence according to microscopy</td>
<td>20.8</td>
<td>%</td>
</tr>
<tr>
<td>Estimated malaria cases in 2021</td>
<td>1,230,000</td>
<td></td>
</tr>
<tr>
<td>Estimated incidence per thousand population in 2021</td>
<td>324.4</td>
<td>/1000</td>
</tr>
<tr>
<td>Year of most recent ITN campaign</td>
<td>2014</td>
<td></td>
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<tr>
<td>Year of preceding ITN campaign</td>
<td>2009</td>
<td></td>
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<tr>
<td>Persons with access to an ITN</td>
<td>19.4</td>
<td>%</td>
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<tr>
<td>Existing ITNs used last night</td>
<td>52.9</td>
<td>%</td>
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<tr>
<td>Population who slept under an ITN the night before the survey</td>
<td>9.9</td>
<td>%</td>
</tr>
<tr>
<td>Children under 5 who slept under any net</td>
<td>10.8</td>
<td>%</td>
</tr>
<tr>
<td>Children under 5 who slept under an ITN</td>
<td>10.8</td>
<td>%</td>
</tr>
<tr>
<td>Proportion of febrile children in past 2 weeks for whom treatment was sought</td>
<td>41.2</td>
<td>%</td>
</tr>
<tr>
<td>Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis</td>
<td>14.6</td>
<td>%</td>
</tr>
</tbody>
</table>

Malaria prevalence in children under 5 years

Diagnosis and treatment for malaria in children under 5 years

Access, coverage and use of ITNs
Ekiti State is located in South-Western Region of Nigeria. It borders Kwara to the north, Kogi to the north-east, to the south and south-east by Ondo, and Osun to the west. The State’s estimated population was 3.4 million in 2019 (1) and 3.9 million in 2022.

The State experiences two distinct seasons: the dry season (November to March) and the rainy season (April to October) (9), with annual rainfall averaging around 1,333.5 millimeters (3).

The State contributed an estimated 1.8% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases remained at around 1.1 million, the estimated incidence decreased from 324.7 to 324.4 per 1000 population (4). Malaria prevalence by microscopy decreased from 28.8% in 2015 to 20.8% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2014. Since 2009, over 2.3 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 27.3% in 2015 to 9.9% in 2021. Care seeking among children with fever in the State was 41.2% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis was 14.6% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy increased from 12.1% in 2015 to 16.1% in 2021 (5).

An estimated 1.3 million cases were averted between 2009 and 2015, and 2.2 million between 2009 and 2021.
**INDICATORS**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
<th>Unit</th>
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<tbody>
<tr>
<td>Estimated population in 2021</td>
<td>5,091,000</td>
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</tr>
<tr>
<td>Malaria prevalence according to RDT</td>
<td>30.2%</td>
<td></td>
</tr>
<tr>
<td>Malaria prevalence according to microscopy</td>
<td>24.3%</td>
<td></td>
</tr>
<tr>
<td>Estimated malaria cases in 2021</td>
<td>1,177,000</td>
<td></td>
</tr>
<tr>
<td>Estimated incidence per thousand population in 2021</td>
<td>231.2 /1000</td>
<td></td>
</tr>
<tr>
<td>Year of most recent ITN campaign</td>
<td>2011</td>
<td></td>
</tr>
<tr>
<td>Year of preceding ITN campaign</td>
<td>2011</td>
<td></td>
</tr>
<tr>
<td>Persons with access to an ITN</td>
<td>17.6%</td>
<td></td>
</tr>
<tr>
<td>Existing ITNs used last night</td>
<td>53.4%</td>
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<tr>
<td>Population who slept under an ITN the night before the survey</td>
<td>9.8%</td>
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</tr>
<tr>
<td>Children under 5 who slept under any net</td>
<td>12.9%</td>
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<tr>
<td>Children under 5 who slept under an ITN</td>
<td>12.9%</td>
<td></td>
</tr>
<tr>
<td>Proportion of febrile children in past 2 weeks for whom treatment was sought</td>
<td>73.2%</td>
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<tr>
<td>Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis</td>
<td>16.5%</td>
<td></td>
</tr>
</tbody>
</table>

**Malaria prevalence in children under 5 years**

- Microscopy
- RDT

**Diagnosis and treatment for malaria in children under 5 years**

- Treatment sought
- Blood tests among treatment seekers

**Access, coverage and use of ITNs**

- ITNs used out of ITNs available
- Use of ITNs among people of all ages
- Use of any net among children under 5
- Use of ITNs among children under 5
Enugu State is located in the South-Eastern Region of Nigeria. It borders Benue and Kogi to the north, Ebonyi to the east and south-east, Abia to the south, and Anambra to the west. The State’s estimated population was 4.4 million in 2019 (1) and 5.2 million in 2022.

The State experiences two distinct seasons: the dry season (January to January) and the rainy season (February to December) (9), with annual rainfall averaging around 1,548.2 millimeters (3).

The State contributed an estimated 1.7% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 1.0 million to 1.2 million, the estimated incidence increased from 214.9 to 231.2 per 1000 population (4). Malaria prevalence by microscopy increased from 10.5% in 2015 to 24.3% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2011. Since 2009, over 1.4 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 14.1% in 2015 to 9.8% in 2021. Care seeking among children with fever in the State decreased from 88.4% in 2015 to 73.2% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 15.3% in 2015 to 16.5% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy increased from 16.6% in 2015 to 20.8% in 2021 (5).

An estimated 2.1 million cases were averted between 2009 and 2015, and 4.3 million between 2009 and 2021.
Report on malaria in Nigeria 2022

FEDERAL CAPITAL

INDICATORS | VALUE | UNIT
--- | --- | ---
Estimated population in 2021 | 5,338,000
Malaria prevalence according to RDT | 34.6% |
Malaria prevalence according to microscopy | 18.8%
Estimated malaria cases in 2021 | 1,438,000
Estimated incidence per thousand population in 2021 | 269.4 /1000
Year of most recent ITN campaign | 2011
Year of preceding ITN campaign | 2011
Persons with access to an ITN | 31.1%
Existing ITNs used last night | 82.3%
Population who slept under an ITN the night before the survey | 28.6%
Children under 5 who slept under any net | 48.2%
Children under 5 who slept under an ITN | 42.3%
Proportion of febrile children in past 2 weeks for whom treatment was sought | 77.7%
Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis | 27.4%

Malaria prevalence in children under 5

Diagnosis and treatment for malaria in children under 5

Access, coverage and use of ITNs
Federal Capital Territory is located in the North-Central Region of Nigeria and hosts the capital of the country. It borders Niger to the west and north, Kaduna to the north-east, Nasarawa to the east and south, and Kogi to the south-west. The State’s estimated population was 2.7 million in 2019 (1) and 5.8 million in 2022.

The State experiences two distinct seasons: the dry season (November to February) and the rainy season (March to October) (9), with annual rainfall averaging around 1,215.0 millimeters (3).

The State contributed an estimated 2.1% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 1.0 million to 1.4 million, the estimated incidence increased from 248.6 to 269.4 per 1000 population (4). Malaria prevalence by microscopy decreased from 20.2% in 2015 to 18.8% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2011. Since 2009, over 0.5 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys increased from 17.4% in 2015 to 28.6% in 2021. Care seeking among children with fever in the State decreased from 80.6% in 2015 to 77.7% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 22.3% in 2015 to 27.4% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 24.4% in 2015 to 20.0% in 2021 (5).

An estimated 1.1 million cases were averted between 2009 and 2015, and 1.3 million between 2009 and 2021.
Report on malaria in Nigeria 2022

GOMBE STATE

INDICATORS | VALUE | UNIT
---|---|---
Estimated population in 2021 | 3 793 000
Malaria prevalence according to RDT | 33.1 %
Malaria prevalence according to microscopy | 17.7 %
Estimated malaria cases in 2021 | 1 363 000
Estimated incidence per thousand population in 2021 | 359.3 /1000
Year of most recent ITN campaign | 2021
Year of preceding ITN campaign | 2018
Persons with access to an ITN | 68.5 %
Existing ITNs used last night | 79.4 %
Population who slept under an ITN the night before the survey | 63.3 %
Children under 5 who slept under any net | 65.2 %
Children under 5 who slept under an ITN | 64.9 %
Proportion of febrile children in past 2 weeks for whom treatment was sought | 56.4 %
Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis | 30.9 %

Malaria prevalence in children under 5 years

Diagnosis and treatment for malaria in children under 5 years

Access, coverage and use of ITNs
Gombe State is located in the North-Eastern Region of Nigeria. It borders Borno and Yobe to the north and north-east, Taraba to the south, Adamawa to the south-east, and Bauchi to the west. The State’s estimated population was 3.6 million in 2019 (1) and 3.9 million in 2022.

The State experiences two distinct seasons: the dry season (November to April) and the rainy season (May to October) (9), with annual rainfall averaging around 851.0 millimeters (3).

The State contributed an estimated 2.0% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 1.2 million to 1.4 million, the estimated incidence increased from 353.9 to 359.3 per 1000 population (4). Malaria prevalence by microscopy decreased from 28.6% in 2015 to 17.7% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2021. Since 2009, over 7.0 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys increased from 33.6% in 2015 to 63.3% in 2021. Care seeking among children with fever in the State decreased from 85.4% in 2015 to 56.4% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 4.4% in 2015 to 30.9% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy increased from 23.3% in 2015 to 28.2% in 2021 (5).

An estimated 1.2 million cases were averted between 2009 and 2015, and 2.5 million between 2009 and 2021.
Report on malaria in Nigeria 2022

IMO STATE

Population count

Estimated malaria cases and incidence

Monthly rainfall

INDICATORS

<table>
<thead>
<tr>
<th>INDICATORS</th>
<th>VALUE</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated population in 2021</td>
<td>6,300,000</td>
<td></td>
</tr>
<tr>
<td>Malaria prevalence according to RDT</td>
<td>26.2%</td>
<td></td>
</tr>
<tr>
<td>Malaria prevalence according to microscopy</td>
<td>15.5%</td>
<td></td>
</tr>
<tr>
<td>Estimated malaria cases in 2021</td>
<td>1,734,000</td>
<td></td>
</tr>
<tr>
<td>Estimated incidence per thousand population in 2021</td>
<td>275.2/1000</td>
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<tr>
<td>Year of most recent ITN campaign</td>
<td>2017</td>
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<tr>
<td>Year of preceding ITN campaign</td>
<td>2012</td>
<td></td>
</tr>
<tr>
<td>Persons with access to an ITN</td>
<td>22.8%</td>
<td></td>
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<tr>
<td>Existing ITNs used last night</td>
<td>26.5%</td>
<td></td>
</tr>
<tr>
<td>Population who slept under an ITN the night before the survey</td>
<td>7.4%</td>
<td></td>
</tr>
<tr>
<td>Children under 5 who slept under any net</td>
<td>10.6%</td>
<td></td>
</tr>
<tr>
<td>Children under 5 who slept under an ITN</td>
<td>10.6%</td>
<td></td>
</tr>
<tr>
<td>Proportion of febrile children in past 2 weeks for whom treatment was sought</td>
<td>77.4%</td>
<td></td>
</tr>
<tr>
<td>Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis</td>
<td>20%</td>
<td></td>
</tr>
</tbody>
</table>

Malaria prevalence in children under 5 years

Diagnosis and treatment for malaria in children under 5 years

Access, coverage and use of ITNs

Usage (%)

- ITNs used out of ITNs available
- Use of ITNs among people of all ages
- Use of any net among children under 5
- Use of ITNs among children under 5
Imo State is located in the South-Eastern Region of Nigeria. It borders Anambra, Rivers and Abia State, with the Niger Delta swamp forests in the far east and the drier Cross-Niger transition forests in the other parts of the State. It is highly dependent on agricultural production and minor industrial extraction of crude oil. The State’s estimated population was 5.2 million in 2019 (1) and 5.5 million in 2022.

The State experiences two distinct seasons: the dry season (November to March) and the rainy season (April to October) (3), with annual rainfall averaging around 2,095.0 millimeters (3).

The State contributed an estimated 2.6% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 1.2 million to 1.7 million, the estimated incidence increased from 212.4 to 275.2 per 1000 population (4). Malaria prevalence by microscopy was 15.5% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2017. Since 2009, over 4.2 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys increased from 5.9% in 2015 to 7.4% in 2021. Care seeking among children with fever in the State decreased from 87.9% in 2015 to 77.4% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis decreased from 21.0% in 2015 to 20.0% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy increased from 16.7% in 2015 to 27.8% in 2021 (5).

An estimated 4.8 million cases were averted between 2009 and 2015, and 8.4 million between 2009 and 2021.

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4 Malaria prevalence by microscopy data was not available for Imo State in 2015.
Jigawa State is located in the North-Western Region of Nigeria. It borders Kano and Katsina to the west, Bauchi to the east and Yobe to the north-east and the Republic of Niger to the north. The State’s estimated population was 6.8 million in 2019 (1) and 6.9 million in 2022.

The State experiences two distinct seasons: the dry season (November to March) and the rainy season (April to October) (9), with annual rainfall averaging around 589.4 millimeters (3).

The State contributed an estimated 3.8% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases remained at around 2.5 million, the estimated incidence decreased from 398.9 to 382.1 per 1000 population (4). Malaria prevalence by microscopy decreased from 27.9% in 2015 to 25.4% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2021. Since 2009, over 12.0 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 75.5% in 2015 to 63.4% in 2021. Care seeking among children with fever in the State decreased from 78.1% in 2015 to 76.3% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 14.2% in 2015 to 46.5% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 24.5% in 2015 to 19.7% in 2021 (5).

An estimated 1.9 million cases were averted between 2009 and 2015, and 2.8 million between 2009 and 2021.
Report on malaria in Nigeria 2022

KADUNA STATE

Population count

Estimated malaria cases and incidence

Estimated incidence per thousand population

Malaria prevalence in children under 5 years

Usage (%)

Diagnosis and treatment for malaria in children under 5 years

% of children who had fever in last 2 weeks

INDICATORS | VALUE | UNIT
--- | --- | ---
Estimated population in 2021 | 9,525,000 | 
Malaria prevalence according to RDT | 32.3% | 
Malaria prevalence according to microscopy | 16.2% | 
Estimated malaria cases in 2021 | 3,636,000 | /1000
Estimated incidence per thousand population in 2021 | 381.7 | 
Year of most recent ITN campaign | 2022 | 
Year of preceding ITN campaign | 2019 | 
Persons with access to an ITN | 63.3% | 
Existing ITNs used last night | 77.6% | 
Population who slept under an ITN the night before the survey | 57.1% | 
Children under 5 who slept under any net | 63% | 
Children under 5 who slept under an ITN | 62.4% | 
Proportion of febrile children in past 2 weeks for whom treatment was sought | 83.8% | 
Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis | 22% |
Kaduna State is located in the North-Western Region of Nigeria. It borders Kebbi, Zamfara, Katsina, and Jigawa States. The State’s estimated population was 8.3 million in 2019 (1) and 9.8 million in 2022.

The State experiences two distinct seasons: the dry season (December to February) and the rainy season (March to November) (9), with annual rainfall averaging around 1,175.0 millimeters (3).

The State contributed an estimated 5.3% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 3.0 million to 3.6 million, the estimated incidence increased from 340.6 to 381.7 per 1000 population (4). Malaria prevalence by microscopy decreased from 36.7% in 2015 to 16.2% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2022. Since 2009, over 11.6 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 61.6% in 2015 to 57.1% in 2021. Care seeking among children with fever in the State increased from 58.9% in 2015 to 83.8% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis decreased from 27.8% in 2015 to 22.0% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 23.9% in 2015 to 19.1% in 2021 (5).

An estimated 2.9 million cases were averted between 2009 and 2015, and 6.0 million between 2009 and 2021.
KANO STATE

Report on malaria in Nigeria 2022

INDICATORS | VALUE | UNIT
---|---|---
Estimated population in 2021 | 15 300 000 |
Malaria prevalence according to RDT | 54 | %
Malaria prevalence according to microscopy | 25.5 | %
Estimated malaria cases in 2021 | 6 088 000 |
Estimated incidence per thousand population in 2021 | 397.9 | /1000
Year of most recent ITN campaign | 2022 |
Year of preceding ITN campaign | 2019 |
Persons with access to an ITN | 63.3 | %
Existing ITNs used last night | 90.8 | %
Population who slept under an ITN the night before the survey | 63 | %
Children under 5 who slept under any net | 64.8 | %
Children under 5 who slept under an ITN | 64.8 | %
Proportion of febrile children in past 2 weeks for whom treatment was sought | 44.5 | %
Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis | 30.6 | %
Kano State is located in the North-Western Region of Nigeria. It borders Katsina to the north-west, Jigawa to the north-east, Bauchi to the south-east, and Kaduna to the south-west. The State’s estimated population was 14.3 million in 2019 (1) and 15.8 million in 2022.

The State experiences two distinct seasons: the dry season (November to April) and the rainy season (May to October) (9), with annual rainfall averaging around 813.5 millimeters (3).

The State contributed an estimated 9.0% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 5.7 million to 6.1 million, the estimated incidence decreased from 412.9 to 397.9 per 1000 population (4). Malaria prevalence by microscopy decreased from 27.7% in 2015 to 25.5% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2022. Since 2009, over 18.6 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys increased from 43.8% in 2015 to 63.0% in 2021. Care seeking among children with fever in the State decreased from 86.9% in 2015 to 44.5% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 5.8% in 2015 to 30.6% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 25.4% in 2015 to 25.1% in 2021 (5).

An estimated 3.0 million cases were averted between 2009 and 2015, and 5.6 million between 2009 and 2021.

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Key points

- Kano State is located in the North-Western Region of Nigeria.
- The State experiences two distinct seasons: the dry season (November to April) and the rainy season (May to October).
- The State contributed an estimated 9.0% of Nigeria’s 68 million malaria cases in 2021.
- The proportion of individuals sleeping under ITNs increased from 43.8% in 2015 to 63.0% in 2021.
- Care seeking among children with fever decreased from 86.9% in 2015 to 44.5% in 2021.
- Malaria diagnosis coverage increased from 5.8% in 2015 to 30.6% in 2021.
- An estimated 3.0 million cases were averted between 2009 and 2015, and 5.6 million between 2009 and 2021.

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Profiles of Nigeria states
**Report on malaria in Nigeria 2022**

**KATSINA STATE**

**INDICATORS** | **VALUE** | **UNIT**
--- | --- | ---
Estimated population in 2021 | 9 039 000 |  
Malaria prevalence according to RDT | 49.5 | %
Malaria prevalence according to microscopy | 29.3 | %
Estimated malaria cases in 2021 | 3 157 000 |  
Estimated incidence per thousand population in 2021 | 349.3 | /1000
Year of most recent ITN campaign | 2022 |  
Year of preceding ITN campaign | 2018 |  
Persons with access to an ITN | 40 | %
Existing ITNs used last night | 89.8 | %
Population who slept under an ITN the night before the survey | 41.8 | %
Children under 5 who slept any net | 48.1 | %
Children under 5 who slept under an ITN | 48.1 | %
Proportion of febrile children in past 2 weeks for whom treatment was sought | 80.5 | %
Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis | 65.7 | %

**Malaria prevalence in children under 5**

**Diagnosis and treatment for malaria in children under 5**

**Access, coverage and use of ITNs**
Key points

Katsina State is located in the North-Western Region of Nigeria. It borders Kaduna, Zamfara, Kano, and Jigawa States. The State’s estimated population was 9.3 million in 2019 (1) and 9.3 million in 2022.

The State experiences two distinct seasons: the dry season (November to April) and the rainy season (May to October) (9), with annual rainfall averaging around 705.6 millimeters (3).

The State contributed an estimated 4.6% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 3.0 million to 3.2 million, the estimated incidence decreased from 360.8 to 349.3 per 1000 population (4). Malaria prevalence by microscopy increased from 27.8% in 2015 to 29.3% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2022. Since 2009, over 11.4 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 53.6% in 2015 to 41.8% in 2021. Care seeking among children with fever in the State increased from 52.1% in 2015 to 80.5% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 25.3% in 2015 to 65.7% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 31.5% in 2015 to 22.9% in 2021 (5).

An estimated 2.2 million cases were averted between 2009 and 2015, and 10.1 million between 2009 and 2021.
**KEBBI STATE**

**Population count**

- Yearly population growth curve from 2006 to 2021.

**Estimated malaria cases and incidence**

- Malaria cases from 2014 to 2021.
- Estimated incidence per 1000 population from 2014 to 2021.

**Monthly rainfall**

- Rainfall data from January to December for the years 2014 to 2021.

