

**2007-2008 Influenza Season**  
**Week 52, ending December 29, 2007**

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

**Synopsis:** During week 52 (December 23-29, 2007), influenza activity continued to increase in the United States.

- One hundred eight (3.2%) 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) and acute respiratory illness (ARI) was above national baseline levels. The East North Central, East South Central, Mountain, New England, South Atlantic, and West South Central regions reported ILI equal to or above their region-specific baselines, and the East North Central, Pacific, and West South Central regions reported ARI equal to or above their region-specific baselines.
- Five states reported regional influenza activity; nine states reported local influenza activity; 33 states, the District of Columbia, and Puerto Rico reported sporadic influenza activity; and three states reported no influenza activity.

**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
<b>Nation</b>	Elevated	Elevated	3.2%	5 of 51	253	73	725	146	1
<b>New England</b>	Elevated	Normal	2.7%	0 of 6	12	1	21	9	0
<b>Mid-Atlantic</b>	Normal	Normal	2.1%	1 of 3	5	1	19	26	0
<b>East North Central</b>	Elevated	Elevated	15.8%	0 of 5	21	13	6	9	0
<b>West North Central</b>	Normal	Normal	1.4%	0 of 7	5	3	25	10	0
<b>South Atlantic</b>	Elevated	Normal	3.6%	0 of 9	12	10	163	39	0
<b>East South Central</b>	Elevated	Normal	0.0%	0 of 4	2	1	0	0	0
<b>West South Central</b>	Elevated	Elevated	4.1%	1 of 4	14	34	343	16	1
<b>Mountain</b>	Elevated	Normal	11.2%	2 of 8	114	3	91	27	0
<b>Pacific</b>	Normal	Elevated	4.5%	1 of 5	68	7	57	10	0

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

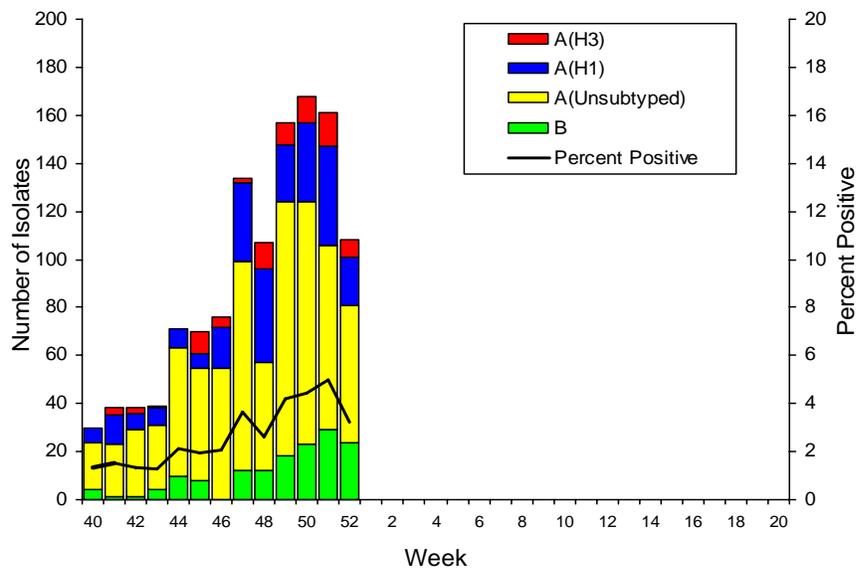
† National data are for current week; regional data are for the most recent three weeks.

‡ Includes all 50 states and the District of Columbia

**Laboratory Surveillance:** During week 52, WHO and NREVSS laboratories reported 3,358 specimens tested for influenza viruses, 108 (3.2%) of which were positive, including 20 influenza A (H1) viruses, seven influenza A (H3) viruses, 57 influenza A viruses that were not subtyped, and 24 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 43,184 specimens for influenza viruses and 1,197 (2.8%) were positive. Among the 1,197 influenza viruses, 1,051 (87.8%) were influenza A viruses and 146 (12.2%) were influenza B viruses. Three hundred twenty-six (31.0%) of the 1,051 influenza A viruses have been subtyped: 253 (77.6%) were influenza A (H1) viruses and 73 (22.4%) were influenza A (H3) viruses.

