

2007-2008 Influenza Season
Week 51, ending December 22, 2007

(All data are preliminary and may change as more reports are received.)

Synopsis: During week 51 (December 16-22, 2007), influenza activity continued to increase in the United States.

- Seventy-seven (3.7%) specimens tested by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories were positive for influenza.
- The proportion of deaths attributed to pneumonia and influenza was below the epidemic threshold.
- The proportion of outpatient visits for influenza-like illness (ILI) was equal to the national baseline. The Mountain, Pacific, and West South Central regions reported ILI above their region-specific baselines. The proportion of outpatient visits for acute respiratory illness (ARI) was below national baseline levels.
- Three states reported regional influenza activity; six states reported local influenza activity; 32 states reported sporadic influenza activity; eight states reported no influenza activity; and one state and the District of Columbia did not report.

National and Regional Summary of Select Surveillance Components

	Data for current week				Data cumulative for the season				
	Sentinel Provider ILI*	DoD and VA ARI*	% pos. for flu†	# jurisdictions reporting regional or widespread activity‡	A (H1)	A (H3)	A Unsub-typed	B	Pediatric Deaths
Nation	Elevated	Normal	3.7%	3 of 51	201	54	618	107	1
New England	Normal	Normal	2.0%	0 of 6	8	0	15	6	0
Mid-Atlantic	Normal	Normal	1.9%	0 of 3	5	1	13	16	0
East North Central	Normal	Normal	7.1%	0 of 5	5	11	6	6	0
West North Central	Normal	Normal	1.2%	0 of 7	5	2	24	7	0
South Atlantic	Normal	Normal	3.7%	0 of 9	5	9	149	35	0
East South Central	Normal	Normal	0.4%	0 of 4	2	1	0	0	0
West South Central	Elevated	Normal	7.6%	1 of 4	8	24	299	11	1
Mountain	Elevated	Normal	8.1%	2 of 8	100	0	58	18	0
Pacific	Elevated	Normal	4.3%	0 of 5	63	6	54	8	0

* Elevated means the % of visits for ILI or ARI is at or above the national or region-specific baseline

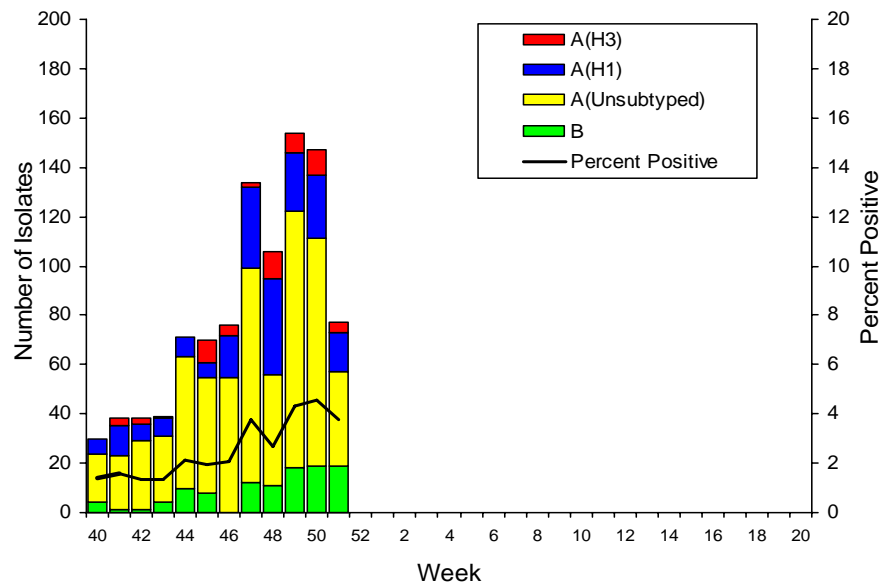
† National data are for current week; regional data are for the most recent three weeks.

‡ Includes all 50 states and the District of Columbia

Laboratory Surveillance: During week 51, WHO and NREVSS laboratories reported 2,059 specimens tested for influenza viruses, 77 (3.7%) of which were positive, including 16 influenza A (H1) viruses, four influenza A (H3) viruses, 38 influenza A viruses that were not subtyped, and 19 influenza B viruses. The District of Columbia and 39 states from all nine surveillance regions have reported laboratory-confirmed influenza this season.

Since September 30, 2007, WHO and NREVSS laboratories have tested a total of 37,275 specimens for influenza viruses and 980 (2.6%) were positive. Among the 980 influenza viruses, 873 (89.1%) were influenza A viruses and 107 (10.9%) were influenza B viruses. Two hundred fifty-five (29.2%) of the 873 influenza A viruses have been subtyped: 201 (78.8%) were influenza A (H1) viruses and 54 (21.2%) were influenza A (H3) viruses.

