ILLINOIS DEPARTMENT OF PUBLIC HEALTH

Illinois Influenza Surveillance Report

Week 49: Week Ending Saturday, December 8, 2012

Division of Infectious Diseases Immunization Section

12/14/2012

Please note that all data are preliminary and may change as more reports are received.

Contents

Summary

- During the Centers for Disease Control and Prevention (CDC) surveillance week 49, the proportion of outpatient visits for influenza-like illness (ILI)[1] reported by ILI Net sentinel providers in Illinois was 2.8% compared with 1.7 % for week 48.
- The influenza (flu) activity level (geographic spread of influenza) for Illinois was **"Regional"** based on CDC criteria for week 49.
- Febrile Respiratory Illness (FRI) surveillance[2] at Naval Recruit Training Command, Great Lakes was **at or below expected value**.
- During week 49, thirteen specimens were tested for influenza by Illinois Department of Public Health Laboratory, eight specimens tested positive for Influenza (A) H3N2.
- Six influenza-associated Intensive Care Unit (ICU) admissions[3] were reported during week 49.
- No influenza-associated pediatric death was reported for week 49.
- During week 49, five influenza outbreaks were reported in long-term care facilities.

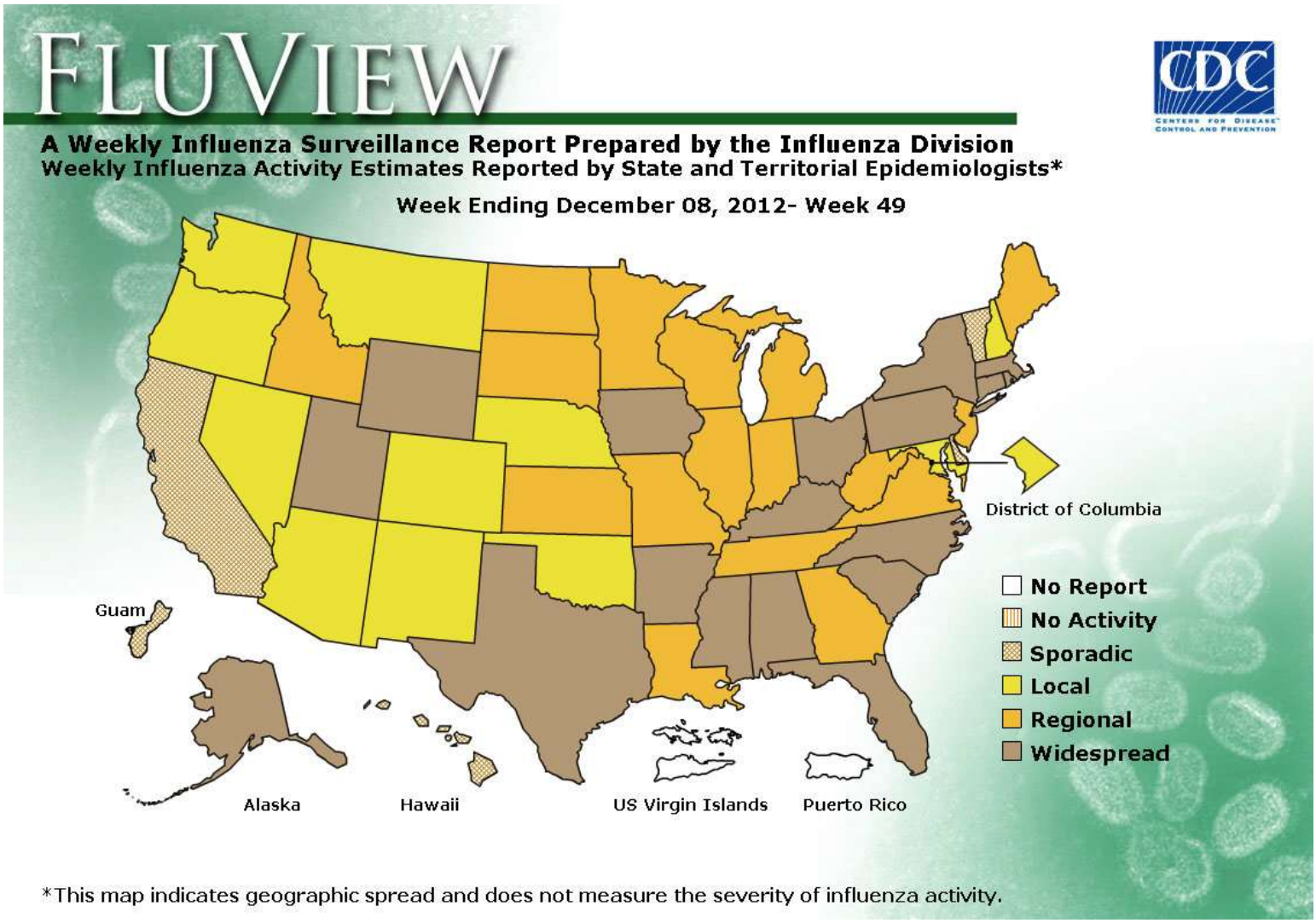
[1] ILI "Influenza like Illness" is defined as fever ≥ 100°F and cough and/or sore throat.

