



**WISCONSIN DEPARTMENT OF HEALTH SERVICES**  
**Division of Public Health**  
**Bureau of Communicable Diseases and Emergency Response**



**Respiratory virus surveillance report for the week ending December 28, 2013 week 13-52**

**AT-A-GLANCE**

- Respiratory viruses identified this week :  
Influenza A 2009/H1N1 and RSV were predominant
- Influenza-like illness (ILI) activity for this week
 

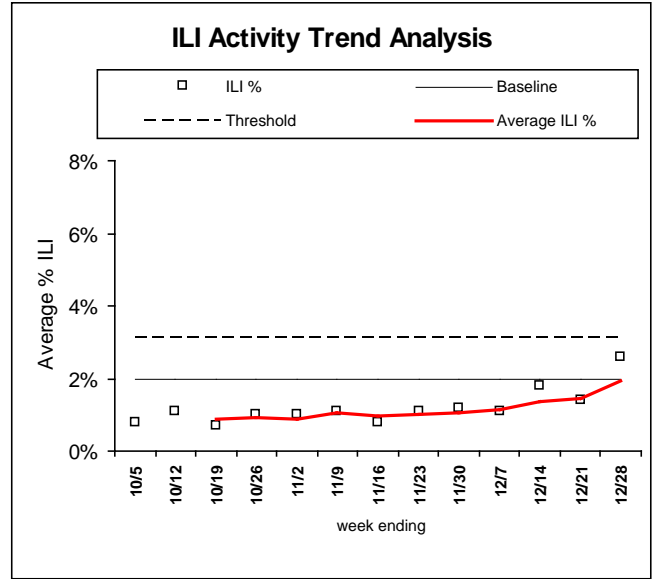
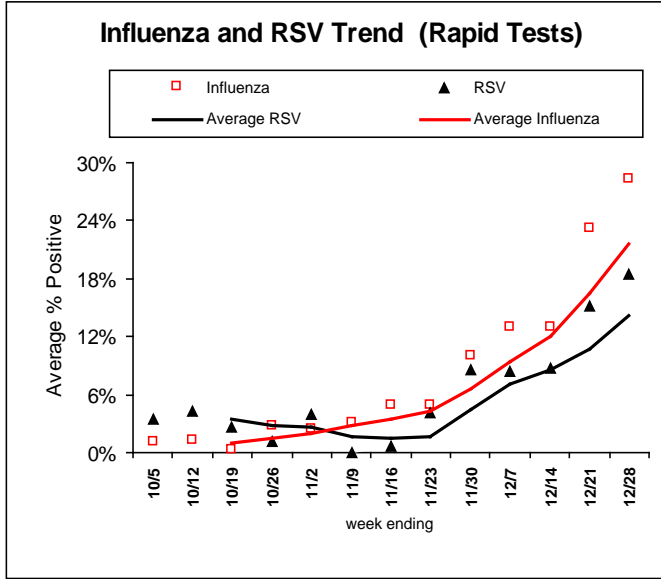
Wisconsin	Moderate
Wisconsin (CDC level)	Low
Northwestern Region	High
Northeastern Region	High
Southeastern Region	Moderate
Southern Region	Low
- ILI activity in Region V of the U.S. (WI, MN, IL, MI, OH, IN) is above baseline levels
- ILI activity in the U.S. is above baseline levels
- The Predictive Value Positive (PVP) for rapid influenza and RSV tests is: Continuing to increase (PVP is the probability of disease in a patient with a positive test result)
- The Predictive Value Negative (PVN) for rapid influenza and RSV tests is: Continuing to decrease (PVN is the probability of not having disease when the test result is negative)
- Influenza-associated pediatric deaths (October 5, 2013-present)

