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

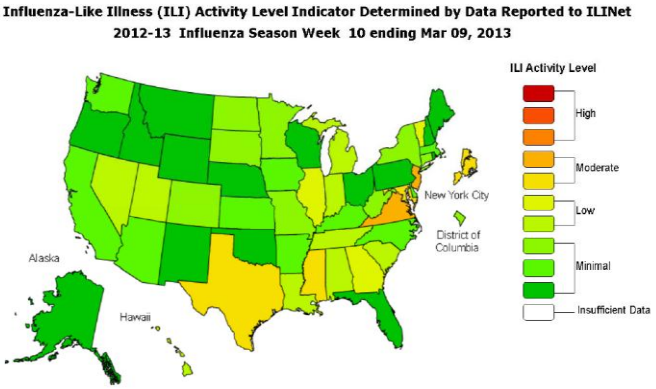
Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses
Weekly Activity Report
For the week ending March 9, 2013, Week 10

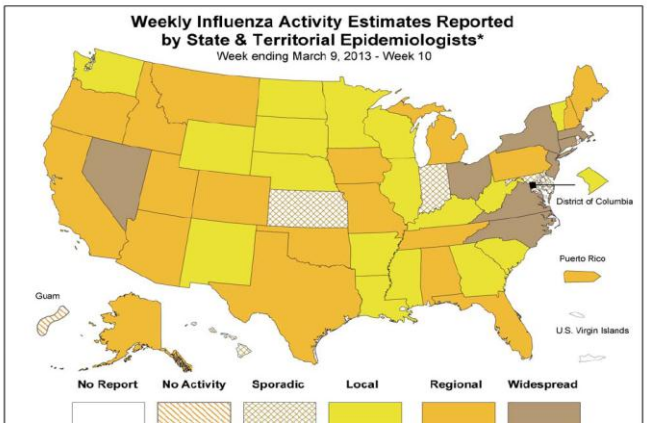
Quick Stats for this reporting week

Iowa activity level[1]	**Regional**
Percent of outpatient visits for ILI[2]	1.7 % (baseline 2.1%)
Percent of influenza rapid test positive	15.6% (100/641)
Percent of RSV rapid tests positive	29.0% (56/193)
Percent school absence due to illness	2.4%
Number of schools with ≥10% absence due to illness	0
Influenza-associated hospitalizations*	23/6,763 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

Influenza activity in Iowa remains regional. For this reporting week, the State Hygienic Laboratory (SHL) confirmed a total of 24 cases of seasonal influenza, including eight influenza A (H3N2) and 16 influenza B. The proportion of outpatient visits due to influenza-like illness (ILI) increased to 1.7 percent, but was below the regional baseline of 2.1 percent. The number of influenza-associated hospitalizations reported from sentinel hospitals also increased slightly to 23. A total of 925 hospitalizations have been reported this season. In addition, six cases of respiratory syncytial virus (RSV), three cases of rhinovirus/enterovirus, and one case of parainfluenza 2 were detected during this reporting week. Thus far this season, the other respiratory viruses that have been identified include adenovirus, rhinovirus/enterovirus, parainfluenza 2-3, RSV, and human metapneumovirus (hMPV).

National activity summary - www.cdc.gov

Synopsis: During week 10 (March 3 – 9, 2013), influenza activity remained elevated in the United States, but decreased in most areas.

- **Viral Surveillance**: Of 5,747 specimens tested and reported by collaborating laboratories, 821 (14.3 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 above the epidemic threshold.
- **Influenza-Associated Pediatric Deaths**: Twelve pediatric deaths were reported.
- **Influenza-Associated Hospitalizations:** A cumulative rate for the season of 39.6 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. Of reported hospitalizations, 51 percent were among adults 65 years and older.
- **Outpatient Illness Surveillance**: The proportion of outpatient visits for influenza-like illness (ILI) was 2.6 percent. This is above the national baseline of 2.2 percent. Six of 10 regions reported ILI at or above region-specific baseline levels. Five states and New York City experienced moderate activity; 12 states experienced low activity; and 33 states and the District of Columbia experienced minimal activity.
- **Geographic Spread of Influenza**: Eight states reported widespread influenza activity; Puerto Rico and 19 states reported regional influenza activity; the District of Columbia and 17 states reported local influenza activity; six states reported sporadic influenza activity; Guam reported no influenza activity, and the U.S. Virgin Islands did not report.

