



Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report

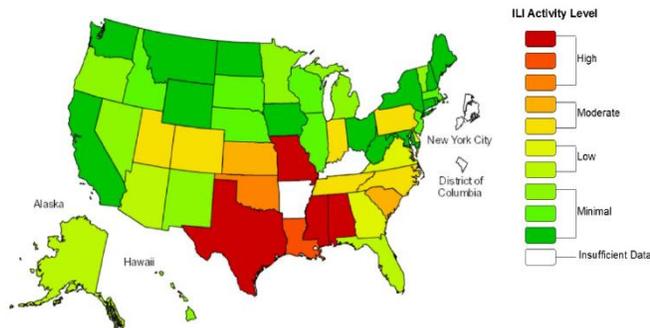
For the week ending December 21, 2013, Week 51

Quick Stats for this reporting week

Iowa activity level ¹	Regional
Percent of outpatient visits for ILI ²	0.4 % (baseline 1.8%)
Percent of influenza rapid test positive	17.2% (91/530)
Percent of RSV rapid tests positive	9.4% (9/96)
Percent school absence due to illness*	2.5%
Number of schools with ≥10% absence due to illness	6
Influenza-associated hospitalizations**	27/3,834 inpatients surveyed
Influenza-associated pediatric mortality***	0

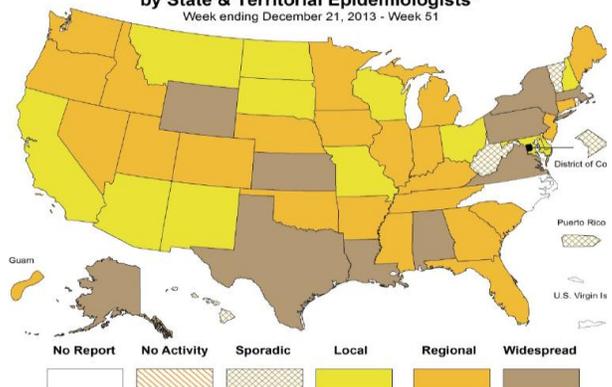
*Percent school absence due to illness are reported through a weekly survey of Iowa sentinel schools
 **Hospitalizations due to influenza are voluntarily reported through a weekly survey of Iowa sentinel hospitals
 ***CDC asks states to report any pediatric death (<18 years old) associated with influenza
 Note: All data in this report are provisional and may change as additional reports are received

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2013-14 Influenza Season Week 51 ending Dec 21, 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.

Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*
Week ending December 21, 2013 - Week 51



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

Iowa statewide activity summary

Influenza activity in Iowa is being upgraded from local to regional due to recent increases in activity from the central and east region of the state. For this reporting period, the State Hygienic Laboratory (SHL) confirmed 48 cases of seasonal influenza A, including 28 cases of 2009 H1N1 and subtyping is pending for 20 cases. So far this season, a total of 150 cases of influenza have been confirmed with the 2009 H1N1 virus predominating. The proportion of outpatient visits due to influenza-like illness (ILI) increased from the previous week, but it remains well below the regional baseline. There were 27 influenza-associated hospitalizations reported from sentinel hospitals, up from the 11 hospitalizations reported in the previous week. There were also six schools that reported 10 percent or greater absenteeism due to illness (three were due to non-respiratory illness). In addition, four cases of adenovirus, two cases of parainfluenza virus type 1, two cases of parainfluenza virus type 3, 24 cases of rhinovirus/enterovirus, four cases of respiratory syncytial virus (RSV), and one case of human metapneumovirus were reported to IDPH this reporting week.

National activity summary - www.cdc.gov

Synopsis: During week 51 (December 15-21, 2013), influenza activity continued to increase in the United States.

¹ **No Activity:** No laboratory-confirmed cases of influenza and no reported increase in the number of cases of influenza-like illness (ILI²).

