



Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report

For the week ending January 5, 2013, Week 1

Quick Stats for this reporting week

Iowa activity level ¹	Widespread
Percent of outpatient visits for ILI ²	5.5 % (baseline 2.1%)
Percent of influenza rapid test positive	22.4% (469/2098)
Percent of RSV rapid tests positive	43.1% (207/480)
Percent school absence due to illness	2.3%
Number of schools with ≥10% absence due to illness	1
Influenza-associated hospitalizations*	141/7415 inpatients surveyed
Influenza-associated pediatric mortality**	0

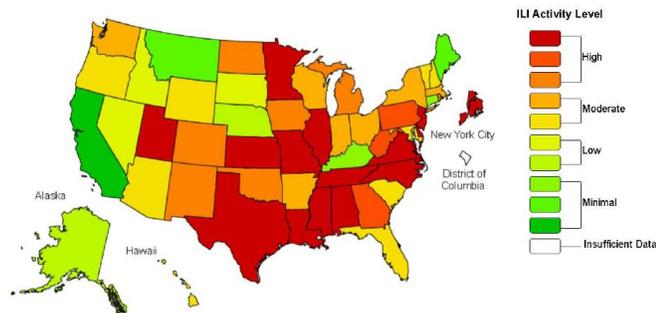
* Hospitalizations due to influenza are voluntarily reported through a weekly survey of Iowa sentinel hospitals

**CDC asks states to report any pediatric death (<18 years old) associated with influenza

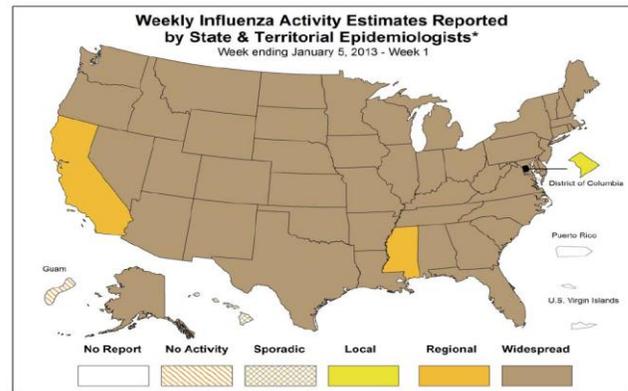
Note: All data in this report are provisional and may change as additional reports are received

Note: It is a short week for schools

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2012-13 Influenza Season Week 1 ending Jan 05, 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.



*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 widespread. For this reporting week, the State Hygienic Laboratory (SHL) confirmed a total of 114 cases of seasonal influenza, including 65 influenza A (H3), one influenza A (2009 H1N1), 34 influenza A (subtyping pending), and 14 influenza B. The proportion of outpatient visits due to influenza-like illness (ILI) remains high at 5.5 percent and was well above the regional baseline of 2.1 percent. The number of influenza-associated hospitalizations reported from sentinel hospitals was 141 (480 for the season so far), which is three times higher than the typical influenza seasons. Two influenza outbreaks were reported from the long term care facilities and one school reported 10 percent or greater absenteeism due to flu-like symptoms (due to holiday week, many schools were not open during this reporting period). In addition, 51 cases of RSV, one case of adenovirus, one case of parainfluenza 1, and four cases of parainfluenza 2 were detected during this reporting week. Thus far this season, the other respiratory viruses that have been identified include adenovirus, rhinovirus, parainfluenza 2-3, RSV, and human metapneumovirus (hMPV).

National activity summary - www.cdc.gov

Synopsis: During week 1 (December 30-January 5), influenza activity remained elevated in the U.S., but may be decreasing in some areas.

