

Week 51: December 20 – December 26, 2009



# Illinois Influenza Surveillance Report

---

Week 51: December 20 – December 26, 2009

**Division of Infectious Diseases**

**Immunizations Section**

**Thursday, December 31<sup>st</sup>, 2009**

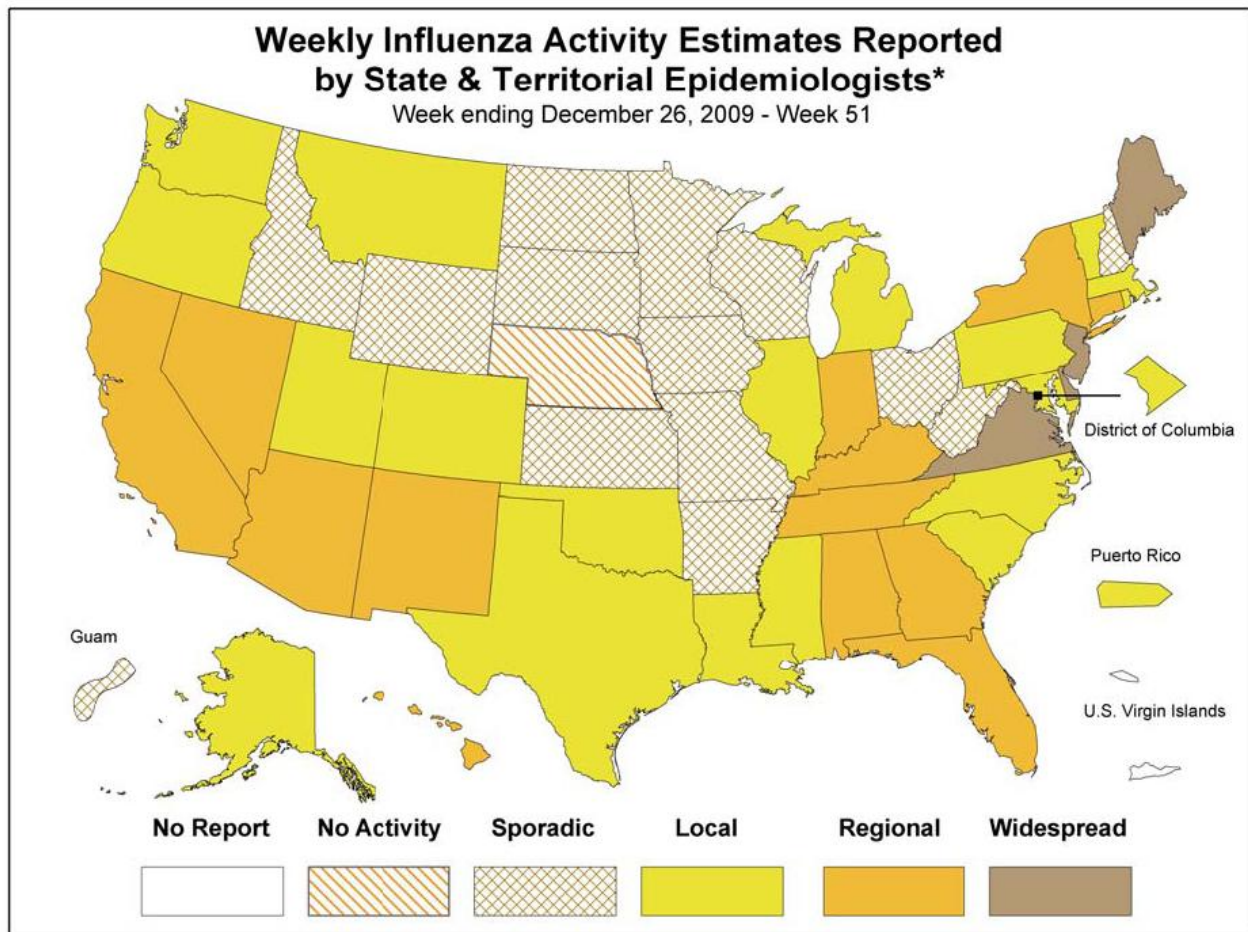
## IN THIS ISSUE

Summary	Page 2
CDC FLU View	Page 3
2009 H1N1 Hospital Admissions and Deaths	Page 4
ILI Net	Page 5
Laboratory surveillance summary	Page 6
National antiviral resistance data and resources	Page 7

