Division of Acute Disease Prevention, Emergency Response, and Environmental Health
Center for Acute Disease Epidemiology

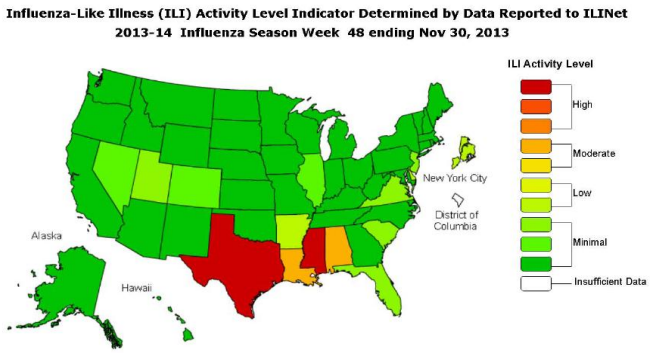
# Iowa Influenza Surveillance Network (IISN)

## Influenza-like Illness (ILI) and Other Respiratory Viruses
## Weekly Activity Report
## For the week ending November 30, 2013, Week 48

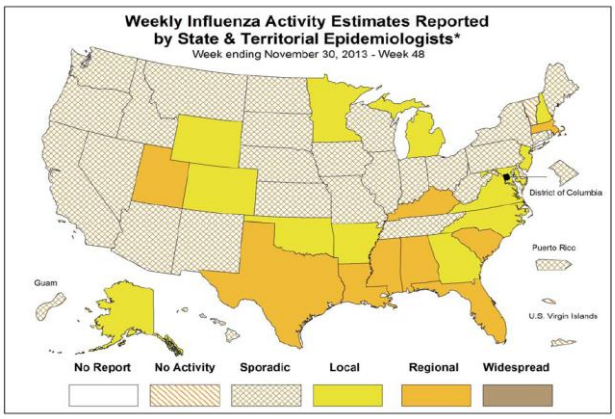
## Quick Stats for this reporting week

| | |
|---|---|
| **Iowa activity level**[1] | **Sporadic** |
| Percent of outpatient visits for ILI[2] | 0.2 % (baseline 1.8%) |
| Percent of influenza rapid test positive | 3.8% (14/369) |
| Percent of RSV rapid tests positive | 6.4% (6/94) |
| Percent school absence due to illness* | 2.0% |
| Number of schools with ≥10% absence due to illness | 1 |
| Influenza-associated hospitalizations** | 2/5,676 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




*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 remains sporadic. For this reporting period, the State Hygienic Laboratory (SHL) confirmed 14 cases of seasonal influenza A, including nine 2009 H1N1 and five subtyping pending. The proportion of outpatient visits due to influenza-like illness (ILI) was 0.18 percent which is well below the regional baseline. There were two influenza-associated hospitalizations reported from sentinel hospitals. One school reported 10 percent or greater absenteeism due to non-respiratory illness. In addition, four cases of adenovirus, three cases of parainfluenza virus type 3, two cases of parainfluenza virus type 4, 19 cases of rhinovirus/enterovirus, and two cases of respiratory syncytial virus (RSV) were reported to IDPH.

## National activity summary - www.cdc.gov

**Synopsis:** During week 48 (November 24-30, 2013), influenza activity increased slightly in the United States.

- **Viral Surveillance**: Of 5,306 specimens tested and reported by U.S. World Health Organization and National Respiratory and Enteric Virus Surveillance System collaborating laboratories during week 48, 536 (10.1 percent) were positive for influenza.

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[1] **No Activity:** No laboratory-confirmed cases of influenza and no reported increase in the number of cases of influenza-like illness (ILI[2]).
**Sporadic:** Isolated laboratory-confirmed influenza cases or a single influenza outbreak has been reported, but there is no increase in cases of ILI[2].
**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.

- **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 was reported.
- **Influenza-associated Hospitalizations:** A cumulative rate for the season of 1.2 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 1.9 percent, below the national baseline of 2.0 percent. Two regions reported ILI above region specific baseline levels. Two states experienced high ILI activity, two states experienced moderate ILI activity, two states and New York City experienced low ILI activity, 44 states experienced minimal ILI activity and the District of Columbia had insufficient data.
- **Geographic Spread of Influenza**: The geographic spread of influenza in nine states was reported as regional; 13 states reported local influenza activity; the District of Columbia, Guam, Puerto Rico, and 27 states reported sporadic influenza activity, and the U.S. Virgin Islands and one state reported no influenza activity.

