

Week 51: December 16-22, 2012

ILLINOIS DEPARTMENT OF PUBLIC HEALTH



# Illinois Influenza Surveillance Report

Week 51: Week Ending Saturday, December 22, 2012

Division of Infectious Diseases Immunization Section

12/31/2012

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## Summary

- During the Centers for Disease Control and Prevention (CDC) surveillance week 51, the proportion of outpatient visits for influenza-like illness (ILI)<sup>1</sup> reported by ILI Net sentinel providers in Illinois was 5.4% compared with 4.2 % for week 50.
- The influenza (flu) activity level (geographic spread of influenza) for Illinois was **“WIDESPREAD”** based on CDC criteria for week 51.
- Febrile Respiratory Illness (FRI) surveillance<sup>2</sup> at Naval Recruit Training Command, Great Lakes was **at or below expected value**.
- During week 51, seven specimens were tested for influenza by Illinois Department of Public Health Laboratory, all seven specimens tested positive for Influenza (A) H3N2.
- Thirty-one influenza-associated Intensive Care Unit (ICU) admissions<sup>3</sup> and three deaths were reported during week 51.
- No influenza-associated pediatric death was reported for week 51.
- During week 51, ten institutional influenza outbreaks were reported.

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<sup>1</sup> ILI “Influenza like Illness” is defined as fever  $\geq 100^{\circ}\text{F}$  and cough and/or sore throat.

<sup>2</sup> FRI surveillance is ongoing at 8 U.S. military basic training centers, representing all service branches. FRI Rate Status is classified into one of 3 categories:

1. At or below expected value (expected value shown as dashed line)
2. Moderately elevated
3. Substantially elevated

<sup>3</sup> For the purpose of diagnosis, influenza can be diagnosed by using the following test: reverse transcription polymerase chain reaction [RT-PCR], viral culture, Immunofluorescence [Direct Fluorescent Antibody (DFA) or Indirect Fluorescent Antibody (IFA) Staining], Enzyme Immuno Assay (EIA) or any rapid diagnostic test. Sensitivities of rapid diagnostic tests are approximately 50-70% when compared with viral culture or reverse transcription polymerase chain reaction (RT-PCR), and specificities of rapid diagnostic tests for influenza are approximately 90-95%. False-positive (and true-negative) results are more likely to occur when disease prevalence in the community is low, which is generally at the beginning and end of the influenza seasons. False-negative (and true-positive) results are more likely to occur when disease prevalence is high in the community, which is typically at the height of the influenza season.