[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

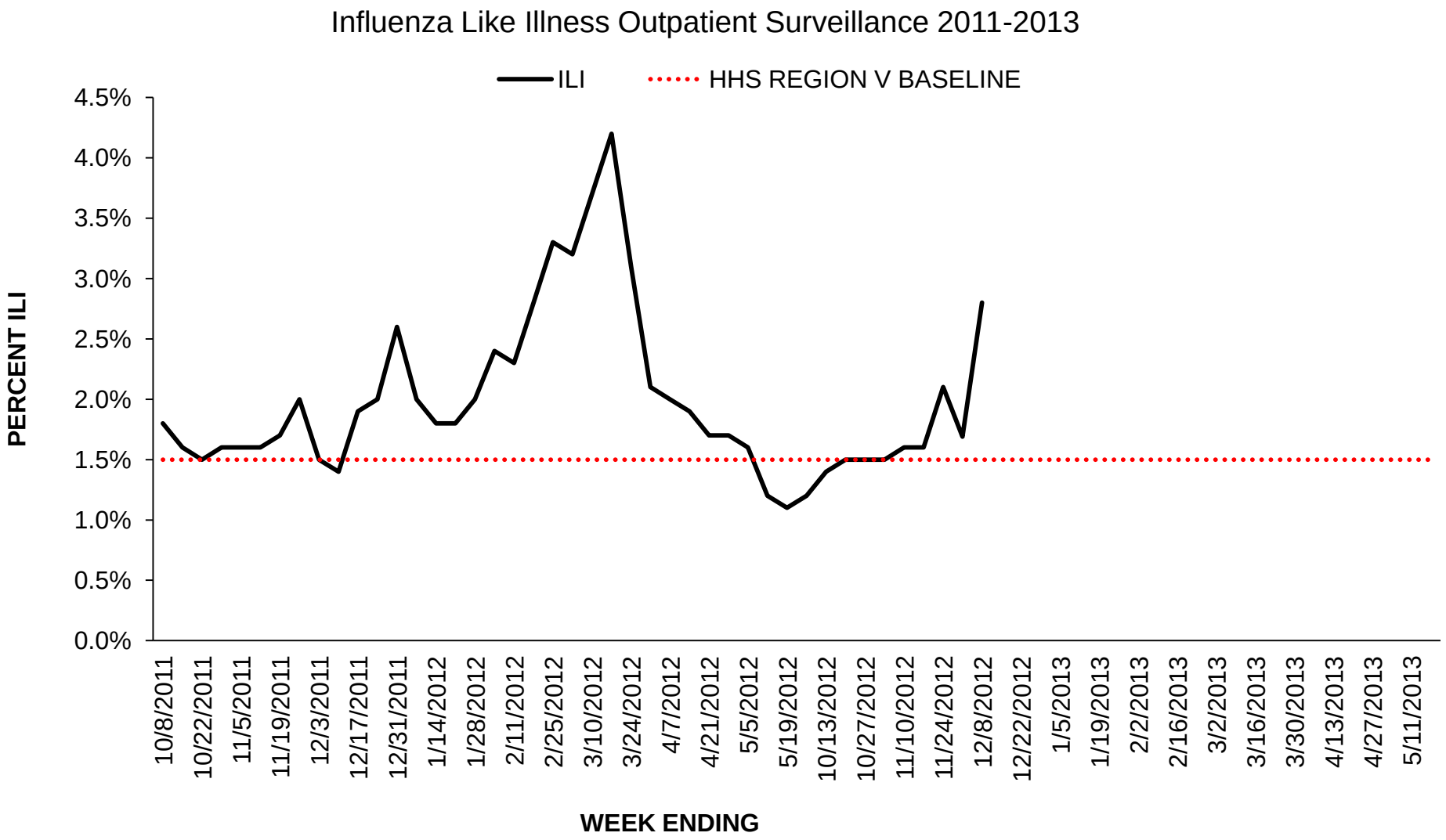
[3] For the purpose of diagnosis, influenza can be diagnosed by using the following test: reverse transcription polymerase chain reaction RT-PCR], viral culture, Immunofluorescence [Direct Fluorescent Antibody (DFA) or Indirect Fluorescent Antibody (IFA) Staining], Enzyme Immuno Assay (EIA) or any rapid 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