## International activity summary - www.who.int

Overall influenza activity in North America increased slightly over the past three weeks, but remained at low levels throughout the region. Countries from the WHO European Region continued to report low levels of influenza activity with only a few countries reporting sporadic influenza detections among samples from sentinel and non-sentinel sources. In northern Asia, influenza activity slightly increased in the north of China and Mongolia. Influenza transmission in southern Asia was low. In Hong Kong Special Administrative Region, China, and in the south of China influenza detections decreased. In South East Asia, influenza activity decreased in Viet Nam, but increased in Cambodia, Lao People's Democratic Republic and Thailand. In this area, co-circulation of influenza A (H1N1) pdm09, influenza A (H3N2) and influenza B virus was reported. In the Caribbean region of Central America and tropical South America, influenza A detections remained at low levels. Respiratory syncytial virus (RSV) continued to predominate in certain countries, but the RSV activity largely remained within expected seasonal levels. The influenza season in the southern hemisphere is largely over.

**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**

| | *Current week* | *Cumulative since 9/1/13* |
|---|---|---|
| **Flu A** | 14 (47%) | 45 (16%) |
| A (2009 H1N1) | 9 (30%) | 29 (11%) |
| A (H3) | 0 (0%) | 6 (2%) |
| A (H3N2) variant | 0 (0%) | 1 (<1%) |
| Subtype pending | 5 (17%) | 9 (3%) |
| **Flu B** | 0 (0%) | 2 (1%) |
| **Equivocal** | 0 (0%) | 0 (0%) |
| **Indeterminate** | 0 (0%) | 0 (0%) |
| **Negative** | 16 (53%) | 224 (83%) |
| **Total** | 30 | 271 |

Note that only cases of Iowa residents are included.

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

| *Age group* | *Flu A (2009 H1N1)* | *Flu A (H3)* | *Flu A (H3N2) Variant* | *Flu A (subtype pending)* | *Flu B* |
|---|---|---|---|---|---|
| ***0-4*** | 6 (21%) | 3 (50%) | * (0%) | 1 (11%) | 1 (50%) |
| ***5-17*** | 6 (21%) | 1 (17%) | * (0%) | 0 (0%) | 1 (50%) |
| ***18-24*** | 2 (7%) | 0 (0%) | 0 (0%) | 4 (44%) | 0 (0%) |
| ***25-49*** | 9 (31%) | 1 (17%) | 0 (0%) | 2 (22%) | 0 (0%) |
| ***50-64*** | 3 (10%) | 1 (17%) | 0 (0%) | 1 (11%) | 0 (0%) |
| ***>64*** | 3 (10%) | 0 (0%) | 0 (0%) | 1 (11%) | 0 (0%) |
| ***Total*** | 29 | 6 | 1 | 9 | 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

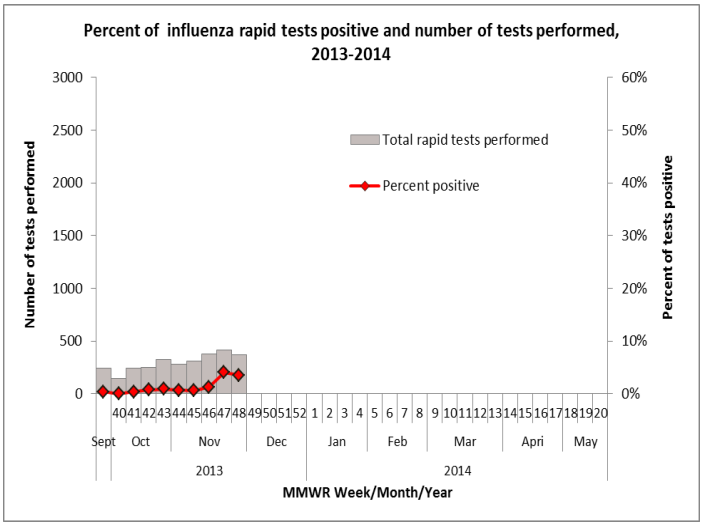
**Table 3. Number of positive results for non-influenza respiratory virus isolated by Mercy Dunes in Sioux City and Iowa Methodist Medical Center**

