NEW MEXICO INFLUENZA SURVEILLANCE UPDATE from the Epidemiology and Response Division of the New Mexico Department of Health (NMDOH)
Weekly Report ending February 25, 2006 (MMWR Week 8)
Posted on March 1, 2006.

Summary of Influenza Activity in New Mexico for Week Ending February 25, 2006:

- Nineteen of the 21 sentinel sites reported a total of 4,921 patient visits, of which 48 (0.97 %) were positive for an influenza-like illness (ILI)[1]. The previous week ending February 18th reported 1.04 % influenza-like illness[2].
- Sentinel clinical laboratories reported that 2.57 % of influenza rapid antigen or immunofluorescence tests were positive for influenza A, and 0.93 % 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 February 25, 2006, 16 of 17 sentinel clinical laboratories reported performing 428 rapid antigen or immunofluorescence (i.e., direct fluorescent antibody staining, DFA) tests, of which 11 (2.57 %) were positive for influenza A, 4 (0.93 %) were positive for influenza B and none were indistinguishable[3].
- Since October 2, 2005, 17 sentinel clinical laboratories have reported the results of 7,638 rapid influenza tests. One thousand, two hundred and forty-six (16.3 %) tests were positive, of which 1,202 detected influenza A, 39 detected influenza B, and 5 were indistinguishable.
- NMDOH Scientific Laboratory Division (SLD) has isolated influenza A in 67 of 194 (34.5%) [2] specimens submitted since October 2005. Subtyping of the influenza A cultures has revealed 49 H3 and 1 H1 viral subtypes; N subtyping by CDC is pending.

Influenza-Related Pediatric Mortality

CDC reported no influenza-related pediatric deaths in Week 7. Since October 2, 2005, CDC has received reports of fourteen influenza-related pediatric deaths, twelve of which occurred during the current influenza season. There have been no reported deaths in NM.

Flu Activity in the Mountain Region and Texas

For the week ending February 18, 2006 (the most recent data available), influenza activity was reported as "Widespread" by Texas, Wyoming and Colorado; "Regional" by Montana, "Local" by Nevada, New Mexico and Arizona; and "Sporadic" by Utah. Idaho did not report. 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 732 influenza A H3N2 isolates, 5 influenza A H1N1 isolates, 562 influenza A unknown subtype isolates, and 72 influenza B isolates.[3]

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[1] 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.
[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.

National Flu Surveillance and Laboratory Activity
Nationwide, for the week ending February 18, 2006, 2.8 % of patient visits to U.S. sentinel providers were due to influenza-like illness, which is above the national baseline of 2.2%. Influenza activity was reported as 'Widespread' by 17 states and New York City, 'Regional' by 18 states, 'Local' by 10 states and 'Sporadic' by 4 states and Puerto Rico. The District of Columbia reported "No Activity" and one state did not report. More information on national surveillance can be found at http://www.cdc.gov/flu/weekly/.

For the week ending February 18, 2006, 437 (15.3 %) of 2,864 specimens tested for influenza viruses were positive by culture. Of these, 116 were influenza A (H3N2), 6 were influenza A (H1N1), 288 were influenza A that were not subtyped, and 27 were influenza B. All states have reported lab-confirmed influenza this season. During the past three weeks (weeks 5-7), the percentage of specimens testing positive for influenza has ranged from 31.2% in the East North Central region to 10.5% in the Pacific region.

Antigenic characterization of 253 influenza viruses by CDC, since October 2005, has indicated the following:

- One hundred and sixty-eight (80.8%) out of 208 H3N2 influenza A isolates are A/California/7/2004-like.
- Twelve (85.7 %) of the 14 H1 influenza A isolates were antigenically similar to the vaccine strain A/New Caledonia/20/99.
- Nineteen (61.3%) of the 31 influenza B viruses belong to the B/Yamagata lineage: seventeen are B/Florida/07/2004-like (a minor antigenic variant of B/Shanghai/361/2002) and two are antigenically similar to the 2005-2006 vaccine strain B/Shanghai/361/2002. Twelve (38.7%) influenza B viruses belong to the B/Victoria lineage which is not contained in the 2005-06 vaccines.

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) contains 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.
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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
No activity	Low	**And**	No lab confirmed cases†
Sporadic	Not increased	**And**	Isolated lab-confirmed cases
	OR		
	Not increased	**And**	Lab confirmed outbreak in one institution‡
Local	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		
	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
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		
	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
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.