**U.S. WHO/NREVSS Collaborating Laboratories
National Summary, 2007-08**



Antigenic Characterization: CDC has antigenically characterized 66 influenza viruses [32 influenza A (H1), 19 influenza A (H3), and 15 influenza B viruses] collected by U.S. laboratories since September 30, 2007.

Influenza A (H1) [32]

- All 32 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.

Influenza A (H3) [19]

- Four viruses were characterized as A/Wisconsin/67/2005-like, the influenza A (H3) component of the 2007-08 influenza vaccine for the Northern Hemisphere.
- Fourteen 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.

- One virus showed somewhat reduced titers with antisera produced against A/Wisconsin/67/2005 and A/Brisbane/10/2007.

Influenza B (B/Victoria/02/87 and B/Yamagata/16/88 lineages) [15]

Victoria lineage [0]

- 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.

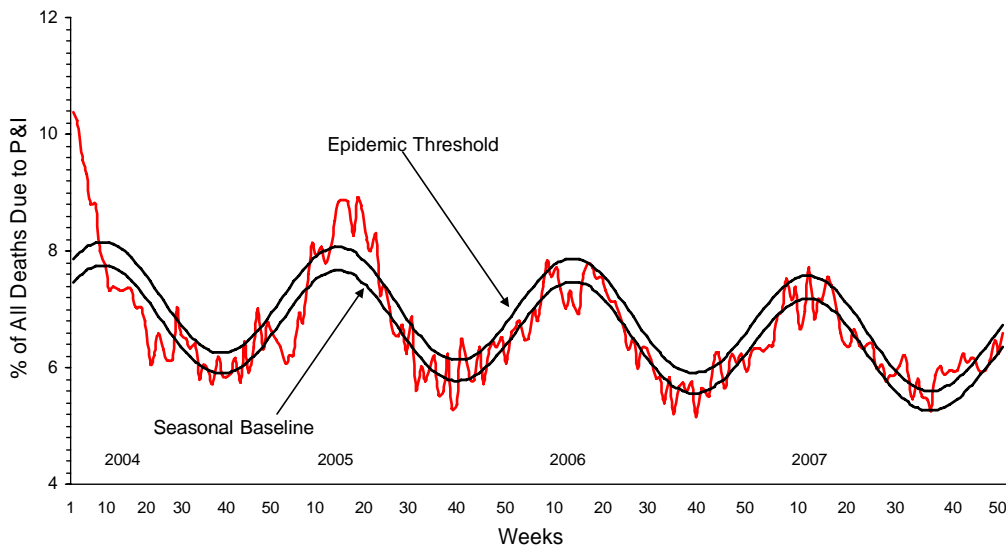
Yamagata lineage [15]

- All 15 viruses were identified as belonging to the B/Yamagata 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.

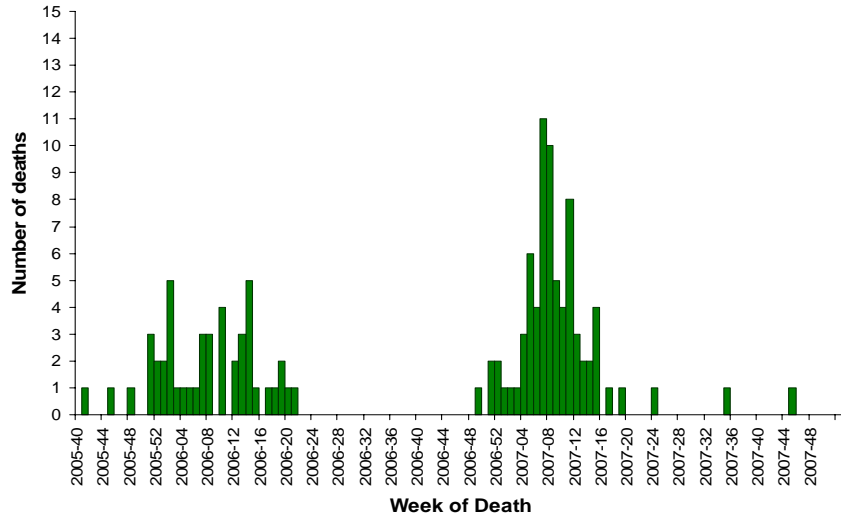
Pneumonia and Influenza (P&I) Mortality Surveillance: During week 51, 6.6% of all deaths reported through the 122-Cities Mortality Reporting System were reported as due to P&I. This percentage is below the epidemic threshold of 6.7% for week 51.

