



Iowa Infection Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report

For the week ending October 8, 2016 - Week 40

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 | 0.05% (baseline 1.8%) |
| Percent of influenza rapid test positive | 2.4% (8/333) |
| Percent of RSV rapid tests positive | 1.9% (1/53) |
| Percent school absence due to illness ² | 1.53% |
| Number of schools with ≥10% absence due to illness | 0 |
| Influenza-associated hospitalizations ³ | 1/411 inpatients surveyed |
| Influenza-associated mortality -all ages (Cumulative) ⁴ | 0 |
| 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.

| I |
|-----------------|
| No Activity |
| Sporadic |
| Local |
| Regional |
| Widespread |

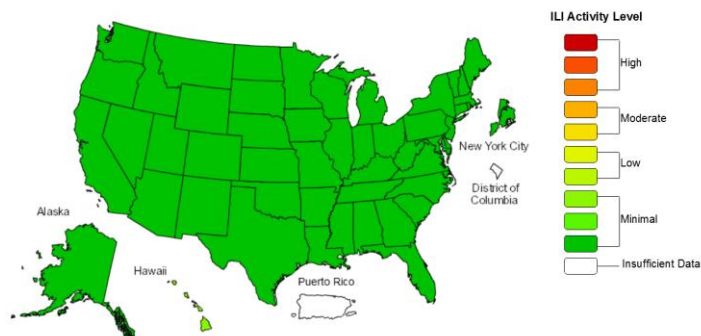
⁵This is based on CDC's activity estimates definition www.cdc.gov/flu/weekly/overview.htm

Iowa statewide activity summary:

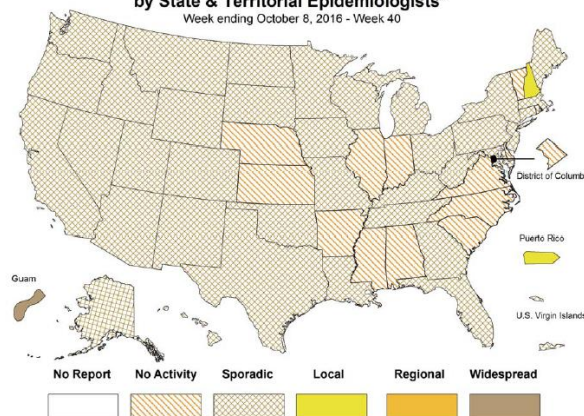
Influenza activity in Iowa is low. The geographic spread of influenza in Iowa is sporadic. For this reporting week, the State Hygienic Laboratory confirmed one influenza A (H3). One influenza-related hospitalization was reported from sentinel hospitals. The proportion of outpatient visits due to influenza-like illness (ILI) was 0.05 percent, which is below the regional baseline. In this reporting week, six adenovirus, one parainfluenza virus type 1, two parainfluenza virus type 2, ten parainfluenza virus type 3, 45 rhinovirus/ enterovirus, one RSV, and one Corona virus were detected from surveillance sites.

National activity summary - (CDC)-Last Updated in Week 40:

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2016-17 Influenza Season Week 40 ending Oct 08, 2016



Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*
Week ending October 8, 2016 - Week 40



Synopsis: During week 40 (October 2-8, 2016), influenza activity was low in the United States.

Viral Surveillance: The most frequently identified influenza virus type reported by public health laboratories during week 40 was influenza A. The percentage of respiratory specimens testing positive for influenza in clinical laboratories was low.

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

Influenza-associated Pediatric Deaths: No influenza-associated pediatric deaths were reported.

Outpatient Illness Surveillance: The proportion of outpatient visits for influenza-like illness (ILI) was 1.1 percent, which is below the national baseline of 2.2 percent. All 10 regions reported ILI below region-specific baseline levels. Puerto Rico experienced moderate ILI activity; three states experienced low ILI activity; New York City and 50 states experienced minimal ILI activity; and the District of Columbia and Puerto Rico had insufficient data.

Geographic Spread of Influenza: The geographic spread of influenza in Guam was reported as widespread; Puerto Rico and one state reported local activity; the U.S. Virgin Islands, and 36 states reported sporadic activity; and the District of Columbia, and 13 states reported no activity.