**INDICATORS**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated population in 2021</td>
<td>5 148 000</td>
<td></td>
</tr>
<tr>
<td>Malaria prevalence according to RDT</td>
<td>75.6%</td>
<td>%</td>
</tr>
<tr>
<td>Malaria prevalence according to microscopy</td>
<td>49%</td>
<td>%</td>
</tr>
<tr>
<td>Estimated malaria cases in 2021</td>
<td>2 074 000</td>
<td></td>
</tr>
<tr>
<td>Estimated incidence per thousand population in 2021</td>
<td>402.9 /1000</td>
<td></td>
</tr>
<tr>
<td>Year of most recent ITN campaign</td>
<td>2022</td>
<td></td>
</tr>
<tr>
<td>Year of preceding ITN campaign</td>
<td>2014</td>
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</tr>
<tr>
<td>Persons with access to an ITN</td>
<td>46.9%</td>
<td>%</td>
</tr>
<tr>
<td>Existing ITNs used last night</td>
<td>73.6%</td>
<td>%</td>
</tr>
<tr>
<td>Population who slept under an ITN the night before the survey</td>
<td>38.2%</td>
<td>%</td>
</tr>
<tr>
<td>Children under 5 who slept under any net</td>
<td>46.2%</td>
<td>%</td>
</tr>
<tr>
<td>Children under 5 who slept under an ITN</td>
<td>43%</td>
<td>%</td>
</tr>
<tr>
<td>Proportion of febrile children for whom treatment was sought</td>
<td>47.1%</td>
<td>%</td>
</tr>
<tr>
<td>Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis</td>
<td>42.9%</td>
<td>%</td>
</tr>
</tbody>
</table>

**Malaria prevalence in children under 5 years**

- Comparison of malaria prevalence by RDT and microscopy methods from 2015 to 2021.

**Diagnosis and treatment for malaria in children under 5 years**

- % of children who had blood tests and % of children who had treatment from 2013 to 2021.

**Access, coverage and use of ITNs**

- ITNs used out of ITNs available, use of ITNs among people of all ages, use of any net among children under 5, and use of ITNs among children under 5 from 2013 to 2021.
Kebbi State is located in the North-Western Region of Nigeria. It borders Sokoto and Zamfara to east and north, Niger to the south, and the Republic of Benin and the Republic of Niger to the west. The State’s estimated population was 5.0 million in 2019 (1) and 5.3 million in 2022.

The State experiences two distinct seasons: the dry season (November to March) and the rainy season (April to October) (9), with annual rainfall averaging around 845.9 millimeters (3).

The State contributed an estimated 3.1% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases decreased from 2.6 million to 2.1 million, the estimated incidence decreased from 556.3 to 402.9 per 1000 population (4). Malaria prevalence by microscopy decreased from 63.6% in 2015 to 49.0% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2022. Since 2009, over 3.5 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys increased from 37.6% in 2015 to 38.2% in 2021. Care seeking among children with fever in the State increased from 44.3% in 2015 to 47.1% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 19.4% in 2015 to 42.9% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 25.1% in 2015 to 21.7% in 2021 (5).

The cumulative estimated cases averted between 2009 and 2015 was negative as there was an increase in cases during this period, and 0.95 million between 2009 and 2021.

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**Key points**

- Kebbi State is located in the North-Western Region of Nigeria.
- It borders Sokoto and Zamfara to east and north, Niger to the south, and the Republic of Benin and the Republic of Niger to the west.
- The State’s estimated population was 5.0 million in 2019 and 5.3 million in 2022.
- The State experiences two distinct seasons: the dry season (November to March) and the rainy season (April to October).
- Malaria prevalence by microscopy decreased from 63.6% in 2015 to 49.0% in 2021.
- The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2022.
- Care seeking among children with fever increased from 44.3% in 2015 to 47.1% in 2021.
- The cumulative estimated cases averted between 2009 and 2015 was negative as there was an increase in cases during this period.
Report on malaria in Nigeria 2022

KOGI STATE

Estimated malaria cases and incidence

Population count

Malaria prevalence in children under 5 years

Diagnosis and treatment for malaria in children under 5 years

Access, coverage and use of ITNs
Kogi State is located in the North-Central Region of Nigeria. It borders Ekiti and Kwara to the west, Federal Capital Territory to the north, Nasarawa to the north-east, Niger to the north-west, Edo and Ondo to the south-west, Anambra and Enugu to the south-east, and Benue to the east. The State’s estimated population was 4.2 million in 2019 (1) and 5.3 million in 2022.

The State experiences two distinct seasons: the dry season (November to March) and the rainy season (April to October) (9), with annual rainfall averaging around 1,221.3 millimeters (3).

The State contributed an estimated 2.3% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases remained at around 1.5 million, the estimated incidence decreased from 307.3 to 301.8 per 1000 population (4). Malaria prevalence by microscopy was 15.9% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2017. Since 2009, over 3.4 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 22.3% in 2015 to 18.0% in 2021. Care seeking among children with fever in the State decreased from 93.4% in 2015 to 66.7% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 10.5% in 2015 to 31.6% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 32.7% in 2015 to 30.2% in 2021 (5).

An estimated 4.0 million cases were averted between 2009 and 2015, and 7.2 million between 2009 and 2021.
Kwara State is located in the North-Central Region of Nigeria. It borders Kogi to the east, Niger to the north, and Ekiti Osun, and Oyo to the south, the Republic of Benin to the west. The State’s estimated population was 3.3 million in 2019 (1) and 3.8 million in 2022.

The State experiences two distinct seasons: the dry season (October to April) and the rainy season (May to September) (9), with annual rainfall averaging around 1,094.9 millimeters (3).

The State contributed an estimated 1.4% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases remained at around 1.0 million, the estimated incidence increased from 302.3 to 312.0 per 1000 population (4). Malaria prevalence by microscopy decreased from 26.4% in 2015 to 5.6% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2020. Since 2009, over 5.0 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys increased from 16.6% in 2015 to 39.0% in 2021. Care seeking among children with fever in the State increased from 46.0% in 2015 to 57.3% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 19.8% in 2015 to 77.8% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy increased from 15.4% in 2015 to 24.1% in 2021 (5).

An estimated 2.0 million cases were averted between 2009 and 2015, and 4.6 million between 2009 and 2021.

Key points
Report on malaria in Nigeria 2022

LAGOS STATE

Population count

Estimated malaria cases and incidence

Monthly rainfall

Malaria prevalence in children under 5 years

Diagnosis and treatment for malaria in children under 5 years

Access, coverage and use of ITNs

<table>
<thead>
<tr>
<th>INDICATORS</th>
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<tbody>
<tr>
<td>Estimated population in 2021</td>
<td>14,618,000</td>
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<tr>
<td>Malaria prevalence according to RDT</td>
<td>3.2</td>
<td>%</td>
</tr>
<tr>
<td>Malaria prevalence according to microscopy</td>
<td>2.6</td>
<td>%</td>
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<tr>
<td>Estimated malaria cases in 2021</td>
<td>2,556,000</td>
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<td>Estimated incidence per thousand population in 2021</td>
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<td>Year of most recent ITN campaign</td>
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<td>Year of preceding ITN campaign</td>
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<tr>
<td>Persons with access to an ITN</td>
<td>22.1</td>
<td>%</td>
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<td>Existing ITNs used last night</td>
<td>36.8</td>
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<tr>
<td>Population who slept under an ITN the night before the survey</td>
<td>9.6</td>
<td>%</td>
</tr>
<tr>
<td>Children under 5 who slept under any net</td>
<td>14</td>
<td>%</td>
</tr>
<tr>
<td>Children under 5 who slept under an ITN</td>
<td>9.2</td>
<td>%</td>
</tr>
<tr>
<td>Proportion of febrile children in past 2 weeks for whom treatment was sought</td>
<td>73.4</td>
<td>%</td>
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<tr>
<td>Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis</td>
<td>36.4</td>
<td>%</td>
</tr>
</tbody>
</table>
Lagos State is located in South-Western region of Nigeria. It borders the Republic of Benin to the west and Ogun State to the north-east. The State’s estimated population was 12.8 million in 2019 (1) and 15.1 million in 2022.

