

Abstract

Evaluation of Dengue Surveillance System - Islamabad, 2017

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Background: Dengue is a significant public health problem affecting 50% population worldwide. Every year 50-100 million cases of DF while 250000-500000 cases of DHF are reported worldwide. Mortality rate of DHF/DSS is 5-10%.

Objective: The study was conducted to evaluate the system in terms of its core functions, system attributes and challenges faced in order to make recommendations for improvement.

Methods: This evaluation was conducted during November 2017 at Islamabad District. A desk review of literature, departmental reports and documents was conducted. Quantitative and qualitative system attributes were assessed using Updated CDC Guidelines for Evaluating Public Health Surveillance Systems, 2001. Stakeholders were identified and interviewed. A semi structured questionnaire was used to collect data.

Results: Staff was trained in data collection and data entry. NS1 (Non-structural protein1) and dengue-specific IgM antibody test were available at all tertiary care hospitals to confirm diagnosis. Case definition was simple and strictly followed. Data flow was easy. System is less flexible but able to integrate with other systems. Quality of data was poor as 80% of filled forms were incomplete in demographic and clinical profile. Acceptability was good due to sense of ownership and good coordination among all stakeholders. Sensitivity was 27.6% and predictive value positive was 81.5%. Representativeness was poor, covering only tertiary care hospitals. Timeliness was excellent with daily reporting and case response within 24 hours. The system is useful as it provides dengue fever data base for planning and management purpose. System is stable, secure and available when required.

Conclusions: The evaluation shows the performance of dengue surveillance system was good overall. System is not representative but has ability to detect and respond to outbreaks within time. Expansion of the coverage to include all public and private healthcare facilities is needed. Regular data collection trainings are recommended. Feedback mechanism is necessary to ensure data quality.

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