

# Nigeria



**Capital:** Abuja  
**Infant Mortality Rate:** 72.97/1000 live births  
**Population:** 174,507,539 (July 2013 est.)



## Overview

The Nigerian Federal Ministry of Health (FMOH) has been collaborating with 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 has been relocated to the National Epidemiology Division (under the Nigeria Center for Disease Control). Currently there are four sentinel 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.

## Highlights

- Acquired H7N9 primers from the Influenza Reagent Resource (IRR).
- Hosted a meeting of stakeholders on Influenza Surveillance Sustainability Planning (August 2013).
- Increased population awareness for the program via meetings, workshops, presentations and publications in local and international journals.
- Drafted an influenza sustainability plan.

## Surveillance

All demographic data including oropharyngeal and nasopharyngeal samples of ILI and SARI cases collected are sent to the national influenza reference laboratory (NIRL) where diagnosis and analysis is carried out. The NIRL also received samples from suspected cases of avian flu (H7N9) from the University College Hospital, Ibadan (outside the surveillance network) and Aminu Kano Teaching Hospital (within the surveillance network) with all results to date being negative. The total samples received for ILI and SARI between October 2012 and August 2013 were 2,014 while those processed were 1,515. During the period, the project was awarded a supplementary grant by CDC to expand SARI surveillance to one urban site in each of the two remaining geopolitical zones not currently covered by the initial grant.

### Surveillance Activities

- Developed indicators to evaluate site performance efforts.
- Conducted the 2011/2012 annual review meeting with the sites, trained NISS staff on sample collection, storage and transportation.
- Prepared a manuscript for publication on influenza surveillance.
- Created awareness among departmental staff and Nigeria Field Epidemiology and Laboratory Training Programme (NFELTP) residents on H7N9 with the Nigeria Centre for Disease Control (NCDC).

## Laboratory

The laboratory ran smoothly without any experience of out of stock reagents. Samples collected were speedily investigated using RT-PCR with a relatively short turn-around-time. Equipment (stratogene) was installed to provide additional back-up to the two current RT-PCR machines in the laboratory. Training and retraining of staff occurred while laboratory activity documentation improved. Although equipment for carrying out cell culture was installed, it has yet to be validated. Validation of BSL-2 equipment for PCR was completed. The laboratory registered with IRR and has been benefitting from the available supplies of influenza primers (including H7N9) and other reagents necessary for molecular diagnosis of Influenza. The laboratory received a team of NFEITP residents from Namibia.

### Laboratory Activities

- Received 2,014 nasopharyngeal and oropharyngeal samples consisting of 1,638 ILI and 376 SARI samples and processing 1,239 ILI and 277 SARI samples as of August 2013.
- Submitted 33 positive samples to WHO CC, Atlanta where samples were further characterized.
- Participated in a workshop on BioRisk Management organized by Sandia Laboratories (USA) in Lagos, April 2013.
- Updated laboratory standard operating procedures (SOP).
- Received consumables for the laboratory from NCDC.

## Preparedness

A new unit has been carved out by the Epidemiology Branch of the NCDC which is overseeing the pandemic preparedness. This unit has started active collaboration with the NISS Project to update the pandemic preparedness plan developed some years back (2006). The plan has been included for support in the current Federal Ministry of Health's budget plan. Improvement of laboratory detection of influenza and other respiratory viruses was key in the plan as was expansion of the number of laboratories with capacity for molecular diagnosis. Lastly, NISS is collaborating with the "Early Warning and Alert Response Network" (EWARN) established by the Federal Ministry of Health, and domiciled under NCDC, in response to previous flood disaster, to fortify the network for quick response to epidemics. NISS is also working with the FMOH's Integrated Disease Surveillance and Response (IDSR) network to actualize preparedness.

## Preparedness Activities

- Collaborated with the pandemic preparedness unit within the Epidemiology Unit of NCDC (NISS belongs to this branch).
- Conducted a preparedness plan update meeting with the pandemic preparedness unit of the Epidemiology Branch.
- Conducted a meeting with NCDC management, EWARN and other stakeholders on pandemic preparedness.
- Participated in the Ministry's pandemic preparedness exercise towards H7N9.
- Reviewed Nigeria's performance rating with Pandemic Preparedness Unit on the 12 core capabilities carried out by CDC and FMOH in August 2012.

## Training

- Participated in BioRisk Management Training, organized by Sandia Laboratories (USA) in Lagos, Nigeria (April 2013).
- Attended the Data Management and Scientific Writing Workshop for Influenza, Côte d'Ivoire (May 2013).
- Conducted the Annual Influenza Review and Capacity Building Meeting in Kuchikau, Nassarawa State, Nigeria (June 2013).

## Publications

Five-year Review of the National Influenza Sentinel Surveillance (NISS), Nigeria Bulletin of Epidemiology, ISSN:2006-6082 Special Edition, December 2012.