The State experiences two distinct seasons: the dry season (November to February) and the rainy season (March to October) (9), with annual rainfall averaging around 1,535.8 millimeters (3).

The State contributed an estimated 3.8% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 2.2 million to 2.6 million, the estimated incidence increased from 164.5 to 174.9 per 1000 population (4). Malaria prevalence by microscopy was 2.6% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2011. Since 2009, over 4.2 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 11.1% in 2015 to 9.6% in 2021. Care seeking among children with fever in the State increased from 67.8% in 2015 to 73.4% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 14.7% in 2015 to 36.4% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 13.9% in 2015 to 10.1% in 2021 (5).

An estimated 3.5 million cases were averted between 2009 and 2015, and 2.2 million between 2009 and 2021.
Nasarawa State is located in the North-Central Region of Nigeria. It borders Taraba and Plateau to the east, Kaduna to the north, Kogi and Benue to the south, and Federal Capital Territory to the west. The State’s estimated population was 2.6 million in 2019 (1) and 3.0 million in 2022.

The State experiences two distinct seasons: the dry season (November to February) and the rainy season (March to October) (9), with annual rainfall averaging around 1,217.4 millimeters (3).

The State contributed an estimated 1.2% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases remained at around 0.7 million, the estimated incidence increased from 252.7 to 274.1 per 1000 population (4). Malaria prevalence by microscopy decreased from 35.9% in 2015 to 15.3% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2022. Since 2009, over 4.1 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 44.4% in 2015 to 14.5% in 2021. Care seeking among children with fever in the State decreased from 83.5% in 2015 to 52.4% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 30.4% in 2015 to 63.0% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy increased from 24.4% in 2015 to 26.5% in 2021 (9).

An estimated 1.1 million cases were averted between 2009 and 2015, and 3.4 million between 2009 and 2021.
**Report on malaria in Nigeria 2022**

### Malaria prevalence in children under 5 years

![Malaria prevalence graph](image1.png)

- **Microscopy**: Red bars
- **RDT**: Green bars

**Years**
- 2015
- 2018
- 2021

**Values**
- 2015: 42.6%
- 2018: 42.1%
- 2021: 35.1%

### Diagnosis and treatment for malaria in children under 5 years

![Diagnosis and treatment graph](image2.png)

- **Treatment sought**: Yellow bars
- **Blood tests among treatment seekers**: Orange bars

**Years**
- 2013
- 2015
- 2018
- 2021

**Values**
- 2013: 60%
- 2015: 60%
- 2018: 60%
- 2021: 60%

### Access, coverage and use of ITNs

![Access, coverage and use of ITNs graph](image3.png)

- **ITNs used out of ITNs available**: Green bars
- **Use of ITNs among people of all ages**: Orange bars
- **Use of any net among children under 5**: Yellow bars
- **Use of ITNs among children under 5**: Blue bars

**Years**
- 2013
- 2015
- 2018
- 2021

**Values**
- 2013: 30%
- 2015: 30%
- 2018: 30%
- 2021: 30%
Niger State is located in the North-Central Region of Nigeria. With the largest landmass in Nigeria, it borders Zamfara, Kebbi, Kaduna to the north, Federal Capital Territory to the east, Kogi and Kwara to the South and the Republic of Benin to the west. The State’s estimated population was 6.2 million in 2019 (1) and 6.4 million in 2022.

The State experiences two distinct seasons: the dry season (November to March) and the rainy season (April to October) (9), with annual rainfall averaging around 1,101.7 millimeters (3).

The State contributed an estimated 3.2% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases remained at around 2.1 million, the estimated incidence decreased from 368.9 to 351.5 per 1000 population (4). Malaria prevalence by microscopy decreased from 33.5% in 2015 to 20.7% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2022. Since 2009, over 7.7 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 38.0% in 2015 to 22.1% in 2021. Care seeking among children with fever in the State decreased from 81.9% in 2015 to 73.6% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 14.4% in 2015 to 30.0% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy increased from 20.8% in 2015 to 24.9% in 2021 (5).

An estimated 2.6 million cases were averted between 2009 and 2015, and 4.6 million between 2009 and 2021.
OGUN STATE

Report on malaria in Nigeria 2022

INDICATORS | VALUE | UNIT
--- | --- | ---
Estimated population in 2021 | 6 105 000 | |
Malaria prevalence according to RDT | 35.6 | %
Malaria prevalence according to microscopy | 24.9 | %
Estimated malaria cases in 2021 | 1 709 000 | |
Estimated incidence per thousand population in 2021 | 279.9 | /1000
Year of most recent ITN campaign | 2021 | |
Year of preceding ITN campaign | 2018 | |
Persons with access to an ITN | 33.7 | %
Existing ITNs used last night | 65.5 | %
Population who slept under an ITN the night before the survey | 21.7 | %
Children under 5 who slept under any net | 18.2 | %
Children under 5 who slept under an ITN | 18.2 | %
Proportion of febrile children in past 2 weeks for whom treatment was sought | 39.4 | %
Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis | 61.7 | %

Malaria prevalence in children under 5 years

Diagnosis and treatment for malaria in children under 5 years

Access, coverage and use of ITNs
Ogun State is located in the South-Wester Region of Nigeria. It borders Lagos, Oyo, Osun, Ondo, and the Republic of Benin, has Abeokuta as its capital and largest city, featuring a predominantly rainforest landscape, with wooden savanna in the north-west. The State’s estimated population was 5.9 million in 2019 (1) and 6.3 million in 2022.

The State experiences two distinct seasons: the dry season (October to February) and the rainy season (March to September) (9), with annual rainfall averaging around 1,332.3 millimeters (3).

The State contributed an estimated 2.5% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 1.5 million to 1.7 million, the estimated incidence increased from 267.3 to 279.9 per 1000 population (4). Malaria prevalence by microscopy increased from 14.7% in 2015 to 24.9% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2021. Since 2009, over 10.3 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys increased from 12.2% in 2015 to 21.7% in 2021. Care seeking among children with fever in the State increased from 36.0% in 2015 to 39.4% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis decreased from 77.8% in 2015 to 61.7% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 17.2% in 2015 to 13.7% in 2021 (5).