Sporadic: Isolated laboratory-confirmed influenza cases or a single influenza outbreak has been reported, but there is no increase in cases of ILI².

Local: Outbreaks of influenza or increases in ILI cases 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 of the state.

² ILI: Influenza-like Illness is defined as a fever of ≥100° F as well as cough and/or sore throat.

- **Viral Surveillance:** Of 6,813 specimens tested and reported by U.S. World Health Organization and National Respiratory and Enteric Virus Surveillance System collaborating laboratories during week 51, 1,639 (24.1 percent) were positive for influenza.
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza was below the epidemic threshold.
- **Influenza-associated Pediatric Deaths:** One influenza-associated pediatric death that occurred during the 2012-2013 season was reported.
- **Influenza-associated Hospitalizations:** A cumulative rate for the season of 4.3 laboratory confirmed influenza-associated hospitalizations per 100,000 population was reported.
- **Outpatient Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) was 3.0 percent, above the national baseline of 2.0 percent. Eight regions reported ILI at or above region-specific baseline levels. Six states experienced high ILI activity; eight states experienced moderate ILI activity; six states experienced low ILI activity; 28 states experienced minimal ILI activity, and the District of Columbia, New York City, and two states had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in 10 states was reported as widespread; Guam and 23 states reported regional influenza activity; 12 states reported local influenza activity; the District of Columbia, Puerto Rico, and four states reported sporadic influenza activity, and the U.S. Virgin Islands and one state did not report.

International activity summary - www.who.int

In North America the influenza season has started. The predominant subtype of influenza viruses detected was influenza A(H1N1)pdm09. For the rest of the northern hemisphere as well as in the southern hemisphere influenza activity remained low. In countries of tropical areas variable influenza activity was reported. Based on FluNet reporting (*as of 19 December 2013, 07:15 UTC*), during weeks 48 to 49 (24 November 2013 to 7 December 2013), National Influenza Centres and other national influenza laboratories from 89 countries, areas or territories reported influenza surveillance data. The WHO GISRS laboratories tested more than 42,360 specimens. 3,304 were positive for influenza viruses, of which 2,816 (85.3 percent) were typed as seasonal influenza A and 487 (14.7 percent) as influenza B. Of the sub-typed seasonal influenza A viruses, 1,166 (66.4 percent) were influenza A(H1N1)pdm09 and 591 (33.6%) were influenza A(H3N2). Of the characterized B viruses, 39 (70.9 percent) belonged to the B-Yamagata lineage and 16 (29.1%) to the B-Victoria lineage

Laboratory surveillance program – influenza and other respiratory viruses

The State Hygienic Laboratory (SHL) is the primary lab for influenza testing and reporting in Iowa. SHL reports the number of tests performed and the type and strain of positive tests to the influenza surveillance network several times every week. In addition, SHL surveys clinical and reference labs for the number of rapid-antigen tests performed and number positive weekly. This report also includes the positive non-influenza virus tests reported from SHL, the Dunes Medical Laboratories at Mercy Medical Center in Sioux City, and Iowa Methodist Medical Center in Des Moines.

Specimens tested by the State Hygienic Laboratory

	Current week	Cumulative since 9/1/13
Flu A	48 (76%)	148 (35%)
A (2009 H1N1)	28 (44%)	115 (27%)
A (H3)	0 (0%)	8 (2%)
A (H3N2) variant	0 (0%)	1 (<1%)
Subtype pending	20 (32%)	24 (6%)
Flu B	0 (0%)	2 (<1%)
Equivocal	0 (0%)	0 (0%)
Indeterminate	0 (0%)	0 (0%)
Negative	15 (24%)	273 (65%)
Total	63	423

Note that only cases of Iowa residents are included.

