



Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report



For the week ending February 13, 2016 - Week 6

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

| Quick Stats | |
|--|-----------------------------|
| Percent of outpatient visits for ILI ¹ | 0.56% (baseline 1.7%) |
| Percent of influenza rapid test positive | 10.7% (105/984) |
| Percent of RSV rapid tests positive | 39.4% (149/378) |
| Percent school absence due to illness ² | 2.44% |
| Number of schools with ≥10% absence due to illness | 1 |
| Influenza-associated hospitalizations ³ | 8/2,171 inpatients surveyed |
| Influenza-associated mortality -all ages (Cumulative) ⁴ | 7 |
| Influenza-associated pediatric mortality (Cumulative) | 0 |

¹ ILI: Influenza-like illness is defined as a fever of ≥100° F as well as cough and/or sore throat.
² Percent school absence due to illness are reported through a weekly survey of Iowa sentinel schools
³ Hospitalizations due to influenza are voluntarily reported through a weekly survey of Iowa sentinel hospitals
⁴ Deaths in which influenza is listed on the death certificate. This is an underestimate of influenza-related deaths.
 Cumulative is 10/4/2015-current week.

| Iowa Influenza Geographic Spread ⁵ |
|---|
| No Activity |
| Sporadic |
| Local |
| Regional |
| Widespread |

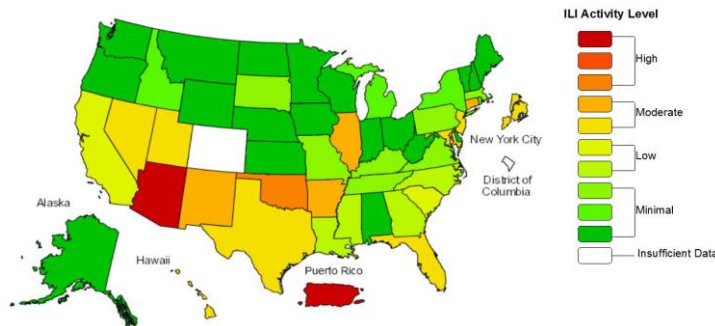
⁵This is based on CDC's activity estimates definition www.cdc.gov/flu/weekly/overview.htm

Iowa statewide activity summary:

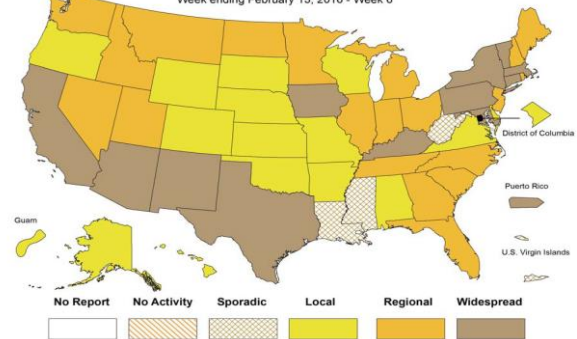
Influenza remains widespread in Iowa. For this reporting week, the State Hygienic Laboratory (SHL) confirmed 24 cases of influenza A and 1 case of influenza B. Eight influenza-related hospitalizations were reported from sentinel hospitals. The proportion of outpatient visits due to influenza-like illness (ILI) was 0.56 percent which is below the regional baseline. One school reported 10 percent or greater absenteeism due to illness, which included influenza-like symptoms. No influenza outbreaks have been reported in Iowa long-term care facilities so far this influenza season. In this reporting week, 12 adenovirus, two parainfluenza virus type 1, one parainfluenza virus type 2, one parainfluenza virus type 3, two parainfluenza virus type 4, 18 rhinovirus/enterovirus, 65 RSV, and 20 hMPV were detected from surveillance sites.

National activity summary - (CDC):

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2015-16 Influenza Season Week 6 ending Feb 13, 2016



Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*
Week ending February 13, 2016 - Week 6



Synopsis: During week 6 (February 7-13, 2016), influenza activity increased in the United States.

Viral Surveillance: The most frequently identified influenza virus type reported by public health laboratories during week 6 was influenza A, with influenza A (H1N1)pdm09 viruses predominating. The percentage of respiratory specimens testing positive for influenza in clinical laboratories increased.

Pneumonia and Influenza Mortality: The proportion of deaths attributed to pneumonia and influenza (P&I) was below their system-specific epidemic threshold in both the NCHS Mortality Surveillance System and the 122 Cities Mortality Reporting System.

Influenza-associated Pediatric Deaths: Two influenza-associated pediatric deaths were reported.

Influenza-associated Hospitalizations: A cumulative rate for the season of 4.1 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 3.1 percent, which is above the national baseline of 2.1 percent. Nine of 10 regions reported ILI at or above region-specific baseline levels. Puerto Rico and two states experienced high ILI activity; New York City and 11 states experienced moderate ILI activity; 6 states experienced low ILI activity; 30 states experienced minimal ILI activity; and the District of Columbia and one state had insufficient data.