International activity summary - www.who.int

Influenza activity in North America continued to decrease overall, though activity remained high in some areas. The proportion of influenza B increased slightly, but influenza A (H3N2) was still the most commonly detected virus subtype. The season has been more severe than average in the United States, with a notably high number of pneumonia and influenza-related hospitalizations among adults aged 65 years and older. Influenza activity in Europe decreased in some northern and western countries but continued to increase in the eastern part of the region. While influenza A (H1N1) pdm09 was the most commonly detected virus overall, notable exceptions included Denmark, Ireland and the United Kingdom, which reporting much more influenza A (H3N2) and influenza B than the rest of Europe, and Bulgaria, Italy, and Spain which reported more influenza B than A. Excess mortality for the 14 countries reporting to the European Mortality Monitoring project has been higher than average for individuals over the age of 65 years but not as high as the previous two seasons. Influenza activity throughout the temperate region of Asia decreased, except in Mongolia where it appears to have reached a peak. Only low levels of influenza activity were reported across the tropical regions of the world and activity in countries of the southern hemisphere remained at inter-seasonal levels. The WHO Consultation on the Composition of Influenza Virus Vaccines for the Northern Hemisphere 2013–2014 took place during the third week of February, and updates to the A (H3N2) and B/Yamagata lineage components were recommended.

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

	Current week	*Cumulative since 9/2/12*
Flu A	8 (11%)	1,597 (39%)
A (2009 H1N1)	0 (0%)	15 (<1%)
A (H3)	8 (11%)	1,483 (37%)
A (H3N2) variant	0 (0%)	1 (<1%)
Subtyping not reported	0 (0%)	98 (2%)
Flu B	16 (21%)	319 (8%)
Equivocal	0 (0%)	0 (0%)
Indeterminate	1 (1%)	24 (<1%)
Negative	51 (67%)	2,121 (52%)
Total	76	4,061

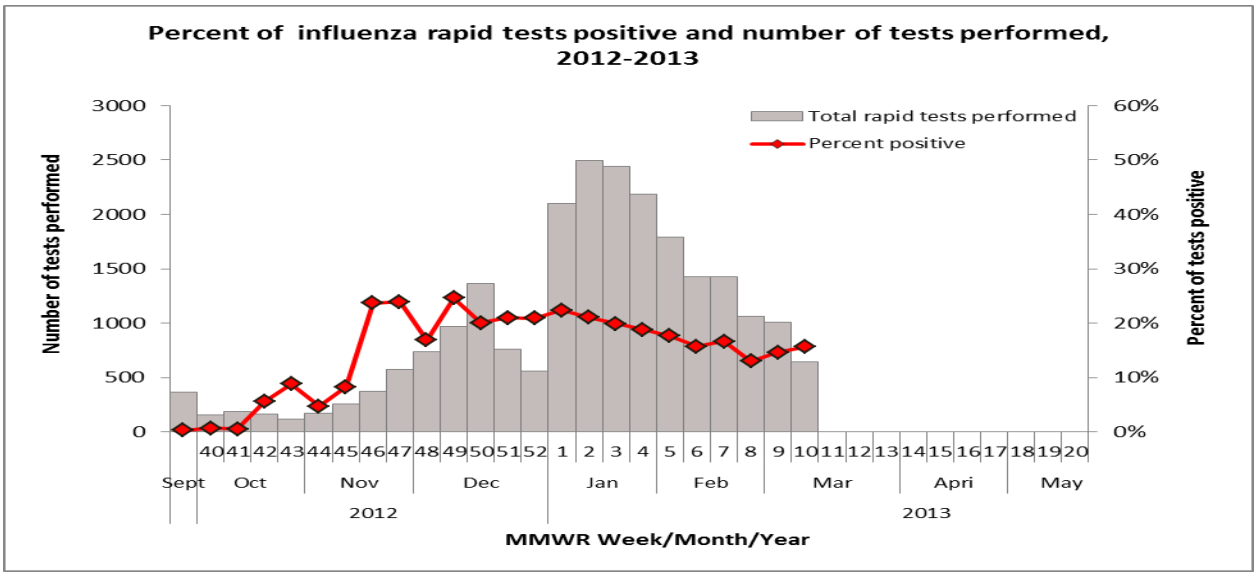
Table 2. Influenza viruses by age group 9/2/12 to present week

