



Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report

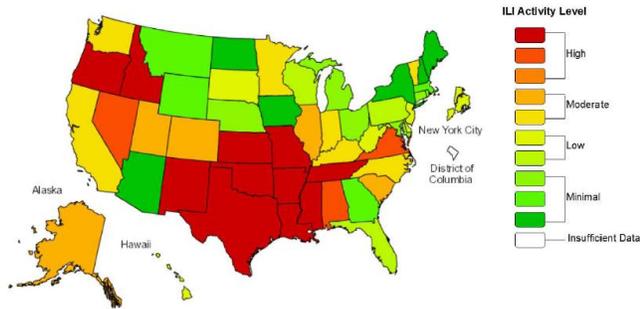
For the week ending January 11, 2014, Week 2

Quick Stats for this reporting week

Iowa activity level ¹	Regional
Percent of outpatient visits for ILI ²	0.5 % (baseline 1.8%)
Percent of influenza rapid test positive	22.9% (357/1562)
Percent of RSV rapid tests positive	20.8% (47/226)
Percent school absence due to illness*	2.1
Number of schools with ≥10% absence due to illness	1
Influenza-associated hospitalizations**	50/6,647 inpatients surveyed
Influenza-associated pediatric mortality***	1

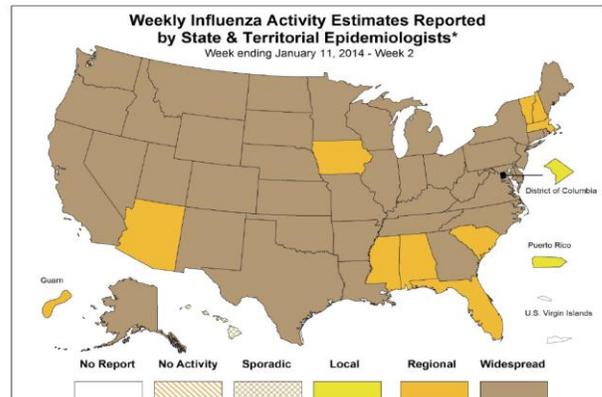
*Percent school absence due to illness are reported through a weekly survey of Iowa sentinel schools
 **Hospitalizations due to influenza are voluntarily reported through a weekly survey of Iowa sentinel hospitals
 ***CDC asks states to report any pediatric death (<18 years old) associated with influenza
 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 2 ending Jan 11, 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 January 11, 2014 - Week 2



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

Iowa statewide activity summary

Influenza activity in Iowa is high, and remains regional. For this reporting period, the State Hygienic Laboratory (SHL) confirmed 70 cases of seasonal influenza A, including 66 cases of 2009 H1N1, one case of H3N2, and subtyping is pending for three cases. So far this season, a total of 387 cases of influenza have been confirmed with the 2009 H1N1 virus predominating. The proportion of outpatient visits due to influenza-like illness (ILI) continued to increase, but it remains below the regional baseline. There were 50 influenza-associated hospitalizations reported from sentinel hospitals, down from the previous week. One influenza-associated pediatric death and one influenza outbreak in a long-term care facility were reported during this reporting week. There was also one school that reported 10 percent or greater absenteeism due to illness. In addition, seven cases of adenovirus, one case of parainfluenza virus type 1, 13 cases of rhinovirus/enterovirus, 15 cases of respiratory syncytial virus (RSV), and three cases of human metapneumovirus were reported to IDPH this reporting week.

National activity summary - www.cdc.gov

Synopsis: During week 2 (January 5-11, 2014), influenza activity remained high 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 10,841 specimens tested and reported during week 2 by U.S. World Health Organization and National Respiratory and Enteric Virus Surveillance System collaborating laboratories, 2,721 (25.1 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:** Ten influenza-associated pediatric deaths were reported.
- **Influenza-associated Hospitalizations:** A cumulative rate for the season of 13.8 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 3.6 percent, above the national baseline of 2.0 percent. All 10 regions reported ILI above region-specific baseline levels. Fourteen states experienced high ILI activity; 12 states experienced moderate ILI activity; eight states and New York City experienced low ILI activity; 16 states experienced minimal ILI activity, and the District of Columbia had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in 40 states was reported as widespread; nine states and Guam reported regional influenza activity; the District of Columbia and Puerto Rico reported local influenza activity; one state reported sporadic influenza activity, and the U.S. Virgin Islands did not report.

