

**2007-2008 Influenza Season**  
**Week 1, ending January 5, 2008**

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

**Synopsis:** During week 1 (December 30, 2007-January 5, 2008), influenza activity continued to increase in the United States.

- Two hundred twenty-one (7.2%) 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) was below national baseline levels, and the proportion of outpatient visits for acute respiratory illness (ARI) was above national baseline levels. The East North Central, New England, and West South Central regions reported ILI equal to or above their region-specific baselines, and the East North Central, Mid-Atlantic, Pacific, and West South Central regions reported ARI equal to or above their region-specific baselines.
- One state reported widespread influenza activity; 10 states reported regional influenza activity; 12 states and the District of Columbia reported local influenza activity; 26 states and Puerto Rico reported sporadic influenza activity; and one state 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>	Normal	Elevated	7.2%	11 of 51	307	94	1051	222	1
<b>New England</b>	Elevated	Normal	2.8%	2 of 6	12	1	36	14	0
<b>Mid-Atlantic</b>	Normal	Elevated	3.0%	2 of 3	8	2	32	34	0
<b>East North Central</b>	Elevated	Elevated	26.4%	0 of 5	33	20	6	30	0
<b>West North Central</b>	Normal	Normal	2.0%	0 of 7	6	3	34	14	0
<b>South Atlantic</b>	Normal	Normal	5.6%	1 of 9	19	15	194	46	0
<b>East South Central</b>	Normal	Normal	0.9%	0 of 4	2	1	2	0	0
<b>West South Central</b>	Elevated	Elevated	6.7%	1 of 4	17	40	558	29	1
<b>Mountain</b>	Normal	Normal	13.5%	2 of 8	130	5	131	39	0
<b>Pacific</b>	Normal	Elevated	8.2%	3 of 5	80	7	58	16	0

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

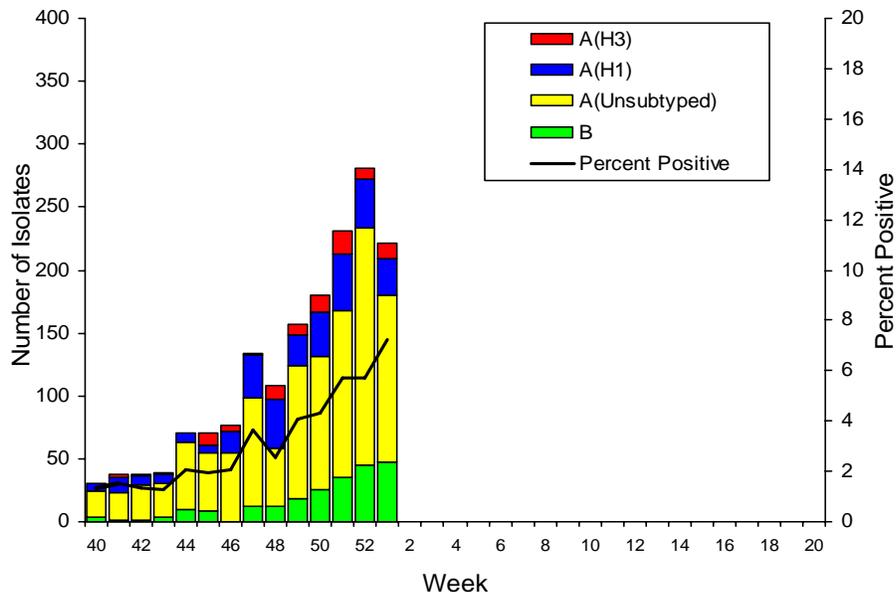
† National data are for current week; regional data are for the most recent three weeks.

‡ Includes all 50 states and the District of Columbia

**Laboratory Surveillance:** During week 1, WHO and NREVSS laboratories reported 3,066 specimens tested for influenza viruses, 221 (7.2%) of which were positive, including 29 influenza A (H1) viruses, 12 influenza A (H3) viruses, 133 influenza A viruses that were not subtyped, and 47 influenza B viruses. The District of Columbia and 40 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 49,283 specimens for influenza viruses and 1,674 (3.4%) were positive. Among the 1,674 influenza viruses, 1,452 (86.7%) were influenza A viruses and 222 (13.3%) were influenza B viruses. Four hundred one (27.6%) of the 1,452 influenza A viruses have been subtyped: 307 (76.6%) were influenza A (H1) viruses and 94 (23.4%) were influenza A (H3) viruses.

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



**Antigenic Characterization:** CDC has antigenically characterized 114 influenza viruses [67 influenza A (H1), 19 influenza A (H3), and 28 influenza B viruses] collected by U.S. laboratories since September 30, 2007.

#### Influenza A (H1) [67]

- All 67 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.

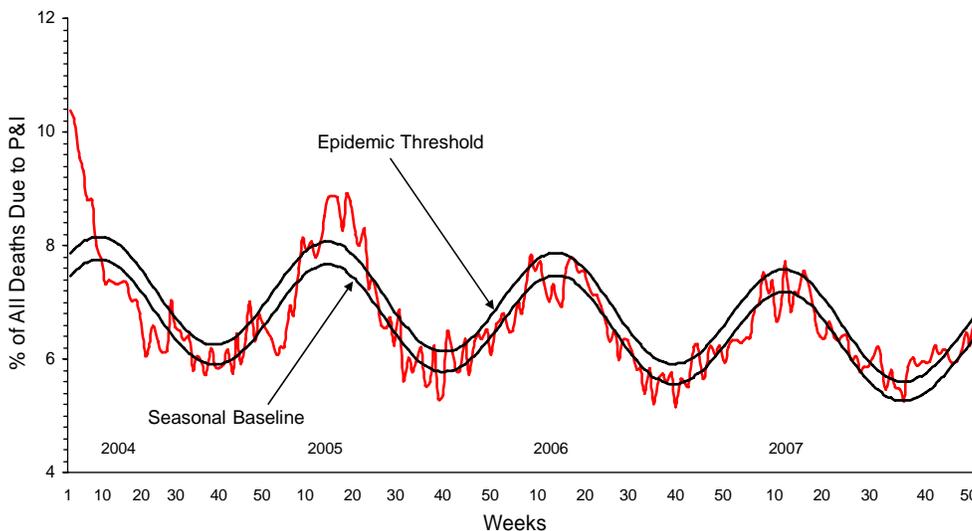
#### Yamagata lineage [25]

- 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.

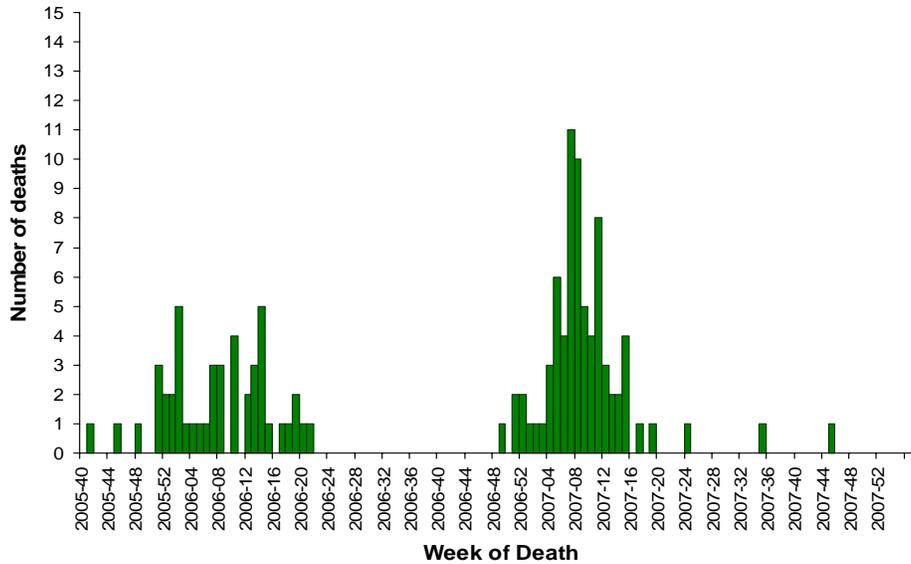
**Pneumonia and Influenza (P&I) Mortality Surveillance:** During week 1, 6.8% of all deaths reported through the 122-Cities Mortality Reporting System were reported as due to P&I. This percentage is below the epidemic threshold of 6.9% for week 1.

