

Week 4: January 20-26, 2013

ILLINOIS DEPARTMENT OF PUBLIC HEALTH



# Illinois Influenza Surveillance Report

Week 4: Week Ending Saturday, January 26, 2013

Division of Infectious Diseases Immunization Section

1/31/2013

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## Summary

- During the Centers for Disease Control and Prevention (CDC) surveillance week four, the proportion of outpatient visits for influenza-like illness (ILI)<sup>1</sup> reported by ILI Net sentinel providers in Illinois was 4.3% compared with 4.4% for week two.
- The influenza (flu) activity level (geographic spread of influenza) for Illinois was **“WIDESPREAD”** based on CDC criteria for week ending January 26, 2013.
- Febrile Respiratory Illness (FRI) surveillance<sup>2</sup> at Naval Recruit Training Command, Great Lakes was **at or below expected value**.
- For the week ending January 26, 2013, eight specimens were tested for Influenza by Illinois Department of Public Health Laboratory, 6 (75%) were positive for influenza. All Isolates were Influenza (A) H3N2 (100%).
- Twenty influenza-associated Intensive Care Unit (ICU) admissions<sup>3</sup> and four deaths were reported for week ending January 26, 2013.
- One influenza-associated pediatric death was reported for the week ending January 26, 2013.
- For the week ending January 26, 2013, 11 institutional influenza outbreaks were reported.

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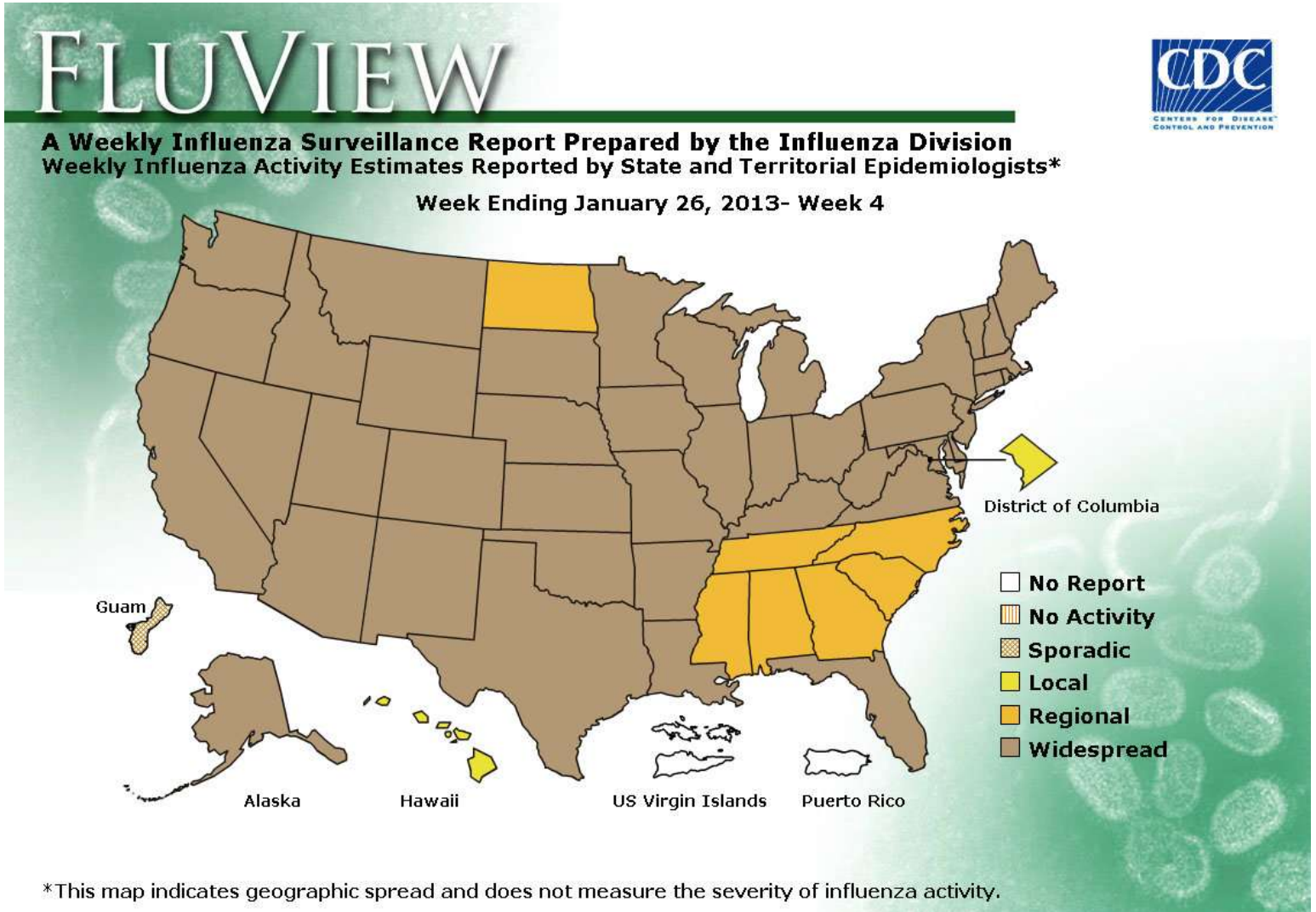
<sup>1</sup> ILI “Influenza like Illness” is defined as fever  $\geq 100^{\circ}\text{F}$  and cough and/or sore throat.

