

Week 19: May 10, 2015 – May 16, 2015

ILLINOIS DEPARTMENT OF PUBLIC HEALTH



Illinois Influenza Surveillance Report

Week 19: Week Ending Saturday, May 16

Division of Infectious Diseases, Communicable Disease Section

5/22/2015

Contents

Summary	2
ILINet Provider Surveillance.....	5
ILI Visits by Age Group	6
Influenza Intensive Care Unit (ICU) Admissions and Deaths	7
Influenza Related ICU Admissions by Age Group.....	8
Laboratory Surveillance	9
Influenza Outbreaks Reported in Long-Term Facilities (LTC) and Correctional Facilities	9
Weekly Viral Subtype	11
IDPH Infectious Diseases Regional Map	12
Resources	13

Summary

- For this reporting week, the proportion of outpatient visits for influenza-like illness (ILI)¹ was **1.01%**, which is **below** the regional baseline of **1.70%**.
- Based on CDC criteria, Illinois influenza activity is classified as **Sporadic** (see CDC FluView Section) for this reporting week.
- For this reporting week there were **259** influenza specimens tested by WHO/NREVSS collaborating Illinois laboratories and **10** tested by Illinois Department of Public Health Laboratories for a total of **269** specimens tested. **3** specimens tested positive for Influenza.
- **3** influenza-associated Intensive Care Unit (ICU) admissions³ were reported for this reporting week.
- **No** influenza-associated pediatric deaths were reported for this reporting week.
- For this reporting week, **no** influenza outbreaks were reported.

Since the start of the season, influenza A (H3N2) viruses have predominated nationally and in Illinois, however later in the season influenza B viruses has been the predominant virus circulating.

Yearly influenza vaccination is recommended for everyone six months of age and older as the first and most important step in protecting against influenza infection. People should begin getting vaccinated soon after vaccine becomes available, ideally by October, to ensure that as many people as possible are protected before influenza season begins. However, as long as influenza viruses are circulating in the community, it's not too late to get vaccinated. Information on the influenza vaccine effectiveness for the 2014-2015 season can be found on the [CDC 2014-2015 Flu Season](#) website.

Additionally, clinicians are reminded of the use of neuraminidase inhibitor antiviral medications when indicated for treatment and prevention of influenza, as an adjunct to vaccination. For more information see the [CDC Influenza Antiviral](#) webpage.