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



**Antigenic Characterization:** CDC has antigenically characterized 79 influenza viruses [32 influenza A (H1), 19 influenza A (H3), and 28 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) [28]

#### Victoria lineage [3]

- Two viruses were characterized as B/Ohio/01/2005-like. 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. B/Ohio/01/2005 is a recent B/Malaysia/2506/2004-like reference strain.
- One virus showed somewhat reduced titers with antisera produced against B/Ohio/01/2005 and B/Malaysia/2506/2004.

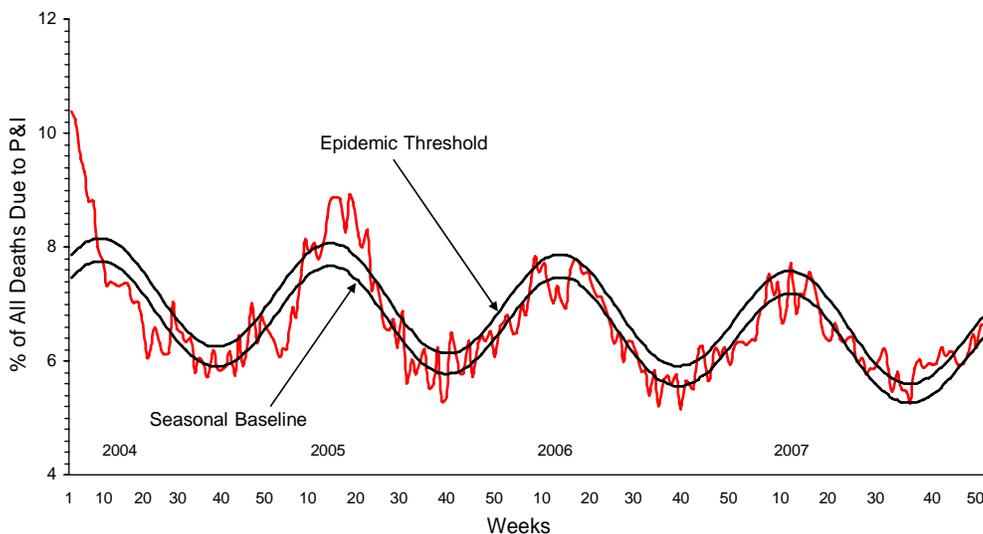
#### Yamagata lineage [25]

- Twenty-five 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.

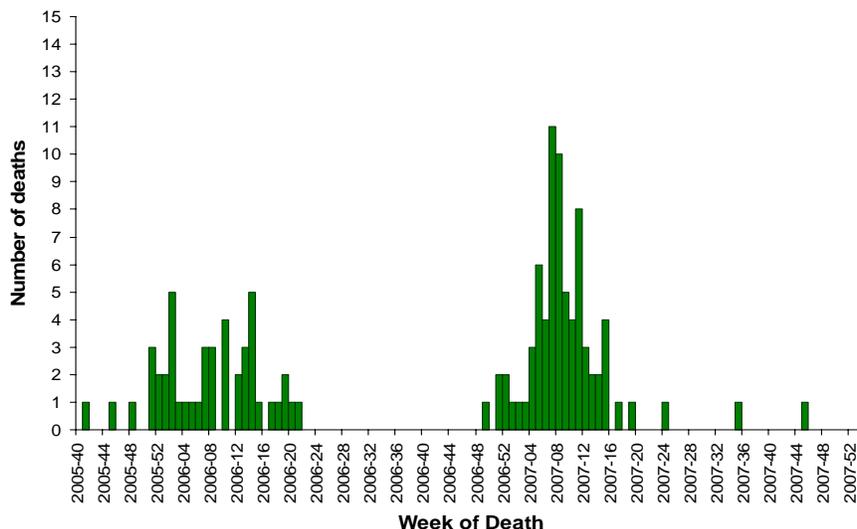
**Pneumonia and Influenza (P&I) Mortality Surveillance:** During week 52, 6.6% of all deaths reported through the 122-Cities Mortality Reporting System were reported as due to P&I. This percentage is below the epidemic threshold of 6.8% for week 52.

