Division of Acute Disease Prevention and Emergency Response
Center for Acute Disease Epidemiology

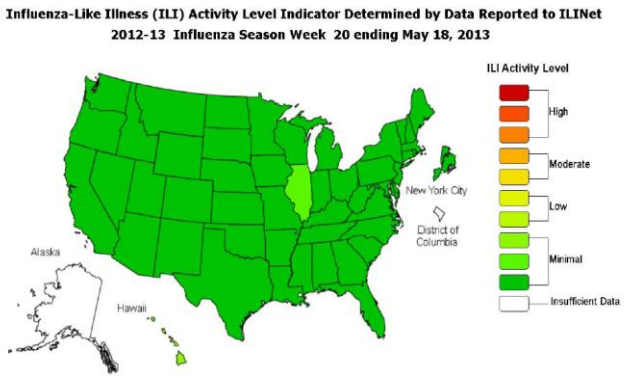
# Iowa Influenza Surveillance Network (IISN)

## Influenza-like Illness (ILI) and Other Respiratory Viruses
## Weekly Activity Report
## For the week ending May 18, 2013, Week 20

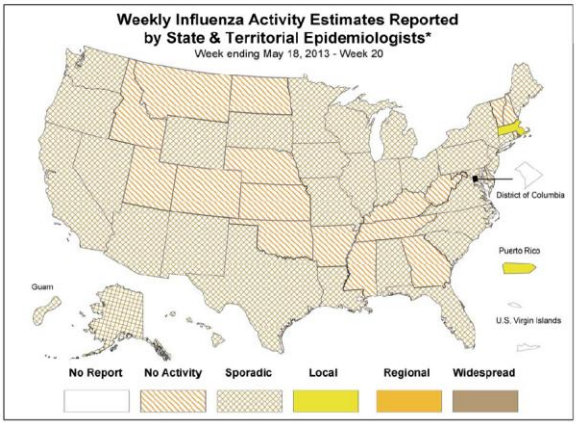
## Quick Stats for this reporting week

| | |
|---|---|
| **Iowa activity level[1]** | **Sporadic** |
| Percent of outpatient visits for ILI[2] | 0.0 % (baseline 2.1%) |
| Percent of influenza rapid test positive | 1.5% (1/66) |
| Percent of RSV rapid tests positive | 2.6% (1/39) |
| Percent school absence due to illness | 1.5% |
| Number of schools with ≥10% absence due to illness | 0 |
| Influenza-associated hospitalizations* | 0/5,854 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




*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

This is the last weekly report for the 2012-2013 season; however monthly summary reports will continue throughout the summer. For this reporting week, there were no cases confirmed by the State Hygienic Laboratory, but one rapid positive influenza case was reported. The proportion of outpatient visits due to influenza-like illness (ILI) decreased to 0.0 percent. There were no influenza-associated hospitalizations reported from sentinel hospitals for this reporting period. A total of 980 hospitalizations have been reported this season.

Eleven cases of rhinovirus/enterovirus, five cases of human metapneumovirus, four cases of adenovirus, two cases of parainfluenza 1 and three cases of parainfluenza3 were reported this week. Thus far this season, other respiratory viruses that have been identified include adenovirus, rhinovirus/enterovirus, parainfluenza 1-3, respiratory syncytial virus (RSV), and human metapneumovirus (hMPV).

## National activity summary - www.cdc.gov

**Synopsis:** During week 20 (May 12-18, 2013), influenza activity remained low in the United States.

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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.

- **Viral Surveillance**: Of 2,104 specimens tested and reported by collaborating laboratories, 68 (3.2 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**: Seven pediatric deaths were reported.
- **Influenza-Associated Hospitalizations:** A cumulative rate for the season of 44.3 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. Of reported hospitalizations, about 50 percent were among adults 65 years and older.
- **Outpatient Illness Surveillance**: The proportion of outpatient visits for influenza-like illness (ILI) was 0.9 percent. This is below the national baseline of 2.2 percent. All 10 regions reported ILI below region-specific baseline levels. Forty-nine states and New York City experienced minimal activity, and one state and the District of Columbia had insufficient data.
- **Geographic Spread of Influenza**: Puerto Rico and one state reported local influenza activity; Guam and 31 states reported sporadic influenza activity; 18 states reported no influenza activity, and the District of Columbia and the U.S. Virgin Islands did not report.

