



# Epidemiology and Response Division

## NEW MEXICO INFLUENZA SURVEILLANCE UPDATE 2006-2007 Influenza Season

*Epidemiology and Response Division, New Mexico Department of Health (NMDOH)*

### Weekly Report ending April 7, 2007 (MMWR Week 14)

NMDOH reported the state influenza activity as “**Sporadic**” to the Centers for Disease Control and Prevention (CDC) (see table below for definitions). The Scientific Lab Division (SLD) has received 379 culture specimens since the beginning of the season. One hundred and seventeen specimens (30.9%) have been culture-positive and typed: 109 type A with subtyping showing a predominance of H1 over H3, and 8 type B. At this point in the season a subset of 5 specimens (two typeA/H1, one type A/H3 and two type B) has undergone further antigenic characterization at CDC. Results indicate that all the specimens match the strains in this season’s vaccine.

### **Summary of Influenza Activity in New Mexico for Week Ending 4/7/07<sup>1</sup>:**

- Eighteen of the 19 sentinel sites reported a total of 5,231 patient visits, of which 59 (1.12%) were positive for an influenza-like illness (ILI)<sup>2</sup>. The previous week ending March 31st reported 1.53% influenza-like illness.

### **Summary of Sentinel Laboratory Activity in New Mexico:**

Period of 2006-2007 Influenza Season	Number of Tests Performed**	Positive Type A (n,%)	Positive Type B (n,%)	Positive Type Unknown <sup>3</sup> (n,%)	Total Positive All Types (n,%)
Week ending 4/7/07 (31 of 31 labs reporting)	297	35 (11.78%)	2 (0.67%)	4 (1.35%)	41 (13.8%)
Cumulative as of 10/1/06	9702	1135 (11.7%)	44(0.45%)	33 (0.34%)	1212 (12.49%)

\*\*Includes rapid antigen and immunofluorescence testing (i.e., direct fluorescent antibody staining)

Note: The sensitivity and specificity of point of care rapid diagnostic tests vary during times when influenza is not circulating widely. The NM Influenza Surveillance Program expects some false positive rapid diagnostic results outside the time of peak influenza activity (i.e., beginning and end of season). The first NM laboratory confirmed case of the influenza season is based on a positive viral culture result.

### **Influenza-Related Pediatric Mortality:**

There have been forty cases of influenza-related pediatric deaths reported to CDC this influenza season. NM has reported one confirmed influenza-related pediatric death this influenza season.

### **Reported Flu Activity in the Mountain Region and Texas, Week Ending 3/31/07:**

Regionally, for the week ending 3/31/07, of the 7 other states in the Mountain Region, one state (Montana) reported “widespread” activity, three states (Idaho, Wyoming and Colorado) reported “regional” activity, two states (Arizona and Nevada) reported “local” activity and one state (Utah) reported “sporadic” activity. Texas reported “regional” activity.

<sup>1</sup> Weekly ILI and lab data may change as additional reports are compiled.

<sup>2</sup> Influenza-like Activity (ILI) is defined as Fever (≥ 100°F [37.8° C], oral or equivalent) AND cough and/or sore throat in absence of a KNOWN cause other than influenza.

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

**National Flu Surveillance and Laboratory Activity, Week Ending 3/31/07:**

Nationwide, for the week ending 3/31/07, 2.2% of patient visits to U.S. sentinel providers were due to ILI, which is slightly above the national baseline of 2.1 %. Influenza activity was reported as “Widespread” by 10 states, “Regional” by 9 states, ”Local” by 13 states and New York City, and “Sporadic” by 17 states and the District of Columbia. One state (Ohio) reported “No Activity”.

During this same week, WHO and NREVSS laboratories reported 2,524 specimens tested for influenza viruses, 260 (10.3%) of which were positive:17 influenza A (H1), 19 influenza A (H3), 145 influenza A that were not subtyped, and 79 influenza B viruses.

Beginning in October 2006, CDC has performed the antigenic characterization of 454 influenza virus isolates. The following table summarizes the consistency of the isolates with the antigenic makeup of this season’s vaccine

2006-2007 Vaccine Makeup	Type, Subtype	Number of Antigenically Similar Isolates	Total Number of Sub-typed Isolates	% Matching Similar to Vaccine Strain
A/New Caledonia/20/1999-like	A (H1)	296	296	100%
A/Wisconsin/67/2005-like	A (H3)	40	40	100%
B/Ohio/01/2005*	B	87	118	74%

\*Some vaccine manufacturers may have included B/Malaysia/2506/2004-like as the B component. These two vaccine strains are antigenically equivalent and belong to the B/Victoria lineage of viruses.

**Update on vaccine recommendations for the next influenza season:**

**Recommended vaccine composition of influenza virus vaccines for use in the 2007-2008 influenza season:**

- an A/Solomon Islands/3/2006 (H1N1)-like virus (replacing A/New Caledonia/20/1999-like)
- an A/Wisconsin/67/2005 (H3N2)-like virus<sup>a</sup>
- a B/Malaysia/2506/2004-like virus

<sup>a</sup> Vaccine viruses include:

A/Wisconsin/67/2005 (H3N2) and A/Hiroshima/52/2005

More information on national surveillance can be found at <http://www.cdc.gov/flu/weekly/>.

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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>
	<b>OR</b>		
<b>Regional</b> (doesn't apply to states with ≤4 regions)	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>OR</b>		
<b>Regional</b> (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	<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>OR</b>		
<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.

\*Influenza-like illness: Fever ( $\geq 100^{\circ}\text{F}$  [ $37.8^{\circ}\text{C}$ ], oral or equivalent) and cough and/or sore throat (in the absence of a known cause other than influenza)

<sup>†</sup> Lab confirmed case = case confirmed by rapid diagnostic test, antigen detection, culture, or PCR. Care should be given when relying on results of point of care rapid diagnostic test kits during times when influenza is not circulating widely. The sensitivity and specificity of these tests vary and the predictive 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.

<sup>‡</sup> Institution includes nursing home, hospital, prison, school, etc.

\*\*Region: population under surveillance in a defined geographical subdivision of a state. A region could be comprised of 1 or more counties and would be based on each state's specific circumstances. Depending on the size of the state, the number of regions could range from 2 to approximately 12. The definition of regions would be left to the state but existing state health districts could be used in many states. Allowing states to define regions would avoid somewhat arbitrary county lines and allow states to make divisions that make sense based on geographic population clusters. Focusing on regions larger than counties would also improve the likelihood that data needed for estimating activity would be available.

## Influenza Surveillance Graphs:

