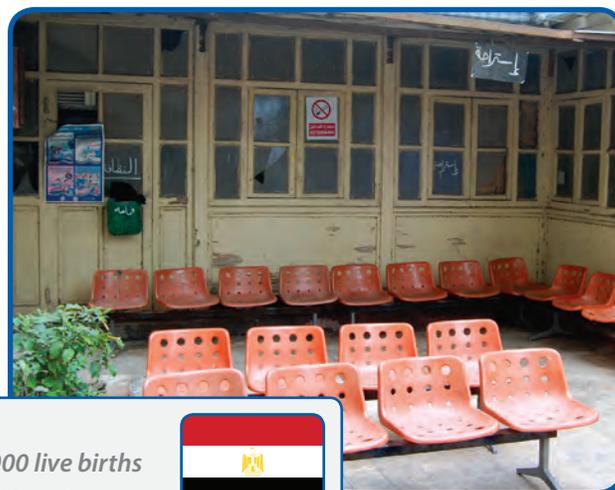
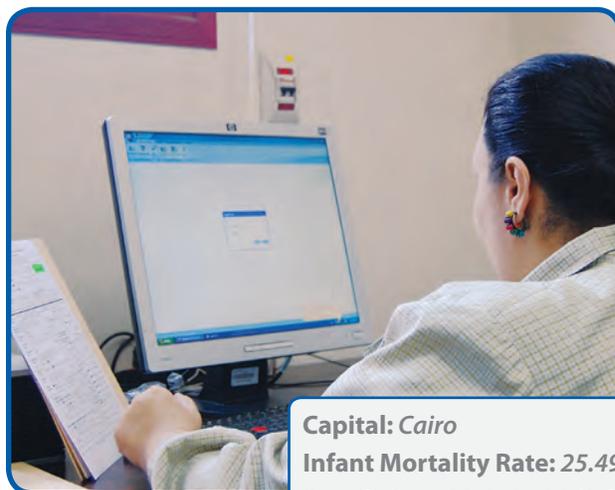


Arab Republic of Egypt



Capital: Cairo

Infant Mortality Rate: 25.49/1,000 live births

Population: 32,649,130 (July 2013 est.)



Overview

The influenza program in Egypt was established more than 10 years ago through an interagency agreement between CDC and NAMRU-3. A cooperative agreement with the 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. An influenza cooperative agreement with the Regional Office of the Eastern Mediterranean (EMRO) of WHO provides international support to countries in this region for pandemic influenza preparedness and response, infection control, International Health Regulations, health communications, and outbreak response. CDC's efforts currently support 13 eastern Mediterranean NICs, an ARI surveillance network, and influenza surveillance in West Africa. The program also conducts population based studies of the burden of influenza and effectiveness of prevention measures.

Highlights

- All influenza-related activities are coordinated by an influenza surveillance group at the Ministry of Health and Population (MOHP). Included in these activities are the nationwide hospital-based surveillance for avian and pandemic influenza, and the ILI and SARI sentinel surveillance programs.
- MOPH launched a web-based reporting system in 2011 in eight of 16 sentinel sites.
- Established the National Egyptian Disease Surveillance System (NEDSS) for communicable diseases in 2002.

Surveillance

Influenza surveillance was established in Egypt in 1999 and has expanded throughout the period of CDC funding that began in 2009. Laboratory capacity has been enhanced and the number of sites has increased. These improvements have led to an increase in the level of preparedness and response in the country. The MOHP collaborates with NAMRU-3 in Cairo, and the regional WHO office to enhance on-going surveillance activities, and also participates in the Eastern Mediterranean Acute Respiratory Infection Surveillance (EMARIS) Network.