Geographic Spread of Influenza: The geographic spread of influenza in Puerto Rico and 12 states was reported as widespread; 20 states reported regional activity; the District of Columbia, Guam, and 15 states reported local activity; and the U.S. Virgin Islands and three states reported sporadic activity.

Detailed information can be found online at www.cdc.gov/flu/weekly/.

International activity summary - (WHO):

Globally, increasing levels of influenza activity continued to be reported in the temperate zones of the northern hemisphere with influenza A(H1N1)pdm09 as the most detected virus. Detailed information can be found online at www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/. It was last updated 02/08/2016.

Laboratory surveillance program:

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 sub-type of positive tests to the influenza surveillance network several times every week. In addition, SHL surveys clinical and reference labs on a weekly basis for the number of rapid-antigen tests performed, the number positive and the positive non-influenza virus tests. This report also includes the positive non-influenza virus tests reported from the Dunes Medical Laboratories at Mercy Medical Center in Sioux City.

Table 1: Influenza A viruses detected by SHL by age group

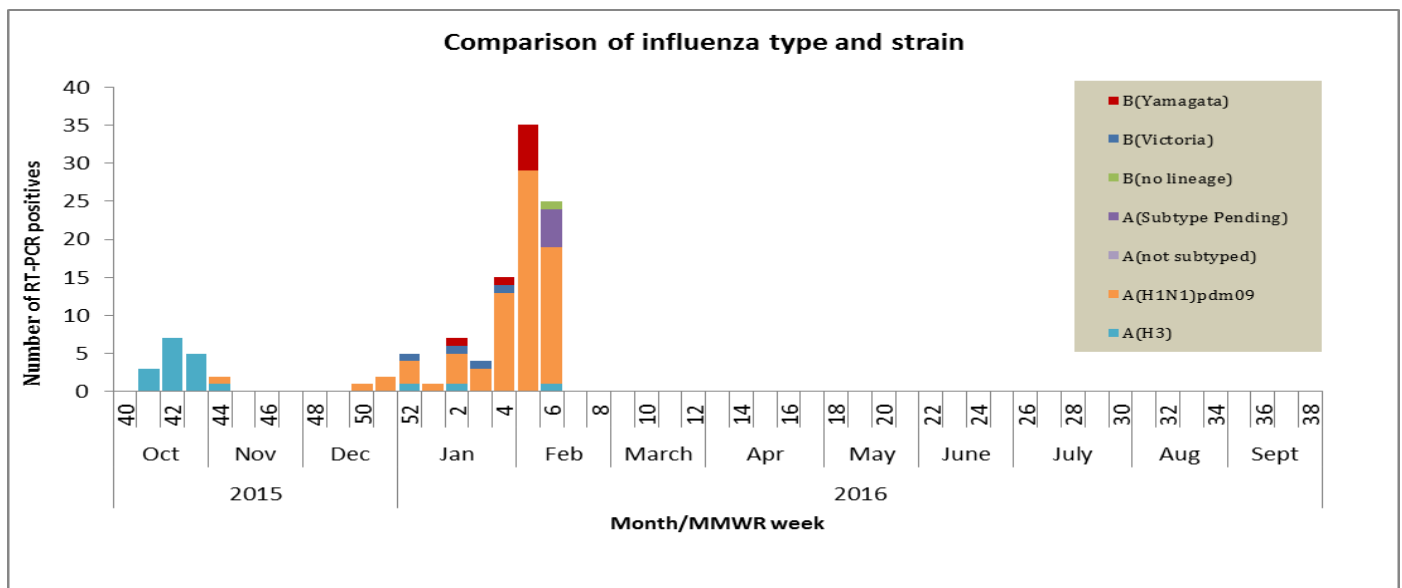
| Age Group | CURRENT WEEK | | | | CUMULATIVE (10/4/15 – CURRENT WEEK) | | | |
|--------------|--------------|----------|-----------------|--------------|-------------------------------------|-----------|-----------------|--------------|
| | Flu A | | | | Flu A | | | |
| | A(H1N1)pdm09 | A(H3) | Subtype Pending | Not subtyped | A(H1N1)pdm09 | A(H3) | Subtype Pending | Not subtyped |
| 0-4 | 1(6%) | 0(0%) | 1(20%) | 0(0%) | 15(20%) | 0(0%) | 1(20%) | 0(0%) |
| 5-17 | 3(17%) | 0(0%) | 1(20%) | 0(0%) | 13(17%) | 0(0%) | 1(20%) | 0(0%) |
| 18-24 | 1(6%) | 0(0%) | 0(0%) | 0(0%) | 6(8%) | 3(16%) | 0(0%) | 0(0%) |
| 25-49 | 11(61%) | 0(0%) | 2(40%) | 0(0%) | 30(40%) | 3(16%) | 2(40%) | 0(0%) |
| 50-64 | 2(11%) | 1(100%) | 1(20%) | 0(0%) | 9(12%) | 6(32%) | 1(20%) | 0(0%) |
| >64 | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 2(3%) | 7(37%) | 0(0%) | 0(0%) |
| Total | 18 | 1 | 5 | 0 | 75 | 19 | 5 | 0 |

*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
 Only cases of Iowa residents are included
 "Not subtyped" column is due to weak detections. This can be due to poor collection, timing of collection or stage of infection.