## International activity summary - www.who.int

The influenza season is gradually coming to an end with inter seasonal levels seen in much of North America, Europe, and northern Asia though low level persistent transmission was still observed in a few countries. The persistence of transmission at low levels in the northern hemisphere temperate regions has been associated with increasing numbers of influenza type B virus appearing late in the season across North America and parts of Europe. Prior to this, influenza A (H3N2) was the most commonly detected virus in North America, A (H1N1) pdm09 in Europe, and both in varying proportions in different countries of northern Asia. Low levels of influenza activity continued to be reported across the tropical regions of the world and activity in countries of the southern hemisphere remained at inter-seasonal levels. The majority of influenza A viruses characterized so far this season have been antigenically related to those contained in the current trivalent vaccine. Among the B viruses characterized, those that were of the Yamagata lineage were antigenically related to the viruses recommended for the trivalent vaccine, although 10-30 percent of reported B viruses were of the Victoria lineage. Only very low numbers of oseltamivir and zanamivir resistant viruses have been detected so far this season. In China, a total of 131 cases of H7N9 have been reported with 36 deaths to date. A summary review of the Northern Hemisphere influenza season is expected to be published in the World Epidemiological Report on 31 May 2013.

## 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 9/2/12* |
|---|---|---|
| **Flu A** | 0 (0%) | 1,612 (36%) |
| A (2009 H1N1) | 0 (0%) | 16 (<1%) |
| A (H3) | 0 (0%) | 1,509 (34%) |
| A (H3N2) variant | 0 (0%) | 1 (<1%) |
| Subtyping not reported | 0 (0%) | 86 (2%) |
| **Flu B** | 0 (0%) | 368 (8%) |
| **Equivocal** | 0 (0%) | 27 (<1%) |
| **Indeterminate** | 0 (0%) | 28 (<1%) |
| **Negative** | 12 (100%) | 2,469 (55%) |
| **Total** | 12 | 4,504 |

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

| *Age group* | *Flu A (2009 H1N1)* | *Flu A (H3)* | *Flu A (H3N2) Variant* | *Flu A (no typing)* | *Flu B* |
|---|---|---|---|---|---|
| ***0-4*** | 5 (31%) | 184 (12%) | * (*%) | 7 (8%) | 72 (20%) |
| ***5-17*** | 3 (19%) | 280 (19%) | * (*%) | 5 (6%) | 131 (36%) |
| ***18-24*** | 0 (0%) | 115 (8%) | 0 (0%) | 6 (7%) | 32 (9%) |
| ***25-49*** | 4 (25%) | 269 (18%) | 0 (0%) | 7 (8%) | 55 (15%) |
| ***50-64*** | 2 (13%) | 169 (11%) | 0 (0%) | 16 (19%) | 27 (7%) |
| ***>64*** | 2 (13%) | 488 (32%) | 0 (0%) | 45 (52%) | 51 (14%) |
| ***Total*** | 16 | 1,509 | 1 | 86 | 368 |