## SUMMARY

- During CDC week 51, the proportion of outpatient visits for influenza-like illness (ILI)<sup>i</sup> was 3.5%. This represents a 32% increase compared with last week.
- Based on CDC criteria; influenza activity is currently **local** in Illinois. For more information visit <http://www.cdc.gov/flu/weekly/fluactivity/htm>
- During week 51, 100.0 % of all influenza A viruses sub typed by IDPH and sentinel hospitals were 2009 influenza A (H1N1).
- Two thousand Six hundred and twenty nine hospital admissions and 83 deaths have occurred among individuals with confirmed 2009 influenza A (H1N1) since April 2009.
- 2009 influenza (A) H1N1 infection continues to impact younger age groups in Illinois. More than 80% of individuals hospitalized since April 1<sup>9th</sup>, 2009 were less than 65 years old.

**CDC FLU VIEW**



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

Activity Level	ILI activity <sup>*</sup> /Outbreaks		Laboratory data
No activity	Low	And	No lab confirmed cases <sup>†</sup>
Sporadic	Not increased	And	Isolated lab-confirmed cases
	Not increased	And	OR Lab confirmed outbreak in one institution <sup>‡</sup>
Local	Increased ILI in 1 region <sup>**</sup> ; ILI activity in other regions is not increased	And	Recent (within the past 3 weeks) lab evidence of influenza in region with increased ILI
	2 or more institutional outbreaks (ILI or lab confirmed) in 1 region; ILI activity in other regions is not increased	And	OR 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
	Institutional outbreaks (ILI or lab confirmed) in ≥2 and less than half of the regions	And	OR 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.

<sup>\*</sup> ILI activity can be assessed using a variety of data sources including ILINet providers, school/workplace absenteeism, and other syndromic surveillance systems that monitor influenza-like illness.

<sup>†</sup> Lab confirmed case = case confirmed by rapid diagnostic test, antigen detection, culture, or PCR.

<sup>‡</sup> Institution includes nursing home, hospital, prison, school, etc.

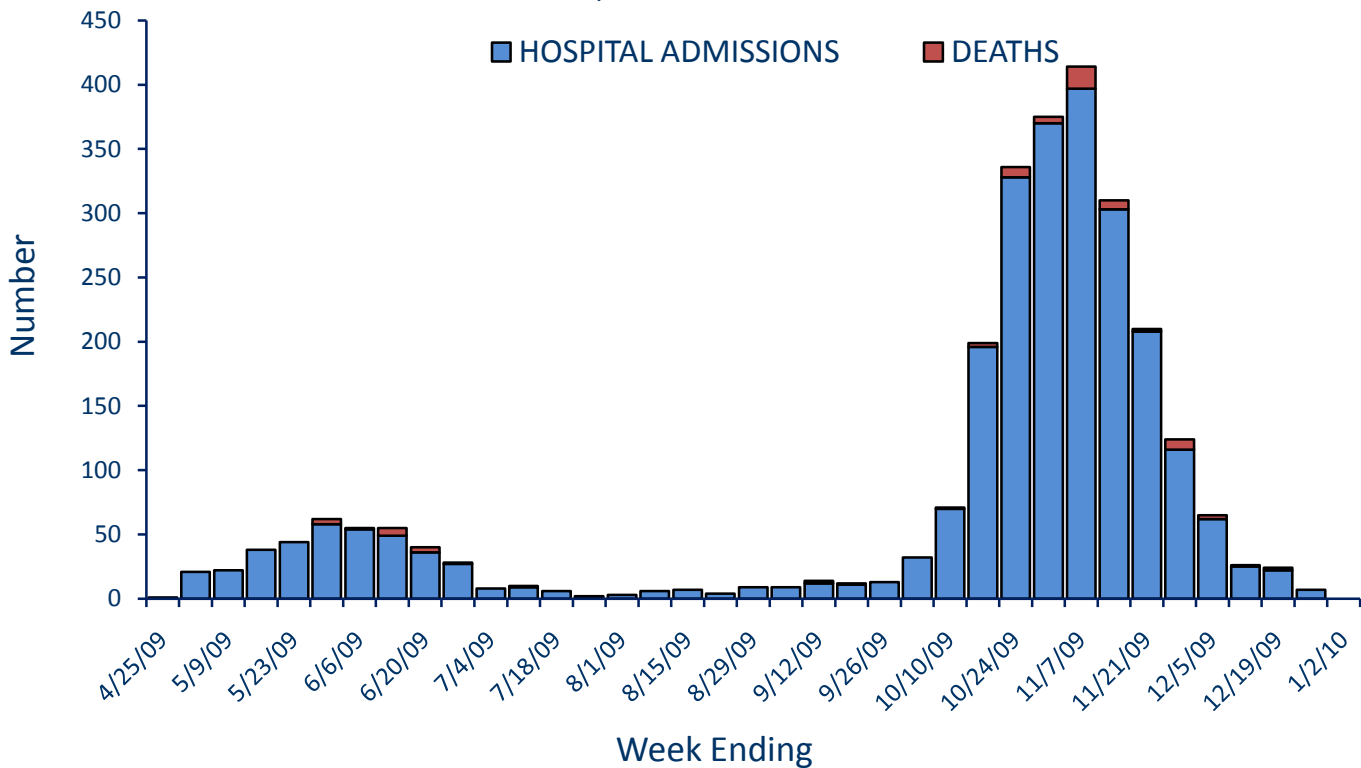
<sup>\*\*</sup> Region: population under surveillance in a defined geographical subdivision of a state.