Table 2: Influenza B viruses detected by SHL by age group

| Age Group | CURRENT WEEK | | | CUMULATIVE (10/4/15 – CURRENT WEEK) | | |
|--------------|------------------|------------------|-----------------|-------------------------------------|------------------|-----------------|
| | Flu B | | | Flu B | | |
| | Victoria Lineage | Yamagata Lineage | Lineage Pending | Victoria Lineage | Yamagata Lineage | Lineage Pending |
| 0-4 | 0(0%) | 0(0%) | 0(0%) | 2(50%) | 2(25%) | 0(0%) |
| 5-17 | 0(0%) | 0(0%) | 0(0%) | 1(25%) | 2(25%) | 0(0%) |
| 18-24 | 0(0%) | 0(0%) | 0(0%) | 1(25%) | 0(0%) | 0(0%) |
| 25-49 | 0(0%) | 0(0%) | 1(100%) | 0(0%) | 1(13%) | 1(100%) |
| 50-64 | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 2(25%) | 0(0%) |
| >64 | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 1(13%) | 0(0%) |
| Total | 0 | 0 | 1 | 4 | 8 | 1 |

*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
 Only cases of Iowa residents are included



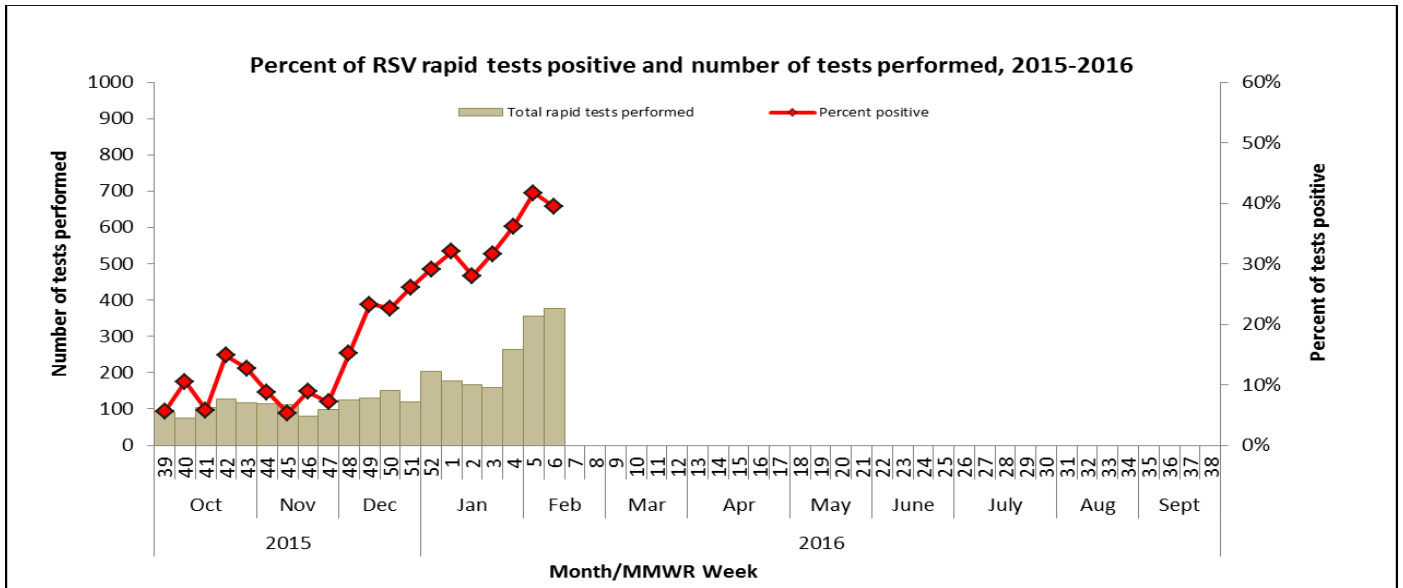
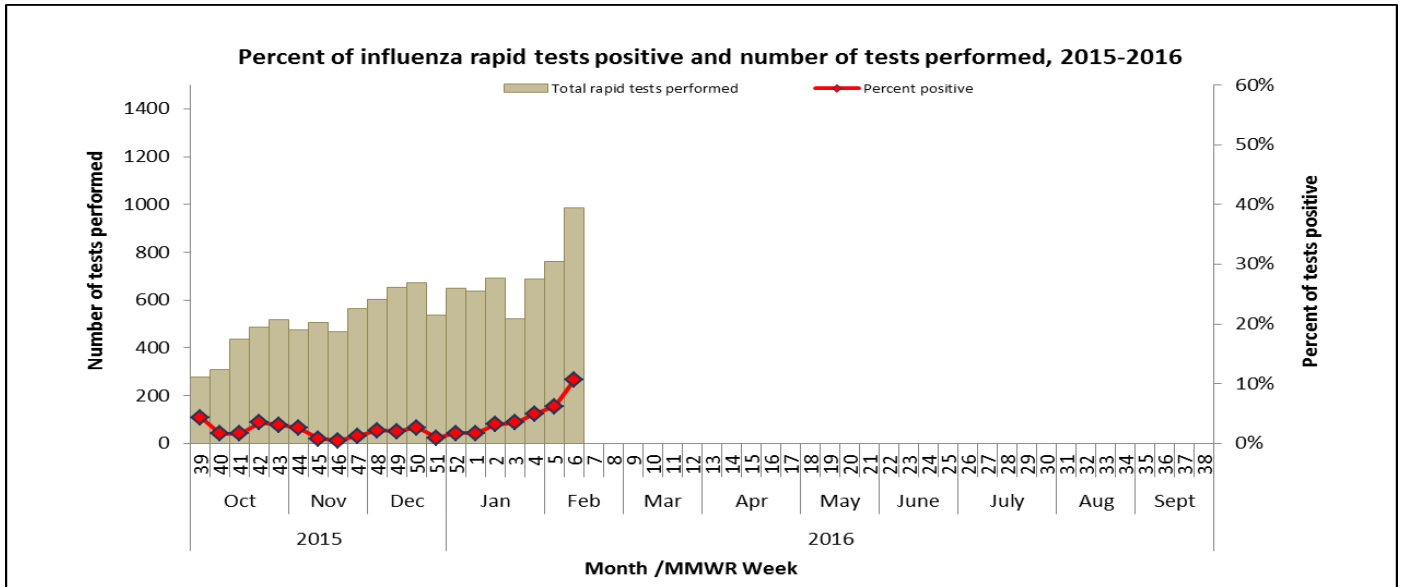
Rapid influenza and RSV test surveillance:

The State Hygienic Laboratory (SHL) runs a weekly web-based survey program where laboratorians report the number of influenza and respiratory syncytial virus (RSV) rapid tests performed and the number of tests positive. This table includes only the number of patients tested for influenza or RSV at laboratory surveillance sites throughout the state. This table does not provide case counts.

Table 2: Percent of influenza rapid tests positive and number of tests performed by region for the present week

| REGION* | RAPID ANTIGEN INFLUENZA TESTS | | | | RAPID ANTIGEN RSV TESTS | | |
|--------------------|-------------------------------|-----------|-----------|-------------|-------------------------|------------|-------------|
| | Tested | Flu A | Flu B | % Positive | Tested | Positive | % Positive |
| Region 1 (Central) | 131 | 11 | 2 | 9.9 | 67 | 31 | 46.3 |
| Region 2 (NE) | 23 | 0 | 1 | 4.3 | 12 | 4 | 33.3 |
| Region 3 (NW) | 40 | 1 | 0 | 2.5 | 22 | 6 | 27.3 |
| Region 4 (SW) | 66 | 6 | 0 | 9.1 | 17 | 9 | 52.9 |
| Region 5 (SE) | 107 | 7 | 1 | 7.5 | 49 | 19 | 38.8 |
| Region 6 (Eastern) | 617 | 57 | 19 | 12.3 | 211 | 80 | 37.9 |
| Total | 984 | 82 | 23 | 10.7 | 378 | 149 | 39.4 |

*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.



Non-influenza respiratory viruses:

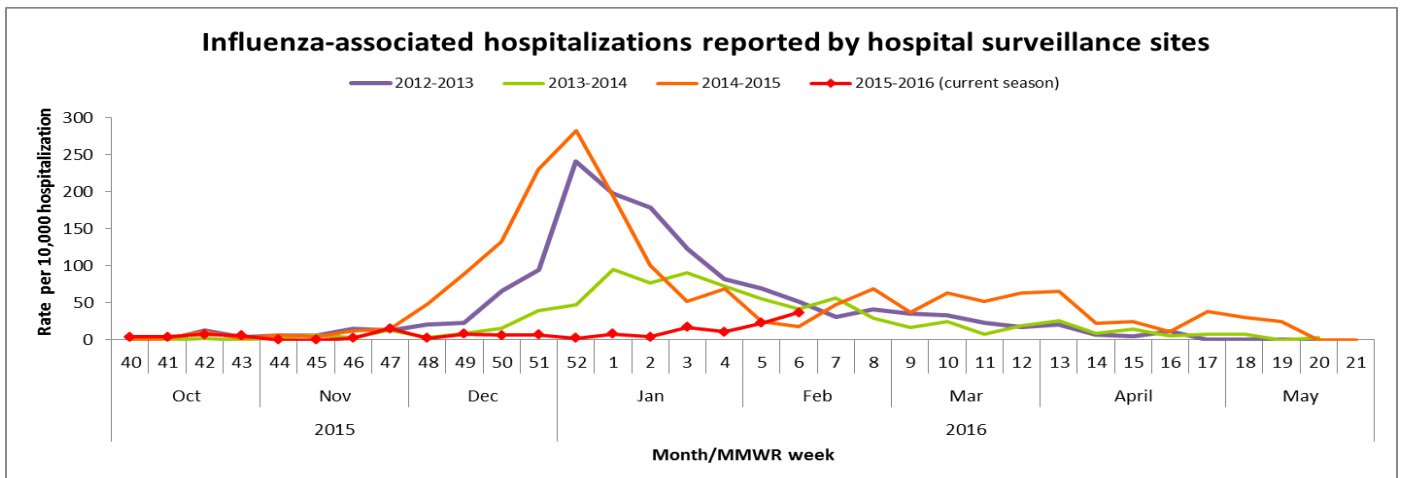
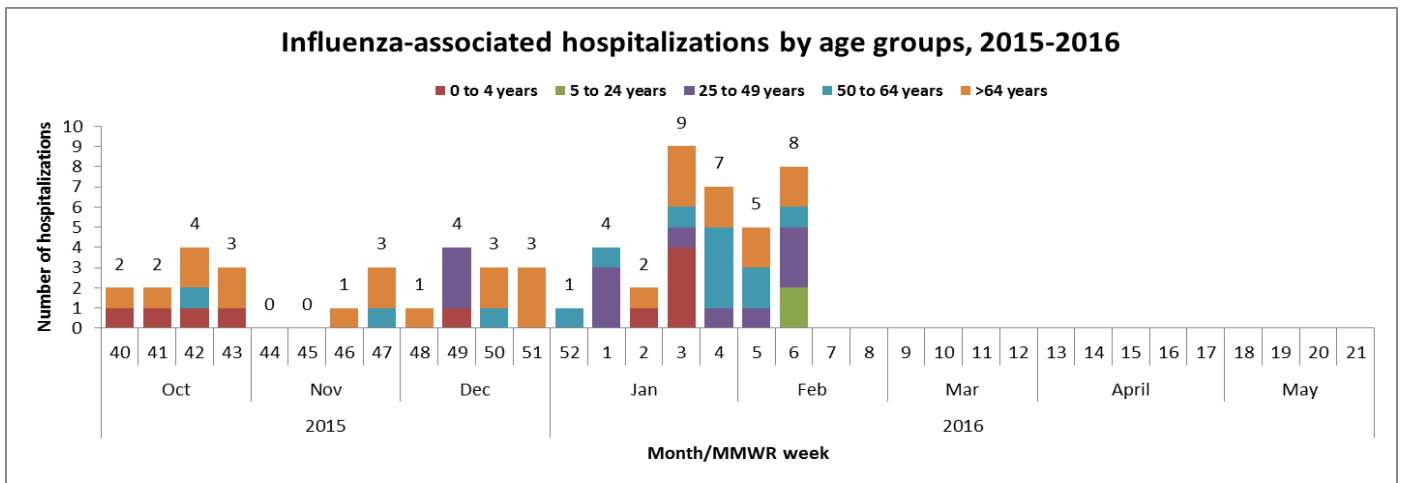
The State Hygienic Laboratory (SHL) runs a weekly web-based survey program where laboratorians report the number of positive tests for non-influenza respiratory viruses. This table also includes the positive non-influenza virus tests reported from the Dunes Medical Laboratories at Mercy Medical Center in Sioux City. The table includes only the number of positive tests at laboratory surveillance sites throughout the state. The table does not provide case counts.

| Viruses | CURRENT WEEK | CUMULATIVE (10/4/15 – CURRENT WEEK) |
|-----------------------------------|--------------|-------------------------------------|
| Adenovirus | 12 | 217 |
| Parainfluenza Virus Type 1 | 2 | 149 |
| Parainfluenza Virus Type 2 | 1 | 3 |
| Parainfluenza Virus Type 3 | 1 | 4 |
| Parainfluenza Virus Type 4 | 2 | 62 |
| Rhinovirus/Enterovirus | 18 | 567 |
| Respiratory syncytial virus (RSV) | 65 | 323 |
| Human metapneumovirus (hMPV) | 20 | 117 |
| Total | 121 | 1442 |

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.