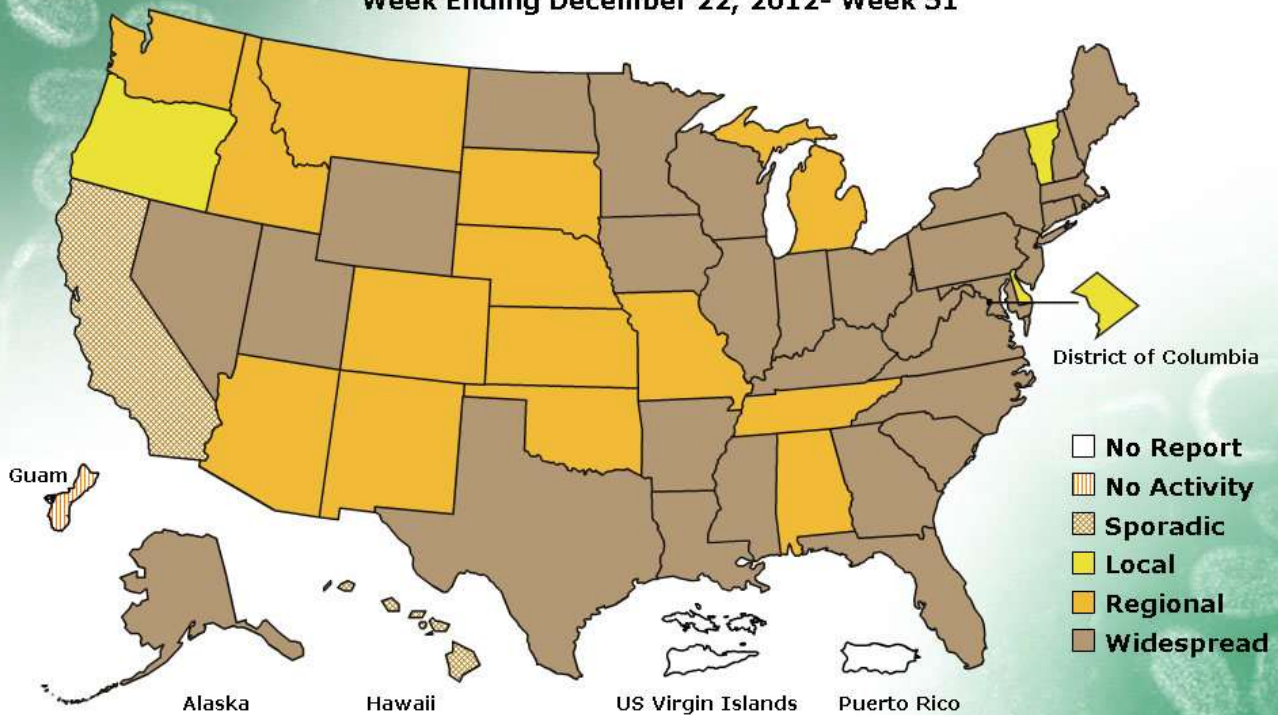
## CDC Flu View

# FLUVIEW



**A Weekly Influenza Surveillance Report Prepared by the Influenza Division  
Weekly Influenza Activity Estimates Reported by State and Territorial Epidemiologists\***

**Week Ending December 22, 2012- Week 51**



\*This map indicates geographic spread and 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).

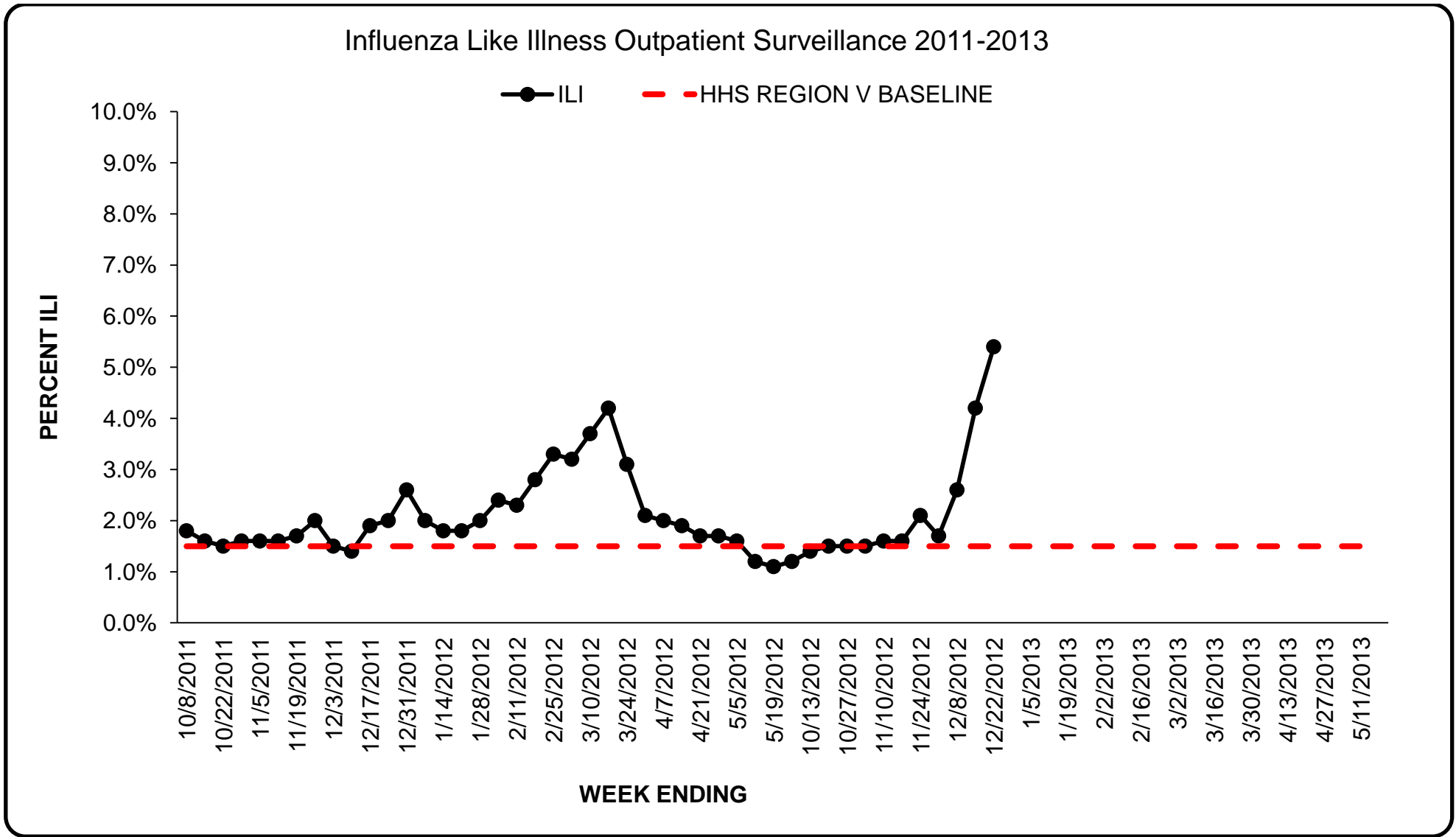
**Sporadic:** Small numbers of laboratory confirmed influenza cases or a single laboratory confirmed influenza in a single region of the state.

