Abstract

Electronic Integrated Disease Early Warning System Surveillance System Evaluation, Sana'a Capital, Yemen, 2021

Samar Nasher[1], MSc; Rima Alusfi[2], BSc; Rula Taher[2], MSc; Abdualqawi Qasira[1], MSc; Abdualwakeel Alsameay[1], BSc; Yasser Ghaleb[1], MSc

[1]Yemen Field Epidemiology Training Program, Sana'a, Yemen

[2]Ministry of Public Health and Population, Sana'a, Yemen

Corresponding Author:
Samar Nasher, MSc
Yemen Field Epidemiology Training Program
Mazda Alhasaba
Sana'a
Yemen
Phone: 967 771340700
Email: drsammas8@gmail.com

Abstract

Background: The Electronic Integrated Disease Early Warning System (eIDEWS) is an essential system; it contributes to the better prevention and management of epidemics. Through the collection of complete, accurate, and timely data, countries are able to determine the priorities for suitable interventions that save the lives of communities. Regardless of the conflict in Yemen, the system is still functioning and is expanding to be the most effective epidemiological surveillance program.

Objective: We aimed to determine the usefulness of the eIDEWS, assess its performance, and identify the strengths and weaknesses of its implementation.

Methods: The usefulness and performance attributes of the eIDEWS were evaluated using the Centers for Disease Control and Prevention's updated guidelines for evaluating public health surveillance systems. The evaluation was carried out in Sana'a capital from January to March 2021 by interviewing 25 stakeholders at 3 levels—the central, governorate, and health district levels—and using a semistructured questionnaire. Attributes of the system were ranked as poor (<60%), average (60% to <80%), good (80% to <90%), and excellent (≥90%) on the basis of indicators to calculate the final scores.

Results: The eIDEWS' overall usefulness and performance score was 90%—an excellent rank. The mean score of system attributes was 100% for acceptability, completeness, and timeliness. The flexibility was good (83%), since the change in reporting method was applied difficultly. The system depends completely on foreign funds; thus, the system's stability was average (75%). However, the eIDEWS was expanded recently to add new health facilities; its representativeness was average (76%).

Conclusions: The system is working effectively at evaluated sites. The overall system performance was excellent; however, flexibility and stability were good due to the negative adaptation of the system with regard to the reporting method and the absence of other fund resources. Therefore, evaluating the newly upgraded system, strengthening its stability by finding other supporting resources, and further expanding coverage to include all public and private health care facilities are recommended.

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KEYWORDS

eIDEWS; surveillance; evaluation; Yemen

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