

Abstract

Enforcement of Functionality and Effectiveness of Event-Based Surveillance System (EBS), Egypt, April-September 2017

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Abstract

Background: To meet the requirements of International Health Regulations 2005 (IHR), initiation of EBS is essential to complement the Indicator Based Surveillance (IBS) and to boost early detection of potential Public health threats. In November 2015, the Ministry of Health (MoH) launched the EBS at the central level. The hot line in emergency room and active browsing for electronic media are the main sources of information.

Objective: To enhance early detection and rapid response to potential public health threats and to improve the performance of the EBS team.

Methods: At the end of June 2017, the reporting form, database and the standard Operating Procedures (SOPs) of EBS were updated. EBS team received training for the system updates. Data from April to September was investigated for the source of information, signal filtration, verification, and timeliness of response. For the events that are routinely reported by IBS, early detection was checked for both systems. The results were compared three months before and after the training.

Results: Out of 762 raw signals, 199 events were detected, from which 65% (130/199) events after June. Proportion of events captured by electronic media, health care workers and community were 75% (150/199), 20% (40/199) and 5% (9/199) respectively. Filtration of signals varied significantly from 14 % to 51% (P value < 0.0001). Verification improved from 78% to 86 % (P value= 0.154). Positive Predictive Value (PPV) significantly differed from 80% to 93% (P value = 0.012). Rapid response within 24 hours significantly improved from 53% to 88% (P value < 0.0001). Capability of EBS to capture events Preceding IBS improved from 27% (9/33) to 38% (32/85) (P value= 0.288).

Conclusions: Increase EBS capacity for early detection of potential public health threats. Marked improvement of EBS team performance. Raise community awareness, expand the sources of information and shift to electronic database are highly recommended.

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