<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



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

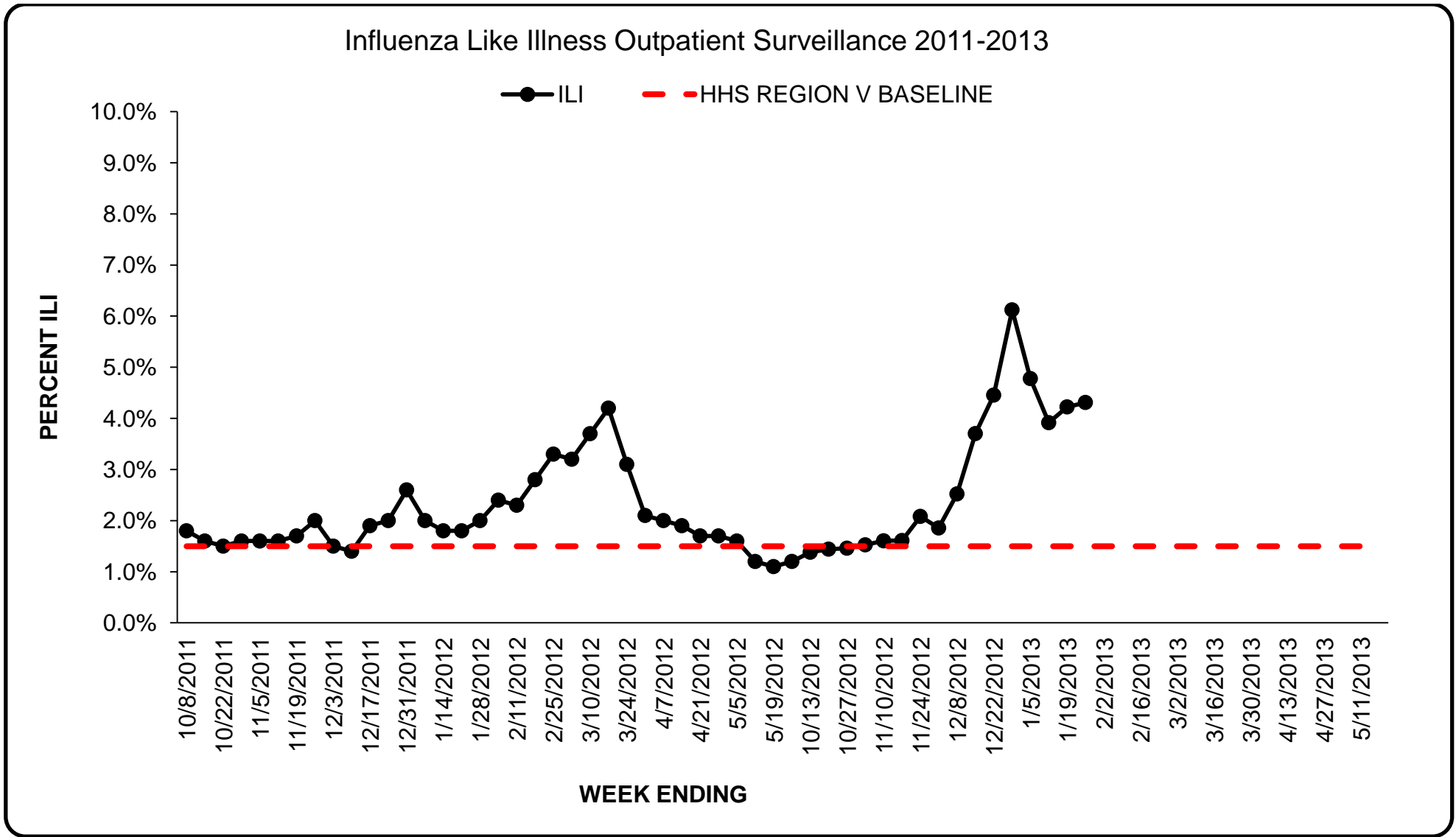
**Sporadic:** Small numbers of laboratory confirmed influenza cases or a single laboratory confirmed influenza in a single region of the state.

