

ARAB REPUBLIC OF EGYPT



OVERVIEW

A cooperative agreement with the Ministry of Health and Population (MOH) provides support to conduct epidemiologic and laboratory surveillance for influenza and to build capacity in Egypt's National Influenza Center (NIC) to detect and isolate seasonal and novel influenza viruses.

SURVEILLANCE

The influenza surveillance system is regularly monitored through site visits. The improved regional laboratory capacity, strengthened through training, has supported improvements in the national surveillance system. Egypt designed a forecasting model, based on the current surveillance system, to estimate how many cases of influenza A (H5N1) virus infection are likely to occur annually. The severe acute respiratory infection (SARI) surveillance system has been leveraged for the detection and testing of suspected cases of MERS-CoV. A standardized case definition for SARI was distributed to all surveillance sites nationwide in order to ensure standardized reporting. Egypt has been reporting influenza-like illness (ILI) results to WHO FluNet regularly, and a weekly report of all influenza programs (sentinel, national, and follow up of returned Hajj pilgrims) is sent out to stakeholders and decision makers. Surveillance data are analyzed and the findings are discussed at the crisis committee meetings; these discussions resulted in the early detection of the most recent avian influenza outbreak. These discussions also guided the implementation of better policies leading to positive results, such as early detection and diagnosis and in turn resulted in decreasing the case fatality rate compared with that seen in the early outbreak of 2014–2015.

SURVEILLANCE ACTIVITIES

- Coordinated the epidemiology and laboratory sectors of both the MOH and veterinary authorities to improve national risk assessment for avian influenza and other zoonotic diseases.
- Conducted multiple field investigations for communicable diseases, assessing both the epidemiologic and environmental situation in various governorates.

HIGHLIGHTS

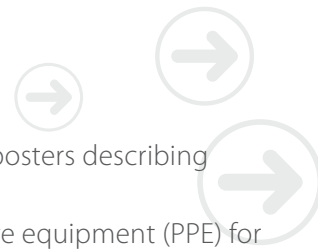
- Assessed the overall effectiveness of the influenza A (H5N1) virus surveillance system.
- Developed preparedness and response plans for a potential MERS-CoV outbreak.
- Revised health communication messages through analysis of specific risk factors for possible transmission of infection.
- Conducted in-depth studies and cluster investigations including consultations with external experts.
- Strengthened electronic systems for timely sharing of data and information across all levels of the Ministry of Health and Population (MOH).

- Conducted field visits to monitor influenza A (H5N1) virus national surveillance sites and provide on-the-job training.
- Established unified database for acute respiratory illness (ARI) and influenza surveillance.
- Provided reports online for sentinel surveillance sites (ILI/SARI).
- Improved diagnostic capacity of the subnational laboratories.
- Expanded geographical representativeness of influenza surveillance, early detection, and improved diagnosis, including the capacity for influenza virus subtyping in cooperation with the NIC and Vacsera.

LABORATORY

Working in coordination with the EMR regional reference laboratory at NAMRU-3, Egypt has tested a backlog of samples obtained from the influenza surveillance system dating from 2012. Other laboratory activities included monitoring visits to the national and sentinel site laboratories.

Epidemiology and laboratory-linked surveillance for SARI and pneumonia was strengthened, and now includes surveillance for MERS-CoV, as well as avian influenza A (H7N9) and (H9N2) viruses. The influenza A (H5N1) virus surveillance system has been strengthened and refined.



The capacity of the Central Public Health Laboratory (CPHL) has been improved with upgrades in equipment and supplies, as has the sub-national laboratories that have also benefited from increased staff training. Two new sub-national laboratories are now functioning, bringing the total to seven laboratories throughout the country.

LABORATORY ACTIVITIES

- Coordinated with reference laboratories in the Region to examine samples collected and stored since 2012.
- Strengthened epidemiologic and virologic surveillance of SARI and pneumonia.
- Added MERS-CoV and avian influenza A (H7N9) and (H9N2) diagnosis to the ARI surveillance system.
- Upgraded the CPHL and built capacity in influenza virus detection and diagnosis at sub-national laboratories.
- Improved laboratory confirmation: throat swabs from suspected cases are tested using RT-PCR in CPHL and NAMRU-3.

PREPAREDNESS

The capacity of rapid response teams at the governorate and district levels was upgraded and enhanced through training, case studies, field activities and outbreak response. Influenza and Ebola preparedness plans were designed and disseminated. Support was provided to improve response at the district level through training, provision of supplies, equipment and education, information and communication materials. A bulletin was disseminated on influenza surveillance, notifiable disease surveillance, and international health regulations.

PREPAREDNESS ACTIVITIES

- Upgraded and enhanced the capacity of the designated rapid response team at the governorate and district levels through training case studies and field activities for actual outbreaks.
- Trained senior preventive health staff at the governorate and district levels on tools and skills for monitoring trends and patterns of emerging pathogens among health care personnel.
- Distributed communications materials to raise awareness of MERS-CoV (100,000 brochures; 1,000,000 leaflets; 20,000 posters describing the

case definition and 40,000 posters describing prevention methods).

- Procured personal protective equipment (PPE) for Ebola preparedness.
- Established a hotline for responding to public inquiries.
- Conducted two training courses on outbreak investigation, descriptive statistics and analysis, rapid response team staffing, specimen collection and laboratory confirmation, food-borne diseases, and control of infectious diseases for 140 governorate level health staff.
- Conducted 4-way linking, crisis committee and supreme committee regular meetings.
- Conducted rapid risk assessment for influenza in collaboration with the CDC/WHO joint mission.

TRAINING

- Conducted 26 workshops on effective health education messages.
- Conducted 30 workshops on avian influenza surveillance and case management.
- Conducted five workshops on the National Emerging Disease Surveillance System (NEDSS) for directorate and district-level influenza surveillance officers.
- Conducted ten workshops in 21 governorates for directorate and district teams.
- Conducted ten two-day training courses on risk communication for directorate-level attendees.
- Conducted eight training sessions on the early warning system for communicable and emerging diseases.
- Conducted 16 intensive training sessions on influenza surveillance activities in Sharkia.
- Conducted 100 workshops for capacity building of healthcare workers and laboratory technicians at community healthcare facilities.
- Conducted 11 workshops on SARI surveillance for physicians, sanitarians, and laboratory technicians.
- Conducted 20 training sessions for laboratory technicians at the subnational laboratories.
- Conducted three orientation workshops to review the plan of action and update the avian influenza case definition.

INFLUENZA VACCINE ACTIVITIES

There is a well-established influenza vaccination policy which is obligatory for healthcare workers and Hajj/Umra travelers. Vaccines are also available for high-risk groups.

