

Swine Flu Update

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New Developments ▪ WHO Pandemic Alert Levels Overview ▪ Key Questions

By the Staff of the Center for Biosecurity

New Developments

Media outlets are reporting this afternoon that confirmed and probable cases of the new strain of H1N1 swine influenza have been discovered in Kansas, New York, and California. These reports have not been independently verified by public health officials or diagnostic testing at the time of this writing. Reportedly the cases are clinically mild.

In Mexico, media is also reporting additional possible cases in the last 24 hours, but these have not been confirmed by Mexican, U.S., or World Health Organization (WHO) health authorities at the time of this writing. President Felipe Calderón published an order Saturday that would give his government extraordinary powers to address a deadly flu epidemic, including isolation of those affected by the rare virus, inspection of their homes, and mandated closure of any public events that might result in more infection.

CDC reports it is working closely with state and local officials in California and Texas, as well as with health officials in Mexico, Canada, and the WHO. On April 24th, CDC deployed 7 epidemiologists to San Diego and Imperial counties in California and 1 senior medical officer to Texas to provide guidance and technical support for the ongoing epidemiologic field investigations. CDC has also deployed to Mexico 1 medical officer and 1 senior expert who are part of a global team that is responding to the outbreak of respiratory illnesses in Mexico.

WHO Decided to Keep Pandemic Alert Level at 3

The WHO held an expert meeting today to discuss the possibility of raising the pandemic alert level from its current level 3, but decided not to adjust that level. The rationale for this decision was not publicly reported.

The pandemic alert phases are outlined in the WHO's 2005 global influenza preparedness plan, which makes recommendations for international and national measures to be taken during phases 1 to 6 of pandemic alert. The phases scale up or down according to the WHO's assessment of the public health risk of a pandemic at that time.

According to the WHO's global influenza preparedness plan, the decision to move between phases 3, 4, and 5 is to be based on "an assessment of the risk of a pandemic" which may include consideration of "rate of transmission, geographical location and spread, severity of illness, presence of genes from human strains (if derived from an animal strain), and/or other scientific parameters."

Brief Overview of WHO's Pandemic Alert Levels

- **Phase 3** [CURRENT PHASE] of the pandemic alert period is when there are human infections with a new sub-type, but there is no human-to-human spread (or at least very rare instances of spread to a close contact). At this point, the new virus subtype must be characterized rapidly to ensure early detection, notification and response of additional cases.
- **Phase 4** may occur when there are small clusters (e.g., <25 human cases lasting <2 weeks) with limited human-to-human transmission, but spread is highly localized (which suggests the virus does not adapt well to humans). During this phase, WHO describes a variety of measures (such as targeted use of antiviral medications) aimed at containing the virus within a limited area or to delay spread to buy time to implement preparedness measures, such as vaccine development.
- **Phase 5** may occur when there are large clusters (e.g., 25-50 cases lasting 2 to 4 weeks), but human-to-human spread is still localized. The virus may not yet be fully transmissible. At this point, it is imperative to continue efforts to contain or delay spread of the virus, to both avert a pandemic and to implement pandemic response measures.
- **Phase 6** is when transmission to the general population has increased and is sustained, meaning there is a pandemic. All efforts to minimize the impacts of the pandemic are necessary at this time.

Key Questions

Many important questions remain unanswered:

- What is the epidemiology of this outbreak?
- What is the spectrum of clinical disease and the incidence of sub-clinical infection with this strain of swine flu in Mexico and the U.S.?
- How many deaths in Mexico are laboratory confirmed cases of swine influenza?
- Is the current seasonal influenza vaccine effective against this virus?
- What is the efficacy of various containment measures that have been tried already or may be considered by political and health authorities?

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