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

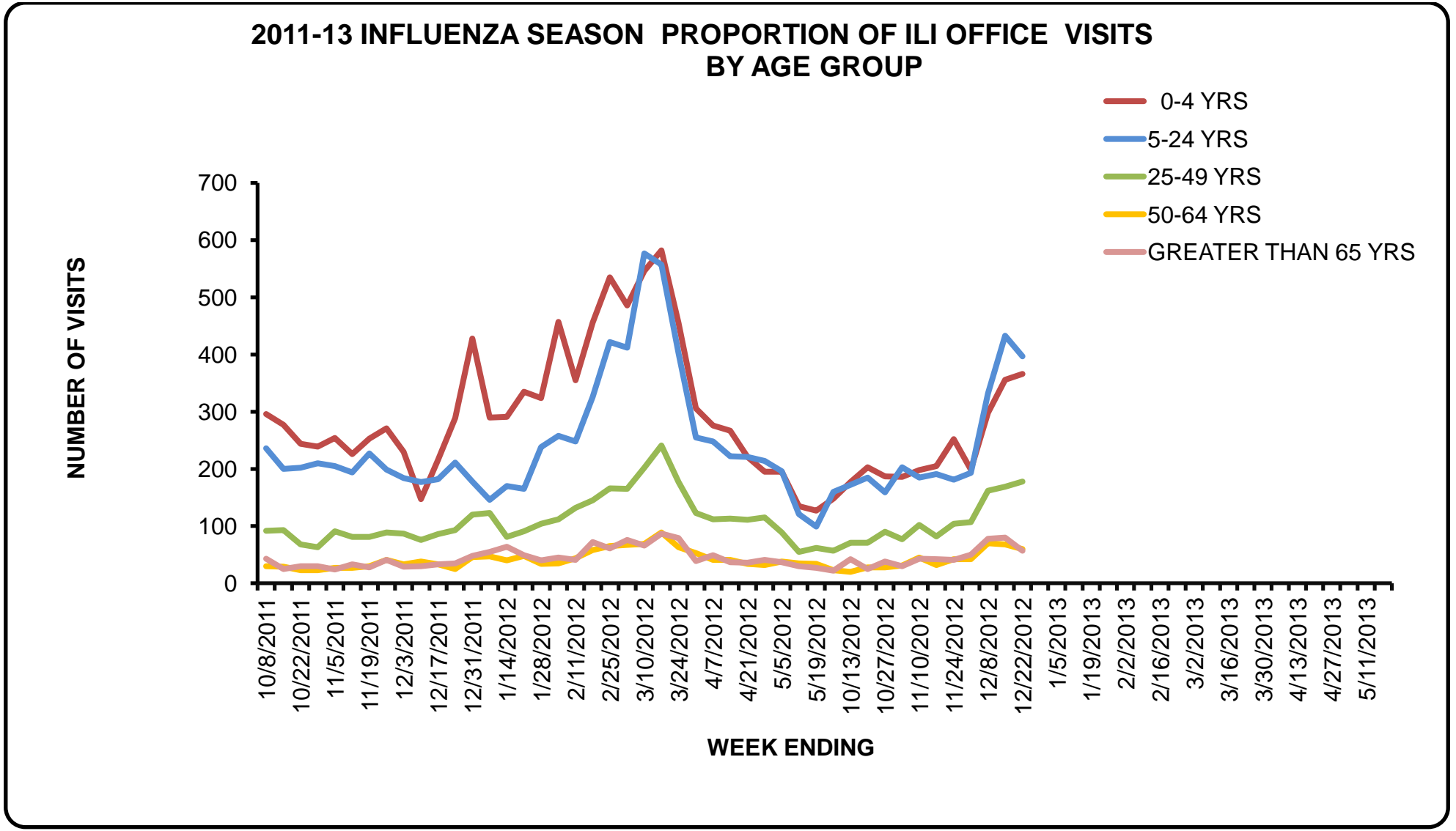
**Regional:** Outbreaks of influenza or increases in ILI and recent laboratory confirmed influenza in at least two but less than half the regions of the state.

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

**ILI Net Provider Surveillance**



**ILI Visits by Age Group**



**Great Lakes Naval Recruit Influenza Surveillance**

Febrile Respiratory Illness (FRI) surveillance<sup>4</sup> at Naval Recruit Training Command, Great Lakes was **at or below expected value** for week ending December 22, 2012. For more information visit <http://www.med.navy.mil/sites/nhrc/geis/Pages/default.aspx>

**Influenza Intensive Care Unit Admissions and Deaths**

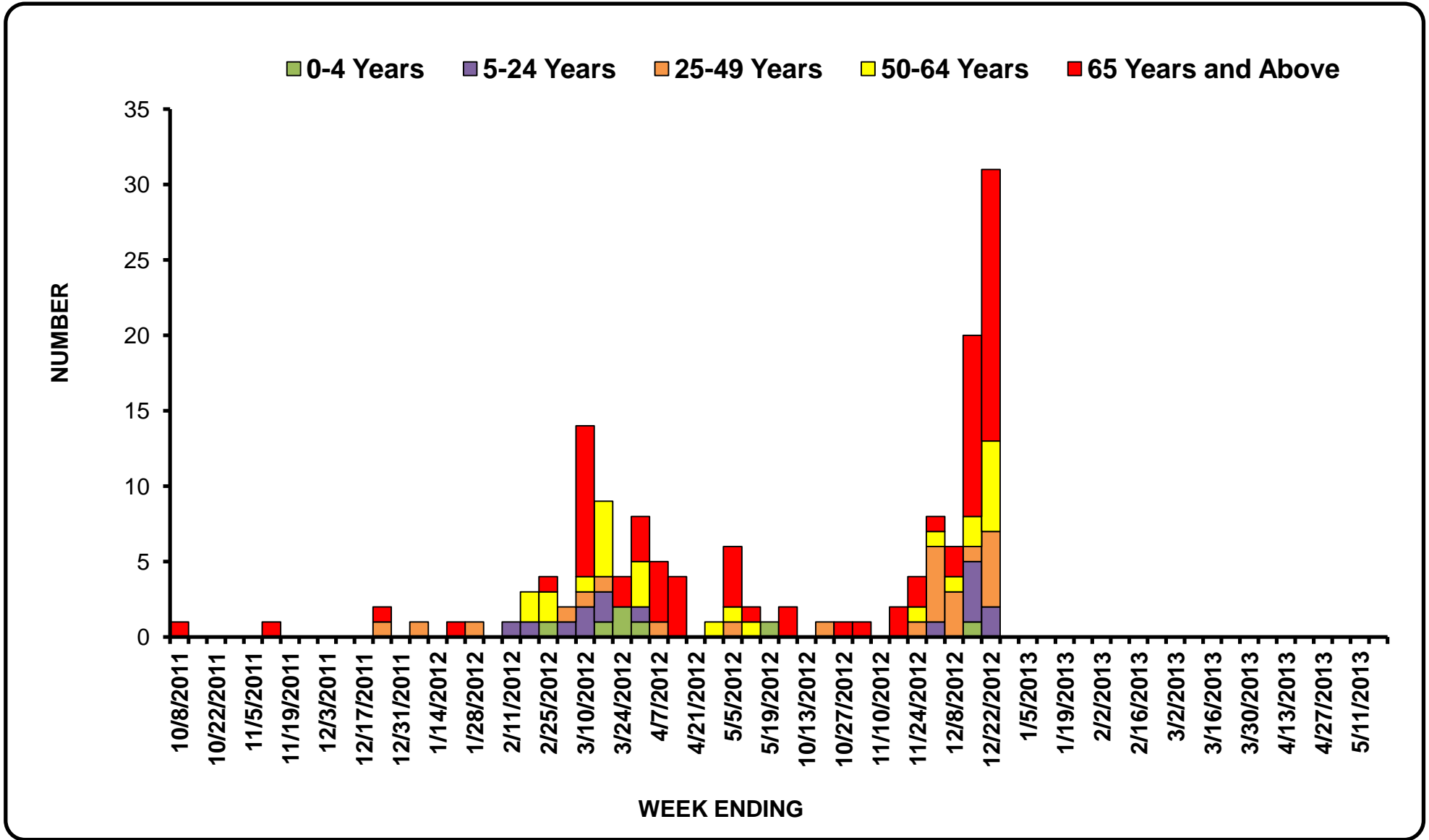
There were 31 influenza related ICU admissions and three deaths reported for week ending December 22, 2012.

