

Week 18: April 28- May 4, 2013

ILLINOIS DEPARTMENT OF PUBLIC HEALTH



# Illinois Influenza Surveillance Report

Week 18: Week Ending Saturday, May 4, 2013

Division of Infectious Diseases Immunization Section

5/10/2013

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## Summary

- During the Centers for Disease Control and Prevention (CDC) surveillance week 18, the proportion of outpatient visits for influenza-like illness (ILI)<sup>1</sup> reported by ILI Net sentinel providers in Illinois was 1.1 % compared with 1.2% for week 17.
- The influenza (flu) activity level (geographic spread of influenza) for Illinois was “**SPORADIC**” based on CDC criteria for week ending May 4, 2013.
- Febrile Respiratory Illness (FRI) surveillance<sup>2</sup> at Naval Recruit Training Command, Great Lakes was **at or below expected value** for week 18.
- For the week ending May 4, 2013, two specimens were tested for Influenza by the Illinois Department of Public Health Laboratory. Of the two specimens tested, one tested positive for influenza A (H1N1).
- One influenza-associated Intensive Care Unit (ICU) admissions<sup>3</sup> and death were reported during week 18.
- No influenza-associated pediatric death was reported during week 18.
- During week 18, one institutional influenza outbreak was reported.

## Avian Influenza A (H7N9)

- Cases of human infection with a new avian influenza A (H7N9) virus continue to be detected in China since the first cases were internationally reported by the World Health Organization on April 1, 2013.
- No cases of H7N9 have been detected in the United States or anywhere outside of China at this time.
- As of May 8, 2013, 12:00PM EDT, 131 human cases of H7N9 infection had been reported, with 32 deaths.

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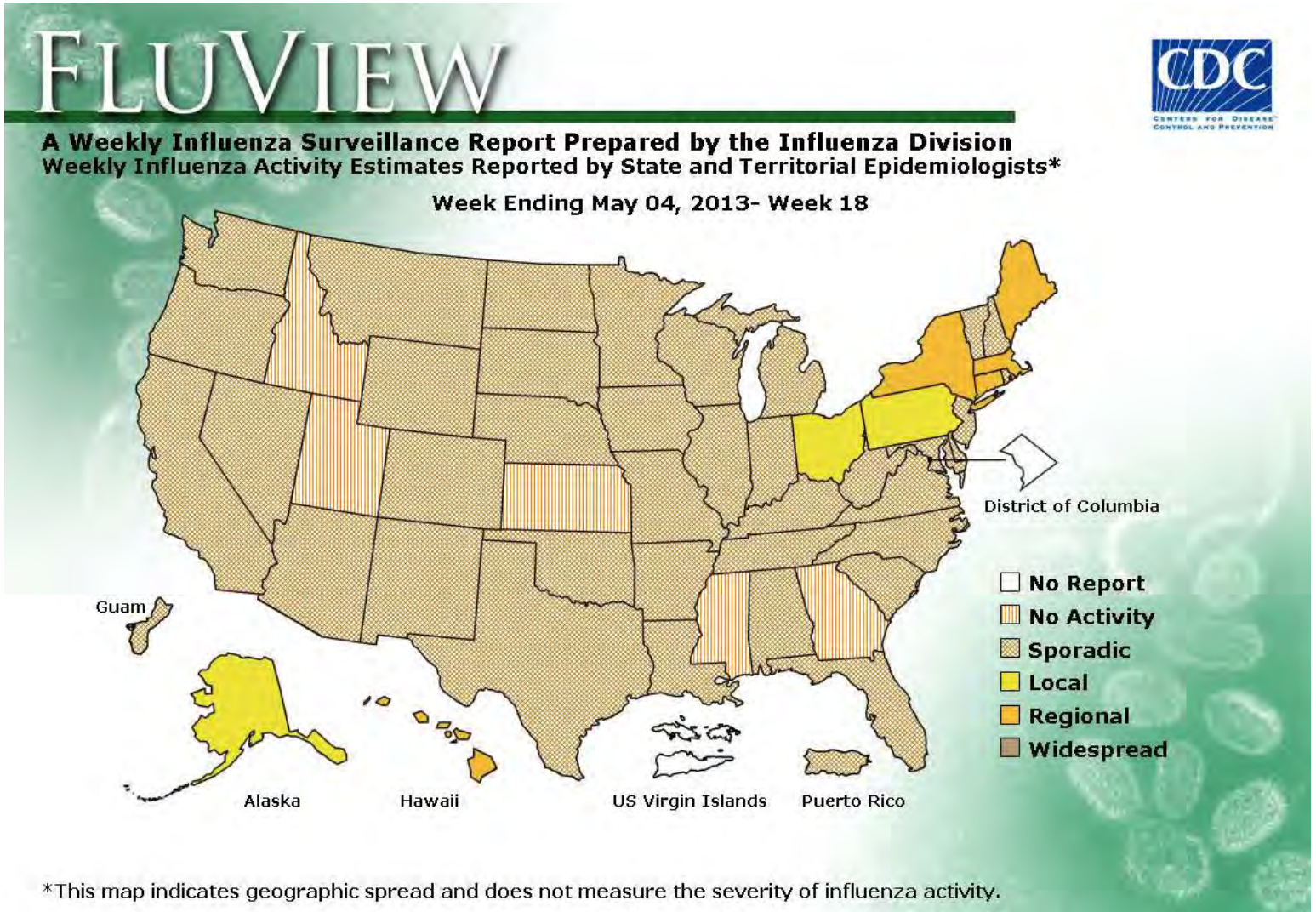
<sup>1</sup> ILI “Influenza like Illness” is defined as fever  $\geq 100^{\circ}\text{F}$  and cough and/or sore throat.