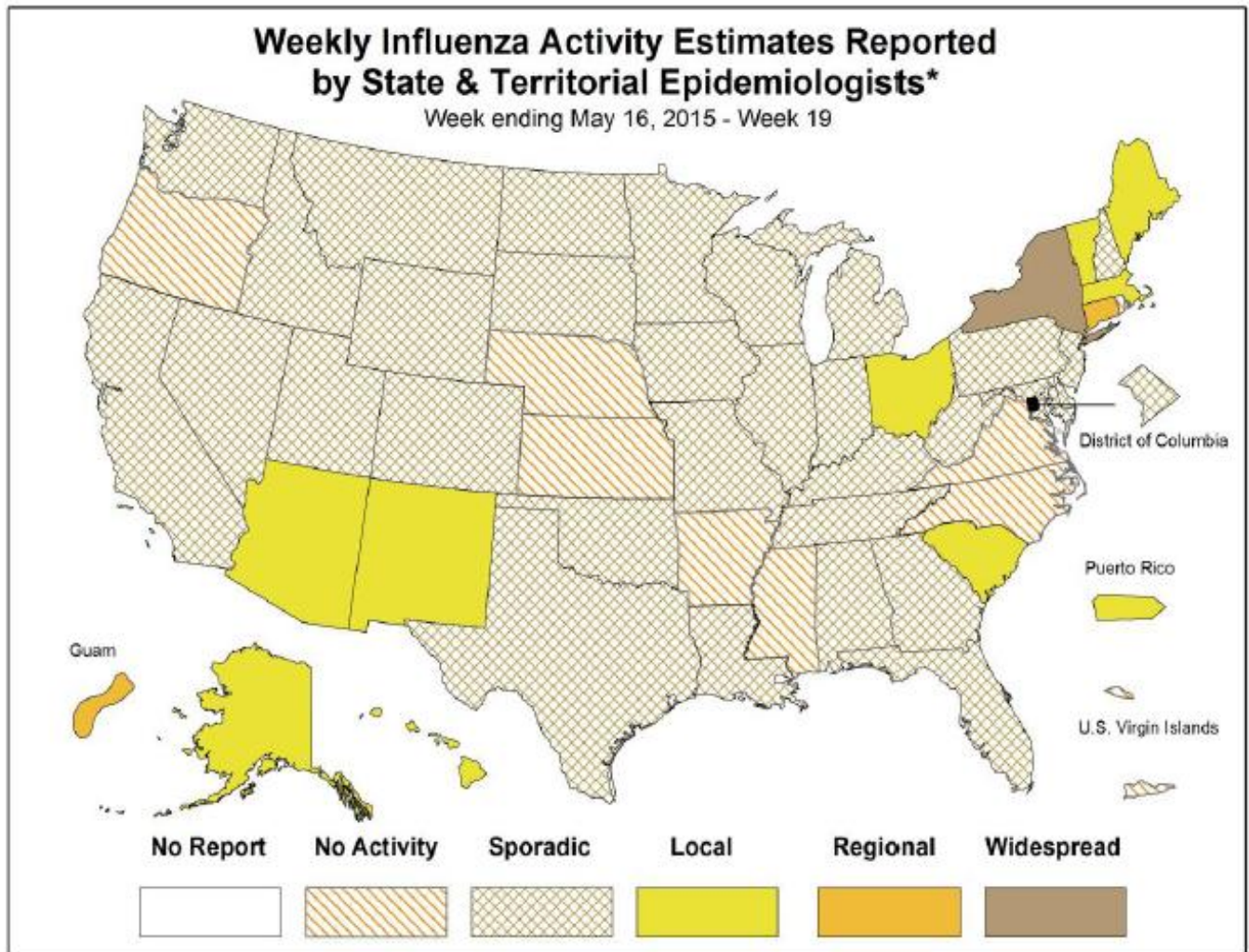
¹ ILI "Influenza like Illness" is defined as fever $\geq 100^{\circ}\text{F}$ and cough and/or sore throat.

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
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 FluView



* This map indicates geographic spread & 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.