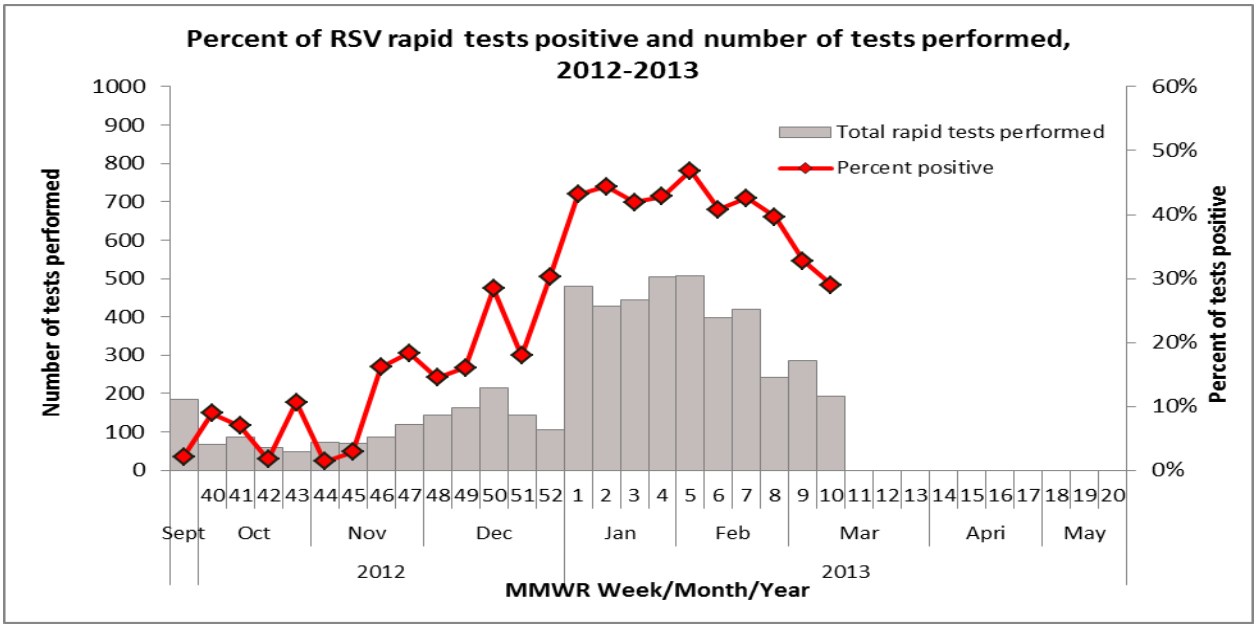
Age group	*Flu A (2009 H1N1)*	*Flu A (H3)*	*Flu A (H3N2) Variant*	*Flu A (no typing)*	*Flu B*
0-4	5 (33%)	183 (12%)	* (*%)	7 (7%)	58 (18%)
5-17	3 (20%)	278 (19%)	* (*%)	7 (7%)	119 (37%)
18-24	0 (0%)	111 (8%)	0 (0%)	9 (9%)	29 (9%)
25-49	4 (27%)	265 (18%)	0 (0%)	9 (9%)	48 (15%)
50-64	1 (7%)	168 (11%)	0 (0%)	17 (17%)	24 (8%)
>64	2 (13%)	474 (32%)	0 (0%)	49 (50%)	41 (13%)
Total	15	1,483	1	98	319

