

Week 1: December 30, 2012 – January 05, 2013

ILLINOIS DEPARTMENT OF PUBLIC HEALTH



Illinois Influenza Surveillance Report

Week 1: Week Ending Saturday, January 05, 2013

Division of Infectious Diseases Immunization Section

1/11/2013

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Summary

- During the Centers for Disease Control and Prevention (CDC) surveillance week 1, the proportion of outpatient visits for influenza-like illness (ILI)¹ reported by ILI Net sentinel providers in Illinois was 5.1% compared with 6.1 % for week 52.
- The influenza (flu) activity level (geographic spread of influenza) for Illinois was **“WIDESPREAD”** based on CDC criteria for week ending January 5, 2013.
- Febrile Respiratory Illness (FRI) surveillance² at Naval Recruit Training Command, Great Lakes was **at or below expected value**.
- For the week ending January 5, 2013, five specimens were tested for Influenza by Illinois Department of Public Health Laboratory, four were positive. All four Isolates (80%) were Influenza (A) H3N2.
- Eighty-one influenza-associated Intensive Care Unit (ICU) admissions³ and four deaths were reported for week ending January 5, 2013.
- No influenza-associated pediatric death was reported for the week ending January 5, 2013.
- For the week ending January 5, 2013, 18 institutional influenza outbreaks were reported.

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

² 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

³ 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.

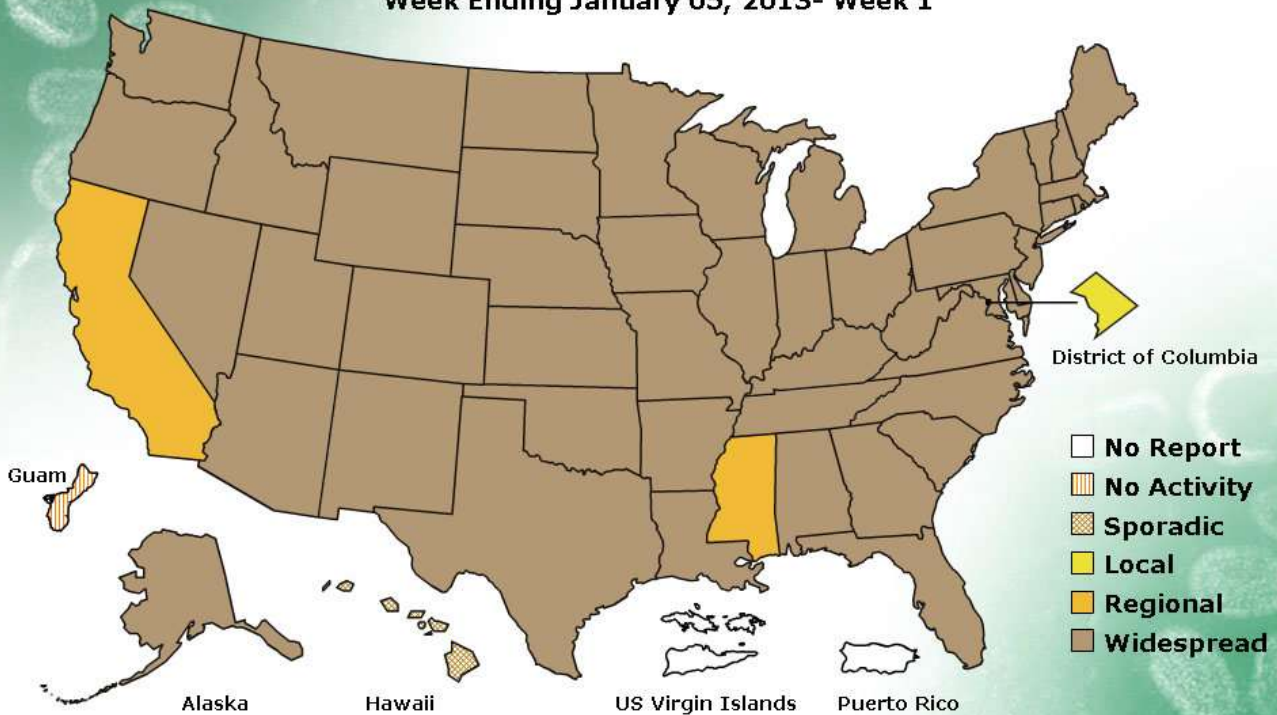
CDC Flu View

FLUVIEW



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

Week Ending January 05, 2013- Week 1



*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).

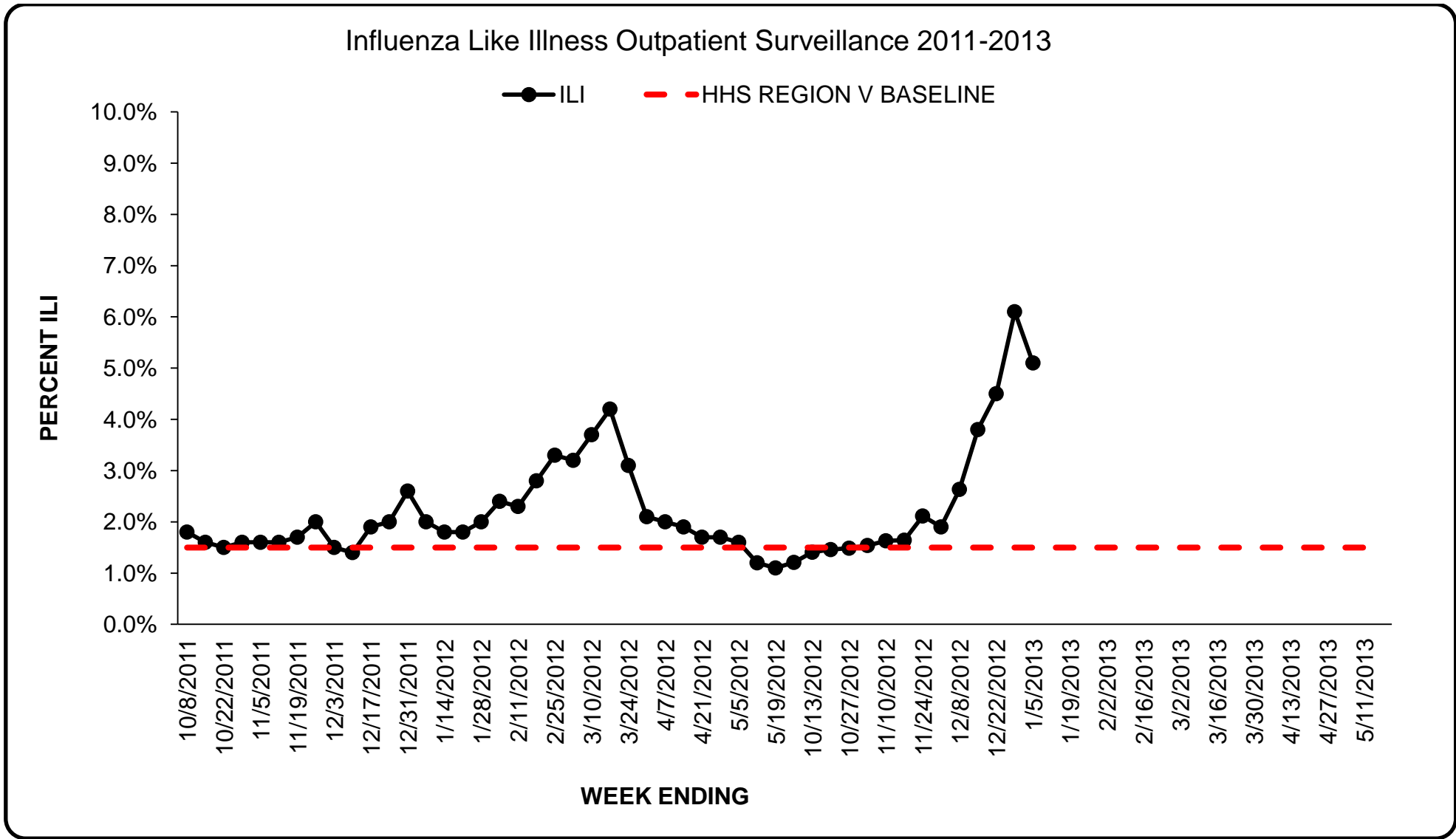
Sporadic: Small numbers of laboratory confirmed influenza cases or a single laboratory confirmed influenza in a single region of the state.

