



Epidemiology and Response Division

NEW MEXICO INFLUENZA SURVEILLANCE UPDATE from the Epidemiology and Response Division of the New Mexico Department of Health (NMDOH)

Weekly Report ending April 15, 2006 (MMWR Week 15)

Posted on April 20, 2006.

Summary of Influenza Activity in New Mexico for Week Ending April 15, 2006:

- Nineteen of the 21 sentinel sites reported a total of 4,781 patient visits, of which 19 (0.39 %) were positive for an influenza-like illness (ILI)¹. The previous week ending March 25th reported 0.67 % influenza-like illness².
- Sentinel clinical laboratories reported that 3.3 % of influenza rapid antigen or immunofluorescence tests were positive for influenza A, and 8.1 % were positive for Influenza B.
- NMDOH reported the state influenza activity as “SPORADIC” to the Centers for Disease Control and Prevention (CDC) (see table below for definitions).

Laboratory Activity in NM:

- For the week ending April 15, 2006, 17 of 17 sentinel clinical laboratories reported performing 123 rapid antigen or immunofluorescence (i.e., direct fluorescent antibody staining, DFA) tests, of which 4 (3.2 %) were positive for influenza A, 10 (8.1 %) were positive for influenza B and none were indistinguishable³.
- Since October 2, 2005, 17 sentinel clinical laboratories have reported the results of 9,135 rapid influenza tests. One thousand, three hundred and eighty-three (15.1 %) tests were positive, of which 1,252 detected influenza A, 126 detected influenza B, and 5 were indistinguishable.
- NMDOH Scientific Laboratory Division (SLD) has isolated 68 (33%) influenza A and 7 (3.4%) influenza B in 207 specimens submitted since October 2005². Subtyping of the influenza A cultures has revealed 67 H3 and 1 H1 viral subtypes. Further antigenic testing by CDC of four H3's and the one H1 from this group, collected between 11/28 and 12/18/05, revealed strains that were included in the 2005-06 vaccine. SLD subtyping of the 7 influenza B isolates has revealed Hong Kong-like strains (from the Victoria lineage).

Influenza-Related Pediatric Mortality

Since October 2, 2005, CDC has received reports of 22 influenza-related pediatric deaths, 20 of which occurred during the current influenza season. There has been one pediatric flu-related death in NM thus far this season.

Flu Activity in the Mountain Region and Texas

For the week ending April 8, 2006 (the most recent data available), influenza activity was reported as “Regional” by Montana; “Local” by Nevada and Colorado and “Sporadic” by Texas, Wyoming, Idaho, New Mexico, Arizona and Utah. Since October 2, 2005,

¹ Influenza-like Activity (ILI) is defined as Fever ($\geq 100^{\circ}\text{F}$ [37.8°C], oral or equivalent) AND cough and/or sore throat in absence of a KNOWN cause other than influenza.

² Weekly ILI and lab data may change as additional reports are compiled.

³ Some rapid influenza tests cannot differentiate between types A and B.

laboratory testing from the National Respiratory and Enteric Virus Surveillance System (NREVSS) in the Mountain Region (NM, AZ, CO, UT, NV, ID, MT, WY) has identified 857 influenza A H3N2 isolates, 5 influenza A H1N1 isolates, 986 influenza A unknown subtype isolates, and 591 influenza B isolates.³

National Flu Surveillance and Laboratory Activity

Nationwide, for the week ending April 8, 2006, 1.9 % of patient visits to U.S. sentinel providers were due to influenza-like illness, which is below the national baseline of 2.2%. Influenza activity was reported as “Widespread” by 10 states; “Regional” by 10 states; “Local” by 15 states, New York City and the District of Columbia; “Sporadic” by 14 states and Puerto Rico; and “No Activity” by one state. One state did not report. More information on national surveillance can be found at <http://www.cdc.gov/flu/weekly/>.

For the week ending April 8, 2006, 300 (15.7 %) of 1,980 specimens tested for influenza viruses were positive by culture. Of these, 24 were influenza A (H3N2), 36 were influenza A (H1N1), 77 were influenza A that were not subtyped, and 163 were influenza B. During the past three weeks (weeks 12-14), the percentage of specimens testing positive for influenza has ranged from 26.4 % in the South Atlantic region to 12.5 % in the Mid-Atlantic region. During weeks 12-14, the Pacific, Mountain and West North Central regions reported the highest proportion of isolates as influenza B (between 61-62%).