Year	Week No	Admissions	Deaths
2012	42	1	0
2012	43	1	0
2012	44	1	0
2012	45	0	0
2012	46	2	0
2012	47	4	0
2012	48	8	0
2012	49	6	0
2012	50	20	0
2012	51	31	3

<sup>4</sup> FRI surveillance is ongoing at 8 U.S. military basic training centers, representing all service branches. FRI Rate Status is classified into one of 3 categories:

- 4. At or below expected value (expected value shown as dashed line)
- 5. Moderately elevated
- 6. Substantially elevated

**Influenza Related ICU Admissions by Age Group**





**Laboratory Surveillance**

During week 51, seven specimens were tested for Influenza by Illinois Department of Public Health Laboratory. All seven isolates (100%) were Influenza (A) H3N2.

Year	Week	A (H1)	2009(A)H1N1	A (H3)	A(Unable to subtype)	A(Sub typing not performed)	B	Total # Tested	% Positive
2012	43	0	0	0	0	0	0	0	0%
2012	44	0	0	0	0	0	0	0	0%
2012	45	0	0	0	0	0	0	2	0%
2012	46	1	0	0	0	0	0	1	100%
2012	47	0	0	0	0	0	1	2	50%
2012	48	0	0	3	0	0	0	3	100%
2012	49	0	0	8	0	0	0	13	62%
2012	50	0	0	9	1	0	0	16	63%
2012	51	0	0	7	0	0	0	7	100%