### Pneumonia and Influenza Mortality for 122 U.S. Cities Week Ending 01/05/2008



**Influenza-Associated Pediatric Mortality:** No influenza-associated pediatric deaths were reported during week 1. One influenza-associated pediatric death occurring during the 2007-08 season has been reported.

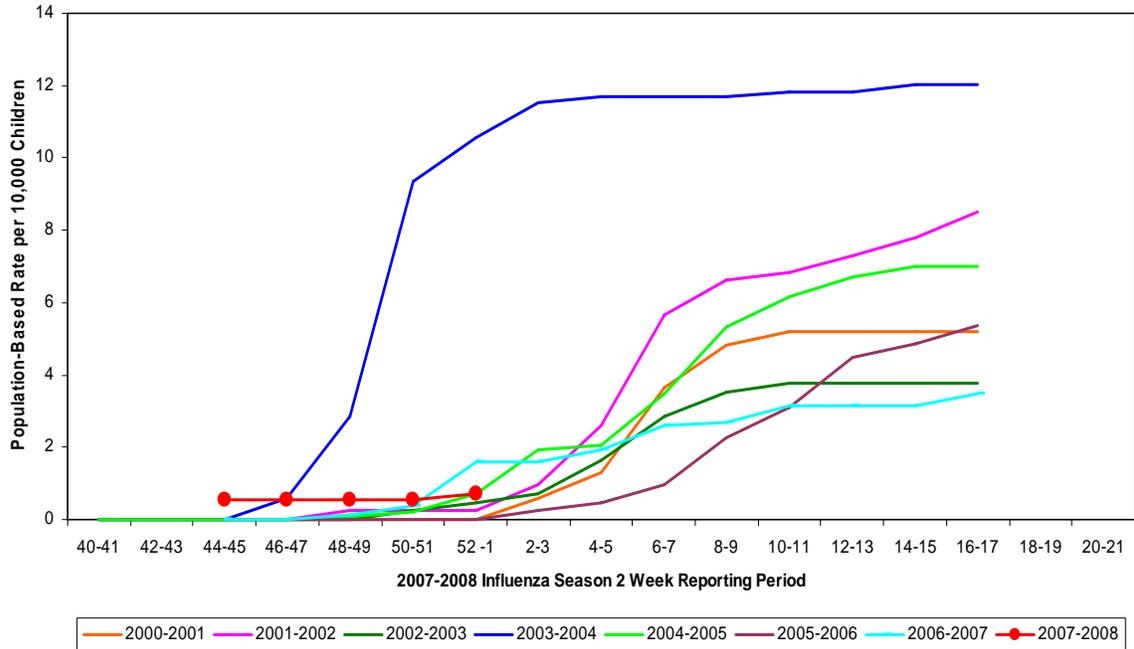
### Number of Influenza-Associated Pediatric Deaths by Week of Death: 2005-06 season to present