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

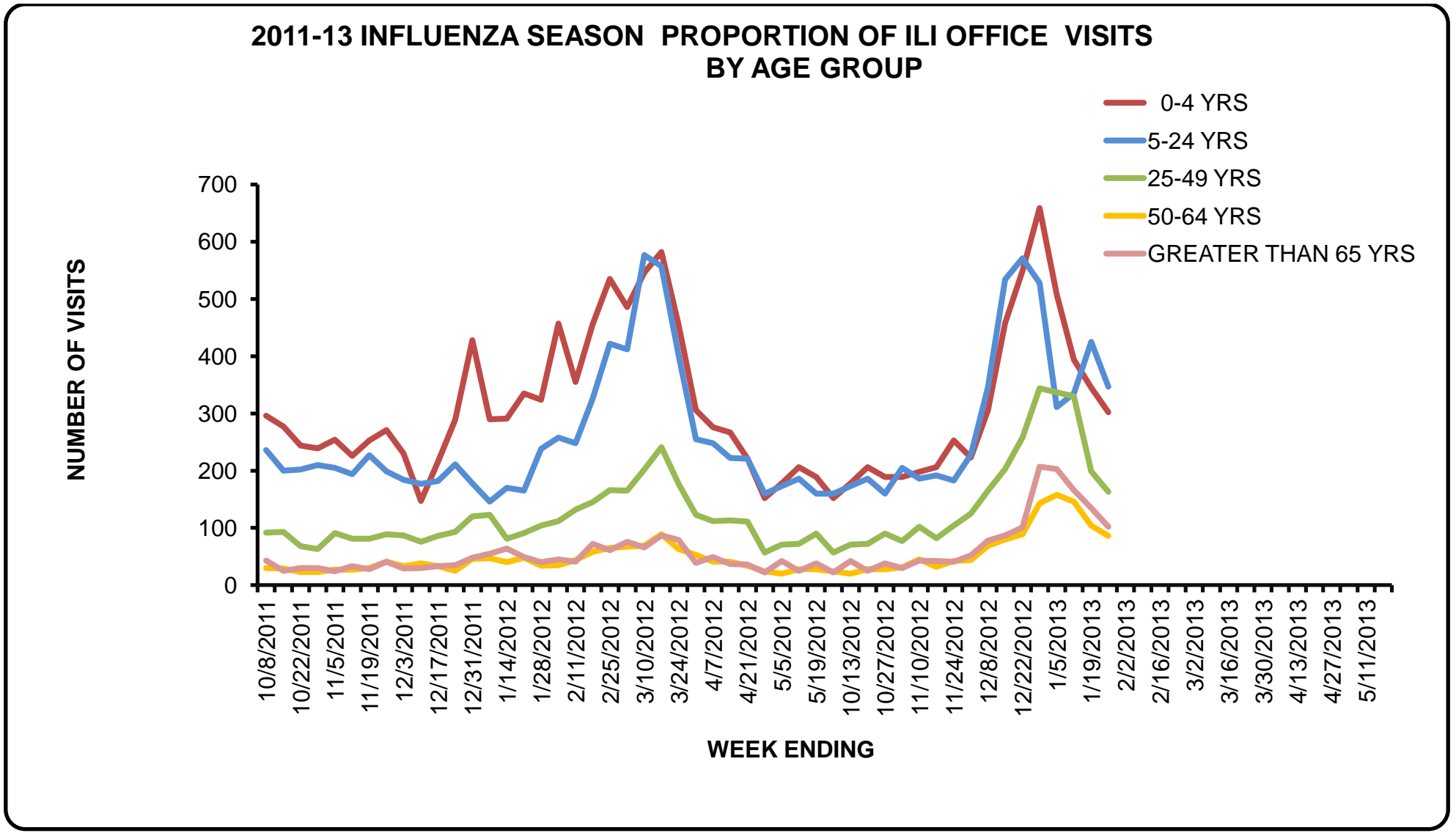
**Regional:** Outbreaks of influenza or increases in ILI and recent laboratory confirmed influenza in at least two but less than half the regions of the state.