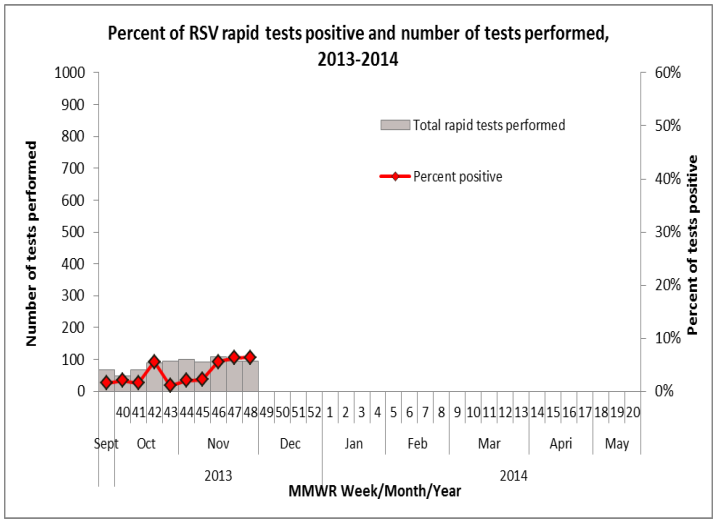
| | *Current week* | *Cumulative since 9/1/13* |
|---|---|---|
| ***Adenovirus*** | 4 | 30 |
| ***Parainfluenza Virus Type 1*** | 0 | 31 |
| ***Parainfluenza Virus Type 2*** | 0 | 1 |
| ***Parainfluenza Virus Type 3*** | 3 | 8 |
| ***Parainfluenza Virus Type 4*** | 2 | 13 |
| ***Rhinovirus/Enterovirus*** | 19 | 177 |
| ***Respiratory syncytial virus (RSV)*** | 2 | 3 |
| ***human metapneumovirus (hMPV)*** | 0 | 1 |

**Table 4. Percent of influenza rapid tests positive and number of tests performed by region for the present week**

| Region* | Influenza | | | | | RSV | | |
|---|---|---|---|---|---|---|---|---|
| | *Tested* | *Flu A* | *Flu B* | *Both* | *% Positive* | *Tested* | *Positive* | *% Positive* |
| ***Region 1*** | 55 | 2 | 0 | 0 | 3.6% | 16 | 2 | 12.5% |
| ***Region 2*** | 23 | 2 | 1 | 0 | 13.0% | 9 | 1 | 11.1% |
| ***Region 3*** | 42 | 2 | 0 | 0 | 4.8% | 10 | 1 | 10.0% |
| ***Region 4*** | 29 | 1 | 0 | 0 | 3.4% | 8 | 0 | 0.0% |
| ***Region 5*** | 13 | 0 | 0 | 0 | 0.0% | 2 | 1 | 0.0% |
| ***Region 6*** | 207 | 6 | 0 | 0 | 2.9% | 49 | 2 | 4.1% |

*Region 1- Boone, Calhoun, Carroll, Dallas, Greene, Grundy, Hamilton, Hardin, Jasper, Marshall, Polk, Poweshiek, Story, Tama, Warren, Webster; **Region 2**- Allamakee, Bremer, Butler, Cerro Gordo, Chickasaw, Emmet, Fayette, Floyd, Franklin, Hancock, Howard, Humboldt, Kossuth, Mitchell, Winnebago, Winneshiek, Worth, Wright; **Region 3**- Buena Vista, Cherokee, Clay, Crawford, Dickinson, Ida, Lyon, Monona, O'Brien, Osceola, Palo Alto, Plymouth, Pocahontas, Sac, Sioux, Woodbury; **Region 4**- Adair, Adams, Audubon, Cass, Clarke, Decatur, Fremont, Guthrie, Harrison, Madison, Mills, Montgomery, Page, Pottawattamie, Ringgold, Shelby, Taylor, Union; **Region 5**- Appanoose, Davis, Des Moines, Henry, Jefferson, Keokuk, Lee, Louisa, Lucas, Mahaska, Marion, Monroe, Muscatine, Van Buren, Wapello, Washington, Wayne; **Region 6**- Benton, Black Hawk, Buchanan, Cedar, Clayton, Clinton, Delaware, Dubuque, Iowa, Jackson, Johnson, Jones, Linn, Scott.