## Viral Resistance

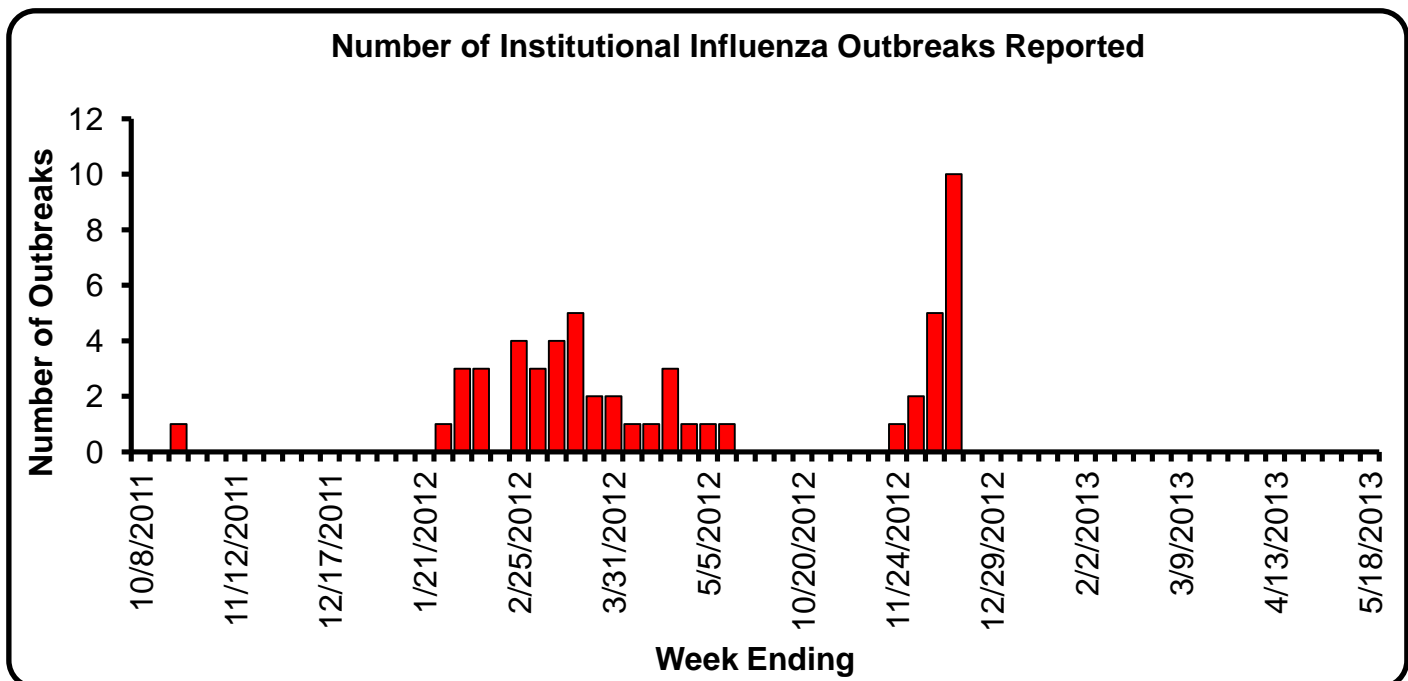
The majority of currently circulating influenza viruses are susceptible to the neuraminidase inhibitor antiviral medications oseltamivir and zanamivir; however, rare sporadic cases of oseltamivir resistant 2009 influenza A (H1N1) and A (H3N2) viruses have been detected worldwide.

Neuraminidase Inhibitor Resistance Testing Results on Samples Collected in the U.S. Since October 1, 2012				
	Oseltamivir		Zanamivir	
	Virus Samples tested (n)	Resistant Viruses, Number (%)	Virus Samples tested (n)	Resistant Viruses, Number (%)
<b>Influenza A (H3N2)</b>	400	0 (0.0)	400	0 (0.0)
<b>Influenza B</b>	157	0 (0.0)	157	0 (0.0)
<b>2009 H1N1</b>	22	0 (0.0)	17	0 (0.0)

High levels of resistance to the adamantanes (amantadine and rimantadine) persist among 2009 H1N1 and A (H3N2) viruses (the adamantanes do not have activity against influenza B viruses). Antiviral treatment as early as possible with oseltamivir or zanamivir is recommended for patients with confirmed or suspected influenza who have severe, complicated, or progressive illness; who require hospitalization; or who are at greater risk for influenza-related complications. Additional information treatment and chemoprophylaxis of influenza virus infection with antiviral agents is available at <http://www.cdc.gov/flu/antivirals/index.htm>.

## Institutional Influenza Outbreaks Reported

Ten influenza outbreaks were reported in long-term care facilities within Illinois for week ending December 22, 2012. The facilities were located in regions 1,4,6,7 and 8 (see regional map below).