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

International activity summary - (WHO):

Globally, influenza activity has varied in South America and has remained steady in South Africa and decreased across Oceania in the last few weeks. Influenza levels also remain low in Asia, Europe and North America. Detailed information can be found online at www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/. It was last updated 10/03/2016.

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

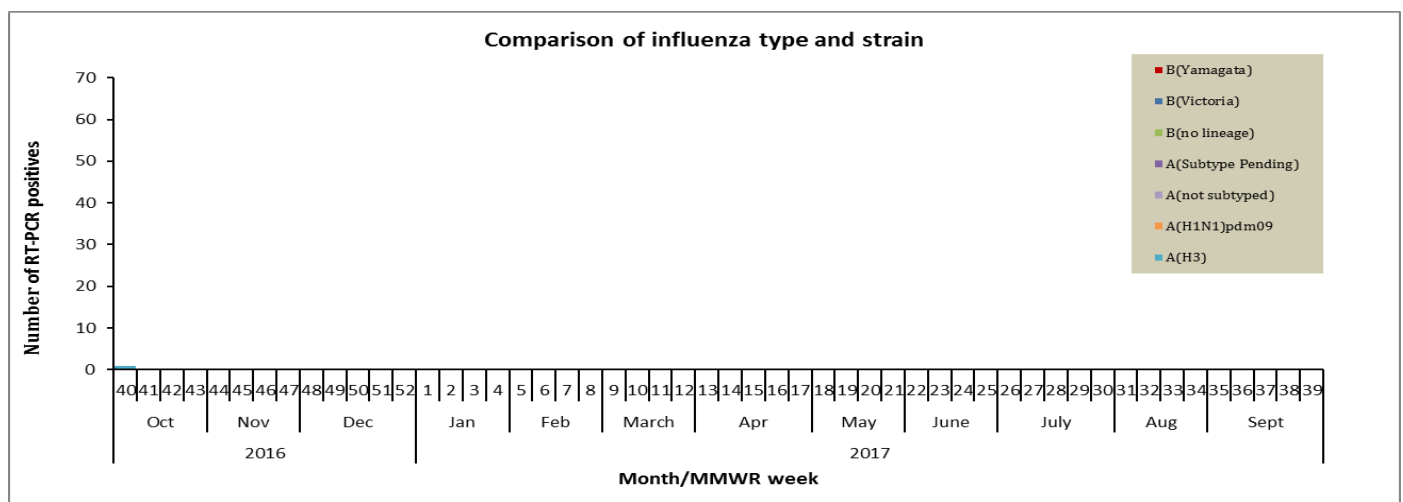
| Age Group | CURRENT WEEK | | | | CUMULATIVE (10/2/16 – CURRENT WEEK) | | | |
|--------------|--------------|----------|-----------------|--------------|-------------------------------------|----------|-----------------|--------------|
| | Flu A | | | | Flu A | | | |
| | A(H1N1)pdm09 | A(H3) | Subtype Pending | Not subtyped | A(H1N1)pdm09 | A(H3) | Subtype Pending | Not subtyped |
| 0-4 | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) |
| 5-17 | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) |
| 18-24 | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) |
| 25-49 | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) |
| 50-64 | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) |
| >64 | 0(0%) | 1(100%) | 0(0%) | 0(0%) | 0(0%) | 1(100%) | 0(0%) | 0(0%) |
| Total | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 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 (10/2/16 – 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%) | 0(0%) | 0(0%) | 0(0%) |
| 5-17 | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) |
| 18-24 | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) |
| 25-49 | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) |
| 50-64 | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) |
| >64 | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) | 0(0%) |
| Total | 0 | 0 | 0 | 0 | 0 | 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