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

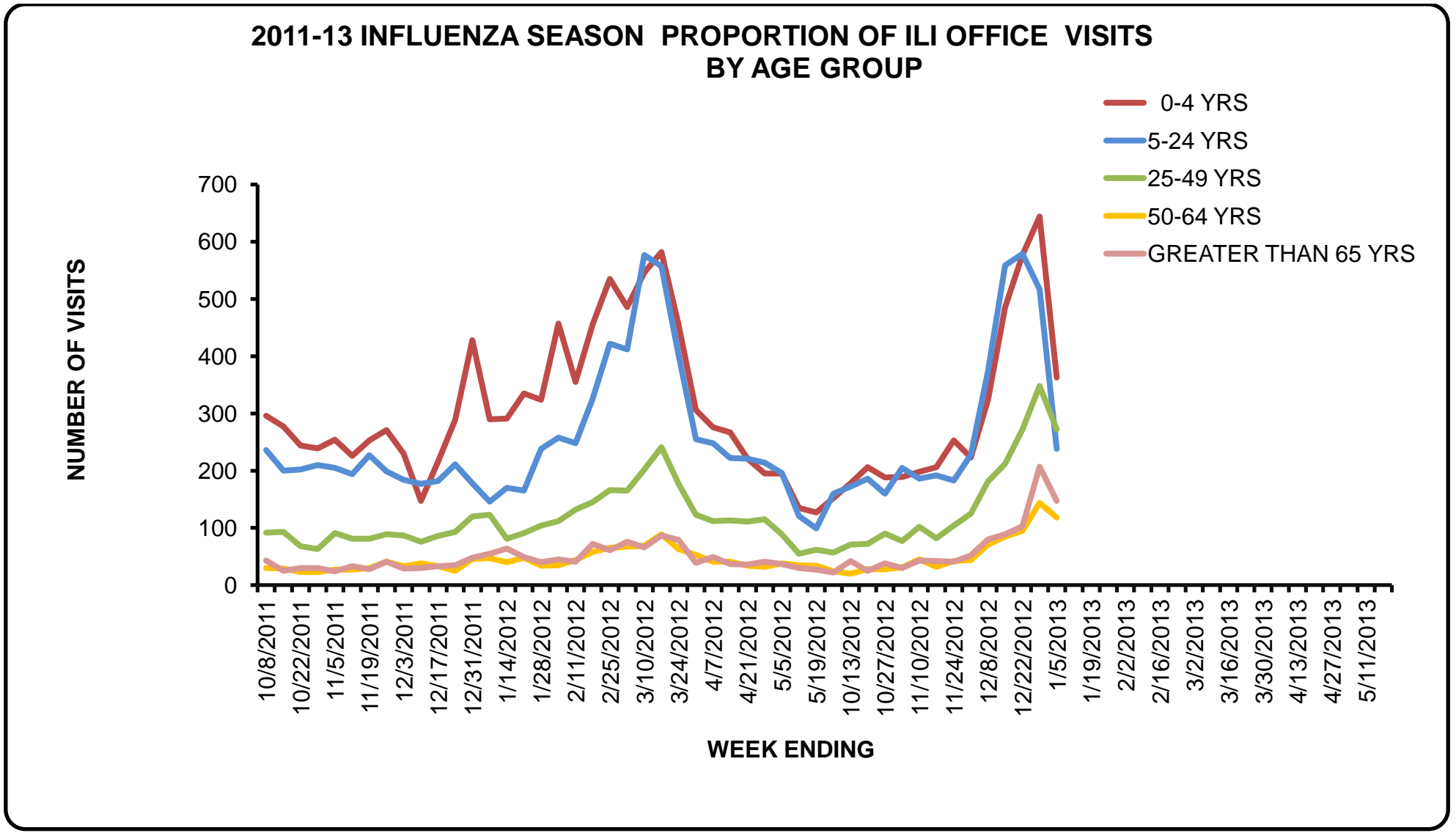
Regional: Outbreaks of influenza or increases in ILI and recent laboratory confirmed influenza in at least two but less than half the regions of the state.