### Pneumonia and Influenza Mortality for 122 U.S. Cities Week Ending 12/29/2007



**Influenza-Associated Pediatric Mortality:** No influenza pediatric deaths were reported during week 52. 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**

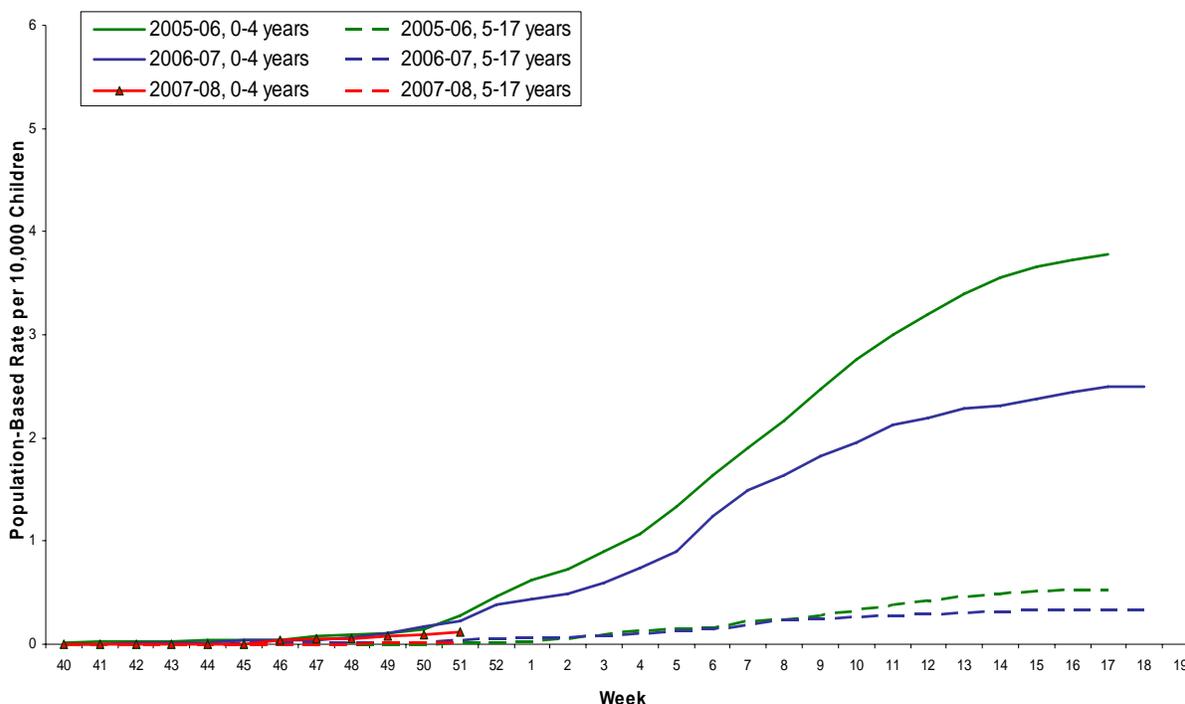


**Influenza-Associated Pediatric Hospitalizations:** Laboratory-confirmed influenza-associated pediatric hospitalizations are monitored in two population-based surveillance networks: the New Vaccine Surveillance Network (NVSN) and the Emerging Infections Program (EIP).

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

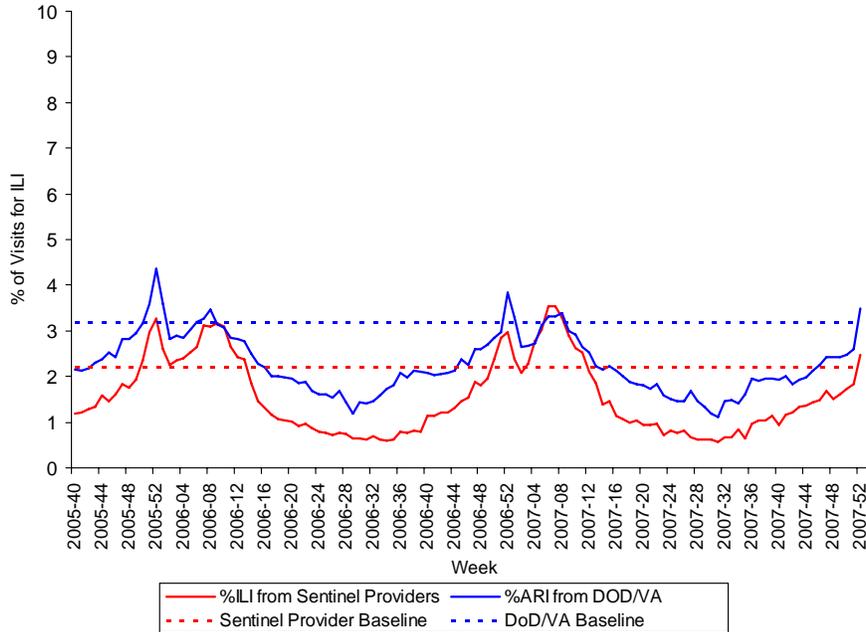
During September 30-December 22, 2007, the preliminary laboratory-confirmed influenza-associated hospitalization rate reported by the EIP for children 0–17 years old was 0.05 per 10,000. For children aged 0-4 years and 5-17 years, the rate was 0.12 per 10,000 and 0.01 per 10,000, respectively.