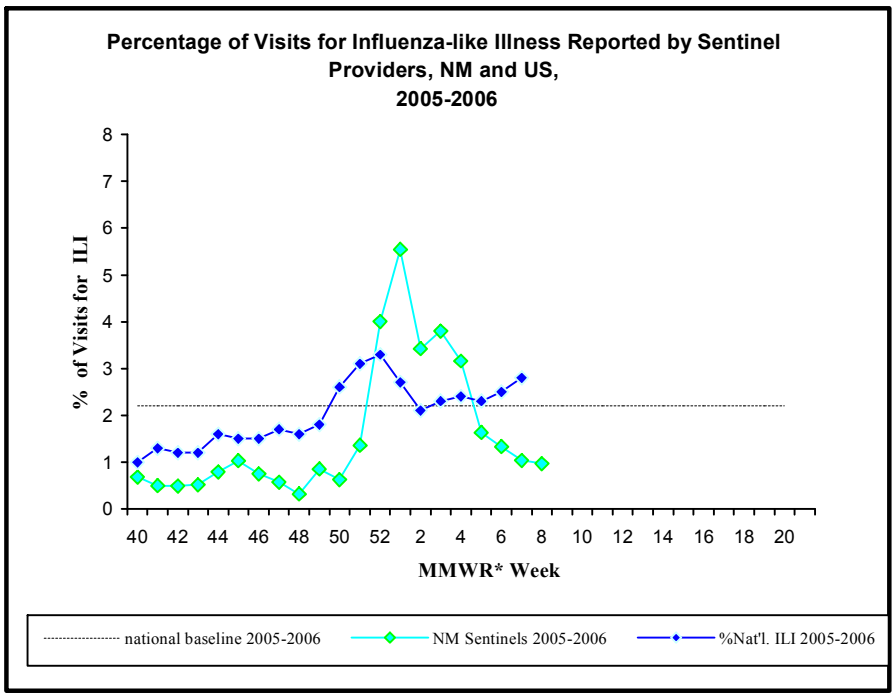
* ILI activity can be assessed using a variety of data sources including sentinel providers, school/workplace absenteeism, and other syndromic surveillance systems that monitor influenza-like illness.

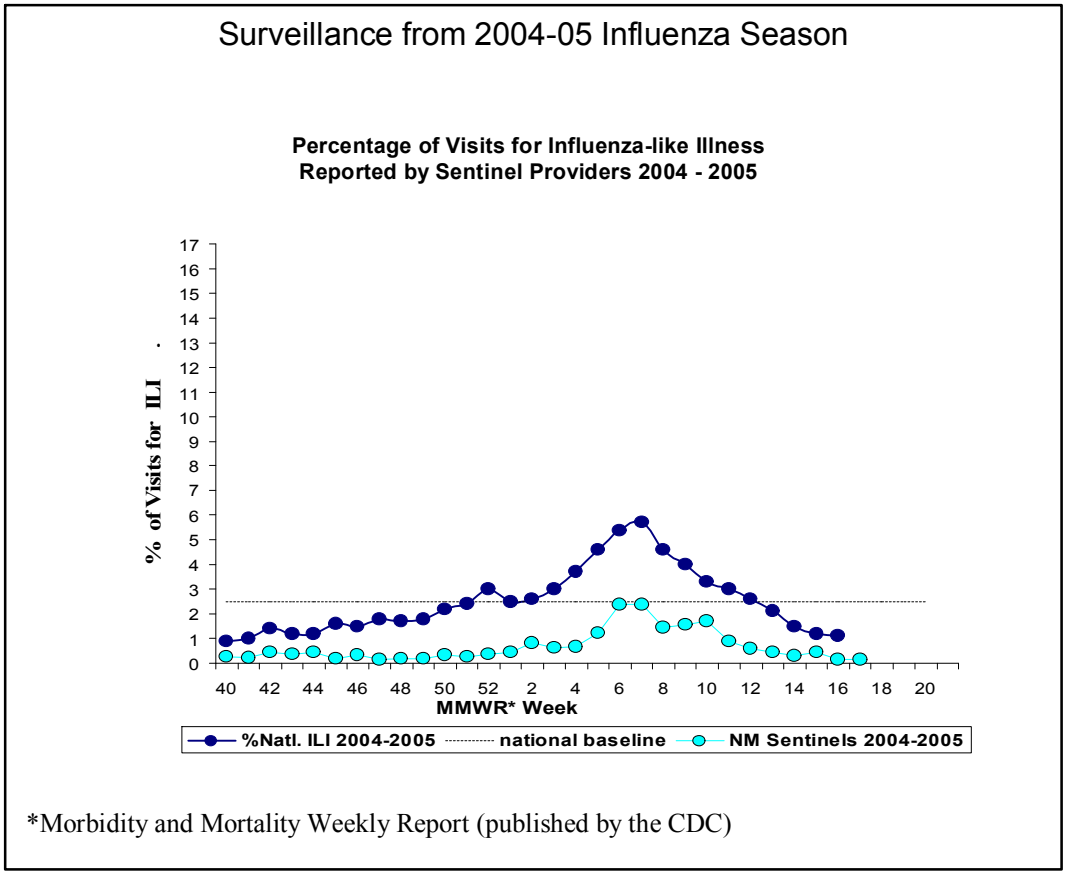
† Lab confirmed case = case confirmed by rapid diagnostic test, antigen detection, culture, or PCR. The sensitivity and specificity of these tests vary and the predicative value positive may be low outside the time of peak influenza activity. Therefore, a state may wish to obtain laboratory confirmation 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:





*Morbidity and Mortality Weekly Report (published by the CDC)