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## EDITORIAL

### The Double Burden of Communicable and Non-Communicable Diseases

It is with great delight that I present this edition of our great Journal. As usual, this edition features articles that cuts across the various medical and surgical disciplines and specialties. The range of articles in this edition demonstrates and reminds us of the reality of the so-called double burden of disease in many developing parts of the world, including our sub-region.<sup>1</sup> In other words, the prevalence of non-communicable diseases (NCDs) and their risk factors are on the increase, such as obesity, diabetes, hypertension and other cardiovascular diseases, and several chronic inflammatory conditions. These health conditions are associated with attendant long-term psychological and physiological complications.

While this epidemiological transition is ongoing, the threats posed by infectious diseases remains unabatedly high in many sub-Saharan countries. The challenges associated with the prevention and control of these communicable diseases also persists. Due to the frequently precarious healthcare systems' lack of financial resources, the majority of low-income and middle-income countries (LMICs) continue to suffer a high prevalence of infectious diseases. For LMICs, where the little financial resources are predominantly used to address the problem of communicable diseases, the dual burden poses a serious concern, as the issue of NCDs is frequently neglected. Dealing with the dual burden of infectious and non-infectious diseases in a resource-constrained context with weak health services is becoming an increasingly common trend in developing countries.<sup>2</sup>

There are a number of studies in this edition of the journal which are

focused on different NCDs that are becoming increasingly prevalent in our part of the world such as obesity, hypertension, diabetes, etc. We also have articles on the persistent threat posed by certain communicable diseases. The following four articles illustrate this: the study by Oyapero, *et al* on the relationship between oral inflammatory conditions and cardiovascular risk factors, an evaluation of specific thrombotic markers in diabetic patients by Dada *et al*, the effect antidepressant treatment on antidiabetic medication adherence and glycaemic control among patients with depression and diabetes comorbidity and the work by Aigbokhaode, *et al* on the pattern of presentation of Yellow fever disease during an outbreak.

Oyapero and others conducted a prospective observational study to determine the association between dental caries and periodontitis and cardiovascular diseases. The results show that cardiovascular risk factors such as poor blood pressure control, low HDL, cigarette smoking and diabetes were associated with higher odds of experiencing caries. This underscores the potential nexus between inflammatory processes in the oral cavity and the development of cardiovascular diseases. There is a need for robust policies and programmes that integrate oral and general health promotion for individuals and the general population.

Diabetes Mellitus (DM) is one of the commonest NCDs and it is associated with a wide array of potential complications. Patients with diabetes experience increased risk of thrombosis leading to complications such as deep vein thrombosis and pulmonary embolism.<sup>3</sup> In a comparative study among diabetic patients and non-diabetic controls, Dada *et al* determined the serum levels of certain

proteins that are suggestive of a pro-thrombotic state. They found that some specific pro-thrombotic markers, including Beta-thromboglobulin (BTG) and platelet factor 4 (PF4) were significantly elevated in DM patients compared to non-DM participants. Hence, the measurement of these proteins may be useful in predicting the risk of thrombotic complications in diabetic patients which can prompt the appropriate prophylactic intervention.

Clinical depression has been shown to be a common problem among patients who have diabetes mellitus. In these individuals, depression as a comorbidity exerts adverse effects on social and physical functioning and quality of life, and also on their adherence to medications and self-management plan.<sup>4</sup> Against this background, Gabriel-Alayode and associates assessed the effect of antidepressant treatment on medication adherence and glycaemic control in an intervention study among a cohort of type 2 diabetic patients. These two variables were found to significantly improve among the patients after treatment with an antidepressant medication. The importance of prompt recognition and treatment of depression among diabetic patients cannot thus be overemphasized.

In conclusion, I will like to thank the various authors and our readers for the continued contribution and interest. We encourage and welcome more submissions of high-quality manuscripts on topical issues for prompt review and publication.