	<u>Week 13-52</u>	<u>Total to Date</u>
Wisconsin	0	0
United States	2	6

**WISCONSIN and REGIONAL SUMMARIES**  
(Trend analysis based on 3-week moving averages)

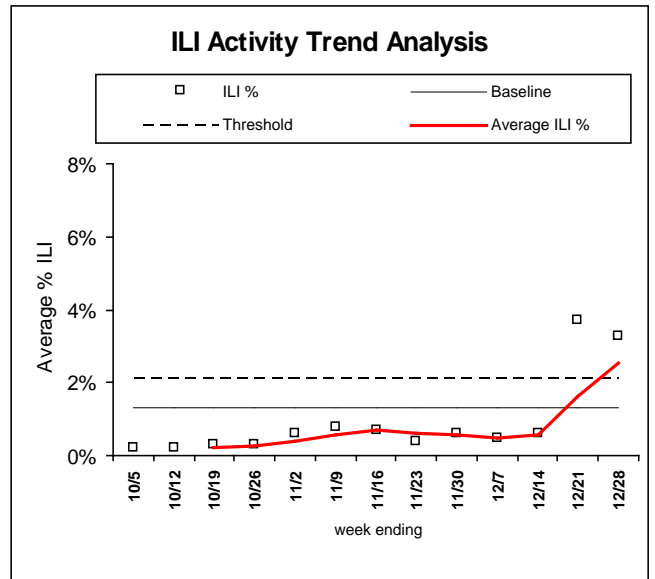
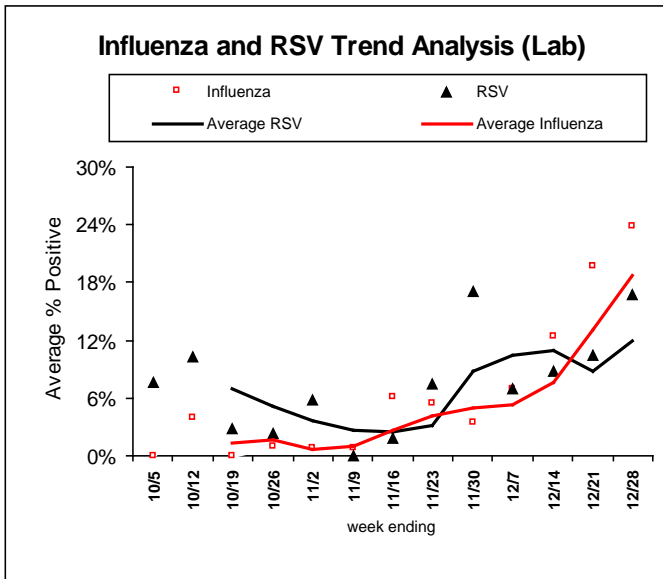
**Wisconsin (ILI activity is Moderate)**

INFLUENZA RAPID ANTIGEN TESTS					RSV RAPID ANTIGEN TESTS			INFLUENZA-LIKE ILLNESS		
Tested	Positive			% Positive	Tested	Positive	% Positive	ILI %	Baseline	Threshold
	Flu A	Flu B	Total							
1744	484	12	496	28.4%	243	45	18.5%	2.6%	2.0%	3.1%



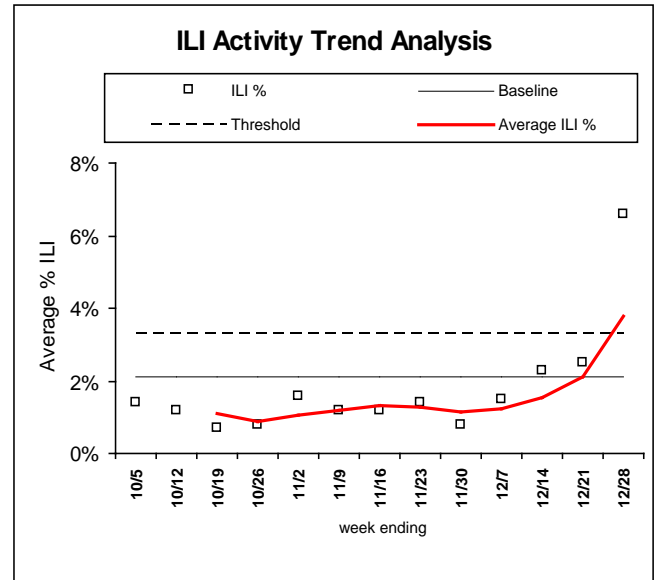
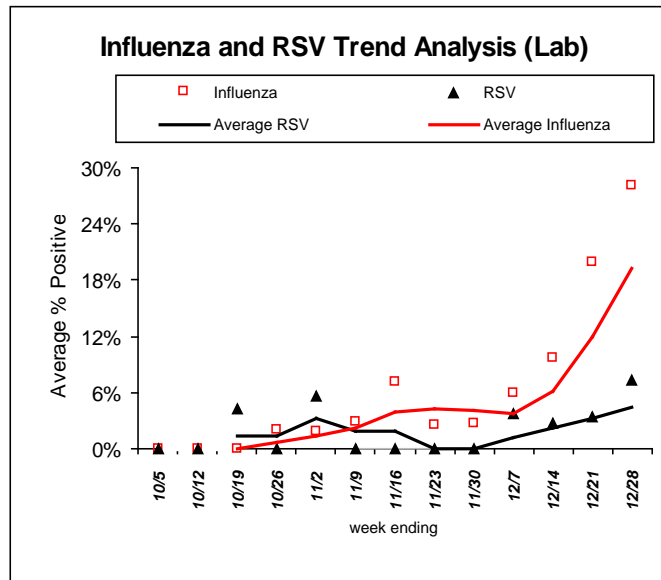
**Northwestern Region (ILI activity is High)**

INFLUENZA RAPID ANTIGEN TESTS					RSV RAPID ANTIGEN TESTS			INFLUENZA-LIKE ILLNESS		
Tested	Positive			% Positive	Tested	Positive	% Positive	ILI %	Baseline	Threshold
	Flu A	Flu B	Total							
586	135	0	135	23.8%	96	16	16.7%	3.3%	1.3%	2.1%



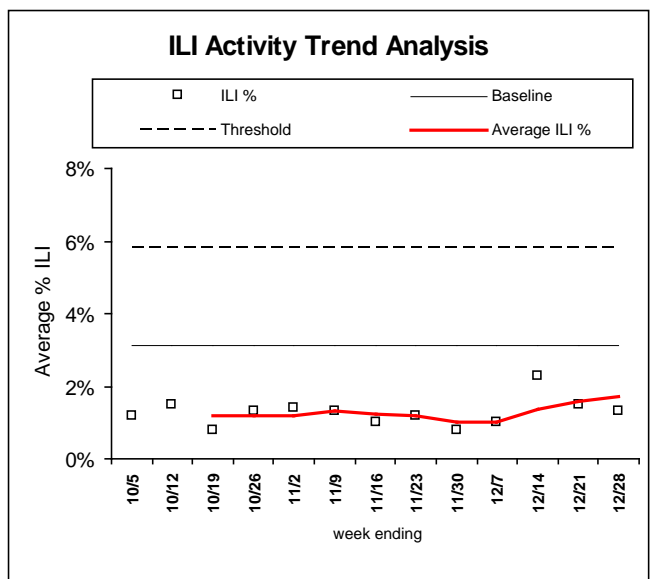
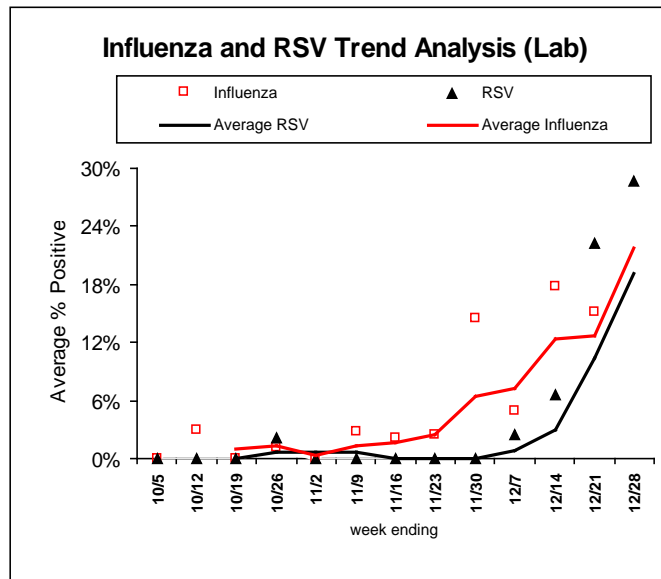
**Northeastern Region (ILI activity is High)**

INFLUENZA RAPID ANTIGEN TESTS				RSV RAPID ANTIGEN TESTS			INFLUENZA-LIKE ILLNESS			
Tested	Positive			% Positive	Tested	Positive	% Positive	ILI %	Baseline	Threshold
	Flu A	Flu B	Total							
167	45	2	47	28.1%	27	2	7.4%	6.6%	2.1%	3.3%



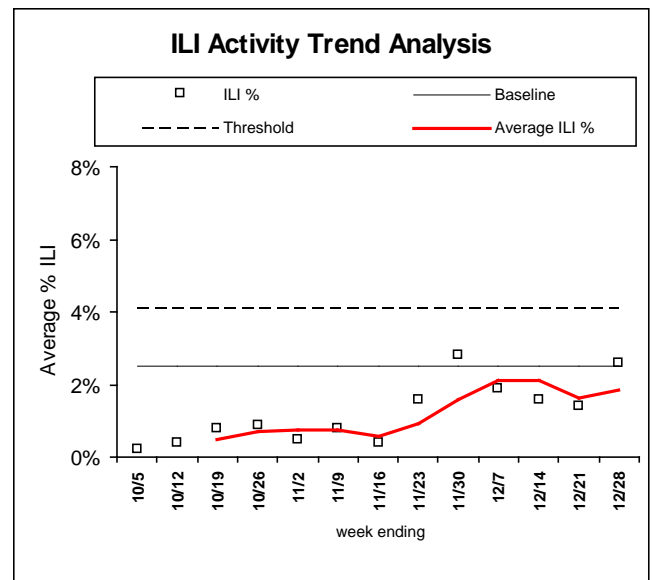
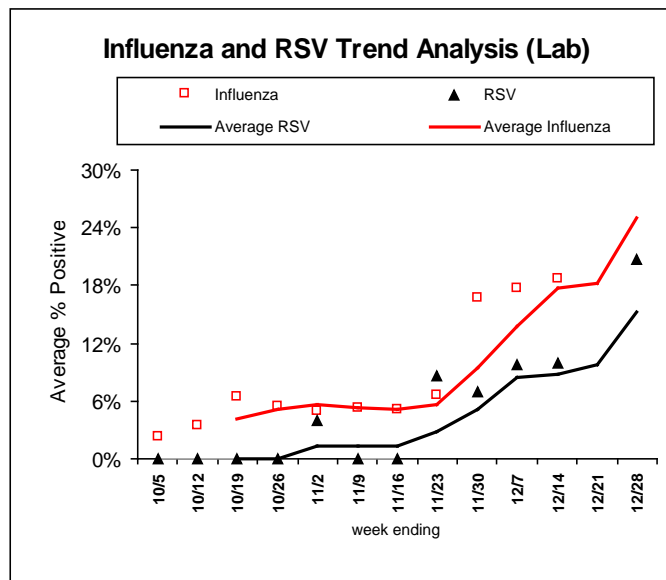
**Southern Region (ILI activity is Low)**

