



Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report



For the week ending December 23, 2017 - Week 51

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

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

Note: See CDC activity estimates for definition www.cdc.gov/flu/weekly/overview.htm

| Quick Stats | |
|---|-----------------------|
| Percent of influenza rapid test positive | 22% (369/1706) |
| Percent of RSV rapid tests positive | 18% (30/165) |
| Influenza-associated hospitalizations | 47/5242 inpatients |
| Percent of outpatient visits for ILI | 2.10% (baseline 1.9%) |
| Percent school absence due to illness | 2.60% |
| Number of long-term care influenza outbreaks | 5 |
| Number of schools with ≥10% absence due to illness | 7 |
| Influenza-associated mortality -all ages (Cumulative) | 2 |
| Influenza-associated pediatric mortality (Cumulative) | 0 |

Note: Deaths are considered influenza-associated when influenza is listed on the death certificate. This is an underestimate of influenza-related deaths. Cumulative mortality totals are from 10/1/2017 to the current week.

Iowa statewide activity summary:

Influenza activity continues to increase in Iowa. The geographic spread of influenza in Iowa is regional. For this reporting week, the State Hygienic Laboratory confirmed 97 influenza A(H3), five influenza A(H1N1)pdm09, and 21 influenza B (Yamagata Lineage) viruses from submitted samples as well as six influenza A and two influenza B positive specimens awaiting subtyping/lineage. Forty-seven influenza-related hospitalizations were reported from sentinel hospitals during this reporting week. Five influenza outbreaks in long-term care facilities were reported with first onset in this reporting week. The proportion of outpatient visits due to influenza-like illness (ILI) was 2.10 percent, which is above the regional baseline of 1.9 percent. Surveillance sites reported detecting the following non-influenza respiratory illnesses with the most frequency: 120 coronavirus, 119 rhinovirus/enterovirus, 101 RSV, 29 adenovirus, and 23 parainfluenza virus type 1.

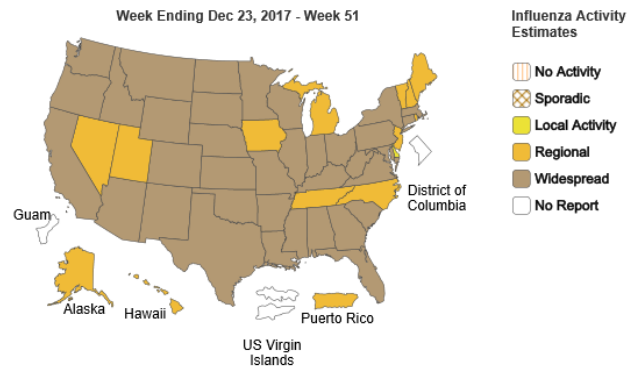
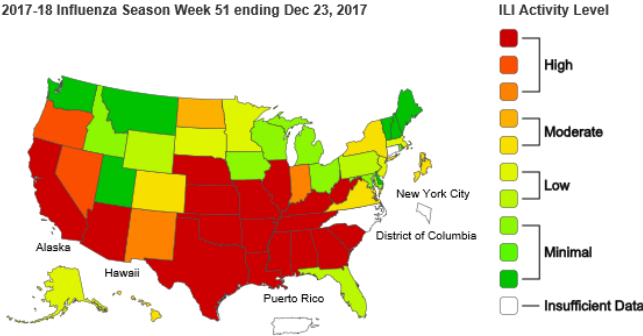
International activity summary - (WHO):

Influenza activity continued to increase in the temperate zone of the northern hemisphere while in the temperate zone of the southern hemisphere activity decreased at inter-seasonal levels. In Central America and the Caribbean, influenza activity remained low. Worldwide, influenza A(H3N2) and B viruses accounted for the majority of influenza detections.

Visit www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/ for more information. It was last updated 12/25/2017.

National activity summary - (CDC)-Last Updated in Week 51:

2017-18 Influenza Season Week 51 ending Dec 23, 2017



Synopsis: During week 51 (December 17-23, 2017), influenza activity increased in the United States.

Viral Surveillance: The most frequently identified influenza virus type reported by public health laboratories during week 51 was influenza A(H3). 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 the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.

