ABSTRACT

Title of Abstract : The Adverse Events Following Samarinda's 2024 Mass Polio Immunization
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Background : Indonesia's Ministry of Health (IMOH) declared a polio outbreak in 2022, resulting in fourteen polio cases through 2024. As the outbreak response, supplementary immunization activities (SIAs) using the novel oral polio vaccine type 2 (nOPV2) are carried out.

Objective : This study aims to determine the prevalence of adverse events following immunization (AEFI) and factors associated with second-dose coverage of nOPV2 in Samarinda, East Kalimantan.

Research Methods/ Implementation Methods : We conducted a cross-sectional analysis from the AEFI nOPV2 survey conducted by the Samarinda District Health Office (DHO) in 2024. AEFI are characterized by various symptoms, including fever, diarrhea, and other medical complications that occur within 1 to 14 days post-vaccination. The presence of incomplete information in the database served as an exclusion factor. We gathered the children's characteristics, immunization sites, pre-vaccination conditions, and AEFI symptoms. The data was analyzed with chi-square analysis.

Results : We analyzed 470 full datasets from a total of 628 survey responses. We identified 56 cases (11.9%) of AEFI after the first dose and 18 cases (5.4%) out of 332 after the second dose among children who got nOPV2 in 2024. Nearly one-third (29.4%) did not receive a second dose of nOPV2. No serious AEFIs were noted. The predominant AEFIs associated with nOPV2 are fever (66.1% and 55.6%) and diarrhea (28.6% and 16.7%). A significant association was found between children with AEFI in the first dose and nOPV2 second-dose uptakes (RR 1.48, CI 1.02-2.78, P < 0.040), with vomiting and nausea being the prominent symptoms influencing the decision (RR 2.16, CI 1.27-3.41, P 0.010).

Conclusion/Lesson Learned : The reported prevalence of AEFI was 11.9% for the first dose and 5.4% for the second dose. The majority are mild. A surveillance of mild AEFI and an extensive educational intervention and risk communication should be implemented regarding the risks of nOPV2's AEFI, which may impact adherence to the subsequent dose

Keyword : AEFIs; nOPV2; polio outbreak; control measures