Pneumonia and Influenza Mortality for 122 U.S. Cities Week Ending 12/22/2007



Influenza-Associated Pediatric Mortality: One influenza-associated pediatric death was reported during week 51 from New York City. This death occurred during the 2006-07 season bringing the total number of cases occurring during that season to 74. One influenza-associated pediatric death occurring during the 2007-08 season has been reported.

Number of Influenza-Associated Pediatric Deaths by Week of Death: 2005-06 season to present

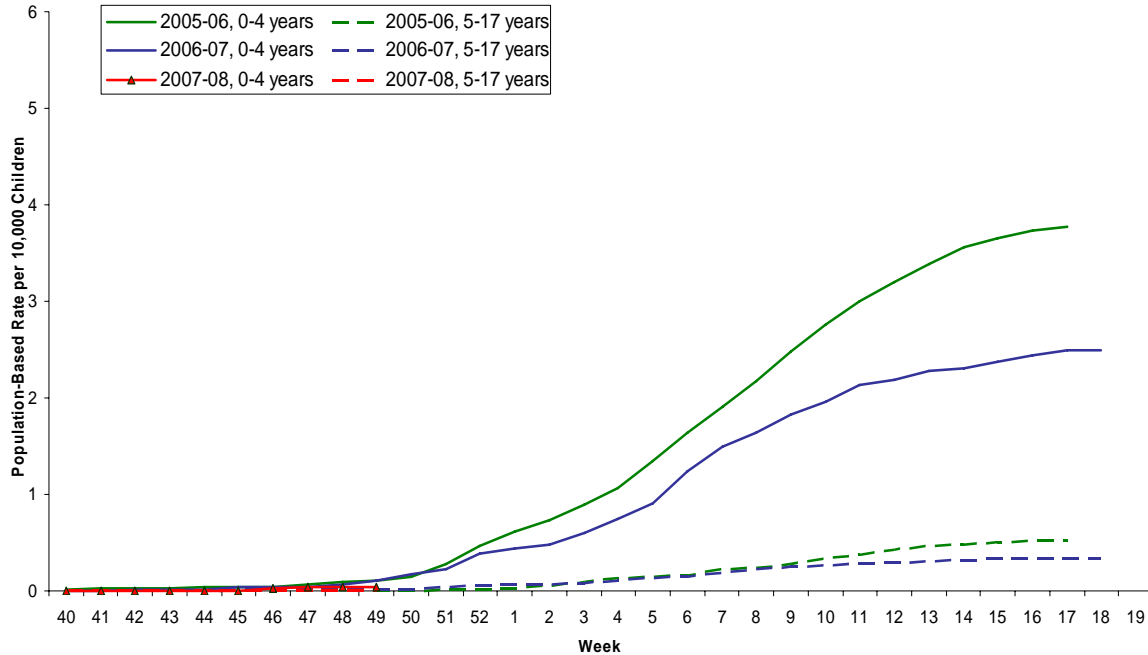


Influenza-Associated Pediatric Hospitalizations: Laboratory-confirmed influenza-associated pediatric hospitalizations are monitored in two population-based surveillance networks: the New Vaccine Surveillance Network (NVSN) and the Emerging Infections Program (EIP).

No influenza-associated pediatric hospitalizations have been reported from the NVSN.

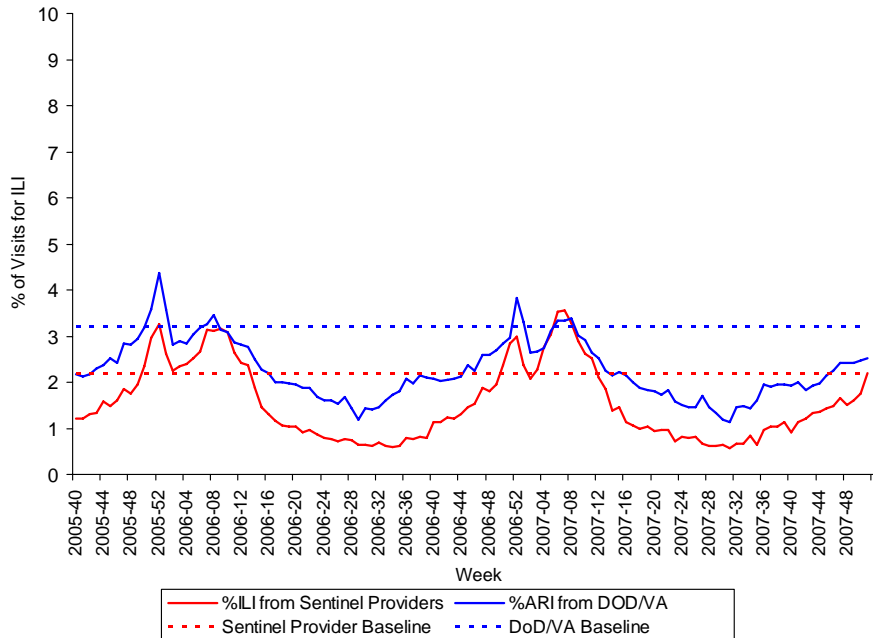
During September 30-December 8, 2007, the preliminary laboratory-confirmed influenza-associated hospitalization rate reported by the EIP for children 0–17 years old was 0.02 per 10,000. For children aged 0-4 years and 5-17 years, the rate was 0.03 per 10,000 and 0.005 per 10,000, respectively.