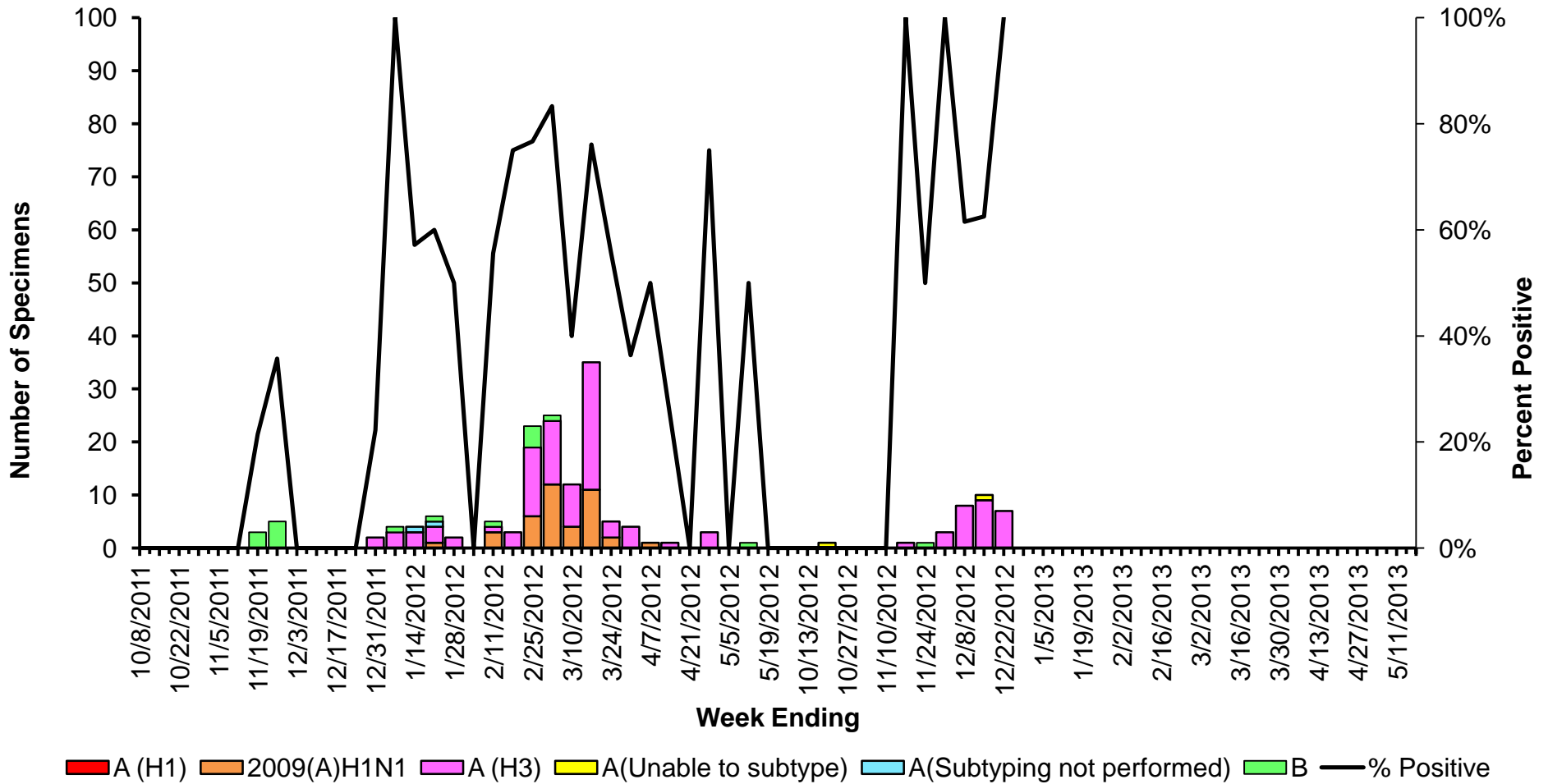


**IDPH, Immunization Section Regional Map**



**Weekly Viral Subtype**

**Influenza Isolates from Illinois Reported by IDPH Laboratories, 2011-2013**



## **Resources**

- Centers for Disease Control and Prevention Influenza Website: <http://www.cdc.gov/flu/>
- Immunization Action Coalition Website: <http://immunize.org/>
- IDPH Website: <http://www.idph.state.il.us/flu/surveillance.htm>
- ACL Clinical Laboratory Respiratory Panel: <http://www.acllaboratories.com/>
- St Louis Children's Hospital Clinical Laboratory Respiratory Panel:  
<http://www.stlouischildrens.org/health-care-professionals/clinical-laboratories>