Surveillance Activities

- Provided refresher training for sentinel site staff to ensure knowledge and responsibilities are clear.
- Employed data entry personnel in 21 governorates.
- Published weekly and monthly surveillance reports, integrating data from all sentinel sites.
- Published scientific articles on epidemiology, influenza and IHR were distributed during training and supervisory field visits to surveillance staff.
- Shared a weekly report including merged Central Public Health Laboratory (CPHL) and NAMRU-3 laboratory data with stakeholders.
- Influenza surveillance activities successfully detected early changes in influenza activity in 2012.
- Distributed surveillance bulletins to communicate surveillance results to remote audiences.

Laboratory

We have eight sentinel laboratory sites conducting influenza PCR testing in seven governorates. These laboratories are visited regularly to evaluate their performance as part of a continuous improvement process.

Junior staff who work in the PCR laboratories are regularly sent to NAMRU-3 for refresher training on real-time PCR.

WHO EMRO has done a basic assessment for our CPHL PCR unit, including a gap analysis with the goal to achieve International Organization for Standardization (ISO) 15189/2007 accreditation.

Laboratory Activities

- Tested 2,570 samples for influenza by PCR; 310 tested influenza A-positive (223 H3N2, 82 H1N1pdm09, five H5N1) and 120 tested positive for influenza B.
- Conducted seven two-week PCR lab training courses at government labs.
- Improved laboratory capacity through routine laboratory visits in collaboration with NAMRU-3.
- Participated in meetings and discussions as part of the Four-way Linking Project, which involves improving collaboration and communication between laboratory and epidemiology groups of human sectors (MOHP) and the laboratory and epidemiology groups of veterinary services sector. These meetings have been very successful and are a great benefit to both sectors.
- All influenza data has been reported to WHO's Flu-Net.
- A strategic plan for pandemic preparedness has been developed. The plan includes all phases (pre-pandemic, alert and pandemic phases).

Preparedness

The MOHP, as the representative of the preventive medicine sector, has reviewed and updated Egypt's national pandemic preparedness plan. Several workshops were coordinated by the MOHP – Epidemiology and Surveillance Unit (ESU) and were attended by the vaccination unit, communicable disease control, infection control and quarantine departments to discuss their roles and cooperation in preparedness and response to pandemic threats. There was also collaboration with veterinary services in risk assessment and joint response activities. Several training workshops were conducted on the pandemic preparedness framework including rapid response, risk communication, and humanitarian principles and standards. The extension of SARI sentinel sites to enhance influenza surveillance and early detection of MERS-CoV was established in five high-risk governorates.

Preparedness Activities

- Task force meetings were held by the preventive sector at the national level to review and update Egypt's national pandemic preparedness plan.
- The central epidemiology and virology laboratory teams in the MOHP and veterinary sector continue their collaboration in risk assessment and joint response activities at the national level.
- Extension of SARI sentinel sites to enhance influenza surveillance and early detection of MERS-CoV was established in five high-risk governorates including, Cairo, Alexandria, and the most populous governorates from Upper and Lower Egypt.
- Regional pandemic and outbreak response training workshops were held by the epidemiology and surveillance unit to enhance influenza surveillance.
- Risk communication training workshops were held by CDC for MOHP staff at the national and sub-national levels.
- Humanitarian principles and standards (SPHERE training) workshops were held by CDC for MOHP staff at the national and sub-national level.
- Regional risk communication training workshops were held by the epidemiology and surveillance unit in the pandemic preparedness framework.

Training

The MOHP conducted the following trainings in FY 2012:

- Seven training workshops were implemented on enhancing human influenza surveillance, emerging infectious diseases and IHR for 280 participants from 17 governorates.
- Nineteen training workshops were implemented on application of NEDSS Online for 527 participants from 20 governorates.
- Eight training courses were implemented in collaboration with CPHL on enhancing epidemiologic and laboratory surveillance for 112 participants from 26 governorates.
- Four hundred twenty field visits were made for follow up of ILI, SARI, communicable disease surveillance, infection control, and NEDSS Online system procedures in all 27 governorates of Egypt.