**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 January 26, 2013. For more information visit <http://www.med.navy.mil/sites/nhrc/geis/Pages/default.aspx>

**Influenza Intensive Care Unit (ICU) Admissions and Deaths**

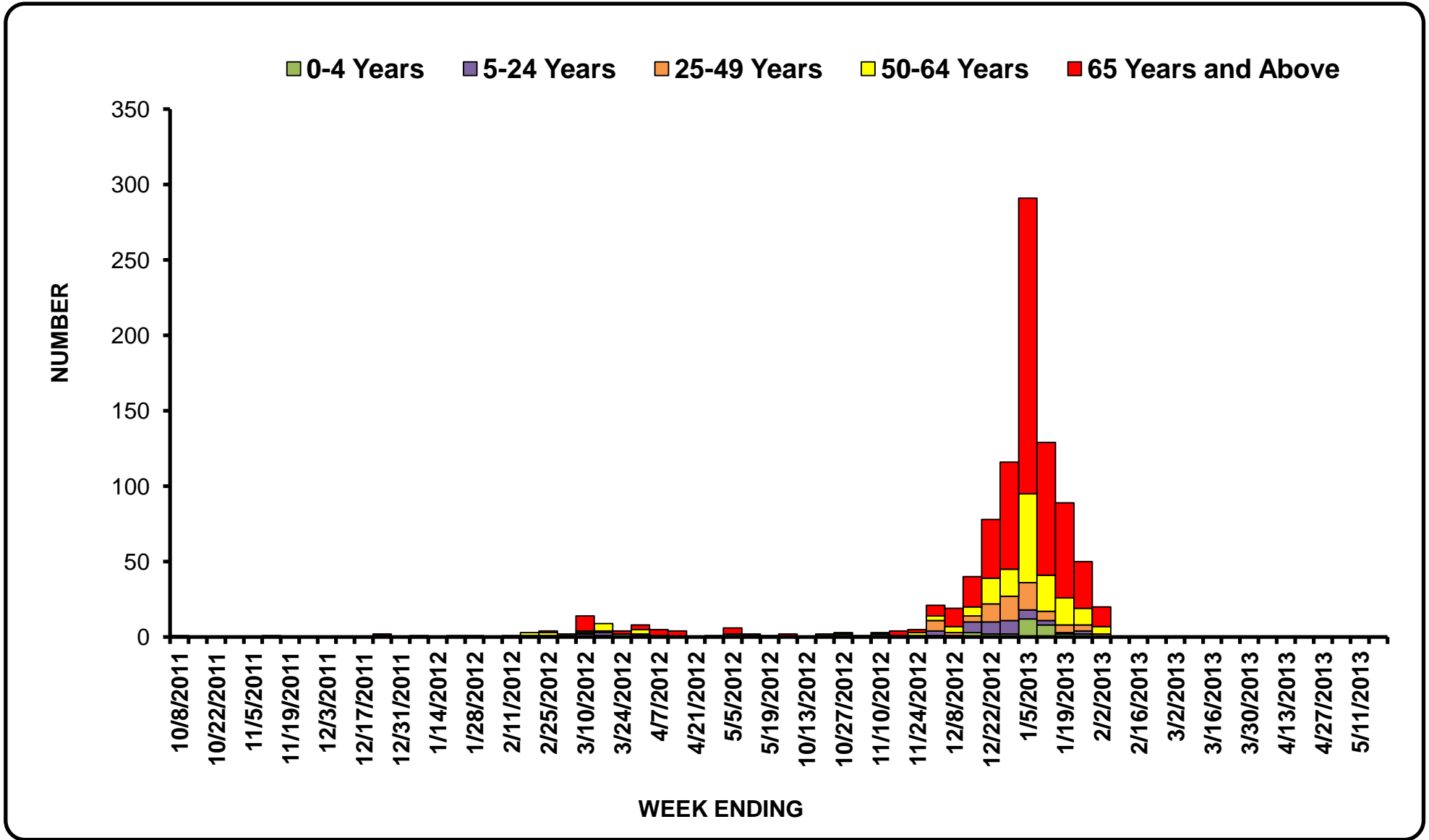
For the week ending January 26 2013, 20 influenza related ICU admissions and four deaths were reported. Total provisional ICU Admissions and deaths for the 2012-13 Influenza season up to week ending January 26, 2013 is 582 and 76 respectively.

Year	Week No	Admissions	Deaths
2012	52	116	15
2013	1	129	20
2013	2	89	15
2013	3	50	5
2013	4	20	4
<b>Total (Provisional) for 2012-13 Season up to week ending January 26, 2013</b>	-	<b>582</b>	<b>76</b>

<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 four, eight specimens tested for Influenza by Illinois Department of Public Health Laboratory, six (75%) were positive. All isolates were Influenza (A) H3N2 (100%). For more information about viruses circulating in Illinois visit

- 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>

Year	Week	A (H1)	2009(A)H1N1	A (H3)	A(Unable to subtype)	A(Sub typing not performed)	B	Total # Tested	% Positive
2012	52	0	0	2	0	0	1	3	100%
2013	1	0	0	4	0	0	0	5	80%
2013	2	0	1	11	0	0	0	14	86%
2013	3	0	0	7	0	0	0	10	70%
2013	4	0	0	6	0	0	0	8	75%