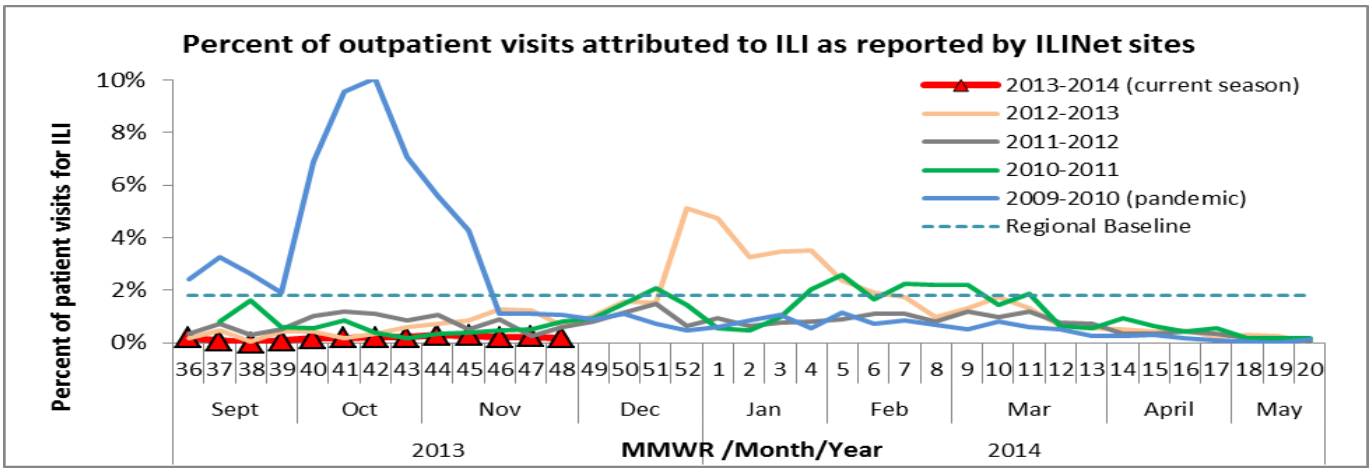

## Outpatient health care provider surveillance program (ILINet)

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***

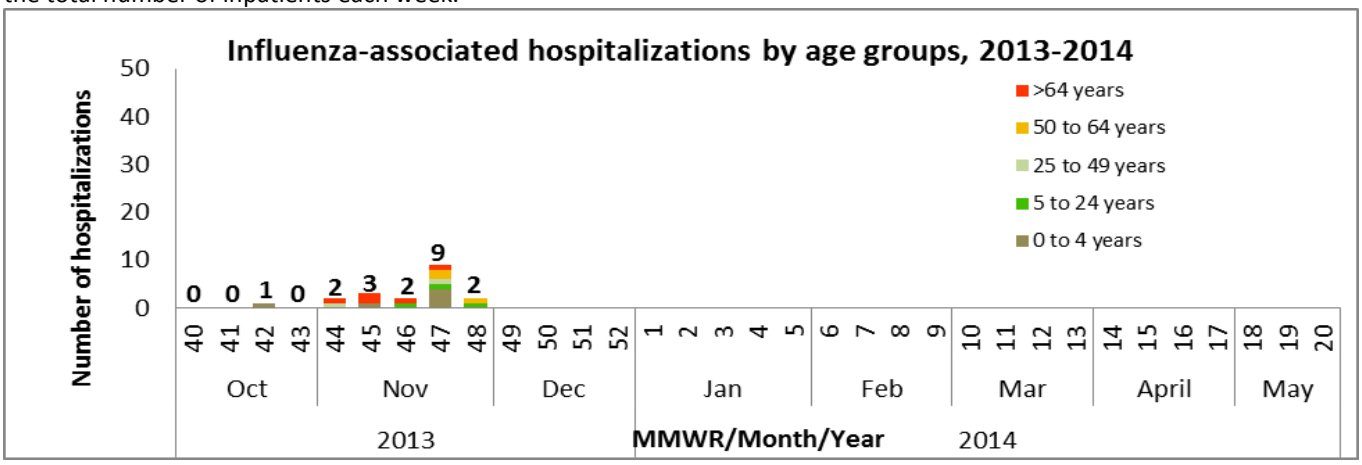
| Week | % ILI | Total ILI | Age 0-4 | Age 5-24 | Age 25-49 | Age 50-64 | Age > 64 |
|---|---|---|---|---|---|---|---|
| Week 46, ending Nov 16, 2013 | 0.20 | 69 | 19 | 32 | 8 | 6 | 4 |
| Week 47, ending Nov 23, 2013 | 0.22 | 72 | 16 | 32 | 17 | 3 | 4 |
| Week 48, ending Nov 30, 2013 | 0.18 | 47 | 17 | 16 | 12 | 1 | 1 |