<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.

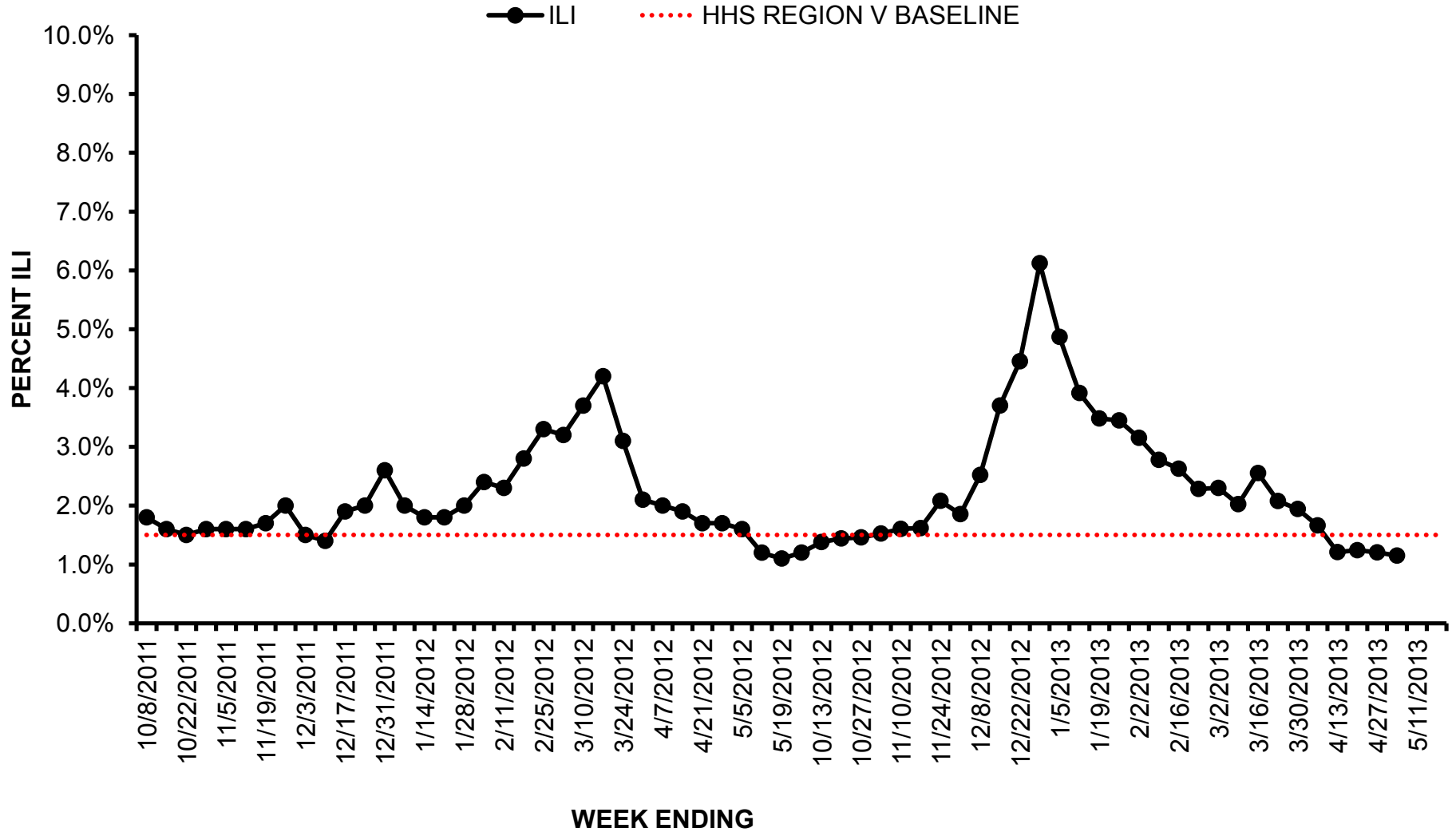
**Local:** Outbreaks of influenza or increases in ILI and recent laboratory confirmed influenza in a single region of the state.

