

2007-2008 Influenza Season
Week 3, ending January 19, 2008

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

Synopsis: During week 3 (January 13 - 19, 2008), influenza activity continued to increase in the United States.

- Three hundred twenty-nine (11.1%) 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 slightly above the epidemic threshold.
- The proportion of outpatient visits for influenza-like illness (ILI) was above national baseline levels, and the proportion of outpatient visits for acute respiratory illness (ARI) was below national baseline levels. The East North Central, East South Central, Mountain, New England, Pacific, West North Central, and West South Central regions reported ILI at or above their region-specific baselines.
- Six states reported widespread influenza activity; 17 states reported regional influenza activity; 17 states and the District of Columbia reported local influenza activity; 10 states and Puerto Rico reported sporadic 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
Nation	Elevated	Normal	11.1%	23 of 51	462	176	1879	442	1
New England	Elevated	Normal	4.3%	2 of 6	18	1	56	39	0
Mid-Atlantic	Normal	Normal	5.5%	3 of 3	10	3	104	88	0
East North Central	Elevated	Normal	13.7%	0 of 5	44	25	12	34	0
West North Central	Elevated	Normal	6.5%	3 of 7	10	4	95	22	0
South Atlantic	Normal	Normal	7.8%	4 of 9	29	39	319	95	0
East South Central	Elevated	Normal	5.1%	1 of 4	4	7	6	4	0
West South Central	Elevated	Normal	16.6%	2 of 4	29	76	930	63	1
Mountain	Elevated	Normal	12.4%	4 of 8	167	11	228	69	0
Pacific	Elevated	Normal	10.7%	4 of 5	151	10	129	28	0

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

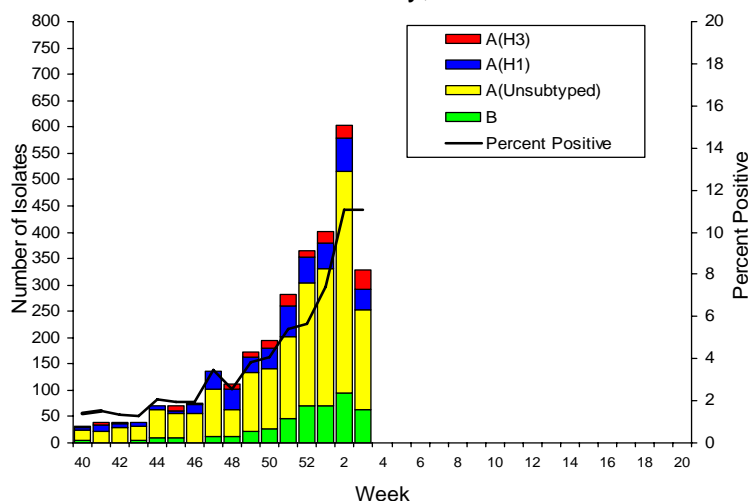
† National data are for current week; regional data are for the most recent three weeks.

‡ Includes all 50 states and the District of Columbia

Laboratory Surveillance: During week 3, WHO and NREVSS laboratories reported 2,971 specimens tested for influenza viruses, 329 (11.1%) of which were positive, including 38 influenza A (H1) viruses, 38 influenza A (H3) viruses, 190 influenza A viruses that were not subtyped, and 63 influenza B viruses. The District of Columbia and 45 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 64,795 specimens for influenza viruses and 2,959 (4.6%) were positive. Among the 2,959 influenza viruses, 2,517 (85.1%) were influenza A viruses and 442 (14.9%) were influenza B viruses. Six hundred thirty-eight (25.3%) of the 2,517 influenza A viruses have been subtyped: 462 (72.4%) were influenza A (H1) viruses and 176 (27.6%) were influenza A (H3) viruses.

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



Antigenic Characterization: CDC has antigenically characterized 197 influenza viruses [101 influenza A (H1), 53 influenza A (H3), and 43 influenza B viruses] collected by U.S. laboratories since September 30, 2007.

Influenza A (H1) [101]

- Ninety-seven (96%) of the 101 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.
- Four (4%) of the 101 viruses showed somewhat reduced titers with antisera produced against A/Solomon Islands/3/2006.