**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).

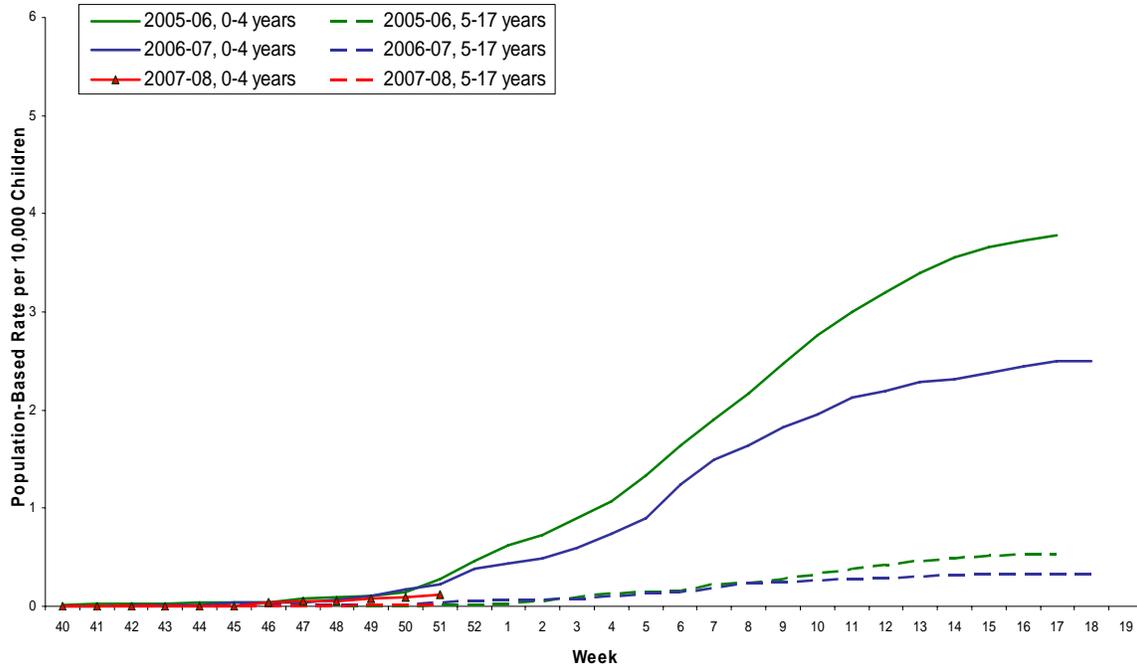
During November 4, 2007-December 29, 2007, the preliminary laboratory-confirmed influenza-associated hospitalization rate reported by the NVSN for children 0-4 years old was 0.73 per 10,000.

## NVSN Influenza Laboratory-Confirmed Cumulative Hospitalization Rates for Children 0 - 4 Years, 2007- 08 and Previous 7 Seasons



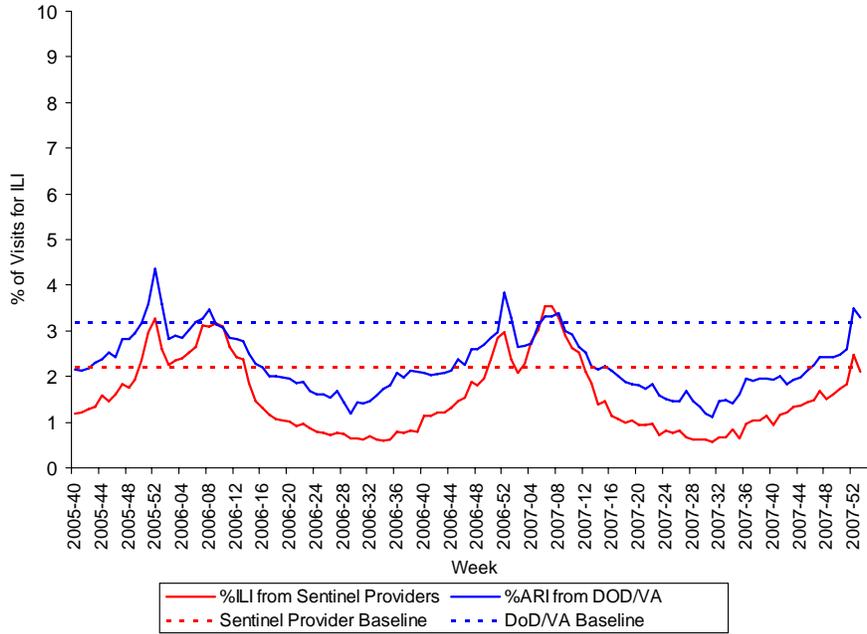
During September 30-December 22, 2007, the preliminary laboratory-confirmed influenza-associated hospitalization rate reported by the EIP for children 0–17 years old was 0.05 per 10,000. For children aged 0-4 years and 5-17 years, the rate was 0.12 per 10,000 and 0.01 per 10,000, respectively.

