



# 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 May 20, 2006 (MMWR Week 20)

*Final report of the 2005-06 Influenza Season*

### Summary of Influenza Activity in New Mexico for Week Ending May 20, 2006:

- Nineteen of the 21 sentinel sites reported a total of 4,556 patient visits, of which 8 (0.17 %) were positive for an influenza-like illness (ILI)<sup>1</sup>. The previous week ending May 13th reported 0.14 % influenza-like illness<sup>2</sup>.
- Sentinel clinical laboratories reported that no influenza rapid antigen or immunofluorescence tests were positive for influenza A or B.
- NMDOH reported the state influenza activity as “NO ACTIVITY” to the Centers for Disease Control and Prevention (CDC) (see table below for definitions).

### Laboratory Activity in NM:

- For the week ending May 20, 2006, 11 of 17 sentinel clinical laboratories reported performing 3 rapid antigen or immunofluorescence (i.e., direct fluorescent antibody staining, DFA) tests, of which none were positive for influenza A or B<sup>3</sup>.
- Since October 2, 2005, 17 sentinel clinical laboratories have reported the results of 9,361 rapid influenza tests. One thousand, three hundred and ninety-six (14.9 %) tests were positive, of which 1,259 detected influenza A, 132 detected influenza B, and 5 were indistinguishable.
- NMDOH Scientific Laboratory Division (SLD) has isolated 68 (31.6 %) influenza A and 14 (6.5 %) influenza B in 215 specimens submitted since October 2005<sup>2</sup>. Subtyping of the influenza A cultures has revealed 68 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 14 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 35 influenza-related pediatric deaths, 33 of which occurred during the current influenza season. There have been three pediatric flu-related deaths in NM thus far this season (infant and 2 children).

### Flu Activity in the Mountain Region and Texas

For the week ending May 13, 2006 (the most recent data available), influenza activity was reported as “Sporadic” by Montana, Nevada, Colorado, Wyoming, Arizona, and Utah; and “No Activity” by Idaho, New Mexico and Texas. Since October 2, 2005, 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 880 influenza

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

<sup>2</sup> Weekly ILI and lab data may change as additional reports are compiled.

<sup>3</sup> Some rapid influenza tests cannot differentiate between types A and B.

A H3N2 isolates, 5 influenza A H1N1 isolates, 1,082 influenza A unknown subtype isolates, and 703 influenza B isolates.<sup>3</sup>

**National Flu Surveillance and Laboratory Activity**

Nationwide, for the week ending May 13, 2006, 1.2 % 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 “Regional” by 1 state; “Local” by 1 state; “Sporadic” by 29 states, New York City, the District of Columbia and Puerto Rico; and “No Activity” by 19 states. More information on national surveillance can be found at <http://www.cdc.gov/flu/weekly/>.

For the week ending May 13, 2006, 92 (8.4 %) of 1,097 specimens tested for influenza viruses were positive by culture. Of these, 35 were influenza A that were not subtyped, and 57 were influenza B. During the past three weeks (weeks 17-19), the percentage of specimens testing positive for influenza has ranged from 18 % in the West South Central region to 3.2 % in the Atlantic region; 66.7% of isolates were influenza B.

Antigenic characterization of 819 influenza viruses by CDC, since October 2005, has indicated the following:

- Three hundred and eighty-one (75.7 %) out of 503 H3N2 influenza A isolates are A/California/7/2004-like.
- Eighty-five (96.6 %) of the 88 H1 influenza A isolates were antigenically similar to the vaccine strain A/New Caledonia/20/99.
- Fifty-two (22.8 %) of the 228 influenza B viruses belong to the B/Yamagata lineage: forty-three are B/Florida/07/2004-like (a minor antigenic variant of B/Shanghai/361/2002); eight are antigenically similar to the 2005-2006 vaccine strain B/Shanghai/361/2002 and one showed reduced titers with antisera of both strains. One hundred seventy-six (77.2 %) 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.

**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.

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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/fluvirus.htm>

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

<sup>†</sup> 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.

<sup>‡</sup> 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:**