## 2009 (A) H1N1 HOSPITAL ADMISSIONS AND DEATHS

Illinois H1N1 (2009): Cumulative Hospitalizations and Deaths by Age Group through December 22, 2009<sup>ii</sup>

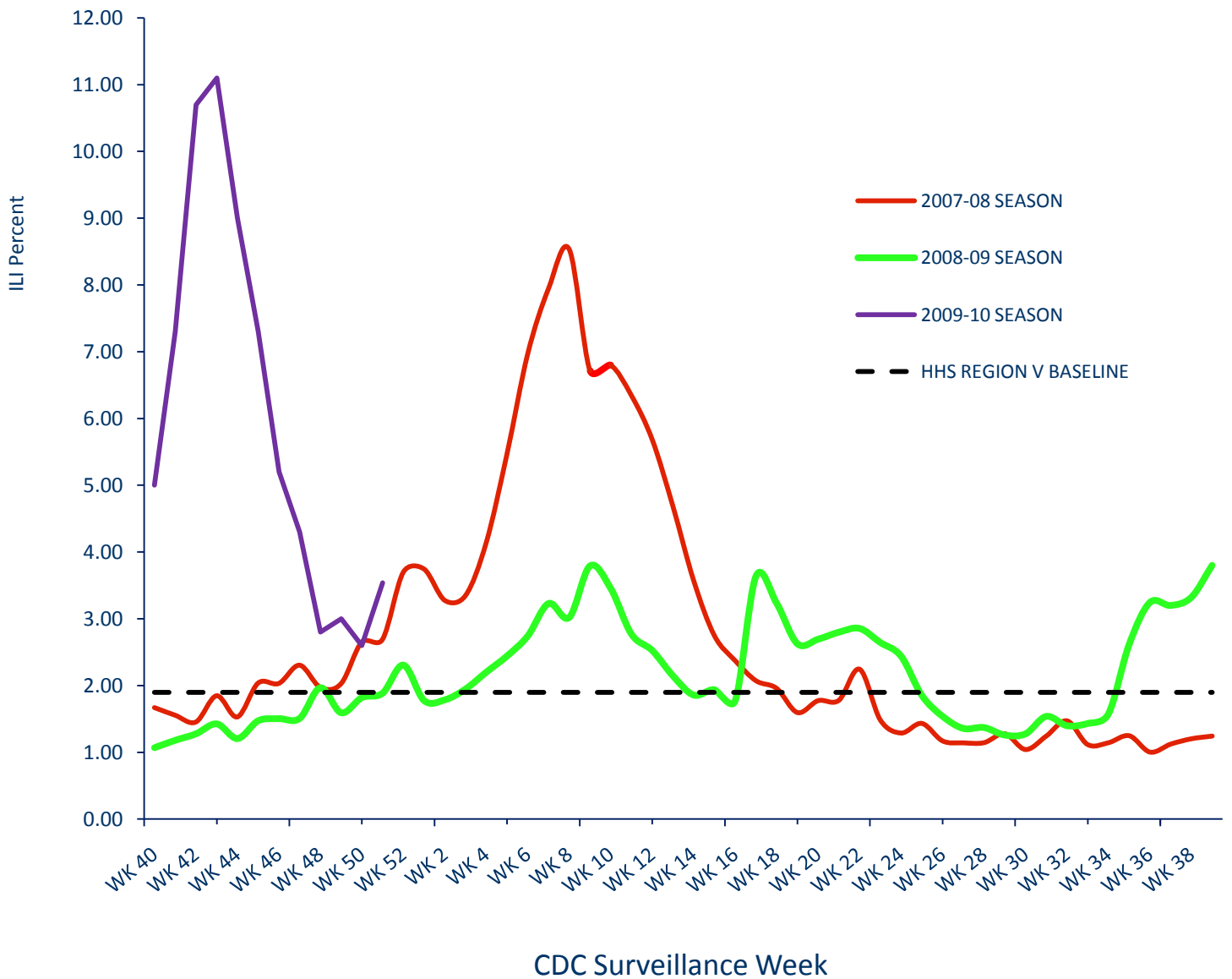
Age range	Admissions	Percent	Deaths	Percent
0-4 Years	509	(19)	2	(3)
5-18 Years	600	(23)	11	(13)
19-24 Years	204	(8)	3	(4)
25-49 Years	679	(26)	33	(40)
50-64 Years	450	(17)	21	(25)
65 + Years	185	(7)	13	(16)
Unknown	2	(0)	0	(0)
<b>TOTAL</b>	<b>2629</b>		<b>83</b>	