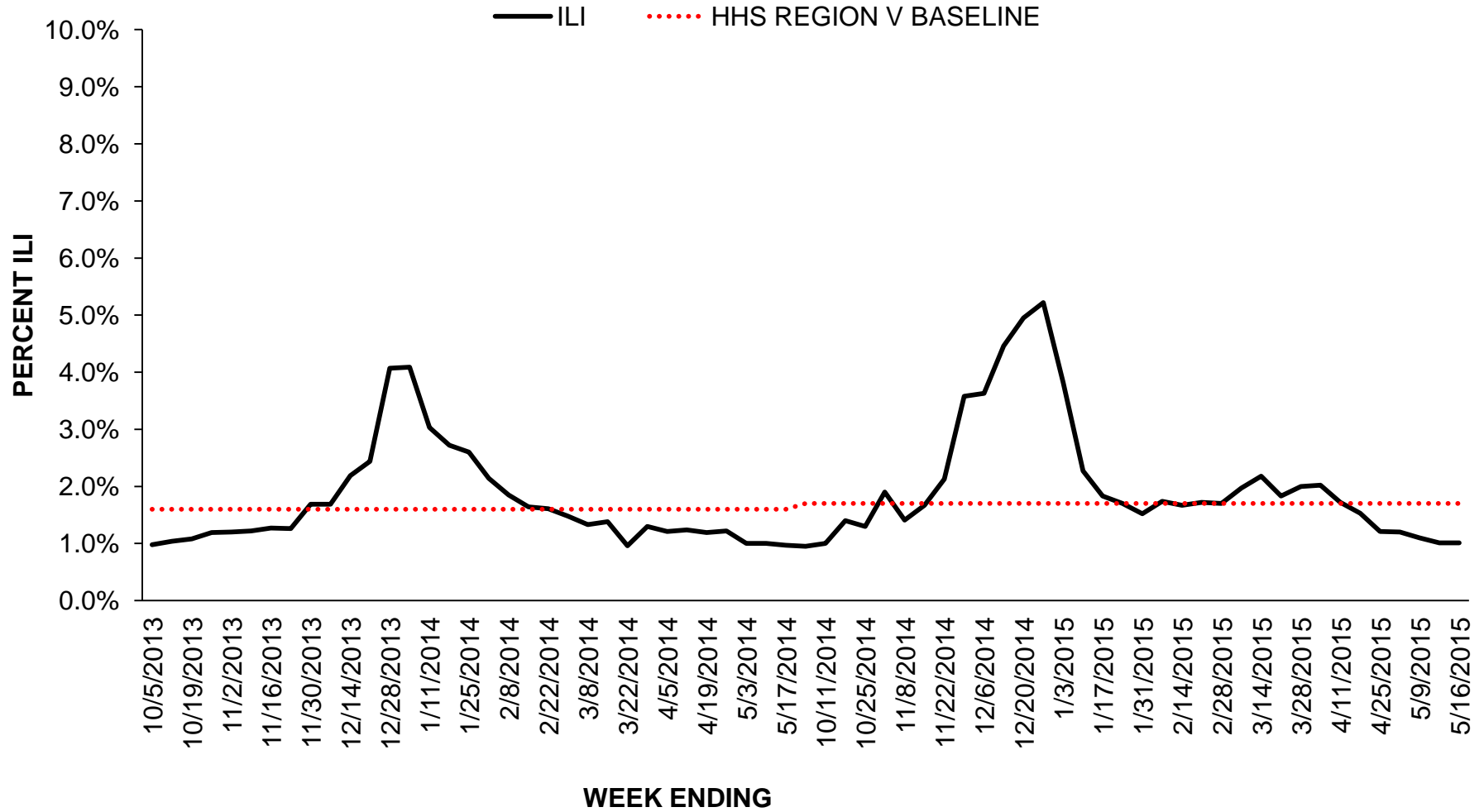
Local: Outbreaks of influenza or increases in ILI and recent laboratory confirmed influenza in a single region of the state.

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.

