

#P18 Natural Immunity in the African Meningitis Belt to *Neisseria meningitidis* serogroup X: A Seroprevalence Study

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Invasive meningococcal disease (IMD) affects approximately 1.2 million people worldwide annually. Prevention of IMD is provided through conjugate vaccines; however, no licensed vaccine is currently available to protect against meningococcal serogroup X associated infection. This study aimed to provide seroprevalence data to assess natural immunity to serogroup X within the African sub-Saharan meningitis belt using a serum bactericidal antibody (SBA) assay. This assay will also be used to evaluate the immunogenicity of a pentavalent conjugate vaccine containing serogroup X, NmCV-5 (Serum Institute India), prior to its introduction into the meningitis belt.

A seroprevalence study was conducted to assess natural immunity and identify the SBA baseline to *N. meningitidis* serogroup X from 377 serum samples gathered in March 2012 from Niger, West Africa, within the meningitis belt.

The age-specific prevalence of SBA to serogroup X was measured. Data were analysed to identify the percentage of individuals with protective SBA titres (≥ 8) to serogroup X prior to the introduction of the NmCV-5 vaccine.

(c) Seroprevalence data show that natural immunity to *N. meningitidis* serogroup X were present in 52.3% of study participants. The highest protective SBA titres (≥ 8) to serogroup X were seen in age group 5-14 years-old (73.9%) and lowest in ages <1 year old (0%).

(d) Seroprevalence data support the need for implementation of the NmCV-5 vaccine into the sub-Saharan meningitis belt. Following the introduction of NmCV-5, a secondary seroprevalence study should be completed to determine the impact of the vaccine within the meningitis belt.

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