INFLUENZA RAPID ANTIGEN TESTS				RSV RAPID ANTIGEN TESTS			INFLUENZA-LIKE ILLNESS			
Tested	Positive			% Positive	Tested	Positive	% Positive	ILI %	Baseline	Threshold
	Flu A	Flu B	Total							
226	72	1	73	32.3%	28	8	28.6%	1.3%	3.7%	5.8%



**Southeastern Region (ILI activity is Moderate)**

INFLUENZA RAPID ANTIGEN TESTS				RSV RAPID ANTIGEN TESTS			INFLUENZA-LIKE ILLNESS			
Tested	Positive			% Positive	Tested	Positive	% Positive	ILI %	Baseline	Threshold
	Flu A	Flu B	Total							
765	231	9	240	31.4%	92	19	20.7%	2.6%	2.5%	4.1%

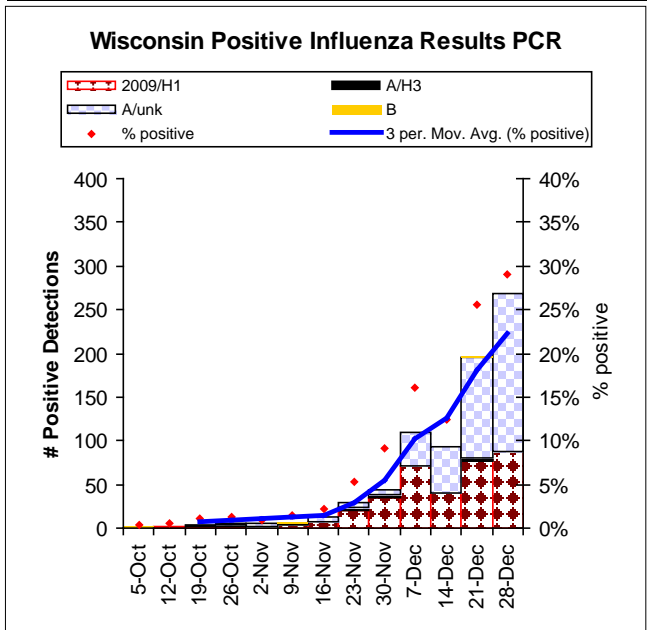
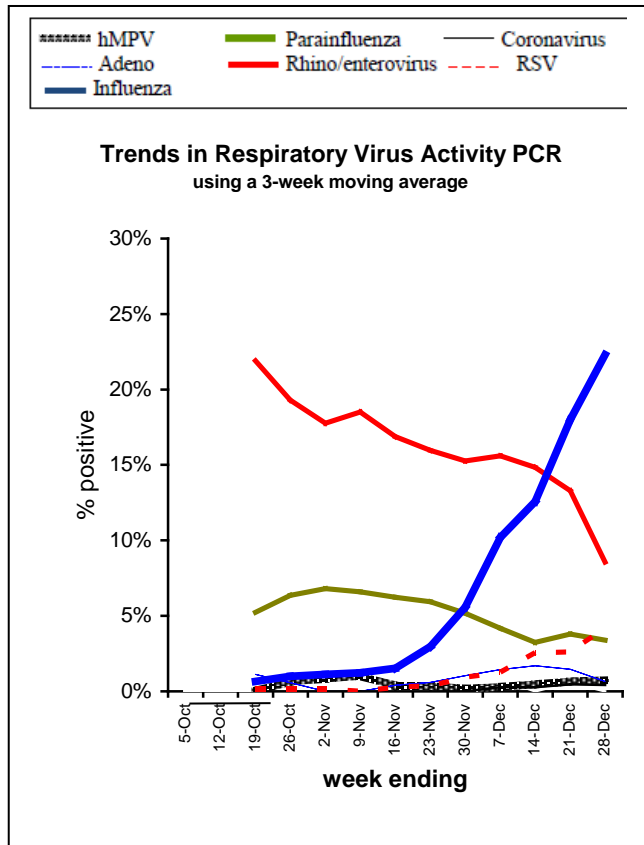


**For the 2013-14 influenza season, data from the Western Region and the Northern Region will be combined and referred to as the Northwestern Region. This change was made in response to the small number of providers who participate in our weekly surveillance in the Northern Region.**

**LABORATORY SURVEILLANCE FOR RESPIRATORY VIRUSES (PCR)**

Respiratory Agent	Tested	Positive	% Positive	Flu A 2009/H1N1	Flu A Seasonal H3	Flu A (Unk)	Flu B
Influenza	924	268	29.0%	87	0	181	0
Respiratory Agent	Tested	Positive	% Positive	P1	P2	P3	P4
Parainfluenza	211	5	2.4%	0	0	0	5
Respiratory Agent	Tested	Positive	% Positive	CoV-229E	CoV-OC43	CoV-NL63	CoV-HKU1
Coronavirus	152	1	0.7%	0	1	0	0