EIP Influenza Laboratory-Confirmed Cumulative Hospitalization Rates for Children Aged 0-4 and 5-17 yrs, 2007-2008 and Previous 2 Seasons

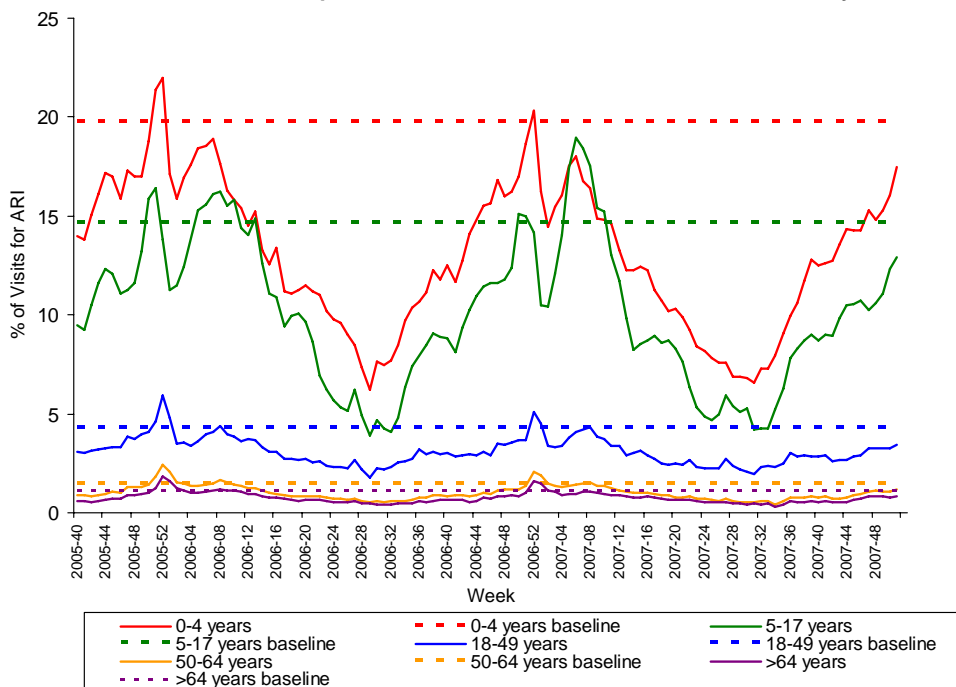


Outpatient Illness Surveillance: Nationwide during week 51, 2.2% of outpatient visits reported through the U.S. Influenza Sentinel Provider Surveillance Network were due to influenza-like illness (ILI) and 2.5% of patient visits to Department of Veteran’s Affairs (VA) and Department of Defense (DoD) outpatient treatment facilities were for acute respiratory illness (ARI). The percentage of visits for ILI was equal to the national baseline of 2.2%, while the percentage of visits for ARI was below the national baseline of 3.2%. On a regional level, the percentage of visits for ILI ranged from 0.9% to 5.1% and the percentage of visits for ARI ranged from 1.2% to 3.1%. The Mountain, Pacific, and West South Central regions reported ILI above their region-specific baselines. The increase in the percentage of patient visits for ILI may be influenced by a reduction in routine healthcare visits during the holiday season, as has occurred in previous seasons. All nine regions reported percentages of visits for ARI below their respective region-specific baselines. All five age groups reported percentages of visits for ARI below their respective age-specific baselines.