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

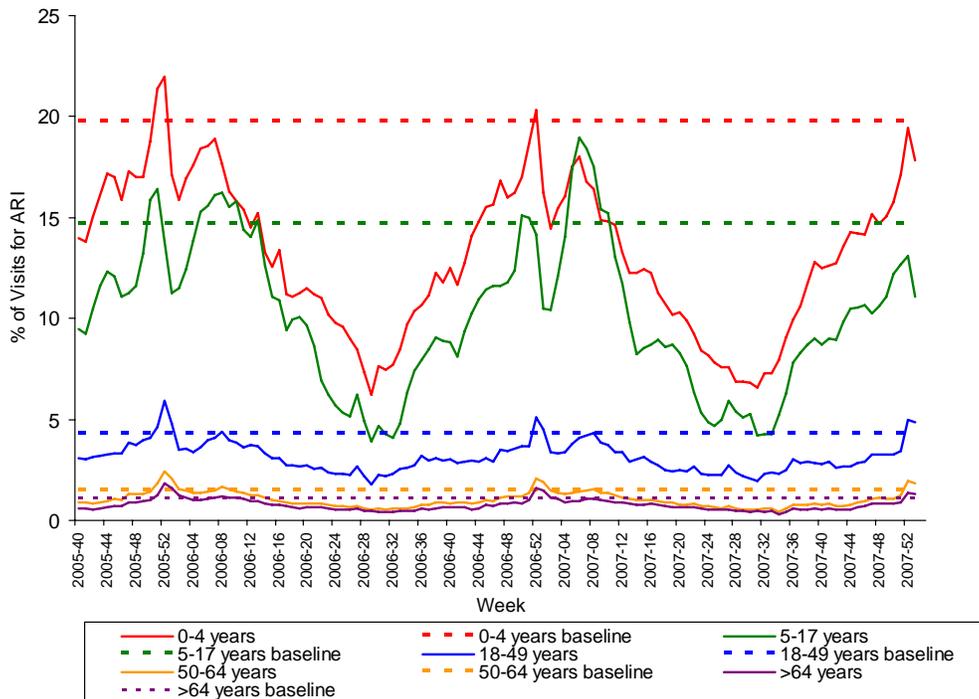


**Outpatient Illness Surveillance:** Nationwide during week 1, 2.1% of outpatient visits reported through the U.S. Influenza Sentinel Provider Surveillance Network were due to influenza-like illness (ILI) and 3.3% of patient visits to Department of Veteran’s Affairs (VA) and Department of Defense (DoD) outpatient treatment facilities were for acute respiratory illness (ARI). The percentage of visits for ILI was below the national baseline of 2.2%, and the percentage of visits for ARI was above the national baseline of 3.2%. On a regional level, the percentage of visits for ILI ranged from 0.7% to 4.4% and the percentage of visits for ARI ranged from 1.8% to 4.2%. The East North Central, New England, and West South Central regions reported ILI equal to or above their region-specific baselines, and the East North Central, Mid-Atlantic, 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.

