

# NIGERIA



The H7N9 Surveillance Team in Abuja, Nigeria.

## OVERVIEW

The Nigerian Federal Ministry of Health (FMOH) has been collaborating with the U.S. Centers for Disease Control and Prevention (CDC) on influenza control since 2006. This support has enabled Nigeria to establish a system for early detection and effective response to avian and pandemic influenza. To improve integration, coordination and sustainability, the project was placed under the Nigeria Centre for Disease Control. Currently there are four sentinel surveillance sites, located in four tertiary health institutions in four of the six geopolitical zones of the country. Each of these sites has an influenza-like illness (ILI) component in the outpatient clinic and a severe acute respiratory infection (SARI) component in the inpatient unit.

## SURVEILLANCE

Surveillance activities continued with improvement in the turn-around time. With a focus on avian influenza A (H7N9) virus, two additional SARI surveillance sites were established and activated, one in each of the two geopolitical zones (South-south and North-east parts of the country) not covered by the National Influenza Surveillance System (NISS). The program improved its data collection to capture additional data from the sentinel sites that are key to the estimation of the disease burden due to influenza.

## HIGHLIGHTS

- Confirmed influenza positivity in 262 (60.0%) out of 437 samples from acute respiratory infection (ARI) cases not meeting the criteria for temperature specification for ILI, and received comparable results with that from classical definition of ILI.
- Established two sentinel sites for influenza A (H7N9) surveillance in two geopolitical zones not previously covered by NISS.
- Participated in proficiency testing for MERS-CoV with acceptable results.
- Participated in laboratory confirmation of Ebola virus disease (EVD) from suspected cases during the outbreak in Nigeria.

## SURVEILLANCE ACTIVITIES

- Established two additional sites at University of Port Harcourt Teaching Hospital and Abubakar Tafawa Balewa University Teaching Hospital; trained identified teams; activated the sites to carry out SARI surveillance for influenza A (H7N9) virus for one year (November 2013-February 2014).
- Received 1,736 oropharyngeal and nasopharyngeal samples from SARI and ILI cases.
- Received 437 oropharyngeal and nasopharyngeal samples from ILI-like acute respiratory infection cases not meeting the temperature specification for ILI.
- Carried out a one-day stakeholders' meeting to review the one year implementation of NISS sustainability plan (September 2014).
- Convened a one-day stakeholders' meeting to adapt WHO's guidelines (2014) for the new SARI case definition and deliberated on gaps and strategies for estimating influenza disease burden in Nigeria using the WHO Manual for estimating disease burden associated with seasonal influenza (September 2014).
- Reported influenza activities in the Nigeria Weekly Epidemiology Report and submitted weekly epidemiology reports through FluID.



A photo taken during the H7N9 Surveillance Review Meeting.

## LABORATORY

The National Influenza Reference Laboratory maintained uninterrupted performance with administrative and laboratory operational tools available in sufficient quantities. The project had two of its laboratory staff leave to pursue higher education and one staff transferred to another position. They were replaced through complementary posting of new laboratory staff. There was demonstrable progress in the establishment of the laboratory's cell culture diagnostic capacity. In its ongoing quest to attract the Government's attention for financing, the laboratory supported the Federal Government of Nigeria in the diagnosis of EVD and other viral hemorrhagic fevers, especially Lassa fever, dengue and yellow fever during the July and August 2014 EVD outbreaks.

These efforts have highlighted the expanded capacity of the laboratory to diagnose other viral diseases in addition to influenza. The laboratory has positioned itself for broader recognition and is currently exploring alternative financing to support sustainability.

### LABORATORY ACTIVITIES

- Tested 1,718 samples from ILI and SARI cases and 262 samples from ARI cases received from the sentinel sites during both budget years.
- Submitted 51 influenza-positive samples to a WHO Collaborating Center (CC), some of which contributed to the 2014 WHO seasonal influenza vaccine strain selection.

- Acquired equipment necessary for influenza diagnosis using the cell culture technique in a bid to become a National Influenza Centre (NIC).
- Acquired primers for Ebola, Lassa, dengue and yellow fever viruses, from alternate sources, and utilized them for screening and confirmation of samples from suspected cases of Ebola virus disease.
- Provided weekly virology reports through the WHO AFRO Laboratory Network and FluNet.
- Performed well on WHO's External Quality Assessment Project (EQAP).

## PREPAREDNESS

NISS redoubled its efforts in pandemic preparedness by forging collaboration with key Ministries, Departments and Agencies and highlighting plans to detect and prevent any influenza epidemic or pandemic in the country. In addition, discussions were held on sharing influenza data with the Federal Ministry of Agriculture and National Primary Health Care Development Agency's (NPHCDA) Immunization Department for enhanced surveillance and utilization of influenza surveillance data to inform introduction of an influenza vaccination and programming.

### PREPAREDNESS ACTIVITIES

- Convened stakeholders meeting to strengthen collaboration among NISS, the surveillance and pandemic preparedness components of NCDC, the animal component of influenza surveillance, and immunization component of NPHCDA in the spirit of "One World, One Health, One Medicine".
- Facilitated the coordination of national efforts to strengthen the detection and diagnostic capacity for dangerous zoonotic pathogens in Nigeria.
- Collaborated with some State Ministries of Health, State Ministries of Agriculture and Nigeria Field Epidemiology and Laboratory Training Programme (NFELTP) to investigate handlers and human contacts of influenza A (H5N1) virus-infected birds during the zoonotic outbreak that affected 20 of the 36 states (plus Federal Capital Territory) of the Federation.



An H7N9 Training Session in October 2014.

## TRAINING

- Attended training on laboratory diagnosis of influenza and other emerging respiratory viruses organized by Noguchi Memorial Institute for Medical Research in Accra, Ghana (November 2013).
- Trained two staff on Molecular Diagnosis and Serology of Infectious Diseases at the Nigerian Institute of Medical Research in Lagos, Nigeria (February 2014).
- Attended the 4th African Network for Influenza Surveillance and Epidemiology (ANISE) Meeting in Cape Town, South Africa (December 2014).
- Attended the CDC/APHL International Advanced Influenza Real-Time RT-PCR workshop in Antananarivo, Madagascar (January 2015).
- Attended training on cell culture and isolation of influenza viruses at Noguchi Memorial Institute for Medical Research, in Accra, Ghana (March 2015).

## INFLUENZA VACCINE ACTIVITIES

There was no influenza vaccination activity but there was an awareness meeting with the agency responsible for immunization to discuss the relevance of influenza data in influencing decisions on vaccination policy and program.