* 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

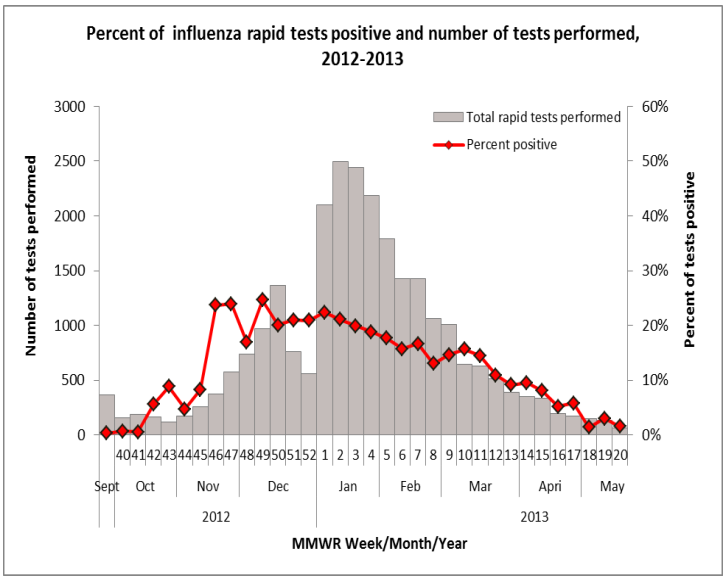
**Table 3. Number of positive results for non-influenza respiratory virus isolated by the State Hygienic Laboratory, Mercy Dunes in Sioux City, and Iowa Methodist Medical Center**

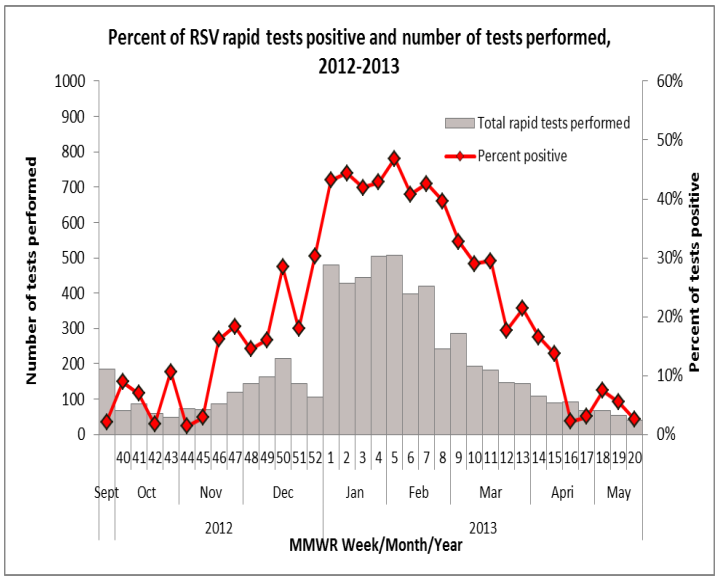
| | *Current week* | *Cumulative since 9/2/12* |
|---|---|---|
| ***Adenovirus*** | 4 | 40 |
| ***Parainfluenza Virus Type 1*** | 2 | 5 |
| ***Parainfluenza Virus Type 2*** | 0 | 31 |
| ***Parainfluenza Virus Type 3*** | 3 | 54 |
| ***Rhinovirus/Enterovirus*** | 11 | 214 |
| ***Respiratory syncytial virus (RSV)*** | 0 | 582 |
| ***human metapneumovirus (hMPV)*** | 5 | 53 |

**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*** | 7 | 0 | 0 | 0 | 0.0% | 5 | 0 | 0.0% |
| ***Region 2*** | 3 | 0 | 0 | 0 | 0.0% | 1 | 0 | 0.0% |
| ***Region 3*** | 3 | 0 | 0 | 0 | 0.0% | 1 | 0 | 0.0% |
| ***Region 4*** | 2 | 0 | 0 | 0 | 0.0% | 0 | 0 | 0.0% |
| ***Region 5*** | 9 | 0 | 0 | 0 | 0.0% | 1 | 0 | 0.0% |
| ***Region 6*** | 42 | 0 | 1 | 0 | 2.4% | 31 | 1 | 3.2% |