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

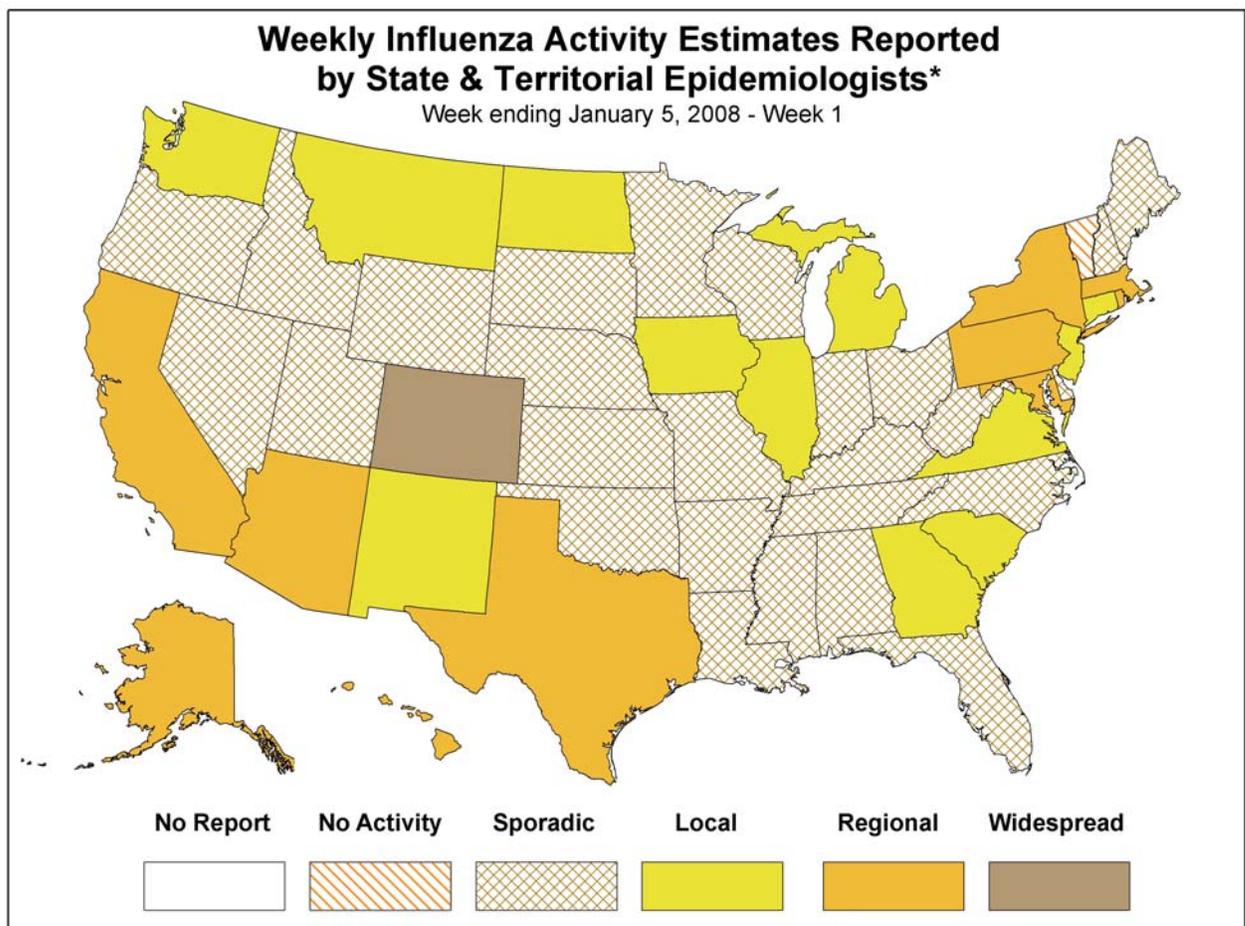


## Percentage of Visits for ARI by Age Group Reported by DoD/VA Outpatient Clinics - National Summary



**Geographic Spread of Influenza as Assessed by State and Territorial Epidemiologists:** During week 1 the following influenza activity was reported:

- Widespread activity was reported by one state (Colorado).
- Regional activity was reported by 10 states (Alaska, Arizona, California, Hawaii, Maryland, Massachusetts, New York, Pennsylvania, Rhode Island, and Texas).
- Local activity was reported by the District of Columbia and 12 states (Connecticut, Georgia, Illinois, Iowa, Michigan, Montana, New Jersey, New Mexico, North Dakota, South Carolina, Virginia, and Washington).
- Sporadic activity was reported by Puerto Rico and 26 states (Alabama, Arkansas, Delaware, Florida, Idaho, Indiana, Kansas, Kentucky, Louisiana, Maine, Minnesota, Mississippi, Missouri, Nebraska, Nevada, New Hampshire, North Carolina, Ohio, Oklahoma, Oregon, South Dakota, Tennessee, Utah, West Virginia, Wisconsin, and Wyoming).
- No activity was reported by one state (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 11, 2008