



Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report

For the week ending February 15, 2014, Week 7

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	10.9% (109/1005)
Percent of RSV rapid tests positive	33.1% (81/245)
Percent school absence due to illness*	2.4
Number of schools with ≥10% absence due to illness	2
Influenza-associated hospitalizations**	24/6,832 inpatients surveyed
Influenza-associated pediatric mortality***	0

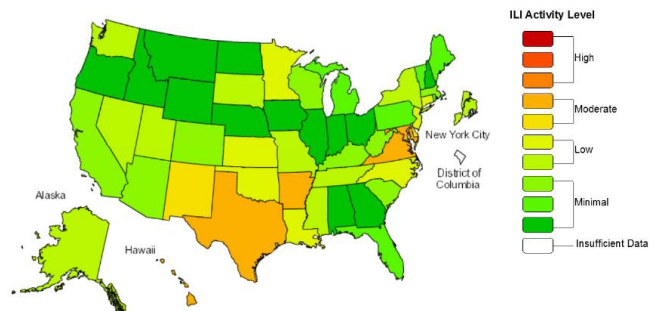
*Percent school absence due to illness are reported through a weekly survey of Iowa sentinel schools

**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

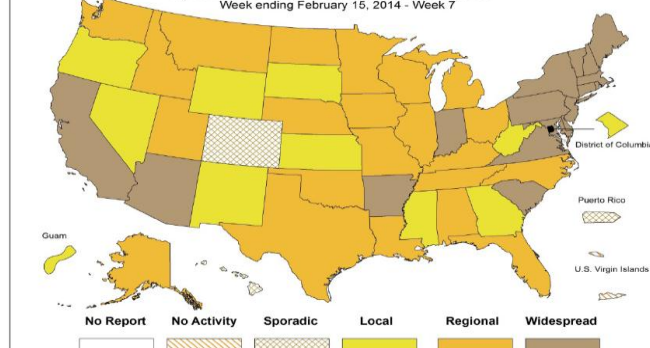
Note: All data in this report are provisional and may change as additional reports are received

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2013-14 Influenza Season Week 7 ending Feb 15, 2014



*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 February 15, 2014 - Week 7



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

Iowa statewide activity summary

Overall influenza activity in Iowa remains regional. For this reporting period, the State Hygienic Laboratory (SHL) confirmed 13 cases of seasonal influenza, including nine cases of 2009 H1N1, three cases of A subtyping pending, and one case of influenza B. So far this season, a total of 598 cases of influenza have been confirmed with the 2009 H1N1 virus predominating. The proportion of outpatient visits due to influenza-like illness (ILI) was 0.37% and remains below the regional baseline. There were 24 influenza-associated hospitalizations reported from sentinel hospitals, bringing the total number of influenza-associated hospitalizations to 398. There were two schools that reported 10 percent or greater absenteeism due to illness. In addition, nine cases of adenovirus, one case of parainfluenza 1, two cases of parainfluenza 4, 13 cases of rhinovirus/enterovirus, 47 cases of respiratory syncytial virus (RSV), and five cases of human metapneumovirus were reported to IDPH this reporting week.

National activity summary - www.cdc.gov

Synopsis: During week 7 (February 9-15, 2014), influenza activity decreased, but remained elevated 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 6,887 specimens tested and reported during week 7 by U.S. World Health Organization and National Respiratory and Enteric Virus Surveillance System collaborating laboratories, 958 (13.9 percent) were positive for influenza.
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza was above the epidemic threshold.
- **Influenza-associated Pediatric Deaths:** Two influenza-associated pediatric deaths were reported.
- **Influenza-associated Hospitalizations:** A season-cumulative rate of 26.1 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 2.5 percent, above the national baseline of 2.0 percent. Nine of 10 regions reported ILI at or above region-specific baseline levels. Seven states experienced moderate ILI activity; 16 states and New York City experienced low ILI activity; 27 states experienced minimal ILI activity, and the District of Columbia had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in 17 states was reported as widespread; 22 states reported regional influenza activity; the District of Columbia, Guam, and nine states reported local influenza activity; Puerto Rico and two states reported sporadic influenza activity, and the U.S. Virgin Islands reported no influenza activity.