2009 Influenza A (H1N1 ) Admissions and Deaths  
April- December 2009



**ILI NET PROVIDER SURVEILLANCE**

Influenza like Illness(ILI) Outpatient Surveillance by Season  
2007-2009

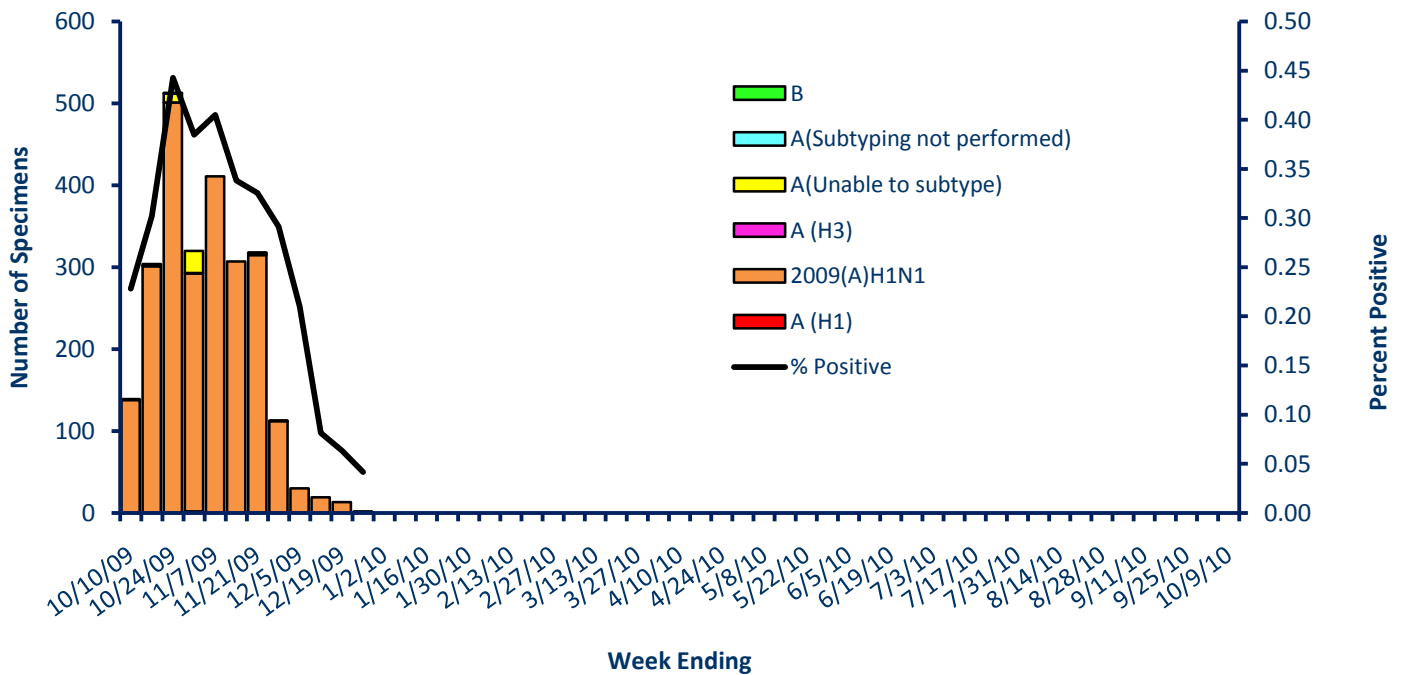


## LABORATORY SURVEILLANCE

During week 51, 2 (4 %) specimens tested by Illinois WHO/NREVSS<sup>iii</sup> collaborating laboratories and sentinel sites<sup>iv</sup> tested positive for influenza. Two (100.0%) sub typed influenza A viruses were 2009 influenza A (H1N1) viruses.

Week	No of Labs Reporting	A (H1)	2009(A)H1N1	A (H3)	A(Unable to subtype)	A(Sub typing not performed)	B	Total # Tested	% Positive
48	1	0	30	0	0	0	0	143	0.21
49	2	0	19	0	0	0	0	234	0.08
50	2	0	13	0	0	0	0	205	0.06
51	1	0	2	0	0	0	0	48	0.04
<b>2009 Year to Date</b>		214	6,137	73	122	74	70	18,021	0.37

**Influenza Isolates from Illinois Reported by  
WHO/NREVSS Collaborating and Sentinel Laboratories  
2009-2010 Season**



## NATIONAL ANTIVIRAL RESISTANCE DATA

### Antiviral Resistance Testing Results on Samples Collected Since September 1, 2009.

	Viruses tested (n)	Resistant Viruses, No. (%)	Viruses tested (n)	Resistant Viruses, No. (%)	Viruses tested (n)	Resistant Viruses, No. (%)
	Oseltamivir		Zanamivir		Adamantanes	
Seasonal Influenza A (H1N1)	1	1 (100)	0	0 (0)	2 (0)	0 (0)
Influenza A (H3N2)	8	0 (0)	0	0 (0)	6 (0)	5 (83.3)
Influenza B	1	0 (0)	0	0 (0)	NA	NA
2009 Influenza A (H1N1)	2445	38 <sup>vi</sup> (1.6)	666	0 (0)	685	684 (99.8)

The majority of 2009 influenza A (H1N1) viruses are susceptible to the neuraminidase inhibitor antiviral medication oseltamivir; however, rare sporadic cases of oseltamivir resistant 2009 Influenza A (H1N1) viruses have been detected worldwide. A total of 50 cases of oseltamivir resistant 2009 influenza A (H1N1) viruses have been identified in the United States since April 2009. Of these 50 cases, 40 have been identified in the United States since September 1, 2009.