**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.

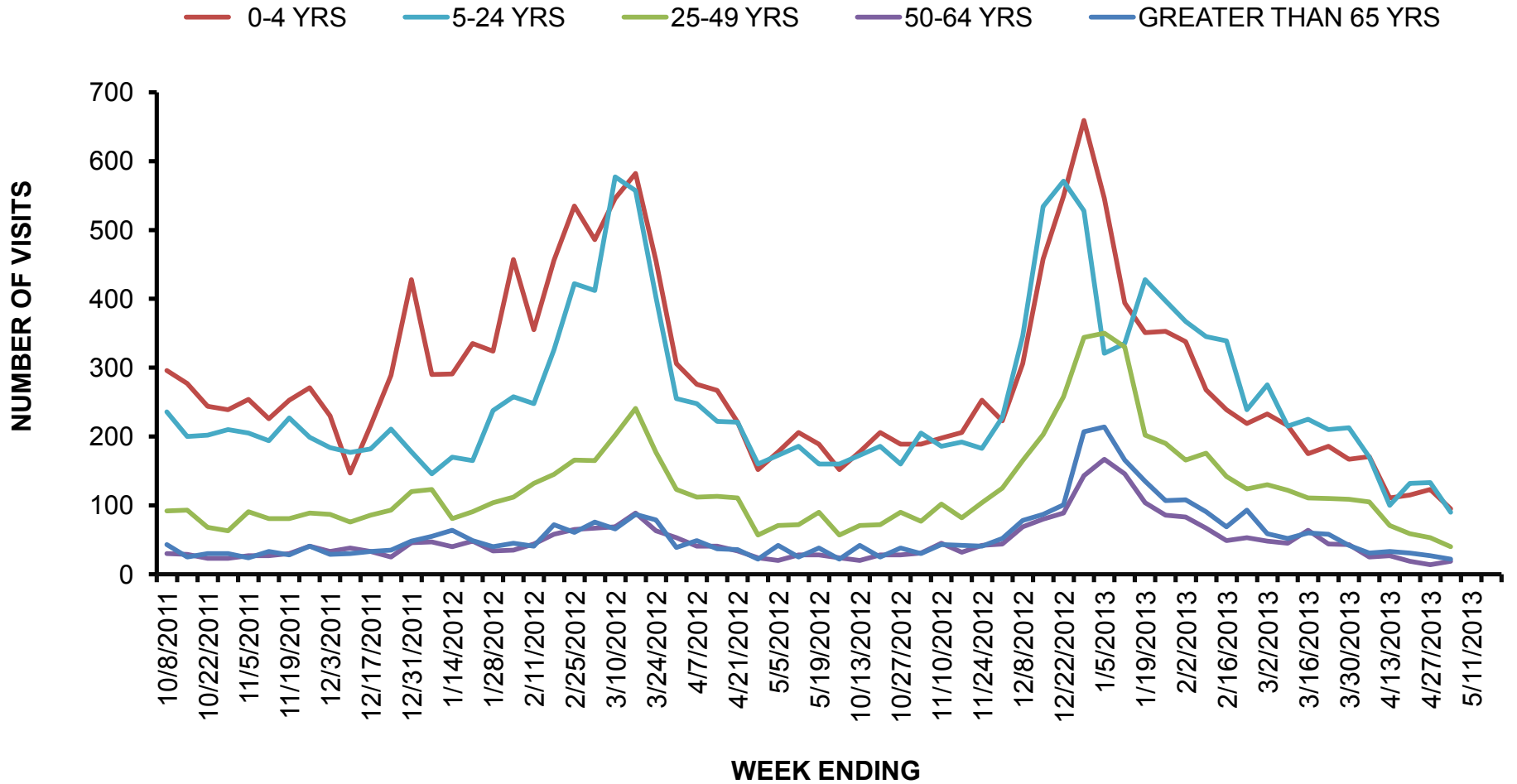
**ILI Net Provider Surveillance**

**Influenza Like Illness Outpatient Surveillance 2011-2013**



**ILI Visits by Age Group**

**2011-13 INFLUENZA SEASON PROPORTION OF ILI OFFICE 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 May 4, 2013. For more information visit <http://www.med.navy.mil/sites/nhrc/geis/Pages/default.aspx>