Antigenic characterization of 575 influenza viruses by CDC, since October 2005, has indicated the following:

- Three hundred and fifty-two (77.7 %) out of 453 H3N2 influenza A isolates are A/California/7/2004-like.
- Thirty-nine (92.9 %) of the 42 H1 influenza A isolates were antigenically similar to the vaccine strain A/New Caledonia/20/99.
- Twenty nine (36.3 %) of the 80 influenza B viruses belong to the B/Yamagata lineage: twenty-four are B/Florida/07/2004-like (a minor antigenic variant of B/Shanghai/361/2002) and five are antigenically similar to the 2005-2006 vaccine strain B/Shanghai/361/2002. Fifty-one (63.8 %) influenza B viruses belong to the B/Victoria lineage and all were similar to B/Ohio/1/2005, the influenza B component selected for the 2006-07 vaccine.

Components of 2005-06 influenza vaccines:

- Fluvirin® (Chiron) contains A/California/7/2004-like (H3N2); and A/New Caledonia/20/99-like (H1N1); and B/Shanghai/361/2002-like strain.
- Both Fluzone® (sanofi) and Fluarix™ (GSK) contain A/New York/55/2004 (H3N2, an A/California/7/2004-like strain); and A/New Caledonia/20/99 (H1N1); and B/Jiangsu/10/2003 (a B/Shanghai/361/2002-like strain).
- FluMist® (Medimmune, live attenuated vaccine) contains A/California/7/2004-like (H3N2); and A/New Caledonia/20/99 (H1N1); and B/Jiangsu/10/2003 (a B/Shanghai/361/2002-like strain).

Composition of the 2006-2007 Influenza Vaccine

WHO has recommended that the 2006-07 trivalent influenza vaccine for the Northern Hemisphere contain A/New Caledonia/20/99-like (H1N1), A/Wisconsin/67/2005-like (H3N2) and B/Malaysia/2506/2004-like viruses. The influenza A (H3N2) and the

influenza B components have been changed from the 2005-06 season vaccine components. A/Wisconsin/67/2005 is an antigenic variant of the current vaccine strain A/California/07/2004. Influenza B viruses currently circulating can be divided into two antigenically distinct lineages represented by B/Yamagata/16/88 and B/Victoria/2/87 viruses. The updating of the influenza B component to B/Ohio/1/2005 (which is antigenically equivalent to B/Malaysia/2506/2004) represents a change to the B/Victoria lineage, based on antigenic analyses of recently isolated influenza viruses, epidemiologic data and post-vaccination serologic studies in humans.

This information is collected by the Infectious Disease Epidemiology Bureau, Epidemiology Response Division, NMDOH. For questions, please call 505-827-0006. For more information on influenza go to the NMDOH web page: <http://www.health.state.nm.us/flu/> or the CDC web page: <http://www.cdc.gov/ncidod/diseases/flu/fluivirus.htm>

Activity Level	ILI activity*/Outbreaks		Laboratory data
No activity	Low	And	No lab confirmed cases [†]
Sporadic	Not increased	And	Isolated lab-confirmed cases
	OR		
Local	Not increased	And	Lab confirmed outbreak in one institution [‡]
	OR		
Regional	Increased ILI in 1 region**; ILI activity in other regions is not increased	And	Recent (within the past 3 weeks) lab evidence of influenza in region with increased ILI
	OR		
Regional (doesn't apply to states with ≤4 regions)	2 or more institutional outbreaks (ILI or lab confirmed) in 1 region; ILI activity in other regions is not increased	And	Recent (within the past 3 weeks) lab evidence of influenza in region with the outbreaks; virus activity is no greater than sporadic in other regions
	OR		
Regional (doesn't apply to states with ≤4 regions)	Increased ILI in ≥2 but less than half of the regions	And	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
	OR		
Regional (doesn't apply to states with ≤4 regions)	Institutional outbreaks (ILI or lab confirmed) in ≥2 and less than half of the regions	And	Recent (within the past 3 weeks) lab confirmed influenza in the affected regions
	OR		
Widespread	Increased ILI and/or institutional outbreaks (ILI or lab confirmed) in at least half of the regions	And	Recent (within the past 3 weeks) lab confirmed influenza in the state.

* ILI activity can be assessed using a variety of data sources including sentinel providers, school/workplace absenteeism, and other syndromic surveillance systems that monitor influenza-like illness.

† Lab confirmed case = case confirmed by rapid diagnostic test, antigen detection, culture, or PCR. The sensitivity and specificity of these tests vary and the predicative value positive may be low outside the time of peak influenza activity. Therefore, a state may wish to obtain laboratory confirmation of influenza by testing methods other than point of care rapid tests for reporting the first laboratory confirmed case of influenza of the season. For assigning an influenza activity level, NMDOH Epidemiology and Response Division utilizes results of rapid influenza testing only after receiving evidence of at least one culture confirmed case.

‡ Institution includes nursing home, hospital, prison, school, etc.

**Region: population under surveillance in a defined geographical subdivision of a state. NMDOH Epidemiology and Response Division uses the five Public Health Regions for our state subdivisions.

Influenza Surveillance Graphs:

