

Meningitis Outbreak in Nigeria: Public Health Alert

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Meningococcal meningitis is a life threatening bacterial infection caused by *Neisseria meningitidis* (13 serogroups), which can result in severe damage to the brain, with a case fatality rate of 50%, if left untreated [1]. Although, outbreaks of meningococcal meningitis have been reported across the world, it has been rated as one of the leading public health concerns in sub-Saharan Africa [1]. In-fact, the region has been named as the meningitis belt (extending from Senegal to Ethiopia - comprising of 26 nations), because of the large number of cases being reported in the region [2]. In addition, in the year 2014 alone, close to 12000 cases and 1146 deaths have been reported among the 19 nations of the meningitis belt [1,2].

The epidemiological analysis of the trends of the disease has shown that the disease has a seasonal variation, with maximum number of cases / outbreaks being reported in the dry season (December to June) [1]. This is probably because of the interplay of various factors like dust winds, cold nights, overcrowding, increased risk of upper respiratory tract infections, and significant population displacement because of the large number of pilgrims coming in the region during the season [2,3]. As anticipated according to the prevalent trends, since the beginning of 2015, a new outbreak of the meningococcal meningitis (caused predominantly by the serogroup-C) has been reported in Nigeria, in which 5855 cases, including 406 deaths (case fatality rate - 7%) have been notified till the first half of May month [2,4]. The number of suspects has increased at an alarming rate, with number of cases being tripled in the last couple of weeks, which is a serious concern [4]. Another area of concern is that for the first time a large-scale meningitis outbreak has been reported because of serogroup-C, and hence there is a significant shortage of the appropriate vaccine [2,4,5].

It is really a major public health concern that so many people are losing their lives because of a disease which can be completely prevented through the vaccines, some of which are available since the last 30 years [1,6]. In-fact, documented evidence is available to suggest that since the introduction of a new meningococcal-A conjugate vaccine (MACV) in the targeted age-group of 1-29 years, the number of cases have

declined remarkably in the region [5,6]. Realizing the utility and scope of vaccine in reducing the burden of the disease, it has been advocated to facilitate prompt detection of cases and outbreaks through enhanced surveillance; appropriate management of cases with a complete course of antibiotic; to administer serogroup-specific vaccines in the affected region; prophylactic vaccination of the general population with MACV; and to introduce MACV into national routine immunization schedule [1,2,4]. In addition, there is a crucial need to constitute a national epidemic committee to respond to such outbreaks, and every attempt should be taken to mobilize and actively involve the national and international partners [2,4,5].

To conclude, as a part of preparedness and effectively contain and manage the outbreaks of meningococcal meningitis in the sub-Saharan African region, the need of the hour is to strengthen the existing resources, work in a concerted manner with the stakeholders, and effectively address the issue of vaccine shortage, so that any such future outbreaks can be averted.

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