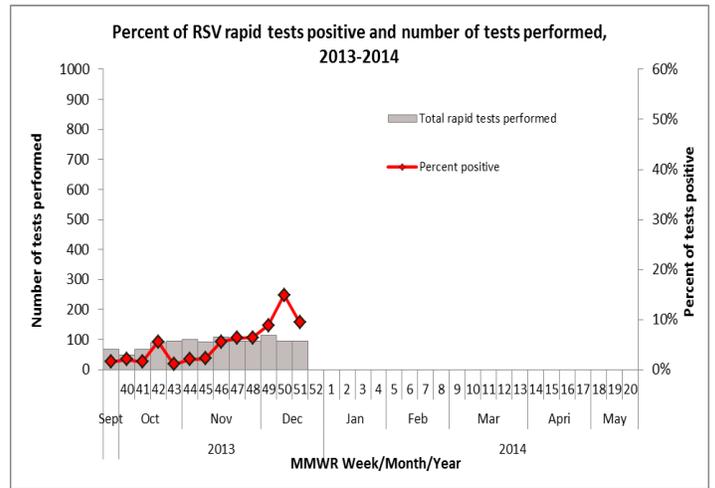
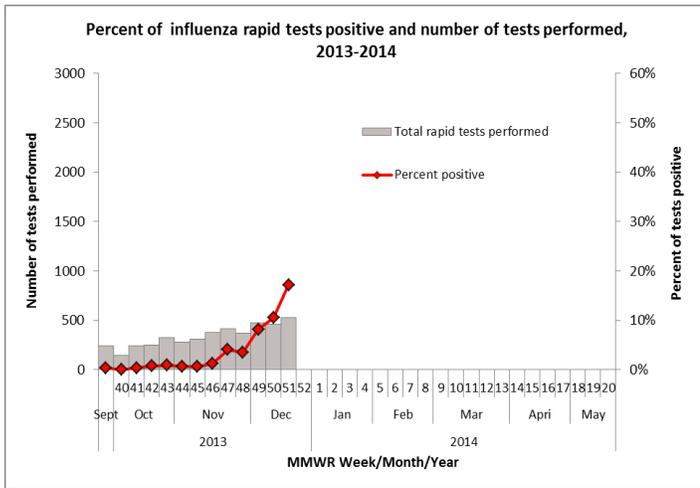
Age group	Flu A (2009 H1N1)	Flu A (H3)	Flu A (H3N2) Variant	Flu A (subtype pending)	Flu B
0-4	20 (17%)	4 (50%)	* (0%)	2 (8%)	1 (50%)
5-17	23 (20%)	1 (13%)	* (0%)	7 (29%)	1 (50%)
18-24	19 (17%)	0 (0%)	0 (0%)	5 (21%)	0 (0%)
25-49	33 (29%)	2 (25%)	0 (0%)	7 (29%)	0 (0%)
50-64	12 (10%)	1 (13%)	0 (0%)	1 (4%)	0 (0%)
>64	8 (7%)	0 (0%)	0 (0%)	2 (8%)	0 (0%)
Total	115	8	1	24	2

* Counts of three or less are sometimes suppressed to protect confidentiality.

Note that counts may not add up to the total due to missing age information

Table 3. Number of positive results for non-influenza respiratory virus isolated by Mercy Dunes in Sioux City and Iowa Methodist Medical Center

	<i>Current week</i>	<i>Cumulative since 9/1/13</i>
Adenovirus	4	41
Parainfluenza Virus Type 1	2	36
Parainfluenza Virus Type 2	0	1
Parainfluenza Virus Type 3	2	10
Parainfluenza Virus Type 4	0	15
Rhinovirus/Enterovirus	24	239
Respiratory syncytial virus (RSV)	4	9
human metapneumovirus (hMPV)	1	3