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

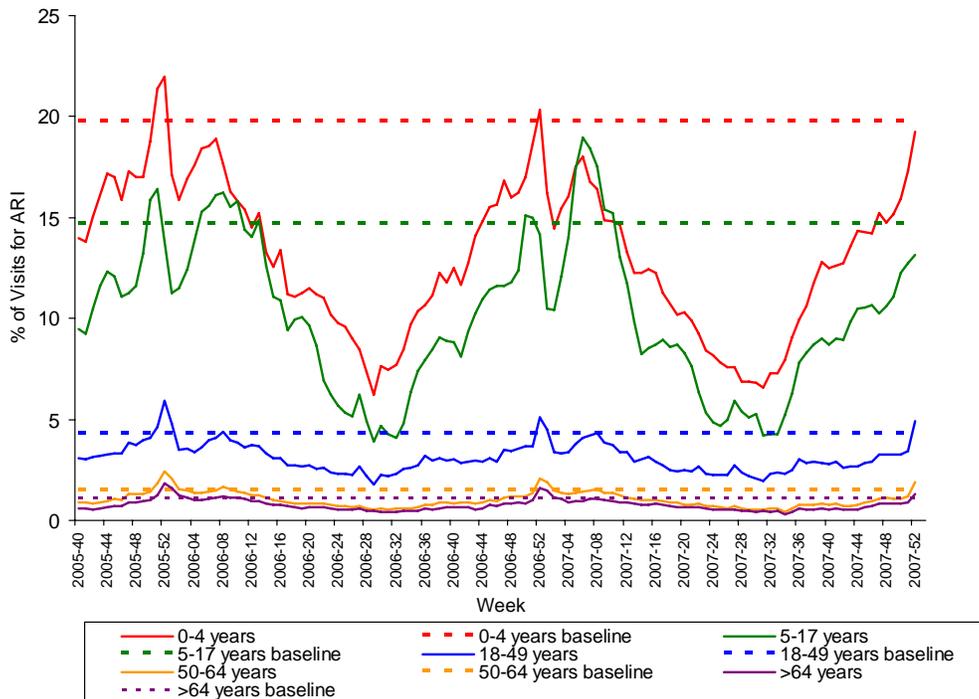


**Outpatient Illness Surveillance:** Nationwide during week 52, 2.5% of outpatient visits reported through the U.S. Influenza Sentinel Provider Surveillance Network were due to influenza-like illness (ILI) and 3.5% of patient visits to Department of Veteran’s Affairs (VA) and Department of Defense (DoD) outpatient treatment facilities were for acute respiratory illness (ARI). These percentages are above the national baselines of 2.2% and 3.2%, respectively. On a regional level, the percentage of visits for ILI ranged from 0.9% to 4.4% and the percentage of visits for ARI ranged from 1.7% to 4.4%. The East North Central, East South Central, Mountain, New England, South Atlantic, and West South Central regions reported ILI equal to or above their regions specific baselines, and the East North Central, Pacific, and West South Central regions reported ARI equal to or above their region-specific baselines. The percentages of visits reported for ARI in the 18-49 years, 50-64 years, and >64 years age groups were above their respective age-specific baselines. The increase in the percentage of patient visits for ILI and ARI may be influenced by a reduction in routine healthcare visits during the holiday season, as has occurred in previous seasons.

