

Case study



Establishing web-based syndromic surveillance for Hajj: a teaching case-study

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Abstract

Hajj, the Muslims ritual pilgrimage to Makkah in Saudi Arabia, is an annual and everlasting mass gathering event of more than two million persons. This ritual which takes 15 – 40 days is performed in a very crowding situation, involving a lot of outdoor movements and under a harsh environment. Public health surveillance, in particular for infectious diseases, is being carried out intensively but using routine methods depending on reported suspected cases from clinics. There is a clear demand for more real-time / near real-time notification of every suspected case. Early detection of priority events and situational awareness can be achieved via Syndromic Surveillance. This case study simulates the steps to be carried in developing a model of Syndromic Surveillance relevant to Hajj in Saudi Arabia. Using the ready collected data from health facilities, Syndromic Surveillance can be generated based on a logical algorithm to produce automated graphical output. The later will be used to monitor the epidemiological situation. This case study is designed for the training of both novice or advanced level field epidemiology trainees and other officials working at National or Regional Surveillance Departments. It can be administered in 3-4 hours. The case study provides the trainees with competencies in designing and developing electronic surveillance models, suitable to use when dealing with mass gatherings.

How to use this case study

General instructions: this case study should be used as adjunct training material for novice or advanced level epidemiology trainees to reinforce the concepts taught in prior lectures. The case study is ideally taught by a facilitator in groups of about 15- 20 participants. Participants are to take turns reading the case study, usually a paragraph per student. The facilitator guides the discussion on possible responses to questions. The facilitator may make use of flip charts to illustrate certain points. Additional instructor's notes for facilitation are coupled with each question in the instructor's guide to aid facilitation.

Audience: this case study was developed for both novice or advanced level field epidemiology trainees and other officials working at National or Regional Surveillance Departments who are interested in this topic.

Prerequisites: before using this case study, participants should have received basic lectures on public health surveillance and data management in the context of electronic surveillance.

Materials needed: Flash drive, flip charts, markers, computers with MS Excel

Level of training and associated public health activity: Surveillance (electronic surveillance)

Time required: 3 - 4 hours

Language: English

Case study material

- Download the case study student guide
- Request the case study facilitator guide

Competing interest

The authors declare no competing interests.

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Annexes

Annex 1: Hajj priority conditions case definitions

Annex 2: summary of algorithms for targeted Syndrome's

Annex 3: image of Data Entry e-form

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