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

Influenza-associated Hospitalizations: A cumulative rate of 8.7 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 5.0%, which is above the national baseline of 2.2%. All 10 regions reported ILI at or above region-specific baseline levels. Twenty-one states experienced high ILI activity; New York City and five states experienced moderate ILI activity; eight states experienced low ILI activity; 14 states experienced minimal ILI activity; and the District of Columbia, Puerto Rico, and two states had insufficient data.

Geographic Spread of Influenza: The geographic spread of influenza in 36 states was reported as widespread; Puerto Rico and 13 states reported regional activity; one state reported local activity; and District of Columbia, the U.S. Virgin Islands, and Guam did not report.

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

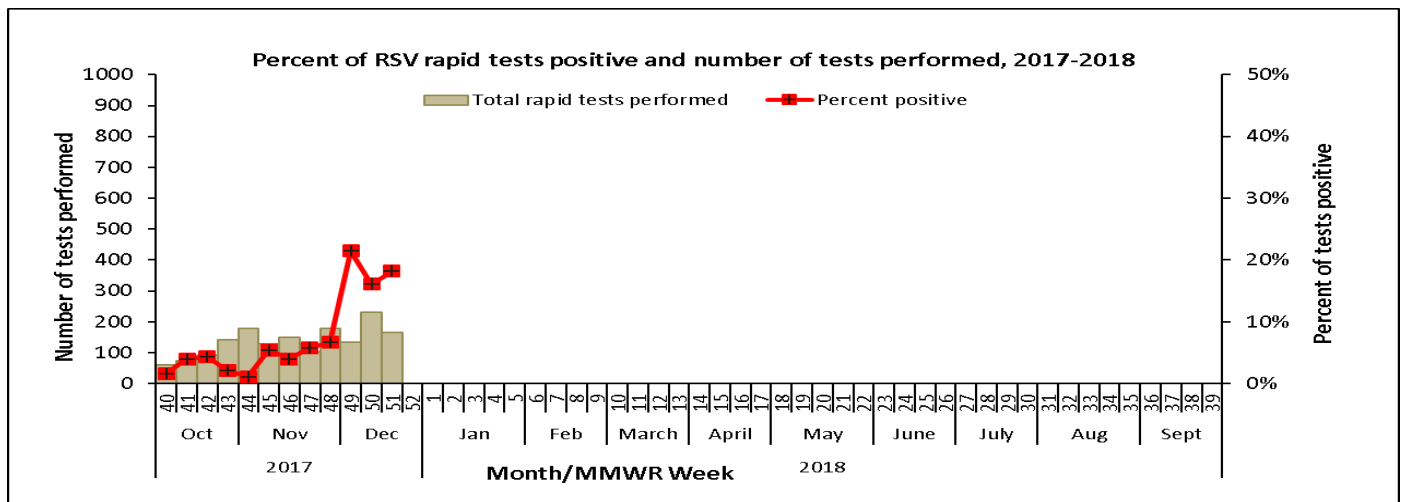
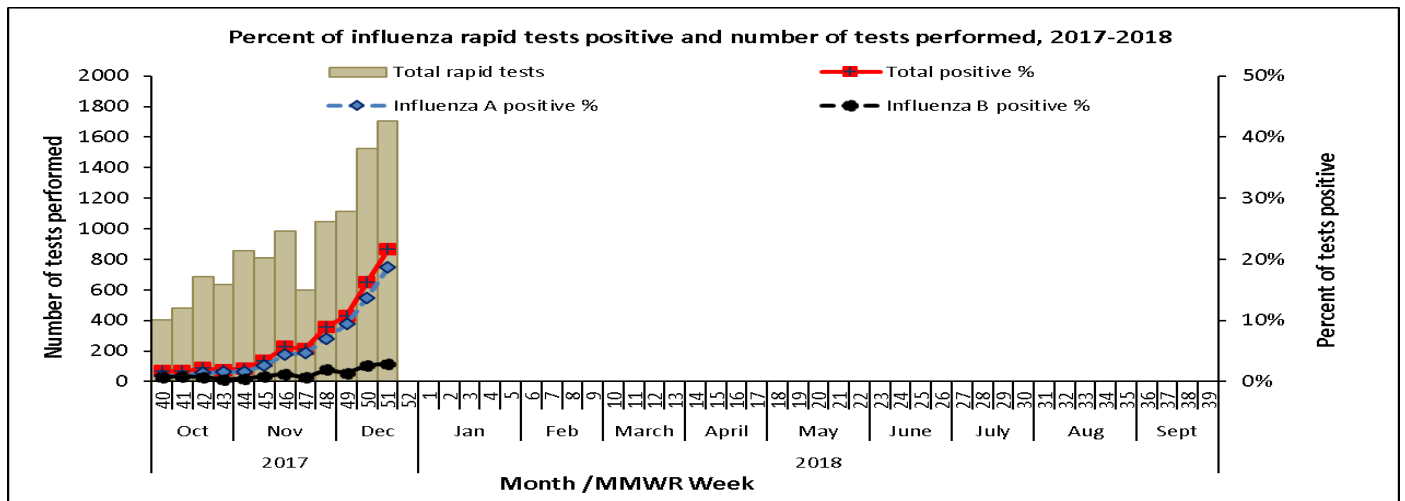
Rapid influenza and RSV test surveillance:

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

| REGION* | RAPID INFLUENZA TESTS | | | | RAPID RSV TESTS | | |
|--------------------|-----------------------|------------|-----------|------------|-----------------|-----------|------------|
| | Tested | Flu A | Flu B | % Positive | Tested | Positive | % Positive |
| Region 1 (Central) | 543 | 87 | 16 | 19 | 35 | 6 | 17 |
| Region 2 (NE) | 89 | 18 | 1 | 21 | 7 | 0 | 0 |
| 146 | 146 | 23 | 6 | 20 | 16 | 7 | 44 |
| Region 4 (SW) | 176 | 50 | 0 | 28 | 37 | 7 | 19 |
| Region 5 (SE) | 221 | 39 | 16 | 25 | 39 | 6 | 15 |
| Region 6 (Eastern) | 531 | 102 | 11 | 21 | 31 | 4 | 13 |
| Total | 1706 | 319 | 50 | 22 | 165 | 30 | 18 |

Note: see map in the school section for a display of the counties in each region.

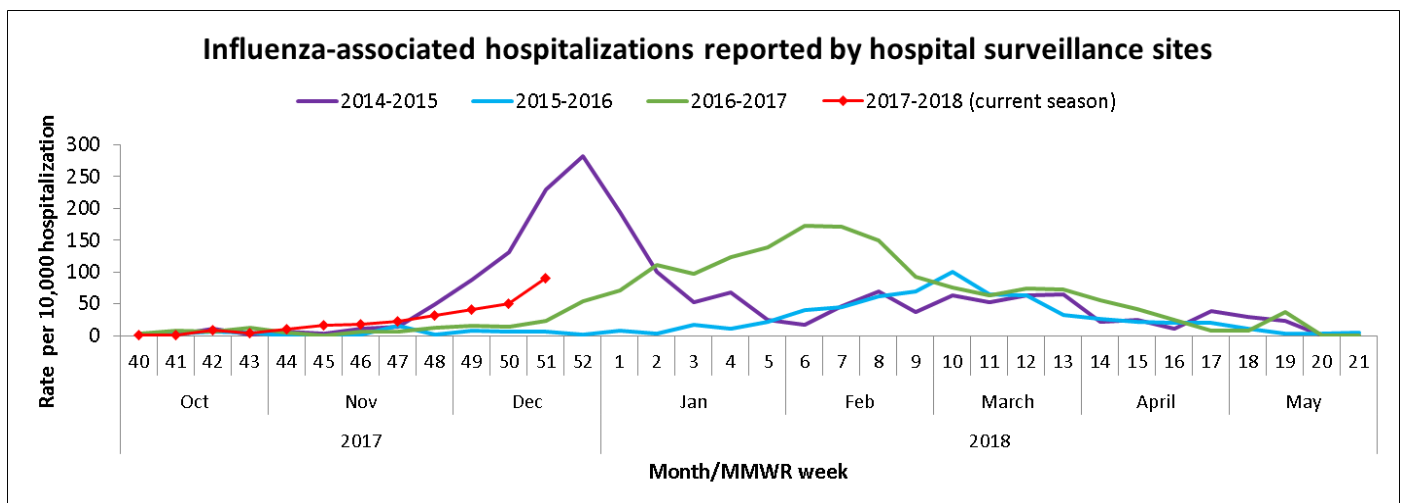
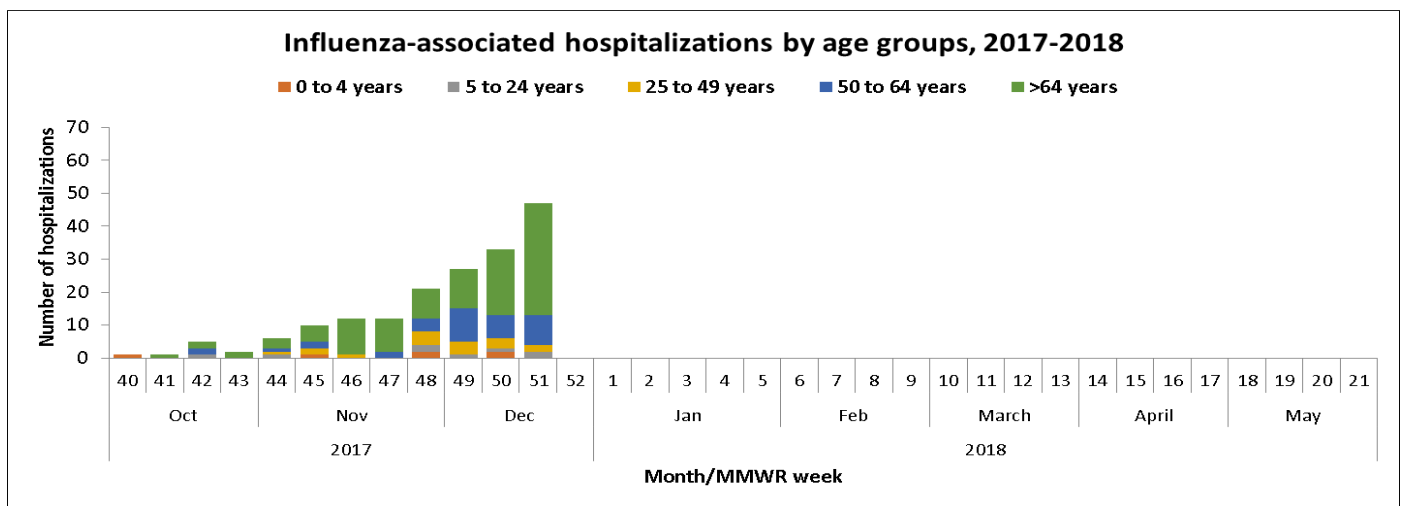


Influenza-associated hospitalizations:

Sentinel hospitals that participate in IISN voluntarily track and report the number of influenza-associated hospitalizations and the total number of inpatients each week. Iowa hospitals interested in joining this surveillance program should contact Andy Weigel at 515-322-1937 or andy.weigel@idph.iowa.gov or more information.

Table 4: Number of influenza-associated hospitalization reported by age group

| AGE | CURRENT WEEK | CUMULATIVE (10/1/17 – CURRENT WEEK) |
|--------------|--------------|-------------------------------------|
| Age 0-4 | 0 | 6 |
| Age 5-24 | 2 | 8 |
| Age 25-49 | 2 | 17 |
| Age 50-64 | 9 | 37 |
| Age >64 | 34 | 109 |
| Total | 47 | 177 |



