

Week 40: October 4th – October 10th, 2009



Illinois Influenza Surveillance Report

Week 40: October 4th –October 10th , 2009

Division of Infectious Diseases

Immunizations Section

10/16/2009

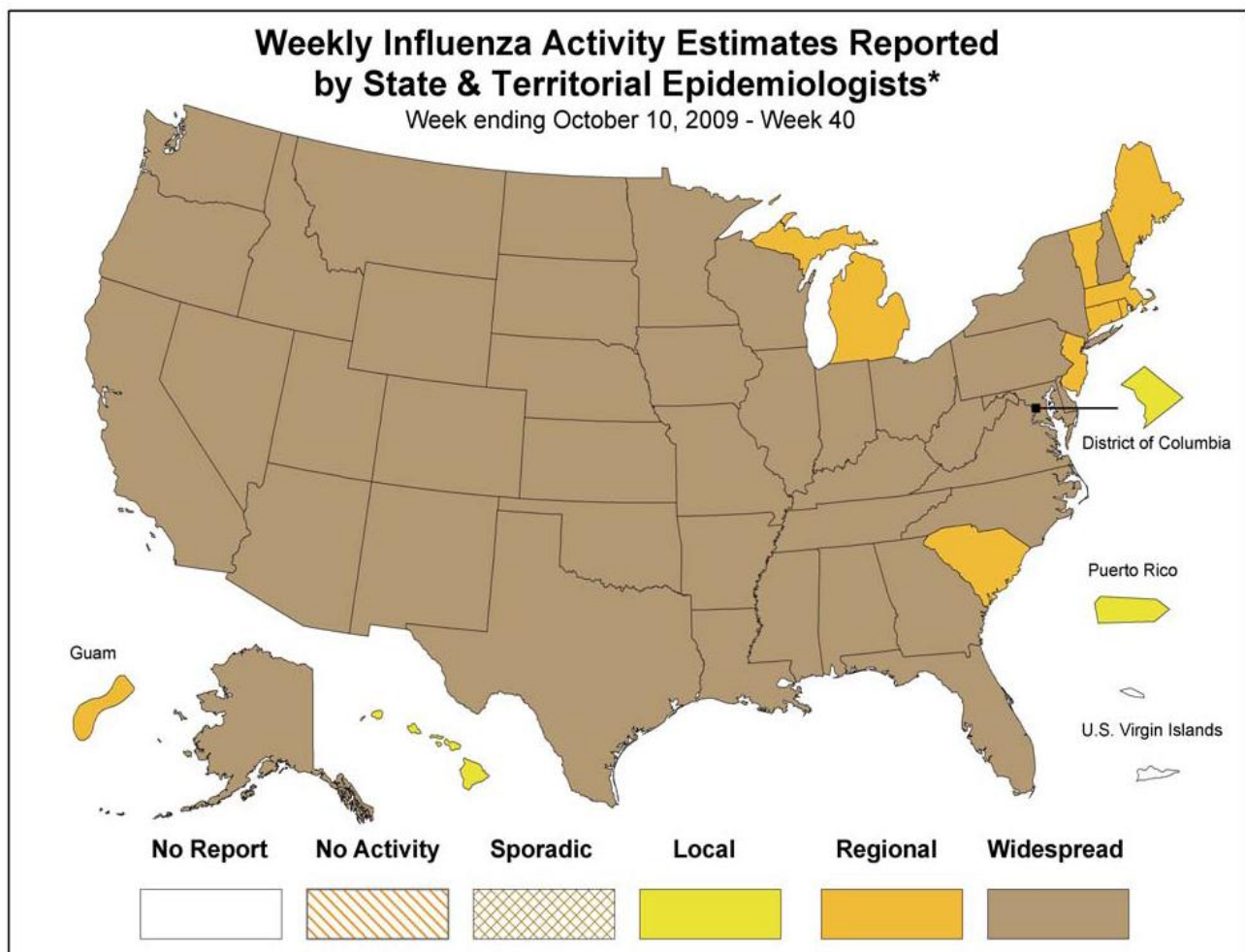
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SUMMARY