Influenza A (H3) [53]

- Six (11%) of the 53 viruses were characterized as A/Wisconsin/67/2005-like, the influenza A (H3) component of the 2007-08 influenza vaccine for the Northern Hemisphere.
- Forty-six (87%) of the 53 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 (2%) of the 53 viruses 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) [43]

Victoria lineage [3]

- Three (7%) of the 43 influenza B viruses characterized belong to the B/Victoria lineage of viruses.
 - Two (67%) of these 3 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 (33%) of these 3 viruses showed somewhat reduced titers with antisera produced against B/Ohio/01/2005 and B/Malaysia/2506/2004.

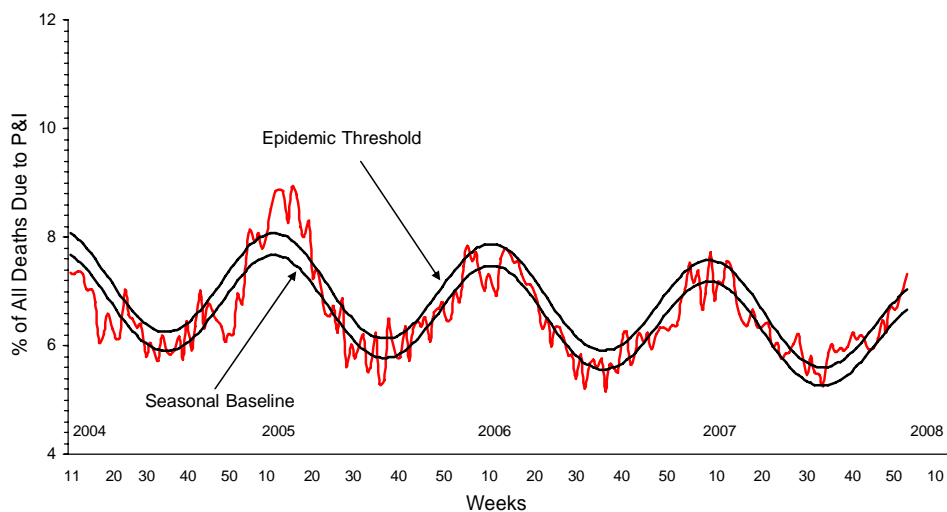
Yamagata lineage [40]

- Forty (93%) of the 43 viruses were identified as belonging to the B/Yamagata lineage of viruses.

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.

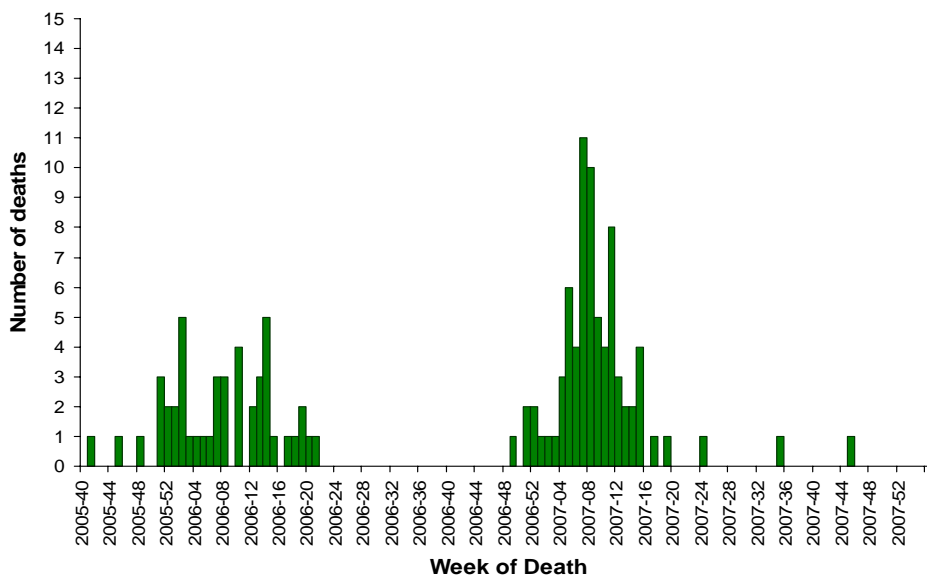
Pneumonia and Influenza (P&I) Mortality Surveillance: During week 3, 7.3% of all deaths reported through the 122-Cities Mortality Reporting System were reported as due to P&I. This percentage is slightly above the epidemic threshold of 7.0% for week 3.

