



Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report

For the week ending November 24, 2018 - Week 47

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

| | |
|---|----------------------------|
| Predominate influenza subtype | A(H3) / A(H1N1)pdm09 |
| Percent of influenza rapid test positive | 1% (5/876) |
| Percent of RSV rapid tests positive | 2% (2/121) |
| Influenza-associated hospitalizations | 3/4719 inpatients surveyed |
| Percent of outpatient visits for ILI | 0.70% (baseline 1.6%) |
| Percent school absence due to illness | 2.28% |
| Number of long-term care outbreaks | 0 |
| Number of schools with $\geq 10\%$ absence due to illness | 0 |
| Influenza-associated mortality - all ages (Cumulative) | 0 |
| Influenza-associated pediatric mortality (Cumulative) | 0 |
| Predominate non-influenza virus | Rhinovirus/enterovirus |

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 9/30/2018 to the current week.

Iowa statewide activity summary:

Influenza activity is low in Iowa this week. The geographic spread of influenza in Iowa is sporadic. The State Hygienic Laboratory confirmed four influenza A(H3) and two influenza A(H1N1)pdm09 viruses from submitted samples. Three influenza-related hospitalizations were reported from sentinel hospitals. The proportion of outpatient visits due to influenza-like illness (ILI) was 0.7 percent, which is below the regional baseline of 1.6 percent. No long-term care outbreaks were reported, no schools reported 10 percent absenteeism, and no influenza-related deaths were reported. Surveillance sites most frequently detected the following non-influenza respiratory illnesses: 151 rhinovirus/enterovirus, 37 adenovirus, 32 parainfluenza virus type four, and 21 parainfluenza type two.

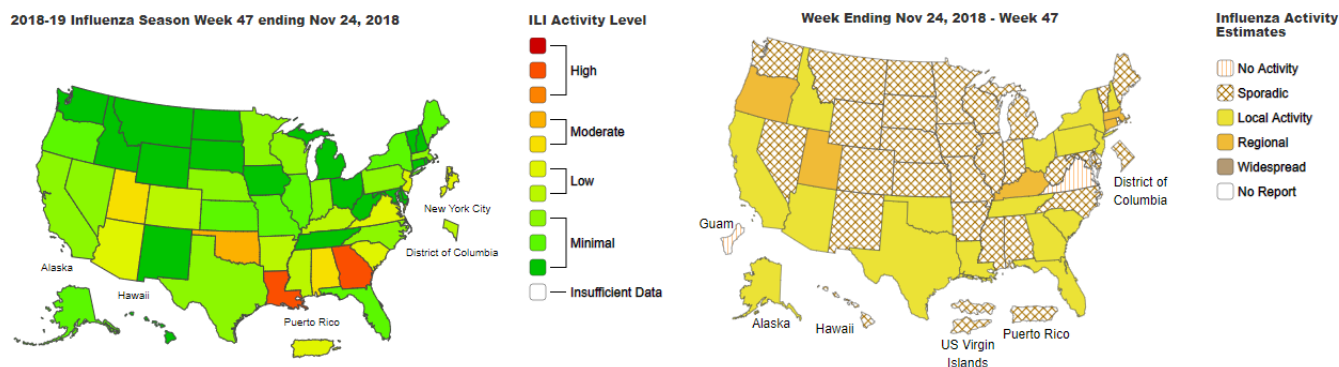
International activity summary - (WHO):

In the temperate zone of the northern hemisphere influenza activity started to increase although overall influenza activity remained low. Increased influenza detections were reported in some countries of South-East Asia and Central America. In the temperate zones of the southern hemisphere, influenza activity returned to inter-seasonal levels. Worldwide, seasonal influenza subtype A viruses accounted for the majority of detections.

Visit www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/ for more information. It was last updated 11/26/2018.

National activity summary - (CDC)-Last Updated for Week 47:

2018-19 Influenza Season Week 47 ending Nov 24, 2018



Synopsis: During week 47 (November 18 - November 25, 2018), influenza activity in the United States increased slightly. The increase in the percentage of patient visits for ILI may be influenced in part by a reduction in routine healthcare visits during the Thanksgiving holidays, as has occurred in previous seasons. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate, with influenza A(H1N1)pdm09 viruses reported most commonly by public health laboratories since September 30, 2018.

Viral Surveillance: Influenza A viruses have predominated in the United States since the beginning of July. The percentage of respiratory specimens testing positive for influenza in clinical laboratories was low. The majority of influenza viruses characterized antigenically and genetically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses. All viruses tested since late May show susceptibility to the antiviral drugs oseltamivir, zanamivir, and peramivir.

Outpatient Illness Surveillance: The proportion of outpatient visits for influenza-like illness (ILI) increased to 2.3%, which is above the national baseline of 2.2%. Five of 10 regions reported ILI at or above their region-specific baseline level.

Geographic Spread of Influenza: The geographic spread of influenza in five states was reported as regional; 16 states reported local activity; the District of Columbia, Puerto Rico, the U.S. Virgin Islands and 28 states reported sporadic activity; and Guam and one state reported no influenza activity.

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: Two influenza-associated pediatric deaths were reported to CDC for week 47.

Laboratory surveillance program:

The State Hygienic Laboratory (SHL) is the primary laboratory in Iowa characterizing specimens for influenza surveillance. SHL reports the number of tests performed and the type and subtype/lineage of positive tests to the influenza surveillance network daily. SHL also sends a portion of specimens to CDC for further characterization.

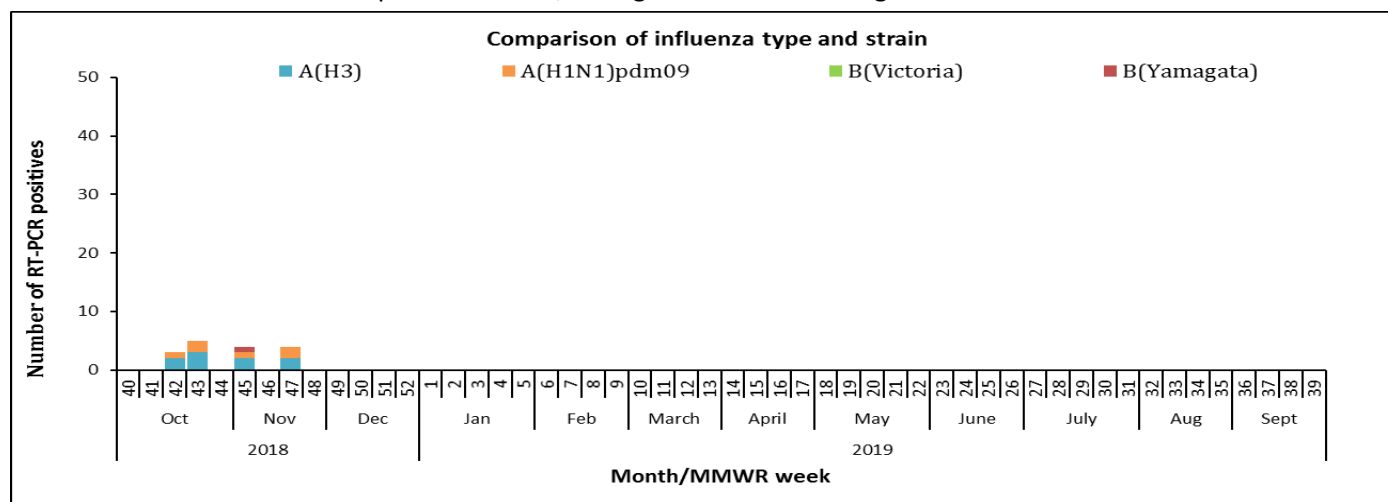
Table 1: Influenza A viruses detected by SHL by age group

| Age Group | CURRENT WEEK | | | | CUMULATIVE (9/30/18– CURRENT WEEK) | | | |
|--------------|----------------|----------------|---------------|----------|------------------------------------|----------------|---------------|-----------|
| | A(H1N1) pdm09 | A(H3) | Not subtyped | Total | A(H1N1) pdm09 | A(H3) | Not subtyped | Total |
| 0-4 | 1 | 0 | 0 | 1 (25%) | 1 | 1 | 0 | 2 (13%) |
| 5-17 | 1 | 0 | 0 | 1 (25%) | 3 | 1 | 0 | 4 (27%) |
| 18-24 | 0 | 0 | 0 | 0 (0%) | 0 | 0 | 0 | 0 (0%) |
| 25-49 | 0 | 0 | 0 | 0 (0%) | 1 | 1 | 0 | 2 (13%) |
| 50-64 | 0 | 2 | 0 | 2 (50%) | 1 | 4 | 0 | 5 (33%) |
| >64 | 0 | 0 | 0 | 0 (0%) | 0 | 2 | 0 | 2 (13%) |
| Total | 2 (50%) | 2 (50%) | 0 (0%) | 4 | 6 (40%) | 9 (60%) | 0 (0%) | 15 |