## RESOURCES

Centers for Disease Control and Prevention Influenza Website:

<http://www.cdc.gov/flu/weekly/fluactivity.htm>

Immunization Action Coalition Website: <http://immunize.org/>

IDPH Website <http://www.idph.state.il.us/flu/surveillance.htm>

<sup>i</sup> ILI "Influenza like Illness" is defined as fever  $\geq 100^{\circ}\text{F}$  and cough and/or sore throat.

<sup>ii</sup> Beginning 4/5/2009 includes influenza A infections negative for human H1 and H3 by influenza RT\_PCR and positive for novel H1N1 by RT\_PCR

<sup>iii</sup> WHO/NREVSS Collaborating Laboratories WHO/NREVSS Collaborating Laboratories: For viral surveillance - About 80 U.S. World Health Organization (WHO) Collaborating Laboratories and 70 National Respiratory and Enteric Virus Surveillance System (NREVSS), located throughout the United States report daily or weekly the results of their testing.

<sup>iv</sup> Super Sentinel Surveillance Sites: Sites recruited by IDPH to conduct virologic surveillance during summer 2009

<sup>v</sup> Two screening tools were used to determine oseltamivir resistance: sequence analysis of viral genes or a neuraminidase inhibition assay

<sup>vi</sup> Additional laboratories perform antiviral resistance testing and report their results to CDC. One additional oseltamivir resistant 2009 influenza A (H1N1) virus has been identified by these laboratories since September 1, 2009, bringing the total number to 46. Of the 50 total cases identified, 34 had documented exposure to oseltamivir through either treatment or chemoprophylaxis, 14 are under investigation to determine exposure to oseltamivir, and two patients had no documented oseltamivir exposure.