Pneumonia and Influenza Mortality for 122 U.S. Cities Week Ending 01/19/2008



Influenza-Associated Pediatric Mortality: No influenza-associated pediatric deaths were reported during week 3. One influenza-associated pediatric death occurring during the 2007-08 season has been reported.

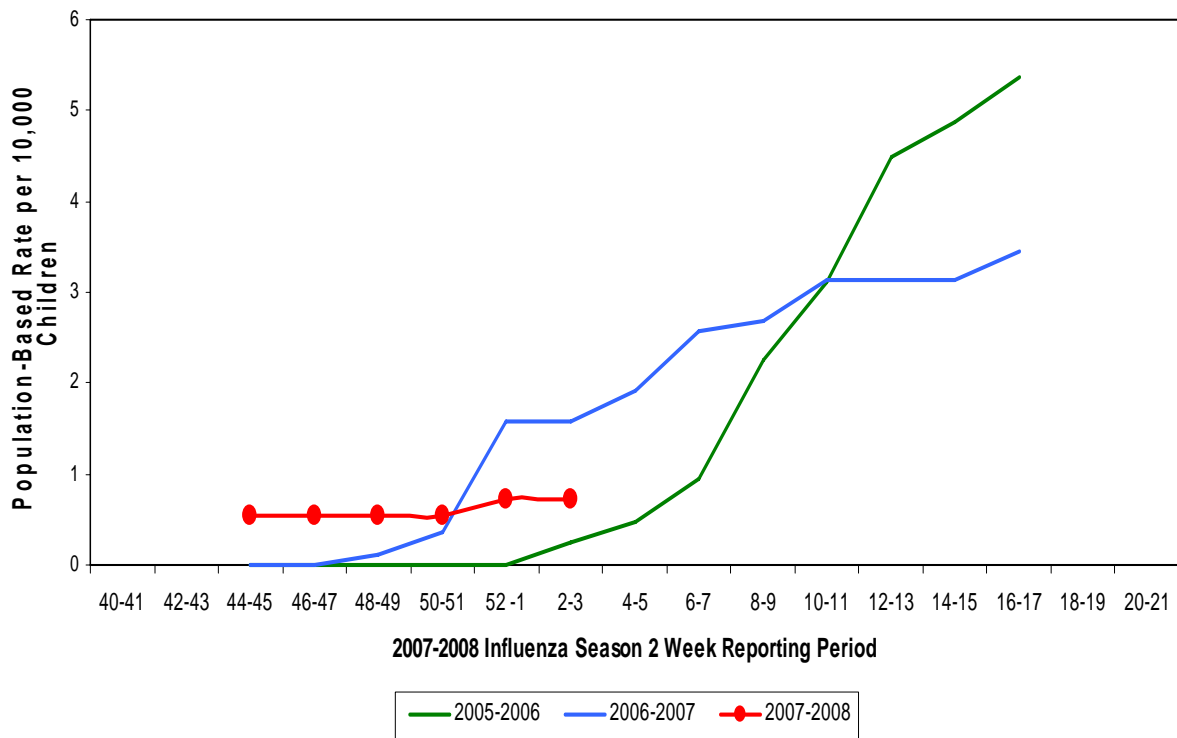
Number of Influenza-Associated Pediatric Deaths by Week of Death: 2005-06 season to present



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).