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 12,876 specimens tested and reported by the U.S. World Health Organization and National Respiratory and Enteric Virus Surveillance System collaborating laboratories, 4,222 (32.8 percent) were positive for influenza.
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza was slightly above the epidemic threshold.
- **Influenza-Associated Pediatric Deaths:** Two influenza-associated pediatric deaths were reported. One was associated with an influenza A (H3) virus and one was associated with an influenza A virus for which the subtype was not determined.
- **Outpatient Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) was 4.3 percent; above the national baseline of 2.2 percent. Nine of 10 regions reported ILI above region-specific baseline levels. Twenty-four states and New York City experienced high ILI activity; 16 states experienced moderate ILI activity; five states experienced low ILI activity; 5 states experienced minimal ILI activity, and the District of Columbia had insufficient data.
- **Geographic Spread of Influenza:** Forty-seven states reported widespread geographic influenza activity; two states reported regional activity; the District of Columbia reported local activity; one state reported sporadic activity; Guam reported no influenza activity, and Puerto Rico and the U.S. Virgin Islands did not report.

International activity summary - www.who.int

Reporting of influenza activity has been irregular in the past two weeks due to the holiday season in many countries. As a result, overall virus detections reported have dropped off although in most countries in the northern temperate regions, influenza activity appears to have continued rising. Many countries of North America, Europe, North Africa, eastern Mediterranean and temperate Asia have reported increasing influenza activity over the past weeks. North China has started its influenza season. In tropical Asia, influenza activity was similar to previous weeks, with persistent low-level circulation. Influenza activity in sub-Saharan Africa has declined in most countries, with the exception of the Democratic Republic of Congo and Ghana. In the Caribbean, Central America and tropical South America, influenza activity decreased to low levels, except for Bolivia, where there is increasing circulation of influenza A (H3N2). Influenza activity in countries of the southern hemisphere is currently at inter-seasonal levels. Several unconfirmed media stories have reported a number of deaths related to infection with influenza A (H1N1) pdm09 in different parts of the world. As with other seasonal influenza viruses, it is expected that some deaths would occur with infection, in particular now when influenza season starts in Northern Hemisphere. These reports at times refer to this A (H1N1) pdm09 virus as “swine flu”, causing some confusion with other viruses that recently reported in the United States. A (H1N1) pdm09 virus has been circulating in humans for more than 3 years and now is a seasonal human influenza virus.

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

	<i>Current week</i>	<i>Cumulative since 9/2/12</i>
Flu A	100 (47%)	1146 (49%)
A (2009 H1N1)	1 (1%)	5 (<1%)
A (H3)	65 (31%)	1072 (46%)
A (H3N2) variant	0 (0%)	1 (<1%)
Subtyping not reported	34 (16%)	69 (3%)
Flu B	14 (7%)	134 (6%)
Equivocal	0 (0%)	0 (0%)
Indeterminate	3 (2%)	12 (<1%)
Negative	90 (44%)	1024 (44%)
Total	207	2317