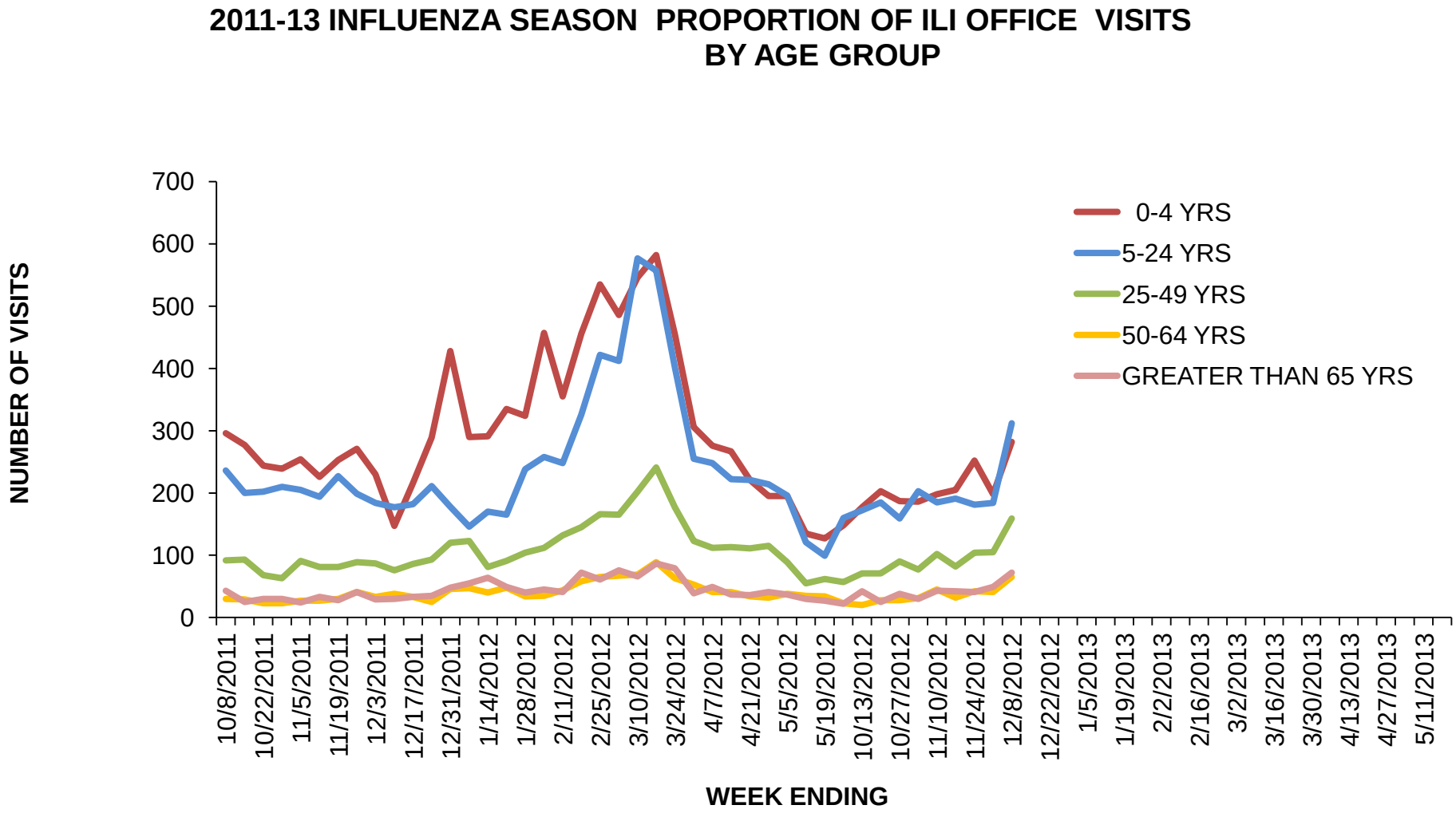


No activity: No laboratory confirmed cases of influenza and no reported increase in cases of influenza like illness (ILI).
Sporadic: Small numbers of laboratory confirmed influenza cases or a single laboratory confirmed influenza in a single region of the state.
