

**TITLE:** Meningitis prevalence in Northeastern Brazil: a long way to eradicate the disease

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**ABSTRACT:**

Meningitis is defined as an inflammation of the meninges and may be promoted by infectious agents, such as virus and bacteria, and also by non-infectious processes. Viral and bacterial meningitis are important because of their ability to promote outbreaks and its high mortality rate, close to 20% in cases of bacterial infection. The Brazilian Society of Pediatrics recommends quadrivalent meningococcal conjugate vaccine (ACWY) for children aged 3, 5 and 7 months. Booster doses are indicated on two occasions: in children aged 4 to 6 years and aged 11 years. The objective of the present study was to verify the total number of immunizations and the incidence of meningitis in Northeastern Brazil, through a descriptive cross-sectional study based on data available in the Department of Informatics of the Brazilian National Health System (DATASUS) and in The Notification of Injury Information System (SINAN). The number of immunizations between January 2011 and December 2015 and the incidence of the disease from January 2016 to December 2018 (post-vaccination period) were computed in order to observe the prevalence of meningitis cases in Northeast region from Brazil. In the period from January 2011 to December 2015, 23,755,683 vaccinations were performed against meningitis. In addition, 4,494,791 BCG immunizations were performed, which prevents severe cases of meningeal tuberculosis. In this period, 45,039 meningitis cases were dated, with 2,127 of the cases leading to death. Between January 2016 and December 2018, 23,178 cases of meningitis were diagnosed by SINAN, resulting in 945 (about 5%) deaths. These data demonstrated that there is still a long way to eradicate meningitis in Northeastern Brazil. For this reason, the use of demographic health indicators to assess the control of such disease is unquestionable.

**Keywords:** prevalence, vaccine, meningitis, immunizations, eradicate the disease