International activity summary - www.who.int

In North America, influenza activity decreased in the United States of America and Canada, and increased in Mexico with A(H1N1)pdm09 virus predominating. In Europe influenza activity continued to increase, particularly in the south with both influenza A viruses circulating. In eastern Asia influenza activity remained high with influenza A(H1N1)pdm09 predominating, with increases observed in some countries. In western Asia influenza activity was increasing with mainly A(H3N2), while Egypt reported high activity of influenza A(H1N1)pdm09. In countries of tropical areas variable influenza activity was reported. In the southern hemisphere influenza activity remained low. Based on FluNet reporting (as of 6 February 2014, 12:30 UTC), during weeks 3 to 4 (12 January 2014 to 25 January 2014), National Influenza Centres and other national influenza laboratories from 97 countries, areas or territories reported data. The WHO GISRS laboratories tested more than 68 458 specimens. 19 547 were positive for influenza viruses, of which 17 992 (92%) were typed as influenza A and 1555 (8%) as influenza B. Of the sub-typed influenza A viruses, 8257 (79.75%) were influenza A(H1N1)pdm09, 2096 (20.24%) were influenza A(H3N2) and 1 (0.01%) was influenza A(H5N1). Of the characterized B viruses, 200 (69.7%) belong to the B-Yamagata lineage and 87 (30.3%) 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	12 (29%)	594 (51%)
A (2009 H1N1)	9 (21%)	544 (47%)
A (H3)	0 (0%)	18 (1%)
A (H3N2) variant	0 (0%)	1 (<1%)
Subtype pending	3 (7%)	31 (3%)
Flu B	1 (2%)	4 (<1%)
Equivocal	0 (0%)	5 (<1%)
Indeterminate	0 (0%)	6 (<1%)
Negative	29 (69%)	550 (47%)
Total	42	1,159

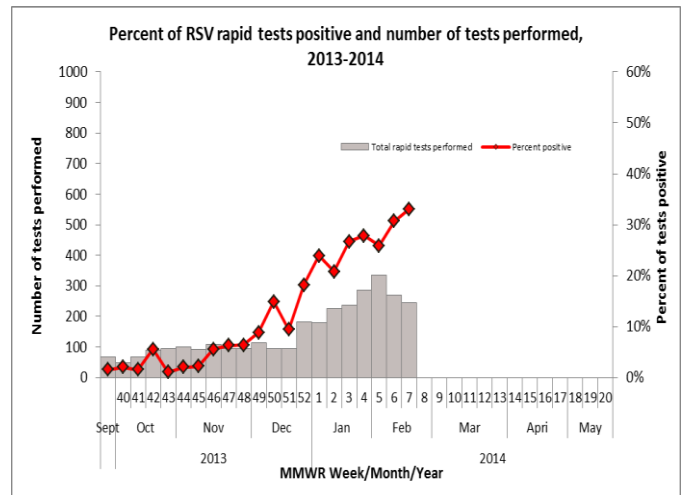
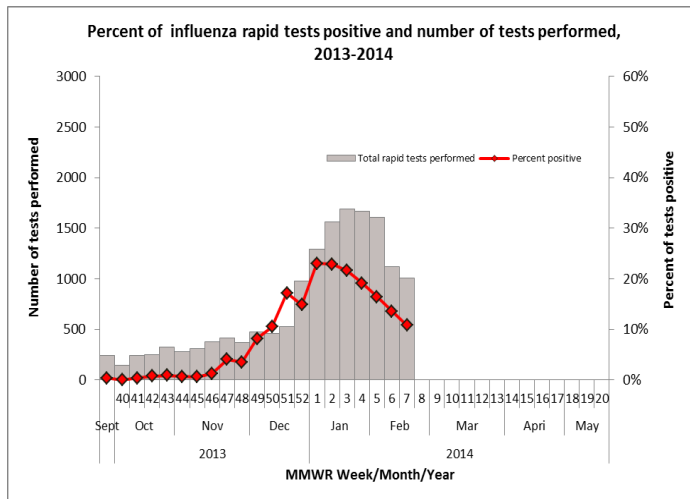
Note that only cases of Iowa residents are included.