* 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

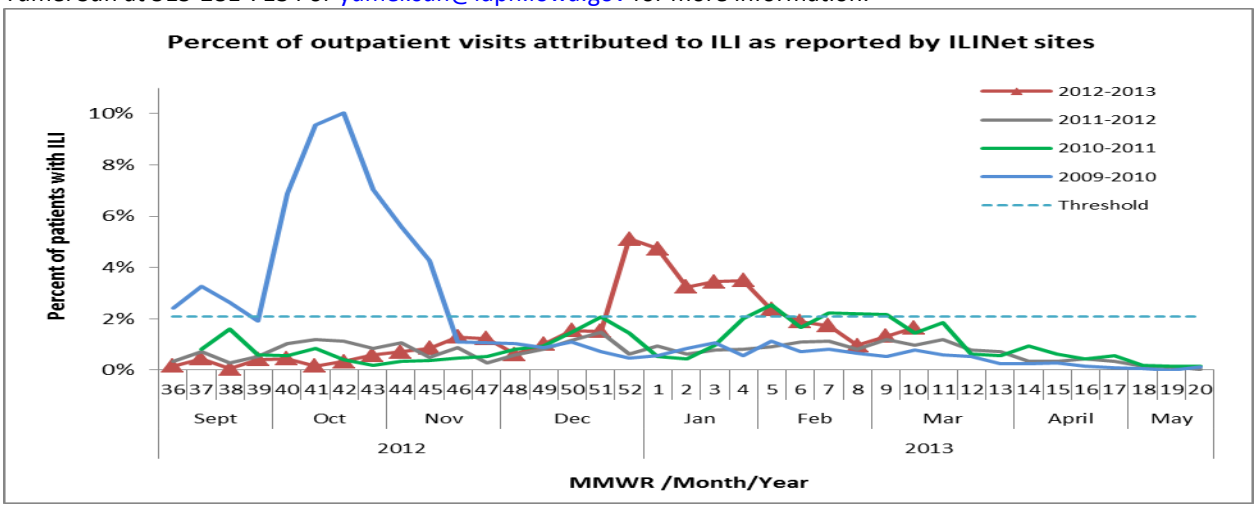
	Current week	*Cumulative since 9/2/12*
Adenovirus	0	25
Parainfluenza Virus Type 1	0	3
Parainfluenza Virus Type 2	1	30
Parainfluenza Virus Type 3	0	42
Rhinovirus/Enterovirus	3	88
Respiratory syncytial virus (RSV)	6	536
human metapneumovirus (hMPV)	0	19





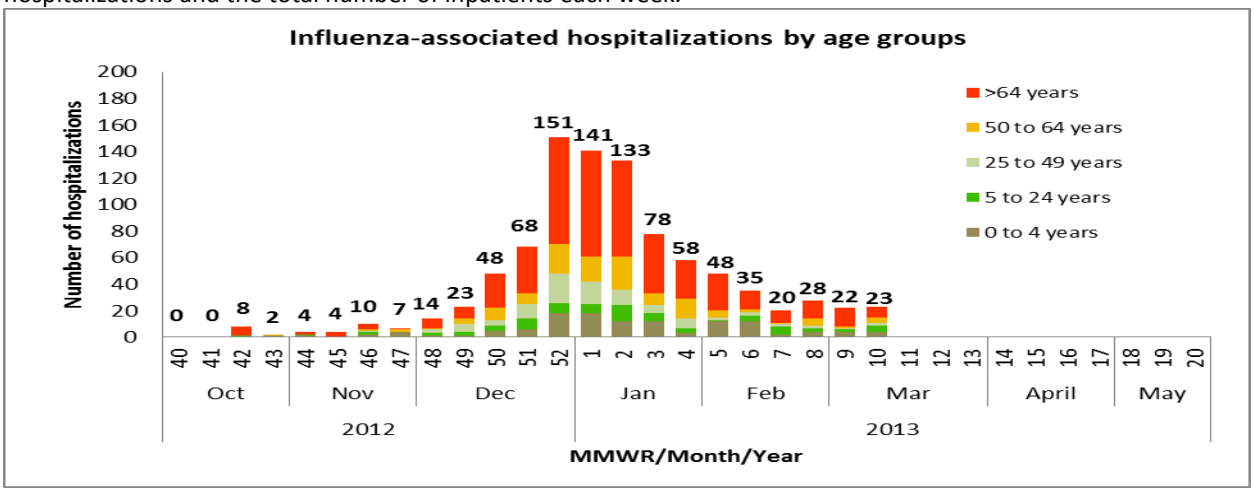
Outpatient health care provider surveillance program (ILINet)