Percentage of Visits for ILI & ARI Reported by Sentinel Providers and BioSense Outpatient Facilities, National Summary

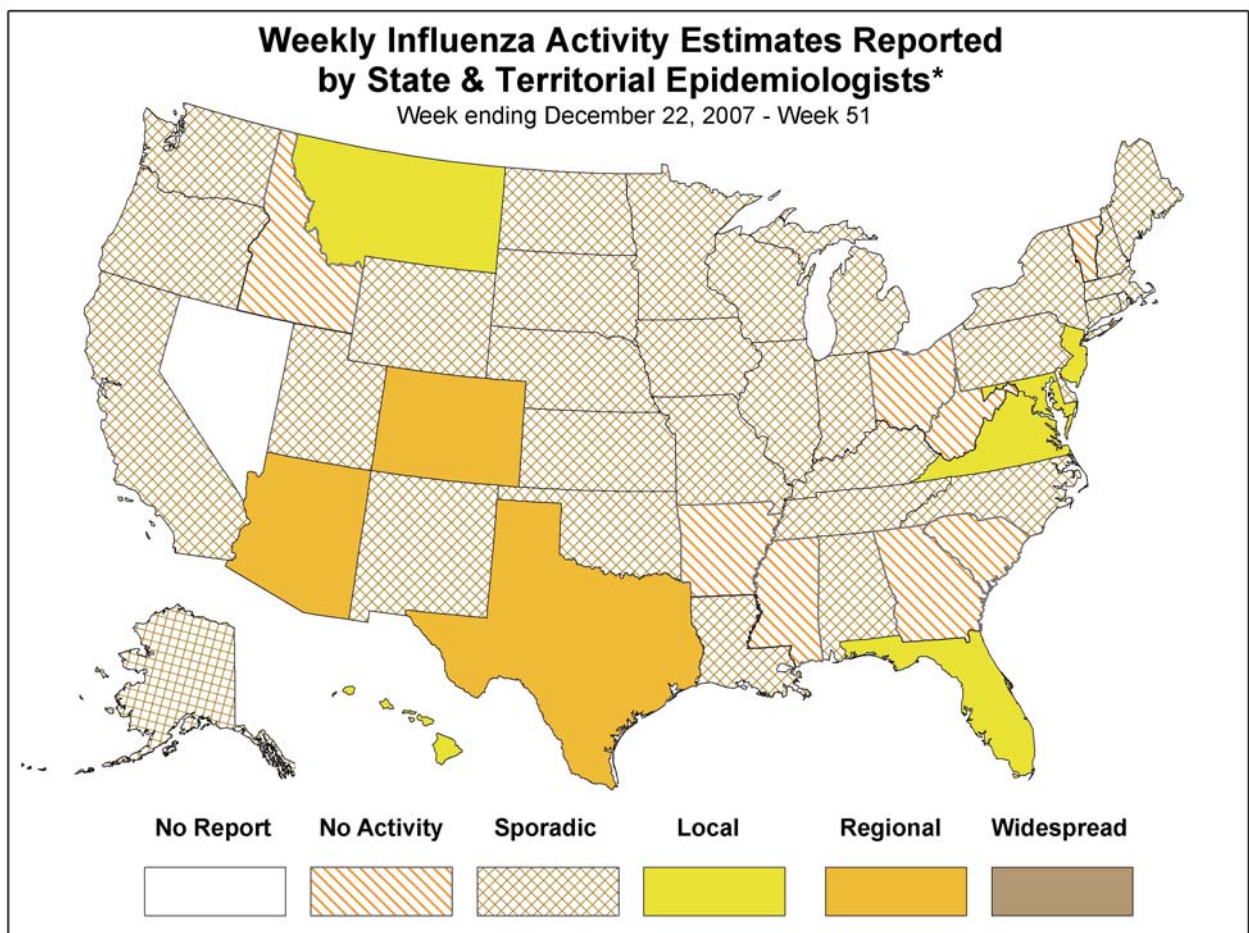


Percentage of Visits for ARI by Age Group Reported by DoD/VA Outpatient Clinics - National Summary



Geographic Spread of Influenza as Assessed by State and Territorial Epidemiologists: During week 51 the following influenza activity was reported:

- Regional activity was reported by three states (Arizona, Colorado, and Texas).
- Local activity was reported by six states (Florida, Hawaii, Maryland, Montana, New Jersey, and Virginia).
- Sporadic activity was reported by the 32 states (Alabama, Alaska, California, Connecticut, Delaware, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Missouri, Nebraska, New Hampshire, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Utah, Washington, Wisconsin, and Wyoming).
- No activity was reported by eight states (Arkansas, Georgia, Idaho, Mississippi, Ohio, South Carolina, Vermont, and West Virginia).
- One state (Nevada) and the District of Columbia did not report



* This map indicates geographic spread & does not measure the severity of influenza activity

A description of surveillance methods is available at: <http://www.cdc.gov/flu/weekly/fluactivity.htm>

Report prepared: December 28, 2007