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

| Age Group | CURRENT WEEK | | | | CUMULATIVE (9/30/18– CURRENT WEEK) | | | |
|--------------|------------------|------------------|---------------|----------|------------------------------------|------------------|---------------|----------|
| | Victoria Lineage | Yamagata Lineage | Not subtyped | Total | Victoria Lineage | Yamagata Lineage | Not subtyped | Total |
| 0-4 | 0 | 0 | 0 | 0 (0%) | 0 | 0 | 0 | 0 (0%) |
| 5-17 | 0 | 0 | 0 | 0 (0%) | 0 | 0 | 0 | 0 (0%) |
| 18-24 | 0 | 0 | 0 | 0 (0%) | 0 | 0 | 0 | 0 (0%) |
| 25-49 | 0 | 0 | 0 | 0 (0%) | 0 | 1 | 0 | 1 (100%) |
| 50-64 | 0 | 0 | 0 | 0 (0%) | 0 | 0 | 0 | 0 (0%) |
| >64 | 0 | 0 | 0 | 0 (0%) | 0 | 0 | 0 | 0 (0%) |
| Total | 0 (0%) | 0 (0%) | 0 (0%) | 0 | 0 (0%) | 1 (100%) | 0 (0%) | 1 |

Table 1 and 2 Notes: Cell counts of three or less are sometimes suppressed to protect confidentiality. Totals by age may not add up to totals by subtype/lineage due to missing age information. Only cases of Iowa residents are included. Specimens listed as “not subtyped” may be pending or were not able to be subtyped due to weak positive lab results. This can be due to poor collection, timing of collection or stage of infection.