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) surveillance⁴ at Naval Recruit Training Command, Great Lakes was **at or below expected value** for week ending January 05, 2013. For more information visit <http://www.med.navy.mil/sites/nhrc/geis/Pages/default.aspx>

Influenza Intensive Care Unit Admissions and Deaths

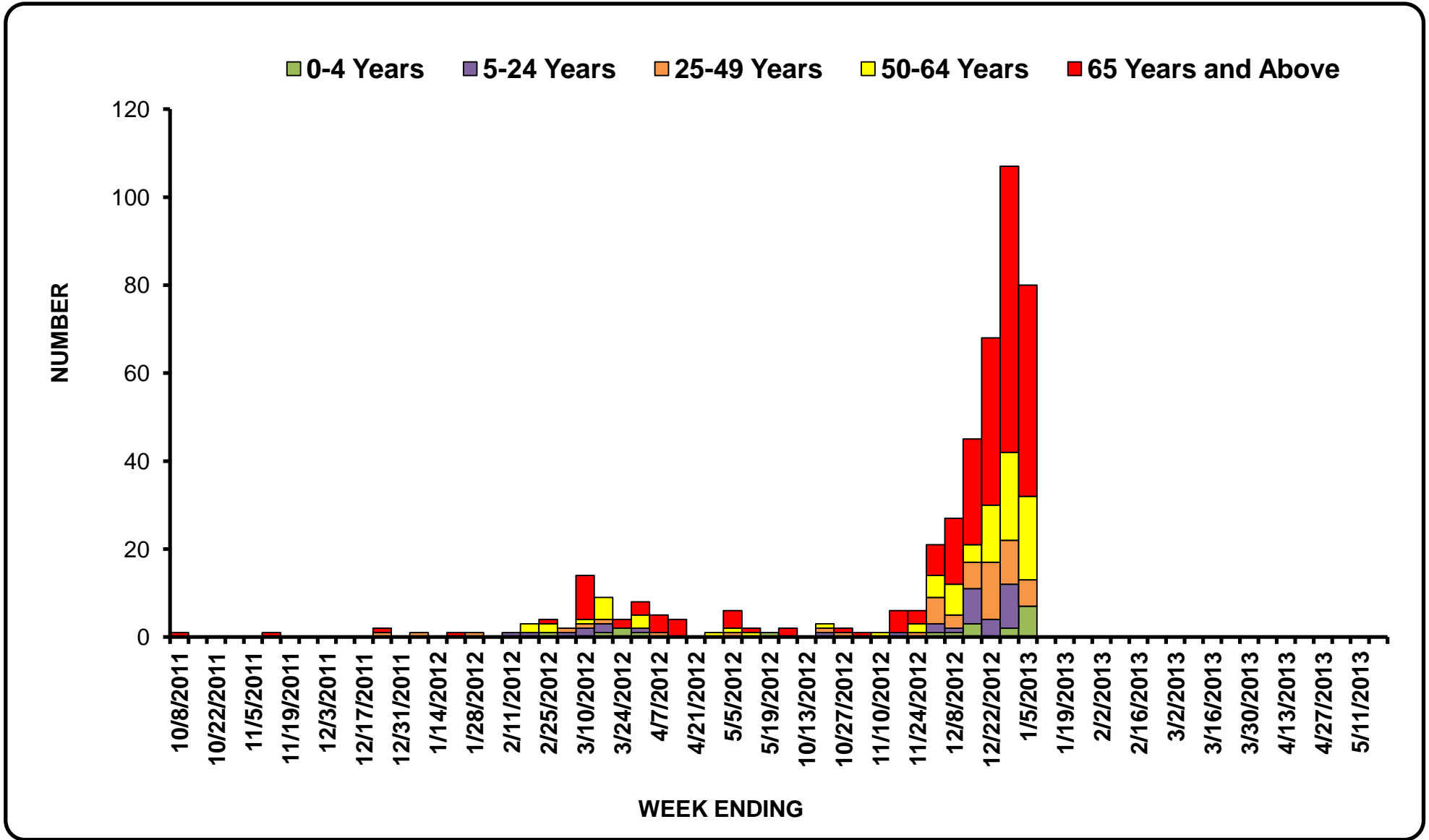
For the week ending January 05, 2013, 81 influenza related ICU admissions and four deaths were reported.