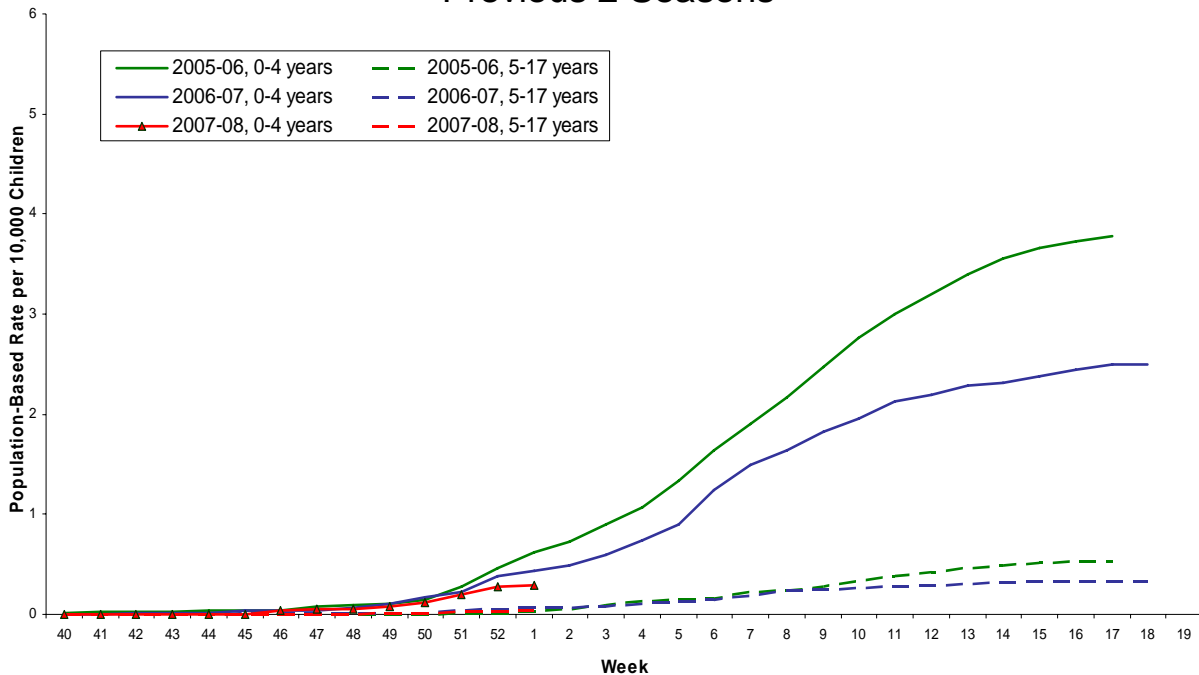
During November 4, 2007-January 12, 2008, the preliminary laboratory-confirmed influenza-associated hospitalization rate reported by the NVSN for children 0-4 years old was 0.73 per 10,000.

NVSN Influenza Laboratory-Confirmed Cumulative Hospitalization Rates for Children 0 - 4 Years, 2007- 08 and Previous 2 Seasons



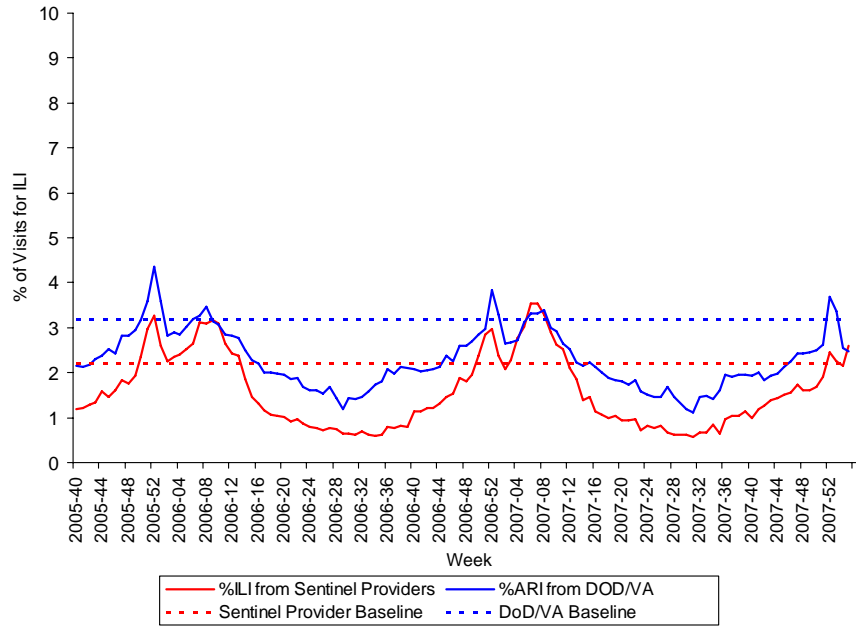
During September 30 – January 8, 2008, the preliminary laboratory-confirmed influenza-associated hospitalization rate reported by the EIP for children 0–17 years old was 0.11 per 10,000. For children aged 0-4 years and 5-17 years, the rate was 0.3 per 10,000 and 0.04 per 10,000, respectively.