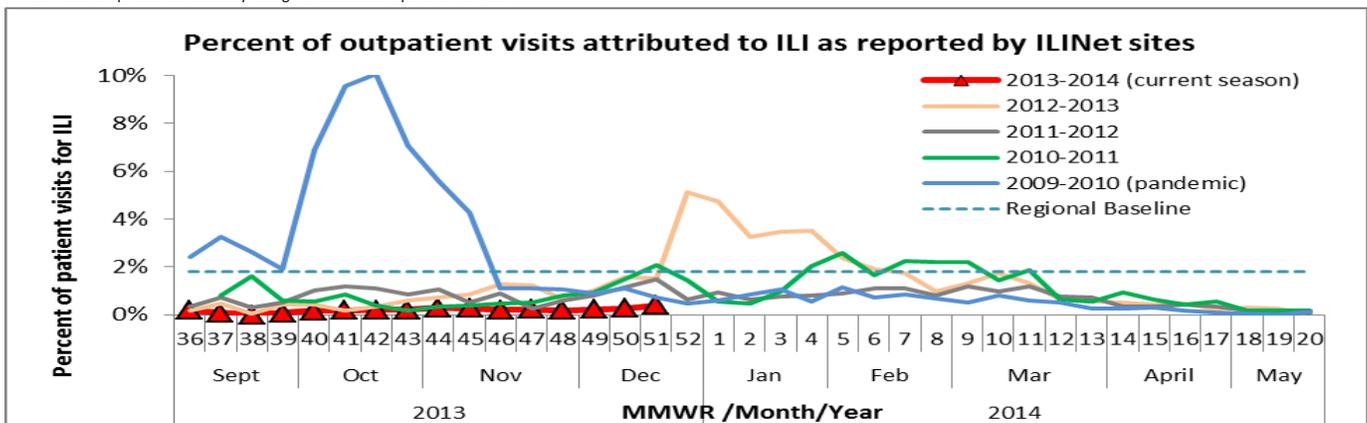
Outpatient health care provider surveillance program (ILINet)

Outpatient health care providers who participate in the ILINet (a national influenza surveillance program) report the number of patients seen with influenza-like illness and the total number of patient visits each week. This system is a key part of Iowa’s influenza surveillance. Iowa health care providers interested in joining this important surveillance program should contact Yumei Sun at 515-281-7134 or yumei.sun@idph.iowa.gov for more information.

Table 4. Outpatient visits for influenza-like illness (ILI) in the past three weeks*