Respiratory Agent	Tested	Positive	% Positive
RSV	341	22	6.5%
Human Metapneumovirus	184	1	0.6%
Rhino-entero	181	8	4.5%
Adenovirus	162	0	0%



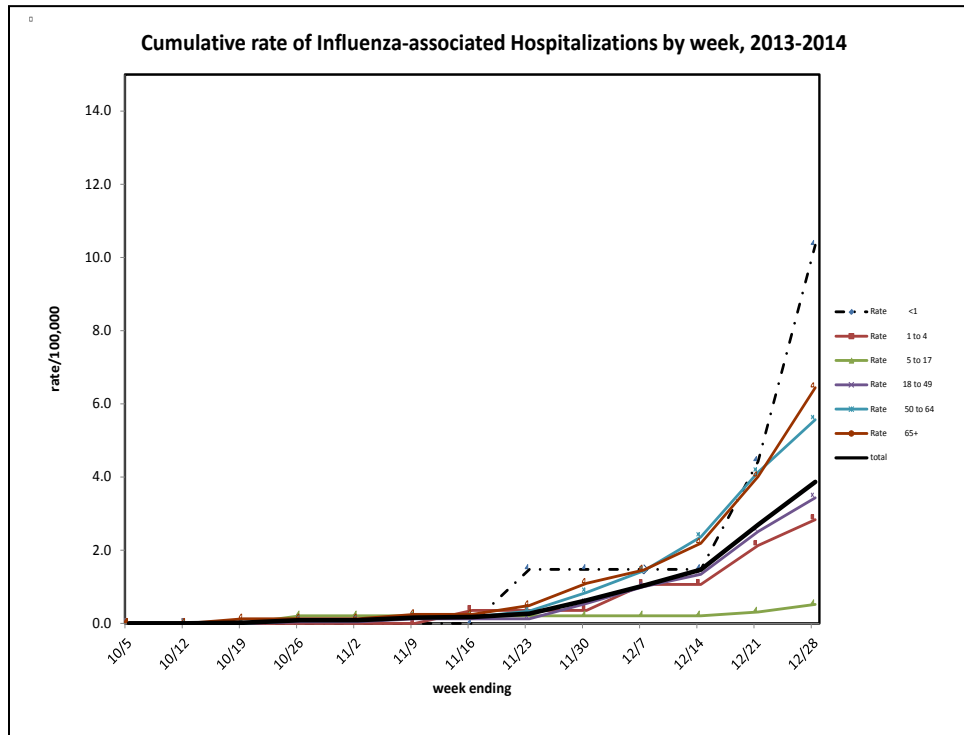
**Cumulative number of positive influenza tests  
By subtype, October 5, 2013 to present**

	2009 A/H1	Seasonal A/H3	A/Unknown	B	Total
<b>Total Number positive</b>	345	18	410	8	781
<b>% of Total number positive</b>	44%	2%	53%	2%	100%
	<b>Total Influenza A %</b>		<b>Total Influenza B %</b>		
	99%		1%		

## Influenza-associated Hospitalizations, October 5, 2013 to January 2, 2014

New hospitalizations since last report of 12/30/13: **170**

Age Group	Total Number Reported (2013-14)	Influenza Subtypes				Not reported	Admitted to ICU	Required Mechanical Ventilation
		2009 A/H1	A/H3	A/Unknown or undetermined	B			
< 1 year	10	1	0	9	0	0	0	0
1 to 4	14	2	0	7	2	3	1	0
5 to 17	8	0	1	5	2	0	3	0
18 to 49	143	18	0	104	5	16	30 (21%)	12 (8%)
50 to 64	122	15	0	92	1	14	25 (21%)	9 (7%)
65 and over	100	8	0	74	11	7	9	4
<b>Total</b>	<b>397</b>	<b>44</b>	<b>1</b>	<b>291</b>	<b>21</b>	<b>40</b>	<b>68 (17%)</b>	<b>25 (6%)</b>



**Incidence/100,000\***

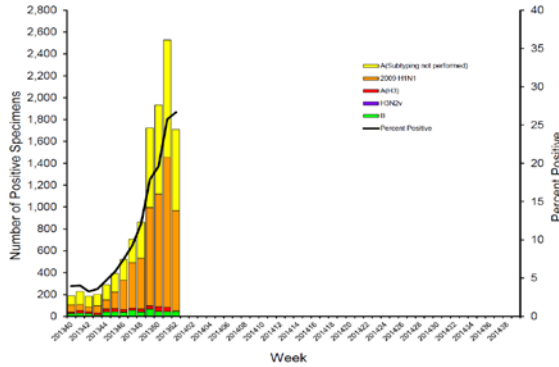
Age group	Wisconsin	National
65 +	6.4	9.4
50-64	5.6	8.4
18-49	3.4	4.5
5-17	0.5	2.1
1-4	2.8	No Data
0-4	4.3	10.9
<1	10.3	No Data
<b>All ages</b>	<b>3.9</b>	<b>4.3</b>