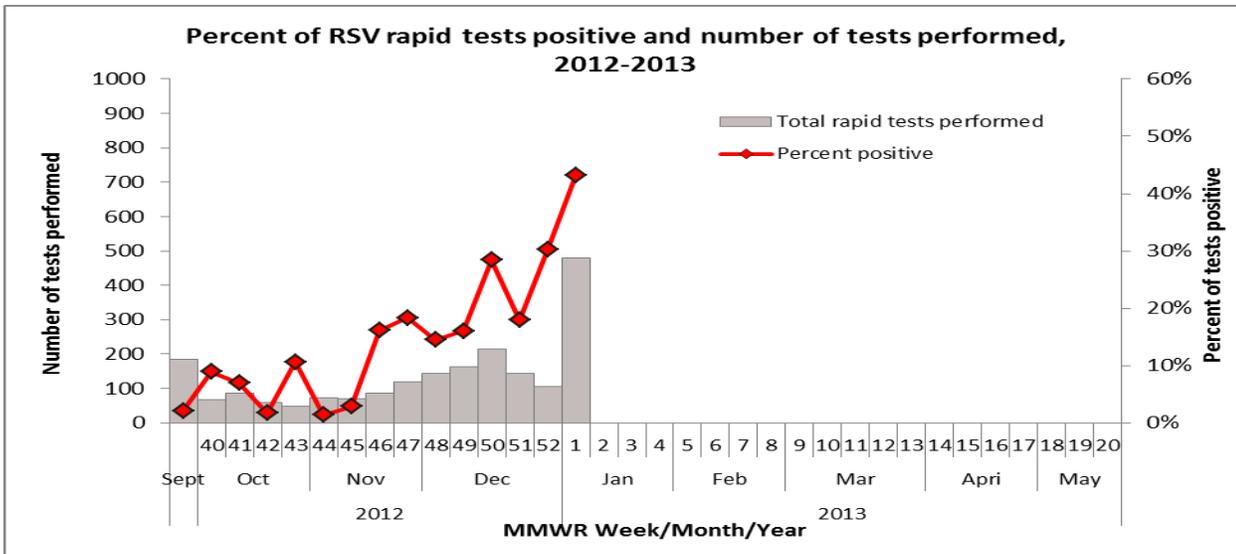
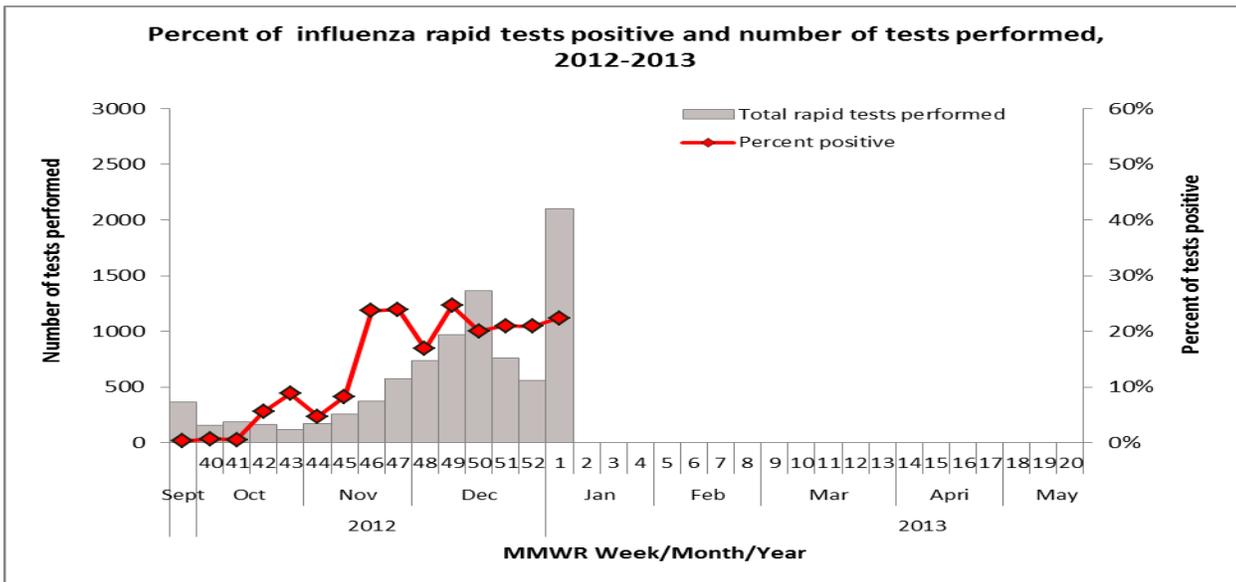
Table 2. Influenza viruses by age group 9/2/12 to present week

<i>Age group</i>	<i>Flu A (2009 H1N1)</i>	<i>Flu A (H3)</i>	<i>Flu A (H3N2) Variant</i>	<i>Flu A (no typing)</i>	<i>Flu B</i>
0-4	2 (40%)	144 (13%)	* (*%)	7 (10%)	27 (20%)
5-17	1 (20%)	232 (22%)	* (*%)	5 (7%)	53 (40%)
18-24	0 (0%)	80 (7%)	0 (0%)	8 (12%)	7 (5%)
25-49	2 (40%)	213 (20%)	0 (0%)	9 (13%)	24 (18%)
50-64	0 (0%)	111 (10%)	0 (0%)	11 (16%)	11 (8%)
>64	0 (0%)	292 (27%)	0 (0%)	29 (42%)	12 (9%)
Total	5	1072	1	69	134

* Counts of three or less of reportable diseases are suppressed to protect confidentiality. Note that counts may not add up to the total due to missing age information

