



Influenza Cases by a New Subtype: Regional Update



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On 18 April 2009, the National IHR Focal Point of the **United States** reported the laboratory confirmation of 2 human cases of swine influenza in two children of 9 and 10 years old living in the State of California (one in the County of San Diego and the other one in Imperial County).

To date, a total of 20 human cases of swine influenza have been confirmed in the United States (8 in New York, 7 in California, 2 in Texas, 2 in Kansas and 1 in Ohio). Other suspected cases are being investigated.

This virus has been described in the United States as a new subtype of A/H1N1 not previously detected in pigs or humans.

In addition, at the end of March 2009, **Mexico** observed an unusual pattern of acute respiratory infection (SARI) cases that increased even more in the first weeks of April. From 17 to 23 April, 854 probable cases of influenza with severe pneumonia were reported, including 59 deaths. The cases were recorded in 19 of the 32 states of Mexico, but were concentrated in the Federal District, State of Mexico, and San Luis Potosí, the majority of them in previously healthy young adult people. There have been few cases in individuals under 3 or over 59 years old. Samples were sent to a laboratory in Winnipeg, Canada, for analysis. In 16 of the 18 patient samples sent, infection by influenza was confirmed, 8 of them positive for H1N1. Genetic analysis of the latter indicated that they are similar to those isolated in the United States.

In **Canada**, 4 human cases of swine influenza H1N1 were confirmed in children from the province of Nova Scotia, some of them with a recent history of travel to Cancún. All the cases developed a mild form of the disease and are subsequently recovered. Laboratory tests were conducted in Winnipeg, Canada. Indigenous transmission has not been ruled out, since not all the confirmed cases travelled to Cancún.

In relation to laboratory results, in the two confirmed cases in the United States, virus A/California/04/2009 and A/California/05/2009 were isolated. They show a pattern of genetic reassortment of the America-Eurasia virus of the swine influenza type. This particular genetic combination had not been detected in the past. Both proved to be resistant to amantadine and rimantadine, but sensitive to neuraminidase inhibitors, oseltamivir, and zanamivir. Both have been cultured in MDCK cells and inoculated in ferrets for the production of antisera. The complete genome of the virus A/California/04/2009 has been published and is available in the database of the GISAID (www.gisaid.org). The viruses of 5 other confirmed cases correspond to the same new strain.

In summary:

- There is evidence of circulation of a new strain previously undetected in pigs and humans.
- Studies are being conducted in order to determine the extent of the human-to-human transmission.

Epidemiological Surveillance and Outbreak Investigation

In the **United States**, the confirmed cases of swine influenza (H1N1) in humans were identified in five states. Research is being conducted to determine the source of infection and if there are additional cases. All the cases were slight and evolved favorably. No previous contact with pigs was registered in any of the cases.

In **Mexico**, on the other hand, prevention and control measures are underway and include intensified surveillance activities. As a precautionary measure, the closing of day-care centers, schools, and universities was enacted in Mexico City. Similarly social and cultural activities were suspended for a period of 10 days.

This new subtype of the influenza virus could be circulating in swine population, a subject currently being reviewed and investigated.

International Health Regulations (IHR)

At the request of the Director-General (DG) of WHO, the IHR Emergency Committee has been summoned and is advising the DG on the event. On its first day of deliberation, 25 April, it concluded that the present event constitutes a public health emergency of international concern. To date, no temporary recommendations have been made. The Emergency Committee will continue to advise the DG on the basis of the available information.