

OPINION EDITORIAL

Malaria: A Global Health Disparity Challenge from a Nursing Perspective

Yi Liu, British Columbia Institute of Technology

INTRODUCTION

Malaria is a life-threatening disease that disproportionately impacts children under the age of five [1]. Globally, children under five constitute 67% of all malaria deaths [1]. Currently, inadequate education on malaria prevention and management is evident in both low-income countries such as Nigeria and high-income countries such as Canada, implying an urgent need for a greater effort to address this global issue [1-5]. The purpose of this paper is to highlight the impact of malaria education on children at risk of exposure to malaria. Specifically, this review will identify how countries, such as Canada, may learn from endemic countries, such as Nigeria, to tackle malaria from a social determinants of health approach. Since the promotion of global health and equity is a fundamental nursing mandate, this paper also aims to bring a nursing perspective to addressing malaria education.

A GLOBAL CONCERN

Malaria remains to be a health issue that requires global attention. Although efforts have been made for more than a decade in fighting malaria, progress has stalled [2]. Between 2010 and 2018, the global incidence rate of malaria declined from 71 to 57 cases per 1000 individuals at risk [2]. However, reduction in cases has slowed and remained at a constant rate since 2014 [2]. This stagnancy in malaria control could be a result of a reduction in donor funding to endemic countries, which compromises the existing disease control efforts and potentially leads to an increase in

malaria prevalence [6].

Although malaria is a global concern that threatens the health of people worldwide, children remain the most vulnerable to the detrimental impacts of this disease [1]. In regions with high disease transmission, children, unlike adults, have yet to develop full immunity against malaria [7]. Once infected by malaria, they can develop symptoms such as fever, vomiting, diarrhea, and anemia [7]. Left untreated, these symptoms may quickly progress to death [1].

A CONCERN IN NIGERIA

Nigeria, bearing the world's greatest malaria burden, is one of the most important stakeholders involved in the combat against malaria [2]. Nigeria, alone, accounts for 25% of global malaria cases and 24% of global malaria deaths, while 97% of its total population is at risk for the disease [2,8].

In Nigeria, children under five alone accounts for more than 70% of all malaria deaths [3]. Delay in seeking medical care is a major contributing factor for this health disparity [3,4]. Malaria is a curable disease, in which prompt diagnosis and treatment is crucial [2]. However in Nigeria, only 22% of children under five with malaria symptoms seek treatment within 24 hours which increases their risk of death [4]. Inadequate parental knowledge of symptoms and thus ability to seek timely treatment is an underlying root cause for treatment delays and resulting risk of mortality [3,4].

Lack of education also impedes efforts by

governments and NGOs that supply insecticide-treated mosquito nets (ITNs) and indoor insecticide residual spraying (IRS) for vector control [1,2,5,9]. Persistently, inadequate education for caregivers on the appropriate use of ITNs and IRS can contribute to the insufficient prevention and increased susceptibility of children to infection [1,5]. Overall, the disproportionate burden of disease in Nigerian children highlights education as a leading cause of the problem, that requires immediate attention.

A CANADIAN CONCERN

While much attention is given to endemic countries, it is also important to examine the situation in high-income countries to understand the health issue in a global context. Unlike Nigeria, returning travellers from malaria-endemic countries account for the majority of malaria cases in Canada [10]. Better access to treatment and efficient surveillance and reporting systems have also contributed to low disease burden [11]. Moreover, physicians in Canada are required by the federal government to report malaria cases and provide access and guidance to malaria treatment [11]. This facilitates the prevention of potential outbreaks and prompt activation of public health actions.

Yet, despite all the strategies implemented to control malaria, there is a growing concern of increasing incidence of malaria in Canada. Climate change, which results in warmer temperatures, higher humidity, and increased rainfall, can increase the population size and longevity of mosquitoes, leading to a high potential for short-lived malaria outbreaks in Canada [12]. There is also an increased trend in travel to endemic areas, inadequate pre-travel education on chemoprophylaxis use and symptom recognition - both of which risk an increased need for parenteral therapy and delay in treatment among Canadians [13,14]. In anticipating an expansion of malaria cases, Canada may learn lessons from countries such as Nigeria to implement measures to strengthen public education on disease prevention and management to reduce the potential impact on vulnerable populations such as children under the age of five.

IMPLICATIONS FROM A NURSING PERSPECTIVE

To minimize the potential negative impact of malaria, it is important for Canada to recognize the imminent risk for malaria outbreaks and the need for immediate action. Along with immature immunity, a knowledge deficit in malaria prevention and treatment among caregivers can exert a devastating impact on Canadian children during periods of increased disease transmission. Actions such as identifying and tailoring the educational needs for parents will ensure the appropriate use of chemoprophylaxis and timely identification of malaria symptoms. The anticipated increase of malaria burden in Canada reflects the need for greater public awareness of the issue and increased interdisciplinary collaborative efforts among sectors to tackle the health issue. Specifically, the government and health professionals can work together to improve access to pre-travel counselling services and increase the use of chemoprophylaxis and pre-travel education for travellers. Furthermore, the impact of climate change on malaria prevalence suggests the need for a global effort to mitigate global warming and promote sustainable development.

CONCLUSION

Malaria is an increasingly concerning health issue that requires collective efforts for its eradication. Due to immune immaturity and a lack of caregiver education on malaria management, children under five are the most vulnerable population. Countries like Canada, that have not been faced with the burden of malaria in years, may learn lessons about the root causes of health disparities. International collaboration is necessary to tackle the complex challenge of malaria. Identifying individuals and community needs is an important step towards recognizing and addressing the root causes of malaria.

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