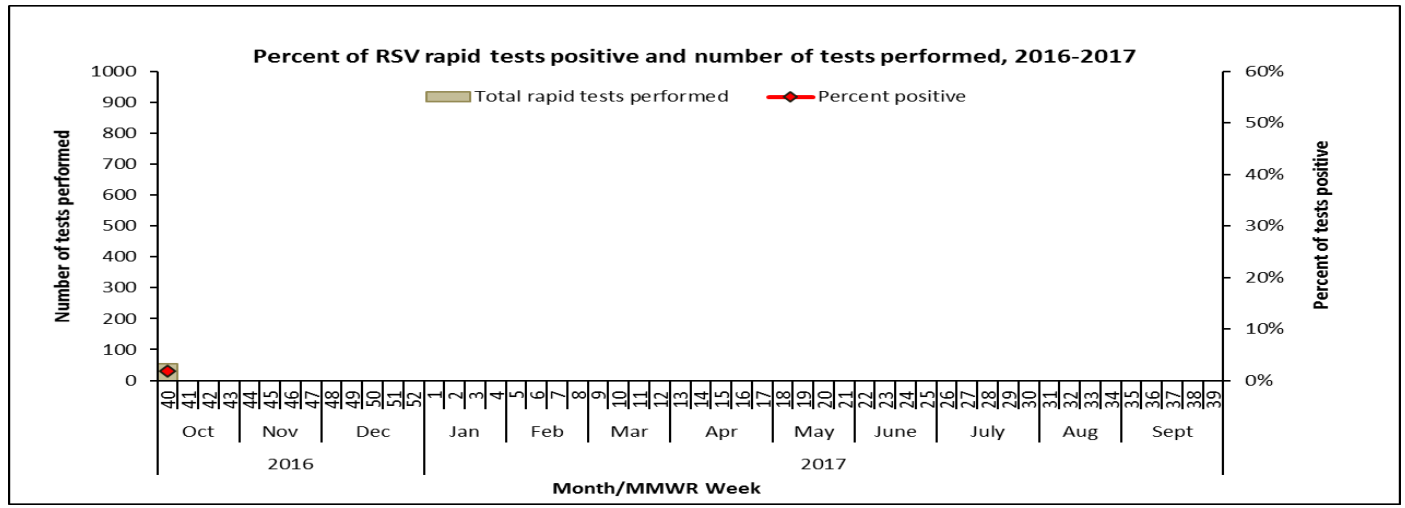
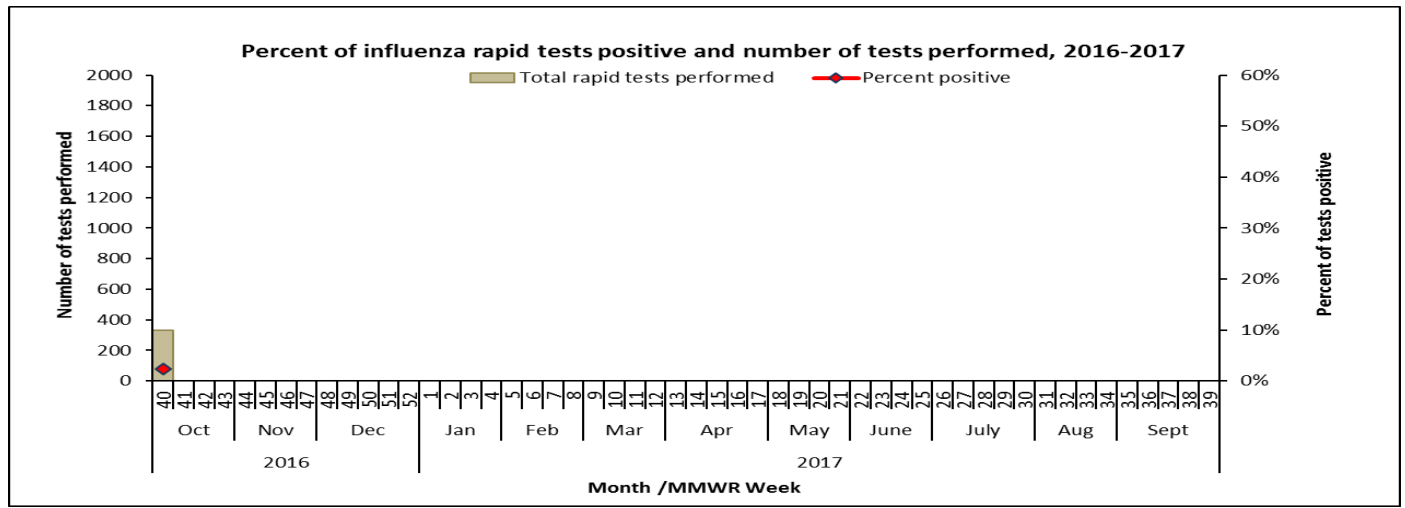
Rapid influenza and RSV test surveillance:

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) | 56 | 1 | 1 | 4 | 8 | 0 | 0 |
| Region 2 (NE) | 5 | 0 | 0 | 0 | 0 | 0 | 0 |
| Region 3 (NW) | 21 | 0 | 0 | 0 | 5 | 0 | 0 |
| Region 4 (SW) | 38 | 1 | 1 | 5 | 5 | 0 | 0 |
| Region 5 (SE) | 41 | 0 | 1 | 2 | 7 | 0 | 0 |
| Region 6 (Eastern) | 172 | 2 | 1 | 2 | 28 | 1 | 4 |
| Total | 333 | 4 | 4 | 2 | 53 | 1 | 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.

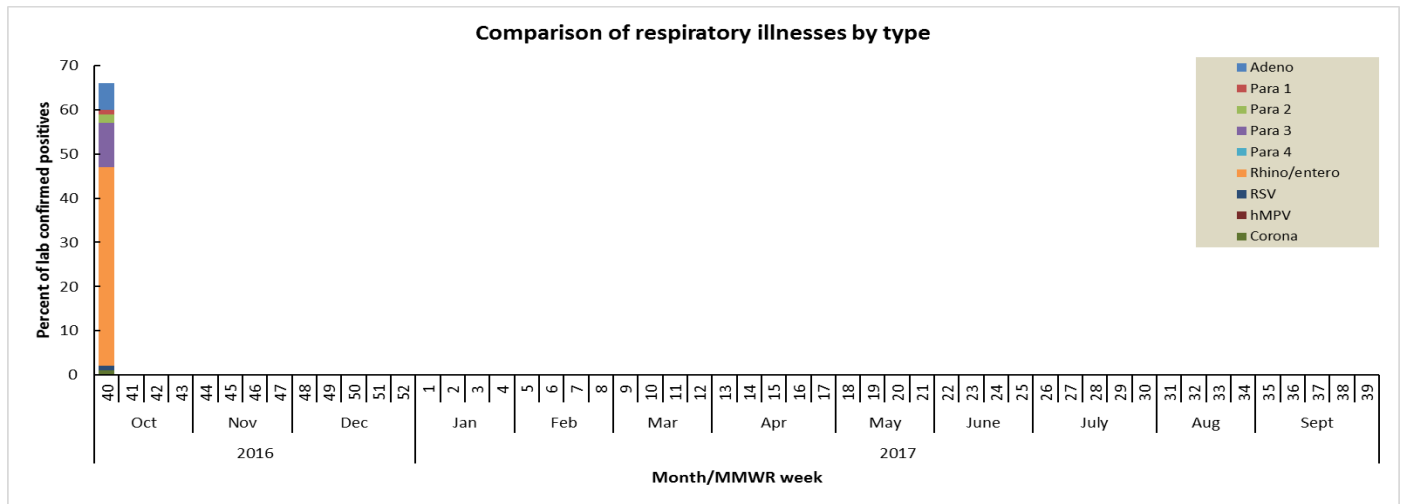


Non-influenza respiratory viruses:

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.

