

# Knowledge and Utilization of Complete Tetanus-diphtheria (Td) Vaccination in Pregnant Women: A Mixed Methods Study in Tertiary Hospitals, FCT Abuja

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## ABSTRACT

**Introduction:** Maternal and neonatal tetanus remains a major public-health challenge in Nigeria, with an estimated incidence of 14.6–20.0 per 1,000 live births. Despite an effective tetanus-diphtheria (Td) vaccine, completion rates remain low.

**Methodology:** This cross-sectional mixed-methods study assessed the level of knowledge of Td vaccination utilization and completion of the Td schedule, barriers influencing completion, and healthcare workers' perspectives on service delivery among pregnant women attending antenatal clinics at three tertiary hospitals in Abuja: University of Abuja Teaching Hospital (UATH), Federal Medical Centre Jabi (FMC), and National Hospital Abuja. Using structured questionnaires and systematic sampling, 218 pregnant women were surveyed, while purposively selected healthcare workers were interviewed. Quantitative data were analyzed with descriptive statistics, chi-square tests, and logistic regression in SPSS v26, and qualitative data underwent thematic analysis.

**Results:** Results showed that 66.5% of respondents had good knowledge of Td vaccination (Objective 1), but only 15.6% completed the full vaccination schedule (Objective 2), with completion rates varying across hospitals (UATH 38.2%; FMC and National Hospital 0%). Barriers (Objective 3) included distance to facilities (mean = 3.46), fear of injection pain (mean = 3.45), and healthcare worker attitudes (mean = 3.42); overall, 62.4% reported moderate and 33.9% high barrier severity. Logistic regression identified barrier severity as the strongest predictor of non-completion (AOR  $\approx$  0.00,  $p < 0.001$ ). Qualitative findings (Objective 4) revealed knowledge gaps among healthcare workers, unstructured reminder systems, and weak inter-departmental coordination.

**Recommendation:** To improve Td completion, this study recommends implementing SMS-based reminder systems, continuous healthcare worker training, integration of Td vaccination into routine ANC and postnatal visits, mobile outreach services for rural areas, and better coordination between immunization and obstetrics units.

**Keywords:** Tetanus-diphtheria Vaccination, Maternal Health, Immunization Uptake