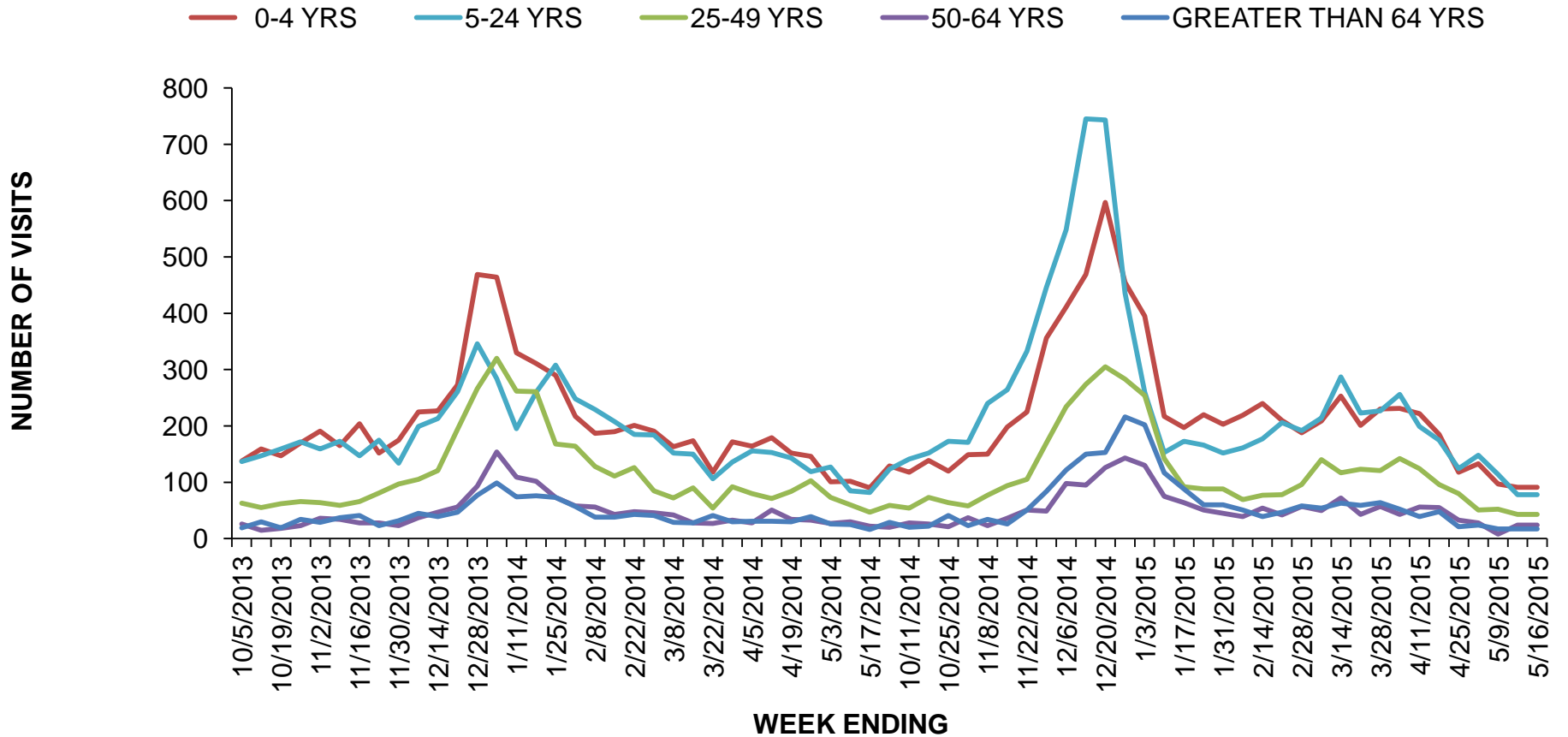
ILINet Provider Surveillance

Influenza Like Illness Outpatient Surveillance 2013-2015



ILI Visits by Age Group

2013-2015 INFLUENZA SEASON PROPORTION OF ILI OFFICE VISITS BY AGE GROUP

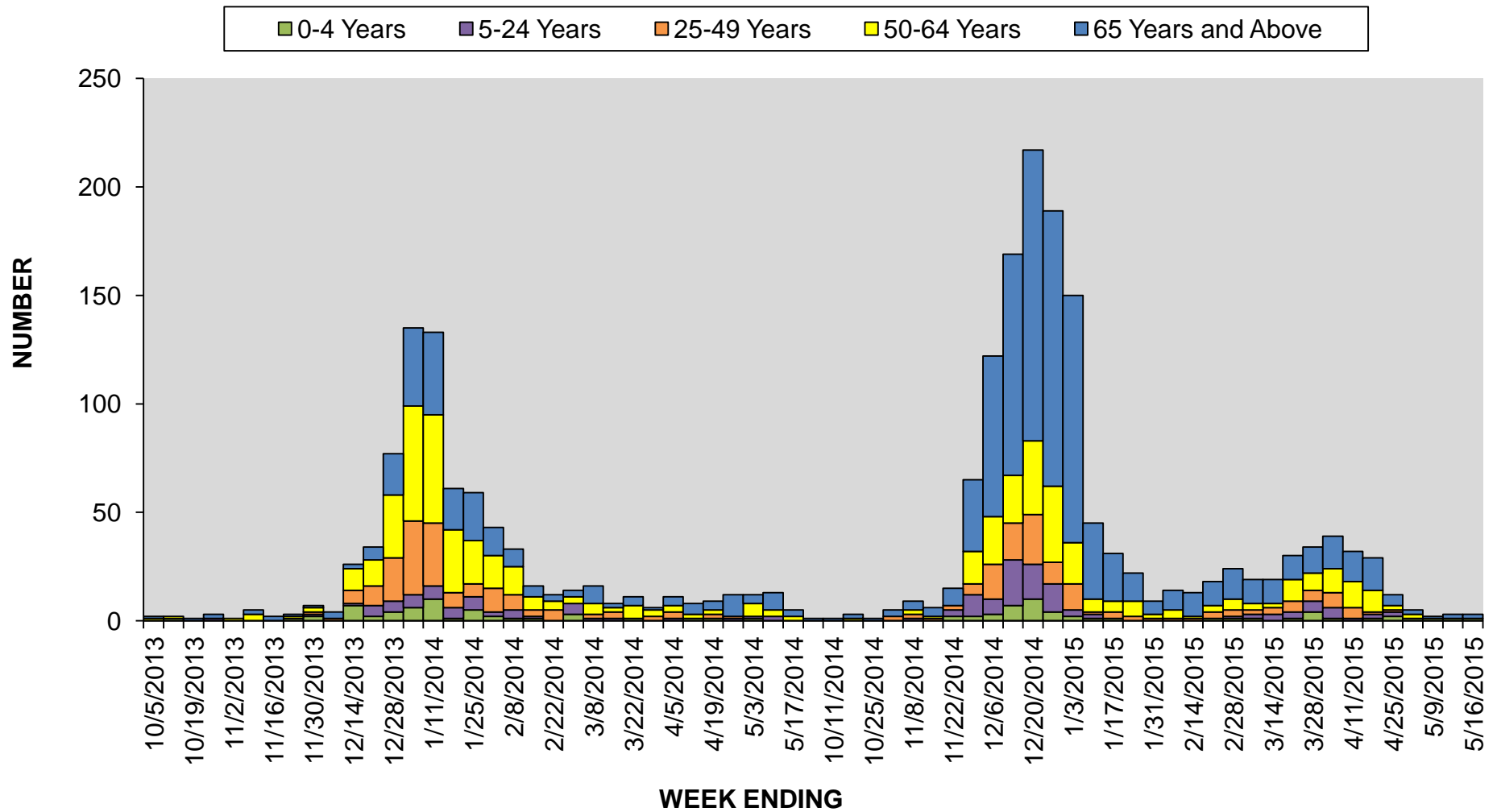


Influenza Intensive Care Unit (ICU) Admissions and Deaths

- There were **3** influenza related ICU admissions and **No** pediatric death for this reporting week. Preliminary data from previous weeks this season was updated for this report.

Year	Week No	Admissions	Pediatric Deaths
2014	40-50	397	1 (w50)
2014	51	217	0
2014	52	189	0
2014	53	150	0
2015	01	45	0
2015	02	31	0
2015	03	22	0
2015	04	9	0
2015	05	14	0
2015	06	13	0
2015	07	18	0
2015	08	24	0
2015	09	19	1
2015	10	19	1
2015	11	30	0
2015	12	34	0
2015	13	39	0
2015	14	32	0
2015	15	29	0
2015	16	12	0
2015	17	5	0
2015	18	2	0
2015	19	3	0
Total (Provisional) for 2014-15 Season		1353	3

Influenza Related ICU Admissions by Age Group, 2013-2015



Laboratory Surveillance