Table 4: Number of positive results for non-influenza respiratory virus collected by SHL, Mercy Dunes in Sioux City and Iowa Methodist Medical Center

| Viruses | CURRENT WEEK | CUMULATIVE (10/2/16 – CURRENT WEEK) |
|-----------------------------------|--------------|-------------------------------------|
| Adenovirus | 6 | 6 |
| Parainfluenza Virus Type 1 | 1 | 1 |
| Parainfluenza Virus Type 2 | 2 | 2 |
| Parainfluenza Virus Type 3 | 10 | 10 |
| Parainfluenza Virus Type 4 | 0 | 0 |
| Rhinovirus/Enterovirus | 45 | 45 |
| Respiratory syncytial virus (RSV) | 1 | 1 |
| Human metapneumovirus (hMPV) | 0 | 0 |
| Corona Virus | 1 | 1 |
| Total | 66 | 66 |



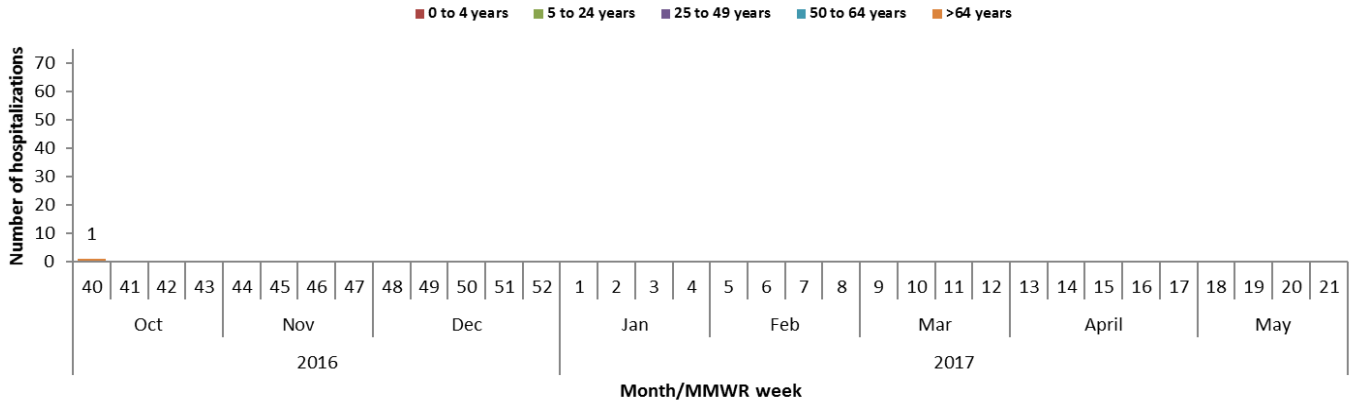
Influenza-associated hospitalizations:

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

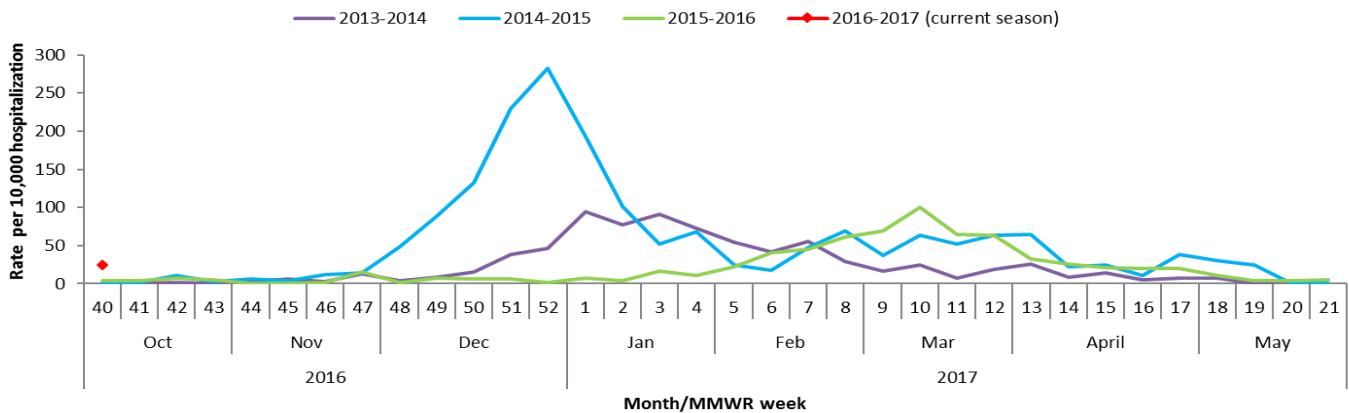
Table 5: Number of influenza-associated hospitalization reported by age group

| AGE | CURRENT WEEK | CUMULATIVE (10/2/16 – CURRENT WEEK) |
|--------------|--------------|-------------------------------------|
| Age 0-4 | 0 | 0 |
| Age 5-24 | 0 | 0 |
| Age 25-49 | 0 | 0 |
| Age 50-64 | 0 | 0 |
| Age >64 | 1 | 1 |
| Total | 1 | 1 |

