

IMPLEMENTING MALARIA PREVENTION STRATEGIES IN NIGERIA: INSIGHTS FROM SUCCESSFUL PROGRAMMES IN EGYPT

How can malaria prevention strategies used in Egypt be effectively implemented to reduce malaria prevalence in Nigeria?

TARGET 3-3

FIGHT COMMUNICABLE DISEASES

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SDG 2030

Goal 3 from the SDG, "Healthy Lifestyles and well-being for all ages" (United Nations Department of Economic and Social Affairs, 2026). Target 3.3 aims to end the epidemic of communicable diseases by reducing malaria incidence by up to 90% by 2030 and eliminating malaria in at least 35 countries (World Health Organization, 2026).

Aim

To analyze malaria prevention strategies implemented in Egypt and explore their adaptability to improve prevention and control in Nigeria.

Methods

- Databases:** PubMed, Scopus + WHO and World Bank reports and Nigerias National Malaria elimination programme
- Study types:** Systematic reviews, epidemiological studies from 2019-2026 written in english
- Search Terms:** Using Boolean search "Malaria" "Malaria prevention" "Malaria elimination programme" "Malaria Nigeria" "Malaria Egypt" "Implementation strategies"

Background:

Malaria and the Global Burden

Malaria is an acute febrile disease caused by the parasite Plasmodium, especially the species Plasmodium falciparum and Plasmodium vivax (Medicines for Malaria Venture, n.d.). These parasites are transmitted among the human population through the bite of infected female Anopheles mosquitoes. Symptoms include fever, headache, and chills. This symptoms can become more severe with the onset of seizures, confusion, kidney failure, and even death (Centers for Disease Control and Prevention, 2024).

According to the 2025 World Malaria Report, there are an estimated 282 million cases across 80 countries affected by the disease. The global outlook shows an increase of 9 million cases compared to 2023.

The majority of these cases are concentrated in the WHO African region, specifically in Nigeria, with 68,466,000 cases (WHO, 2025). The presence of malaria is strongly influenced by anomalies in rainfall, temperature, and humidity in SSA. These irregularities have aided the adaptation and prevalence of the malaria vectors and the parasite (Segun et al., 2020). In rural populations, prevalence is 2.4 times that in urban populations (31% vs. 13%). Compared to the highest socioeconomic group, prevalence among children in the lowest socioeconomic group is seven times higher (U.S. President's Malaria Initiative, 2023).

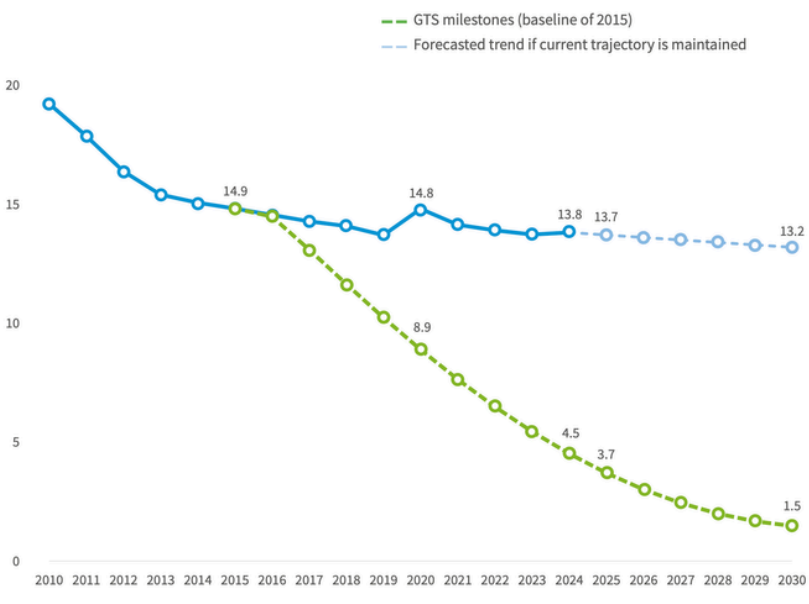


Figure 1.- Comparison between the current trajectory maintained (blue) and SDG targets (green) (World Health Organization, 2026).

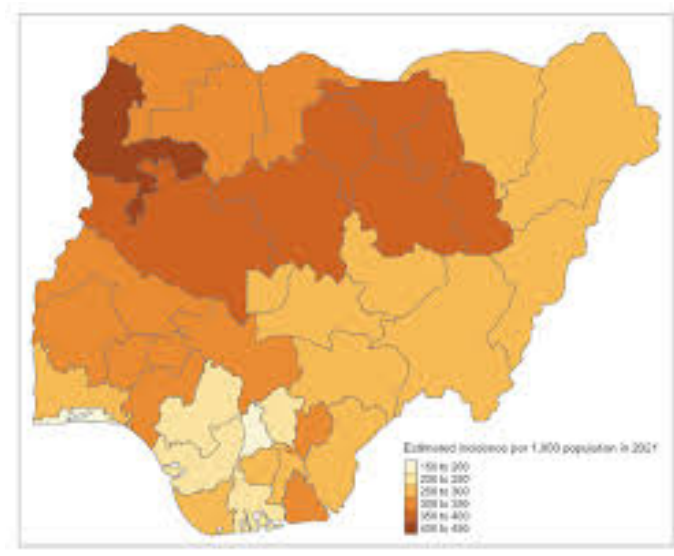


Figure 2.- Heat map showing the distribution of malaria cases in Nigeria (World Health Organization Regional Office for Africa, 2022)

Population demographics for Egypt and Nigeria

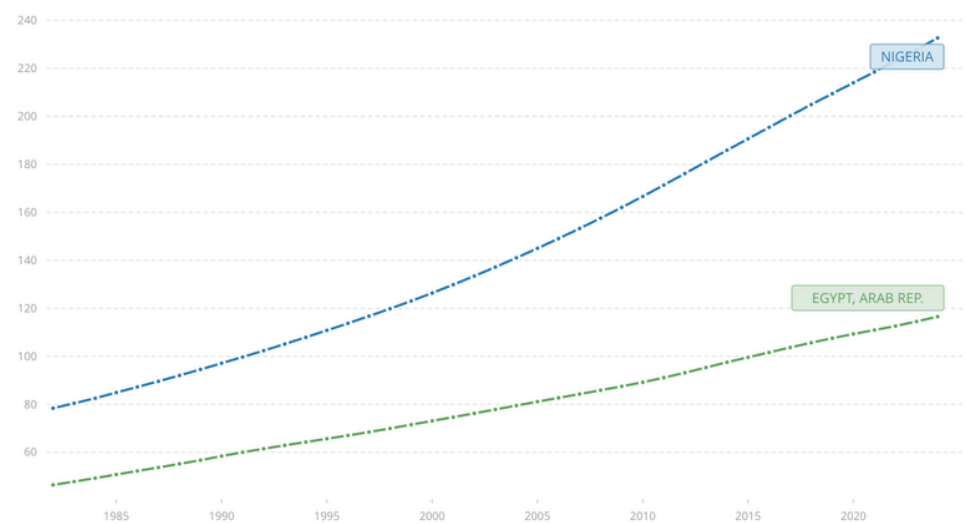


Figure 3. - Comparison between Egypt's and Nigeria's population (World Bank, n.d.)

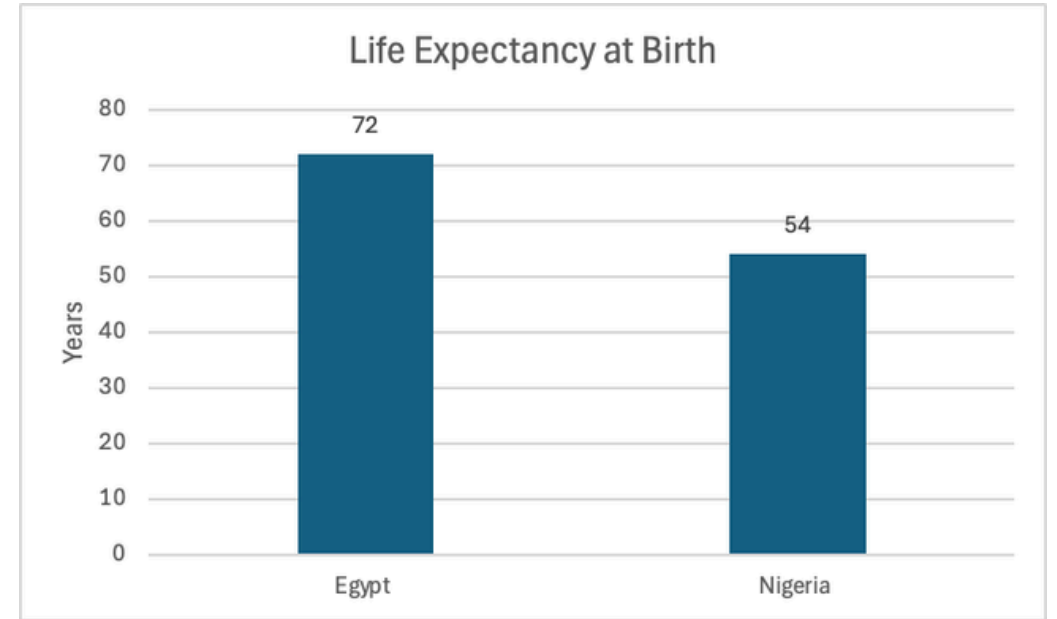


Figure 4. - Comparison between Egypt's and Nigeria's Life expectancy at birth in total (World Bank, n.d.)

Comparison:

Health Domain	Egypt	Nigeria
Healthcare Systems	Public and private healthcare	Private healthcare accounts for 60% of healthcare. High OOP costs.
Access to Malaria Care	Malaria diagnosis and treatment are provided free to the entire population	Lack of essential medicines and fragile surveillance systems
Healthcare Access	Rural areas had poor access to treatment.	Limited formal healthcare accessibility
Education	Limited health education: Low awareness and non-compliance with prevention	Low awareness and limited engagement.
Health Infrastructure	95% living within 5 km of primary care facility.	Inadequate rural healthcare infrastructure

Table 1. - Comparison between Egypt's and Nigeria's key malaria barriers. World Health Organization. (2024, October 20)

Results: Applicable strategies in Nigeria

Effective strategies in Egypt	Application to Nigeria
Effective surveillance systems allowing early detection and rapid response.	Strengthening collaborations with neighbouring countries, to ensure effective surveillance systems.
Use of vector control methods such as insecticide-treated nets.	Equitable provision of free malaria prevention tools, diagnosis and treatment for all.
Campaigns which educated the public about malaria transmission, symptoms, prevention and help-seeking.	Public awareness and education campaigns on the importance of malaria preventive strategies.
Equipped healthcare facilities.	Training healthcare professionals.
Collaboration with international organizations.	Strengthen existing partnerships with the Global Fund and the WHO.
Governmental commitment to sustain eradication initiatives.	Creation of a multi-ministerial platform to ensure effective use of resources and long-term funding.

Table 2 - strategies used in Egypt and application to Nigeria

Measuring success

- Success could be measured by meeting the WHO criteria for eradication. (WHO, 2022)
- Epidemiology:** Zero indigenous cases for >3 years
 - Transmission:** Nationwide interruption of transmission
 - Surveillance:** Case detection, investigation, classification
 - Response:** Rapid containment of any detected case
 - Prevention:** Systems to prevent reintroduction
 - Health system:** Sustained program capacity
 - Verification:** Independent WHO assessment

Limitations: Limited transferability due to health system structure and transmission context. The study is based on secondary data and reports which cannot fully capture implementation. There is also variability in study designs and there may be publication bias.

Conclusion and Recommendation

- Effective malaria prevention in Nigeria requires:**
 - Strengthening the health system and adapting proven strategies to the local context
- Lessons from Egypt show that:**
 - Coordinated, well-implemented interventions can reduce malaria burden. Success depends on context-specific adaptation

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