ILLINOIS DEPARTMENT OF PUBLIC HEALTH

Illinois Influenza Surveillance Report

Week 12: Week Ending Saturday, March 23, 2013

Division of Infectious Diseases Immunization Section

3/29/2013

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 12, the proportion of outpatient visits for influenza-like illness (ILI)[1] reported by ILI Net sentinel providers in Illinois was 2.1% compared with 2.6% for week 11.
- The influenza (flu) activity level (geographic spread of influenza) for Illinois was **"LOCAL"** based on CDC criteria for week ending March 23, 2013.
- Febrile Respiratory Illness (FRI) surveillance[2] at Naval Recruit Training Command,Great Lakes was **at or below expected value** for week 12.
- For the week ending March 23, 2013, one specimen was tested for Influenza by the Illinois Department of Public Health Laboratory; the specimen tested positive for Influenza A, H3 subtype.
- Three influenza-associated Intensive Care Unit (ICU) admissions[3] and one death were reported during week 12.
- No influenza-associated pediatric death was reported during week 12.
- During week 12, two institutional influenza outbreaks were reported.

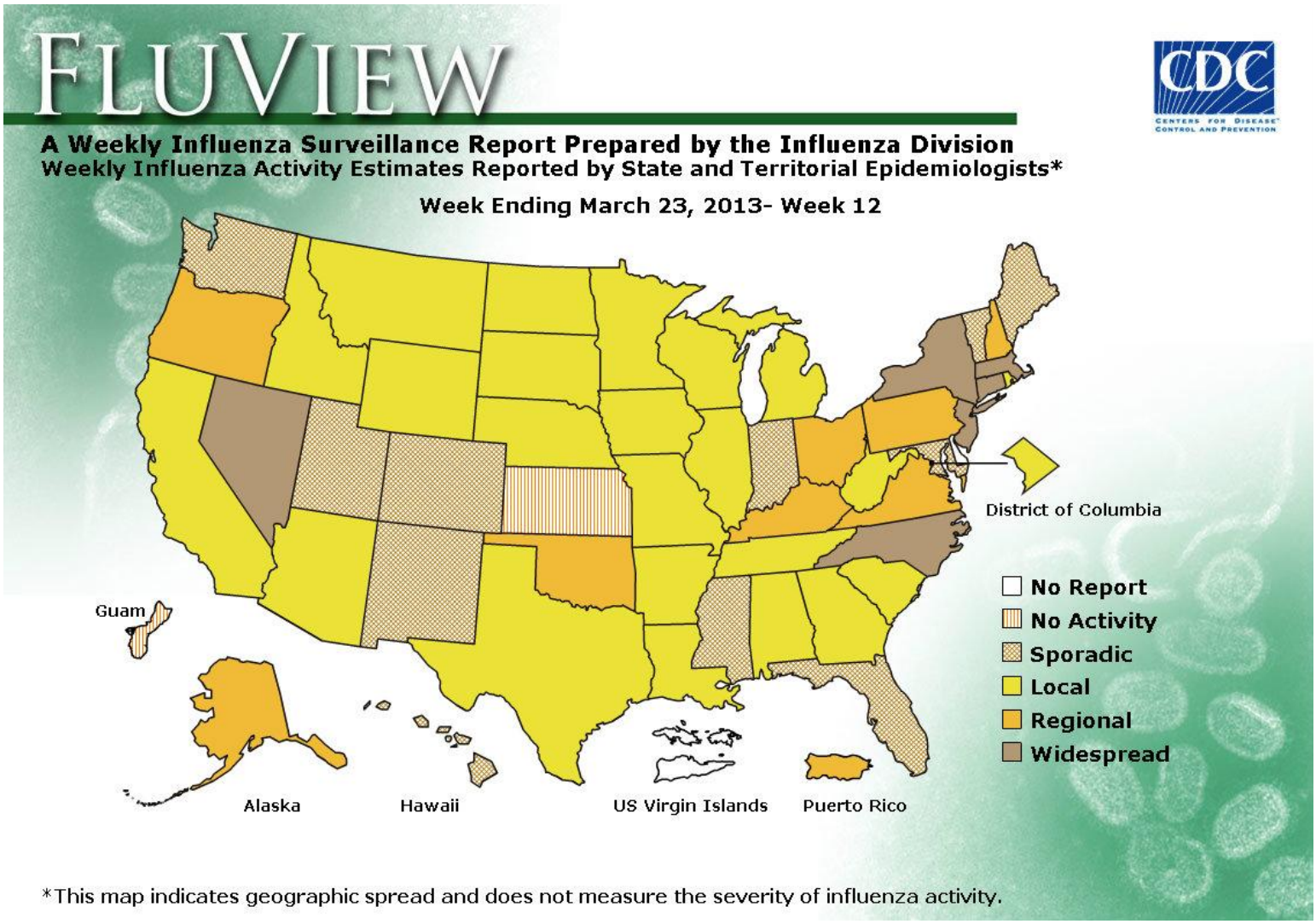
[1] ILI "Influenza like Illness" is defined as fever ≥ 100°F and cough and/or sore throat.