- While the incidence of National data is higher than that of Wisconsin, please keep in mind that many states, especially in the Southeastern United States, are much farther into their influenza season than Wisconsin

## NATIONAL INFLUENZA SURVEILLANCE

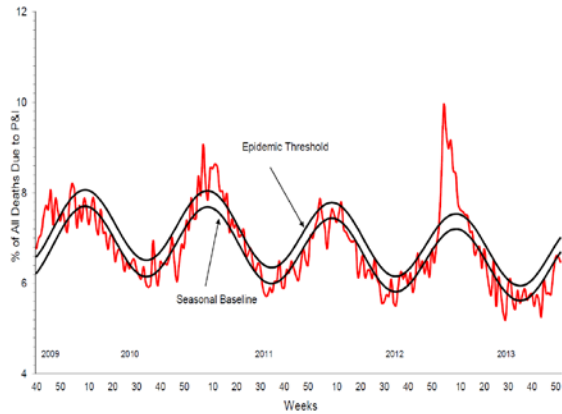
	Week 52
No. of specimens tested	6,419
No. of positive specimens (%)	1,711 (26.7%)
<b>Positive specimens by type/subtype</b>	
Influenza A	1,667 (97.4%)
2009 H1N1	915 (54.9%)
H3	7 (0.4%)
Subtyping not performed	745 (44.7%)
Influenza B	44 (2.6%)

Influenza Positive Tests Reported to CDC by U.S. WHO/NREVSS Collaborating Laboratories, National Summary, 2013-14 Season



**Pneumonia and Influenza (P&I) Mortality Surveillance:** During week 52, 6.5% of all deaths reported through the 122 Cities Mortality Reporting System were due to P&I. This percentage was below the epidemic threshold of 7.0% for week 52.

Pneumonia and Influenza Mortality for 122 U.S. Cities  
Week ending December 28, 2013

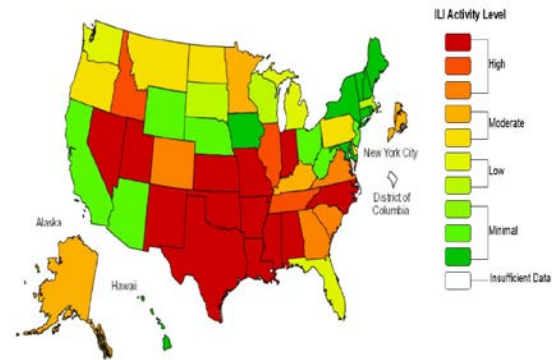


**Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists\***  
Week ending December 28, 2013 - Week 52



\* This map indicates geographic spread & does not measure the severity of influenza activity

**Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet**  
2013-14 Influenza Season Week 52 ending Dec 28, 2013



\*This map uses the proportion of outpatient visits to health care providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.

**Antigenic Characterization\*:** CDC has antigenically characterized 452 influenza viruses [398 2009 H1N1 viruses, 46 influenza A (H3N2) viruses, and 8 influenza B viruses] collected by U.S. laboratories since October 1, 2013 by hemagglutination inhibition (HI).

- **2009 H1N1 [398]:** All 398 2009 H1N1 viruses tested were characterized as A/California/7/2009-like, the influenza A (H1N1) component of the 2013-2014 Northern Hemisphere influenza vaccine.
- **Influenza A (H3N2) [46]:** All 46 influenza A (H3N2) viruses tested have been characterized as A/Texas/50/2012-like, the influenza A (H3N2) component of the 2013-2014 Northern Hemisphere influenza vaccine.
- **Influenza B [8]:** Three (38%) of the eight influenza B viruses tested belong to B/Yamagata/16/89-lineage and the remaining five (62%) influenza B viruses tested belong to B/Victoria/02/87 lineage.
- **Yamagata Lineage [3]:** Three influenza B/Yamagata-lineage viruses were characterized as B/Massachusetts/2/1012-like, which is included as an influenza B component of the 2013-2014 Northern Hemisphere trivalent and quadrivalent influenza vaccines.
- **Victoria Lineage [5]:** Five influenza B/Victoria-lineage viruses were characterized as B/Brisbane/60/2008-like, which is included as an influenza B component of the 2013-2014 Northern Hemisphere quadrivalent influenza vaccine.