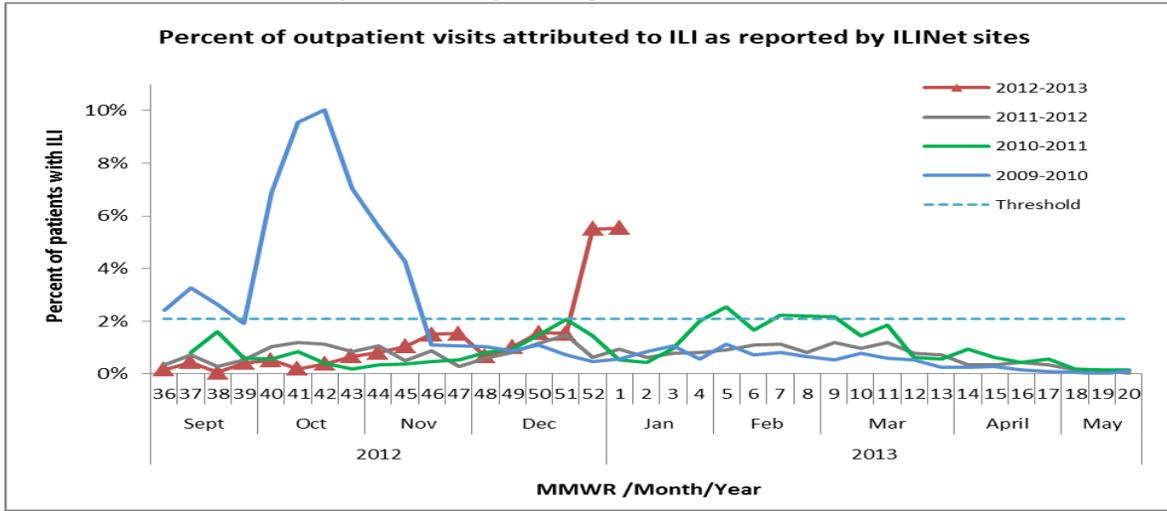
Table 3. Number of positive results for non-influenza respiratory virus isolated by the State Hygienic Laboratory, Mercy Dunes in Sioux City, and Iowa Methodist Medical Center

	<i>Current week</i>	<i>Cumulative since 9/2/12</i>
<i>Adenovirus</i>	1	14
<i>Parainfluenza Virus Type 1</i>	1	1
<i>Parainfluenza Virus Type 2</i>	4	20
<i>Parainfluenza Virus Type 3</i>	0	36
<i>Rhinovirus</i>	0	45
<i>Respiratory syncytial virus (RSV)</i>	51	292
<i>human metapneumovirus (hMPV)</i>	0	1



