

Abstract

Laboratory Based Surveillance Using District Health Information System(DHIS2): Lebanon 2017

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Abstract

Background: The Ministry of Health in Lebanon is moving to electronic surveillance using DHIS2. Laboratory-based surveillance is one of the pillars of infectious diseases surveillance.

Objective: The main objective is to have real-time information flows in order to timely detect alerts and outbreaks. The existence of multiple surveillance systems for notifiable diseases allows each system to complement the other.

Methods: In 2017, DHIS2 tool was used for laboratory surveillance. As part of the implementation process, the online application was developed. Aggregated-based dataset is customized according to the paper reporting form. Accounts users and generic dashboards are generated for each organization unit. Two rounds of trainings were conducted: one in May for initiation and one in July for consolidation. Each round consists of 6 training sessions targeting 150 focal persons working in all public and private hospitals in Lebanon. Then, all hospitals are requested to fill on weekly basis an aggregated based dataset using DHIS2. The dataset includes laboratory general information, bacteriological cultures, stool direct exam, rotavirus testing, serology and influenza testing. Several indicators are generated.

Results: After the second-round training, the completeness rate reached 89.5% in October. Highest reporting rates were recorded in South, Nabatyeh and Baalbeck-Hermel (100%). Timeliness reached 73.4%. Positive bacteriological cultures are as follow: Streptococcus (639), Pneumococcus (269), Listeria (4), Meningococcus (11), Haemophilus (292), Vibrio (3, 2 data entry error and 1 Vibrio Cholera non O1 non O139), Brucella (70), Salmonella (538), Shigella (101), E. coli (2664), Campylobacter (46). The cumulative number of protozoa in stool are: Amoebia (8661) and Giardia (1550). 5702 cases of rotavirus were recorded. Serology testing finds 724 hepatitis A, 17 measles and 82 Rubella.

Conclusions: After 6 months of implementation of DHIS-2, timeliness and completeness of laboratory reporting are improved. Errors and bureaucratic delays are minimized. Extension of DHIS2 for case-based surveillance is recommended.

(*iproc 2018;4(1):e10546*) doi: [10.2196/10546](https://doi.org/10.2196/10546)

Edited by Y Khader; this is a non-peer-reviewed article. Submitted 29.03.18; accepted 29.03.18; published 29.03.18.

Please cite as:

Youssef D, Hemedeh S, Allouch G, Yaghi A, Kaysar I, Jouny A, Ghoussaini F, Zreik H

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iproc 2018;4(1):e10546

URL: <http://www.iproc.org/2018/1/e10546/>

doi: [10.2196/10546](https://doi.org/10.2196/10546)

PMID:

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