

Brazil



Capital: Brasilia
Infant Mortality Rate: 19.83/1,000 live births
Population: 201,009,62 (July 2013 est.)



Overview

Since 2011, Ministry of Health (MS) has been developing activities to strengthen influenza surveillance in order get to know the epidemiological behavior of circulating viruses, based on the decree No. 2,693, published on November 17, 2011 and republished on April 26, 2012. Currently sentinel surveillance is under expansion, with 215 sentinel units: 134 for influenza-like illness (ILI) surveillance and 81 for SARS. The cooperative agreement established with CDC in 2011 reinforced the actions of influenza surveillance in Brazil, especially in order to support the expansion and strengthening process of the surveillance network, through training, technical supervision visits, documents review, among other actions, which so far has demonstrated a better preparedness and response to the seasonality in the country.

Highlights

- Updated treatment protocol.
- Integrated epidemiological surveillance, the laboratory network and health care activities.
- Expanded deployed sentinel units.
- Updated the influenza sentinel information system (SIVEP_Flu).
- Decentralized the diagnosis of influenza by molecular biology.
- Offered distance learning course on clinical management.
- Expanded vaccination recommendation group with high vaccination coverage (above 80%).

Surveillance

The ILI sentinel surveillance system was created in 2000 and the SARS universal surveillance in 2009. In 2011 sentinel surveillance expanded to SARS in ICU and the Ministry of Health (MOH) offered financial support to states and municipalities for strengthening activities. Initially there were 59 sentinel units (US) and currently there are 319 ILI + SARS ICU US, and more than 60% (215/319) of the sentinel units are deployed. It is recommended to collect five samples of ILI patients weekly and samples from all hospitalized cases of SARS. Training, monitoring visit to the states and municipalities and meeting with the surveillance network, laboratories and health care were performed.

Laboratory

The laboratory network in Brazil has three NICs and 27 state labs, and 14% (51) of them perform molecular biology (RT-PCR in real time) diagnosis. Recently we have seen progress in the expansion of laboratory diagnosis with significant integration of surveillance activities and laboratory. CDC training on diagnostic molecular biology, phylogenetic analyzes and transport of samples were offered.

Laboratory Activities

- Tested 37,553 specimens from January to August 2013; 7,304 tested positive for influenza viruses.
- Standardized flows and deadlines for etiologic diagnosis in the influenza surveillance network.
- Diagnostic standardization for the laboratory network: supply and laboratory reagent offered by MS for the diagnosis of influenza by RT-real time PCR and indirect immunofluorescence (IIF).
- Provided air transportation of samples from the states to the NICs by MS laboratories.

- Systematic review and provision of computerized systems for epidemiological surveillance (SIVEP-Flu) and laboratory (GAL), with standardized and predefined information, avoiding error bias in subsequent data analyzes.
- Monitored visits to laboratories and sentinel units in the states and municipalities.

Preparedness

Preparedness activities to the seasonality of influenza and to a possible influenza pandemic: regional seminars, online clinical management course, distribution of educational materials, health care equipment purchase, surveillance training, provision of strategic stockpiles of antiviral, integration with the health care.

Training

- Conducted training on influenza surveillance for indigenous health.
- Conducted training on the information system SIVEP-Flu for 27 states.
- Attended training on biological samples transportation by WHO.
- Conducted training in molecular biology diagnostic to NICs by CDC.
- Attended training in phylogenetic studies by CDC Influenza.
- Conducted state seminars of preparedness for seasonal influenza.
- Hosted a meeting to update the influenza protocol treatment, with the medical societies.

Special Project

Epidemiology Projects with the State of São Paulo, Brazil

During the summer of 2013, the Influenza Division hosted Dr. Ana Freitas Ribeiro, Director of the Surveillance Epidemiologic Center (CVE) for the state of São Paulo, the largest state in Brazil. As head of the CVE she is responsible for surveillance of all chronic and infectious diseases. She is also a PhD candidate in Epidemiology at the University of São Paulo, where her dissertation research focuses on the impact of pandemic influenza in the state of São Paulo. During her time with the Influenza Division, she collaborated on her PhD analyses as well as new collaborative projects between CVE-SP and CDC-Influenza Division.

Working with the Influenza Division, Dr. Freitas Ribeiro analyzed the impact of seasonal influenza vaccination among persons 60 years and older, on rates of influenza-associated mortality and hospitalization from 1994 to 2009 in São Paulo State to examine the impact of the introduction of seasonal influenza vaccination since 1999 among persons ages ≥ 60 years. Dr. Freitas and colleagues also conducted an analysis of increased reports of pH1N1 cases in São Paulo in 2013 and compared the pattern to the 2009 pandemic to examine how the profile of pH1N1 has changed over time. Both analyses are ongoing with Brazil.