- For this reporting week there were **259** influenza specimens tested by WHO/NREVSS collaborating Illinois laboratories and **10** influenza specimens tested by Illinois Department of Public Health Laboratories for a **total of 269** specimens. **3** specimens tested positive for Influenza. Preliminary data from previous weeks this season was updated for this report.

Year	Week	A (H1)	2009(A)H1 N1	A (H3)	A (Unable to subtype)	A (Sub typing not performed)	B	Total # Tested	Total # Positive	% Positive
2014	40-03	0	2	634	0	1865	82	11835	2584	21.8%
2015	04	0	0	3	0	11	15	513	30	5.8%
2015	05	0	0	5	0	4	12	411	21	5.1%
2015	06	0	0	1	0	2	19	414	22	5.3%
2015	07	0	0	3	0	5	29	433	37	8.5%
2015	08	0	0	2	0	3	34	447	39	8.7%
2015	09	0	0	1	0	3	69	518	73	14.1%
2015	10	0	1	1	0	3	120	598	125	20.9%
2015	11	0	0	0	0	1	132	648	133	20.5%
2015	12	0	0	0	0	2	98	574	100	17.4%
2015	13	0	1	0	0	2	99	502	102	20.3%
2015	14	0	0	2	0	3	90	526	95	18.1%
2015	15	0	0	0	0	2	44	463	46	9.9%
2015	16	0	0	0	0	0	39	404	39	9.7%
2015	17	0	0	0	0	0	18	266	18	6.8%
2015	18	0	0	0	0	1	14	255	15	5.9%
2015	19	0	0	0	0	1	2	269	3	1.1%
Season Totals		0	4	652	0	1908	916	19076	3482	18.3%