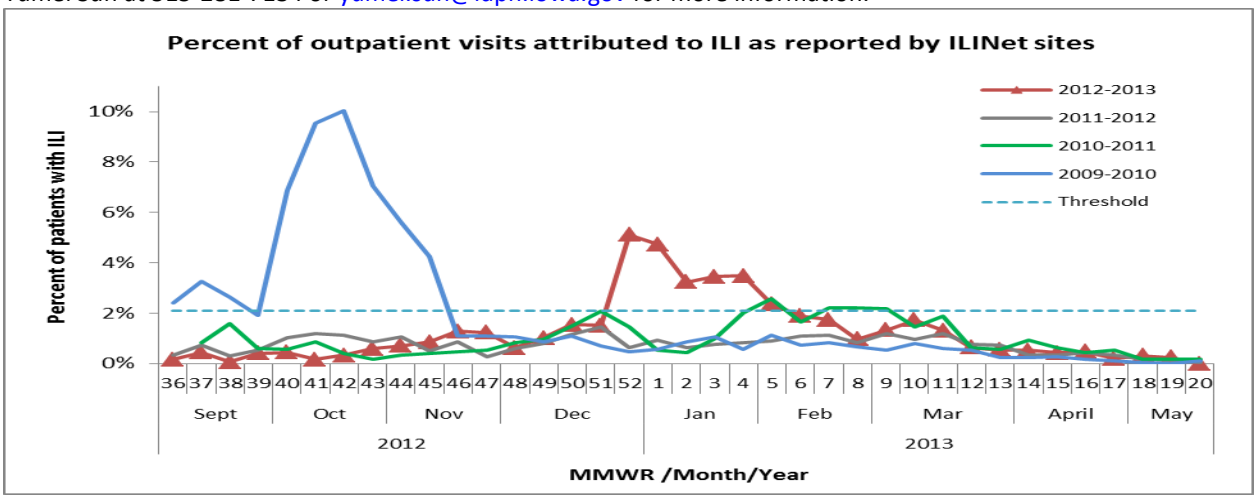
*Region 1- Boone, Calhoun, Carroll, Dallas, Greene, Grundy, Hamilton, Hardin, Jasper, Marshall, Polk, Poweshiek, Story, Tama, Warren, Webster; **Region 2**- Allamakee, Bremer, Butler, Cerro Gordo, Chickasaw, Emmet, Fayette, Floyd, Franklin, Hancock, Howard, Humboldt, Kossuth, Mitchell, Winnebago, Winneshiek, 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.



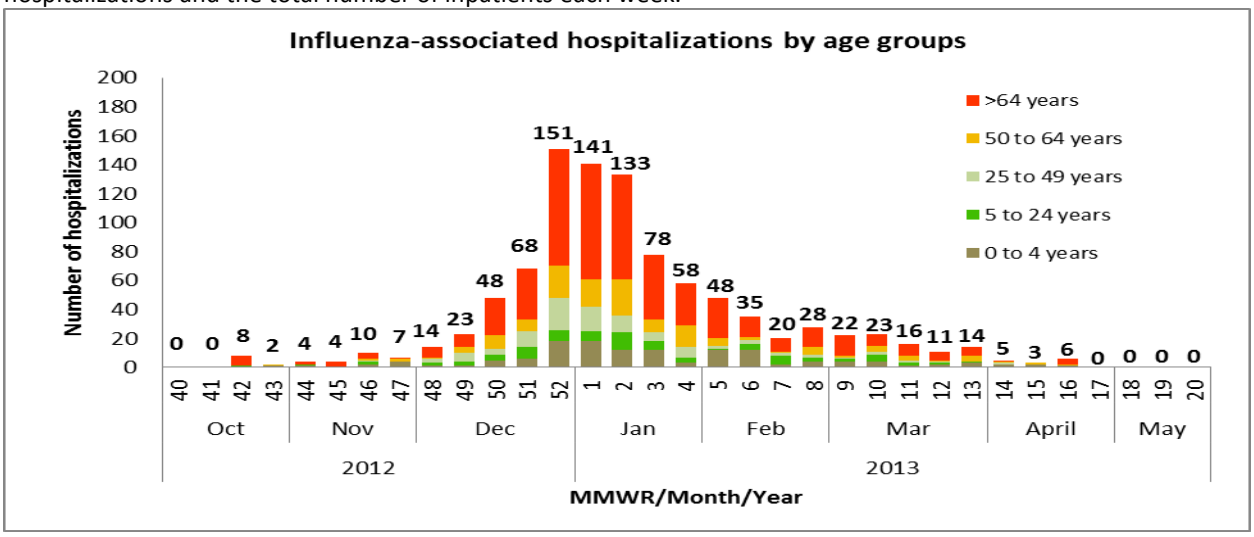
## Outpatient health care provider surveillance program (ILINet)