International activity summary - www.who.int

In North America influenza activity has sharply increased over recent weeks. The predominant subtype of influenza viruses detected was A (H1N1) pdm09. In China influenza activity has been increasing with influenza (H1N1) pdm09, A (H3N2) and influenza B circulating. 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 9 January 2014, 08:05 UTC), during weeks 50 to 52 (8 December 2013 to 28 December 2013), National Influenza Centres and other national influenza laboratories from 99 countries, areas or territories reported data. The WHO GISRS laboratories tested more than 88,471 specimens. 17,640 were positive for influenza viruses, of which 15,233 (86.4 percent) were typed as influenza A and 2,406 (13.6 percent) as influenza B. Of the sub-typed influenza A viruses, 6,889 (67.2 percent) were influenza A (H1N1) pdm09, and 3,365 (32.8 percent) were influenza A (H3N2). Of the characterized B viruses, 352 (81.1 percent) belong to the B-Yamagata lineage and 82 (18.9 percent) 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

Table 1. Influenza viruses isolated by SHL

	<i>Current week</i>	<i>Cumulative since 9/1/13</i>
Flu A	70 (72%)	385 (50%)
A (2009 H1N1)	66 (68%)	355 (47%)
A (H3)	1 (1%)	11 (1%)
A (H3N2) variant	0 (0%)	1 (<1%)
Subtype pending	3 (3%)	18 (2%)
Flu B	0 (0%)	2 (<1%)
Equivocal	1 (1%)	3 (<1%)
Indeterminate	1 (1%)	2 (<1%)
Negative	25 (26%)	357 (48%)
Total	97	749

Note that only cases of Iowa residents are included.

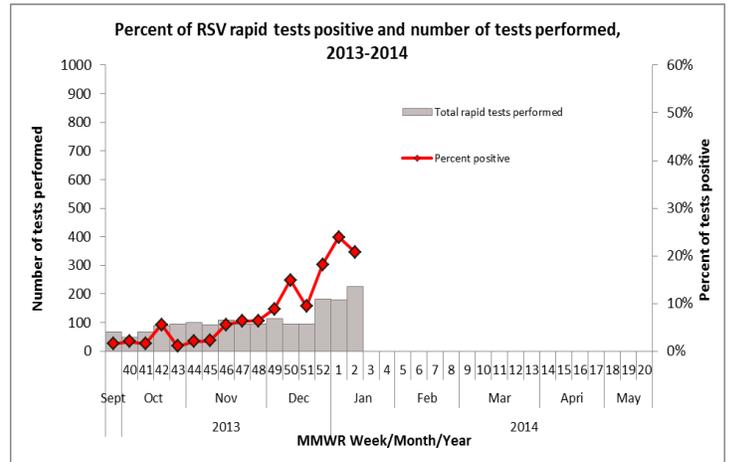
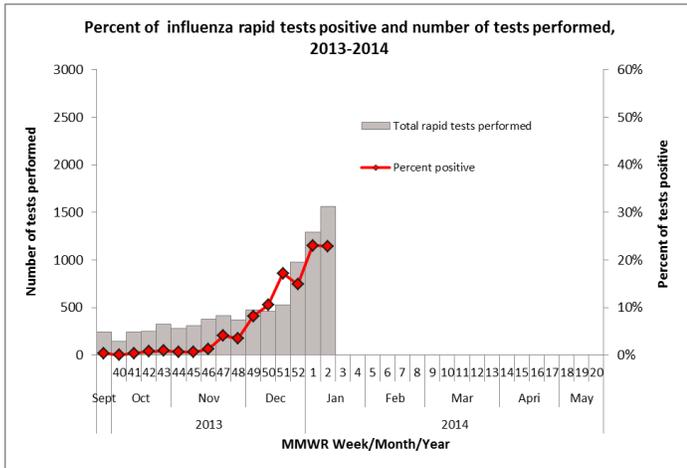
Table 2. Influenza viruses by age group 9/1/13 to present week