[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

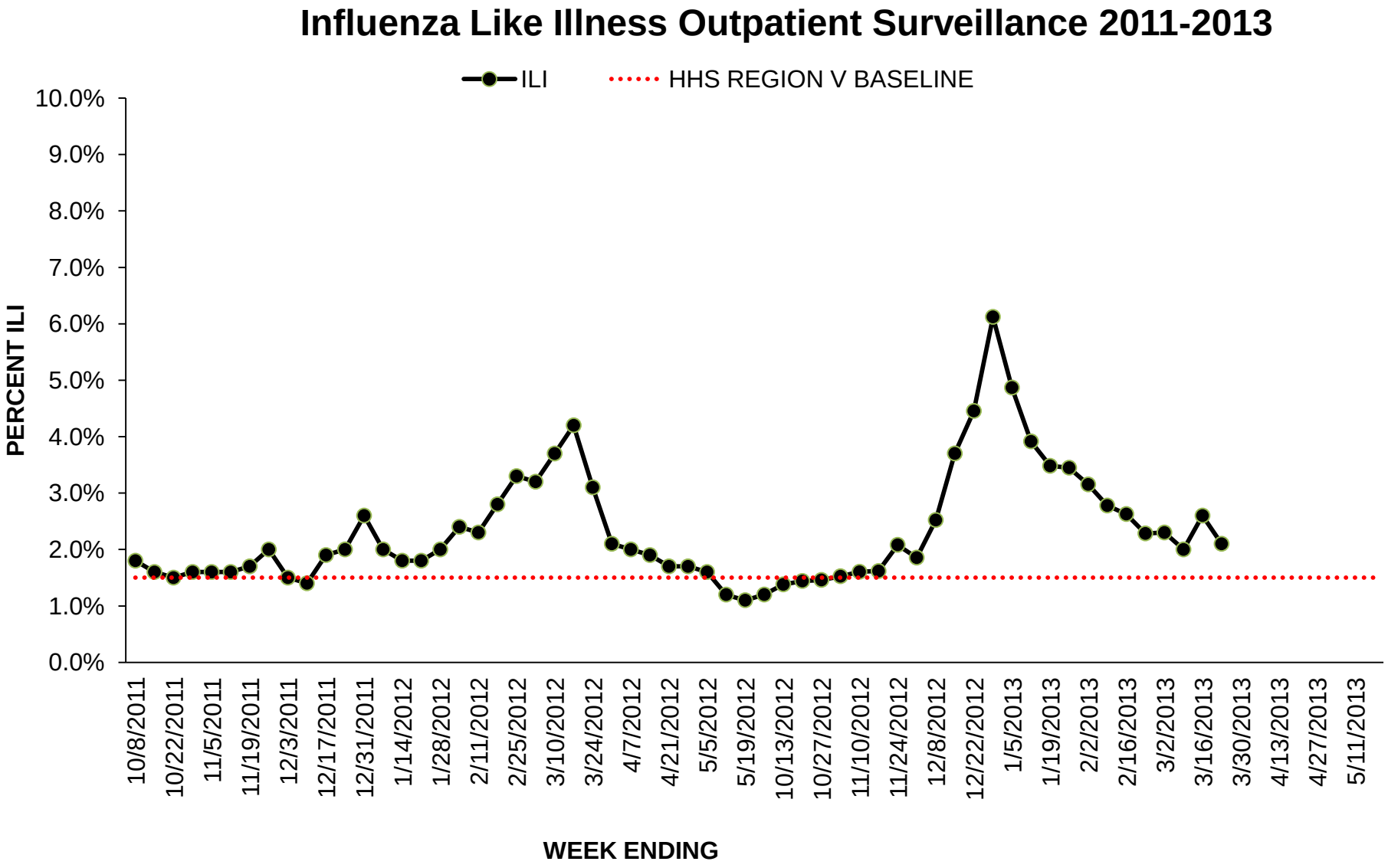
[3] For the purpose of diagnosis, influenza can be diagnosed by using the following test: reverse transcription polymerase chain reaction RT-PCR], viral culture, Immunofluorescence [Direct Fluorescent Antibody (DFA) or Indirect Fluorescent Antibody (IFA) Staining], Enzyme Immuno Assay (EIA) or any rapid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

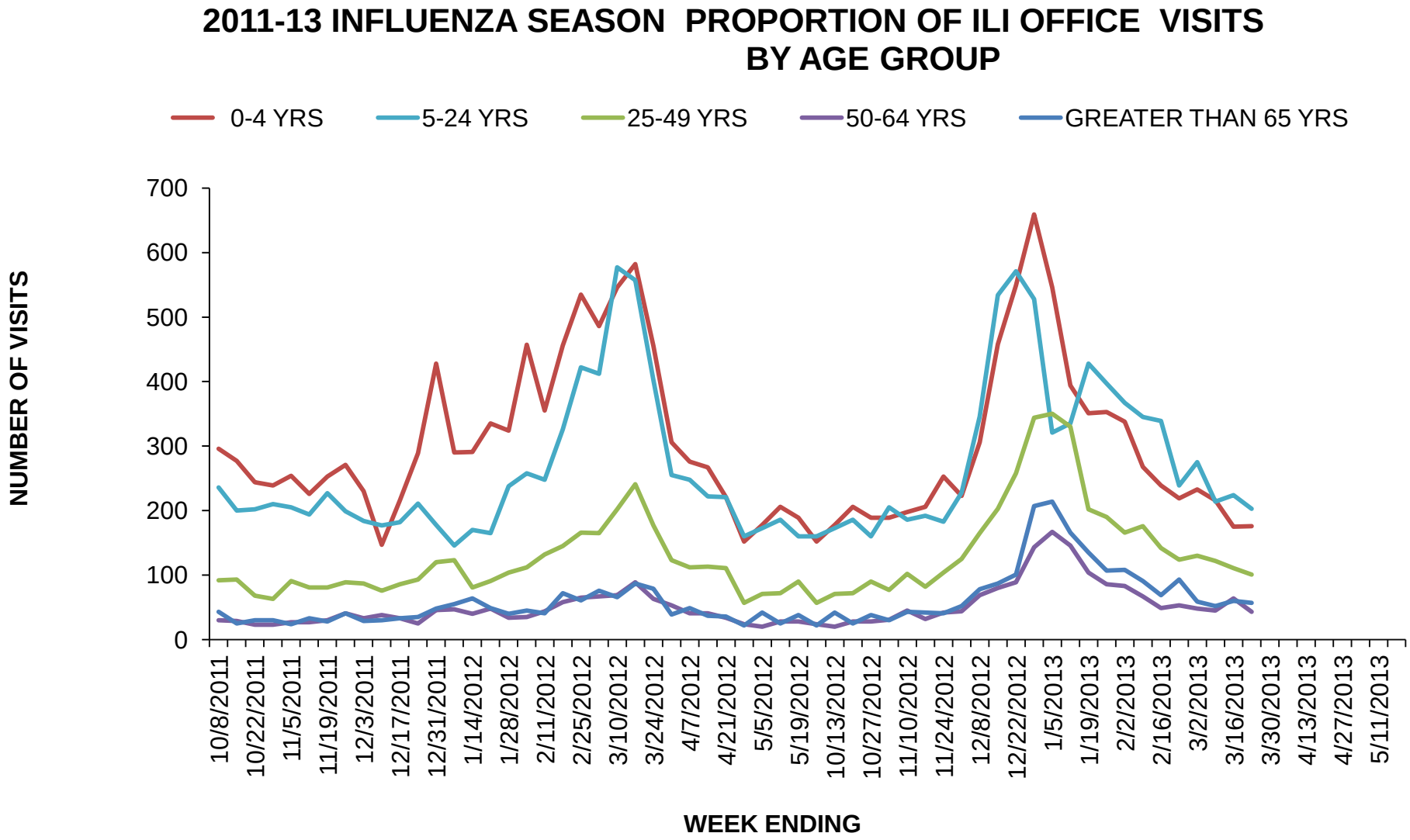


No activity: No laboratory confirmed cases of influenza and no reported increase in cases of influenza like illness (ILI).
Sporadic: Small numbers of laboratory confirmed influenza cases or a single laboratory confirmed influenza in a single region of the state.
Local: Outbreaks of influenza or increases 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 March 23, 2013. For more information visit http://www.med.navy.mil/sites/nhrc/geis/Pages/default.aspx

