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## Advancing Malaria Vaccination in Africa: Cameroon's Pioneering Effort and the Path Forward

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### Dear Editor,

In a groundbreaking move, the fight against malaria in Africa takes a significant stride forward as Cameroon receives 331,200 doses of the RTS,S vaccine, marking the initiation of a wide-spread vaccination program. This momentous event follows a successful pilot phase in 2019, where over 2 million children in Ghana, Kenya, and Malawi received the jab, resulting in notable reductions in severe malaria cases and hospitalizations.<sup>1</sup> As the first malaria vaccine endorsed by the World Health Organization (WHO) to achieve immunity against the deadliest malarial infection caused by *Plasmodium falciparum*, this delivery heralds the commencement of large-scale vaccination efforts across high-risk regions in Africa, representing a historic leap in protecting children from one of the deadliest diseases on the continent. The doses, generously provided by GlaxoSmithKline (GSK), pave the way for an ambitious campaign to combat malaria's devastating impact on African communities.<sup>2</sup> As the malaria vaccine project unfolds throughout Africa, it addresses a crucial need, with 600,000 malaria-related deaths on the continent each year, 80% of which are children under the age of 5, according to the WHO. Cameroon makes a significant move by providing the RTS,S vaccine free of charge to infants up to 6 months old across 42 healthcare facilities that are both public and private in 10 zones, intending to administer 4 doses alongside normal childhood immunizations for increased accessibility. With several African countries preparing to incorporate malaria vaccines into normal immunization programs, the initial doses are expected to be administered between January and March 2024.<sup>1,2</sup> According to UNICEF chief Catherine Russell, the introduction of these vaccines is like adding a star player to the game, ushering in a new age of immunization and malaria control. This monumental step in malaria vaccination is celebrated as a decades-long effort, aiming for a future where no child succumbs to a mosquito bite, as expressed by the United States' global malaria coordinator, David Walton.<sup>1</sup>

While malaria vaccine deployment is a great advance, its efficacy of roughly 36% raises concerns, implying that it is not an all-encompassing solution. The comparatively low efficacy emphasizes the significance of combining it with other methods, such as mosquito nets and antimalarial medicines. Timely advocacy for parents and communities embracing this vaccination is expedient to create awareness for integrating all 3 strategies, which could provide a more comprehensive approach, protecting children from malaria by up to 90% and emphasizing the need for a diversified strategy in combating the disease.<sup>3</sup> Comprehensive planning is recommended to ensure the malaria vaccine's effective distribution in other African countries. This includes establishing a national immunization policy and recommendations, as well as smoothly incorporating the new vaccine into preexisting schedules for delivery with other vaccinations and health interventions. Creating a careful operational implementation strategy, including healthcare practitioner training, is critical. Improving technical proficiency and infrastructure, optimizing vaccine storage facilities, encouraging community participation, and driving demand are all critical components. Furthermore, formative oversight, rigorous monitoring, and a complete review of the entire process are required to ensure the malaria vaccine is delivered with the greatest quality and efficacy.<sup>2</sup>

Finally, a holistic approach is required to increase malaria vaccine availability in Africa, which includes improving healthcare systems, addressing accessibility, compliance, and cultural factors, providing infrastructure, and promoting health education. Effective inventory management requires proactive leadership, surveillance mechanisms, and stakeholder collaboration. Governments should invest in innovating diagnostics to increase sensitivity and specificity, improve data quality, and train practitioners to ensure effective malaria control and immunization.<sup>2,3</sup>




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### Author Contributions

All authors contributed equally to the writing of this manuscript and approved upon reading the final draft.

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### REFERENCES

1. VOA Africa. Africa prepares for rollout of improved malaria vaccine [Internet]. 2023. Accessed February 1, 2024. <https://www.voafrica.com/a/africa-prepares-for-rollout-of-improved-malaria-vaccine/7366386.html>
2. WHO. Cameroon kicks off malaria vaccine rollout [Internet]. 2024. Accessed February 2, 2024. <https://www.afro.who.int/countries/cameroon/news/cameroon-kicks-malaria-vaccine-rollout>
3. El-Moamly AA, El-Sweify MA. Malaria vaccines: the 60-year journey of hope and final success—lessons learned and future prospects. *Trop Med Health*. 2023;51:29.

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