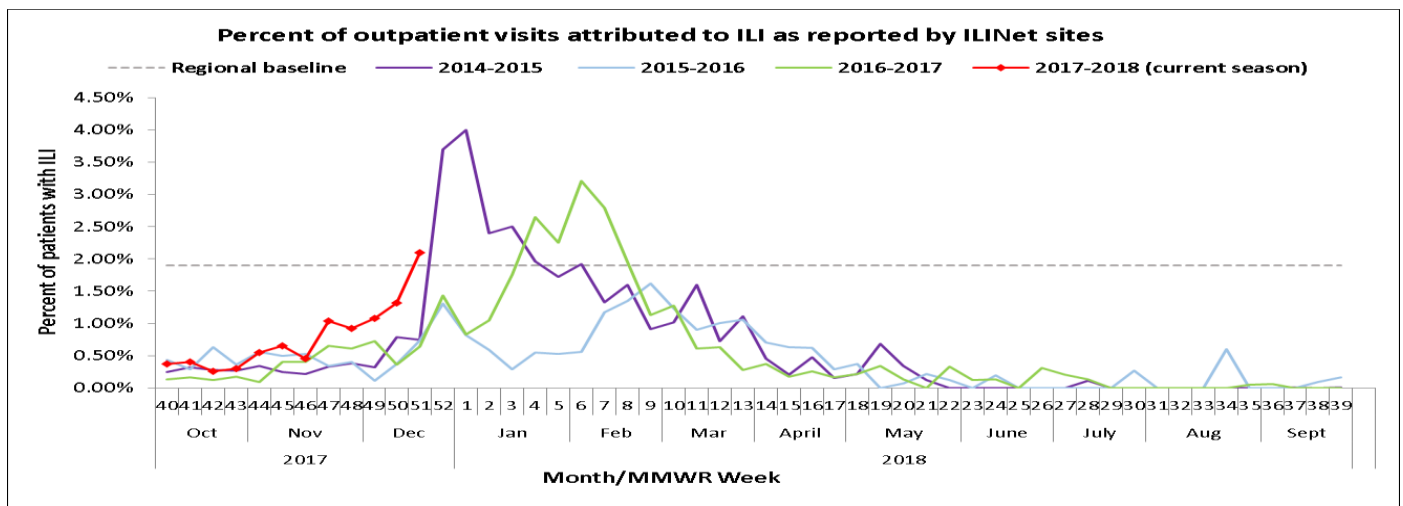
Outpatient health care provider surveillance program (ILINet):

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 Andy Weigel at 515-322-1937 or andy.weigel@idph.iowa.gov for more information.

Table 5: Outpatient visits for influenza-like illness (ILI)

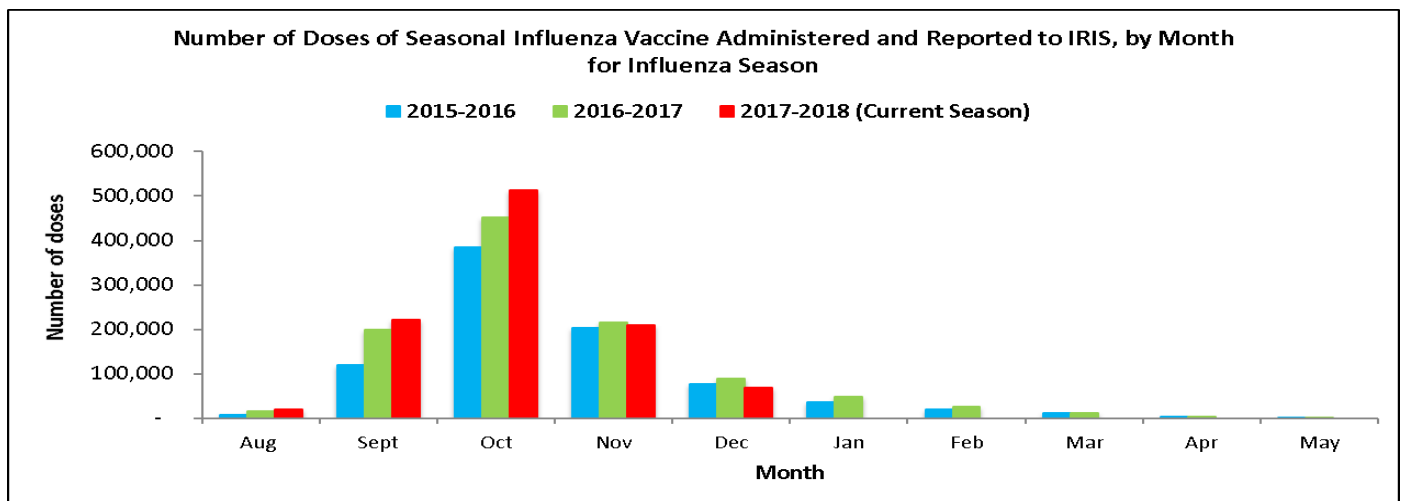
| Week | Age 0-4 | Age 5-24 | Age 25-49 | Age 50-64 | Age > 64 | Total ILI | ILI Percent |
|-----------------------------|---------|----------|-----------|-----------|----------|-----------|-------------|
| Week 49, ending December 9 | 5 | 30 | 5 | 4 | 3 | 47 | 1.07 |
| Week 50, ending December 16 | 11 | 15 | 5 | 3 | 13 | 47 | 1.31 |
| Week 51, ending December 23 | 7 | 12 | 8 | 4 | 6 | 37 | 2.10 |

