ETHIOPIA

OVERVIEW
With the support of CDC, influenza surveillance in Ethiopia was initiated in 2008. The influenza-like illness (ILI) and severe acute respiratory infection (SARI) sentinel surveillance system is owned by the Ethiopian Public Health Institute (EPHI) and monitored and coordinated by the Public Health Emergency Management Center (PHEMC). In 2009, an emergency operations center under the emergency public health management directorate was established.

SURVEILLANCE
Influenza sentinel surveillance was started in 2008 in two health facilities (Yekatit hospital for SARI and Shiromeda health center for ILI) in Addis Ababa. In 2010, the sentinel sites were expanded to two new health centers (Akaki and Kolfe), and four new SARI sentinel sites (Adama, Adare, Mekele and Felegehiwot Hospitals) were selected from four mega regions (Oromia, SNNP, Tigray and Amhara Regions) respectively.

Currently, eight sentinel sites are conducting surveillance. Of them, five are SARI sites and the other three are ILI sites. Ethiopia has selected twenty priority diseases with mandatory reporting. Among those that are required to be reported immediately are avian-human influenza, pandemic influenza, and SARS.

SURVEILLANCE ACTIVITIES
- Compiled and entered surveillance data into a database using Epi Info.
- Conducted regular descriptive data analysis by time, place and person (trends of the disease over the last four years have been analyzed).
- Monitored completeness and quality of surveillance data and based on the gaps identified, provided feedback to the reporting sentinel sites.
- Collaborated with residents of the Field Epidemiology Training Program (FETP) to conduct supervisory visits to the sentinel sites.
- Conducted on-the-job mentorship activities for staff at the new SARI sites.

HIGHLIGHTS
- Developed and disseminated weekly public health emergency management bulletins to stakeholders.
- Conducted regular meetings of the Influenza Technical Working Group.
- Received surveillance data (case-based and aggregated) from all sentinel sites throughout the year.
- Prepared and implemented the public health emergency management annual plan. Influenza is included in the plan.

LABORATORY
The National Influenza Laboratory (NIL) at EPHI is the only laboratory in the country capable of influenza diagnostic testing. The laboratory became functional in June 2009. The NIL has worked closely with CDC to establish a state of the art laboratory. Routine testing of respiratory samples collected through the SARI/ILI sites commenced in 2009. Collaboration between human and animal health laboratory staff is also being supported.

LABORATORY ACTIVITIES
- Provided onsite technical assistance to all sentinel sites in Addis Ababa twice a week.
- Received weekly throat swab specimens from each sentinel site.
- Collected and tested 1,326 specimens by RT-PCR, of which 169 (12.7%) were positive for an influenza virus: 75 for influenza B, 58 for influenza A (H3N2), 6 for influenza A (H1N1), and 30 for influenza A (H1N1)pdm09 (April 2014 to March 2015).
- Reported laboratory results weekly to WHO AFRO.

PREPAREDNESS
The Public Health Emergency Management Center (PHEM) is responsible for preparedness, early warning and response to any public health emergencies including avian and human influenza and pandemic influenza. The PHEM Center is working closely with the national influenza laboratory and coordinates the implementation of influenza sentinel surveillance.
**PREPAREDNESS ACTIVITIES**

- Printed and distributed 40,000 leaflets on MERS-CoV.
- Distributed the influenza sentinel surveillance implementation guideline to sentinel sites.
- Printed and distributed reporting formats for pandemic influenza, severe acute respiratory syndrome (SARS), and avian-human influenza to all regions.
- Developed an influenza sentinel surveillance sustainability plan that is aligned with public health emergency management activities.

**TRAINING**

- Conducted training for 80 participants from sentinel sites, regional health bureaus and other relevant sectors on influenza viruses and MERS-CoV.
- Provided an orientation on MERS-CoV for heads and experts from regional Public Health Emergency Management Centers, Regional Public Laboratories, Disease Prevention and Health Promotion Directorates during the PHEM Annual Review Meeting (August 2014).
- Conducted onsite training and mentoring for all SARI and ILI sites.
- Conducted technical review meetings in May and August 2014.

**INFLUENZA VACCINE ACTIVITIES**

No influenza vaccine-associated activities were implemented during the reporting period.