## Viral Resistance

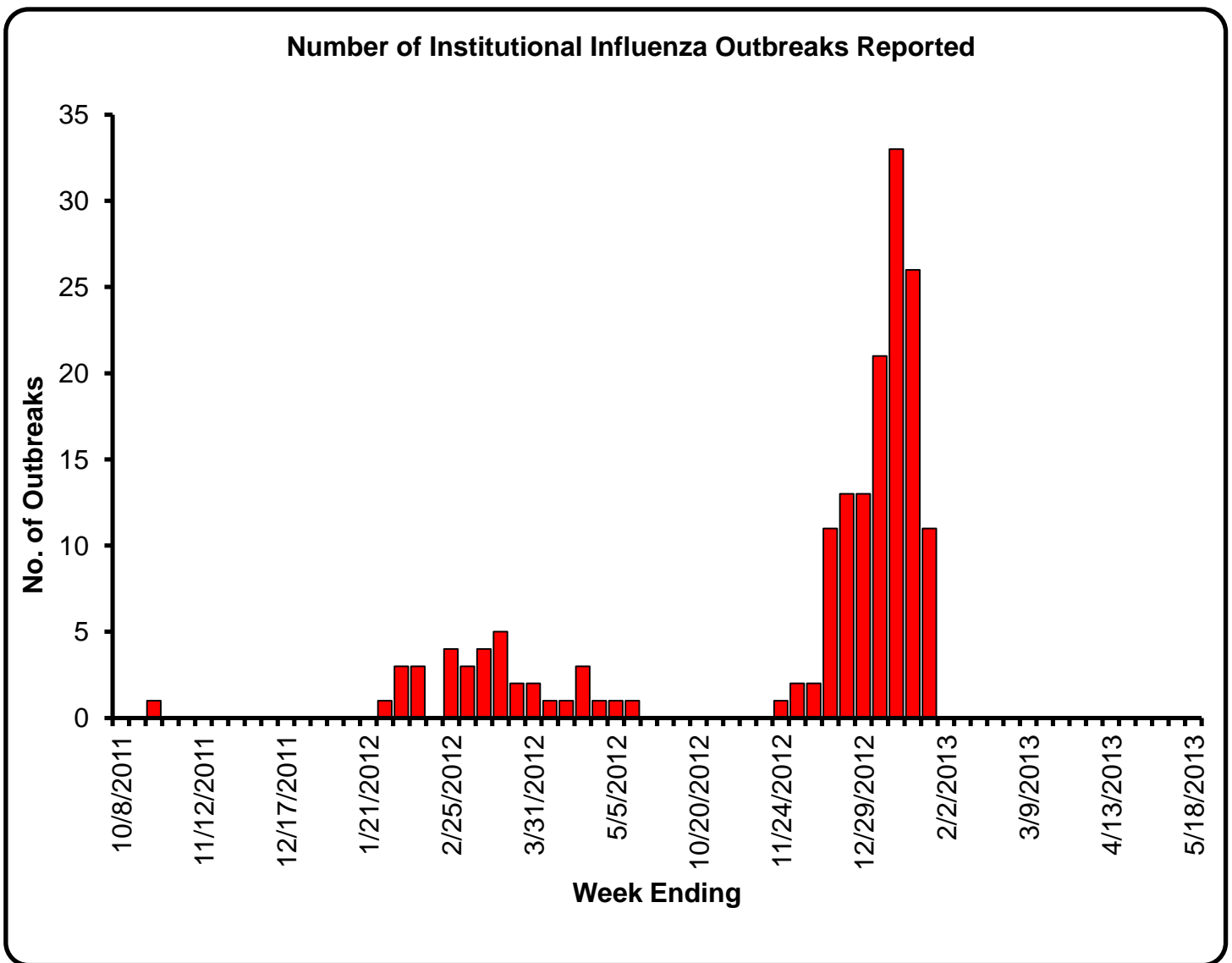
The majority of currently circulating influenza viruses are susceptible to the neuraminidase inhibitor antiviral medications oseltamivir and zanamivir; however, rare sporadic cases of oseltamivir resistant 2009 influenza A (H1N1) and A (H3N2) viruses have been detected worldwide.

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>	901	0 (0.0)	901	0 (0.0)
<b>Influenza B</b>	322	0 (0.0)	322	0 (0.0)
<b>2009 H1N1</b>	135	1 (0.7)	70	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**

Eleven institutional influenza outbreaks within Illinois for week ending January 26, 2013. The facilities were located in regions 1, 2, 4, 6, 7, and 8.

