



Recognising Nigeria's Rollout of Malaria Vaccine: A Milestone in Malaria Prevention and Control

Udokang Ephraim Ikpongifono^{1*}, Stephen Chukwuemeka Igwe², Alatare Abdulrahman Salahudeen², Abdulmalik Opeyemi Adeyemo², Toluwalogo Niji-Olawepo²

¹Faculty of Pharmacy, University of Uyo, Nwaniba Road, Uyo, Akwa Ibom State, Nigeria

²College of Health Sciences, University of Ilorin, 1 University Road Ilorin, Nigeria

Corresponding Author: **Udokang Ephraim Ikpongifono**

Address: Faculty of Pharmacy, University of Uyo, Nwaniba Road, Uyo, Akwa Ibom State, 520003 Nigeria; Email: ephraimudokang@gmail.com

Received date: 18 December 2024; **Accepted date:** 04 January 2025; **Published date:** 11 January 2025

Citation: Ikpongifono UE, Igwe SC, Salahudeen AA, Adeyemo AO, Niji-Olawepo T. Recognising Nigeria's Rollout of Malaria Vaccine: A Milestone in Malaria Prevention and Control. J Health Care and Research. 2025 Jan 11;6(1): 1-3.

Copyright © 2025 Ikpongifono UE, Igwe SC, Salahudeen AA, Adeyemo AO, Niji-Olawepo T. This is an open-access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium provided the original work is properly cited.

Abstract

Nigeria is one of the African nations with a significant global malaria infection burden. Millions of people, particularly children, have died from this parasitic illness. Recently, Nigeria implemented the malaria vaccine, marking a significant step in addressing this issue. This is a major turning point in Nigeria's efforts to eradicate the fatal illness. Since the introduction of the RTS,S vaccine, the country's malaria burden has decreased, and Nigeria deserves praise for its leadership, successful collaboration, and community involvement. This letter highlights the challenges and provides future recommendations while expressing gratitude to the Nigerian government for achieving a significant milestone in the fight to eradicate malaria.

Keywords

Malaria, Vaccine, Prevention, Nigeria, RTS, S Vaccine

Abbreviations

WHO - World Health Organization; COVID-19 - Coronavirus Disease – 2019; NEMC - Nigeria End Malaria Council; ITNs – Insecticide - Treated Nets; NMEP - National Malaria Elimination Program; NMSP - National Malaria Strategic Plan; GAVI - Global Alliance for Immunization; UNICEF - United Nations Children's Fund

Dear Editor,

When Anopheles mosquitoes carrying the parasite *Plasmodium* bite a human, the result is malaria, an infectious disease. With an estimated 400,000 deaths and 229 million cases worldwide in 2019, malaria is a major global health concern [1]. In sub-Saharan Africa, malaria continues to be the leading cause of sickness and mortality among children [2]. With over 300,000 fatalities and an estimated 100 million cases annually,

Nigeria has the largest malaria burden in the world. Additionally, Nigeria and the Republic of Congo account for 36% of all malaria cases globally [3-5].

In recent years, WHO and its partners have reported that the fight against the deadly disease has stalled. However, a major breakthrough in science, child health, and malaria prevention has been made with the widely awaited childhood malaria vaccine. Combining this

vaccination with existing malaria preventive strategies could save tens of thousands of young lives each year [2].

In Nigeria, malaria has remained a serious public health concern and a burden to the nation [3]. Twenty-seven percent of malaria cases worldwide occur in Nigeria [4]. Accordingly, a number of issues, such as insufficient vector control methods, restricted access to efficient treatment, and inadequate infrastructure, contribute to Nigeria's high rates of malaria transmission [4]. Pregnant women and children under five are the groups most at risk of contracting malaria. This infection is regarded as a major cause of childhood illness and the death of over 260,000 African children annually [2]. Overall, Nigeria still has to do more to eradicate the high case burden of malaria, which affects the country in many ways, even though the country has achieved great strides in the fight against the illness [5].

In places like Nigeria, where malaria continues to be a major source of morbidity and mortality among children, the development of the RTS,S vaccine is a significant step forward for public health. The vaccine has shown a 30% reduction in severe malaria cases, lowering fatality rates and decreasing the burden on healthcare systems [3]. Moreover, by targeting vulnerable communities that might not have access to insecticide-treated nets (ITNs), the RTS,S vaccine promotes equitable access to malaria prevention [3]. Widespread application of the malaria vaccine could greatly aid in the fight against the illness in Nigeria. Combining vaccination with current preventive measures could reduce transmission rates and benefit over 90% of children [3]. Additionally, the vaccine will not impede the uptake of ITNs or other required immunizations due to its good safety profile and compatibility with other health initiatives [3]. Given this, achieving Nigeria's malaria eradication goals depends on the RTS,S vaccine.

