

Hepatitis A surveillance evaluation in Mafrq Health Directorate, Jordan 2010

Ghazi Sharkas^{1,2*}, Sami Sheikh-ali^{1,3} and Sultan Abdulla^{1,4}

¹Ministry of Health, Amman, The Capital, Jordan; ²FETP Alumni, Amman, The Capital, Jordan; ³Focal Point Viral Hepatitis, Amman, The Capital, Jordan; ⁴Head of Surveillance Department, Amman, The Capital, Jordan

Objective

The study aims to assess HAV surveillance in Mafrq Health Directorate and to determine whether the increase in reporting is related to a public health issue or is a result of a relatively good surveillance.

Introduction

Hepatitis A virus (HAV) infection is usually mild in childhood but more severe in adolescents and adults. An estimated 1.4 million cases of HAV infection occur annually in the world. The case-fatality rate among patients of all ages is approximately 0.3% but tends to be higher among older persons (approximately 2% for 40 years or older). HAV is a notifiable disease on weekly basis where health centers and hospitals report cases to the health directorates, which in turn report electronically to the Communicable Diseases Directorate, with subsequent paper reporting of detailed epidemiological description. The due time is Tuesday next week. Diagnosis is clinically based and depends on case definition. A previous study in Jordan revealed that reporting rate increased from 6.4 in 2004 to 7.9 in 2008/100,000, the highest reporting rate was in the North region, mainly Mafrq.

Methods

Ten health centers and one hospital were randomly selected; 13 weeks were also selected randomly from the year 2009. The reporting process was reviewed in the three levels for the number of reported cases of HAV in the selected weeks: the peripheral level by reviewing the reporting forms, notifiable logbooks of the reporting sites; the intermediate level in the health directorate by reviewing the specific notification forms(SNF) from each reporting site, and the comprehensive forms from all reporting sites; and the central level by reviewing the electronic and paper reporting to the communicable diseases directorate.

Results

The SNF were found for only 15% of reported HAV from Health Directorate in 2009. All the selected reporting sites had commitment in reporting. The sensitivity of reporting from reporting sites to health directorate was 96%; nevertheless, 38% of the reporting sites reported zero cases. HAV surveillance in Mafrq was evaluated upon application of CDC criteria for evaluation of surveillance system (as demonstrated in Table 1).

Conclusions

The increased number of HAV-reported cases in Mafrq is not related to a public health hazard; it is probably a result of relatively reasonable surveillance system. The reporting protocol is not well implemented, it is mostly phone based, and this will weaken the sensitivity of surveillance system; therefore, paper-based reporting should be enhanced.

Keywords

Hepatitis A; surveillance; evaluation; Mafrq, Jordan

Table 1. Evaluation of surveillance by application of CDC criteria

Simplicity	Flexibility
The diagnosis is clinically based and does not depend on laboratory test. Surveillance does not require complex training, equipments or fulltime working personnel. Reporting procedure is telephone based and 'regular mail' based, which is affordable to all reporting centers	The sureveillance system for HAV is clinically based, it includes also suspect and probable cases, and the reporting is according to available facilities. Case definition could be easily modified to cope with any addition
Acceptability Almost 38% of the reporting sites did not report any case in 2009; also, 23% of the reporting sites reported three cases or less, this could reflect that the surveillance for hepatitis A is not well accepted	Timeliness Almost all reporting centers reported to the health directorate in exact time by telephone, this is followed by paper reporting. Only 42% of the reports from Mafrq health directorate to the Communicable Diseases Directorate were done electronically; about 90% of the electronic reporting was done on time, 'Tuesday' the next week
Representativeness HAV surveillance is considered representative as monthly reports give detailed epidemiological information	Data quality The SNFs were found for only 15% of reported HAV cases from Health Directorate; none of HAV cases were investigated. Discrepancies were observed in the reported numbers, as 7% in excess was found in the reporting centers registry in comparison with the original reporting center SNFs; while 6% less was observed between the numbers of reported HAV cases in health directorate registry in comparison with reporting center registry
Sensitivity The percentage of reported cases to the truly existing cases (sensitivity) was 96% according to our case definition	

References

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*Ghazi Sharkas

E-mail: ghazisharkas@yahoo.com