Influenza-associated hospitalizations by age groups, 2016-2017



Influenza-associated hospitalizations reported by hospital surveillance sites



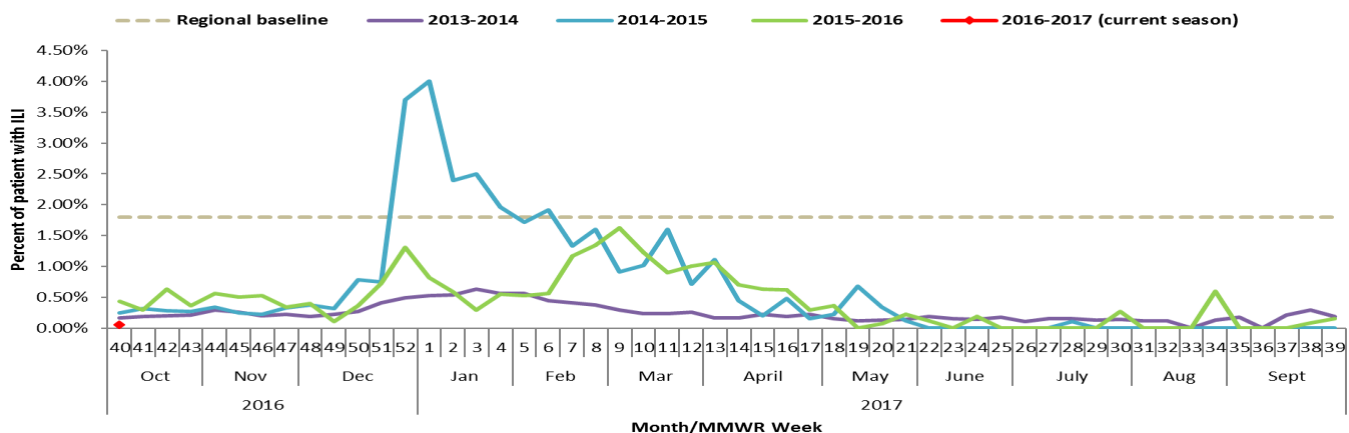
*Note: Week 40's rate may not be accurate due to low numbers of reported inpatient hospitalizations from sentinel hospital sites.

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 Scott Seltrecht at 515-281-4985 or Scott.Seltrecht@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 40, ending October 8 | 0.05 | 0 | 0 | 0 | 1 | 0 | 0 |