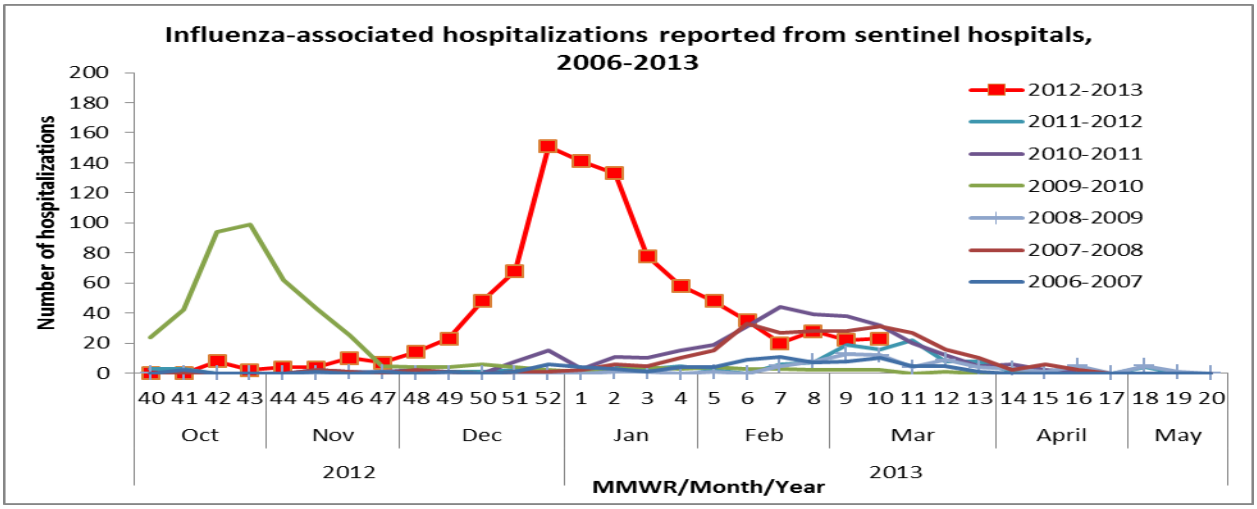
Outpatient health care providers who participate in the ILINet (a national influenza surveillance program) report the number of patients seen with influenza-like illness and the total number of patient visits each week. This system is a key part of Iowa's influenza surveillance. Iowa health care providers 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

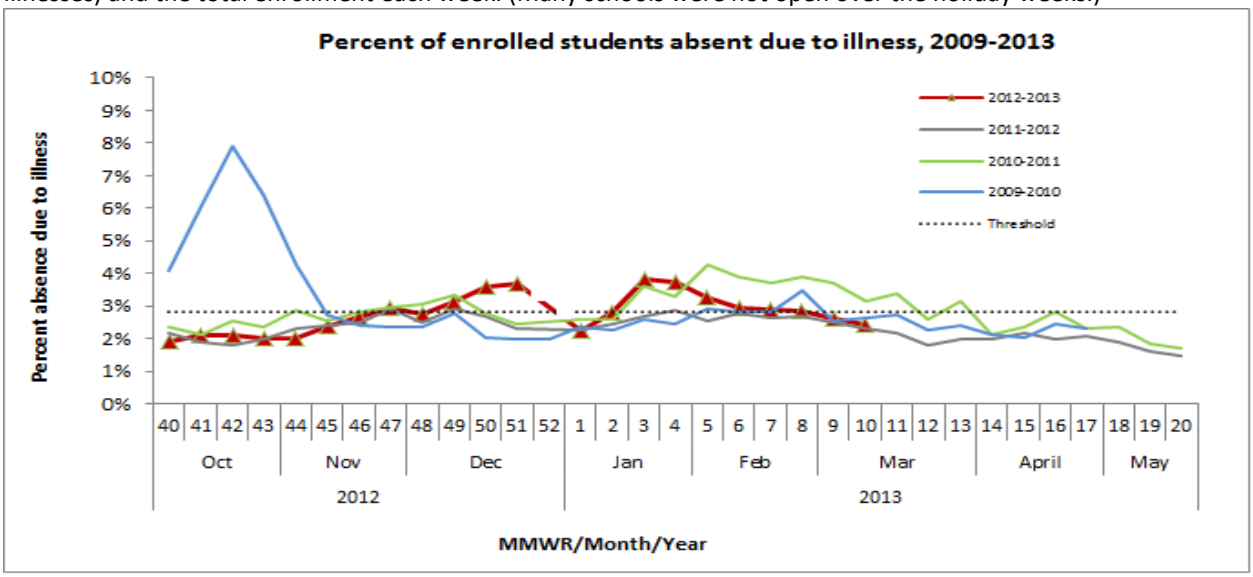
Twenty-one sentinel hospitals that participate in IISN voluntarily track and report the number of influenza-associated hospitalizations and the total number of inpatients each week.





