Abstract

Evaluation of Automated Online Quality Checker Implementation for the Brucellosis Surveillance system, Egypt 2016

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Abstract

Background: National Egyptian Disease Surveillance System collects data on 40 diseases and conditions from 584 nominated reporting sites out of 27 governorates. Brucellosis is a weekly notifiable disease. Reporting levels of completeness and timeliness may differ that may influence data quality; these attributes needed to be assessed prior further manipulation of data. In 2016, Surveillance Online Checker (SOC) was launched to facilitate quality check to give feedback about timeliness and completeness of optional (to online entry) variables to the reporting sites (Completeness of mandatory variables is 100%).

Objective: We aimed to measure the effect of Surveillance Online Checker on brucellosis surveillance data completeness and timeliness after one year of implementation.

Methods: Brucellosis data completeness and timeliness of selected optional variables from the case reporting form were compared before and after one year (2015-2016) of launching SOC using Chi square and student t-test.

Results: It is found that completeness of optional variables were increased from 67.3 % to 78.4% as follows; Detailed Address (67.3% to 78.9%, $P<0.0001$), Patient Telephone (22.1% to 59.9%, $P<0.0001$), National ID (2.8% to 23.8%, $P<0.0001$), Lab Test (81.3% to 86.2%, $P=0.043$) Final Diagnosis (68.3 to 91.8, $P<0.0001$) and Investigation Forms (52.3% to 75.2%, $P<0.0001$). While other variables had no significant change such as Occupation (92.7% to 93.0%, $P=0.946$). The reporting during predefined Timeliness increased from 69.1% to 89.8%, $P<0.0001$, with Average Data Entry Time per Case since its classification improved to be 3.8 days instead of 8.8 days. The average time to retrieve previous calculations shortened from 2 working days /month to just seconds after running SOC.

Conclusions: Completeness and timeliness of brucellosis surveillance improved after SOC. It is recommended to utilize SOC results by intermediate and peripheral levels after adapting SOC for these levels and adding additional surveillance attributes to SOC.

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