Local: Outbreaks of influenza or increases 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[4] at Naval Recruit Training Command, Great Lakes was **at or below expected value** for week ending December 8, 2012. For more information visit http://www.med.navy.mil/sites/nhrc/geis/Pages/default.aspx

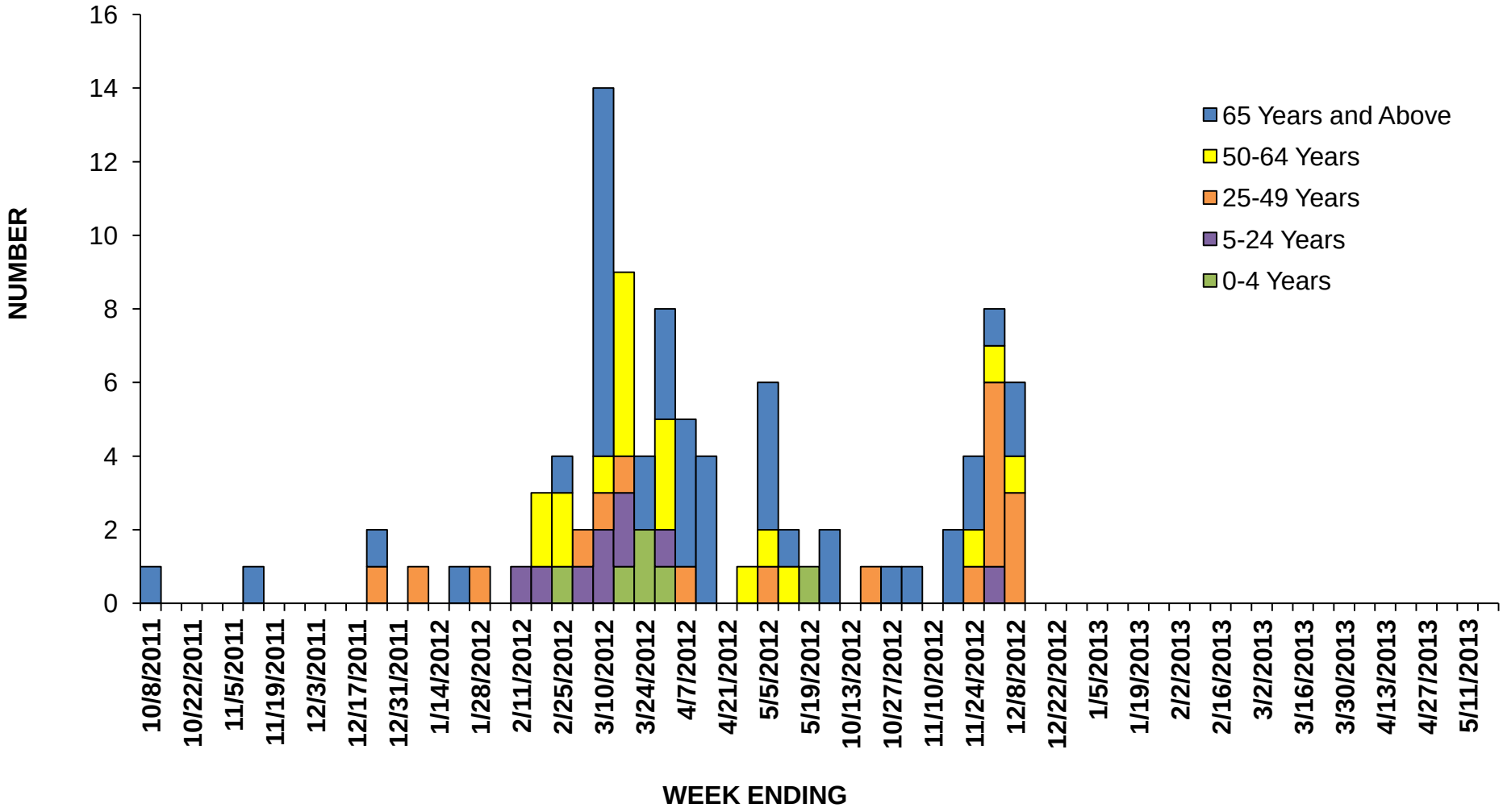
Influenza Intensive Care Unit Admissions and Deaths

