Abstract

Outbreak Investigation of Measles in Farash Town, Islamabad, April 2017

Nadia Noreen

Corresponding Author:
Nadia Noreen

Abstract

Background: On April 14, 2017, two measles cases were reported by local health practitioner from Farash Town. A team of FELTP fellows were deputed to investigate the outbreak.

Objective: On the request of district health authorities an outbreak investigation was conducted to assess magnitude, identify risk factors and recommend control measures.

Methods: Outbreak investigation was carried out from April 18 to May 05, 2017. Active case finding was conducted through a house-to-house survey. A case was defined as onset of maculopapular rash with fever and presence of any of the sign/symptoms like coryza, conjunctivitis and cough in a resident of Farash Town from March 25, 2017 to April 30, 2017. Community-based age and sex-matched controls were selected. Vaccine coverage survey was conducted in a cluster of 245 houses. Frequencies were calculated, attack rates computed, and vaccine efficacy was determined. Blood samples of 03 suspected cases were sent to Public Health Laboratories at NIH Islamabad for confirmation.

Results: A total of 15 cases were identified; 13 through active case finding. Mean age was 44.5 months (range 05-120 months). The cases were predominantly male n=9(60%). Overall attack rate was 1.15% and most severely affected age group was 24-36 months (n=4, AR=10.81%) followed by 12-24 months (n=3, AR=8.10%). Diarrhea developed in n=12 (80%) and pneumonia developed in n=2 (13.3%). Immunization coverage survey showed that AR in unvaccinated was 25% and AR in vaccinated was 10%, hence the vaccine efficacy was calculated to be 60%. The most significant reason for non-vaccination was misconception about vaccination (OR: 24.0, CI: 4.9-116.1). All blood samples were positive for measles-specific IgM on ELISA.

Conclusions: Low immunization status was the most probable cause of outbreak. The results were communicated to district health authorities for mass vaccination. Health awareness session was conducted for all households. No new case was reported during the two weeks follow-up.

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