An estimated 2.7 million cases were averted between 2009 and 2015, and 4.0 million between 2009 and 2021.
Key points

Ondo State is located in the South-Western Region of Nigeria. It borders Ekiti, Kogi, Edo, Delta, Ogun, and Osun States, has Akure as its capital, with the highest point in Nigeria’s western half at over 1000 meters. The State’s estimated population was 5.0 million in 2019 (1) and 5.6 million in 2022.

The State experiences two distinct seasons: the dry season (November to April) and the rainy season (May to October) (9), with annual rainfall averaging around 1,574.2 millimeters (3).

The State contributed an estimated 2.4% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases remained at around 1.6 million, the estimated incidence decreased from 325.9 to 304.0 per 1000 population (4). Malaria prevalence by microscopy increased from 21.3% in 2015 to 26.7% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2021. Since 2009, over 6.9 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 20.1% in 2015 to 17.7% in 2021. Care seeking among children with fever in the State decreased from 59.2% in 2015 to 48.8% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis decreased from 47.8% in 2015 to 16.0% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 22.6% in 2015 to 19.3% in 2021 (5).

An estimated 1.4 million cases were averted between 2009 and 2015, and 3.4 million between 2009 and 2021.
OSUN STATE

INDICATORS | VALUE | UNIT
---|---|---
Estimated population in 2021 | 5,481,000 | 
Malaria prevalence according to RDT | 27.6 | %
Malaria prevalence according to microscopy | 19.3 | %
Estimated malaria cases in 2021 | 1,789,000 | 
Estimated incidence per thousand population in 2021 | 326.5 | /1000
Year of most recent ITN campaign | 2020 | 
Year of preceding ITN campaign | 2017 | 
Persons with access to an ITN | 61.8 | %
Existing ITNs used last night | 43.2 | %
Population who slept under an ITN the night before the survey | 35.3 | %
Children under 5 who slept under any net | 35.1 | %
Children under 5 who slept under an ITN | 35.1 | %
Proportion of febrile children in past 2 weeks for whom treatment was sought | 61 | %
Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis | 48.7 | %

Malaria prevalence in children under 5 years

Diagnosis and treatment for malaria in children under 5 years

Access, coverage and use of ITNs
Osun State is located in the South-Western Region of Nigeria. It borders Ekiti, Ondo, Kwara, Ogun, and Oyo States, features Nigerian lowland forests in the south and drier Guinean forest-savanna mosaic in the north. The State’s estimated population was 4.2 million in 2019 (1) and 5.7 million in 2022.

The State experiences two distinct seasons: the dry season (November to February) and the rainy season (March to October) (9), with annual rainfall averaging around 1,361.8 millimeters (3).

The State contributed an estimated 2.6% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 1.6 million to 1.8 million, the estimated incidence decreased from 327.2 to 326.5 per 1000 population (4). Malaria prevalence by microscopy decreased from 33.4% in 2015 to 19.3% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2020. Since 2009, over 7.1 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys increased from 21.4% in 2015 to 35.3% in 2021. Care seeking among children with fever in the State decreased from 70.2% in 2015 to 61.0% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 12.7% in 2015 to 48.7% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 15.0% in 2015 to 14.9% in 2021 (5).

An estimated 1.7 million cases were averted between 2009 and 2015, and 4.2 million between 2009 and 2021.

Key points
Report on malaria in Nigeria 2022

INDICATORS | VALUE | UNIT
--- | --- | ---
Estimated population in 2021 | 9,215,000 |
Malaria prevalence according to RDT | 29.6% |%
Malaria prevalence according to microscopy | 20.9% |%
Estimated malaria cases in 2021 | 2,889,000 |
Estimated incidence per thousand population in 2021 | 311.4 /1000 |
Year of most recent ITN campaign | 2021 |
Year of preceding ITN campaign | 2016 |
Persons with access to an ITN | 44.4% |%
Existing ITNs used last night | 64.7% |%
Population who slept under an ITN the night before the survey | 31.2% |%
Children under 5 who slept under any net | 35.6% |%
Children under 5 who slept under an ITN | 35.6% |%
Proportion of febrile children in past 2 weeks for whom treatment was sought | 46% |
Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis | 75% |

Malaria prevalence in children under 5 years

Diagnosis and treatment for malaria in children under 5 years

Access, coverage and use of ITNs
Oyo State is located in the South-Western Region of Nigeria. It borders Kwara, Osun, Ogun, and the Republic of Benin. The State’s estimated population was 7.5 million in 2019 (1) and 9.5 million in 2022.

The State experiences two distinct seasons: the dry season (November to March) and the rainy season (April to October) (9), with annual rainfall averaging around 1,088.0 millimeters (3).

The State contributed an estimated 4.2% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 2.5 million to 2.9 million, the estimated incidence increased from 294.2 to 311.4 per 1000 population (4). Malaria prevalence by microscopy increased from 19.2% in 2015 to 20.9% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2021. Since 2009, over 11.2 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 31.4% in 2015 to 31.2% in 2021. Care seeking among children with fever in the State decreased from 83.3% in 2015 to 46.0% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 70.5% in 2015 to 75.0% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy increased from 18.1% in 2015 to 18.5% in 2021 (5).

An estimated 3.7 million cases were averted between 2009 and 2015, and 8.8 million between 2009 and 2021.

Key points
PLATEAU STATE

Estimated population in 2021 | 4,782,000
Malaria prevalence according to RDT | 26.4 %
Malaria prevalence according to microscopy | 18.8 %
Estimated malaria cases in 2021 | 1,370,000
Estimated incidence per thousand population in 2021 | 286.5 /1000
Year of most recent ITN campaign | 2020
Year of preceding ITN campaign | 2015
Persons with access to an ITN | 25.4 %
Existing ITNs used last night | 84 %
Population who slept under an ITN the night before the survey | 26.7 %
Children under 5 who slept under any net | 30.8 %
Children under 5 who slept under an ITN | 29.5 %
Proportion of febrile children in past 2 weeks for whom treatment was sought | 52.7 %
Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis | 19.9 %
Plateau State is located in the North-Central Region of Nigeria. It borders Bauchi to the north-east, Kaduna to the north-west, Nasarawa to the south-west and Taraba to the south-east. The State’s estimated population was 4.4 million in 2019 (1) and 4.9 million in 2022.

The State experiences two distinct seasons: the dry season (September to April) and the rainy season (May to August) (9), with annual rainfall averaging around 1,042.7 millimeters (3).

The State contributed an estimated 2.0% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 1.1 million to 1.4 million, the estimated incidence increased from 257.3 to 286.5 per 1000 population (4). Malaria prevalence by microscopy decreased from 35.8% in 2015 to 18.8% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2020. Since 2009, over 5.9 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 38.4% in 2015 to 26.7% in 2021. Care seeking among children with fever in the State decreased from 78.6% in 2015 to 52.7% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis decreased from 24.9% in 2015 to 19.9% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy increased from 23.5% in 2015 to 27.1% in 2021 (5).