There were six influenza related ICU admissions and no deaths reported for week ending December 8, 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

[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 48, three specimens were tested for Influenza by Illinois Department of Public Health Laboratory. All three 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%

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

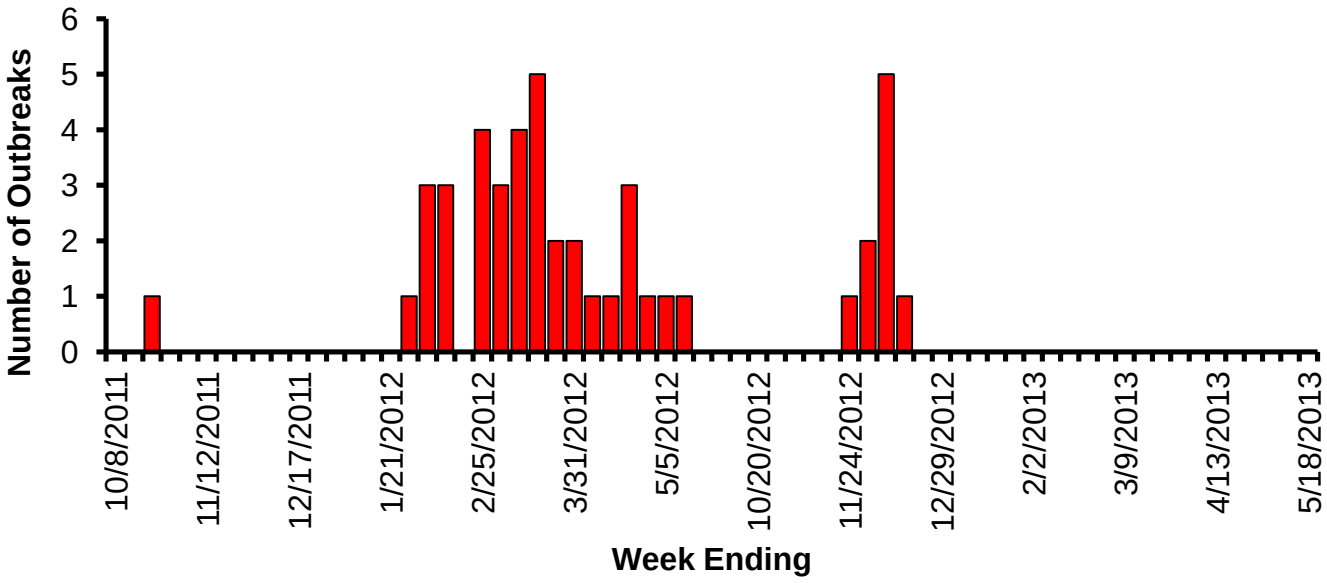
	Oseltamivir		Zanamivir	
	Virus Samples tested (n)	**Resistant Viruses, Number (%)**	**Virus Samples tested (n)**	**Resistant Viruses, Number (%)**
Influenza A (H3N2)	257	0 (0.0)	257	0 (0.0)
Influenza B	118	0 (0.0)	118	0 (0.0)
2009 H1N1	17	0 (0.0)	17	0 (0.0)

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.

