

Abstract

Evaluation of National Electronic Disease Surveillance System (NEDSS) Regarding Typhoid Fever in Sharkia governorate, Egypt, 2016

Shereen Elghazaly; H Abu El Sood; S El Shorbagy; S Refaey

Corresponding Author:

Shereen Elghazaly

Abstract

Background: Typhoid fever is a systemic infection caused by Salmonella Typhi. It is still common in the developing world, where it affects about 21.5 million people each year, 222 000 typhoid-related deaths occur annually worldwide. It can be prevented and can usually be treated with antibiotics. Cases are reported through National Electronic Disease Surveillance System (NEDSS) from all healthcare facilities to department of Epidemiology and Surveillance.

Objective: To identify strengths and weaknesses of surveillance system of reported typhoid cases for improvement and disease control.

Methods: The evaluation was conducted using CDC guidelines for evaluating public health surveillance. NEDSS data regarding Typhoid from 1st January 2016 to 31 December 2016 were extracted on an excel sheet for calculating completeness and timeliness. A structured questionnaire was used to assess the following attributes: Usefulness, Simplicity, Acceptability, and Stability. The assessment was implemented on four levels: central, Health directorate, Health district, Fever hospital levels. Sharkia governorate had been selected which was the highest governorate in reporting typhoid cases. Data were analyzed using Microsoft Excel.

Results: According to surveillance officers in all levels which interviewed (n=10), the mean of system usefulness, simplicity, acceptability and stability was 92.5%, 98.8%, 94%, and 85.5%, respectively. The mean completeness of some variables (Outcome, occupation, national ID, address, final diagnosis) was 75.9%. It takes 2 minutes for case/day for data entry and 27minutes/month for data analysis. Median time between electronic Insertion to Reporting and admission to Notification date was 1 day for both, IQR (3-1) and (2-1) respectively. Positive predictive value was 50%. Satisfaction of surveillance team was 100%.

Conclusions: The system is simple, flexible, stable, acceptable and useful for the surveillance team which is satisfied with their job, the timeline of reporting is considered acceptable in between different levels and Lack of laboratory confirmation of cases (use tube agglutination test only).

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