

Week 39: September 27<sup>th</sup> – October 3rd, 2009



# Illinois Influenza Surveillance Report

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Week 39: September 27<sup>th</sup> –October 3rd , 2009

**Division of Infectious Diseases**

**Immunizations Section**

10/8/2009

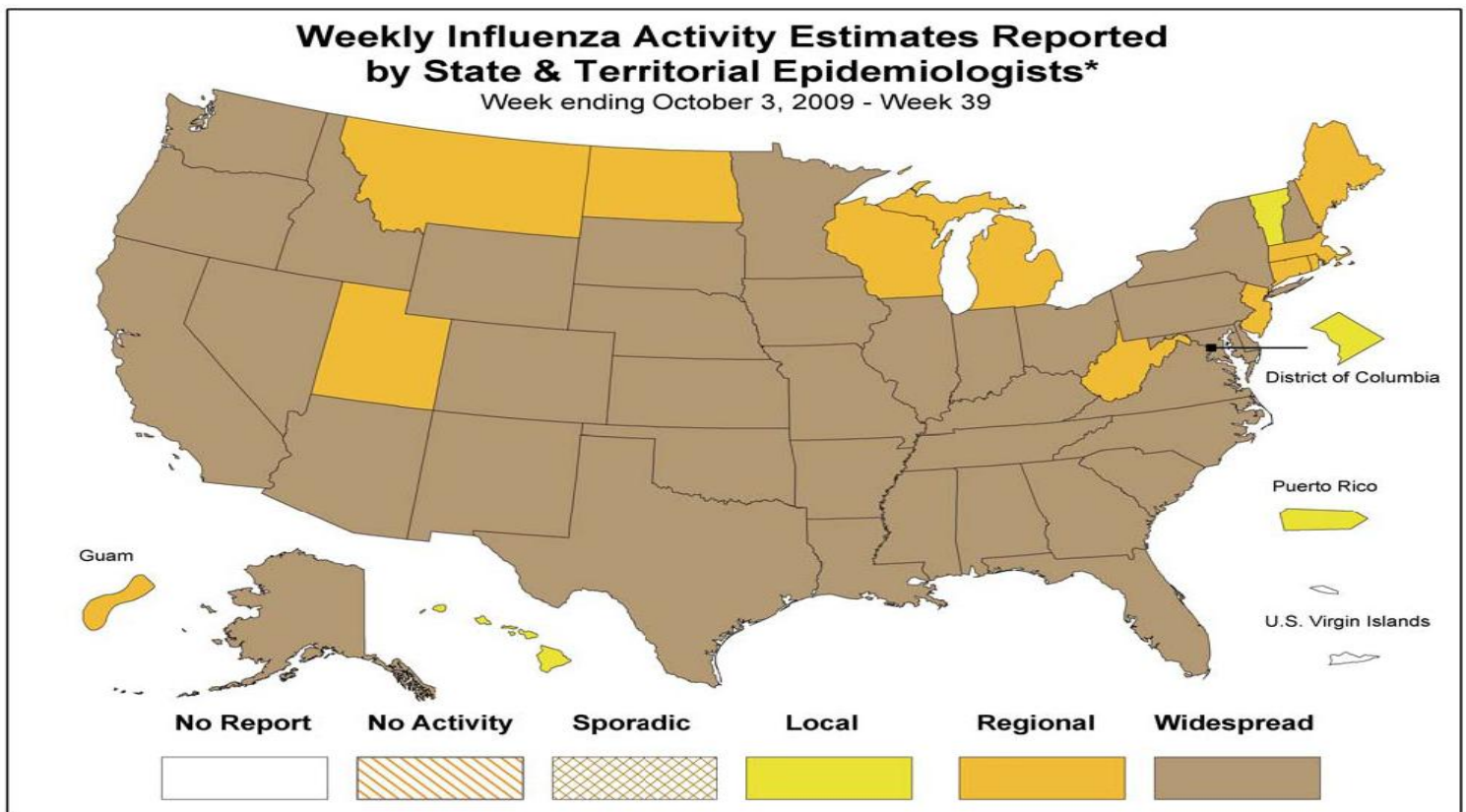
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## SUMMARY

- During CDC Week 39, the proportion of outpatient visits for influenza-like illness (ILI)<sup>i</sup> was 3.87%. This is three times higher than the proportion of ILI outpatients typically seen this time of the year.
- Based on CDC criteria; influenza activity is currently **widespread** in Illinois, and 37 other states. For more information visit <http://www.cdc.gov/flu/weekly/fluactivity/htm>
- During week 39, 99% of all influenza A viruses subtyped by IDPH and sentinel hospitals were 2009 influenza A (H1N1).
- Fourteen new hospital admissions and no deaths occurred among individuals with confirmed 2009 influenza A (H1N1) in the past two weeks from September 20<sup>th</sup> through October 3rd, 2009. In comparison, during peak this spring 107 admissions and five deaths were reported during the two week period from May 17<sup>th</sup> through May 30<sup>th</sup>, 2009.
- 2009 influenza (A) H1N1 infection continues to impact younger age groups in Illinois. More than 80% of individuals hospitalized since April 19<sup>th</sup>, 2009 were less than 65 years old.
- No influenza-associated pediatric deaths were reported.
- The proportion of deaths attributed to pneumonia and influenza (P&I) was below the seasonal baseline<sup>ii</sup>.

CDC FLU VIEW



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

**No activity:** No laboratory confirmed cases of influenza and no reported increase in cases of influenza like illness (ILI).

**Sporadic:** Small numbers of laboratory confirmed influenza cases or a single laboratory confirmed influenza in a single region of the state.

**Local:** Outbreaks of influenza or increases in ILI and recent laboratory confirmed influenza in a single region of the state.

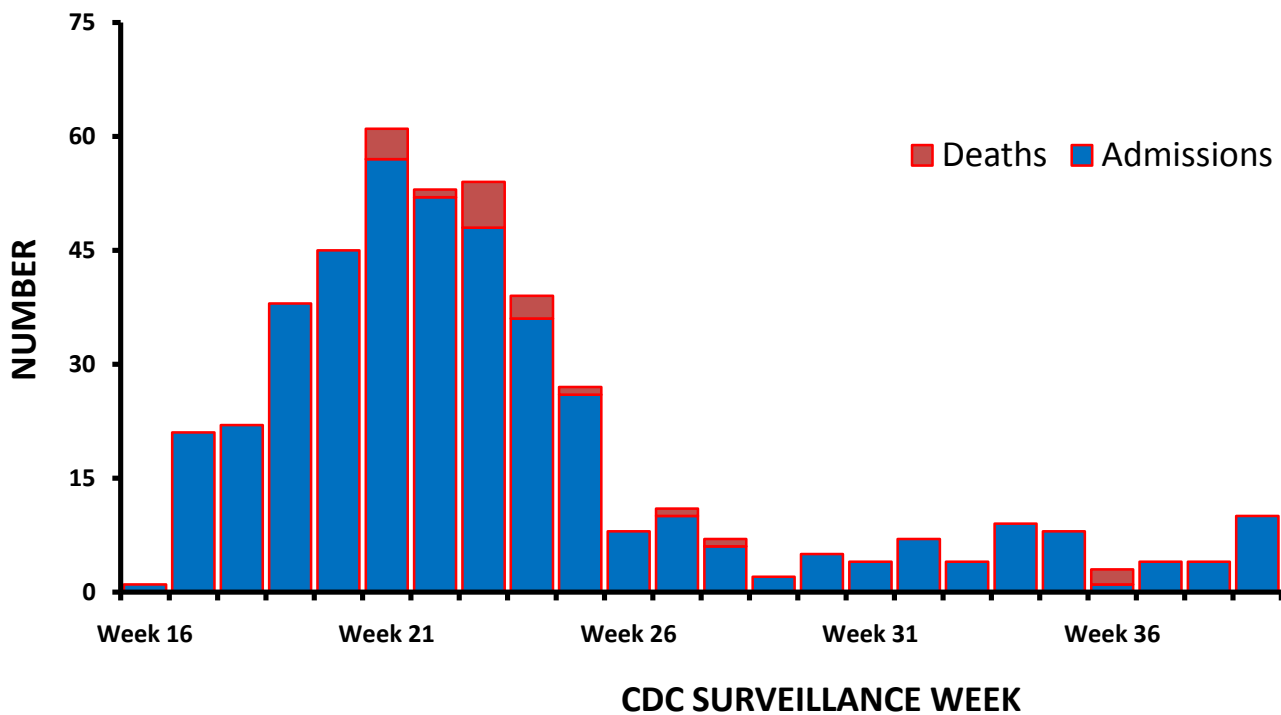
**Regional:** Outbreaks of influenza or increases in ILI and recent laboratory confirmed influenza in at least two but less than half the regions of the state.

**Widespread:** Outbreaks of influenza or increases in ILI cases and recent laboratory confirmed influenza in at least half the regions in the state.

## 2009 (A) H1N1 HOSPITALIZATIONS AND DEATHS

H1N1 2009 Cumulative Hospitalizations and Deaths by Age Group* through October 2 <sup>nd</sup> , 2009		
Age range	Hospital Admissions No. (%)	Deaths No. (%)
0-4	61 (13.62)	1 (5.26)
5-18	125 (27.90)	2 (10.53)
19-24	36 (8.04)	2 (10.53)
25-49	105 (23.44)	7 (36.84)
50-64	55 (12.28)	4 (21.05)
65 +	20 (4.46)	3 (15.79)
Unknown	48 (10.27)	0 (0.0)
TOTAL	438	19

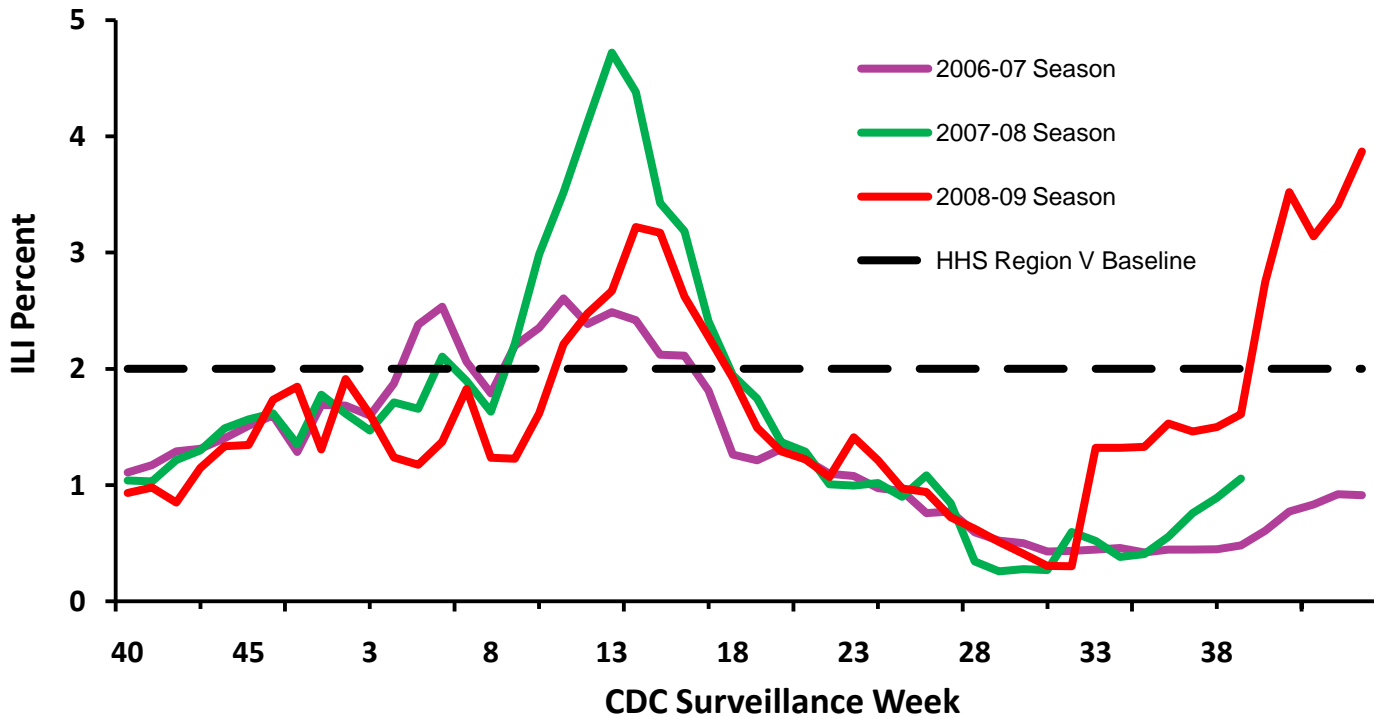
## 2009 Influenza A (H1N1 ) Admissions and Deaths\*