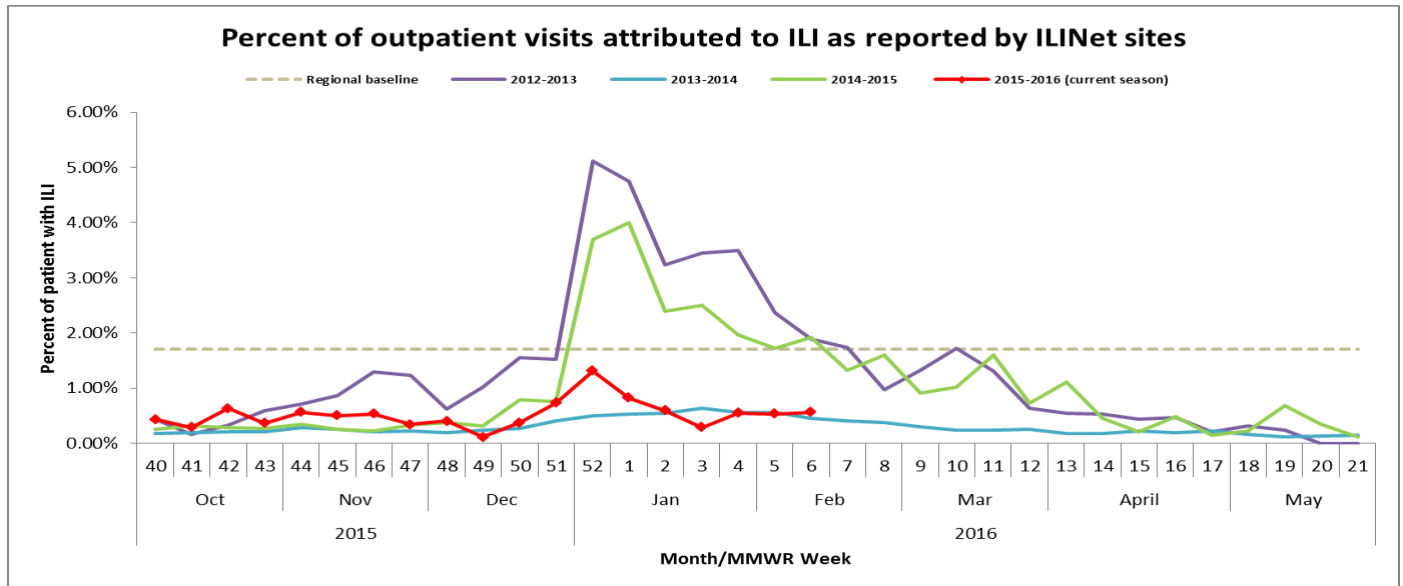
| AGE | CURRENT WEEK | CUMULATIVE (10/4/15 – CURRENT WEEK) |
|--------------|--------------|-------------------------------------|
| Age 0-4 | 0 | 10 |
| Age 5-24 | 2 | 2 |
| Age 25-49 | 3 | 12 |
| Age 50-64 | 1 | 13 |
| Age >64 | 2 | 25 |
| Total | 8 | 62 |



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 surveillance program should contact Julie Coughlin at 515-281-7134 or julie.coughlin@idph.iowa.gov for more information.

| Week | %ILI | Total ILI | Age 0-4 | Age 5-24 | Age 25-49 | Age 50-64 | Age >64 |
|-----------------------|------|-----------|---------|----------|-----------|-----------|---------|
| Week 6, ending Feb 13 | 0.56 | 14 | 3 | 5 | 3 | 2 | 1 |
| Week 5, ending Feb 6 | 0.53 | 8 | 3 | 2 | 2 | 1 | 0 |
| Week 4, ending Jan 30 | 0.55 | 13 | 5 | 8 | 0 | 0 | 0 |