Influenza Outbreaks Reported in Long-Term Facilities (LTC) and Correctional Facilities

There were **no** outbreaks reported for this reporting week.

Region	2014-2015 Influenza Season -Number of outbreaks (%)
Rockford (1)	22 (11.1)
Peoria (2),	32 (16.2)
Edwardsville (4),	39 (19.7)
Marion (5),	15 (7.6)
Champaign (6),	13 (6.6)
West Chicago (7)	55 (27.8)
Chicago/Cook (8)	22 (11.1)
Total	198

Viral Resistance:

Antiviral Resistance: Testing of influenza A(H1N1)pdm09, A(H3N2), and influenza B virus isolates for resistance to neuraminidase inhibitors (oseltamivir, zanamivir, and peramivir) is performed at CDC using a functional assay. Additional A(H1N1)pdm09 and A(H3N2) clinical samples are tested for mutations of the virus known to confer oseltamivir resistance. The data summarized below combine the results of both testing methods. These samples are routinely obtained for surveillance purposes rather than for diagnostic testing of patients suspected to be infected with antiviral-resistant virus.

High levels of resistance to the adamantanes (amantadine and rimantadine) persist among A(H1N1)pdm09 and A(H3N2) viruses (the adamantanes are not effective against influenza B viruses). Therefore, data from adamantane resistance testing are not presented below.