Percent of outpatient visits attributed to ILI as reported by ILINet sites



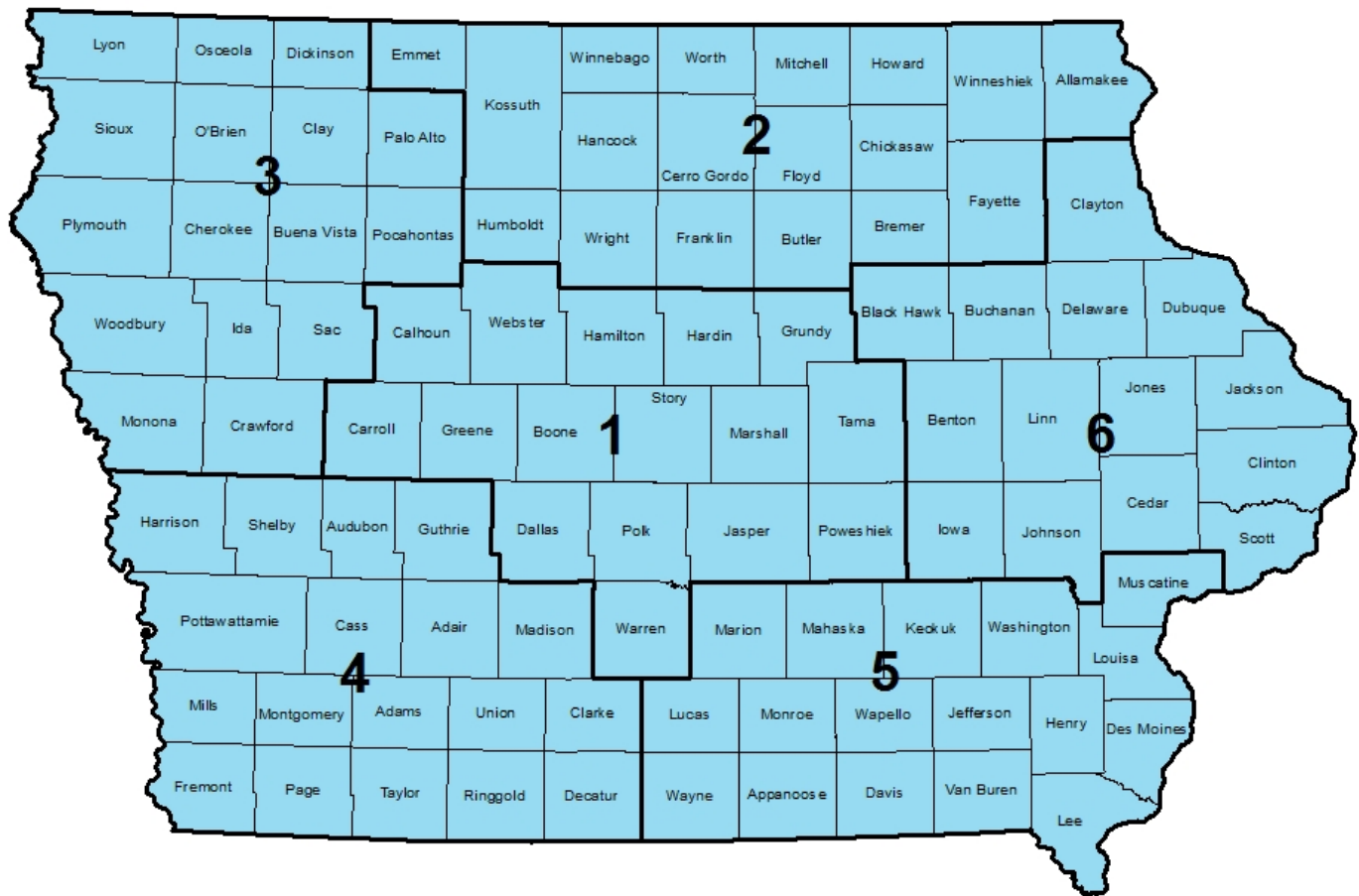
Long-term Care Outbreaks:

| REGION* | CURRENT WEEK | CUMULATIVE (10/2/16 – 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.

