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Prevalence of Adverse Events Following Immunization (AEFI) among Children (0–16 Years) Receiving Routine Vaccines under the National Immunization Schedule: A Cross-Sectional Study in a Tertiary Hospital, June September 2025: Reg No: 465

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ABSTRACT

Introduction: India's National Immunization Schedule (NIS) ensures universal access to vaccines against vaccine-preventable diseases 2. Although vaccines are safe, no vaccine is entirely without risk, and adverse reactions will occasionally occur following immunization 3. Adverse Events Following Immunization (AEFI) require robust monitoring to maintain public confidence and safety surveillance **Objectives**: To estimate the prevalence of AEFI among children (0–16 years) receiving routine vaccines under NIS and to identify sociodemographic and vaccine-related factors associated with AEFI occurrence in a tertiary care setting **Methodology:** A cross-sectional study was conducted from June to September 2025 at the Immunization Clinic of a tertiary hospital in West Bengal.A total of 286 children (0–16 years) and their caregivers were recruited. Data were collected using a pre-tested structured questionnaire capturing: Sociodemographic profile, Vaccine type, dose, and site, Occurrence and type of AEFI within 7 days post-vaccination. Descriptive statistics were used to estimate prevalence, and the Chi-square test assessed associations between independent variables and AEFI occurrence, with $p < 0.05$ considered significant **Results:** The overall prevalence of AEFI was 25.9% (n=74). The most common AEFI was fever (82.4%), followed by local swelling at the injection site (28.4%). Most AEFIs appeared within 24 hours of vaccination, with fever subsiding by day 3, while 5.4% of swelling cases persisted up to day 7.A majority of AEFIs (63.5%) occurred in the 1 to below 9 month age group, followed by 16–24 months (16.2) **Conclusion:** The study highlights that while most AEFIs are minor and self-limiting. Strengthening AEFI surveillance systems, and ensuring timely management and reporting are crucial to sustaining trust in India's Universal Immunization Programme

KEYWORDS

Adverse Events Following Immunization, National Immunization Schedule, Universal Immunization Program, Vaccine Safety, Children, India