**Influenza Intensive Care Unit Admissions and Deaths**

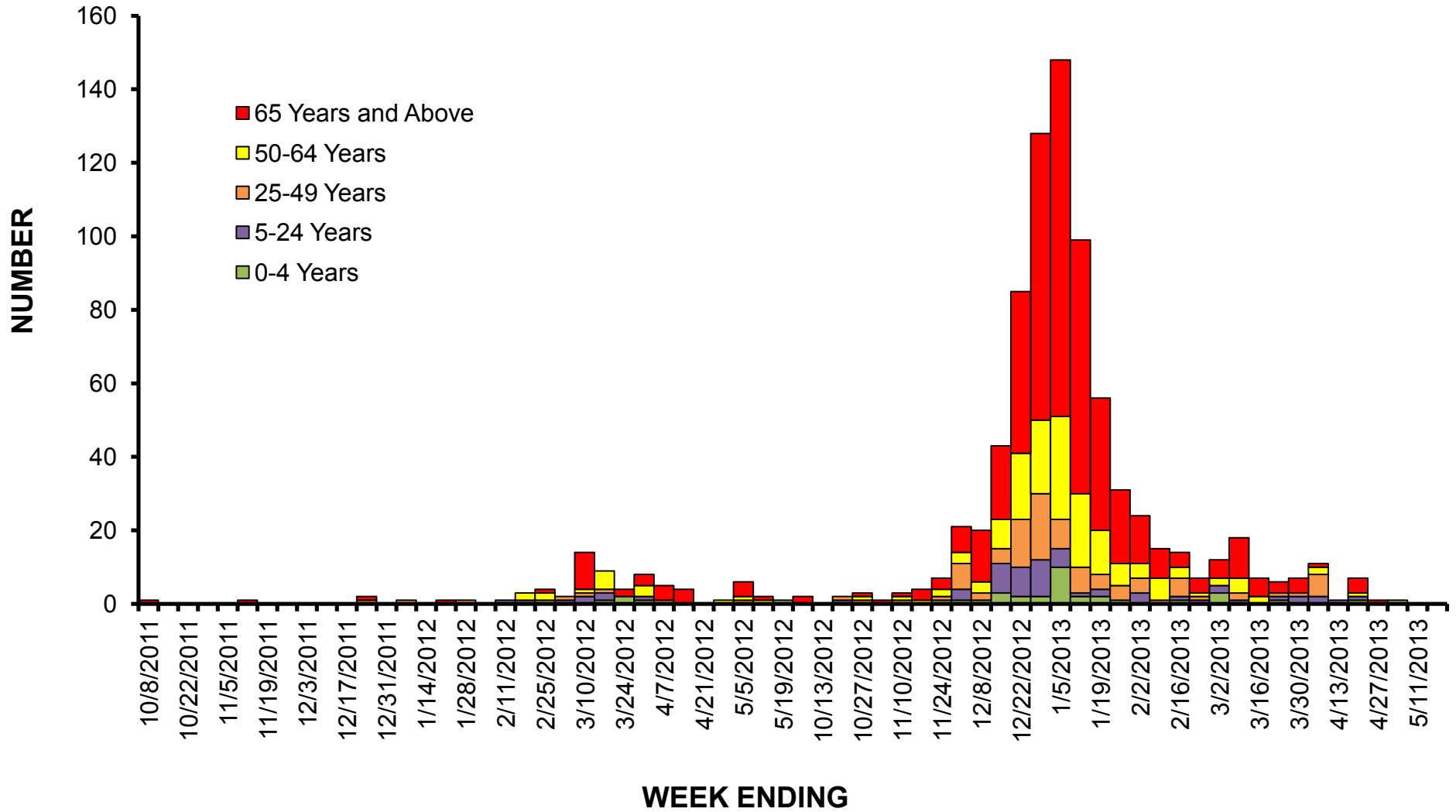
One influenza related ICU admissions and death were reported the week ending May 4, 2013.

<b>Year</b>	<b>Week No</b>	<b>Admissions</b>	<b>Deaths</b>
2013	11	7	0
2013	12	6	1
2013	13	7	0
2013	14	11	2
2013	15	0	1
2013	16	7	2
2013	17	1	1
2013	18	1	0
<b>Total (Provisional) for 2012-13 Season up to week ending April 13, 2013</b>	<b>-</b>	<b>784</b>	<b>129</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

For the week ending May 4, 2013, two specimens were tested for Influenza by the Illinois Department of Public Health Laboratory. Of the two specimens tested, one tested positive for Influenza A (H1N1). 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
2013	13	0	0	0	0	0	0	0	0%
2013	14	0	0	0	0	0	1	3	33%
2013	15	0	0	0	0	0	1	4	25%
2013	16	0	0	0	0	0	1	4	25%
2013	17	0	0	0	0	0	0	0	0%
2013	18	0	1	0	0	0	0	2	50%

## 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 (%)
Influenza A (H3N2)	2086	2 (0.1)	2086	0 (0.0)
Influenza B	898	0 (0.0)	898	0 (0.0)
2009 H1N1	525	2 (0.4)	247	0 (0.0)