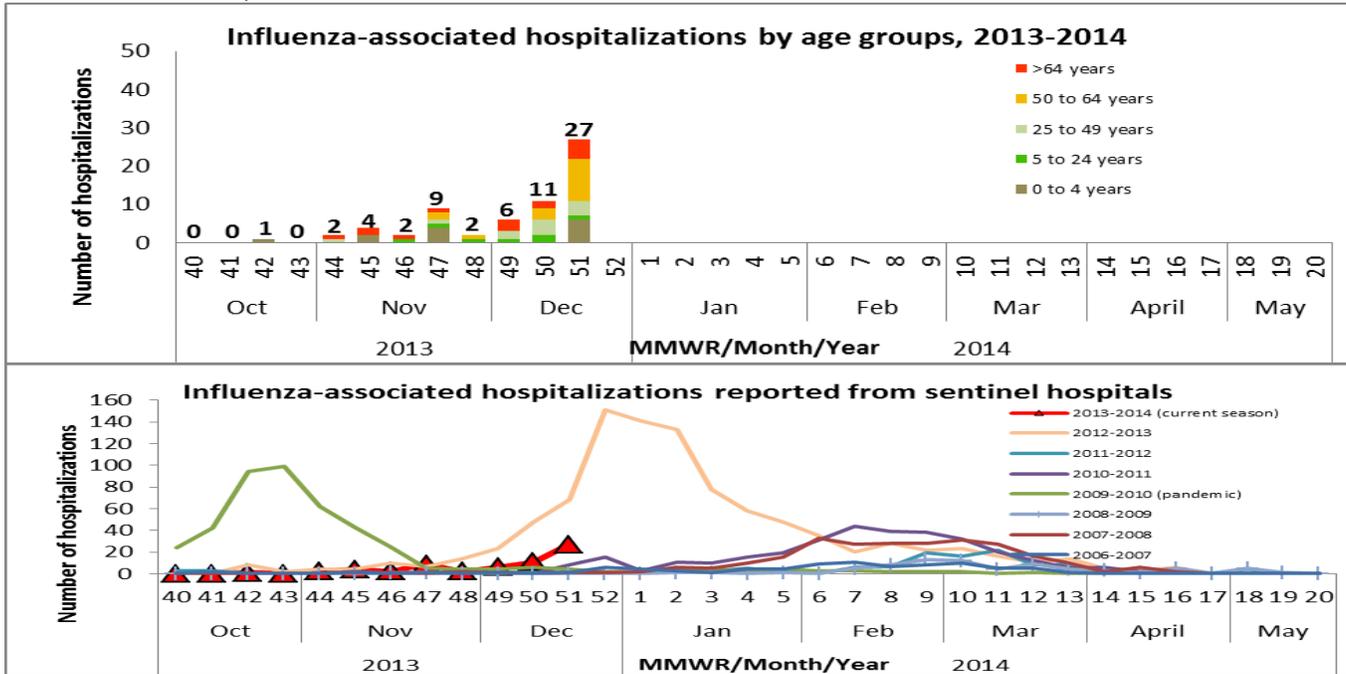
Week	% ILI	Total ILI	Age 0-4	Age 5-24	Age 25-49	Age 50-64	Age > 64
Week 49, ending Dec 07, 2013	0.23	82	20	45	10	3	4
Week 50, ending Dec 14, 2013	0.27	88	20	42	16	7	3
Week 51, ending Dec 21, 2013	0.39	121	26	58	23	19	4

*ILI counts are provisional and may change as additional reports are received



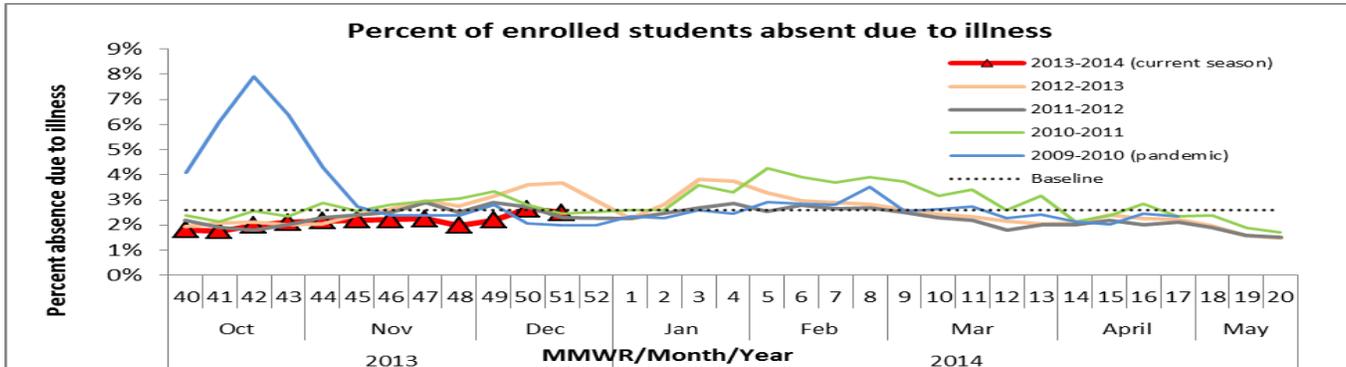
Influenza-associated hospitalizations

Sentinel hospitals that participate in IISN voluntarily track and report the number of influenza-associated hospitalizations and the total number of inpatients each week.



