Epidemiology and Response Division

NEW MEXICO INFLUENZA SURVEILLANCE UPDATE
2007-2008 Influenza Season

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

Week Ending	Activity Level
12/1/07 (MMWR Week 48)	No Activity

NMDOH reported the state influenza activity as **"No Activity"** to the Centers for Disease Control and Prevention (CDC) (see table below for definitions).

Summary of Influenza Activity in New Mexico for Week Ending 12/1/07[1]:

- Twenty-four of the 24 sentinel provider sites reported a total of 7,589 patient visits, of which 71 (0.93%) were positive for an influenza-like illness (ILI)[2]. The previous week ending November 24th reported 1.41 % influenza-like illness.

Summary of Sentinel Laboratory Activity in New Mexico:

Period of 2007-2008 Influenza Season	Number of Tests Performed**	Positive Type A (n,%)	Positive Type B (n,%)	Positive Type Unknown[3] (n,%)	Total Positive All Types (n,%)
Week ending 12/1/07 (30 of 31 labs reporting)	227	2 (0.88%)	0 (0.0%)	2 (0.88%)	4 (1.76%)
Cumulative as of 10/1/07	1307	11 (0.84%)	2 (0.15%)	2 (0.15%)	15 (1.15%)

**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:
One influenza-related pediatric death was reported to CDC for week 48 (ending 12/1/07). NM has had no influenza-related pediatric deaths reported this season.

Reported Flu Activity in the Mountain Region and Texas, Week Ending 12/1/07:

State	Activity Level	State	Activity Level
Montana	Sporadic	Arizona	Sporadic
Idaho	Sporadic	Utah	Sporadic
Wyoming	Sporadic	Nevada	Sporadic
Colorado	Local	Texas	Local

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[1] Weekly ILI and lab data may change as additional reports are compiled.

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

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

National Flu Surveillance and Laboratory Activity, Week Ending 12/1/07:
Nationwide, for the week ending 12/1/07, 1.6% of patient visits to U.S. sentinel providers were due to ILI, which is less than the national baseline of 2.2 %. Influenza activity was reported as "Local" in 4 states (Florida, Virginia, Texas and Colorado) and "Sporadic" in 33 states and the District of Columbia. Thirteen states reported "No Activity". More information on national surveillance can be found at http://www.cdc.gov/flu/weekly/.

During this same week, the World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) laboratories reported 2,504 specimens tested for influenza viruses, 85 (3.4%) of which were positive: thirty influenza A/H1, two influenza A/H3 viruses, 45 influenza A viruses that were not subtyped, and eight influenza B viruses. The District of Columbia and 32 states from all nine surveillance regions have reported laboratory-confirmed influenza this season.

Antigenic Characterization:
CDC has antigenically characterized twenty-seven influenza viruses [19 influenza A (H1), five influenza A (H3) and three influenza B viruses] collected by U.S. laboratories since September 30, 2007.

Influenza A (H1) [**19**]
All 19 viruses were characterized as A/Solomon Islands/3/2006, the influenza A (H1) component of the 2007-08 influenza vaccine for the Northern Hemisphere and the 2008 influenza A (H1) component for the Southern Hemisphere. A/Solomon Islands/3/2006 is a recent minor antigenic variant of A/New Caledonia/20/99.

Influenza A (H3) [**5**]
Two viruses were characterized as A/Wisconsin/67/2005-like, the influenza A (H3) component of the 2007-08 influenza vaccine.
Three viruses were characterized as A/Brisbane/10/2007-like. A/Brisbane/10/2007 is a recent antigenic variant which evolved from A/Wisconsin/67/2005-like. A/Brisbane/10/2007-like virus is the recommended influenza A (H3) component for the 2008 Southern Hemisphere vaccine.

Influenza B [**3**]
All three viruses were identified as belonging to the B/Yamagata lineage. The recommended influenza B component for the 2007-08 influenza vaccine is a B/Malaysia/2506/2004-like virus, belonging to the B/Victoria lineage.

It is too early in the influenza season to determine which influenza viruses will predominate or how well the vaccine and circulating strains will match.

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This information is collected by the Infectious Disease Epidemiology Bureau, Epidemiology Response Division of NMDOH.
 In future issues of this weekly report, NMDOH will be reporting on added influenza surveillance program components (e.g. school surveillance, hospitalization surveillance, and border and tribal surveillance) as data become available.
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.

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

† 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 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.

‡ 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— 2007-2008 Season:

Sentinel Site ILI Visits and Sentinel Laboratory Influenza Testing, New Mexico, 2007-2008 Influenza Season

- ...... National Baseline
- National % ILI 2007-2008
- NM % ILI 2007-2008
- % NM Lab Positive Tests 2007-2008

Temporal Patterns of Influenza Rapid Diagnostic Testing, Sentinel Laboratories, 2007-2008 Influenza Season

- Number of Tests
- Percent Positivity