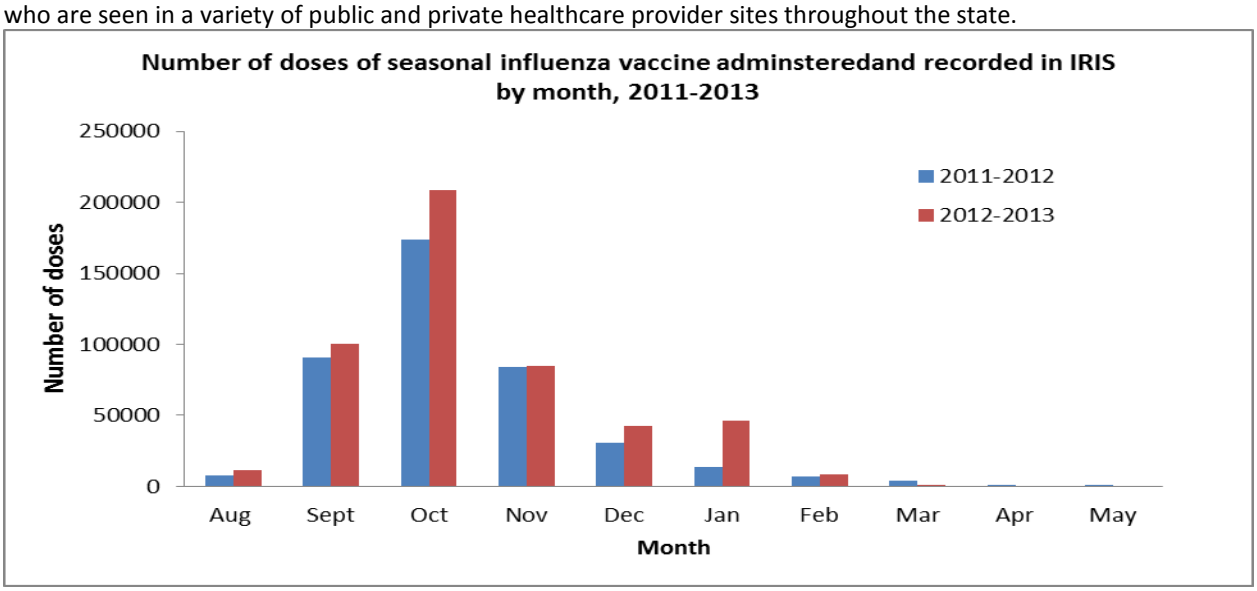
School surveillance program

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



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 3/14/2013 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 ≥10% absence due to illness must report.)