The launch of the vaccine is a significant turning point in Nigeria's fight against malaria [1]. With the development of the malaria vaccine, Nigeria, which has the highest malaria burden in Africa, has hope for its health sector [3]. This remarkable achievement is evidence of the Nigerian government and health authorities' unwavering commitment to malaria

prevention and elimination, which they have demonstrated through the Nigeria End Malaria Council (NEMC), the National Malaria Elimination Program (NMEP), the National Malaria Strategic Plan (NMSP), and other programs and agencies [4]. This accomplishment is largely due to the unprecedented cooperation with global organizations, including UNICEF, Gavi, the Vaccine Alliance, and the World Health Organization. Particularly in the areas of finance, technical know-how, and logistics, these collaborations have been extremely helpful [2]. A common goal of eliminating malaria and saving lives is reflected in the coordinated activities of these parties.

The fear of adverse vaccine effects has traditionally been the main obstacle to vaccination in Nigeria. This might surface during a potential malaria vaccination campaign, similar to how it occurred for the COVID-19 and North's polio vaccinations. As was done for the COVID-19 and polio vaccinations, Nigeria's successful malaria immunization program necessitates a nationwide information surveillance system to combat misinformation and extensive community stakeholder involvement to increase vaccine adoption [3]. Distributing and storing malaria vaccines is challenging in Nigeria due to issues with power supply, cold chain infrastructure, and storage financing, which emphasizes the need for the government to invest in high-quality cold chain equipment [4]. It is difficult to organize interventions and devote resources when there is a lack of data on severe malaria, which further hinders efforts to control the illness.

Problems with monitoring and evaluation include logistical management issues and insufficient data reporting from the private sector [4]. In addition to the issues associated with insurgency in the north, poor storage conditions and restricted access in remote areas make it more difficult to administer malaria medicines, which may affect the use of malaria vaccinations [4]. Therefore, the government ought to provide adequate funds for storage, good transportation facilities, and appropriate data management.

Nigeria has marked a significant milestone in her efforts to prevent and control malaria infection through the rollout of the malaria vaccine. Being one of the few countries in Africa to achieve this feat in the malaria

eradication struggle, Nigeria has proven its commitment to reducing the burden of malaria. It is imperative that all healthcare professionals, the public, as well as government agencies, recognize the importance of this great achievement and continue to support, collaborate, and monitor malaria control strategies to ensure sustained progress and, ultimately, a malaria-free future in the country.

Conflict of Interest

The authors declared that they have no known personal or financial interest that could influence the work in this paper.

Funding

There was no source of funding for this research.

Data Availability

Data sharing is not applicable to this article as no new data were created.

Authors' Contributions

Udokang E. I - Conceptualization, writing, editing, and validation of the manuscript. Stephen C. I, Alatare A. S, Abdulmalik O. A, and Toluwalogo N. O - Literature review and writing of the original draft.

All authors read and approved the final article for publication.

Acknowledgement

None

References

- [1] Anjorin ET, Olulaja ON, Osoba ME, Oyadiran OT, Ogunsanya AO, Akinade ON, Inuajo JM. Overtreatment of malaria in the Nigerian healthcare setting: prescription practice, rationale and consequences. Pan Afr Med J. 2023 Jun 29;45:111. [PMID: 37745920]
- [2] World Health Organization. WHO recommends groundbreaking malaria vaccine for children at risk. Geneva: World Health Organization; 2021 Oct 6 [cited 2024 Nov 30]. Available from: <https://www.who.int/news/item/06-10-2021-who-recommends-groundbreaking-malaria-vaccine-for-children-at-risk>
- [3] Effiong FB, Makata VC, Elebesunu EE, Bassey EE, Salachi KI, Sagide MR, Abdulameed HT, Uwishema O. Prospects of malaria vaccination in Nigeria: Anticipated challenges and lessons from previous vaccination campaigns. Ann Med Surg (Lond). 2022 Aug 17;81:104385. [PMID: 36046716]
- [4] Omojuyigbe JO, Owolade AJ, Sokunbi TO, Bakenne HA, Ogungbe BA, Oladipo HJ, Agughalam PI. Malaria eradication in Nigeria: State of the nation and priorities for action. Journal of Medicine, Surgery, and Public Health. 2023 Jan 1;1:100024.
- [5] Omohwovo EJ, Lucero-Prisno III DE. The urgency of intensifying efforts to combat malaria in Nigeria. Population Medicine. 2023 Jun 30;5(June):1-2.