

Abstract

# Outbreak investigation of Suspected Acute Watery Diarrhea Cases in a Village of District Shangla, Khyber Pakhtunkhwa, Pakistan in September 2016

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## Abstract

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**Background:** On 18th September 2016, leading newspapers reported about 150 suspected acute watery diarrhea cases in a village in district Shangla. In response, FELTP Fellow visited the area on the next day.

**Objective:** To investigate the outbreak and take necessary control measures.

**Methods:** A case was defined as any person of any age and gender belonged to the reported village of district Shangla, with 3 or more episodes of loose stools per day with or without vomiting from 12-20 September 2016. Descriptive study was carried out by visiting the affected village to identify cases, areas and risk factors. District Health Information System reports were reviewed for any reported cases from that area during previous months. Admitted cases and other cases found during active search were interviewed. Samples from different water sources were taken and sent to laboratory for analysis.

**Results:** Three hundred and thirty-six cases were identified from hospital record and during active case finding in the affected village among population of 2800 (attack rate; 12%). Age range of cases was 5-65 years with mean age of 26 years. 32% (n=109) cases were females while 68% (n=227) were males. Male to female ratio of cases was 2.1:1. 27% (n=92) cases belonged to 20-29 years age group while 24% (n=81) from 30-39 years age group. It was found that 71% (n=237) cases were using spring water (attack rate; 8.5/100,000 population) and remaining 29% (n=99) were using other water sources (attack rate; 3.3/100,000 population). Laboratory reports confirmed presence of *Escherichia coli* in the spring water samples.

**Conclusions:** Use of contaminated water was the probable cause of outbreak. Outbreak was controlled, no death occurred, and cases have recovered. Health education sessions were conducted wherein community was advised to boil water for drinking and cooking. Supply of safe drinking water to the community was recommended.

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