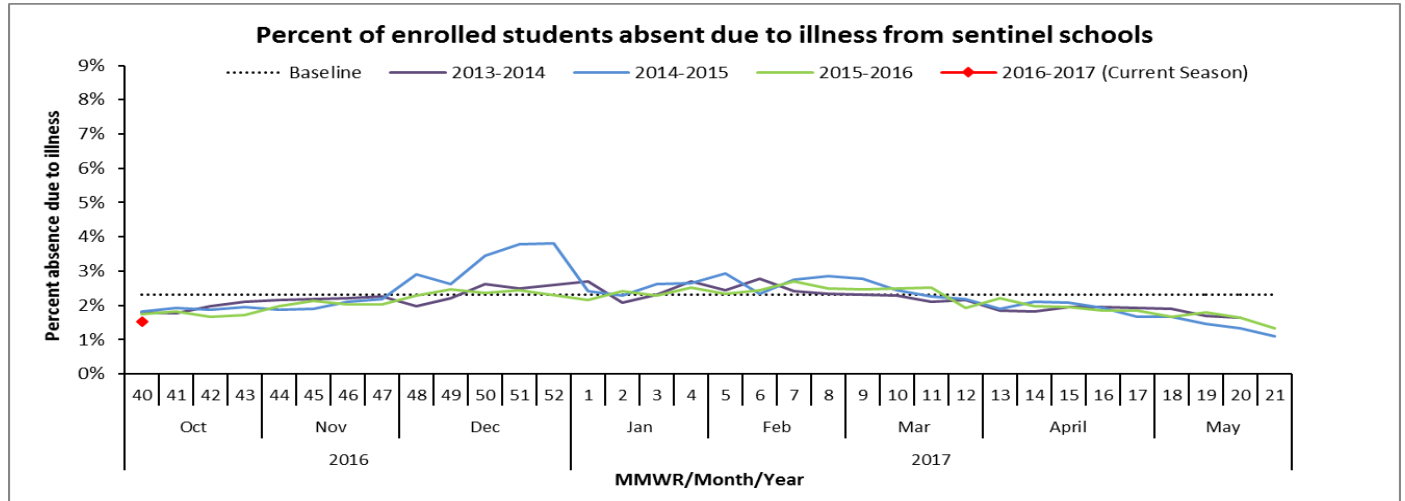
10 percent school absenteeism:

Schools (K-12) track and report outbreaks of influenza-like illness when the number of students absent with illness reaches or exceeds 10 percent of total student enrollment. Regional map with schools that have ≥10% absence due to illness for this current reporting week is displayed below (region numbers in black, number of reporting schools by county in red).



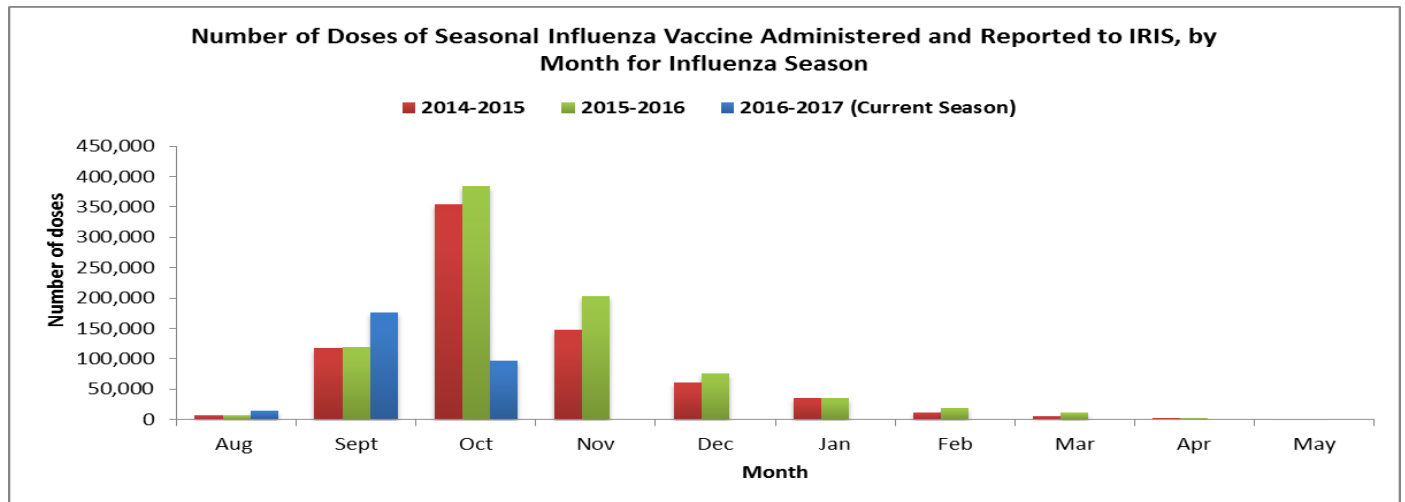
School surveillance program:

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 2016-2017 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/immtdb/immunization/vaccine>

CDC vaccine information: www.cdc.gov/flu/faq/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