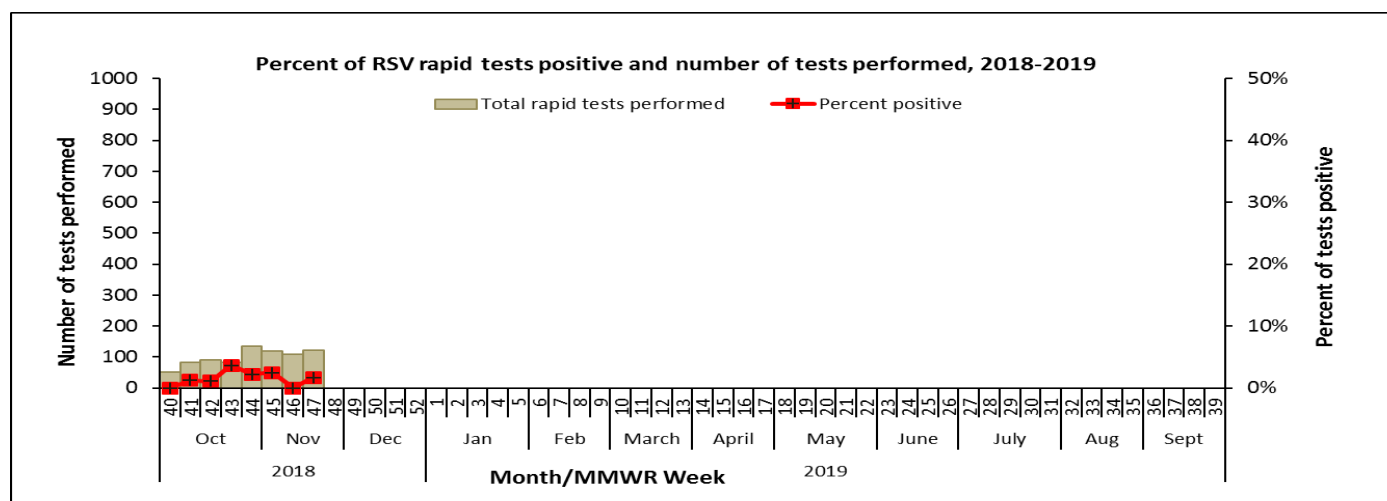
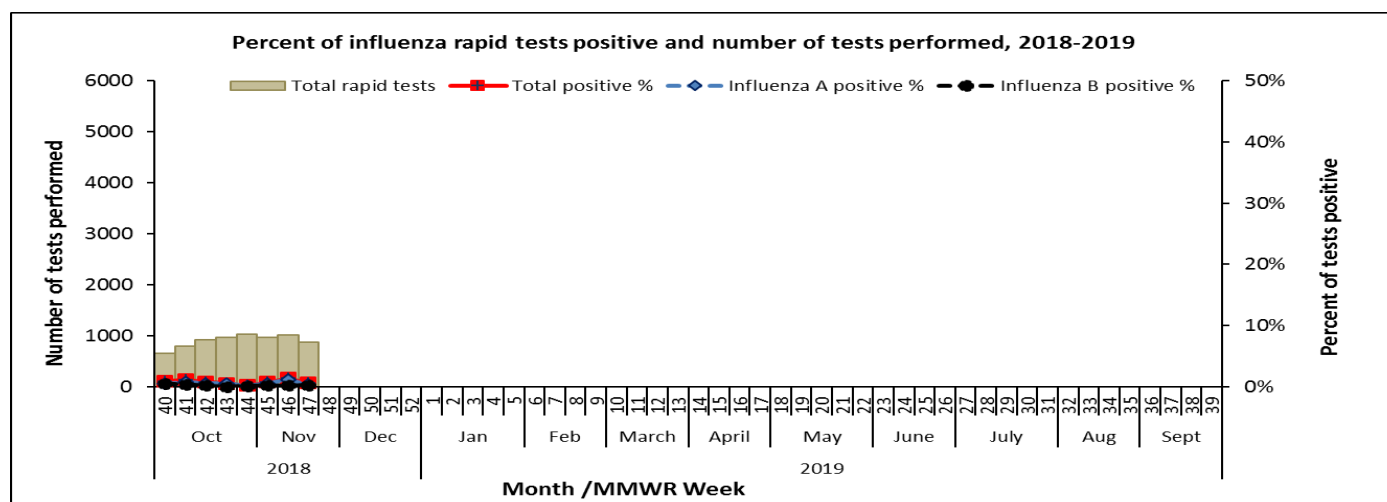
Rapid influenza and RSV test surveillance:

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 ANTIGEN INFLUENZA TESTS | | | | RAPID ANTIGEN RSV TESTS | | |
|--------------------|-------------------------------|----------|----------|------------|-------------------------|----------|------------|
| | Tested | Flu A | Flu B | % Positive | Tested | Positive | % Positive |
| Region 1 (Central) | 290 | 1 | 1 | 1 | 8 | 0 | 0 |
| Region 2 (NE) | 24 | 0 | 0 | 0 | 2 | 0 | 0 |
| Region 3 (NW) | 92 | 0 | 0 | 0 | 67 | 0 | 0 |
| Region 4 (SW) | 44 | 0 | 0 | 0 | 1 | 0 | 0 |
| Region 5 (SE) | 93 | 1 | 1 | 2 | 21 | 0 | 0 |
| Region 6 (Eastern) | 333 | 1 | 0 | 0 | 22 | 2 | 9 |
| Total | 876 | 3 | 2 | 1 | 121 | 2 | 2 |

