



EMPHNET

The Eastern Mediterranean
Public Health Network

Evaluating the Impact of Enhanced Laboratory Based Surveillance of Animal and Human Brucellosis in Jordan

Project Information

- ◆ Department: Public Health Programs
- ◆ Unit: Disease Control and Prevention

OBJECTIVES

This project aims to establishing an active surveillance and enhancing laboratory tools to properly understand brucellosis disease dynamics in Jordan, specifically at three selected areas in coordination and collaboration of the Ministry of Health (MOH), Ministry of Agriculture (MOA) and Royal Medical Services (RMS) in Jordan.

REGIONS OF WORK

This project will be implemented in Jordan targeting three governorates; East Amman, Mafraq, and Karak.

PROJECT DESCRIPTION

During the first project year, EMPHNET conducted a series of capacity building activities to increase the capacity the Jordanian's public and animal health officials from MOH, MOA in surveillance and laboratory diagnosis of brucellosis. This will help to generate more knowledge about the burden of the disease in humans and animals; establish standard procedures for specimen transport and storage; identify risk factors driving transmission between animals and from animals to humans; and map the circulating Brucella species in the selected areas. During the second year the focus is put on epidemiological data collection, specimen collection and laboratory results testing.

EMPHNET continues the collaboration with national partners, stakeholders, CDC and DTRA to implement the project activities. EMPHNET is implementing the fourth year of the project to utilize the obtained data to generate the incidence of the disease and to identify the risk factors (demographic, behavioral and environmental) of the disease in the three selected governorates.

BENEFICIARIES

The project's main beneficiaries are relevant public and animal health officials from MOH, MOA and RMS at central and governmental levels.

PROJECT PHASES

This project involves three phases as follows:

Phase I – Preparations: Capacity building activities for MOH, MOA and RMS team, conduct key stakeholder meetings, update and refine surveillance tool and software and provide laboratory kits and supplies.

Phase II – Implementation: Collect data from the targeted project sites.

Phase III – Documentation: data management and analysis, newsletter and reports development and dissemination of progress and findings with stakeholders.

Project Start and End Date	07/23/2018 – 07/01/2022
Partner Organizations	Jordan Ministry of Health, Ministry of Agriculture and Royal Medical Services
Funded by	Defense Threat Reduction Agency (DTRA)
Collaborators	The centers for Disease Control and Prevention (CDC)



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Currently . . .

Brucellosis is considered a disease of high consequence causing significant animal and human morbidity qualifying *Brucella* spp. as a potential bio-threat. Jordan is especially vulnerable to brucellosis transmission across borders via animal and human migration from endemic countries. Further, there is not enough data regarding the epidemiological profile of brucellosis in Jordan. EMPHNET and CDC implemented in past years a pilot study on brucellosis burden and epidemiology in Mafrq governorate in collaboration with MOH. The pilot study in Mafrq revealed that the brucellosis surveillance system is unspecific, with intermittent reporting, and lacks capacities for sampling, testing and response. In addition, the data demonstrated the need for a holistic substantial view of the epidemiological situation of human and animal brucellosis in Mafrq. The study also recommended the need to expand the project to other regions for a better understanding of brucellosis situation in the country and inform actions for strengthening the surveillance system and reduce the disease burden.

What is next . . .

The implementing activities of this project will contribute to improving the effectiveness of the public health systems in Jordan, in particular through better collaboration between human health and animal health to apply one health approach, and strengthen national capacities for brucellosis surveillance, laboratory diagnosis and outbreak alert and response.

The capacity of laboratorians on brucellosis surveillance and laboratory testing to estimate and characterize the true incidence of brucellosis in humans and animals will be strengthened through formal and on the job training, provision of SOPs and tools. The identification of the risk factors which drive disease transmission between animals and from animals to humans as well the characterization and mapping of the circulating *Brucella* species will help in reducing the incidence of brucellosis of Jordan.

By the Numbers

115

Laboratory technicians trained on brucellosis testing

151

Health clinicians and nurses trained on human brucellosis case definition

51

Veterinaries trained on animal brucellosis case definition

29 Comprehensive Health Centers
4 hospitals
2 Central Human and Veterinary Lab collaborator sites

>913

Probable Human cases enrolled

>294

Animal farms investigated

EMPHNET Information: Eastern Mediterranean Public Health Network (EMPHNET) works at achieving its mission by responding to public health needs with deliberate efforts that allow for health promotion and disease prevention.

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