

# The need for school administrative policies to manage meningitis amongst students in Nigeria: a viewpoint

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## Abstract

Students are at greater risk of meningitis than non-students of similar age. However, a lack of specific school administrative policies for the management of meningitis may contribute to the increasing incidence of meningitis in the student population. The study aims were to promote the need for a policy framework in school settings to manage meningitis, and to encourage research to assess the readiness of school administrators to adopt such a policy in Nigeria. The material reviewed here derives from expert opinion, gray literature, national data sources, websites, and peer-reviewed journals. It is important to offer comprehensible, reliable, and accurate

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information about meningitis to students and staff of every school in Nigeria, as one of the best ways of achieving the goal of preventing meningitis in students may be through the adoption and implementation of meningitis policy frameworks by school administrators. Furthermore, studies are required to examine the readiness of school administrators to adopt a meningitis policy framework.

### **Keywords**

Meningitis, World Meningitis Day, school policy, students, Nigeria, school administrators, health management, disease prevention

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### **Introduction**

Meningitis is a medical condition characterized by inflammation of the meninges (layers covering the brain and spinal cord).<sup>1</sup> Meningitis affects more than 1.2 million people annually; bacterial meningitis is the most common and most severe disease type, accounting for approximately 120,000 annual deaths worldwide.<sup>1</sup> Even with timely diagnosis and treatment, about 10% of patients die from meningitis and approximately 20% or more experience permanent damage and disability.<sup>1</sup> The occurrence of meningitis epidemics is a huge public health issue in many regions of the world<sup>2</sup> and merits the attention of all stakeholders, including governments, practitioners, health educators, and the general public. This study had two aims: to promote the need for a policy framework in school settings for the management of meningitis, and to encourage research to assess the readiness of school administrators to adopt such a policy in Nigeria.

Meningitis is a far-reaching, global phenomenon. There were meningitis outbreaks in India between 1966 and 2005, with cases linked to *Neisseria meningitidis* serogroup A.<sup>3-6</sup> Within the Africa meningitis belt, Nigeria has the highest incidence of

meningitis.<sup>7</sup> The 2018 Nigeria Centre for Disease Control situation report<sup>8</sup> noted that between 1 September 2017, and 25 January 2018, 12 Nigerian states recorded a minimum of one suspected case of meningitis; 481 meningitis cases with 82 deaths were recorded across the 12 states. Additionally, of 176 samples collected and tested in the laboratory, bacterial meningitis was responsible for 44.9% of the positively confirmed cases, whereas *Neisseria meningitidis* C was responsible for 63.3% of the positively confirmed cases.<sup>8</sup> In many Nigerian states, meningitis outbreaks often peak during the dry season as a result of low humidity and dusty conditions and often end as the rainy season begins.<sup>7</sup> Owing to an awareness of the epidemic season in African countries such as Nigeria, efforts are often intensified during this period to effectively coordinate responses to combat outbreaks of the disease.<sup>8</sup> In Nigeria, individuals aged between 1 and 15 years are most affected (accounting for 74% of cases) and the male to female ratio is 1.5:1.<sup>7</sup>

Future global responses to meningitis epidemics may require a cross-disciplinary health care approach, together with appropriate education for effective prevention. World Meningitis Day is held annually on 24 April, and we aim to contribute toward

attaining the goals of this event from a cross-disciplinary perspective by highlighting the need to create policy guidelines for managing meningitis in the Nigerian student population. The World Meningitis Day theme for 2018 is “All Meningitis Matters.”<sup>9</sup> This year’s campaign focused on the various causes of meningitis and the vaccines that could assist in protection against some strains of bacterial and viral meningitis.<sup>9</sup> The main highlights of this year’s campaign included the following goals: raising public awareness of meningitis as a potentially lethal infection that can lead to death in a matter of hours, and raising awareness and educating people to identify the meningitis strains that are preventable using safe and effective vaccines that guard against the commonest causes of bacterial and viral meningitis.<sup>9</sup> Stakeholders and school administrators need to communicate the key messages of the campaign to students, school staff, and host communities.