<i>Age group</i>	<i>Flu A (2009 H1N1)</i>	<i>Flu A (H3)</i>	<i>Flu A (H3N2) Variant</i>	<i>Flu A (subtype pending)</i>	<i>Flu B</i>
0-4	52 (15%)	4 (36%)	* (0%)	3 (17%)	1 (50%)
5-17	57 (16%)	1 (9%)	* (0%)	2 (11%)	1 (50%)
18-24	46 (13%)	0 (0%)	0 (0%)	4 (22%)	0 (0%)
25-49	111 (31%)	3 (27%)	0 (0%)	2 (11%)	0 (0%)
50-64	55 (15%)	1 (9%)	0 (0%)	4 (22%)	0 (0%)
>64	34 (10%)	2 (18%)	0 (0%)	3 (17%)	0 (0%)
Total	355	11	1	18	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	7	62
Parainfluenza Virus Type 1	1	40
Parainfluenza Virus Type 2	0	1
Parainfluenza Virus Type 3	0	12
Parainfluenza Virus Type 4	0	16
Rhinovirus/Enterovirus	13	285
Respiratory syncytial virus (RSV)	15	45
human metapneumovirus (hMPV)	3	8



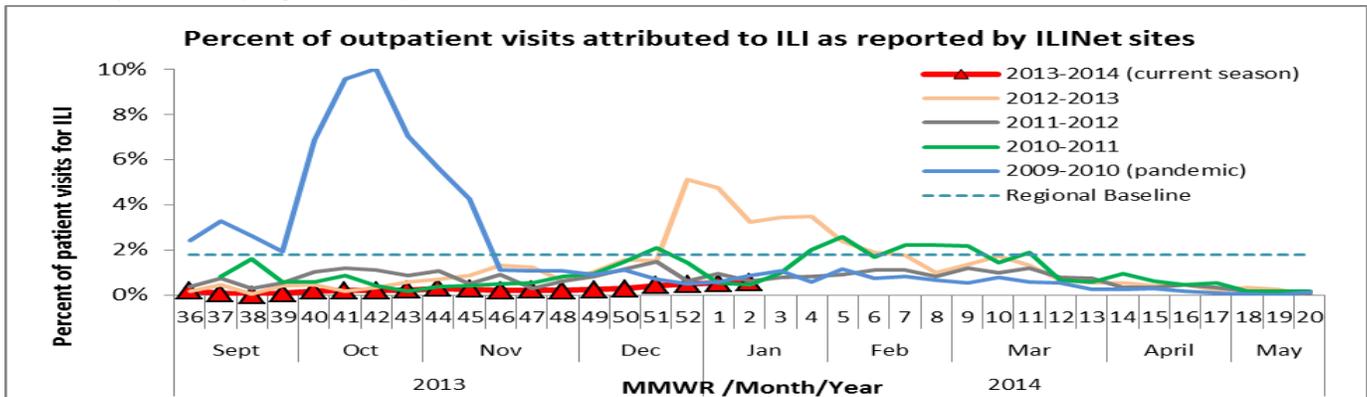
Outpatient health care provider surveillance program (ILINet)

