**YELLOW FEVER VACCINATION IN NIGERIA: FOCUS ON OYO STATE**

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**Introduction**

Yellow fever is endemic in 44 countries in Africa and Latin America (WHO, 2014). It is a vector-borne disease resulting from the transmission of yellow fever virus to humans by bites of infected mosquitoes, majorly *Aedes* species. During major epidemics, it infects large number of unimmunized persons. Epidemics of yellow fever dates far back as 1778 in Africa and the 18th century in the Americas (Bres, 1986). An estimated 84,000 – 170,000 cases and 29,000 – 60,000 deaths were reported in Africa in 2013 (WHO, 2014). YFV endemic countries have been advised to incorporate yellow fever vaccine into their routine national immunization programme. Although an effective vaccine exists, the virus remains a major public health threat in Africa where vaccination is limited by poverty, civil wars and inaccessibility of rural areas where disease outbreaks occur (Deubel, 1986).

In Nigeria, there is lack of surveillance data and no early warning and response network. Between 1986 and 1989, Nigeria reported 16,230 cases of yellow fever. Epidemiological investigations suggest the actual number of cases was 4-90 times higher than reported figures, with a case fatality rate of over 80% in children (Nasidi et al., 1989). Although infants are vaccinated routinely as a component of the Expanded Programme on Immunization (EPI), most immunized adults are vaccinated in a bid to embark on overseas trips. This study provides information on the annual vaccination counts in some major vaccination centers, vaccination status of some patients visiting the hospital for malaria and typhoid tests and *Aedes aegypti* density in Ibadan, Oyo state, Nigeria.

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**Methodology**

The study was carried out in Ibadan North LGA, Oyo State. Approval was obtained from UI/UCH ethics board and Oyo State Ministry of Health Ethics Board. Vaccination records were reviewed from the University Health Services, Institute of Child Health and Adeoyo Hospital Yemetu - Ibadan. Structured questionnaires were administered to 801 patients visiting Adeoyo Hospital for malaria parasite examination and widal test from April to November 2014. One mosquito scout caught day-time-biting mosquitoes once weekly in Agodi and University of Ibadan environs by employing human bait method from May 2013 - June 2014. *Aedes aegypti* were sorted morphologically in the Department of Virology, University of Ibadan.

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**Results**

The vaccination coverage in Ibadan North LGA was 44.5%, 54.5%, 50.9%, 121%, 83.5%, 39.9%, 72.8% and 63.7% in 2007, 2008, 2009, 2010, 2011, 2012, 2013 and 2014 respectively. Out of 801 patients visiting the hospital for malaria parasite examination and widal tests, 799 (99.8%) had no yellow fever vaccination while 751 (93.8%) had been bitten by day-time-biting mosquitoes. *Aedes aegypti* presence was demonstrated throughout the study period except Jan, 2014.

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In conclusion, the annual vaccination counts in Ibadan is still low in relation to the general population. There is an all year round activity of *Aedes aegypti* in Ibadan due to favorable weather and other environmental conditions. Cases of yellow fever in neighboring countries such as Cameroun, Sudan and Ghana highlight the need to embark on national vaccination campaigns. Vaccination is strongly recommended for travelers who visit Nigeria. This study serves as an early warning of the likelihood of yellow fever infections and/or epidemics.