Year	Week No	Admissions	Deaths
2012	40	2	0
2012	42	2	1
2012	43	1	0
2012	44	1	0
2012	45	1	0
2012	46	6	1
2012	47	6	1
2012	48	21	1
2012	49	27	2
2012	50	45	1
2012	51	68	7
2012	52	107	9
2013	1	81	4

⁴ 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, of the five specimens tested for Influenza by Illinois Department of Public Health Laboratory, four (80%) were positive. Of these four, all 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	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%
2012	52	0	0	2	0	0	1	3	100%
2013	1	0	0	4	0	0	0	5	80%

Viral Resistance

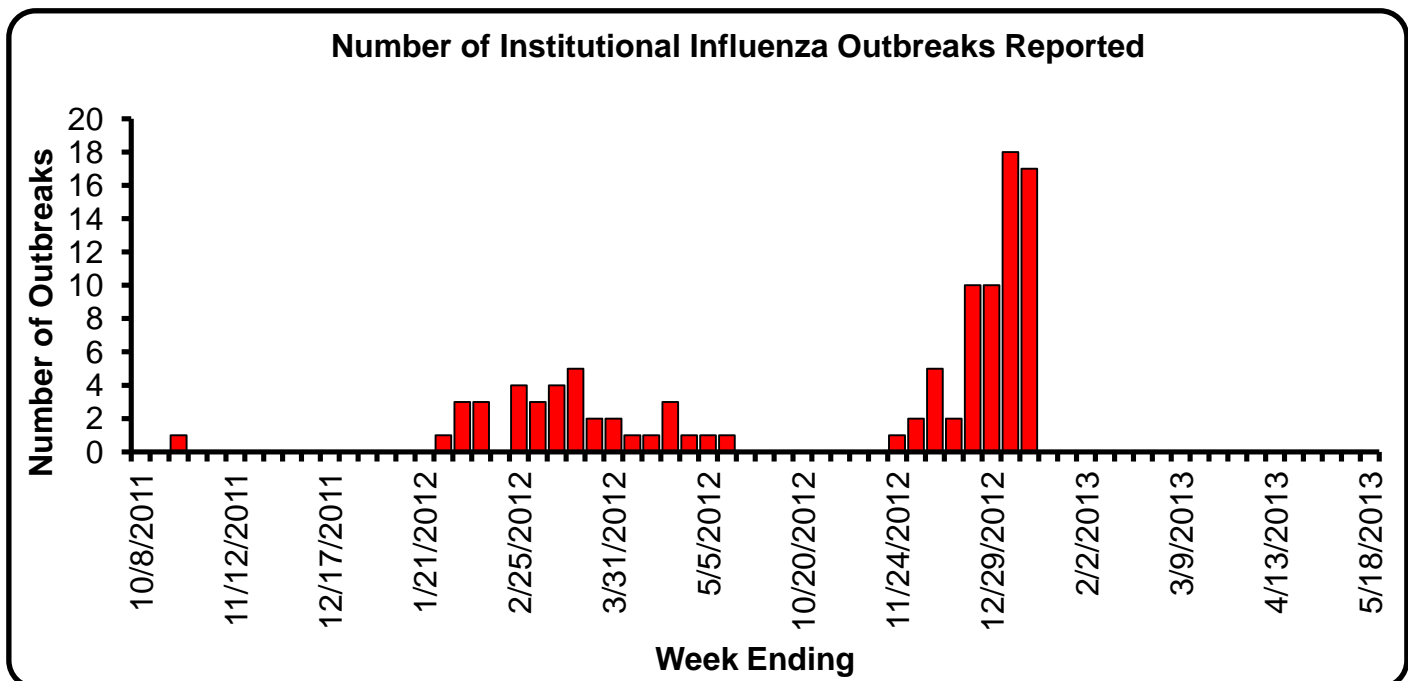
The majority of currently circulating influenza viruses are susceptible to the neuraminidase inhibitor antiviral medications oseltamivir and zanamivir; however, rare sporadic cases of oseltamivir resistant 2009 influenza A (H1N1) and A (H3N2) viruses have been detected worldwide.

