Novel Influenza Update

April 24, 2009

Swine Influenza A(H1N1) Outbreak

Developing situation in California, Texas and Mexico

There have been 8 U.S. cases of a novel Influenza A(H1N1) virus reported as of 2:30 PM CST on 4/24/08. These have been identified in California and Texas.

There are reports of higher numbers of cases in Mexico associated with deaths.

There have been no changes in Pandemic Level at present, but this situation is being closely and seriously monitored by the CDC and the WHO.

This strain appears to be sensitive to neuraminidase inhibitors (oseltamivir and zanamivir), but resistant to adamantanes (amantadine and rimantadine).

Pay close attention to any patients presenting now with influenza-like illness (fever of 100 degrees F or higher along with sore throat and/or cough), particularly if they have had travel to California, Texas or Mexico within the previously 7 days. Wisconsin's influenza season is almost played out, so new cases should be assessed carefully. Any specimens should be forwarded to the Wisconsin State Laboratory of Hygiene for testing.

Additional information is available at: http://www.cdc.gov/flu/swine/key_facts.htm

I have attached the most recent surveillance report with additional information from the Wisconsin State Laboratory of Hygiene.

An addition resource as this novel influenza A (H1N1) outbreak emerges.
http://www.cdc.gov/flu/swine/investigation.htm#pa_health

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VIRUS SURVEILLANCE REPORT
Wisconsin State Laboratory of Hygiene
April 24, 2009

- **Expanded Influenza Surveillance Specimen Request:** The Wisconsin State Laboratory of Hygiene (WSLH) in consultation with the Wisconsin Division of Public Health has expanded Wisconsin's laboratory-based influenza surveillance to monitor for any possible infections with the swine influenza A(H1N1) viruses that have been detected in California and Texas (see background information below and additional information available at http://www.cdc.gov/flu/swine/investigation.htm#residents). All of the swine influenza A(H1N1) viruses associated with the cluster in California and Texas contained an unusual genetic make-up that had not been seen in either humans or swine in the U.S. or elsewhere. The viruses from the first two cases are resistant to amantadine and rimantadine, but sensitive to zanamivir and oseltamivir.

  There have been no known cases of this variant of swine influenza A(H1N1) in Wisconsin. **We are, however, requesting the following expanded influenza surveillance until further notice:**

  - ***Rapid Testing Sites:*** **Please forward *all* specimens that are positive for influenza A to the WSLH for confirmatory testing and subtyping until further notice**. Please send a portion of the specimen before treatment with test reagents or send a second specimen in virus transport medium.
  - ***Viral Culture and PCR Laboratories***: **Please forward *all* specimens that are positive for influenza A to the WSLH for confirmatory testing and subtyping until further notice.**
    - **Please review your inventory/repository and submit at least 0.5 ml. of *all* influenza A positive specimens and cell culture isolates that were received after February 1 and held at freezer temperatures (if they were not previously submitted to the WSLH).**
  - ***If any patients present with influenza-like illness ("ILI") within 7 days of travel to San Diego or Imperial Counties in California or San Antonio, Texas***, send a portion of nasopharyngeal/throat specimen in virus transport medium to the WSLH for testing.
  - ***Specimen Submission and Transport:*** Submitters should follow the specimen submission and transport guidelines used for other influenza specimens this season so that testing and standard next day transport via Dunham Express will be at no charge to the submitter. Testing sites and Laboratories should use their WSLH requisition forms for confirmatory or identification testing.
  - ***Other information for testing sites and laboratories:*** The sensitivity of rapid tests and cell cultures for this virus is not currently known. At this time in Wisconsin, biosafety recommendations for laboratories and testing sites remain unchanged from those for seasonal influenza.
  - **Additional information will be provided as it becomes available.**

- **Swine Influenza A (H1N1) Infection in Two Children - Southern California, March-April 2009, MMWR Dispatch, April 21, 2009 / 58 (Dispatch);1-3.** The following 3 is excerpted from the initial MMWR report on two human cases of swine influenza in California.

  *On April 17, 2009, CDC determined that two cases of febrile respiratory illness occurring in children who resided in adjacent counties in southern California were caused by infection with a swine influenza A (H1N1) virus. The viruses from the two cases are closely related genetically, resistant to amantadine and rimantadine, and contain a unique combination of gene segments that previously has not been reported among swine or human influenza viruses in the United States or elsewhere. Neither child had contact with pigs; the source of the infection is unknown …. Although this is not a new subtype of influenza A in humans, concern exists that this new strain of swine influenza A (H1N1) is substantially different from human influenza A (H1N1) viruses, that a large proportion of the population might be susceptible to infection, and that the seasonal influenza vaccine H1N1 strain might not provide protection. The lack of known exposure to pigs in the two cases increases the possibility that human-to-human transmission of this new influenza virus has occurred. Clinicians should consider animal as well as seasonal influenza virus infections in their differential diagnosis of patients who have febrile respiratory illness and who 1) live in San Diego and Imperial counties or 2) traveled to these counties or were in contact with ill persons from these counties in the 7 days preceding their illness onset, or 3) had recent exposure to pigs. Clinicians who suspect swine influenza virus infections in a patient should obtain a respiratory specimen and contact their state or local health department to facilitate testing at a state public health laboratory. See **www.cdc.gov/mmwr/preview/mmwrhtml/mm58d0421a1.htm*** for the full article.

- **Measles and Rubella:** Cases of measles have been reported this spring in Iowa, Pennsylvania, Maryland, Virginia and Washington, D.C. Minnesota reported its first case of rubella since 2000, in an unvaccinated woman in the Twin Cities area.
- **Seasonal Influenza:** Influenza positives are now being reported at very low levels; influenza positivity by antigen detection was 8% statewide during the week ending April 18, 2009. Positive predictive values are near their lowest levels; negative predictive values are again approaching their highest levels.
- **RSV:** The number tested, number positive, and percent positive for RSV by antigen detection continued to decrease during the week ending April 18; positivity is 9%, ranging from 2% to 17% by region. Positive predictive values are decreasing to low levels; negative predictive values are increasing.
- **Graphs at WSLH Website**: See statewide and regional graphs of influenza, RSV, and rotavirus testing at http://www.slh.wisc.edu/labupdates/
- **Avian Influenza: Enhanced surveillance for avian influenza remains in effect in Wisconsin.** Contact Division of Public Health (608-266-5326 7:45-4:30 Monday-Friday; after-hours, call 608-258-0099 and ask for "Communicable Disease Epidemiologist on-call") prior to submitting specimens for fee-exempt transport and testing of persons with influenza-like illness that have returned from a country affected with human cases of avian influenza. Call the WSLH emergency number (608-263-3280) if you need assistance.

WHEN SUBMITTING INFLUENZA SPECIMENS TO THE WSLH, include the name & phone number of the healthcare provider and whether the patient has a farm connection, especially contact with swine.