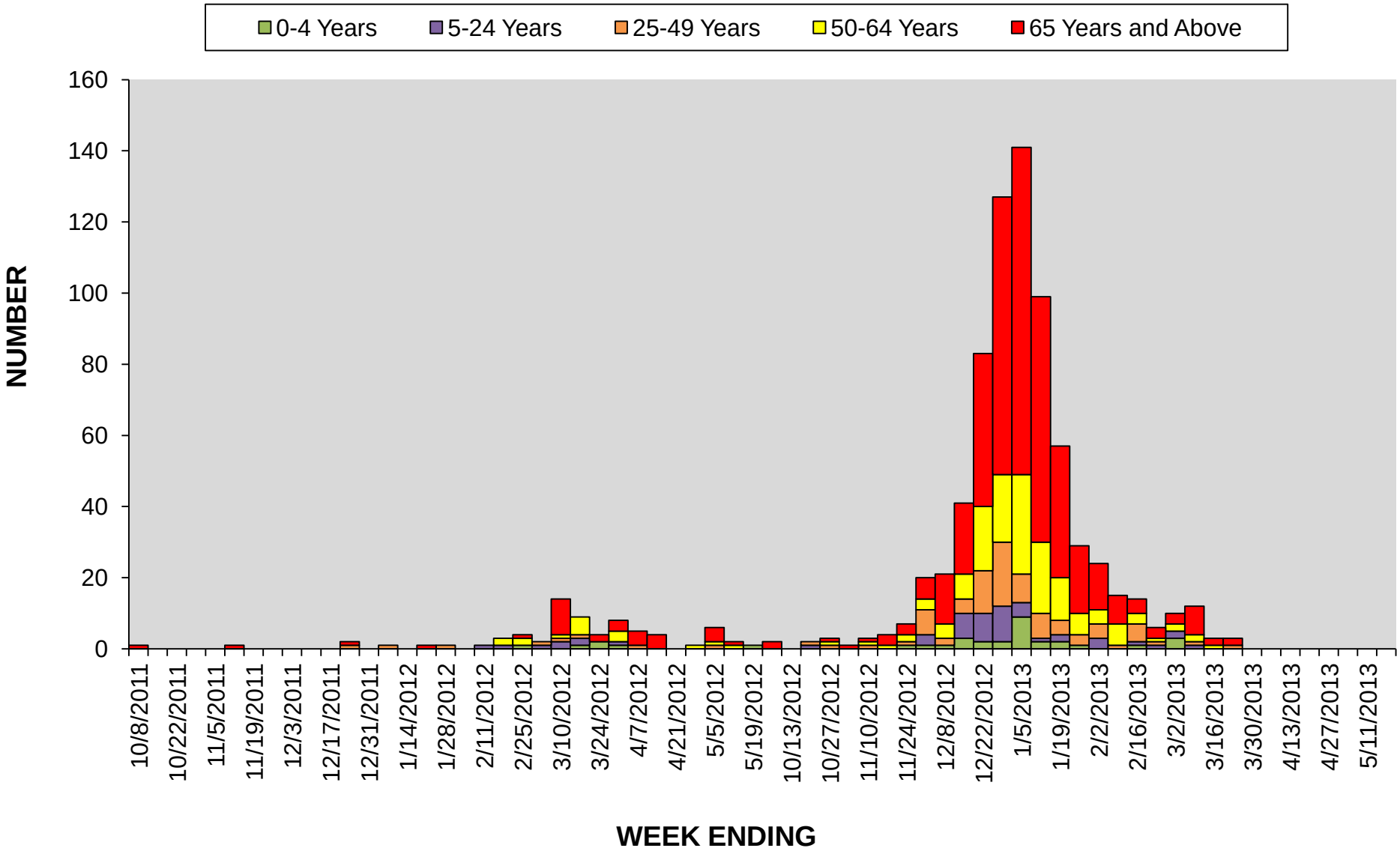
Influenza Intensive Care Unit Admissions and Deaths

Three influenza related ICU admissions and one deaths were reported the week ending March 23, 2013.