- During CDC Week 40, the proportion of outpatient visits for influenza-like illness (ILI)ⁱ was 5.11%. This is five times higher than the proportion of ILI outpatients seen same this time of last year.
- Based on CDC criteria; influenza activity is currently **widespread** in Illinois, and 41 other states. For more information visit <http://www.cdc.gov/flu/weekly/fluactivity/htm>
- During week 40, 99% of all influenza A viruses subtyped by IDPH and sentinel hospitals were 2009 influenza A (H1N1).
- Twenty- three new hospital admissions and one death occurred among individuals with confirmed 2009 influenza A (H1N1) in the past two weeks from September 20th through October 3rd, 2009. In comparison, during peak this spring 107 admissions and five deaths were reported during the two week period from May 17th through May 30th, 2009.
- 2009 influenza (A) H1N1 infection continues to impact younger age groups in Illinois. More than 80% of individuals hospitalized since April 19th, 2009 were less than 65 years old.
- One influenza-associated pediatric death was reported.
- The proportion of deaths attributed to pneumonia and influenza (P&I) was below the seasonal baselineⁱⁱ.

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.

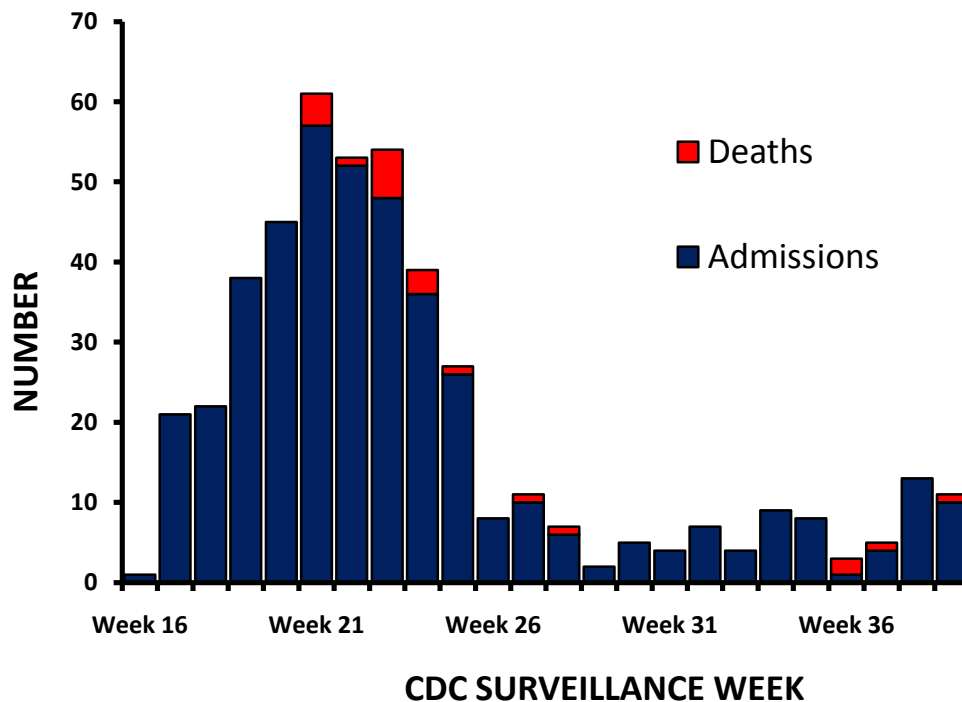
Widespread: Outbreaks of influenza or increases in ILI cases and recent laboratory confirmed influenza in at least half the regions in the state.

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2009 (A) H1N1 HOSPITALIZATIONS AND DEATHS

H1N1 2009 Cumulative Hospitalizations and Deaths by Age Group* through October 10th , 2009		
Age range	Hospital Admissions No. (%)	Deaths No. (%)
0-4	67 (14.08)	1 (5.26)
5-18	131 (27.52)	3 (15.79)
19-24	39 (8.19)	2 (10.53)
25-49	107 (22.48)	7 (36.84)
50-64	59 (12.39)	4 (21.05)
65 +	23 (4.83)	3 (15.79)
Unknown	50 (10.50)	0 (0.0)
TOTAL	476	20

2009 Influenza A (H1N1) Admissions and Deaths

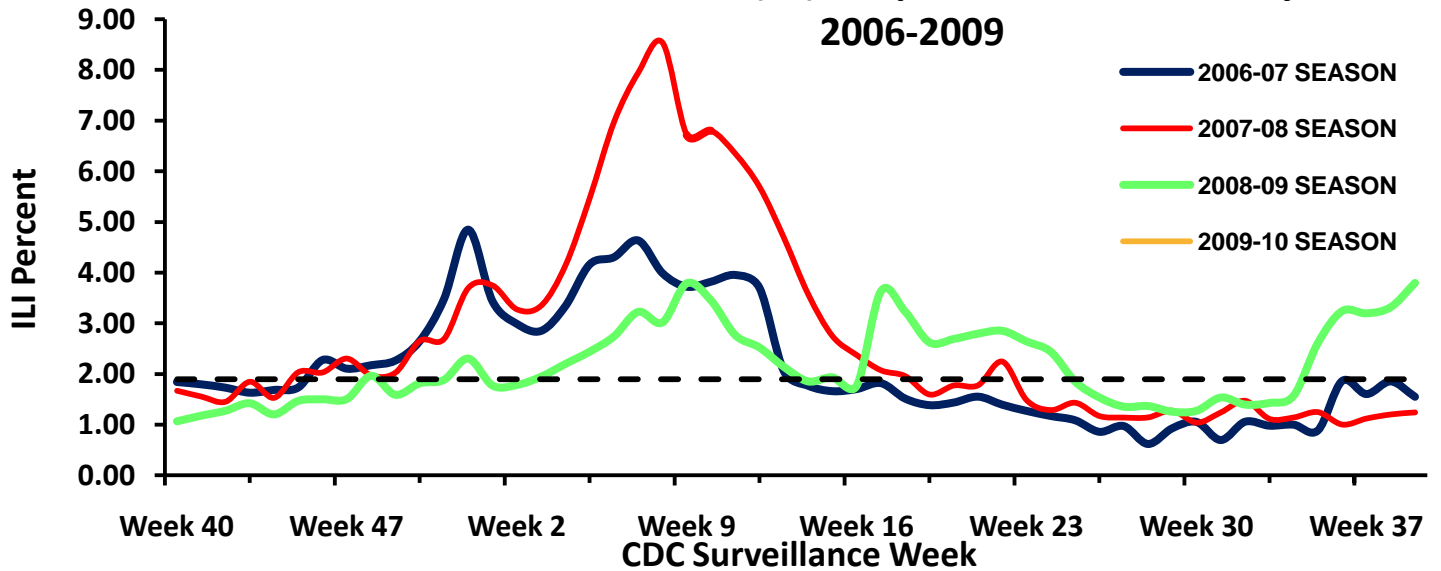


*Does not include 14 hospitalizations with unknown admission date

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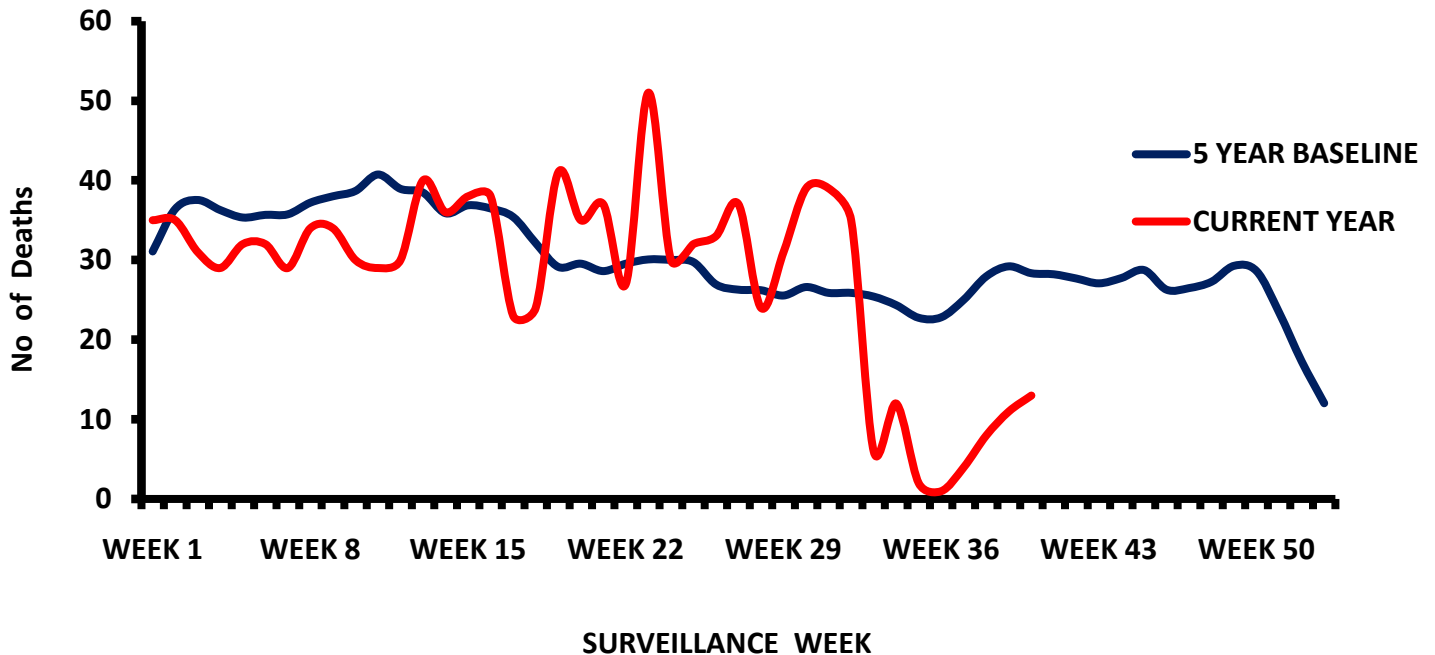
ILI NET PROVIDER SURVEILLANCE

Influenza like Illness(ILI) Outpatient Surveillance by Season
2006-2009



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

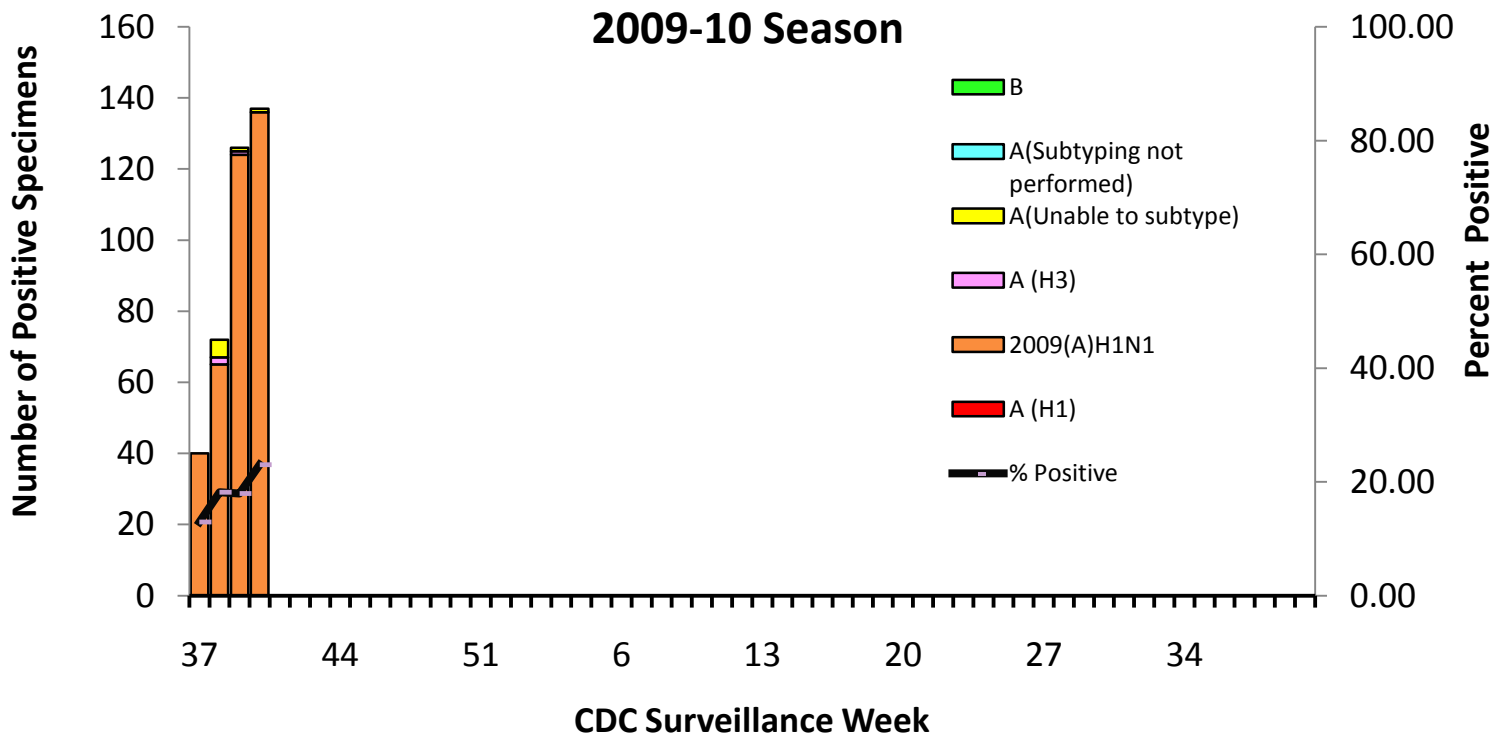
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LABORATORY SURVEILLANCE

During week 40, 137(23%) specimens tested by Illinois WHO/NREVSSⁱⁱⁱ collaborating laboratories and sentinel sites^{iv} tested positive for influenza. 136 (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
37	4	0	40	0	0	0	0	309	12.94
38	3	0	65	2	5	0	0	396	18.18
39	6	0	124	1	1	0	0	702	17.95
40	5	0	136		1	0	0	595	23.03
Year to Date		212	3868	72	82	74	65	11400	38.36%

Influenza Isolates from Illinois Reported by WHO/NREVSS and Sentinel laboratories 2009-10 Season



NATIONAL ANTIVIRAL RESISTANCE DATA

	Viruses tested (n)	Resistant Viruses, No. (%)	Viruses tested (n)	Resistant Viruses, No. (%)
	Oseltamivir		Zanamivir	
Seasonal Influenza A (H1N1)	0	0 (0)	0	0 (0)
Influenza A (H3N2)	0	0 (0)	0	0 (0)
Influenza B	0	0 (0)	0	0 (0)
2009 Influenza A (H1N1)	406	2 ^{vi} (0.5)	89	0 (0)

Since September 1, 2009, 89 2009 influenza A (H1N1) virus isolates have been tested for resistance to the neuraminidase inhibitors (oseltamivir and zanamivir). In addition, 317 2009 influenza A (H1N1) original clinical samples were tested for a single known mutation in the virus that confers oseltamivir resistance.

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>

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

ⁱⁱ 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.

ⁱⁱⁱ 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.

^{iv} Super Sentinel Surveillance Sites: Sites recruited by IDPH to conduct virologic surveillance during summer 2009

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

^{vi} 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.