REPUBLIC OF CÔTE D’IVOIRE

The annual review meeting in March 2014.

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.

OVERVIEW
This cooperative agreement provides supplementary support to the Ivorian Government in order to ensure the sustainability of the influenza surveillance system over time. Among other objectives, this funding will enable an estimation of the burden of disease from influenza in Côte d’Ivoire. Moreover, it will facilitate the development of an influenza vaccine policy based on surveillance data, as well as improve detection and control of influenza and other severe respiratory illnesses.

SURVEILLANCE
The influenza surveillance network in Côte d’Ivoire is included in the Disease Early Warning System that was established in 2000. The influenza surveillance system was able to detect and investigate two outbreaks. In February 2014, an outbreak of influenza A (H3N2) virus was detected in a village north of Abidjan. One hundred twenty-four influenza cases were identified, including 12 deaths among children aged 1–11 years. The deaths were in persons with acute respiratory infection (ARI) associated with malnutrition. In April 2015, a second outbreak was detected in a city south of Abidjan. Ten cases of influenza A (H1N1)pdm09 virus infection, three in persons who were hospitalized, were recorded.

In March 2014, the annual project review meeting held in Korhogo allowed focal points to learn about attack rate, base reproductive rate, generation intervals, and vaccine efficacy. Also, the project team developed a sustainability plan in November 2013, and submitted it to CDC.

SURVEILLANCE ACTIVITIES
- Conducted two annual review meetings to assess the activities being implemented within the influenza surveillance network—the 6th in Korhogo (March 2015) and the 7th in San Pedro (June 2015).
- Developed a sustainability plan for the influenza surveillance network in November 2013.
- Conducted five supervisory visits to influenza sentinel sites by epidemiologists and a virologist from both Institut National d’Hygiène Publique (INHP) and Institut Pasteur de Côte d’Ivoire (IPCI).
- Collected data for estimating influenza burden.
- Detected and investigated two outbreaks outside of Abidjan in February 2014 and April 2015.

LABORATORY
The National Influenza Center (NIC) of Côte d’Ivoire is located at IPCI. The influenza project provided consumables and reagents each year for the diagnosis of influenza. Since 2013, in light of the increase in the number of samples that the NIC must analyze, additional supplies and reagents were purchased for the project. These materials enabled the isolation of influenza viruses during this period. In the same timeframe, 4,224 specimens from suspected cases were analyzed by the laboratory (positivity rate of 11.1%); 176 were influenza B virus, 67 influenza
A (H1N1)pdm09, 175 influenza A (H3N2), and 48 influenza A not able to be subtyped. There were three cases of co-infection with influenza A (H3N2) and (H1N1)pdm09 viruses and one case of influenza A (H1N1)pdm099 and influenza B viruses.

LABORATORY ACTIVITIES
- Collected 52 samples of viruses from October-December 2014, and shipped them to the WHO CC in Atlanta for sequencing.
- Assigned the head of the NIC to participate in quality management training in France at Agence Française de la Normalisation (AFNOR) and helped conduct and evaluate a management policy based on quality (January 2014).
- Trained a virologist on influenza sequencing and phylogenetic analysis at CDC Atlanta in November 2014.

PREPAREDNESS
In the framework of preparedness against pandemic and avian influenza threats, INHP purchased personal protective equipment (PPE) for health workers, and improved the capacities of the quick-response investigation team for local epidemics and clusters. The project organized sensitization and communication visits targeting health care workers, poultry farmers and dealers, community leaders, administrative and political authorities throughout the country.

PREPAREDNESS ACTIVITIES
- Acquired PPE which will be used to fight against epidemic or pandemic influenza, other acute respiratory infections, and emerging and/or re-emerging infectious diseases.
- Developed a functional, quick-response investigation team at the central level and in 82 health districts and sentinel sites.
- Organized a training for health care workers and key stakeholders involved in border surveillance.

TRAINING
- Conducted district-level training for 12 health professionals on sample collection, packaging, and shipping of biological specimens (July 2014).
- Designated the Head of Epidemiological Surveillance of INHP and the Head of the NIC to attend the ANISE Meeting in Cape Town, South Africa (December 2014).
- Identified an epidemiologist to attend the Conference of the International Society for Diseases Surveillance in Philadelphia, PA (December 2014).
- Identified two participants from INHP and IPCI to attend the Grants Proposal Writing Workshop in Johannesburg, South Africa (April 2015).
- Conducted training for 18 health professional workers on influenza outbreak investigation, sample collection, packaging, and shipping of biological specimens (July 2015).

INFLUENZA VACCINE ACTIVITIES
Côte d’Ivoire, within the framework of the Partnership for Influenza Vaccine Introduction (PIVI), plans to organize a mass influenza vaccination campaign in 2015; the campaign will focus on pregnant women to protect this high risk group from severe influenza infections.

This vaccination program aims to reduce the morbidity and mortality from influenza in pregnant women and protect their newborns and infants up to six months. The mass vaccination will take place in the eight health districts of Abidjan.

To this end, Côte d’Ivoire submitted an Operational Work Plan (PAO) to the Task Force for Global Health. The plan was developed in collaboration with WHO and the United Nations Children’s Fund (UNICEF). For Côte d’Ivoire, this important campaign will target 200,000 pregnant women. The total amount of vaccine required is 210,000 doses. The campaign will be organized in two phases in 2015.