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*

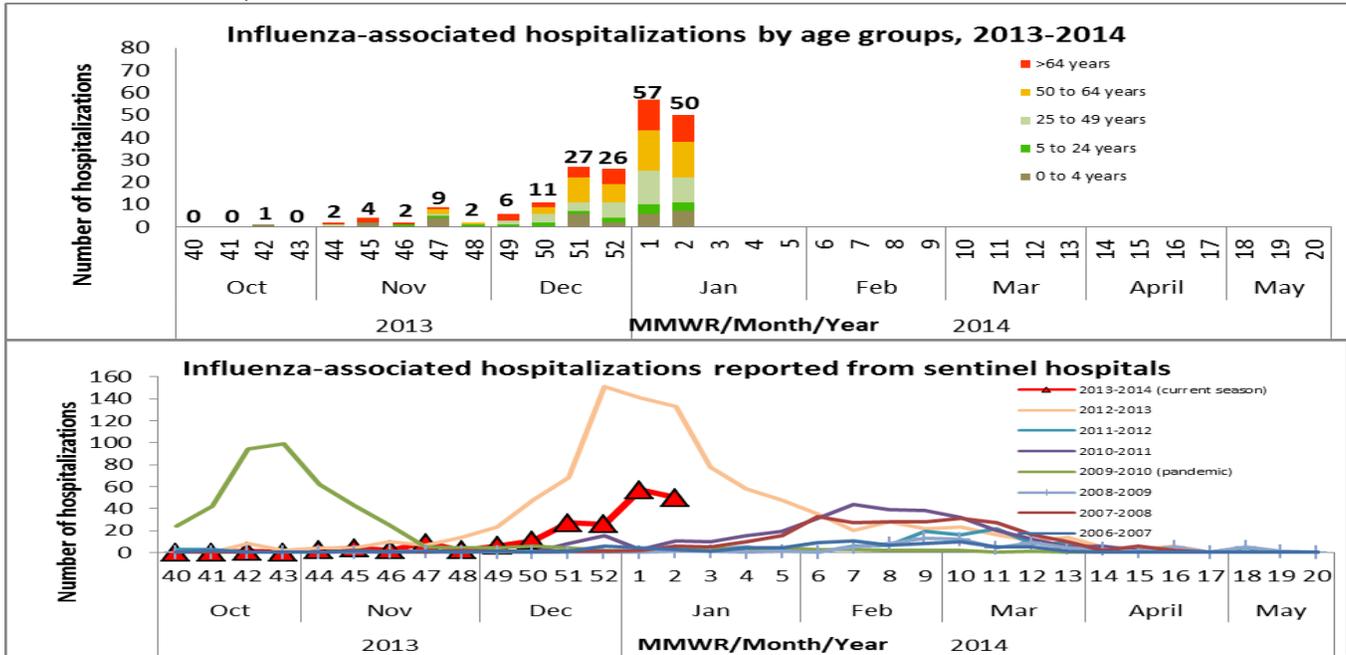
Week	% ILI	Total ILI	Age 0-4	Age 5-24	Age 25-49	Age 50-64	Age > 64
Week 52, ending Dec 28, 2013	0.49	104	37	33	26	6	2
Week 01, ending Jan 04, 2014	0.53	139	31	39	49	11	9
Week 02, ending Jan 11, 2014	0.54	165	36	49	55	19	6