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

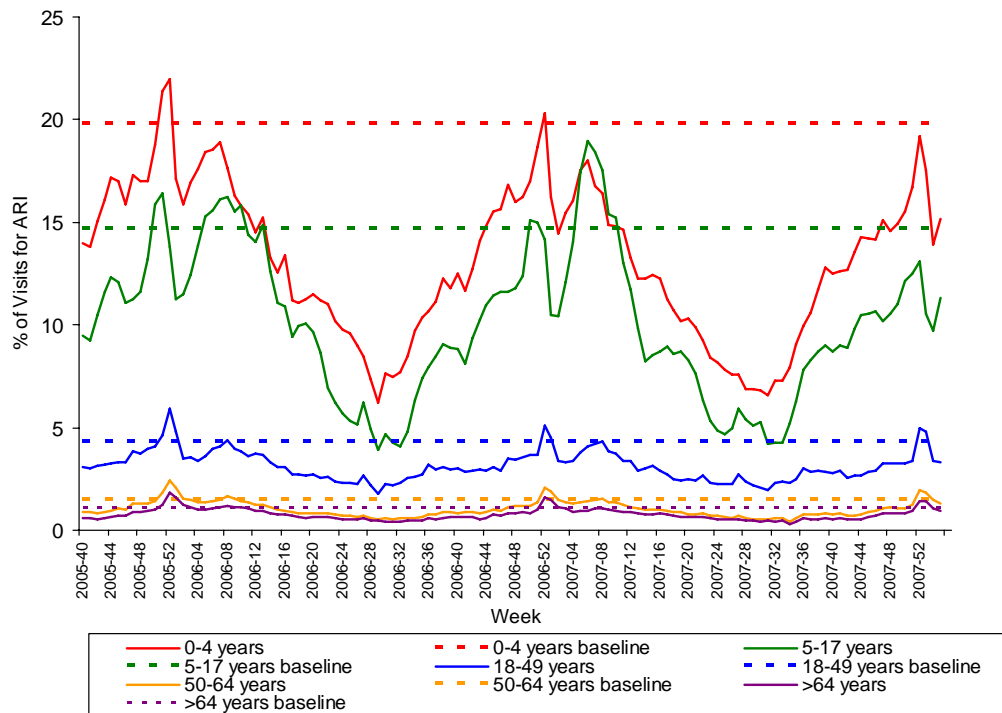


Outpatient Illness Surveillance: Nationwide during week 3, 2.6% of outpatient visits reported through the U.S. Influenza Sentinel Provider Surveillance Network were due to influenza-like illness (ILI) and 2.5% of patient visits to Department of Veteran’s Affairs (VA) and Department of Defense (DoD) outpatient treatment facilities were for acute respiratory illness (ARI). The percentage of visits for ILI was above the national baseline of 2.2%, and 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 1.4% to 5.6% and the percentage of visits for ARI ranged from 1.3% to 3.0%. The East North Central, East South Central, Mountain, New England, Pacific, West North Central, and West South Central regions reported ILI at or above their region-specific baselines. All nine regions reported percentages of visits for ARI below their respective region-specific baselines. The percentage of visits for ARI reported for all five age groups was below their respective age-specific baselines.