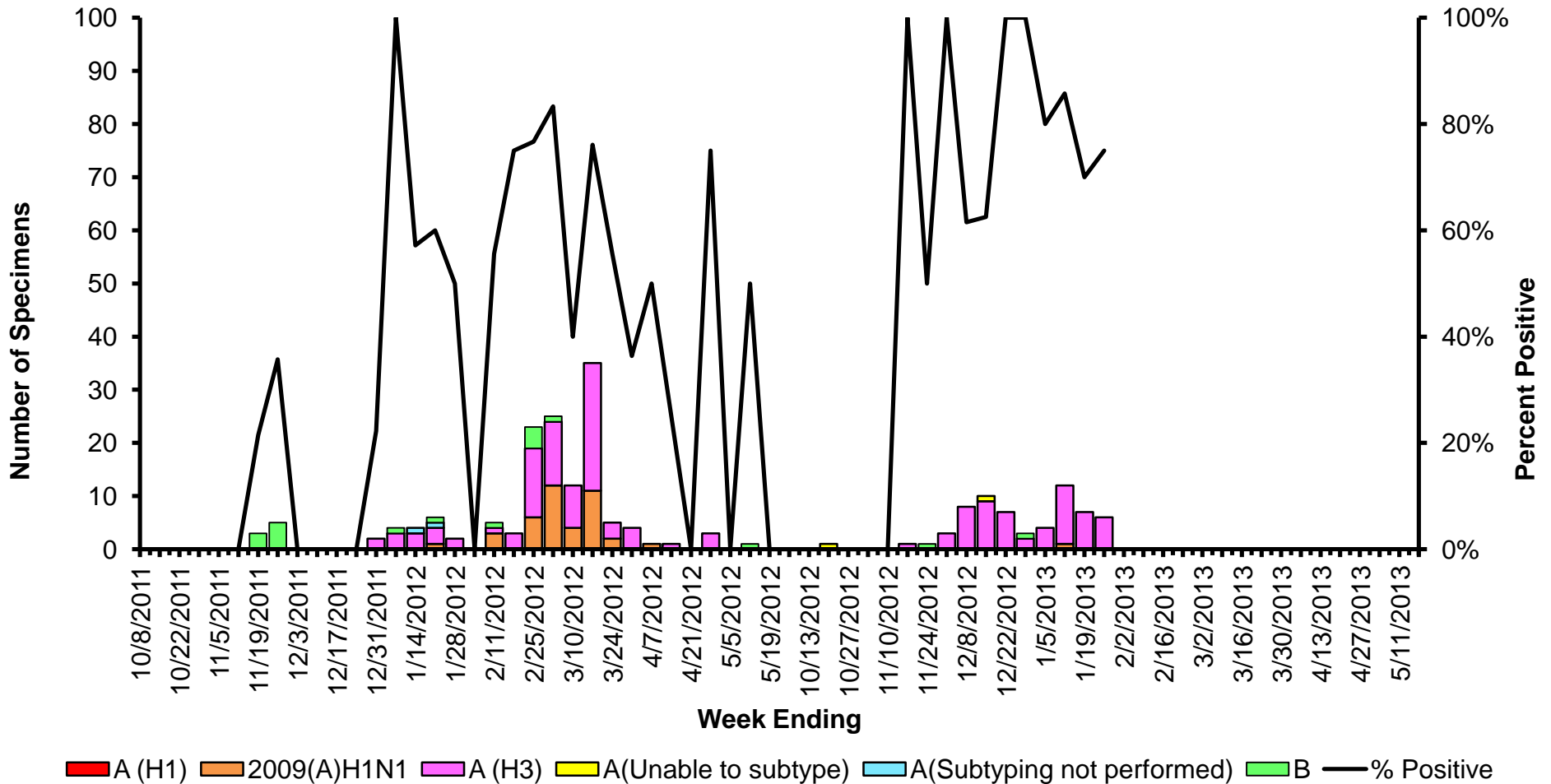


**IDPH, Immunization Section Regional Map**



**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>