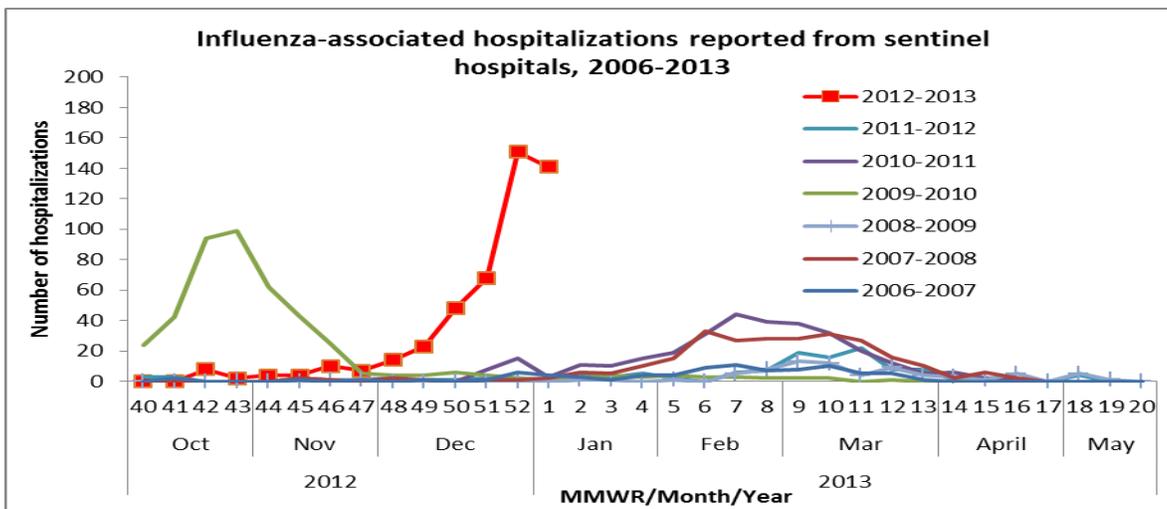
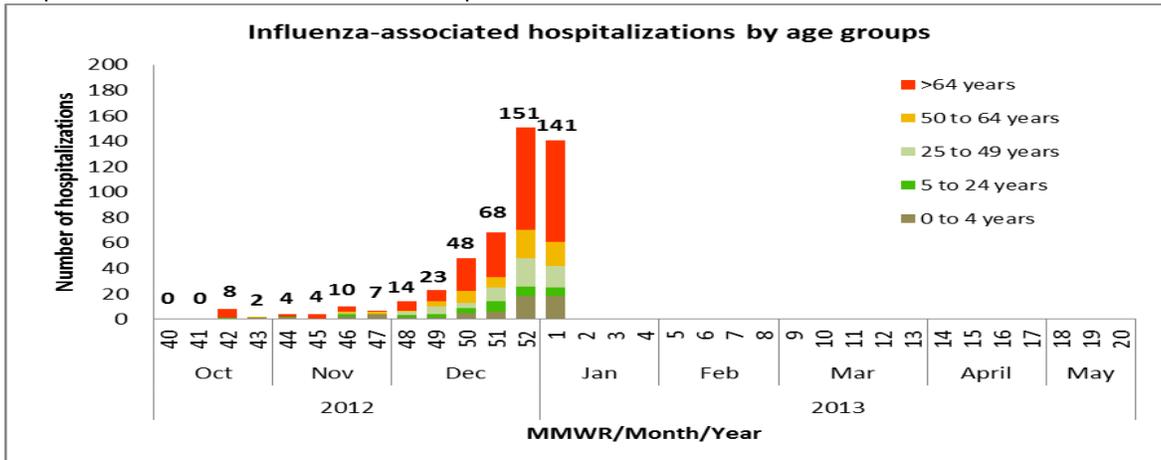
Outpatient health care provider surveillance program (ILINet)

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.



