

## **SWINE INFLUENZA (SWINE FLU)**

Governments and health officials around the world continued to take steps Tuesday (28 April 2009) against the outbreak of swine flu that has killed more than 150 people in Mexico and spread to the U.S., Europe and possibly Asia.

So far, at least 82 cases have been confirmed in other countries, including 40 in the United States, six in Canada and one in Spain. None has yet resulted in death.

With at least 12 nations including Mexico suspecting infections, the World Health Organization on Monday raised its alert level <sup>(\*)</sup> from three to four on its six-level scale.

The move means the U.N. agency has determined that the virus is capable of significant human-to-human transmission -- a major step toward a pandemic, but not necessarily inevitable, Dr. Keiji Fukuda said.

### ***What is swine influenza, and how do people become infected?***

Swine influenza, or "swine flu", is a highly contagious acute respiratory disease of pigs, caused by one of several swine influenza A viruses. Morbidity tends to be high and mortality low (1-4%). The virus is spread among pigs by aerosols, direct and indirect contact, and asymptomatic carrier pigs. Outbreaks in pigs occur year round, with an increased incidence in the fall and winter in temperate zones. Many countries routinely vaccinate swine populations against swine influenza.

Swine influenza viruses are most commonly of the H1N1 subtype, but other subtypes are also circulating in pigs (e.g., H1N2, H3N1, H3N2). Pigs can also be infected with avian influenza viruses and human seasonal influenza viruses as well as swine influenza viruses. The H3N2 swine virus was thought to have been originally introduced into pigs by humans. Sometimes pigs can be infected with more than one virus type at a time, which can allow the genes from these viruses to mix. This can result in an influenza virus containing genes from a number of sources, called a "reassortant" virus. Although swine influenza viruses are normally species specific and only infect pigs, they do sometimes cross the species barrier to cause disease in humans.

People usually get swine influenza from infected pigs, however, some human cases lack contact history with pigs or environments where pigs have been located. Human-

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#### **(\*) WHO ALERT LEVELS:**

In Phase 1 no viruses among animals reported to have caused infections in humans.

In Phase 2 animal flu virus is known to have caused infection in humans and is potential pandemic threat.

In Phase 3, animal or human-animal flu virus has caused small number of cases in people, but not sufficient for community-level outbreaks.

Phase 4 is characterized by verified human-to-human transmission of animal or human-animal flu virus, indicating greater but not inevitable risk of pandemic.

Phase 5 means human-to-human spread of virus is confirmed in two countries in one WHO region and pandemic is feared imminent.

Phase 6 characterized by community-level outbreaks in at least one other country in second WHO region. This phase indicates global pandemic is under way.

to-human transmission has occurred in some instances but was limited to close contacts and closed groups of people.

### ***Recent developments***

WHO is coordinating the global response to human cases of swine influenza A (H1N1) and monitoring the corresponding threat of an influenza pandemic.

The WHO Emergency Committee, established in compliance with the International Health Regulations (2005), held its second meeting on 27 April 2009. The Committee considered available data on confirmed outbreaks of A/H1N1 swine influenza in the United States of America, Mexico, and Canada. The Committee also considered reports of possible spread to additional countries. On the advice of the Committee, the WHO Director-General has raised the level of influenza pandemic alert from the current phase 3 to phase 4.

FAO is mobilizing its teams of experts to help ascertain if the new strain of H1N1 virus, which already killed many people in Mexico, has a direct connection to pigs.

FAO is also deploying a team of experts of the FAO OIE (World Organisation for Animal Health) Crisis Management Centre – Animal Health (CMC-AH), to Mexico this week to help the government assess the epidemiologic situation in the pig production sector.

This influenza event underlines in all countries the crucial importance of maintaining worldwide veterinary services able to implement in animals early detection of relevant emerging pathogens with a potential public health impact. This capacity is fully linked with veterinary services good governance and their compliance with OIE international standards of quality.

### ***For more information***

In addition to the links below, the Websites of the World Health Organization (<http://www.who.int>), the Food and Agriculture Organization of the United Nations (<http://www.fao.org>) and the International Office of Epizootic Diseases (<http://www.oie.int>) can be visited for further health information on this epidemic.

Swine influenza frequently asked questions, WHO, 27 April 2009  
([http://www.who.int/csr/swine\\_flu/swine\\_flu\\_faq.pdf](http://www.who.int/csr/swine_flu/swine_flu_faq.pdf))

Interim WHO guidance for the surveillance of human infection with swine influenza A(H1N1) virus, WHO, 27 April 2009  
([http://www.who.int/csr/disease/swineflu/WHO\\_case\\_definitions.pdf](http://www.who.int/csr/disease/swineflu/WHO_case_definitions.pdf))

### **Sources:**

1. <http://edition.cnn.com/2009/HEALTH/04/28/swine.flu.international/index.html>
2. [http://www.who.int/csr/swine\\_flu/swine\\_flu\\_faq.pdf](http://www.who.int/csr/swine_flu/swine_flu_faq.pdf)

3. <http://www.who.int/csr/disease/swineflu/en/index.html>
4. <http://www.who.int/en/>
5. <http://www.fao.org/news/story/en/item/13002/icode/>
6. [http://www.oie.int/eng/press/en\\_090427.htm](http://www.oie.int/eng/press/en_090427.htm)