

# UGANDA

## OVERVIEW

Since 2008, the Centers for Disease Control and Prevention (CDC) has provided funding to the Uganda National Influenza Center (NIC). The aim of the cooperative agreement is to consolidate achievements in influenza surveillance from the first round of funding and develop a sustainability plan. In 2014, new funding was provided by CDC to assist Uganda in defining a road map for introduction of seasonal influenza vaccines and their increased use through a process of informed analysis of available scientific evidence and assessment of the needs and barriers.

## SURVEILLANCE

We have maintained an efficient routine influenza surveillance system in Uganda that collects, analyzes and reports quality data on severe acute respiratory infections (SARI) and/or influenza-like illness (ILI), and it includes virologic and epidemiologic data on both children and adults. The system collects, analyses and reports epidemiologic and virologic data on both mild and severe influenza-associated disease from sentinel sites using case definitions and epidemiologic and laboratory protocols consistent with global standards. Priority is given to collecting SARI data from five of our surveillance sites: Arua Regional Referral Hospital, Mbarara Regional Referral Hospital, Tororo District Referral Hospital, Fort Portal Regional Referral Hospital and Entebbe General Hospital. Kawaala Health Centre IV, Kitebi and Lobule Health Center III only do surveillance for ILI. Entebbe General Hospital and Koboko District hospital do surveillance for both ILI and SARI. We initiated surveillance for MERS-CoV and avian influenza A (H7N9) virus at three other sentinel sites in Kampala.

### SURVEILLANCE ACTIVITIES

- Improved database for epidemiology and virology data.
- Reviewed and updated our sustainability plan.
- Collected samples regularly and shared data through the Ministry of Health (MOH) Weekly Epidemiology Newsletter, FluNet, and WHO AFRO's system weekly.
- Organized new staff training at the sentinel site in Fort Portal so surveillance could be restarted.

## HIGHLIGHTS

- Hosted two Symposia where we disseminated data on influenza in Uganda.
- Inaugurated the Uganda National Immunization Technical Advisory Group (UNITAG).
- Presented the National Immunization Policy to Uganda Parliament.
- Organized a meeting for the Influenza Technical Committees of the UNITAG and KENITAG (Kenya National Immunization Advisory Group) to explore possibilities for collaboration.

## LABORATORY

The laboratory received 2,093 SARI samples and 1,781 ILI samples from the sentinel sites. All samples were tested. We did not discard any samples, an indication that the sample collection, storage, and transportation are doing well. There were 178 (8.5%) SARI and 275 (15.4%) ILI samples positive for an influenza virus. All positive samples were subtyped. Of the SARI influenza-positive samples the majority (72%) were influenza A (H1N1)pdm09 virus while for the ILI influenza-positive samples 52% were influenza A (H3N2) virus. Virus isolation was carried out on the positive samples, and 112 isolates were obtained. The laboratory sent two shipments of over 200 isolates to the WHO CC in Atlanta. The laboratory participated in WHO's EQAP, Panel 14 and improved the laboratory database. During this period, reagents were received to test for avian influenza A (H7N9) virus and MERS-CoV. Three sentinel sites were initiated in Kampala for this surveillance, but as of now no samples have tested positive for influenza A (H7N9) virus or MERS-CoV.

### LABORATORY ACTIVITIES

- Tested all samples from the sentinel sites for influenza viruses.
- Maintained and cleaned the data in the virological laboratory database.
- Shipped isolates to the WHO CC in Atlanta as part of WHO's GISRS.
- Participated in WHO's EQAP with 100% score for the 13th time.

- Conducted training reviews of sentinel staff at all sentinel sites and at regional review sessions.
- Responded to a questionnaire from WHO AFRO on virological and epidemiological surveillance in the region.

## PREPAREDNESS

The NIC is part of the National Task Force for pandemic preparedness in the country. Data are reported to the Surveillance and Response committee of the National Task Force. The committee meets quarterly and the National Task Force meets twice a year. However during outbreaks the committee meets more regularly, sometimes three to four times a week. While there were no influenza outbreaks, as members of the Task Force, we participated in the Marburg and the Crimean-Congo hemorrhagic fever (CCHF) outbreaks in the country. We were involved in training personnel for surge capacity in blood collection and shipment in preparedness for Ebola.

### PREPAREDNESS ACTIVITIES

- Trained neighboring countries on preparedness for disease outbreaks.
- Presented influenza surveillance data to the National Task Force on Pandemic Preparedness, including our surveillance for MERS-CoV and influenza A (H7N9) virus.
- Prepared a document on risk for introduction of avian influenza A (H5N1) virus into Uganda in light of the poultry outbreaks in West Africa.
- Participated in the quarterly and semi-annual meetings of the National Task Force.
- Trained staff on surge capacity for laboratory activities, field sample collection and transportation in preparation for an Ebola outbreak.

## TRAINING

- Designated one laboratorian to attend a training on PCR and sequencing techniques at the National Institute for Communicable Diseases (NICD), South Africa.
- Designated two laboratorians to attend a training on virus sequencing at Los Alamos Laboratories, USA.
- Designated all staff to attend various trainings on Biosecurity and Biosafety provided by Sandia Laboratories.

- Participated in the Burden of Disease Webinar.
- Participated in the Burden of Disease Workshop at the ANISE Meeting in South Africa.
- Designated staff members to attend training by Supporting Independent Immunization and Vaccine Committees (SIVAC) on conducting data/publication reviews for support of influenza vaccination activities.
- One of our staff attended the grants writing training in South Africa conducted by CDC.

## INFLUENZA VACCINE ACTIVITIES

A survey was conducted to identify gaps and/or barriers to the introduction of influenza vaccination. We also participated in the establishment of the Uganda NITAG and are members of the Influenza Technical Committee of the UNITAG.

We attended several workshops supported by SIVAC: a training workshop for NITAGs in East and South Africa in Naivasha, Kenya from August 4–7, 2014; and February 23–25 2015, a UNITAG workshop for inauguration and orientation of NITAG members to committee roles, responsibilities, and methods of work.

We also attended a Joint Influenza Workshop of the KENITAG and UNITAG Flu Vaccine Working Groups held on March 9–10, 2015 in Entebbe.

We developed a plan for seasonal influenza vaccination introduction activities into Uganda, and continued to collect, compile and analyze SARI data for burden of influenza disease evidence in Uganda.