An estimated 2.0 million cases were averted between 2009 and 2015, and 6.9 million between 2009 and 2021.

**Key points**
Report on malaria in Nigeria 2022

**RIVERS STATE**

- **INDICATORS**
  - Estimated population in 2021: 8,584,000
  - Malaria prevalence according to RDT: 33.8%
  - Malaria prevalence according to microscopy: 8.6%
  - Estimated malaria cases in 2021: 1,954,000
  - Estimated incidence per thousand population in 2021: 227.7 /1000
  - Year of most recent ITN campaign: 2022
  - Year of preceding ITN campaign: 2014
  - Persons with access to an ITN: 16.9%
  - Existing ITNs used last night: 54%
  - Population who slept under an ITN the night before the survey: 10.5%
  - Children under 5 who slept under any net: 14.4%
  - Children under 5 who slept under an ITN: 14.4%
  - Proportion of febrile children in past 2 weeks for whom treatment was sought: 58.2%
  - Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis: 7.2%

- **Malaria prevalence in children under 5**
  - Microscopy
  - RDT

- **Diagnosis and treatment for malaria in children under 5**
  - Treatment sought
  - Blood tests among treatment seekers

- **Access, coverage and use of ITNs**
  - ITNs used out of ITNs available
  - Use of ITNs among people of all ages
  - Use of any net among children under 5
  - Use of ITNs among children under 5
Rivers State is located in the South-Southern Region of Nigeria. It borders Imo to the north, Abia and Akwa Ibom to the east, and Bayelsa and Delta to the west. The State’s estimated population was 7.0 million in 2019 (1) and 8.9 million in 2022.

The State experiences two distinct seasons: the dry season (November to March) and the rainy season (April to October) (9), with annual rainfall averaging around 2,414.2 millimeters (3).

The State contributed an estimated 2.9% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases increased from 1.5 million to 2.0 million, the estimated incidence increased from 196.0 to 227.7 per 1000 population (4). Malaria prevalence by microscopy was 8.6% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2022. Since 2009, over 4.6 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 31.7% in 2015 to 10.5% in 2021. Care seeking among children with fever in the State decreased from 75.6% in 2015 to 58.2% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis decreased from 20.1% in 2015 to 7.2% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 17.1% in 2015 to 17.0% in 2021.

An estimated 2.7 million cases were averted between 2009 and 2015, and 5.8 million between 2009 and 2021.

Key points
Report on malaria in Nigeria 2022

SOKOTO STATE

INDICATORS

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<thead>
<tr>
<th>Indicators</th>
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<th>Unit</th>
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<tbody>
<tr>
<td>Estimated population in 2021</td>
<td>5,769,000</td>
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<tr>
<td>Malaria prevalence according to RDT</td>
<td>40.3%</td>
<td></td>
</tr>
<tr>
<td>Malaria prevalence according to microscopy</td>
<td>35.9%</td>
<td></td>
</tr>
<tr>
<td>Estimated malaria cases in 2021</td>
<td>1,778,000</td>
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<tr>
<td>Estimated incidence per thousand population in 2021</td>
<td>308.2 /1000</td>
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<tr>
<td>Year of most recent ITN campaign</td>
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<tr>
<td>Year of preceding ITN campaign</td>
<td>2018</td>
<td></td>
</tr>
<tr>
<td>Persons with access to an ITN</td>
<td>44.3%</td>
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<tr>
<td>Existing ITNs used last night</td>
<td>64.3%</td>
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<tr>
<td>Population who slept under an ITN the night before the survey</td>
<td>31.1%</td>
<td></td>
</tr>
<tr>
<td>Children under 5 who slept under any net</td>
<td>42.3%</td>
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<tr>
<td>Children under 5 who slept under an ITN</td>
<td>40%</td>
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</tr>
<tr>
<td>Proportion of febrile children in past 2 weeks for whom treatment was sought</td>
<td>71.1%</td>
<td></td>
</tr>
<tr>
<td>Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis</td>
<td>30.9%</td>
<td></td>
</tr>
</tbody>
</table>

Malaria prevalence in children under 5 years

Diagnosis and treatment for malaria in children under 5 years

Access, coverage and use of ITNs
Sokoto State is located in the North-Western Region of Nigeria. It borders Zamfara to the east and south, Kebbi to the west and south and the Republic of Niger to the north. The State’s estimated population was 5.9 million in 2019 (1) and 5.9 million in 2022.

The State experiences two distinct seasons: the dry season (November to April) and the rainy season (May to October) (9), with annual rainfall averaging around 586.4 millimeters (3).

The State contributed an estimated 2.6% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases decreased from 2.2 million to 1.8 million, the estimated incidence decreased from 408.4 to 308.2 per 1000 population (4). Malaria prevalence by microscopy decreased from 46.6% in 2015 to 35.9% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2022. Since 2009, over 6.5 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 48.7% in 2015 to 31.1% in 2021. Care seeking among children with fever in the State increased from 26.1% in 2015 to 71.1% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 18.8% in 2015 to 30.9% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy increased from 28.5% in 2015 to 29.6% in 2021 (9).

The cumulative estimated cases averted between 2009 and 2021 was negative as there was as an increase in cases during this period.
Table 1: Malaria indicators in Nigeria

<table>
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<tr>
<th>Indicators</th>
<th>Value</th>
<th>Unit</th>
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<tbody>
<tr>
<td>Estimated population in 2022</td>
<td>3,893,000</td>
<td></td>
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<tr>
<td>Malaria prevalence according to RDT</td>
<td>24.5</td>
<td>%</td>
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<tr>
<td>Malaria prevalence according to microscopy</td>
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<td>%</td>
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<tr>
<td>Estimated malaria cases in 2021</td>
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<tr>
<td>Estimated incidence per thousand population in 2021</td>
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<td>/1,000</td>
</tr>
<tr>
<td>Year of recent ITN campaign</td>
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<tr>
<td>Year of preceding ITN campaign</td>
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<tr>
<td>Persons with access to an ITN</td>
<td>45.8</td>
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<tr>
<td>Existing ITNs used last night</td>
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<td>%</td>
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<tr>
<td>Population who slept under an ITN the night before the survey</td>
<td>38.2</td>
<td>%</td>
</tr>
<tr>
<td>Children under 5 who slept under any net</td>
<td>41.9</td>
<td>%</td>
</tr>
<tr>
<td>Children under 5 who slept under an ITN</td>
<td>38.1</td>
<td>%</td>
</tr>
<tr>
<td>Proportion of febrile children in past 2 weeks for whom treatment was sought</td>
<td>46.8</td>
<td>%</td>
</tr>
<tr>
<td>Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis</td>
<td>47.4</td>
<td>%</td>
</tr>
</tbody>
</table>

Graphs showing population count, estimated malaria cases and incidence, monthly rainfall, and diagnosis and treatment for malaria in children under 5 years.
Taraba State is located in the North-Eastern Region of Nigeria. It borders Nasarawa and Benue to the west, Plateau to the north-west, Bauchi and Gombe to the north, Adamawa to the north-east, and the Republic of Cameroon to the south. The State’s estimated population was 3.3 million in 2019 (1) and 3.6 million in 2022.

