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 swine influenza A/H1N1 not previously detected in pigs or humans.

In addition, since 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 26 April, 1,455 probable cases of influenza with severe pneumonia were reported, including 84 deaths. The cases were recorded in 24 of the 32 states of Mexico, but were concentrated in the Federal District and the states 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. Of these 1,455 probable cases, 25 cases of swine influenza A/H1N1 have been confirmed in the reference laboratories in Winnipeg, Canada, and the Centers for Disease Control and Prevention (CDC) of the United States. The confirmed cases come from Federal District (17) and from the states of Mexico (6); Oaxaca (1), and Veracruz (1). Five deaths have been reported among the 25 confirmed cases: 4 in the Federal District and 1 in Mexico state.

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

Regarding the **laboratory results**, in the two first 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 a swine influenza virus from the Americas with a swine influenza virus from Eurasia. 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 GISAID

(www.gisaid.org) database. The viruses of other five confirmed cases correspond to the same new strain.

In summary:

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

Epidemiological Surveillance and Outbreak Investigation

In the **United States**, the confirmed cases of swine influenza A(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, including 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 have been suspended for a period of 10 days.

This new sub type of the virus could be circulating in the swine population, an issue 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.