**Professor Gregory E. Erhabor**  
*Editor-in-Chief,*

West African Journal of Medicine  
Department of Medicine,  
Obafemi Awolowo University,  
Ile-Ife, Osun State, Nigeria.

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## The Resurging Outbreaks of Yellow Fever Infection

**Y**ellow fever, an infectious disease, is an acute viral haemorrhagic disease transmitted by infected mosquitoes.<sup>1</sup> It is endemic in tropical Africa as well as in Central and South America and transmitted through infected mosquitoes.<sup>1-2</sup> The *Aedes* specie is mostly responsible for the spread in Africa while the *Aedes*, *Haemagogus*, and *Sabethes* species are responsible in South America. There are three stages in the disease’s transmission cycle: the Jungle (also known as Sylvatic), Intermediate (also known as Savannah), and Urban. In the Jungle cycle, monkeys serve as the main reservoir of the yellow fever virus and are bitten by *Aedes* specie, *Haemagogus/Sabethes* species, mosquitoes that spread the virus. The intermediate transmission cycle, which is widespread in Africa, involves infected mosquitoes biting humans who work or live close to forests. The urban cycle, which is mostly to blame for sustained outbreaks, includes the spread from infected people to other people via the same mosquito species.<sup>1-3</sup>

The global burden of yellow fever is estimated at 200,000 cases and 30,000 deaths annually with a case fatality as high as 50% in untreated severe cases. Africa accounts for greater than 90% of this burden.<sup>1</sup> In the last decade there was a marked increase in the number of reported yellow fever outbreaks in Nigeria with widespread viral trans-

mission to many states between 2017 and 2019. In 2019 alone, 13 of the 36 states in Nigeria recorded at least one confirmed case of yellow fever case.<sup>2,4</sup>

The symptoms of yellow fever include fever, headache, jaundice (hence the name ‘yellow fever’), muscle pain, nausea, vomiting and fatigue. A small proportion of patients who contract the virus develop severe symptoms and approximately half of those die within 7 to 10 days. Yellow fever is difficult to diagnose, especially during the early stages. A more severe case can be confused with severe malaria, leptospirosis, viral hepatitis (especially fulminant forms), other haemorrhagic fevers, infection with other flaviviruses (such as dengue haemorrhagic fever), and poisoning. Polymerase chain reaction (PCR) of blood and urine can sometimes detect the virus in the early stages of the disease. In later stages, testing to identify antibodies is needed. Good supportive treatment in hospitals improves survival rates and there is currently no specific anti-viral drug for yellow fever.<sup>1,3</sup>

Aigbokhaode et al described the pattern of presentation and the outcomes of patients with yellow fever who were managed at the FMC, Asaba during the 2020 outbreak that occurred in Delta State. The most common presentation was generalized weakness which was present in all the patients while the other common features included fever, vomiting and jaundice. More than 50% were

classified as having a moderate clinical presentation of the disease and about 40 % received blood transfusion in addition to the supportive treatment received by all the patients. Mortality was recorded in about ten percent of the cases. The importance of prevention cannot be overemphasized. There is also the need for maintenance of a high index of suspicion

Yellow fever is prevented by an extremely effective vaccine, which is safe and affordable. A single dose of yellow fever vaccine is sufficient to grant sustained immunity and life-long protection against yellow fever disease. A booster dose of the vaccine is not needed. The vaccine provides effective immunity within 10 days for 80–100% of people vaccinated, and within 30 days for more than 99% of people vaccinated. Despite this, outbreaks continue to occur in many countries, especially African countries.<sup>1-3</sup>

The fact that the disease can be prevented and has been eliminated in many developed parts of the world illustrates two contrasting realities. On a positive note, it highlights the importance of vaccines in the promotion of public health. On the other hand, the persistence of the disease and the resurgence of its epidemics in some places are reminders that the coverage of yellow fever vaccination and other routine immunizations remains suboptimal, especially in the developing parts of the world.