



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 was implemented in Jordan targeting three governorates: East Amman, Mafraq, and Karak.

PROJECT DESCRIPTION

With the aim of improving global health security, EMPHNET has implemented the project titled “Evaluating the Impact of Enhanced Laboratory-Based Surveillance of Animal and Human Brucellosis in Jordan” in collaboration with CDC over the last four years from July 23, 2018, to June 30, 2022. The implemented activities of this project will contribute to improving the effectiveness of the public health systems in the kingdom through enhancing the collaboration between human health and animal health (One-Health Approach) and strengthening the capacities in brucellosis surveillance, laboratory diagnosis, and outbreak alert, and response.

Through this project, EMPHNET has worked with project partners and relevant ministries and stakeholders towards increasing the Jordanian’s capacity in surveillance and laboratory diagnosis of brucellosis to generate more knowledge about the burden of the disease in humans and animals; establishing standard procedures for specimen transport and storage; identifying risk factors driving transmission between animals and from animals to humans; and mapping the circulating Brucella species in the selected areas.

BENEFICIARIES

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

PROJECT PHASES

The project involved three phases as follows:

Phase I – Preparations: Capacity building activities for MOH, MOA and RMS team, key stakeholder meetings, updating and refining surveillance tool and software, and providing laboratory kits and supplies.

Phase II – Implementation: Data collection 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 have been strengthened through formal and on the job training and 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 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

959 Human cases enrolled

328 Animal Farms Investigated

14.3

Annual Incidence Rate /100,000 Population

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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