Age group	Flu A (2009 H1N1)	Flu A (H3)	Flu A (H3N2) Variant	Flu A (subtype pending)	Flu B
0-4	85 (16%)	5 (28%)	* (0%)	3 (10%)	1 (25%)
5-17	73 (14%)	1 (6%)	* (0%)	3 (10%)	1 (25%)
18-24	69 (13%)	3 (17%)	0 (0%)	6 (19%)	0 (0%)
25-49	164 (30%)	3 (17%)	0 (0%)	6 (19%)	2 (50%)
50-64	86 (16%)	1 (6%)	0 (0%)	7 (21%)	0 (0%)
>64	67 (12%)	5 (28%)	0 (0%)	8 (22%)	0 (0%)
Total	544	18	1	31	4

* 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	9	100
Parainfluenza Virus Type 1	1	43
Parainfluenza Virus Type 2	0	1
Parainfluenza Virus Type 3	0	14
Parainfluenza Virus Type 4	2	19
Rhinovirus/Enterovirus	13	359
Respiratory syncytial virus (RSV)	47	199
human metapneumovirus (hMPV)	5	22



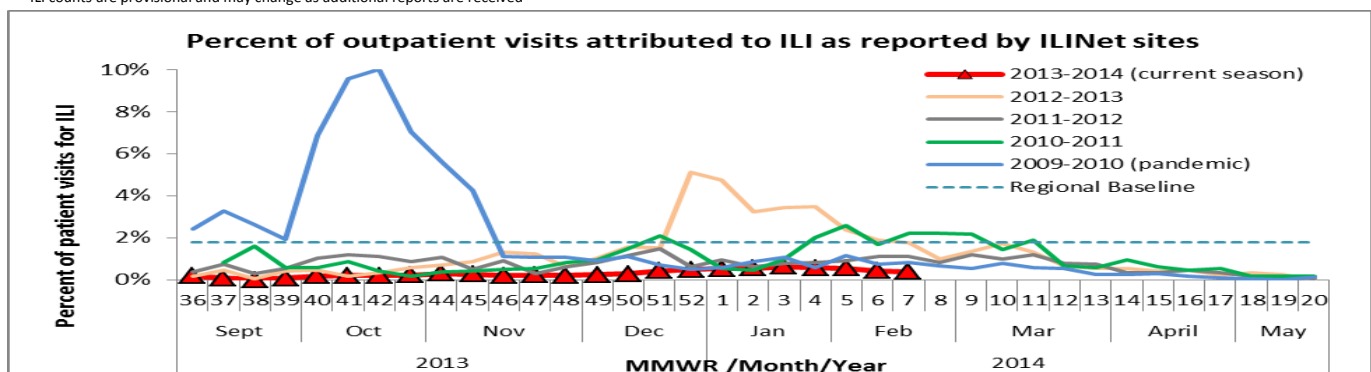
Outpatient health care provider surveillance program (ILINet)