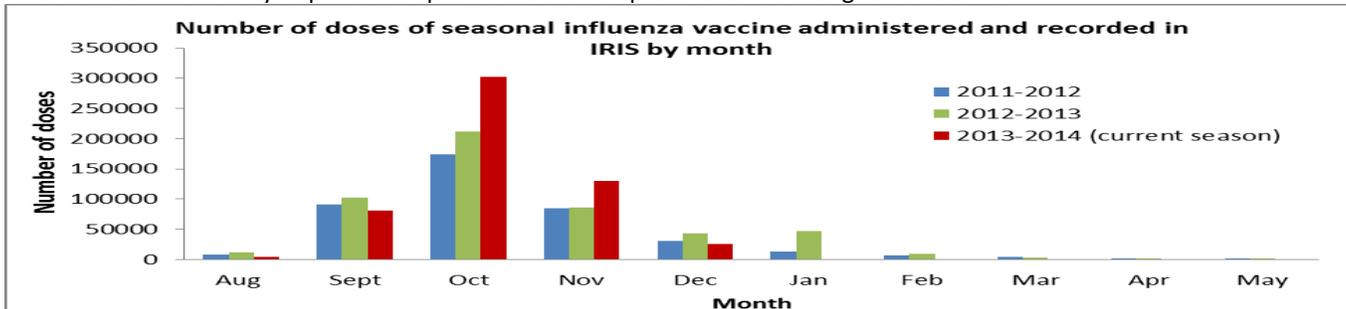
School surveillance program

Sentinel schools that participate in IISN voluntarily track and report absence due to all illness (including non-influenza illnesses) and the total enrollment each week.



Seasonal influenza vaccination

Seasonal influenza vaccination in Iowa is based on doses reported to the Iowa Immunization Registry Information System³ (IRIS). IRIS is a confidential, computerized, population-based system that tracks immunizations for children, adolescents and adults who are seen in a variety of public and private healthcare provider sites throughout the state.



Note: The data for the 2013-2014 season is only up to the current week and there is a lag between the vaccine administration date and the date reported to the IRIS. Therefore, the current season's data will be adjusted as additional data is received.

³ For information on the immunization data, contact Kim Tichy, IRIS coordinator, at 515-281-4288 or Kimberly.Tichy@idph.iowa.gov

Regional activity (Data from sentinel surveillance system surveillance sites, except all schools with $\geq 10\%$ absence due to illness must report.)

Region 1 (Central)	
Influenza-associated hospitalizations	5/1175
Percent of influenza rapid test positive	21.8% (26/119)
Percent of RSV rapid tests positive	0.0% (0/19)
Schools with $\geq 10\%$ absence due to illness	3

Region 2 (North Central)	
Influenza-associated hospitalizations	0/421
Percent of influenza rapid test positive	25.0% (2/8)
Percent of RSV rapid tests positive	0.0% (0/1)
Schools with $\geq 10\%$ absence due to illness	0

Region 3 (Northwest)	
Influenza-associated hospitalizations	0/193
Percent of influenza rapid test positive	9.6% (5/52)
Percent of RSV rapid tests positive	8.7% (2/23)
Schools with $\geq 10\%$ absence due to illness	0

Region 4 (Southwest)	
Influenza-associated hospitalizations	0/25
Percent of influenza rapid test positive	28.3% (13/46)
Percent of RSV rapid tests positive	16.7% (1/6)
Schools with $\geq 10\%$ absence due to illness	0

Region 5 (Southeast)	
Influenza-associated hospitalizations	0/31
Percent of influenza rapid test positive	20.0% (8/40)
Percent of RSV rapid tests positive	14.3% (1/7)
Schools with $\geq 10\%$ absence due to illness	0

Region 6 (East Central)	
Influenza-associated hospitalizations	22/1989
Percent of influenza rapid test positive	14.0% (37/265)
Percent of RSV rapid tests positive	12.5% (5/40)
Schools with $\geq 10\%$ absence due to illness	3

Iowa map with regions and in red the number of schools that have $\geq 10\%$ absence due to illness