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

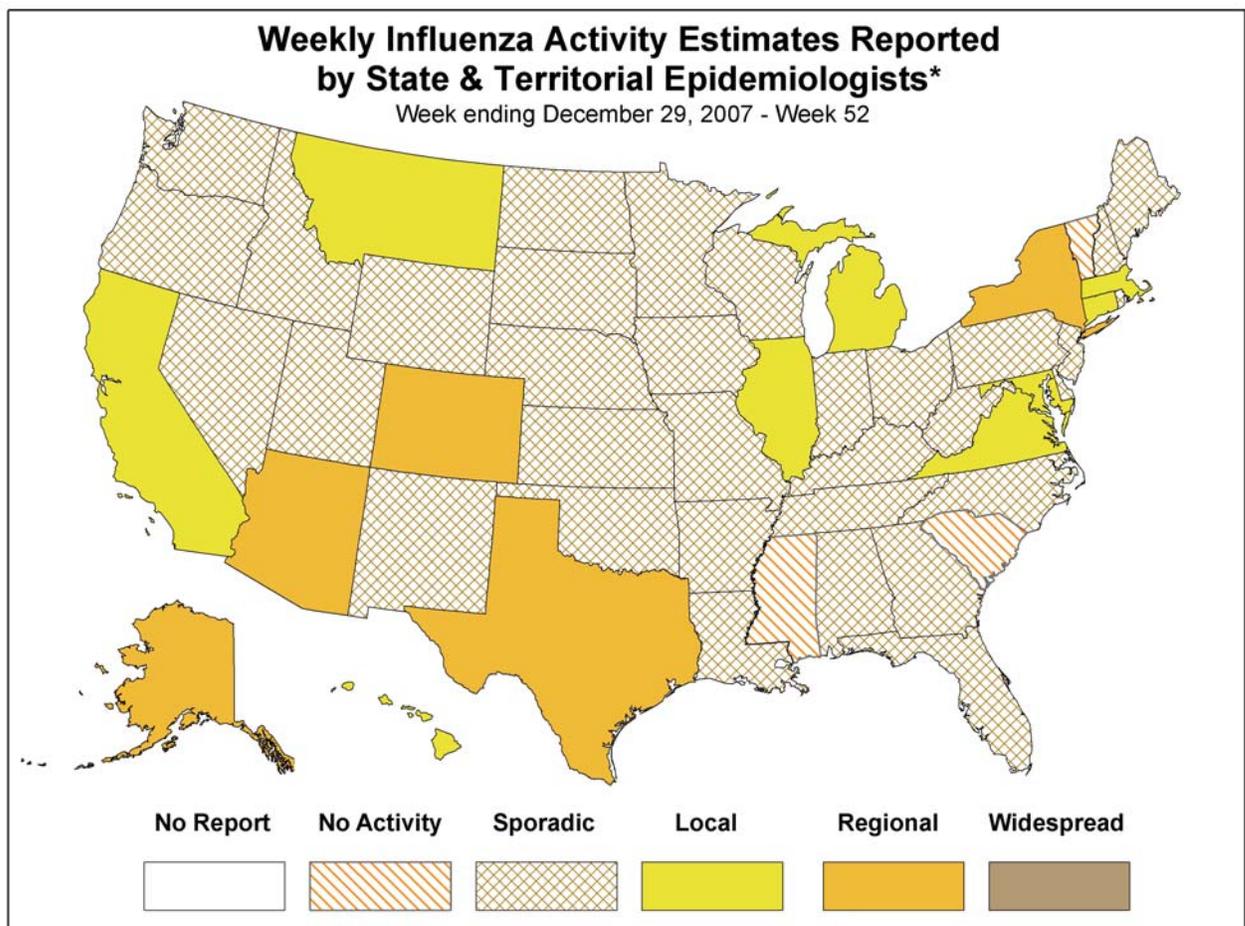


## Percentage of Visits for ARI by Age Group Reported by DoD/VA Outpatient Clinics - National Summary



**Geographic Spread of Influenza as Assessed by State and Territorial Epidemiologists:** During week 52 the following influenza activity was reported:

- Regional activity was reported by five states (Alaska, Arizona, Colorado, New York, and Texas).
- Local activity was reported by nine states (California, Connecticut, Hawaii, Illinois, Maryland, Massachusetts, Michigan, Montana, and Virginia).
- Sporadic activity was reported by the District of Columbia, Puerto Rico, and 33 states (Alabama, Arkansas, Delaware, Georgia, Florida, Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Minnesota, Missouri, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Dakota, Tennessee, Utah, Washington, West Virginia, Wisconsin, and Wyoming).
- No activity was reported by three states (Mississippi, South Carolina, and Vermont).



\* 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: January 4, 2008