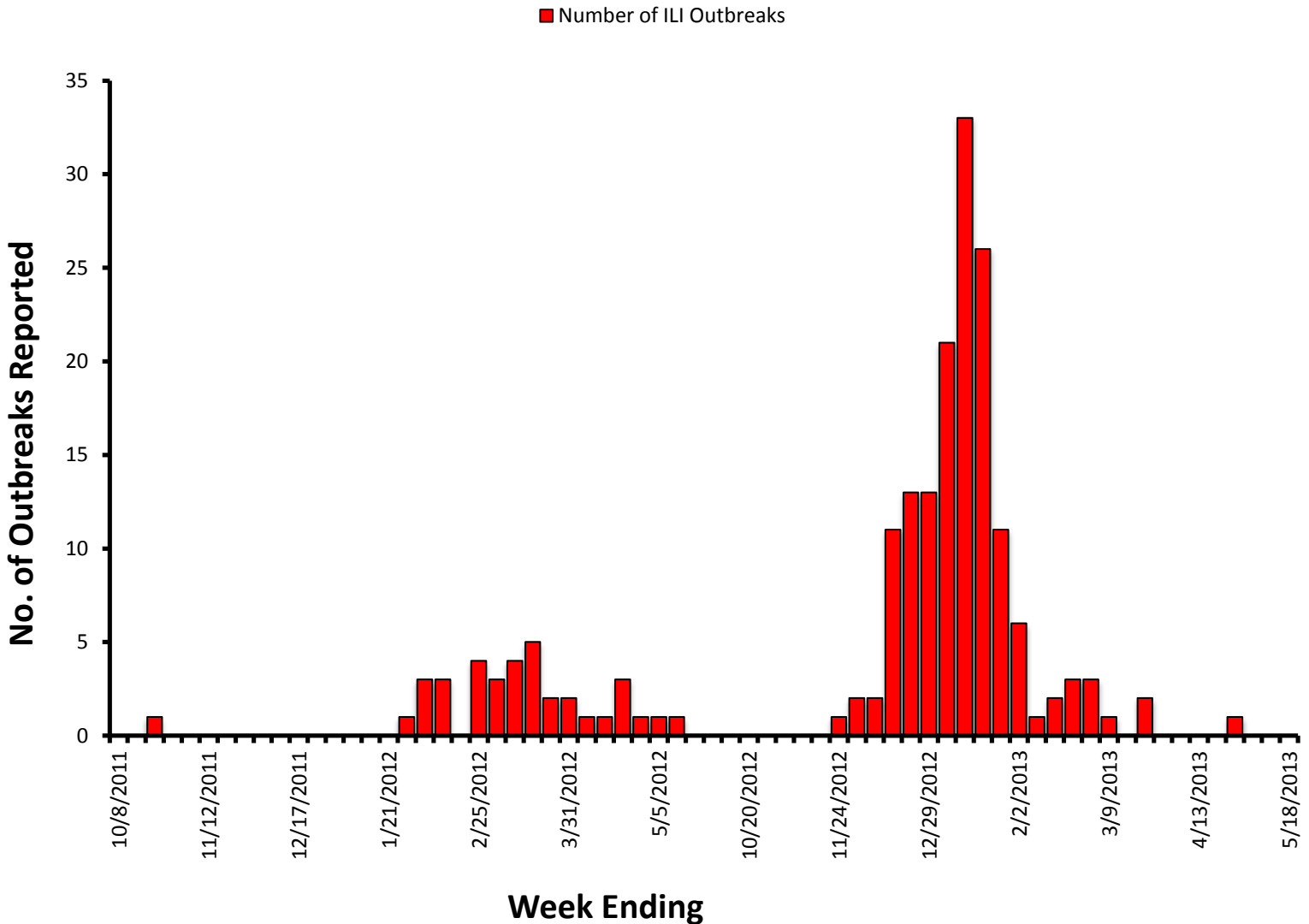
High levels of resistance to the adamantanes (amantadine and rimantadine) persist among 2009 H1N1 and A (H3N2) viruses (the adamantanes do not have activity against influenza B viruses). Antiviral treatment as early as possible with oseltamivir or zanamivir is recommended for patients with confirmed 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**

No institutional influenza outbreak was reported (region 7) the week ending May 4, 2013.