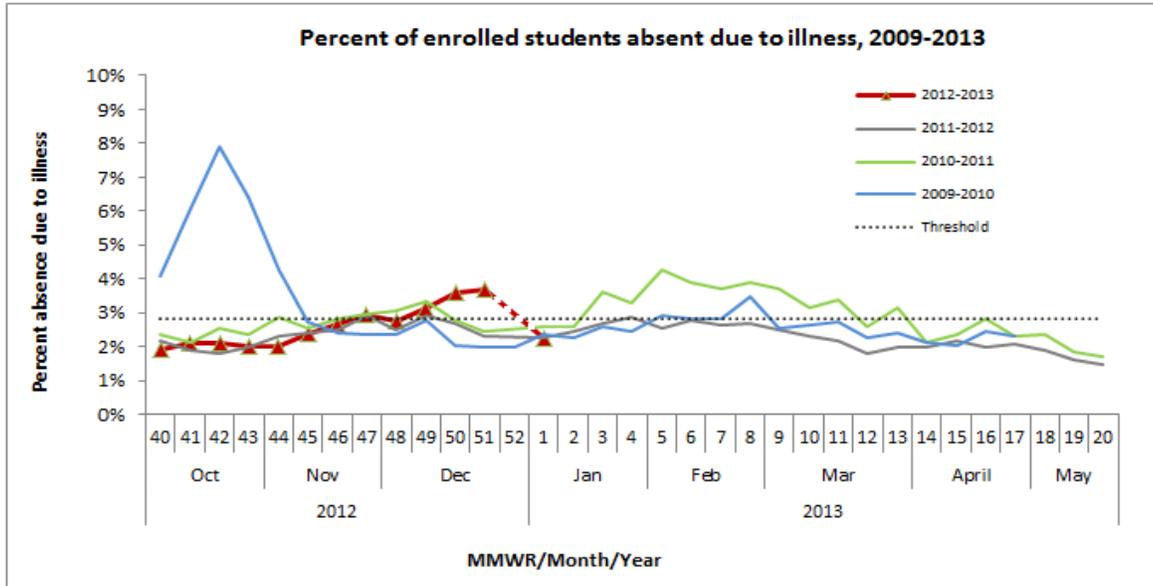
Influenza-associated hospitalizations

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



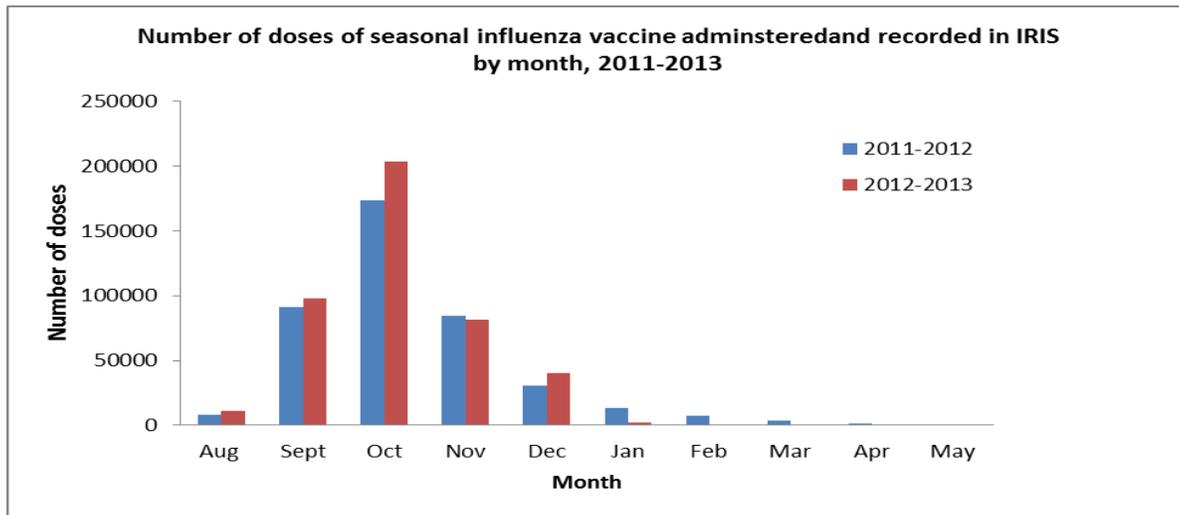
School surveillance program

Approximately 80 schools participating in IISN voluntarily track and report absence due to all illness (including non-influenza illnesses) and the total enrollment each week. (Due to holiday week, many schools were not open during this reporting period.)



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 2012-2013 season is only up to 1/10/2013 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	70/4374
Percent of influenza rapid test positive	25.9% (111/428)
Percent of RSV rapid tests positive	49.1% (78/159)
Schools with $\geq 10\%$ absence due to illness	0

Region 2 (North Central)	
Influenza-associated hospitalizations	39/530
Percent of influenza rapid test positive	22.0% (38/173)
Percent of RSV rapid tests positive	40.0% (12/30)
Schools with $\geq 10\%$ absence due to illness	0

Region 3 (Northwest)	
Influenza-associated hospitalizations	2/150
Percent of influenza rapid test positive	27.2% (71/261)
Percent of RSV rapid tests positive	34.6% (28/81)
Schools with $\geq 10\%$ absence due to illness	0

Region 4 (Southwest)	
Influenza-associated hospitalizations	3/36
Percent of influenza rapid test positive	25.2% (27/107)
Percent of RSV rapid tests positive	35.3% (6/17)
Schools with $\geq 10\%$ absence due to illness	0

Region 5 (Southeast)	
Influenza-associated hospitalizations	2/42
Percent of influenza rapid test positive	23.0% (44/191)
Percent of RSV rapid tests positive	50.0% (16/32)
Schools with $\geq 10\%$ absence due to illness	0

Region 6 (East Central)	
Influenza-associated hospitalizations	25/2013
Percent of influenza rapid test positive	19.0% (178/938)
Percent of RSV rapid tests positive	41.6% (67/161)
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
Due to holiday week, many schools were not open during this reporting period.