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*

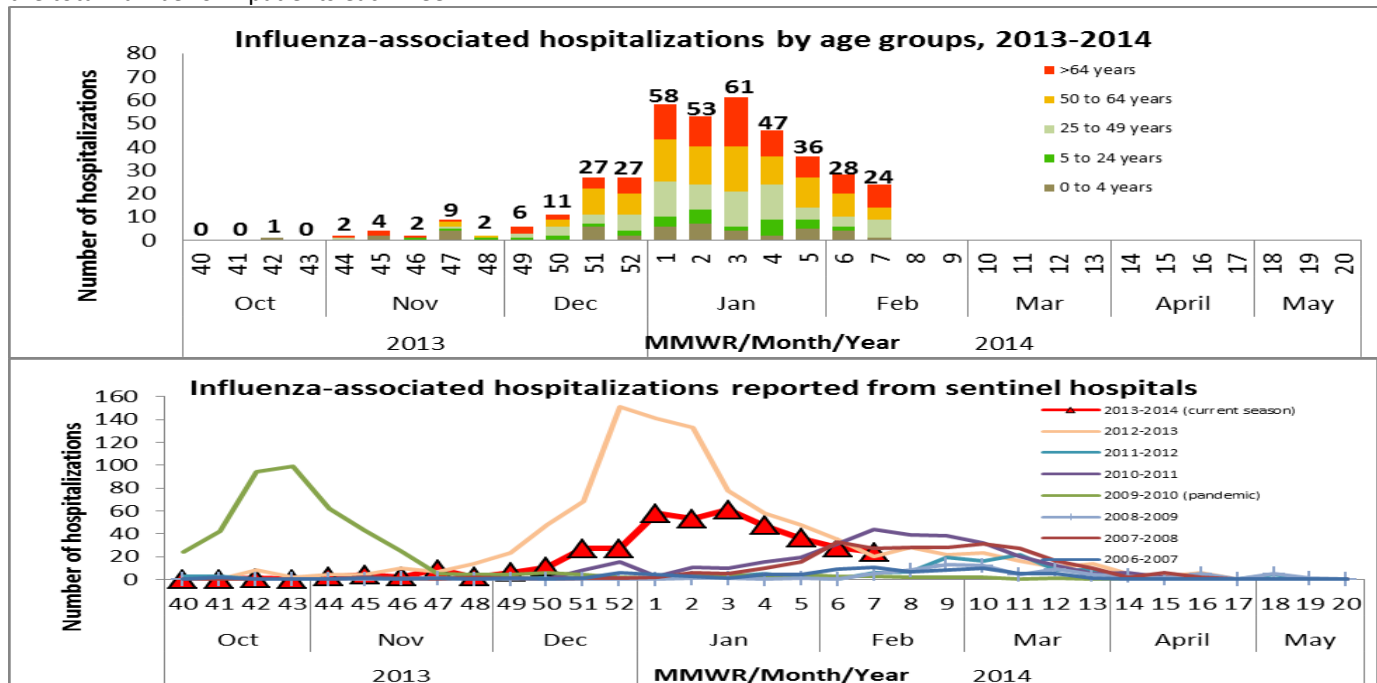
Week	% ILI	Total ILI	Age 0-4	Age 5-24	Age 25-49	Age 50-64	Age > 64
Week 05, ending Feb 01, 2014	0.54	175	41	68	50	13	3
Week 06, ending Feb 08, 2014	0.44	136	35	42	42	5	12
Week 07, ending Feb 15, 2014	0.37	113	34	43	22	12	2