## **Number of Institutional Influenza Outbreaks Reported**

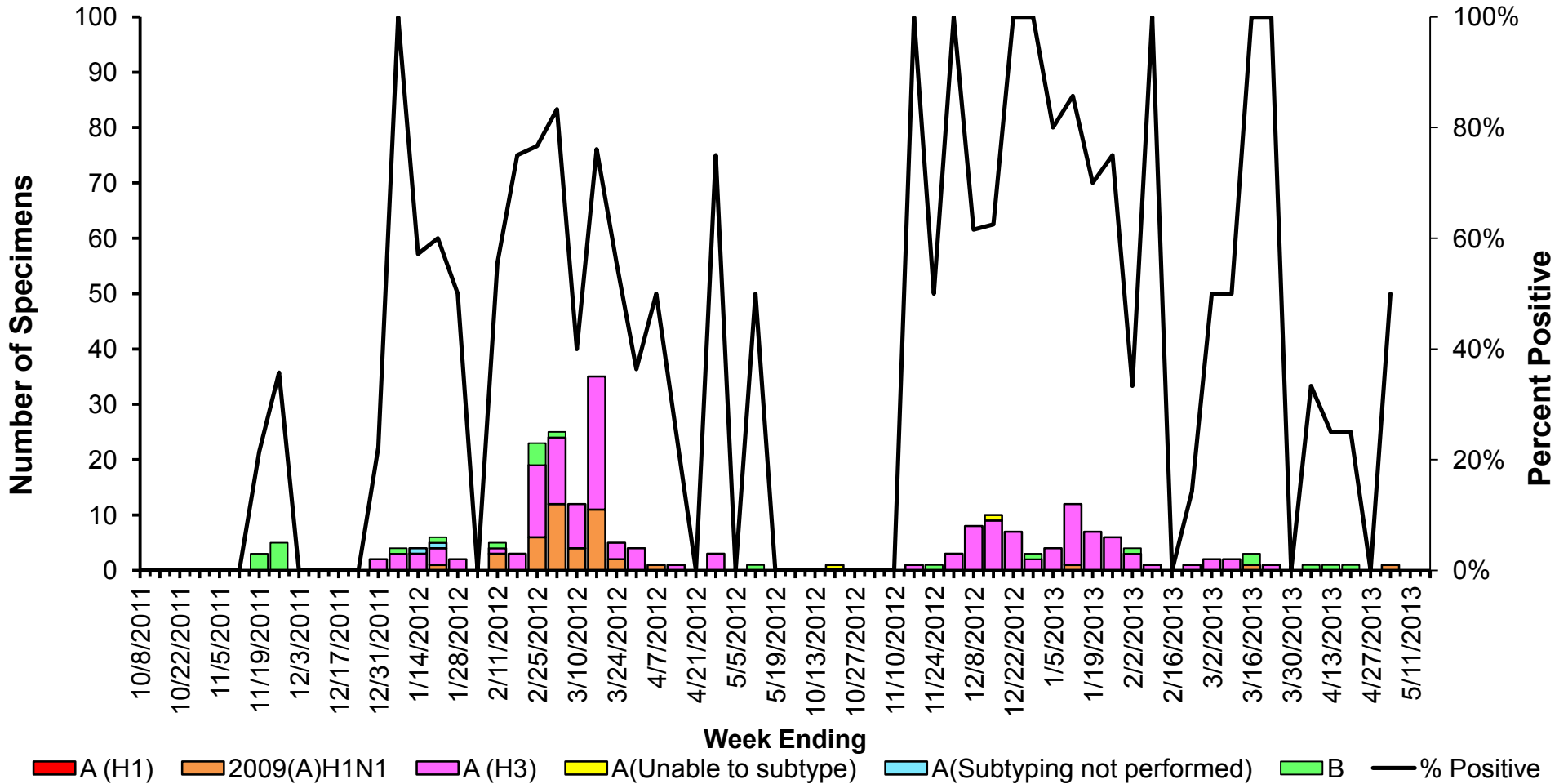


**IDPH, Immunization Section Regional Map**



**Weekly Viral Subtype**

Influenza Isolates from Illinois Reported by WHO/NREVSS Collaborating 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>
- CDC Avian Influenza A (H7N9) <http://www.cdc.gov/flu/avianflu/h7n9-virus.htm>.