The State experiences two distinct seasons: the dry season (November to April) and the rainy season (May to October) (9), with annual rainfall averaging around 1,446.6 millimeters (3).

The State contributed an estimated 1.5% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases remained at around 1 million, the estimated incidence increased from 290.6 to 299.9 per 1000 population (4). Malaria prevalence by microscopy decreased from 42.7% in 2015 to 17.9% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2022. Since 2009, over 2.9 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys increased from 27.3% in 2015 to 38.2% in 2021. Care seeking among children with fever in the State decreased from 50.6% in 2015 to 46.8% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 28.5% in 2015 to 47.4% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy increased from 15.5% in 2015 to 24.2% in 2021 (5).

An estimated 0.9 million cases were averted between 2009 and 2015, and 2.9 million between 2009 and 2021.

Key points
YOBE STATE

Report on malaria in Nigeria 2022

INDICATORS | VALUE | UNIT
--- | --- | ---
Estimated population in 2021 | 3,878,000 |
Malaria prevalence according to RDT | 62.5% |%
Malaria prevalence according to microscopy | 20.5% |%
Estimated malaria cases in 2021 | 1,119,000 |
Estimated incidence per thousand population in 2021 | 288.7 /1000 |
Year of most recent ITN campaign | 2022 |
Year of preceding ITN campaign | 2019 |
Persons with access to an ITN | 51.2% |%
Existing ITNs used last night | 76.6% |%
Population who slept under an ITN the night before the survey | 42.7% |%
Children under 5 who slept under any net | 41.3% |%
Children under 5 who slept under an ITN | 40.7% |%
Proportion of febrile children in past 2 weeks for whom treatment was sought | 45.3% |%
Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis | 53% |%

Malaria prevalence in children under 5 years

Diagnosis and treatment for malaria in children under 5 years

Access, coverage and use of ITNs
Yobe State is located in the North-Eastern Region of Nigeria. It borders the Republic of Niger to the north, Borno and Adamawa to the east and south. The State’s estimated population was 3.4 million in 2019 (1) and 4.0 million in 2022.

The State experiences two distinct seasons: the dry season (October/November to April/May) and the rainy season (May/June to September/October) (9), with annual rainfall averaging around 547.2 millimeters (3).

The State contributed an estimated 1.8% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases remained at around 1.1 million, the estimated incidence increased from 280.9 to 288.7 per 1000 population (4). Malaria prevalence by microscopy increased from 18.9% in 2015 to 20.5% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2022. Since 2009, over 3.4 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 55.9% in 2015 to 42.7% in 2021. Care seeking among children with fever in the State decreased from 65.8% in 2015 to 45.3% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 28.6% in 2015 to 53.0% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 32.0% in 2015 to 24.5% in 2021 (5).

An estimated 1.5 million cases were averted between 2009 and 2015, and 3.7 million between 2009 and 2021.
ZAMFARA STATE

Report on malaria in Nigeria 2022

INDICATORS | VALUE | UNIT
--- | --- | ---
Estimated population in 2021 | 5,259,000
Malaria prevalence according to RDT | 59.7 | %
Malaria prevalence according to microscopy | 36.6 | %
Estimated malaria cases in 2021 | 1,669,000
Estimated incidence per thousand population in 2021 | 317.3 | /1000
Year of most recent ITN campaign | 2020
Year of preceding ITN campaign | 2015
Persons with access to an ITN | 43.7 | %
Existing ITNs used last night | 90.8 | %
Population who slept under an ITN the night before the survey | 40.2 | %
Children under 5 who slept under any net | 46.2 | %
Children under 5 who slept under an ITN | 46.1 | %
Proportion of febrile children in past 2 weeks for whom treatment was sought | 51.7 | %
Proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis | 63.6 | %

Malaria prevalence in children under 5 years

Diagnosis and treatment for malaria in children under 5 years

Access, coverage and use of ITNs
Zamfara State is located in the North-Western Region of Nigeria. It borders the Republic of Niger to the north, Kaduna to the south, Katsina to the east, and Sokoto, Kebbi and Niger States to the west. The State’s estimated population was 5.3 million in 2019 (1) and 5.4 million in 2022.

The State experiences two distinct seasons: the dry season (October to April) and the rainy season (May to September) (9), with annual rainfall averaging around 813.6 millimeters (3).

The State contributed an estimated 2.5% of Nigeria’s 68 million malaria cases in 2021 (2,3). From 2018 to 2021, estimated cases remained at around 1.7 million, the estimated incidence decreased from 375.6 to 317.3 per 1000 population (4). Malaria prevalence by microscopy decreased from 62.6% in 2015 to 36.6% in 2021 (5).

The State conducted its most recent round of insecticide treated nets (ITN) through a mass campaign in 2020. Since 2009, over 6.9 million ITNs have been distributed through mass distribution. The proportion of those who slept under ITNs the night before the surveys decreased from 56.6% in 2015 to 40.2% in 2021. Care seeking among children with fever in the State decreased from 55.2% in 2015 to 51.7% in 2021. The proportion of febrile children for whom treatment was sought and who received a finger or heel prick for malaria diagnosis increased from 13.0% in 2015 to 63.6% in 2021. The coverage of two or more doses of SP for intermittent preventative treatment of malaria during pregnancy decreased from 26.5% in 2015 to 23.5% in 2021 (5).

The cumulative estimated cases averted between 2009 and 2015 was negative as there was an increase in cases during this period, and 2.7 million between 2009 and 2021.
References


Methods

The annual rainfall was extracted from the Climate Hazards group Infrared Precipitation with Stations (CHIRPS) dataset, starting from 2014 to 2022, and annual rainfall averages were extracted per state (3). The estimated cases for each state were calculated as a function of the modeled incidence estimates and the projected population for that state, as described in the World malaria report 2022 (4). The population estimates used in this report are based on projections by state of the 2006 Nigeria national census. The total population is different from the population used in the World malaria report 2022 that is based on UN national population projections, affecting the overall estimates of cases.

Estimated cases averted over the period 2009–2021 were computed by comparing estimates for each year since 2009 with the malaria case incidence rates from 2009, adjusting for population growth. The year 2009 was selected as the baseline (or counterfactual in the absence of interventions) considering that this was the year when first mass insecticide-treated nets (ITN) campaigns were implemented.

Data on distribution of ITNs and SMC were provided by the NMEP. Malaria prevalence, treatment seeking, diagnosis and ITN coverage indicators were extracted from the household survey reports. Health facility level monthly IPTp data were extracted from DHIS2. The number of first and second doses of IPTp and the total number of first antenatal care visits were aggregated to calculate the national and state level coverage of IPTp1 and IPTp2 per year. Coverage was calculated by dividing the number of IPTp1 or IPTp2 doses by the total number of first antenatal care visits. Reports that had missing data for one or more of the data elements were excluded from the analysis. Data were checked for consistencies and outliers, and corrected when appropriate, to improve data quality.
### Annex. Population estimates

Population denominator for case incidence and estimated malaria cases per state and per year

<table>
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