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



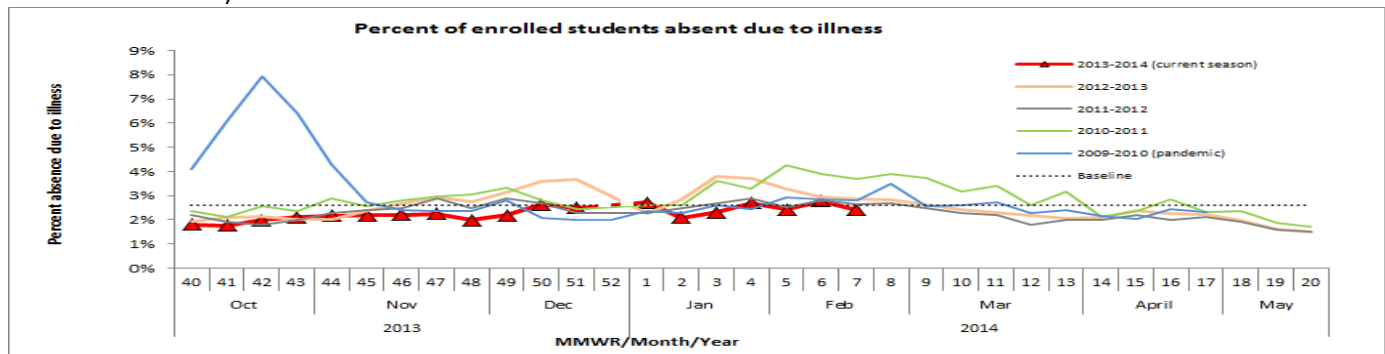
Influenza-associated hospitalizations

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



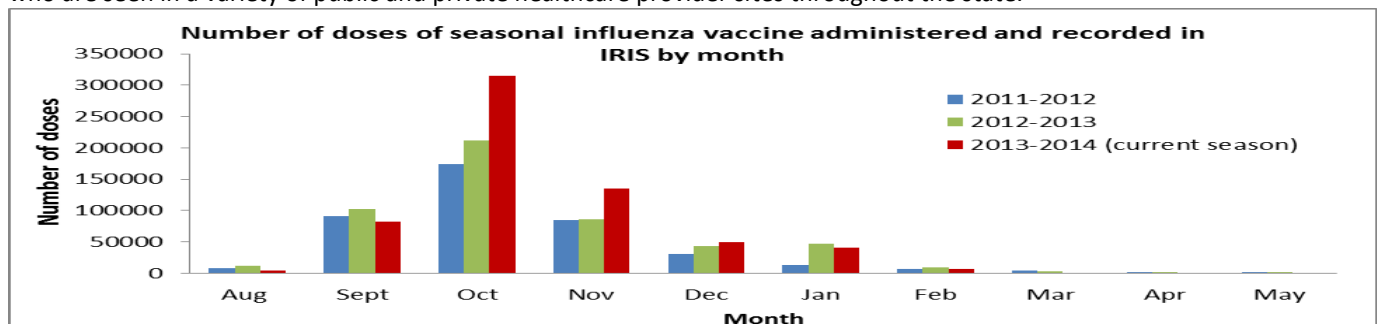
School surveillance program

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	11/4,074
Percent of influenza rapid test positive	9.7% (14/145)
Percent of RSV rapid tests positive	31.0% (9/29)
Schools with $\geq 10\%$ absence due to illness	0

Region 2 (North Central)	
Influenza-associated hospitalizations	7/461
Percent of influenza rapid test positive	16.4% (10/61)
Percent of RSV rapid tests positive	26.7% (4/15)
Schools with $\geq 10\%$ absence due to illness	0

Region 3 (Northwest)	
Influenza-associated hospitalizations	1/169
Percent of influenza rapid test positive	12.0% (22/183)
Percent of RSV rapid tests positive	35.1% (26/74)
Schools with $\geq 10\%$ absence due to illness	1

Region 4 (Southwest)	
Influenza-associated hospitalizations	0/31
Percent of influenza rapid test positive	13.1% (13/99)
Percent of RSV rapid tests positive	30.4% (7/23)
Schools with $\geq 10\%$ absence due to illness	0

Region 5 (Southeast)	
Influenza-associated hospitalizations	0/42
Percent of influenza rapid test positive	4.4% (4/94)
Percent of RSV rapid tests positive	15.8% (3/19)
Schools with $\geq 10\%$ absence due to illness	0

Region 6 (East Central)	
Influenza-associated hospitalizations	5/2,055
Percent of influenza rapid test positive	10.8% (46/427)
Percent of RSV rapid tests positive	37.6% (32/85)
Schools with $\geq 10\%$ absence due to illness	1

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