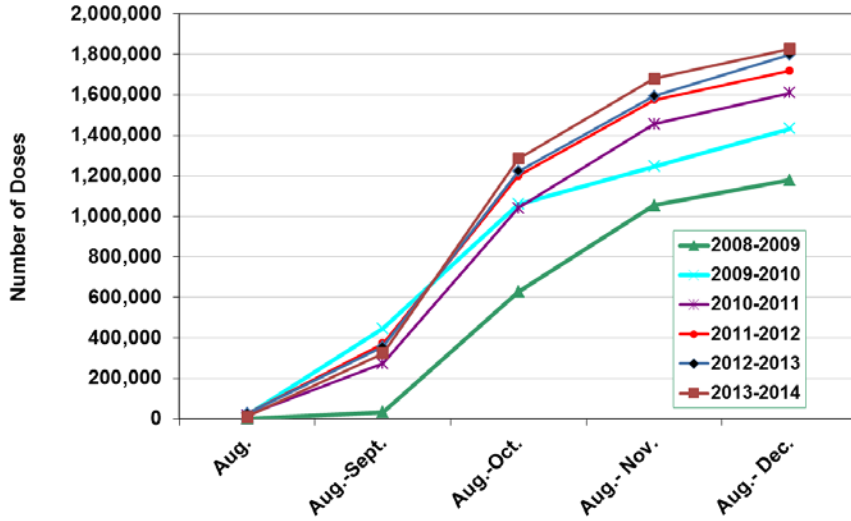
**Neuraminidase Inhibitor Resistance Testing Results**  
on Samples Collected Since October 1, 2013

	Oseltamivir		Zanamivir	
	Virus Samples tested (n)	Resistant Viruses, Number (%)	Virus Samples tested (n)	Resistant Viruses, Number (%)
Influenza A (H3N2)	66	0 (0.0)	66	0 (0.0)
Influenza B	15	0 (0.0)	15	0 (0.0)
2009 H1N1	910*	10 (1.1)	482	0 (0.0)

## Seasonal Influenza Vaccination in Wisconsin Based on Doses Reported to the Wisconsin Immunization Registry (WIR) January 3, 2014

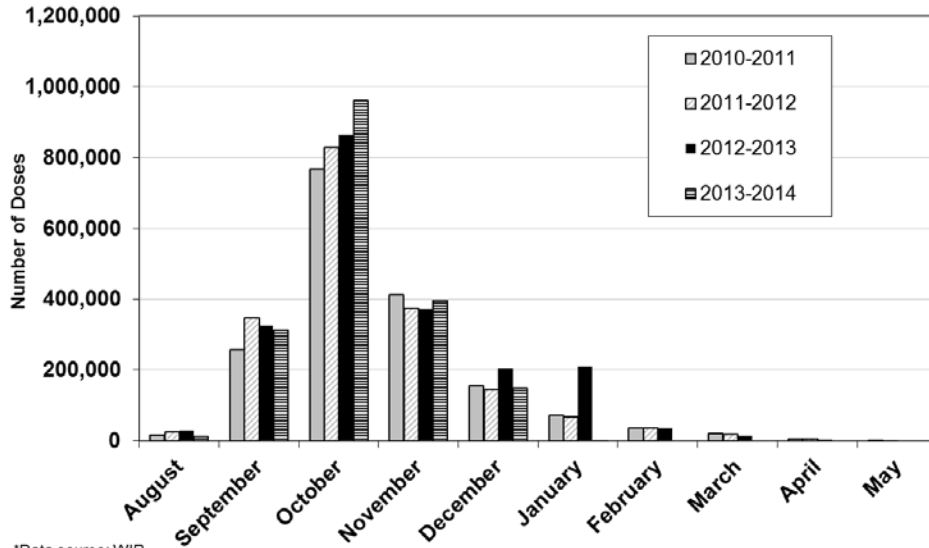
### Data for 2013-2014 Season Reported for 8.1.13.-1.2.14

Cumulative Doses of Seasonal Influenza Administered and Reported to the WIR,  
2008-2013 Influenza Seasons



Data source: WIR  
2013-2014 data 8.1.13 through 01.02.2014

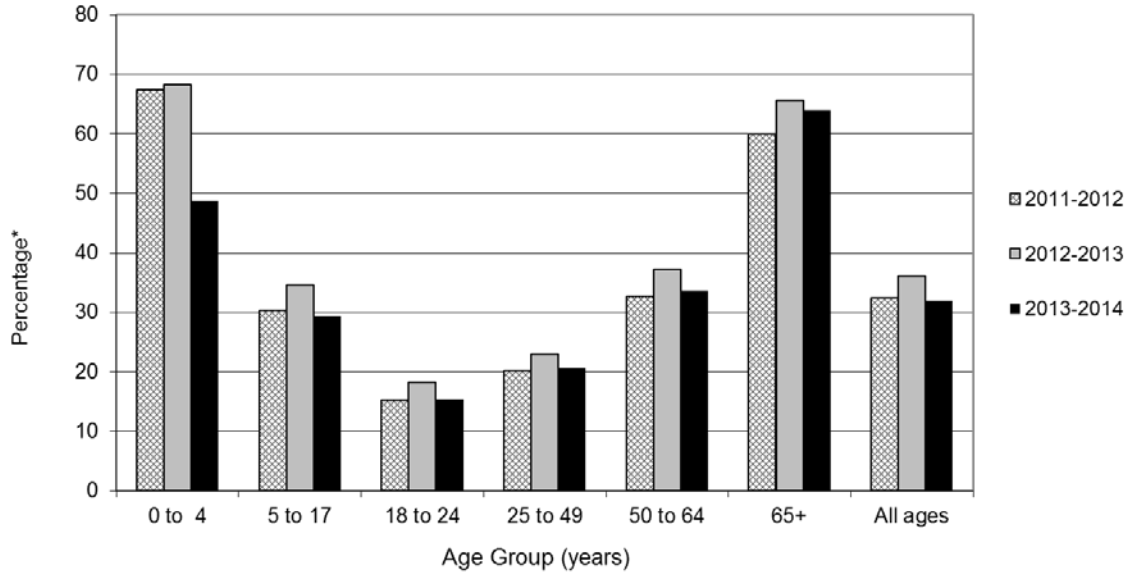
Number of Doses of Seasonal Influenza Vaccine Administered and Reported to  
the WIR, by Month for Influenza Seasons 2010-2014