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



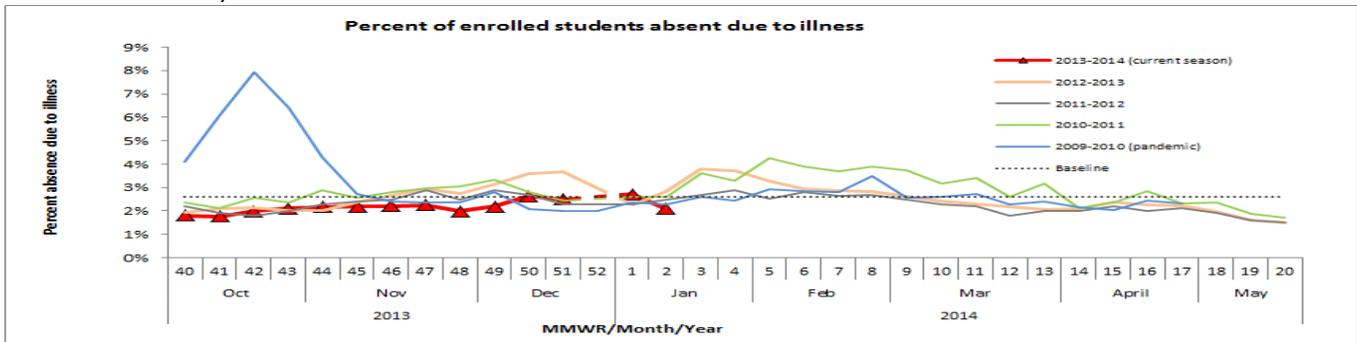
Influenza-associated hospitalizations

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



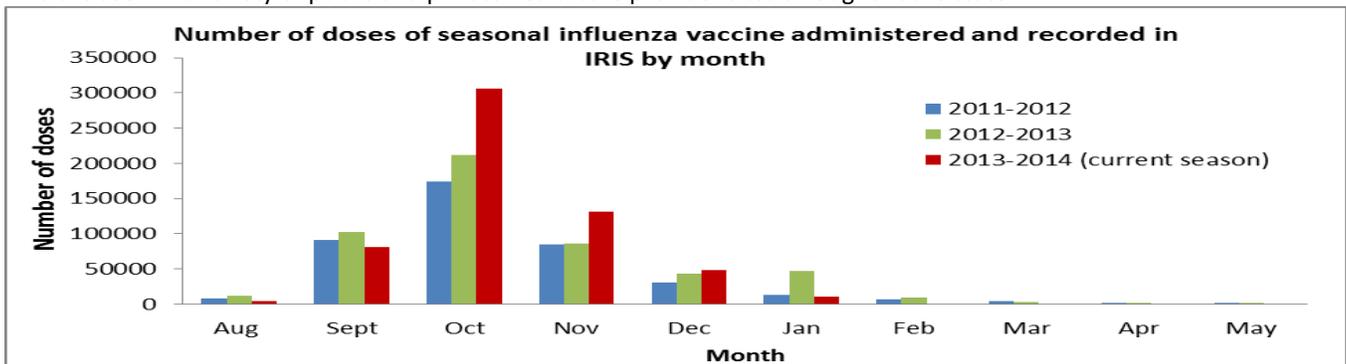
School surveillance program

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	21/3,918
Percent of influenza rapid test positive	20.9% (37/177)
Percent of RSV rapid tests positive	23.3% (7/30)
Schools with $\geq 10\%$ absence due to illness	0

Region 2 (North Central)	
Influenza-associated hospitalizations	0/488
Percent of influenza rapid test positive	21.4% (15/70)
Percent of RSV rapid tests positive	10.0% (1/10)
Schools with $\geq 10\%$ absence due to illness	0

Region 3 (Northwest)	
Influenza-associated hospitalizations	4/225
Percent of influenza rapid test positive	20.2% (50/247)
Percent of RSV rapid tests positive	8.1% (3/37)
Schools with $\geq 10\%$ absence due to illness	0

Region 4 (Southwest)	
Influenza-associated hospitalizations	2/9
Percent of influenza rapid test positive	18.1% (27/149)
Percent of RSV rapid tests positive	22.2% (4/18)
Schools with $\geq 10\%$ absence due to illness	0

Region 5 (Southeast)	
Influenza-associated hospitalizations	0/50
Percent of influenza rapid test positive	20.4% (34/167)
Percent of RSV rapid tests positive	7.7% (1/13)
Schools with $\geq 10\%$ absence due to illness	1

Region 6 (East Central)	
Influenza-associated hospitalizations	23/1,957
Percent of influenza rapid test positive	25.8% (194/752)
Percent of RSV rapid tests positive	26.3% (31/118)
Schools with $\geq 10\%$ absence due to illness	0

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