\*Does not include 14 hospitalizations with unknown admission date

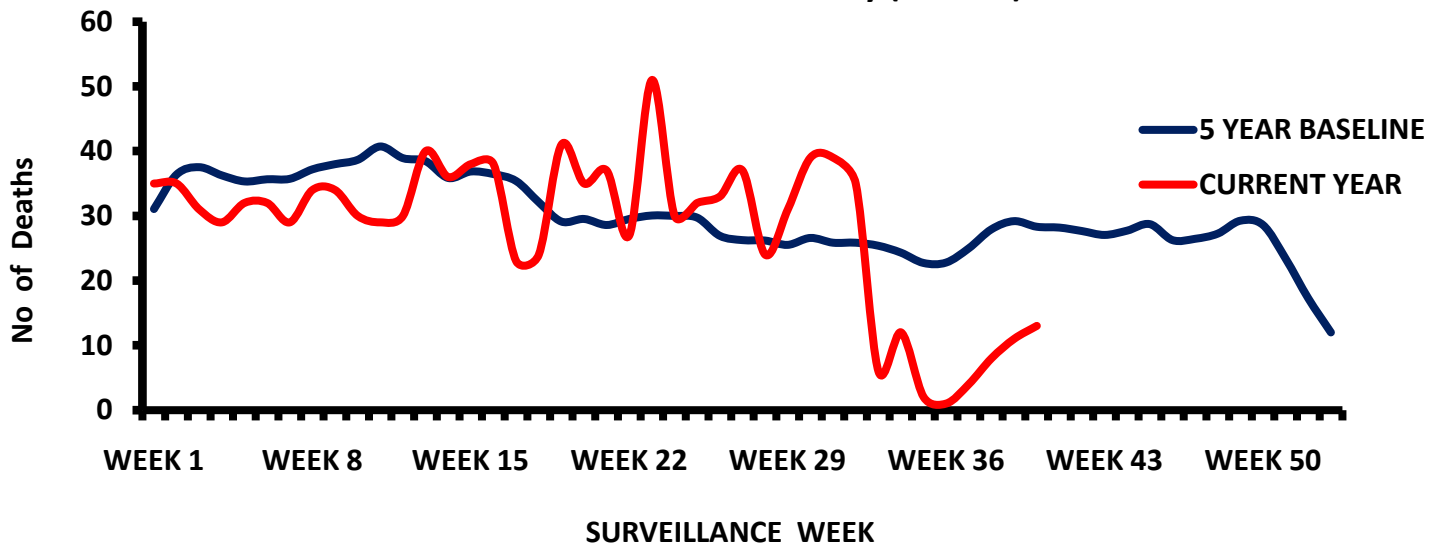
## ILI NET PROVIDER SURVEILLANCE

### Influenza Like Illness Outpatient Surveillance



## PNEUMONIA AND INFLUENZA MORTALITY

### Illinois Pnuemonia and Influenza Mortality (3 Cities)



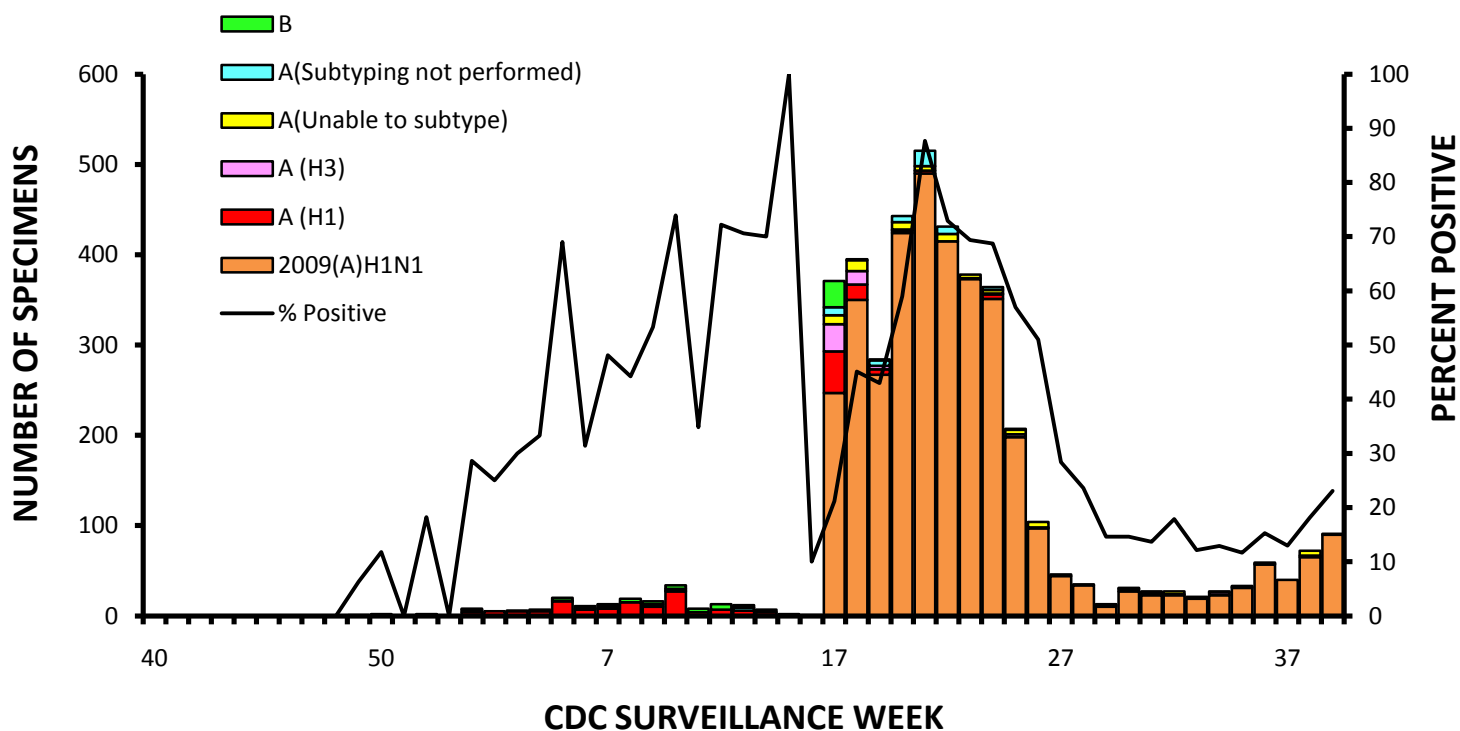
\*\*Three cities (Chicago Peoria and Rockford) Participate in the 122 –Cities Mortality Reporting System  
Reporting may be delayed

## LABORATORY SURVEILLANCE

During week 39, 91(23%) specimens tested by Illinois WHO/NREVSS<sup>iii</sup> collaborating laboratories and sentinel sites<sup>iv</sup> tested positive for influenza. 90 (99.0%) of all 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
36	5	0	57	1	0	0	1	386	15.28
37	4	0	40	0	0	0	0	309	12.94
38	3	0	65	2	5	0	0	396	18.18
39	2	0	90	1	0	0	0	394	23.10
Year to Date		212	3698	72	80	74	65	10497	40.02%

**Influenza Isolates from Illinois**  
**Reported by WHO/NREVSS Collaborating and Sentinel Laboratories**  
**2008-2009 Season**



## NATIONAL ANTIVIRAL RESISTANCE DATA

	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)	1,151	1,146 (99.6%)	1,151	0 (0)	1,157	7 (0.6%)
Influenza A (H3N2)	261	0 (0)	261	0 (0)	271	271 (100%)
Influenza B	654	0 (0)	654	0 (0)	N/A <sup>v</sup>	N/A
2009 Influenza A (H1N1)	2,040	10 <sup>viii</sup> (0.6)	989	0 (0)	526	526 (100%)

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, including 12 cases in the United States. The total of 12 cases represents an increase of one case over the previous week. All tested viruses retain their sensitivity to the other neuraminidase inhibitor: zanamivir.

## 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> The seasonal baseline is calculated using statistical procedures using data from the previous five years, and the epidemic threshold is calculated as 1.645 standard deviations above the seasonal baseline.

<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> The adamantanes (amantadine and rimantadine) are not effective against influenza B viruses.

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

<sup>vii</sup> Additional laboratories perform antiviral resistance testing and report their results to CDC. Two additional oseltamivir resistant 2009 influenza A (H1N1) viruses have been identified by these laboratories, bringing the total number to 11.