Year	Week No	Admissions	Deaths
2013	5	24	5
2013	6	15	2
2013	7	14	1
2013	8	6	0
2013	9	10	0
2013	10	12	2
2013	11	3	0
2013	12	3	1
Total (Provisional) for 2012-13 Season up to week ending March 23, 2013	**-**	**729**	**112**

[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

For the week ending March 23, 2013, one specimen was tested for Influenza by the Illinois Department of Public Health Laboratory; the specimen tested positive for Influenza A, H3 subtype.
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	9	0	0	2	0	0	0	4	50%
2013	10	0	0	2	0	0	0	4	50%
2013	11	0	1	3	0	0	0	3	100%
2013	12	0	0	1	0	0	0	1	100%

Viral Resistance

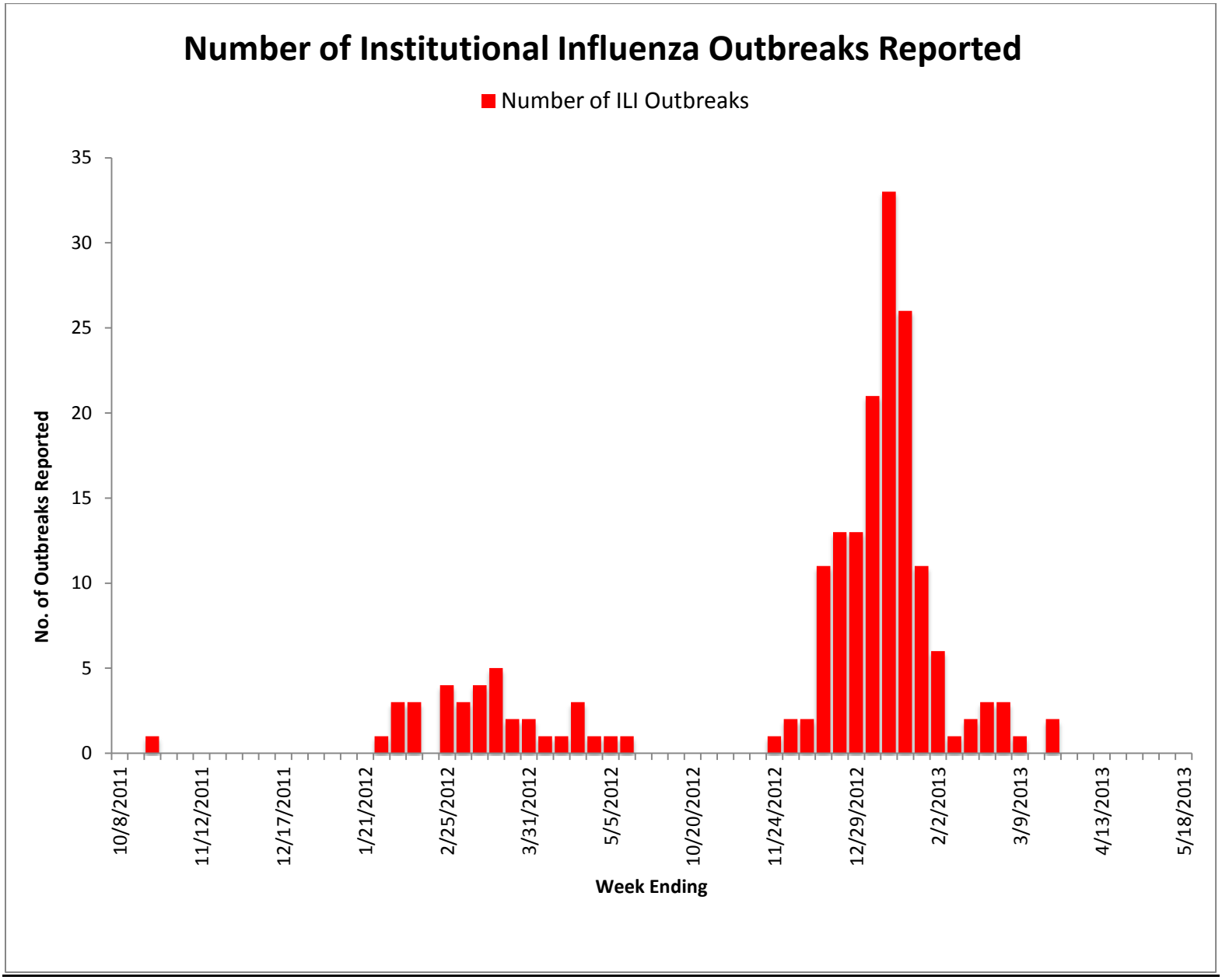
The majority of currently circulating influenza viruses are susceptible to the neuraminidase inhibitor antiviral medications oseltamivir and zanamivir; however, rare sporadic cases of oseltamivir resistant 2009 influenza A (H1N1) and A (H3N2) viruses have been detected worldwide.