\*Data source: WIR,  
2013-2014 data through 01.02.2014

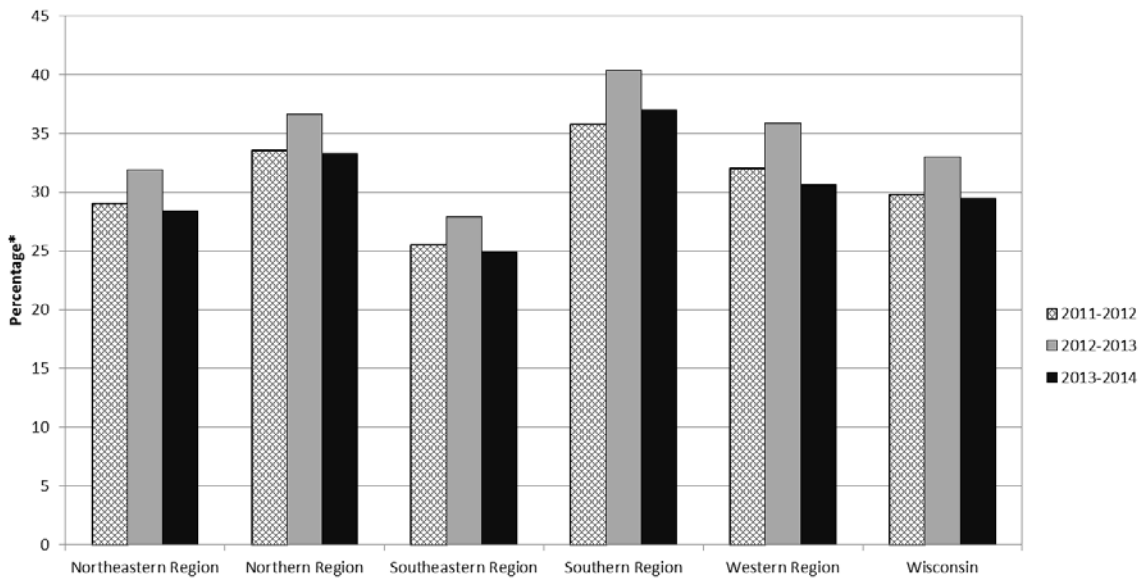


**Rates of Influenza Vaccination in Wisconsin by Age Group, 2011-2014 Influenza Seasons, Based on Doses Reported to the Wisconsin Immunization Registry (WIR)**



\* Numerator: Number of persons recorded in the WIR as having received at least one dose of seasonal influenza vaccine by age group. For 2011-2012 season, receipt of vaccine between 8/1/11 and 7/31/12, assessed 12/2/2013. For 2012-2013 season, doses administered between 8/1/12 to 7/31/13, assessed 12/2/2013. For 2013-2014, doses administered between 8/1/13 to 1/2/14, assessed 1/2/14. Denominator source: 2010 Wisconsin Interactive Statistics on Health (WISH) population estimates, by age group.

**Rates of Influenza Vaccination in Wisconsin by Region, 2011-2014 Influenza Seasons, Based on Doses Reported to the Wisconsin Immunization Registry (WIR)**



\* Numerator: Number of persons recorded in the WIR as having received at least one dose of seasonal influenza vaccine by region. For 2011-2012 season, receipt of vaccine between 8/1/11 and 7/31/12, assessed 11/27/2013. For 2012-2013 season, doses administered between 8/1/12 to 7/31/13, assessed 11/27/2013. For 2013-2014, doses administered between 8/1/13 to 01/02/2014, assessed 01/02/2014. Denominator source: 2012 Wisconsin Interactive Statistics on Health (WISH) population estimates, by region.

- These graphs include only doses of seasonal influenza vaccine administered and reported to the Wisconsin Immunization Registry (WIR).

- Data for 2013-2014 season is incomplete because of the expected lag between the vaccine administration date and the date reported to the WIR, which may be as short as one day or as long as several months, depending on the submitter. Therefore, the current season's data will be adjusted as additional data is received.
- While use of the WIR is not mandatory, the WIR receives data from a variety of sources, including health care providers, health maintenance organizations, local health departments and tribal health centers/clinics, schools and pharmacies.
- For additional information regarding the immunization data, please contact Ashley Petit, epidemiologist, with the Wisconsin Immunization Program at (608) 266-7797.