## Methodology

A review was carried out of information about meningitis management obtained from expert opinions, searches of the gray literature, national data sources, websites, and peer-reviewed journals. No inclusion or exclusion criteria were used for sources. Google, Scopus, and PubMed databases were searched between January and March 2018. The search terms were ‘meningitis’, ‘meningitis school policies’, ‘World Meningitis Day’, ‘meningitis outbreak’ (in Nigeria and other countries), and ‘meningitis disease management in schools’.

## Results and Discussion

### *Relevance of school administrative policies for management of meningitis*

As students are at greater risk of contracting meningitis than non-students of similar

age,<sup>10</sup> the initiation and implementation of school policies for managing meningitis is important for both case management and public health management of meningitis. In addition, the anxiety and fear following a case report of a meningitis outbreak is often more intense than the risk of infection in this population.<sup>9</sup> As experts have indicated, meningitis infection spreads more easily among students simply because they live and study in very close proximity to each other for long periods of time.<sup>11</sup> Therefore, many universities around the world, including the University of Bolton<sup>10</sup> and the University of Reading (both in the United Kingdom),<sup>12</sup> have developed policy guidelines for the management of meningitis. In the United Kingdom, where there are approximately 2,500 cases of bacterial meningitis and about 5,000 cases of viral meningitis each year, the National Union of Teachers has developed a policy brief to provide guidance to schools on how to manage meningitis outbreaks.<sup>13</sup>

Meningitis also affects infants under the age of 1 year, children aged 1 to 5 years, and adolescents aged 15 to 19 years.<sup>14</sup> Therefore, the development of policies for managing meningitis at the pre-school, primary, and high school levels is crucial for effective prevention of meningitis. Research is needed to investigate how and whether school policy guidelines for managing meningitis are being translated into practice in disease outbreaks, particularly in schools that have developed such a policy. Research is also required to understand how school policies for managing this disease have impacted on the prevention efforts of host communities and countries generally.

It is important to encourage students to be immunized (against the strains of meningitis for which vaccines exist), and to explain that one type of immunization does not prevent all types of meningitis and that they should always be on the

alert.<sup>12</sup> Students and school personnel should be informed of the risks and familiarize themselves with the signs and symptoms of the disease. As students in halls of residence may be at higher risk of meningitis infection,<sup>10</sup> prevention information should be specifically tailored to them. In addition, school campaigns and fundraising activities could be initiated to help increase awareness of the signs and symptoms of meningitis, ongoing prevention and education efforts, and research in the student population. The funds raised could be used to provide direct support to affected persons, such as families who have lost loved ones and survivors with impairment.<sup>11</sup>

World Meningitis Day increases the international profile of meningitis and shares potentially life-saving information with thousands of persons globally by telling patient stories, increasing knowledge of the signs and symptoms of meningitis, and increasing knowledge of accessible vaccines.<sup>11</sup> School authorities can play a key role in furthering these activities through distribution of educational resources, such as patient stories, signs and symptoms of meningitis, and determining how to make vaccines available to their students and host communities at no cost. Educational resources on the signs and symptoms of meningitis, as well as general guidance relevant to schools, are available on various government and non-governmental agencies' websites, e.g.,<sup>6,15-18</sup> Schools could delegate their health officials and psychologists to assist in exploring and addressing erroneous local beliefs about transmission of the disease. In addition, a close partnership between the media, schools, and health authorities is essential during a meningitis epidemic.

## Conclusion

Meningitis has the potential to have an enormous impact on the global population.

It is therefore very important to study and understand the disease and to educate people about effective treatment and prevention. If more schools promote a preventative policy, this may result in more effective prevention of the disease at a local, national, and eventually global level. Therefore, it is imperative for schools in every country to develop and implement policy frameworks for both case management and public health management of meningitis. This is particularly important in Nigeria, where there has been a rise in cases of meningitis. Finally, research is needed to assess the readiness of school administrators to adopt a meningitis policy framework in Nigerian school settings. Studies are also needed to increase the awareness of students and school personnel regarding the risks and symptoms of meningitis.

## Declaration of conflicting interest

The authors declare that there is no conflict of interest.

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