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 (%)**
Influenza A (H3N2)	1692	2 (0.1)	1692	0 (0.0)
Influenza B	649	0 (0.0)	649	0 (0.0)
2009 H1N1	427	2 (0.5)	194	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.

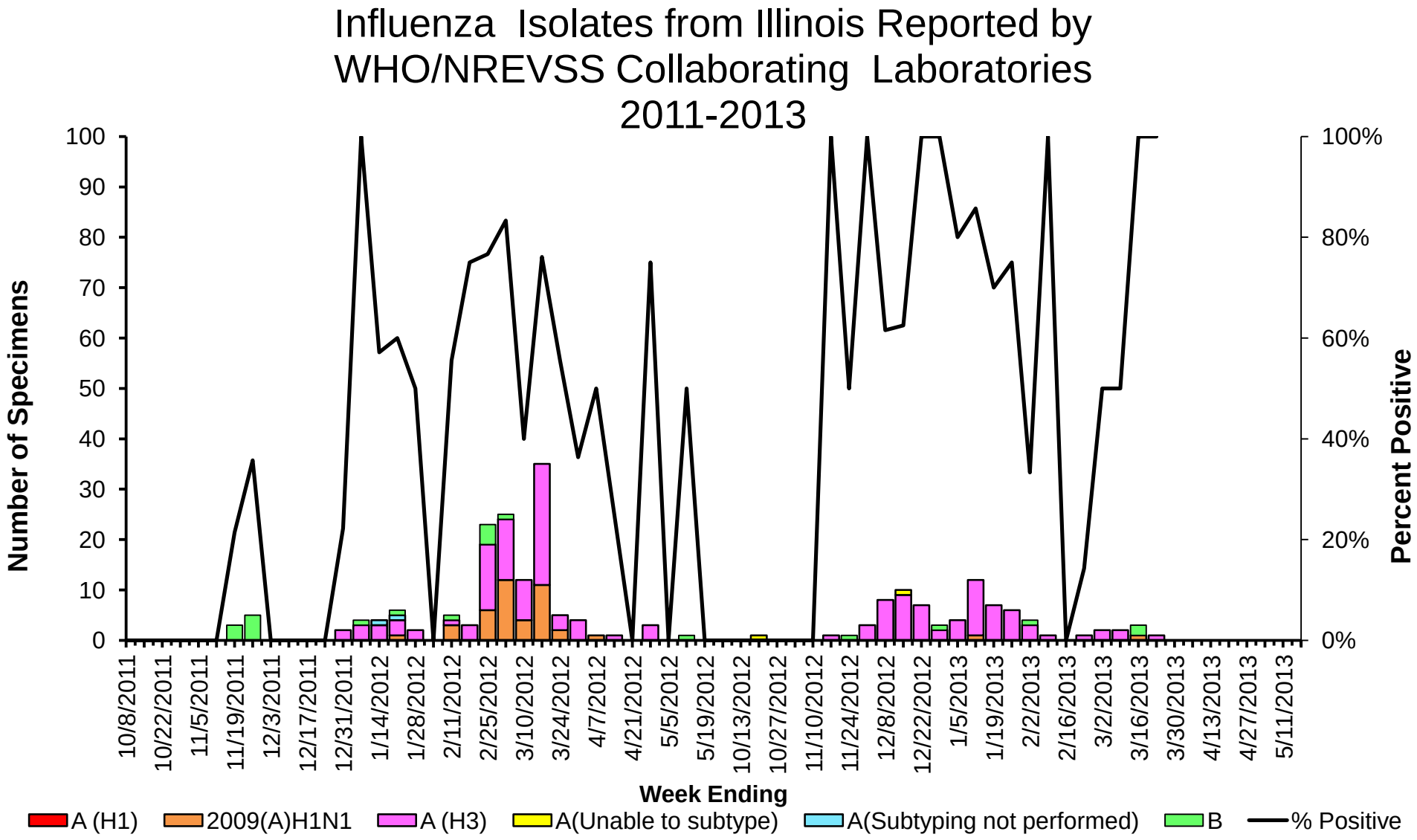
Institutional Influenza Outbreaks Reported

Two institutional influenza outbreaks were reported the week ending March 23, 2013.



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