



# 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 22, 2006 (MMWR Week 16)

Posted on April 27, 2006.

### **Summary of Influenza Activity in New Mexico for Week Ending April 22, 2006:**

- Nineteen of the 21 sentinel sites reported a total of 4,898 patient visits, of which 9 (0.18 %) were positive for an influenza-like illness (ILI)<sup>1</sup>. The previous week ending April 15<sup>th</sup> reported 0.39 % influenza-like illness<sup>2</sup>.
- Sentinel clinical laboratories reported that 8 % of influenza rapid antigen or immunofluorescence tests were positive for influenza A, and 4 % 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 22, 2006, 17 of 17 sentinel clinical laboratories reported performing 50 rapid antigen or immunofluorescence (i.e., direct fluorescent antibody staining, DFA) tests, of which 4 (8 %) were positive for influenza A, 2 (4 %) were positive for influenza B and none were indistinguishable<sup>3</sup>.
- Since October 2, 2005, 17 sentinel clinical laboratories have reported the results of 9,185 rapid influenza tests. One thousand, three hundred and eighty-nine (15.1 %) tests were positive, of which 1,256 detected influenza A, 128 detected influenza B, and 5 were indistinguishable.
- NMDOH Scientific Laboratory Division (SLD) has isolated 68 (32.1%) influenza A and 8 (3.8%) influenza B in 207 specimens submitted since October 2005<sup>2</sup>. 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 8 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 24 influenza-related pediatric deaths, 22 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 15, 2006 (the most recent data available), influenza activity was reported as “Sporadic” by Montana, Nevada, Colorado, Wyoming, Idaho, New Mexico, Arizona, Utah and Texas. Since October 2, 2005, laboratory testing from the National

<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.

Respiratory and Enteric Virus Surveillance System (NREVSS) in the Mountain Region (NM, AZ, CO, UT, NV, ID, MT, WY) has identified 856 influenza A H3N2 isolates, 5 influenza A H1N1 isolates, 1,004 influenza A unknown subtype isolates, and 627 influenza B isolates.<sup>3</sup>

### **National Flu Surveillance and Laboratory Activity**

Nationwide, for the week ending April 15, 2006, 1.5 % 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 5 states; “Regional” by 5 states; “Local” by 16 states, New York City and the District of Columbia; “Sporadic” by 23 states and “No Activity” by one state. More information on national surveillance can be found at <http://www.cdc.gov/flu/weekly/>.

For the week ending April 15, 2006, 221 (12.3 %) of 1,795 specimens tested for influenza viruses were positive by culture. Of these, 25 were influenza A (H3N2), 18 were influenza A (H1N1), 60 were influenza A that were not subtyped, and 118 were influenza B. During the past three weeks (weeks 13-15), the percentage of specimens testing positive for influenza has ranged from 27.8 % in the South Atlantic region to 10.1 % in the East South Central region. During weeks 13-15, the West North Central, East North Central and Mountain regions reported the highest proportion of isolates as influenza B (61-66%).

Antigenic characterization of 624 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.
- Forty (93 %) of the 43 H1 influenza A isolates were antigenically similar to the vaccine strain A/New Caledonia/20/99.
- Forty (31.3 %) of the 128 influenza B viruses belong to the B/Yamagata lineage: thirty-four are B/Florida/07/2004-like (a minor antigenic variant of B/Shanghai/361/2002); five are antigenically similar to the 2005-2006 vaccine strain B/Shanghai/361/2002 and one showed reduced titers with antisera of both strains. Eighty-eight (68.8 %) 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/fluvirus.htm>

Activity Level	ILI activity*/Outbreaks		Laboratory data
No activity	Low	And	No lab confirmed cases <sup>†</sup>
Sporadic	Not increased	And	Isolated lab-confirmed cases
	<b>OR</b>		
Local	Not increased	And	Lab confirmed outbreak in one institution <sup>‡</sup>
	<b>OR</b>		
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
	<b>OR</b>		
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
	<b>OR</b>		
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
	<b>OR</b>		
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
	<b>OR</b>		
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.

<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:

