

Week 3: January 17 – January 23, 2010



Illinois Influenza Surveillance Report

Week 3: January 17 – January 23, 2010

Division of Infectious Diseases

Immunization Section

Thursday, January 28th, 2010

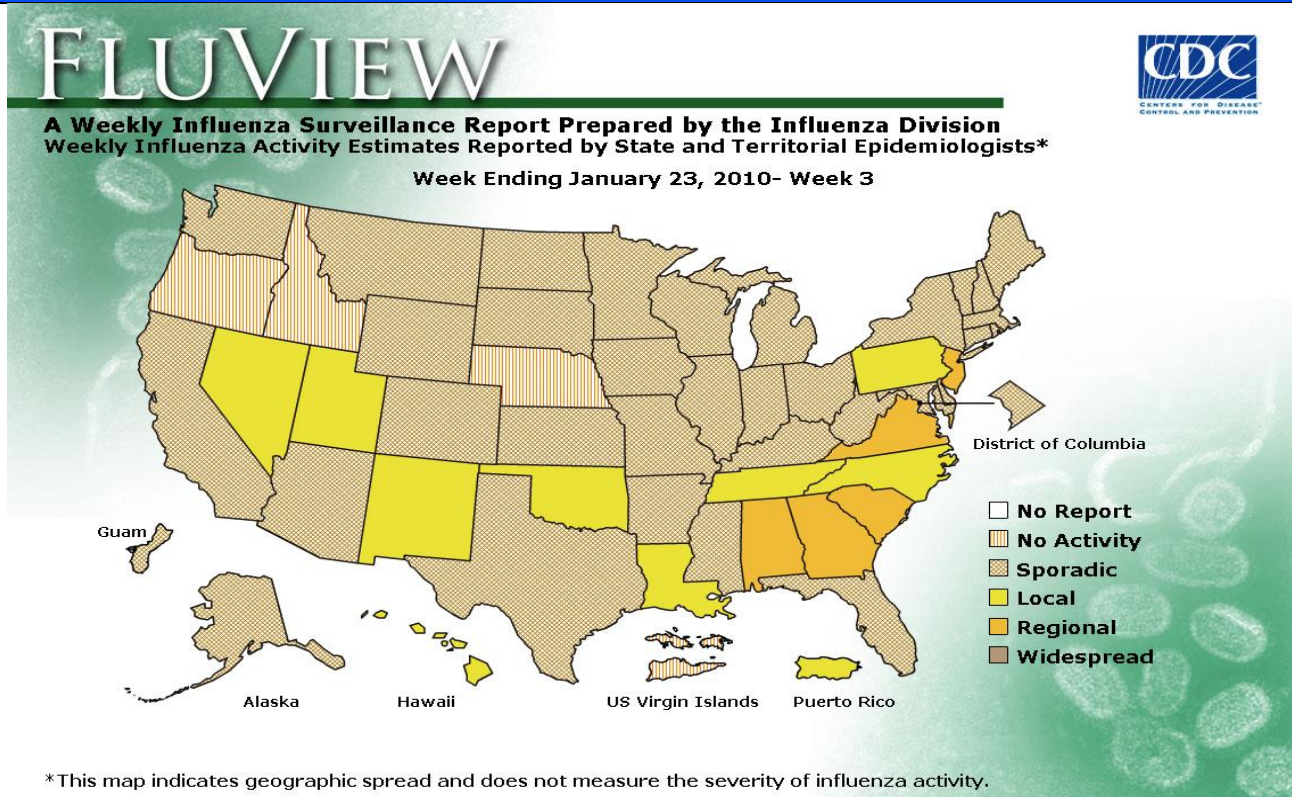
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SUMMARY

- The risk of illness due to influenza viruses is low. During CDC week 3, the proportion of outpatient visits for influenza-like illness (ILI)ⁱ was 1.9 %. Numerous respiratory viruses can cause ILI, and these viruses are now more prevalent than influenza viruses.ⁱⁱ
- Based on CDC criteria; influenza activity is currently sporadic in Illinois. For more information visit <http://www.cdc.gov/flu/weekly/fluactivity/htm>.
- During week 3, two influenza A viruses were sub typed by IDPH and sentinel hospitals; all were 2009 influenza A (H1N1).
- Among individuals with confirmed 2009 influenza A (H1N1) since April 2009, 2,931 hospital admissions and 97 deaths have been reported. More than 80% of hospitalized individuals were less than 65 years old.

CDC FLU VIEW



Activity Level	ILI activity*/Outbreaks		Laboratory data
No activity	Low	And	No lab confirmed cases [†]
Sporadic	Not increased	And	Isolated lab-confirmed cases
	Not increased	And	OR Lab confirmed outbreak in one institution [‡]
Local	Increased ILI in 1 region**; 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.

* 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.

[†] Lab confirmed case = case confirmed by rapid diagnostic test, antigen detection, culture, or PCR.

[‡] Institution includes nursing home, hospital, prison, school, etc.

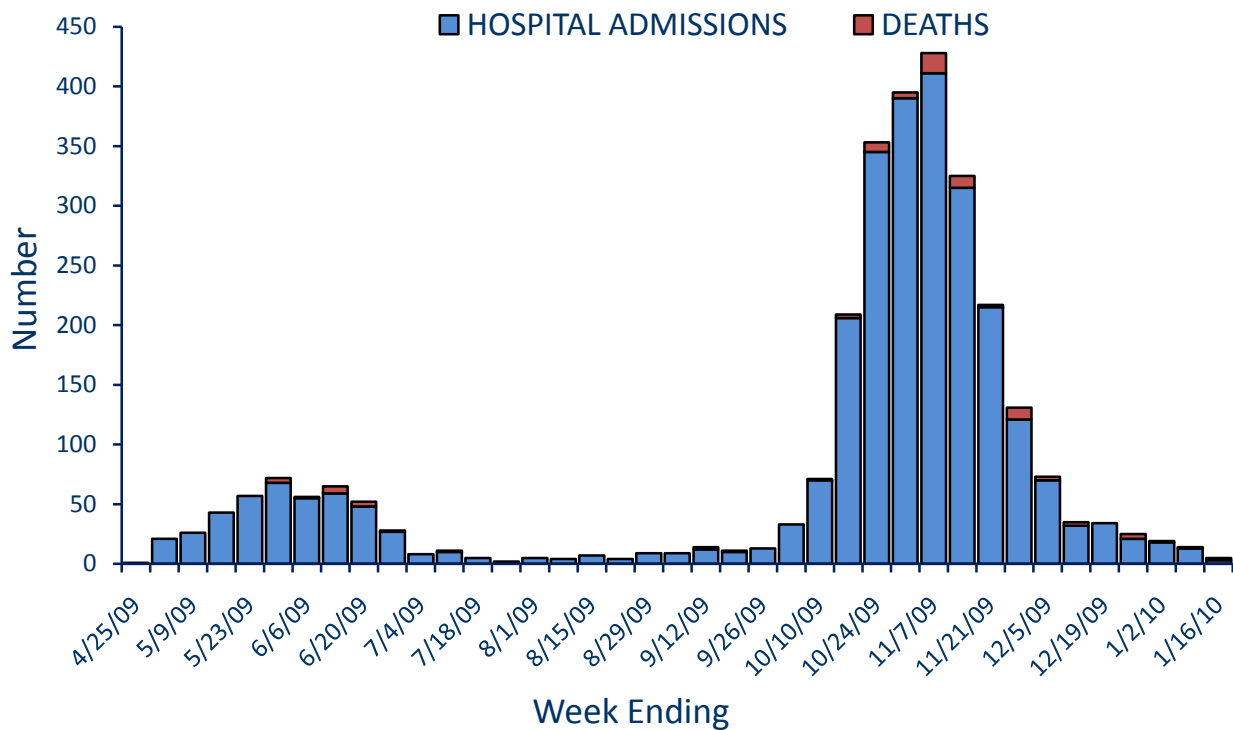
**Region: population under surveillance in a defined geographical subdivision of a state.

2009 H1N1 Influenza HOSPITAL ADMISSIONS AND DEATHS

Illinois 2009 H1N1 Influenza: Cumulative Hospitalization and Deaths by Age Group Through January 26, 2010ⁱⁱⁱ

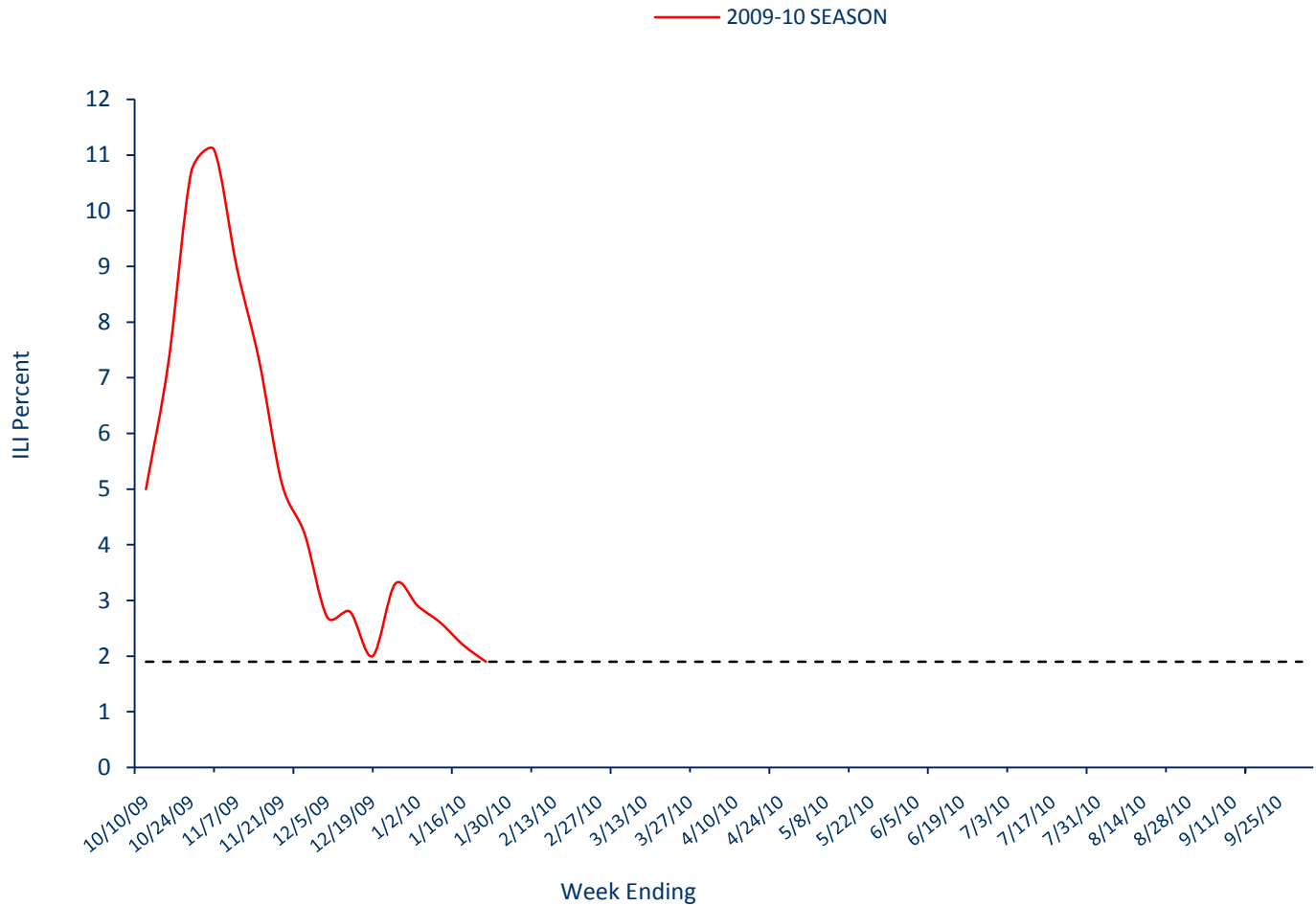
Age range	Admissions	Percent	Deaths	Percent
0-4 Years	585	(20)	2	(2)
5-18 Years	658	(22)	11	(11)
19-24 Years	233	(8)	4	(4)
25-49 Years	750	(26)	38	(39)
50-64 Years	508	(17)	27	(28)
65 + Years	197	(7)	15	(15)
Unknown	0	(0)	0	(0)
TOTAL	2931		97	