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

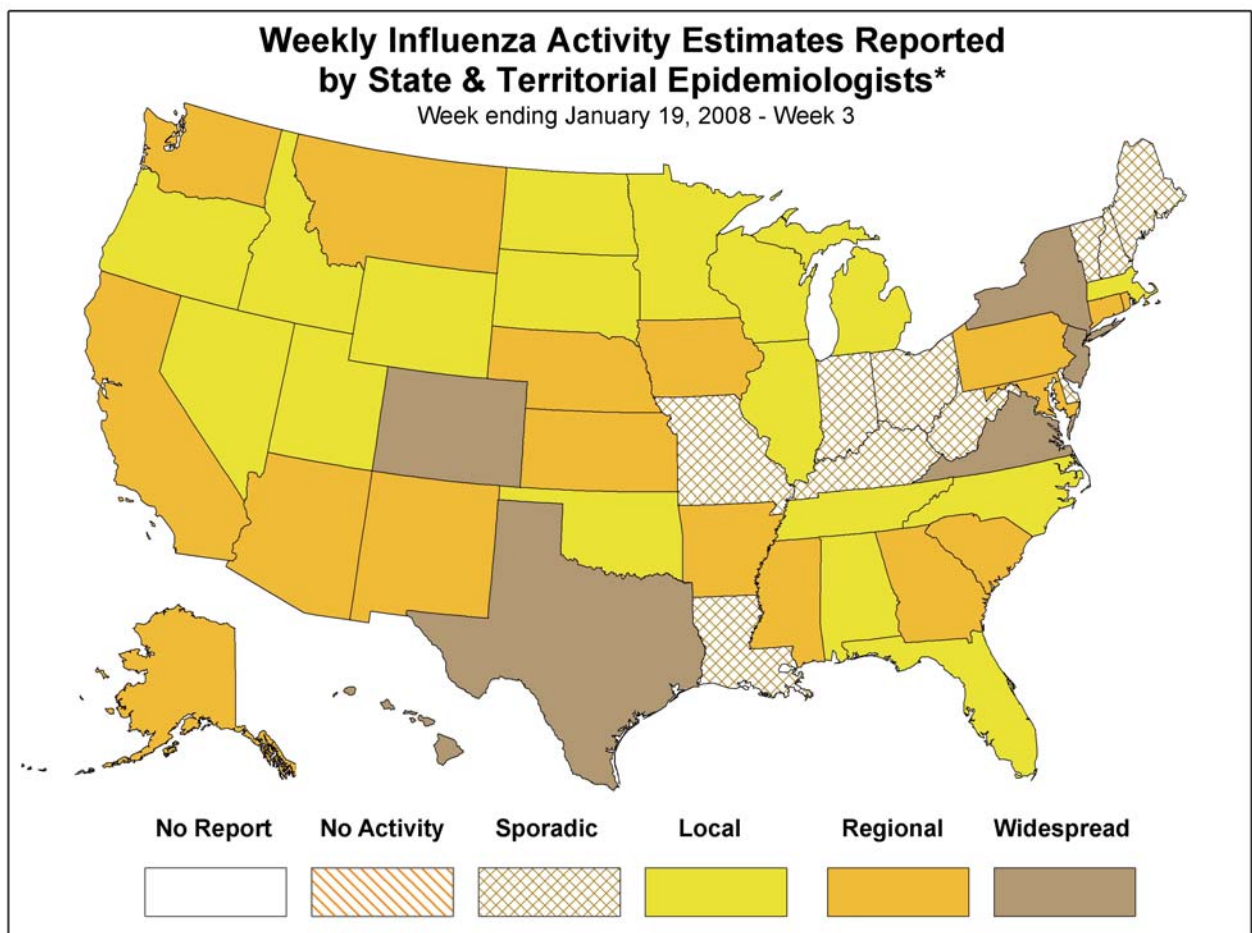


Percentage of Visits for ARI by Age Group Reported by DoD/VA Outpatient Clinics - National Summary



Geographic Spread of Influenza as Assessed by State and Territorial Epidemiologists: During week 3 the following influenza activity was reported:

- Widespread activity was reported by six states (Colorado, Hawaii, New Jersey, New York, Texas, and Virginia).
- Regional activity was reported by 17 states (Alaska, Arizona, Arkansas, California, Connecticut, Georgia, Iowa, Kansas, Maryland, Mississippi, Montana, Nebraska, New Mexico, Pennsylvania, Rhode Island, South Carolina, and Washington).
- Local activity was reported by the District of Columbia and 17 states (Alabama, Florida, Idaho, Illinois, Massachusetts, Michigan, Minnesota, Nevada, North Carolina, North Dakota, Oklahoma, Oregon, South Dakota, Tennessee, Utah, Wisconsin, and Wyoming).
- Sporadic activity was reported by Puerto Rico and 10 states (Delaware, Indiana, Kentucky, Louisiana, Maine, Missouri, New Hampshire, Ohio, Vermont, and West Virginia).



* 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 25, 2008.