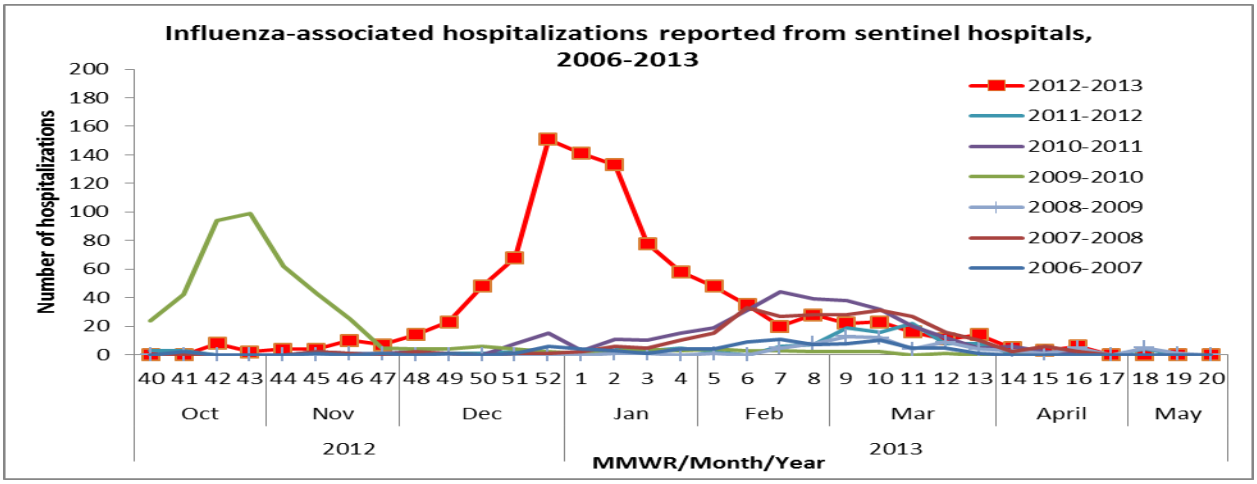
Outpatient health care providers who participate in the ILINet (a national influenza surveillance program) report the number of patients seen with influenza-like illness and the total number of patient visits each week. This system is a key part of Iowa's influenza surveillance. Iowa health care providers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




