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Curbing Hesitancy Associated with Malaria Vaccination Campaigns: A Case Study of Nigeria

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Nigeria remains the most malaria burdened country globally, accounting for 31% of global malaria deaths that occurred in 2021 (WHO, 2022). The high endemicity of malaria in Nigeria is attributed to the characteristic climatic and environmental conditions that is highly favourable for the breeding of the Anopheles mosquito vectors. The analysis of the spatial distribution patterns of malaria based on climatic, ecological and existing malaria survey data showed that 97% of the Nigerian population lives in medium, intense to high intense intense transmission areas (NMCP, 2013). This implies that almost all the entire Nigeria populace are threatened by Plasmodium falciparum malaria. The Global Technical Strategy Goal was introduced with the sole aim of reducing malaria burden by 99% and eliminating the disease in 35 countries by the year 2030. Consequently, the "high burden to high impact" was launched in 2018 to prevent malaria and save lives in malaria endemic countries, including Nigeria (WHO, 2020).

Malaria vaccine development constitutes a key intervention in the prevention of malaria, particularly among children globally. These vaccines candidates are of various types depending on the specific malaria parasite developmental stages they target, and include; transmission blocking vaccines, blood stage vaccine and pre-erythrocytic stages vaccine. Malaria vaccine trials have shown reasonable progress by demonstrating good efficacy levels in immunogenicity and protection of the trial subjects, who are chiefly highly vulnerable children that often develop severe form of the disease. African countries where the malaria vaccine trials have been successfully implemented include; Ghana, Malawi, Kenya, Burkina Faso, among others. According to Nakkazi (2021), RTS,S malaria vaccine that was earlier approved has passed the phase III clinical trials, recording 55% efficacies within one year and a cumulative 39% over four years period. In the same vein, phase III clinical trials have also commenced for the R21 malaria vaccine sequel to previous trial in Burkina Faso with efficacy of 77%, exceeding the 75% efficacy benchmark set by the World Health Organisation for malaria vaccine (Hill, 2021).

Altogether, malaria susceptibility has been successfully reduced and immunological protection has been successfully rendered by the RTS,S vaccine, with over one million children beneficiaries in the African continent (WHO, 2022). Gavi, the Vaccine Alliance have invested over 150 million USD in the procurement and delivery of malaria vaccine to a number of sub-Saharan African countries (Kuehn, 2022), excluding Nigeria. With the progress being made in the malaria vaccination campaigns, malaria control efforts have unleashed greater hope and the feasibility of achieving the WHO 2030 target has shown greater momentum (Patouillard etal., 2017).

The launch of the R21 malaria vaccine in the most malaria endemic country, Nigeria in November, 2024 marks a significant milestone in the fight against the disease. The introduction of the vaccine in Nigeria, whose over 97% of population is at risk of the malaria, is a significant plus to the country's existing arsenal of interventions, including case management, chemoprevention, indoor residual spraying, insecticide nets, among others (WHO, 2024). The rollout of the vaccine was implemented in phases, commencing with two states that are characterised with high burden of the disease, namely; Kebbi and Bayelsa. One million doses of the vaccine have been received, with Gavi, the Vaccine Alliance alone being accountable for 846,000 doses. The schedule of the vaccine involves four dosage regimen; the first at five months, the second at six months, the third at seven months and the last, a booster at 15 months (WHO, 2024).

High coverage is key to the success of the vaccination campaign in the African continent, including Nigeria. A key anticipatory challenge to the ongoing malaria vaccination campaign in Nigeria is misinformation and vaccine hesitancy. Vaccine hesitancy has been attributed to the fear of adverse event following immunisation in Nigeria (Adebisi etal., 2021). This was evident during the COVID-19 vaccination programme, where misconceptions such as the belief that the COVID-19 vaccines were administered to the population with the hidden aim of rendering male sterile, among other misconceptions (Schonbauer, 2022). In the same vein, misconception of vaccines that also occurred in the past is the polio vaccine, particularly in the Northern region of the country (Renne, 2014).

Consequently, it has become imperative to address the misconceptions that are associated with vaccine hesitancy as the campaign is ongoing. A number of approaches have been pointed out in this regard. First is the need for collaborations between the vaccination personnel and the rural community leaders, including the religious leader and traditional rulers (Elebesunu and Ubani, 2021). Adequate involvement of the community stakeholder has been proven to effectively foster the acceptance of vaccine among community populace. Involvement of stakeholder was especially highlighted by Dr Williams, the Executive Secretary of the Bayelsa State Primary Health Care Board. Community engagement efforts, including grassroots campaigns, media outreach and stakeholder collaboration aimed at building trust in the vaccine was recommended. Another key strategy is the implementation of comprehensive information surveillance programme at every level of the Nigeria government with the sole aim of identifying and correcting misconceptions and misinformation regarding malaria vaccine.

Conclusively, the WHO's GTS Goal of reducing malaria cases to 90% and its elimination by the year 2030 is highly feasible with the introduction of malaria vaccine campaign in the most malaria burden country, Nigeria. However, there is the need to address misinformation misinformation that is responsible for vaccine hesitancy in order to ensure a successful campaign and subsequent achievement of the GTS goal.

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