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)	600	0 (0.0)	600	0 (0.0)
Influenza B	230	0 (0.0)	230	0 (0.0)
2009 H1N1	70	0 (0.0)	48	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

Eighteen institutional influenza outbreaks within Illinois for week ending January 05, 2013. The facilities were located in regions 2, 4, 6, 7 and 8 (see regional map below).

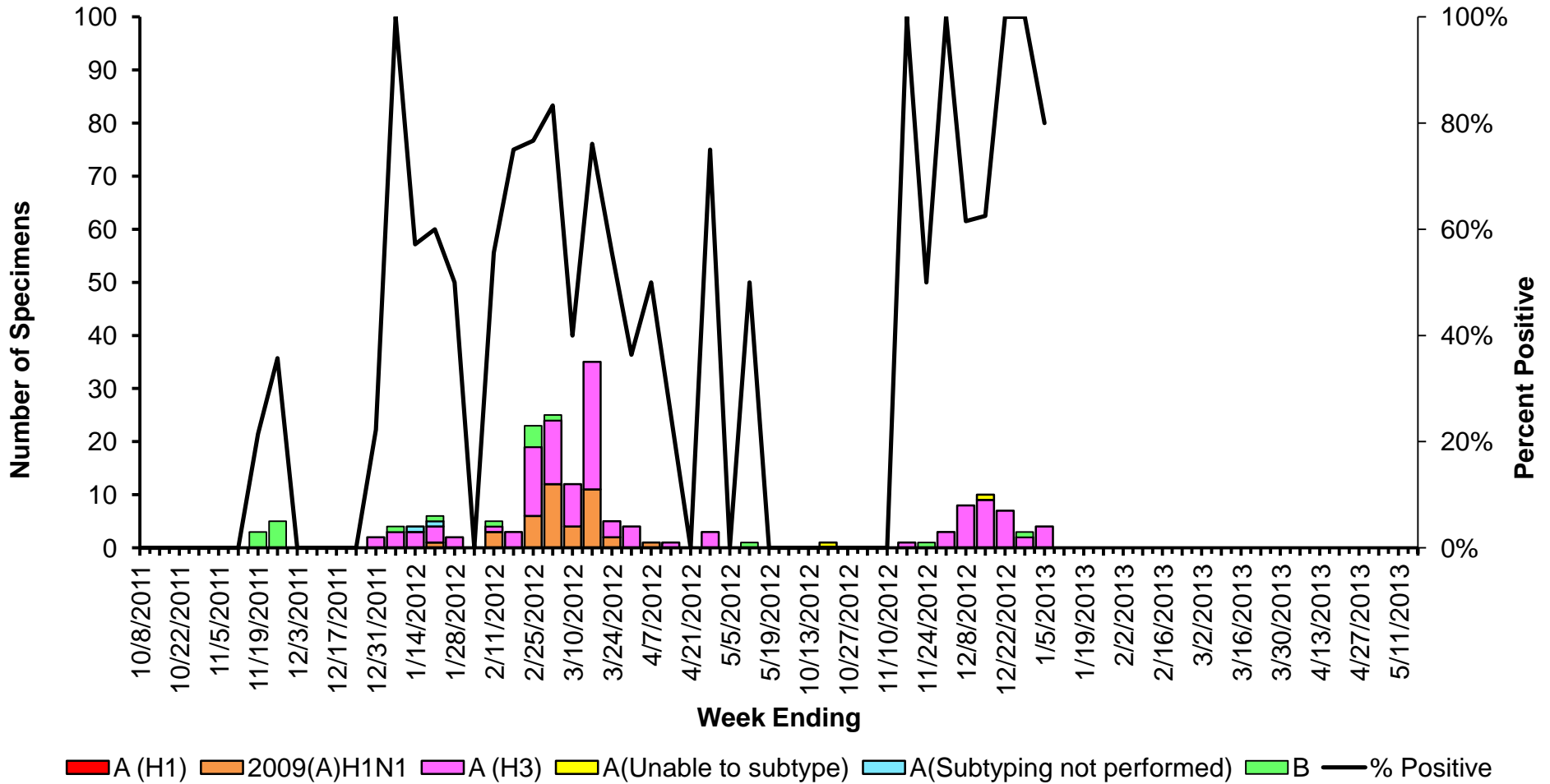


IDPH, Immunization Section Regional Map



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>