## Influenza-associated hospitalizations

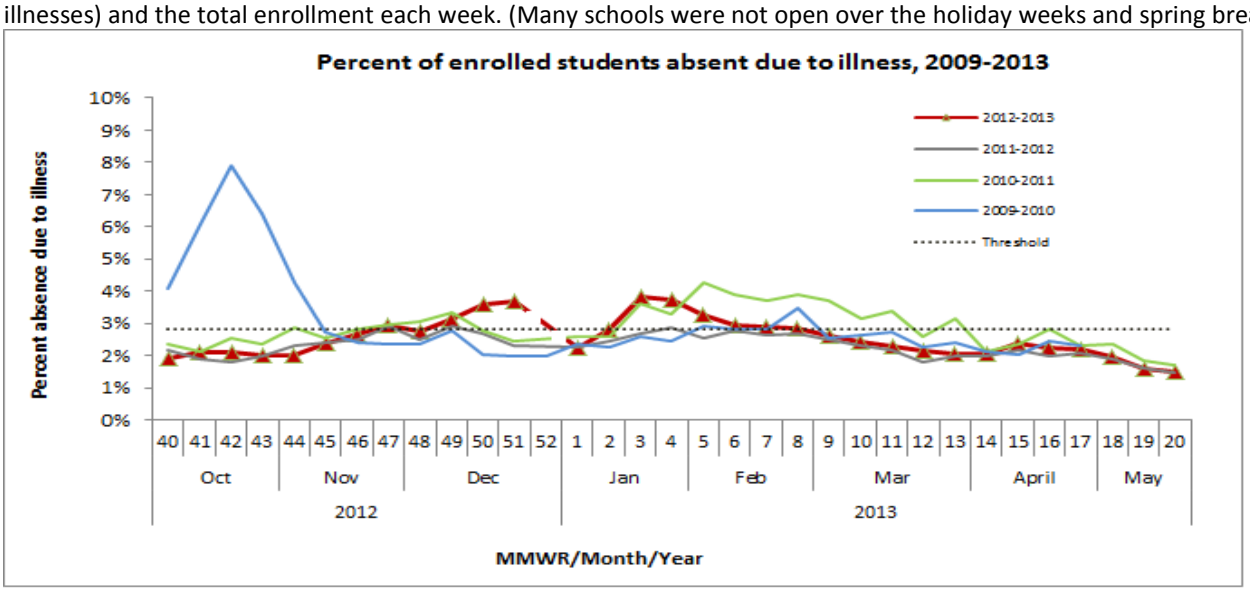
Twenty-three sentinel hospitals that participate in IISN voluntarily track and report the number of influenza-associated hospitalizations and the total number of inpatients each week.



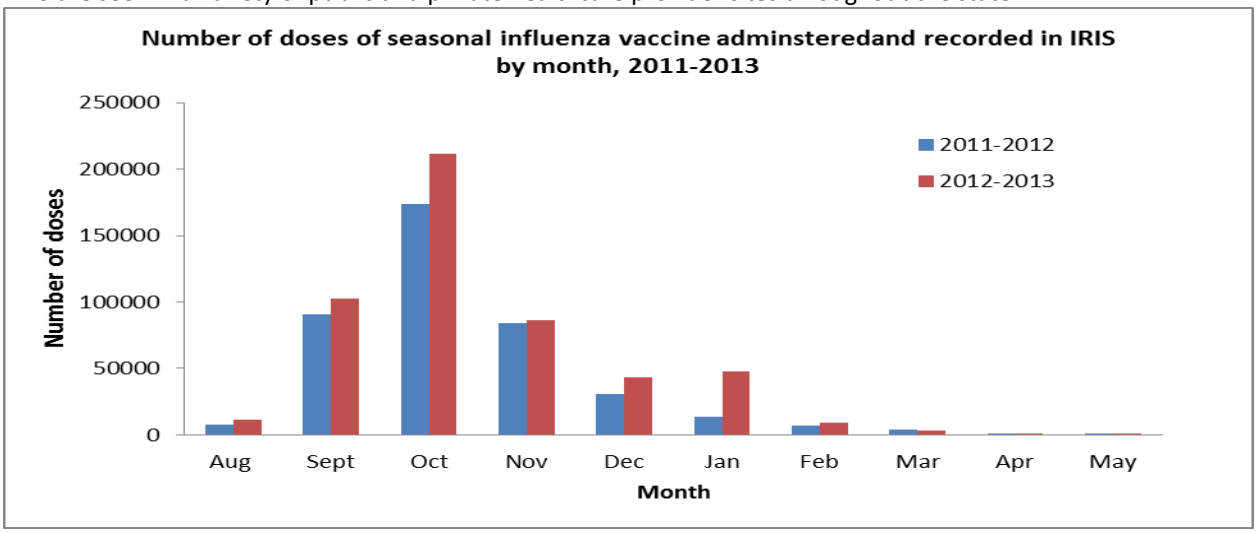
## School surveillance program

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. (Many schools were not open over the holiday weeks and spring break.)




## 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 2012-2013 season is only up to 5/23/2013 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