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## EDITORIAL

### Malaria – Are We Winning The War

We welcome the February edition of the West African Journal of Medicine. Of particular interest in this edition is the article by Folarin et al on *Heavy Malaria Parasitaemia in Nigerian Young Infants: Prevalence, Determinants and Implication for the Health System*. This article explored the prevalence of heavy malaria parasitaemia among 1–6 months old infants and found it to be present in 23.9% of participants. This brings to bear the high endemicity of malaria in Sub-Saharan Africa.

Despite global efforts, malaria continues to be a major public health threat worldwide.<sup>1</sup> Globally in 2020, an estimated 241 million people had malaria, with a mortality of 627,000.<sup>2,3</sup> Malaria is endemic in Africa accounting for 95% of malaria cases and 96% of deaths worldwide.<sup>3</sup> Of these an alarming 80% of deaths occur in children under 5 years old.<sup>2</sup> Among the 11 high burden countries, four account for greater than half of global mortality from malaria. These include Nigeria (31.9%), Democratic Republic of Congo (13.2%), United Republic of Tanzania (4.1%) and Mozambique (3.8%).<sup>3</sup> Population particularly at risk of developing severe illness are young children under five years of age, pregnant women, and non-immune visitors to endemic areas.<sup>2,3</sup>

Heavy malaria parasitaemia results in development of severe malaria and is a major indicator of poor prognosis in affected individuals.<sup>4,5</sup> It is commoner in children and over 90% of the world's severe and fatal malaria is estimated to affect young children in sub-Saharan Africa.<sup>5</sup> Though hyperparasitaemia is less reported among 1–6 month-olds due to the presence of maternal antibodies against malaria, new evidence is

showing heavy parasitaemia in this age group. Factors found to predict heavy parasitaemia include age under five years, fever, pallor, use of mosquito nets, socioeconomic factors, among others.<sup>6,7</sup> The authors in this article found pallor as the only predictive factor for heavy malaria parasitaemia.

Hyperparasitaemia is mainly found in highly endemic areas. Drivers of malaria endemicity include high temperatures, rainfall, high relative humidity and low altitudes, human host immunity, population movement and migration, environmental development and urbanization, and drug resistance, amongst others.<sup>8,9</sup>

In order to prevent heavy malaria parasitaemia, reduce the incidence of severe malaria and achieve malaria control, a multidisciplinary approach must be explored putting into cognizance the epidemiological patterns, political willpower, and available financial, infrastructural and human resources.<sup>10,11</sup> Emphasis should be placed on rapid diagnostic testing, use of long-lasting insecticide treated bed nets (LLITNs), indoor residual spraying with insecticides, and mass distribution of Artemisinin-based therapy especially to vulnerable groups.<sup>11–13</sup> Improved sanitation, elimination of vector breeding sites and larviciding should also be done.<sup>12–14,15</sup>

Malaria continues to be an age-long challenge and current thrust should be geared towards vaccination. The advent of the malaria vaccine, RTS,S/AS01, recommended by the WHO is a welcomed development.<sup>16</sup> In December 2021, the Gavi Alliance Board made a notable investment for the roll-out of the first malaria vaccine programme.<sup>17</sup> This is a great milestone and a long-awaited

breakthrough in malaria prevention and control.

Malaria vaccine is a step into the future; consistent efforts involving all aspects of malaria prevention, control, and management must continue in order to overcome this threat and achieve elimination in Sub-Saharan Africa.

I welcome the editorial by Dr. Taiwo, *et al* on Adolescent obesity. It has enriched our understanding of childhood obesity and provided preventative strategies for this rising pandemic.

**Prof. G. E. Erhabor**  
*Editor-In-Chief*

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## The Challenges of Managing Childhood and Adolescent Obesity

Obesity is a major public health challenge confronting the global community in the 21st century.<sup>1,2</sup> More than a third of the world's adult population are overweight. In the last four decades, obesity has more than tripled with 1.9 billion adults overweight, 650 million of whom are obese.<sup>3</sup> Obesity is quite worrisome with over four million people dying on an annual basis as a result of being overweight or obese.<sup>3</sup> Obesity is not limited to adults but children and adolescents (5–19 years) in all continents are increasingly affected.<sup>3,4</sup> Within a space of 40 years the prevalence of obesity among children risen dramatically from just 4% in 1975 to just over 18% in 2016.<sup>4</sup> Obesity which was previously regarded as a problem of high-income countries, is now growing most rapidly in low- and middle-income countries, especially in urban settings.<sup>2,3,4</sup> According to the World Health Organization (WHO), most overweight or obese children reside in developing countries, where the rate of increase is more than 30% that of developed nations. (WHO).<sup>5</sup> Global statistics show that obesity among children 5- to 19-years increased in all parts of the world between 1975 and 2016 with the largest increase observed in southern part of Africa (approximately 400% per decade)<sup>6</sup>. There is a growing interest in

the epidemic of childhood obesity in the continent of Africa because Africa suffers from the double burden of malnutrition with remarkably high prevalence of undernutrition and an increasing burden of overweight and obesity.<sup>7</sup> The number of states in African with a high prevalence of the double burden of malnutrition continues to rise. In this edition of the West African Journal of Medicine, Adeomi *et al* in their study reported a combined prevalence of overweight and obesity of 12.8%. This was higher than previously reported values among adolescents within the same community about a decade ago.

Overweight and obesity have been defined as the excessive fat accumulation that portends a risk to health.<sup>4</sup> In 2013, The American Heart Association recognized obesity as a disease requiring medical attention.<sup>8</sup> According to the International Classification of Diseases 11 (ICD-11) obesity is defined as “*a chronic complex disease defined by excessive adiposity that can impair health. It is in most cases a multifactorial disease due to obesogenic environments, psycho-social factors and genetic variants. Body mass index (BMI) is a surrogate marker of adiposity calculated as weight (kg)/height<sup>2</sup> (m<sup>2</sup>).*”<sup>9</sup>

In children and adolescents (5–19 years) overweight is defined as BMI-for-age more than 1 standard deviation above

the WHO Growth Reference median while obesity is greater than 2 standard deviations above the WHO Growth Reference median.<sup>3</sup>

The aetiology of obesity is multifactorial, however the combination of exposure of a child to an obesogenic environment and poor biological and behavioural adaptation to the environment plays a major role. An obesogenic environment is one that promotes excessive weight gain and does not support weight loss.<sup>3,10</sup> A large proportion of the children in the world today live and grow in obesogenic environments. Globalization and urbanization have further aided this exposure in high- as well as low- and middle- income countries and across all socioeconomic strata.<sup>10</sup> An important aetiology in childhood and adolescent obesity is the energy imbalance, that is, excess caloric intake without adequate caloric expenditure.<sup>3</sup>

Children are now exposed to heavily processed, energy-dense, nutrient-deficient foods, high in sugars, salt, and fats. The rate of consumption of these cheap convenience foods is increasing at the expense of freshly prepared and minimally processed foods.<sup>7,11</sup> The decline in physical activity or play further complicates the situation resulting in energy imbalance.<sup>11</sup> Children now spend more time on screen-based