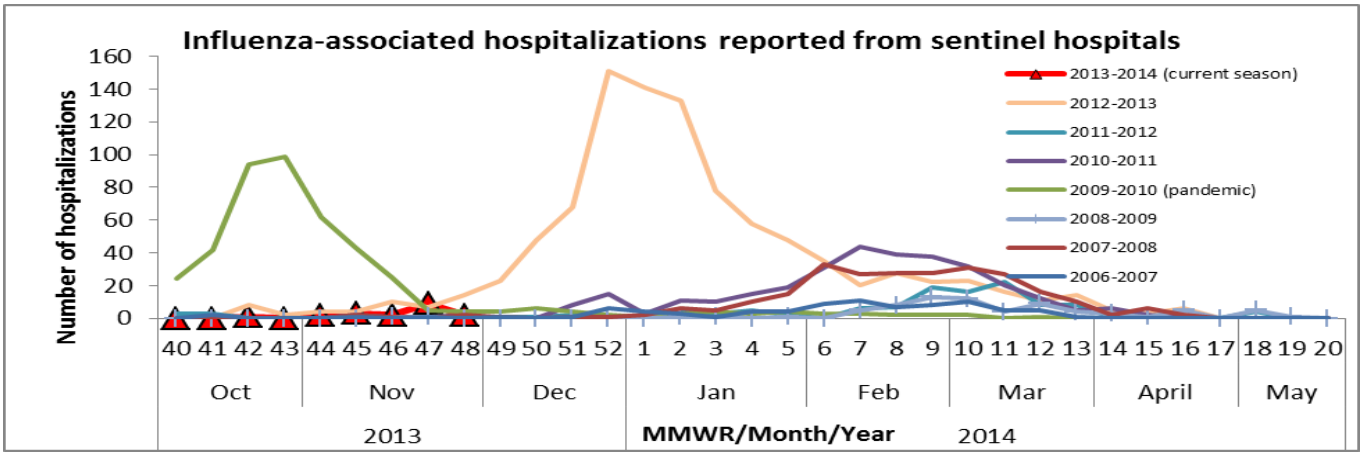
*ILI counts are provisional and may change as additional reports are received