Note: Influenza-like Illness is defined as a fever of $\geq 100^{\circ}$ F as well as cough and/or sore throat.



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 2017-2018 season is provisional due to the lag between the vaccine administration date and the date reported to IRIS.

Long-term care outbreaks:

Table 6: Number of long-term care outbreaks investigated

| REGION | CURRENT WEEK | CUMULATIVE (10/1/17 – CURRENT WEEK) |
|--------------------|--------------|-------------------------------------|
| Region 1 (Central) | 1 | 1 |
| Region 2 (NE) | 0 | 1 |
| Region 3 (NW) | 0 | 0 |
| Region 4 (SW) | 0 | 3 |
| Region 5 (SE) | 3 | 6 |
| Region 6 (Eastern) | 1 | 3 |
| Total | 5 | 14 |

Note: see map in the school section for a display of the counties in each region.

School surveillance program

IDPH monitors illnesses in schools from two different types of reporting: 10 percent school absence reports and weekly sentinel illness reporting. Iowa schools (K-12) track and report (including non-influenza illnesses) when the number of students absent with illness reaches or exceeds 10 percent of total student enrollment. Iowa sentinel schools that participate in IISN voluntarily track and report absence due to all illness and the total enrollment each week. This data provides excellent trends for influenza activity as well as age-specific information used to target vaccination efforts and messages.

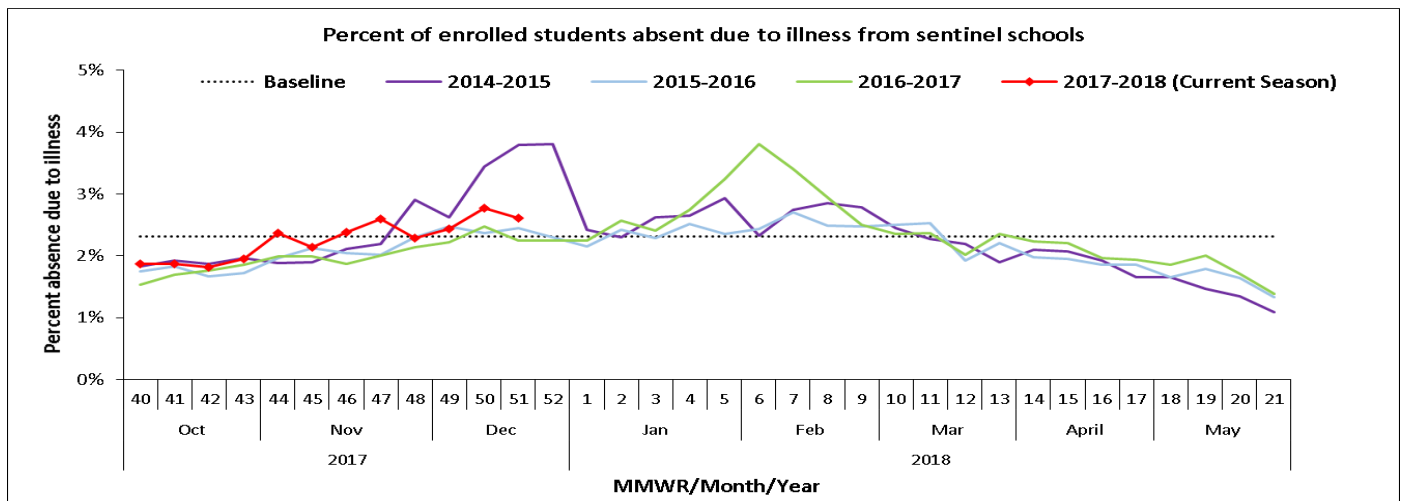
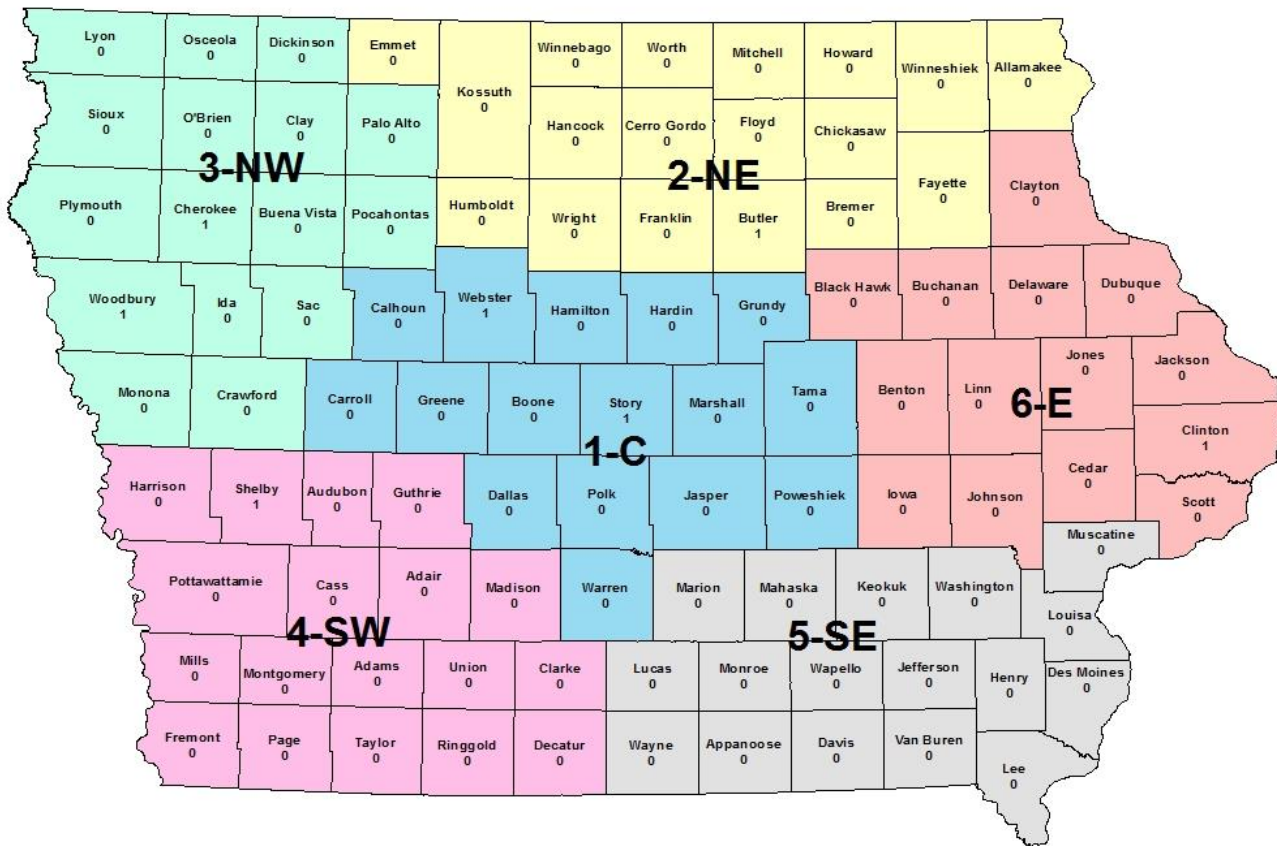