2009 H1N1 Influenza Admissions and Deaths
April 2009 - January 2010



ILI NET PROVIDER SURVEILLANCE

Influenza like Illness(ILI) Outpatient Surveillance by Season
2007-2010



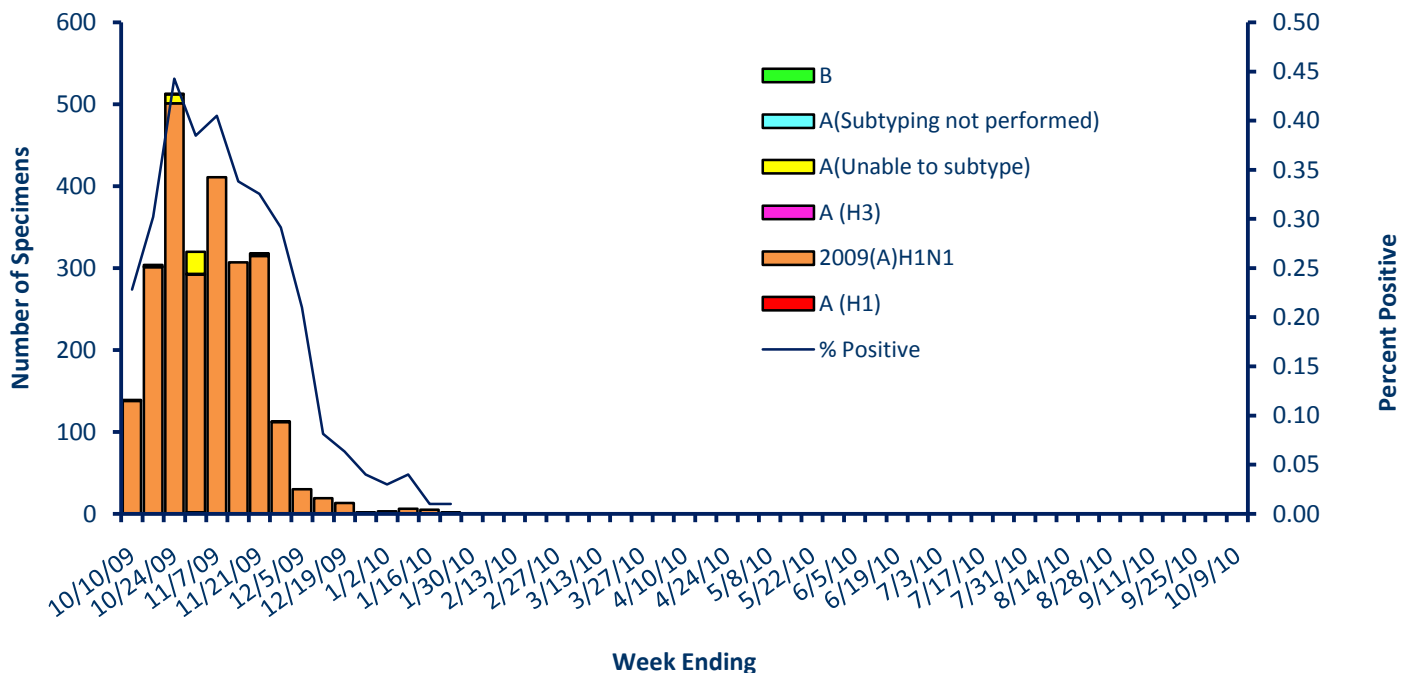
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LABORATORY SURVEILLANCE

During week 3, 2 (1%) specimens tested by Illinois WHO/NREVSS^{iv} collaborating laboratories and sentinel sites^v tested positive for influenza. All (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
52	1	0	3	0	0	0	0	112	0.03
1	2	0	6	0	0	0	0	135	0.04
2	2	0	5	0	0	0	0	400	0.01
3	2	0	2	0	0	0	0	122	0.01
2009-10 Season to Date		2	2455	1	42	0	5	8293	0.30

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)	1 (0)	0 (0)
Influenza A (H3N2)	8	0 (0)	0	0 (0)	10 (0)	10 (100)
Influenza B	6	0 (0)	0	0 (0)	NA	NA
2009 Influenza A (H1N1)	3026	41 ^{viii} (1.4)	858	0 (0)	1056	1053 (99.7)

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 54 cases of oseltamivir resistant 2009 influenza A (H1N1) viruses have been identified in the United States since April 2009. Of these 54 cases, 44 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>

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

ⁱⁱ For more information regarding circulating respiratory viruses, see

a. <http://www.cdc.gov/surveillance/nrevss/rsv/state.html>

b. <http://www.aclaboratories.com/>

c. www.stlouischildrens.org/content/ClinicalLaboratories.htm

ⁱⁱⁱ 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

^{iv} 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.

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

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

^{vii} 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 54 total cases identified, 42 had documented exposure to

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oseltamivir through either treatment or chemoprophylaxis, eight are under investigation to determine exposure to oseltamivir, three patients had no documented oseltamivir exposure, and in one patient exposure cannot be determined.