

# Determinants of Hepatitis B Vaccine Uptake Among Senior Secondary School Students in Abuja Municipal Area Council, Federal Capital Territory, Nigeria

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## ABSTRACT

**Background:** Hepatitis B is a significant public health challenge in Nigeria, with adolescent vaccination rates remaining low despite its preventable nature. Understanding factors influencing vaccine uptake is critical for effective interventions. This study examined the determinants of hepatitis B vaccine uptake among senior secondary school students in Abuja Municipal Area Council (AMAC), Federal Capital Territory, Nigeria.

**Objectives:** The study aimed to determine hepatitis B vaccination status, assess risk perception of infection, evaluate knowledge about the vaccine, and identify socio-demographic characteristics, barriers, and facilitators influencing uptake among students.

**Methods:** A cross-sectional survey was conducted among 198 senior secondary school students in AMAC. Data on vaccination status, knowledge, risk perception, and socio-demographic factors were collected and analysed using chi-square tests and logistic regression to identify associations and predictors of vaccine uptake.

**Results:** Only 12.6% of the students reported having received the hepatitis B vaccine. Knowledge levels were categorized as good ( $\geq 70\%$ ), moderate (50–69%), and poor ( $< 50\%$ ), with 46.0% of students demonstrating good knowledge. Risk perception was fairly evenly distributed across low (29.3%), moderate (28.8%), and high (28.8%) categories. Chi-square analyses indicated significant associations between uptake and factors such as gender, awareness of the vaccine, and knowing someone with hepatitis B, whereas other sociodemographic characteristics showed no significant relationships, likely due to wide confidence intervals. Multivariate logistic regression further confirmed that vaccine awareness (AOR = 3.85,  $p = 0.011$ ) and knowing a family member (AOR = 5.60,  $p = 0.007$ ) or friend (AOR = 4.85,  $p = 0.027$ ) with hepatitis B substantially increased the likelihood of vaccination. The most commonly reported barriers to vaccination were lack of parental permission (23.0%) and fear of side effects (21.0%), while major facilitators included parental support (26.1%) and the availability of free vaccinations within schools (24.1%).

**Conclusion:** Low vaccine uptake highlights the need for targeted interventions. Recommendations include school-based vaccination programs, parental education campaigns emphasizing vaccine safety and personal stories of hepatitis B's impact, and community advocacy to address barriers and leverage facilitators, enhancing uptake among AMAC students.

