

# PERU



## OVERVIEW

Peru began to develop preparedness and response plans against avian influenza in 2005. The Ministry of Health initiated advocacy to increase the awareness of health and non-health authorities, and to encourage working together to prepare to face a potential influenza pandemic threat. This work was the first line of response against the 2009 influenza pandemic. In 2010, Peru's Ministry of Health and the Directorate General of Epidemiology entered into an agreement to strengthen surveillance and detection for avian and human influenza in the country. Peru's influenza surveillance system uses sentinel sites to identify influenza-like illness (ILI) and severe acute respiratory infection (SARI) case patients throughout the country. Laboratory testing for influenza viruses takes place in the 15 regional laboratories, as well as the National Influenza Center (NIC) located in the National Institute of Health (INS) in Lima.

## SURVEILLANCE

Peru has 21 surveillance sites that perform ILI and SARI surveillance throughout the country. Since 2006, the MoH sub-committee for influenza surveillance has collaborated with the Virology Department of the U.S. Naval Medical Research Unit No. 6 (NAMRU-6) based in Peru.

### SURVEILLANCE ACTIVITIES

- Updated the guidelines for investigation and control of outbreaks of influenza and SARI.
- Developed a 'professional supervision' tool to support surveillance sites.
- Conducted a PAHO review of the Expanded Program for Immunization that also included a review of surveillance for influenza.
- Conducted meetings to analyze the surveillance system and identify methods for improvement.

## LABORATORY

Peru has a National Influenza Center, located in the laboratories of the National Health Institute in Lima that has for many years achieved 100% agreement in quality control testing, and routinely provides data to networks of the Pan American Health Organization

## HIGHLIGHTS

- Continued epidemiological surveillance of influenza and produced analysis and reports on influenza activity in the country.
- Strengthened epidemiological surveillance (notification and immediate investigation of probable and confirmed cases) of influenza A (H1N1)pdm09 virus, including cases of ILI, SARI and SARI deaths.
- Used virological data and knowledge from the surveillance system to help guide vaccination policies.

(e.g. SARInet and REVELAC-i). The laboratory also sends strains to the World Health Organization Collaborating Centre to inform decisions on the formulation of the influenza vaccine. The country has 15 regional laboratories all of which receive respiratory samples from influenza sentinel sites. Samples at the regional sites are tested using immunofluorescent assays (IFA), and those that are positive are then sent to the country's NIC for testing by RT-PCR. Testing at the NIC is done the same day samples are received and results are generally returned within 72 hours. The influenza positive samples are cultured in MDCK cells. Positive isolates are shared with CDC at least three times per year.

### LABORATORY ACTIVITIES

- Learned that influenza A (H1N1)pmd09 virus is circulating in different parts of the country; however, the type of influenza virus that presents most frequently is influenza B.

## PREPAREDNESS

In 2014, Peru revised their National Plan of Preparedness and Response to a potential pandemic of influenza and other emerging respiratory viruses.

## INFLUENZA VACCINE ACTIVITIES

In 2014, Peru distributed vaccines against influenza in all departments. As of April 2014, there was only 6.5% coverage in children under one year and 8.12% in persons over 65 years.

## RESEARCH

The Influenza Division has partnered with the Ministry of Health, PAHO, and NAMRU-6 to explore the timing of influenza in different macro-regions of Peru, the optimal time of influenza vaccination, the disease and economic burden associated with disease, and the vaccine effectiveness among potential target groups.

Research activities include:

- Describing the timing of influenza epidemics and optimal time to vaccinate using seven years of National Influenza Centre and WHO Collaborating Centre data.
- Estimating the incidence and burden of influenza in four ecologically distinct regions in Peru through a household-based community cohort study.
- Estimating the economic burden of influenza in Peru, 2009–2010.
- Exploring vaccine effectiveness of the trivalent inactivated influenza vaccine among health care workers in Lima, Peru.