Influenza Outbreaks Reported in Long-Term Facilities (LTC) and Nursing Homes (NH)

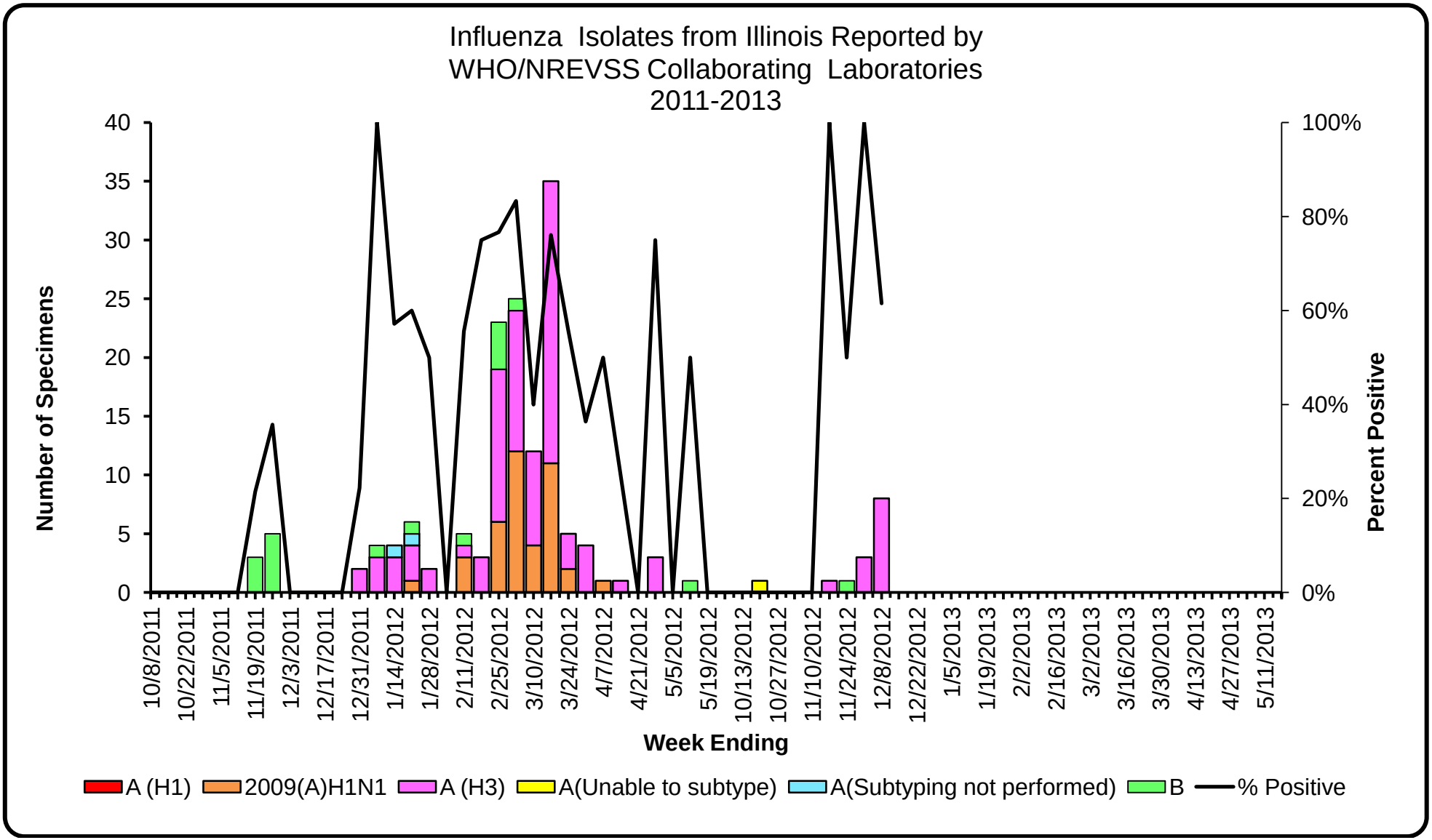
Five influenza outbreaks were reported in long-term care facilities within Illinois for week ending December 8, 2012.The facilities were located in regions 4, 7 and 8 (see regional map below).

Number of LTC and NH Influenza Outbreaks Reported



IDPH, Immunization Section Regional Map

Weekly Viral Subtype



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