## Influenza-associated hospitalizations

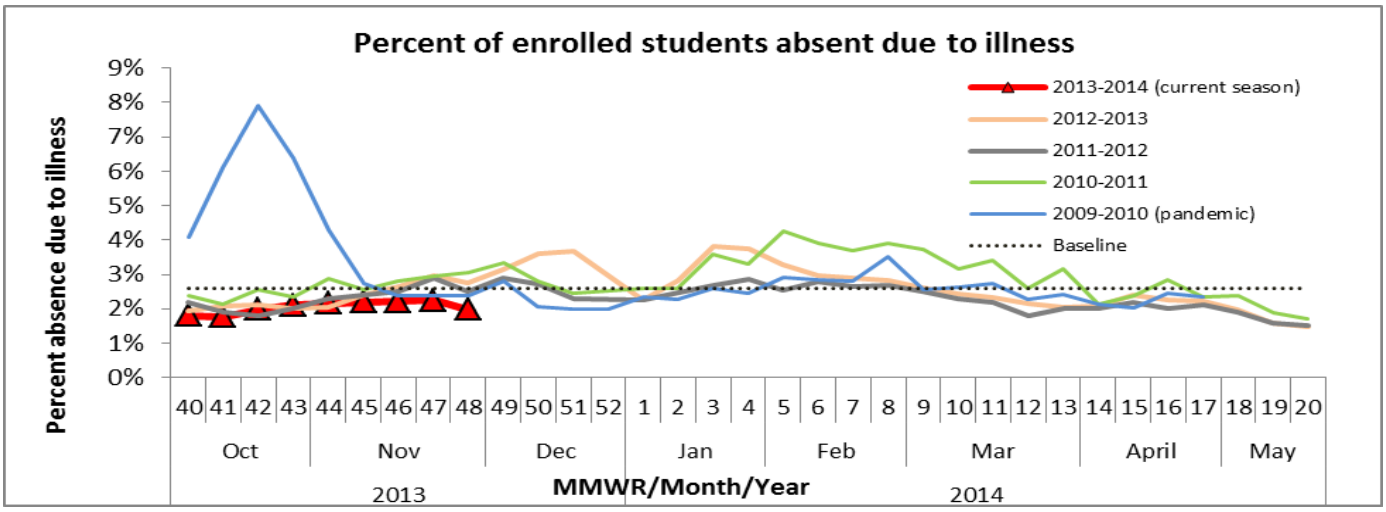
Sentinel hospitals that participate in IISN voluntarily track and report the number of influenza-associated hospitalizations and the total number of inpatients each week.



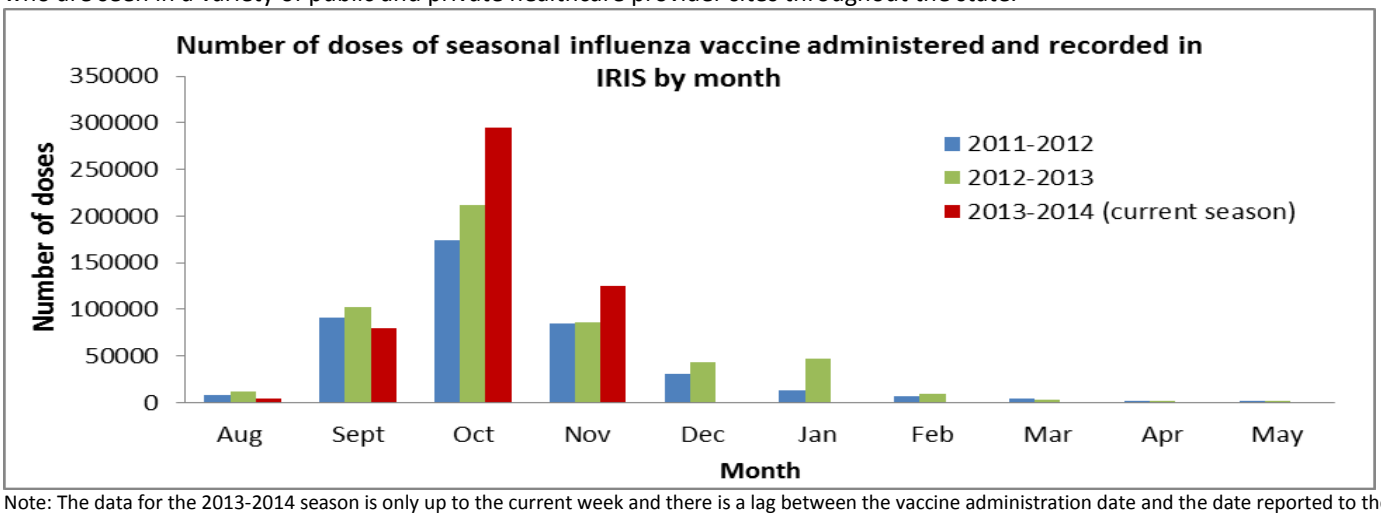
## School surveillance program

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 System[3] (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