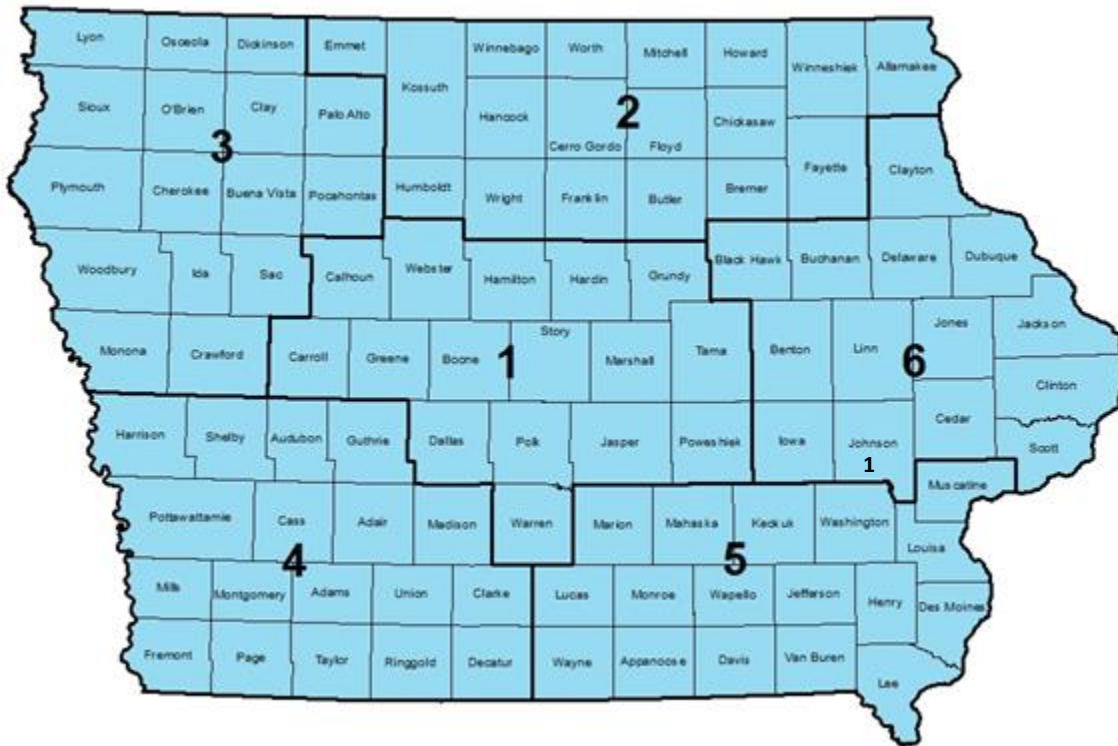
Long-term Care Outbreaks:

| REGION* | CURRENT WEEK | CUMULATIVE (10/4/15 – CURRENT WEEK) |
|--------------------|--------------|-------------------------------------|
| Region 1 (Central) | 0 | 0 |
| Region 2 (NE) | 0 | 0 |
| Region 3 (NW) | 0 | 0 |
| Region 4 (SW) | 0 | 0 |
| Region 5 (SE) | 0 | 0 |
| Region 6 (Eastern) | 0 | 0 |
| Total | 0 | 0 |

*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.

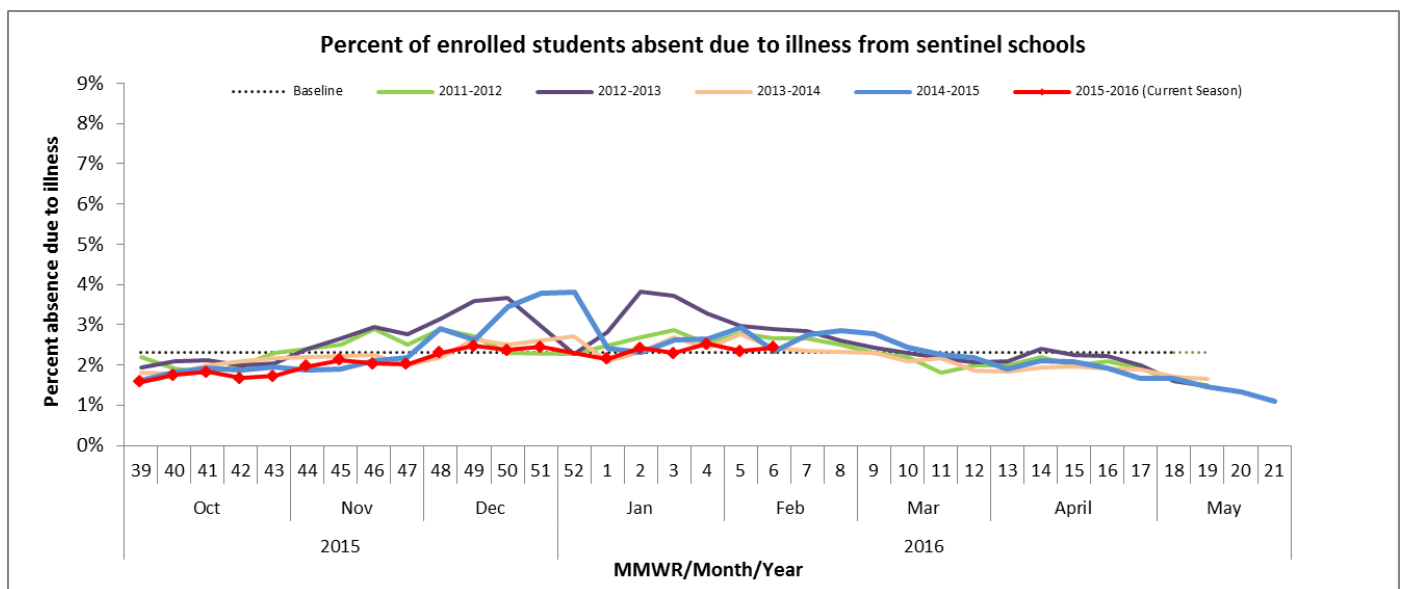
10 percent school absenteeism:

Schools (K-12) track and report when the number of students absent with illness reaches or exceeds 10 percent of total student enrollment. A regional map with schools that have $\geq 10\%$ absence due to illness, which includes influenza-like illness, for the current reporting week is displayed below.



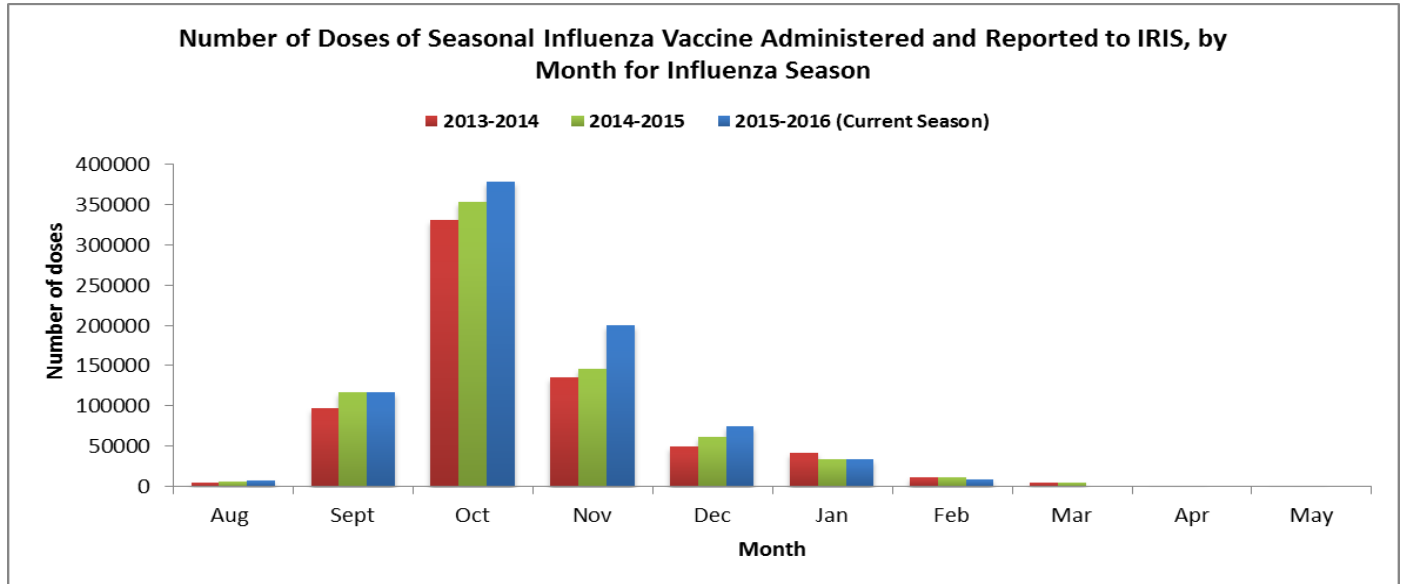
School surveillance program:

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 data in Iowa is based on doses reported to the Iowa Immunization Registry Information System (IRIS). IRIS is a confidential, computerized, population-based system that tracks immunization for children, adolescents and adults who are seen in a variety of public and private healthcare provider sites throughout the state of Iowa. For more information on the immunization data, contact Kim Tichy, IRIS coordinator at 515-281-4288 or kimberly.tichy@idph.iowa.gov.



Note: The data for the 2015-2016 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. The current season's data will be adjusted as additional data is received.

Other resources:

Vaccine:

Influenza vaccine recommendation: <http://idph.iowa.gov/imm/tb/immunization/vaccine>

CDC vaccine information: www.cdc.gov/flu/fag/flu-vaccine-types.htm

Vaccine finder: <http://vaccinefinder.org/>

Neighboring states' influenza information:

Illinois: www.dph.illinois.gov/topics-services/diseases-and-conditions/influenza/surveillance

Minnesota: www.health.state.mn.us/divs/idepc/diseases/flu/stats/index.html

Missouri: <http://health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php>

South Dakota: <http://doh.sd.gov/diseases/infectious/flu/>

Wisconsin: www.dhs.wisconsin.gov/influenza/index.htm