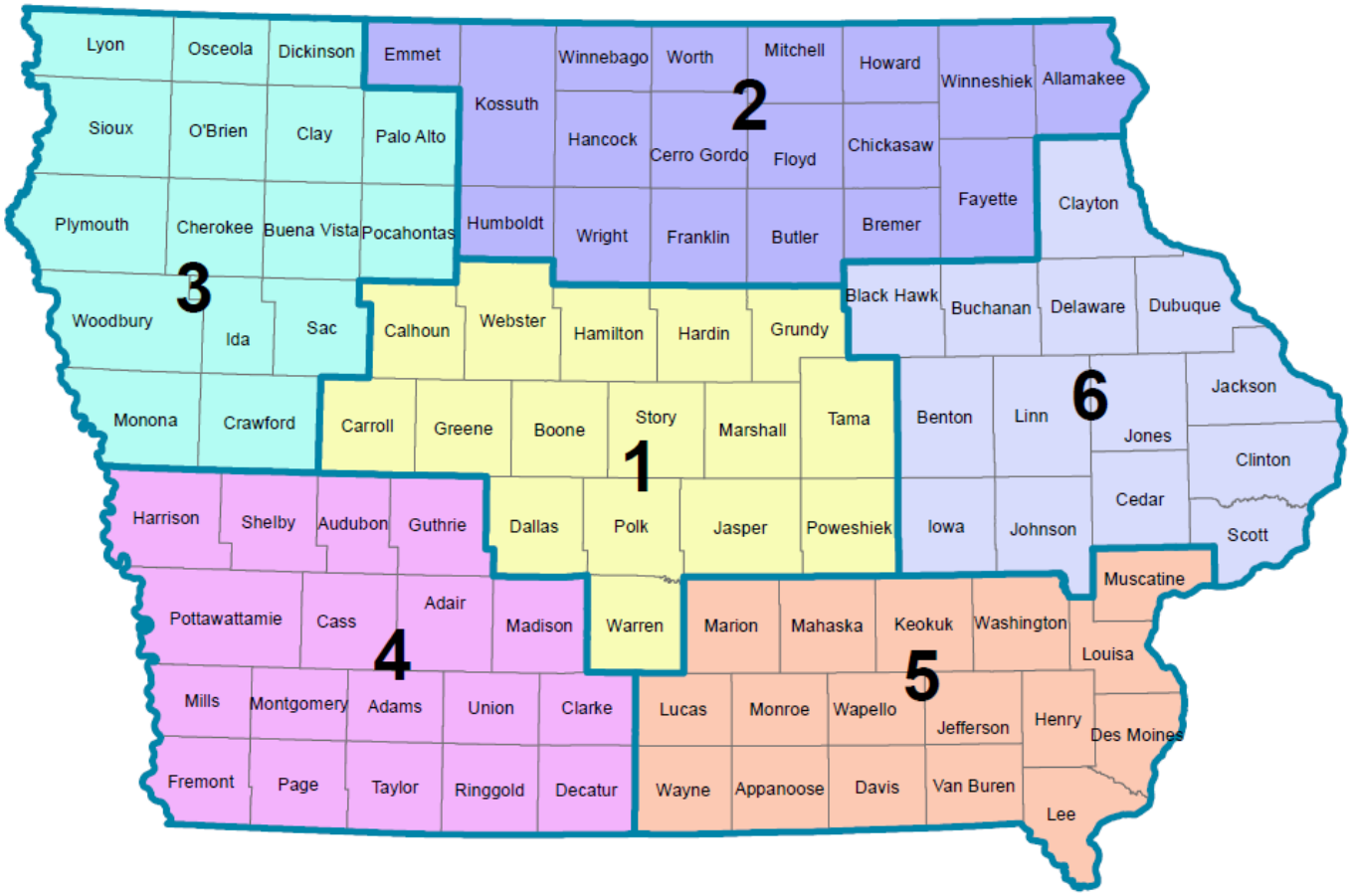
Region 1 (Central)	
Influenza-associated hospitalizations	9/4,107
Percent of influenza rapid test positive	17.0% (18/106)
Percent of RSV rapid tests positive	31.3% (10/32)
Schools with ≥10% absence due to illness	0

Region 2 (North Central)	
Influenza-associated hospitalizations	0/499
Percent of influenza rapid test positive	26.7% (8/30)
Percent of RSV rapid tests positive	14.3% (1/7)
Schools with ≥10% absence due to illness	0

Region 3 (Northwest)	
Influenza-associated hospitalizations	0/117
Percent of influenza rapid test positive	18.1% (17/94)
Percent of RSV rapid tests positive	38.3% (18/47)
Schools with ≥10% absence due to illness	0

Region 4 (Southwest)	
Influenza-associated hospitalizations	0/30
Percent of influenza rapid test positive	16.9% (12/71)
Percent of RSV rapid tests positive	26.7% (8/30)
Schools with ≥10% absence due to illness	0

Region 5 (Southeast)	
Influenza-associated hospitalizations	0/39
Percent of influenza rapid test positive	16.2% (6/37)
Percent of RSV rapid tests positive	33.3% (2/6)
Schools with ≥10% absence due to illness	0

Region 6 (East Central)	
Influenza-associated hospitalizations	14/1,971
Percent of influenza rapid test positive	12.9%(39/303)
Percent of RSV rapid tests positive	23.9% (17/71)
Schools with ≥10% absence due to illness	0

Iowa map with regions and in red the number of schools that have ≥10% absence due to illness.