Table 7: Number of schools reporting >10% absenteeism due to any illness

| REGION | CURRENT WEEK | CUMULATIVE (10/1/17 – CURRENT WEEK) |
|--------------------|--------------|-------------------------------------|
| Region 1 (Central) | 2 | 9 |
| Region 2 (NE) | 1 | 4 |
| Region 3 (NW) | 2 | 4 |
| Region 4 (SW) | 1 | 5 |
| Region 5 (SE) | 0 | 0 |
| Region 6 (Eastern) | 1 | 8 |
| Total | 7 | 30 |

Note: A regional map with the total of schools by county that report at least 10 percent of students absent due to illness for this current reporting week is displayed below (region numbers and abbreviations are displayed in large black font near the middle of each region). Current week totals only include the first report for a school in the week, but cumulative totals may include multiple reports for the same school from different weeks.

Number of schools with at least 10 percent of students absent, by county and region

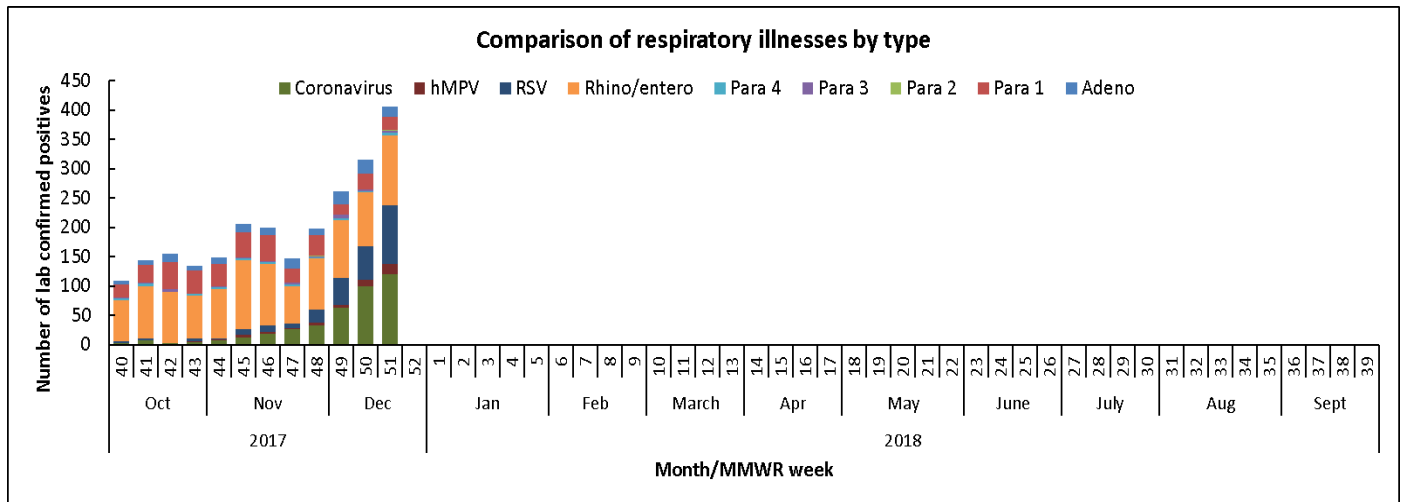


Non-influenza respiratory viruses:

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 8: 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 (10/1/17 – CURRENT WEEK) |
|-----------------------------------|--------------|-------------------------------------|
| Adenovirus | 29 | 176 |
| Parainfluenza Virus Type 1 | 23 | 396 |
| Parainfluenza Virus Type 2 | 2 | 4 |
| Parainfluenza Virus Type 3 | 3 | 26 |
| Parainfluenza Virus Type 4 | 4 | 35 |
| Rhinovirus/Enterovirus | 119 | 1086 |
| Respiratory syncytial virus (RSV) | 101 | 266 |
| Human metapneumovirus (hMPV) | 17 | 53 |
| Coronavirus | 120 | 393 |
| Total | 418 | 2435 |



Other resources:

Vaccine:

Influenza vaccine recommendation: idph.iowa.gov/immtdb/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: health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php

South Dakota: doh.sd.gov/diseases/infectious/flu/

Wisconsin: flu.wisconsin.gov/