**Neuraminidase Inhibitor Resistance Testing Results
on Samples Collected Since October 1, 2014**

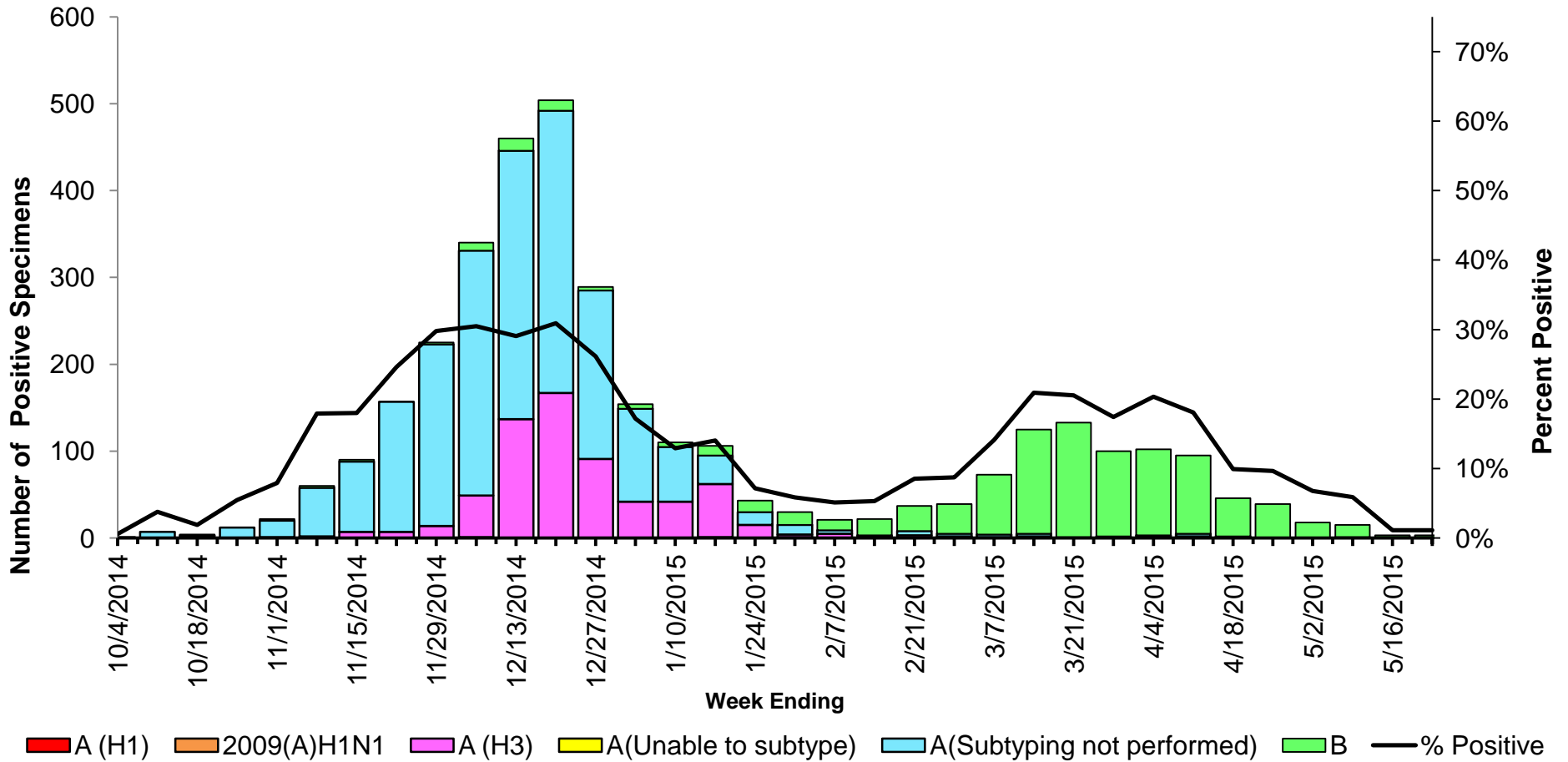
	Oseltamivir		Zanamivir		Peramivir	
	Virus Samples tested (n)	Resistant Viruses, Number (%)	Virus Samples tested (n)	Resistant Viruses, Number (%)	Virus Samples tested (n)	Resistant Viruses, Number (%)
Influenza A(H1N1)pmd09	59	1 (1.7)	53	0 (0.0)	59	1 (1.7)
Influenza A (H3N2)	3,187	0 (0.0)	3,187	0 (0.0)	1,678	0 (0.0)
Influenza B	809	0 (0.0)	809	0 (0.0)	809	0 (0.0)

In the United States, the vast majority of recently circulating influenza viruses have been susceptible to the neuraminidase inhibitor antiviral medications, oseltamivir, zanamivir, and peramivir; rare sporadic instances of oseltamivir-resistant A(H1N1)pdm09 and A(H3N2) viruses have been detected worldwide. Antiviral treatment is recommended as early as possible for patients with confirmed or suspected influenza who have severe, complicated, or progressive illness; who require hospitalization; or who are at high risk for serious influenza-related complications. Additional information on recommendations for treatment and chemoprophylaxis of influenza virus infection with antiviral agents is available at <http://www.cdc.gov/flu/antivirals/index.htm>.

Weekly Viral Subtype

Influenza Isolates from Illinois Reported by WHO/NREVSS Collaborating Laboratories, 2014-2015 Influenza Season.

Influenza Isolates from Illinois Reported by
WHO/NREVSS Collaborating Laboratories
2014-2015 Influenza Season



IDPH Infectious Diseases Regional Map



Resources

- Centers for Disease Control and Prevention Influenza Website:
 - <http://www.cdc.gov/flu/>
- Immunization Action Coalition Website: <http://immunize.org/>
- IDPH Seasonal Influenza Website: <http://www.idph.state.il.us/flu/surveillance.htm>
- National Respiratory and Enteric Virus Surveillance System (NREVSS), CDC website: <https://www.cdc.gov/nrevss/account/export.aspx>
- St Louis Children's Hospital Weekly Virus/Microbiology Update: <http://slchlptestguide.bjc.org/Default.aspx?url=63e0653d-fe31-466f-9228-d4de90fa7424>