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

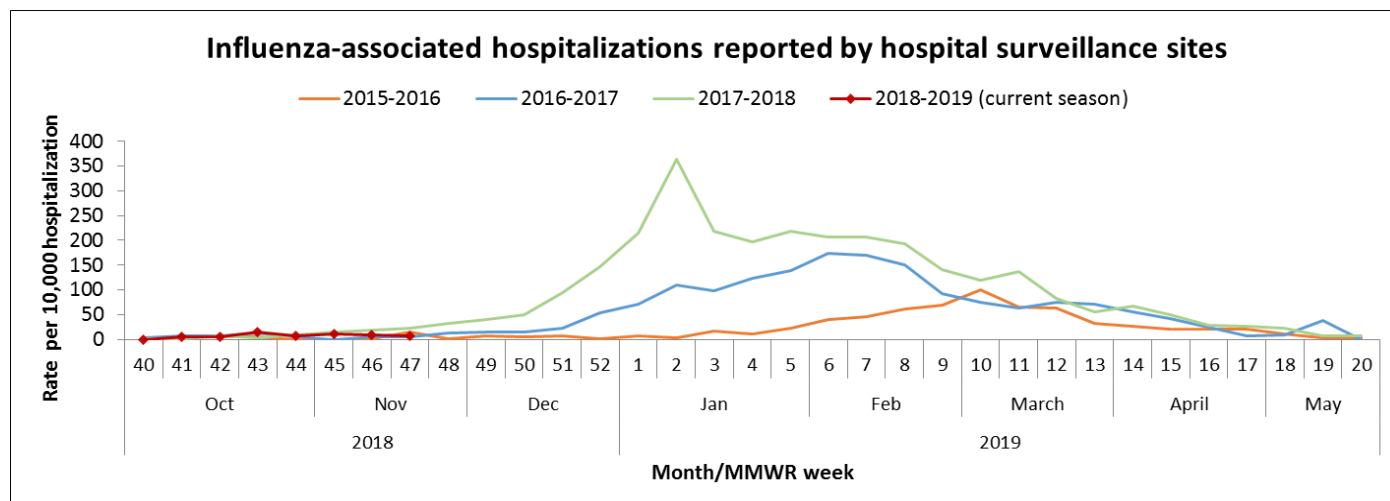
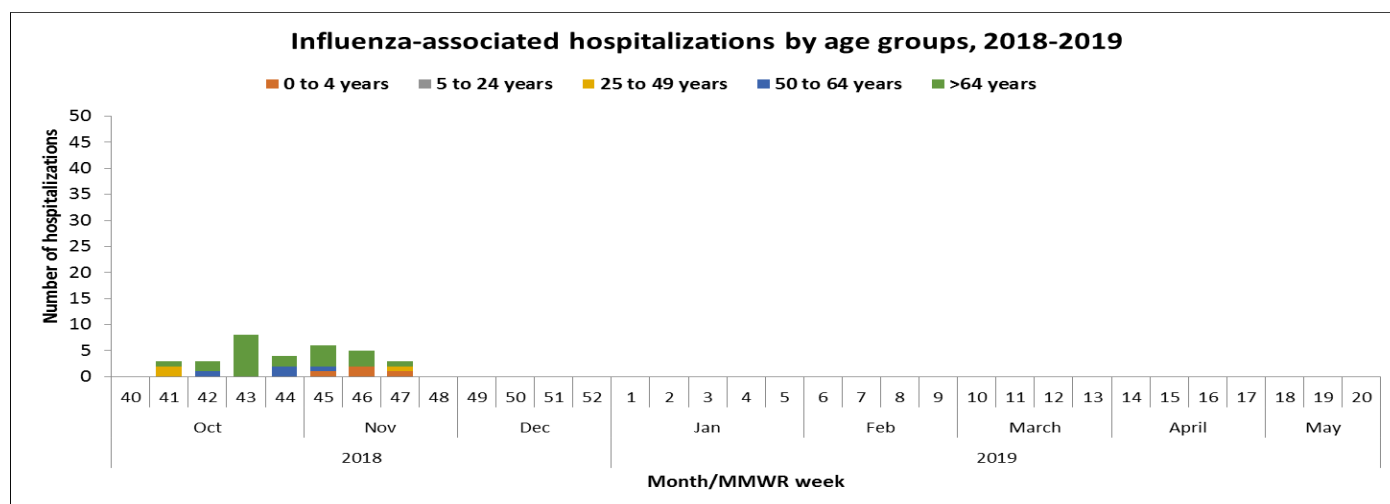


Influenza-associated hospitalizations:

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 for more information.

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

| AGE | CURRENT WEEK | CUMULATIVE (9/30/18– CURRENT WEEK) |
|--------------|--------------|------------------------------------|
| Age 0-4 | 1 | 4 |
| Age 5-24 | 0 | 0 |
| Age 25-49 | 1 | 3 |
| Age 50-64 | 0 | 4 |
| Age >64 | 1 | 21 |
| Total | 3 | 32 |



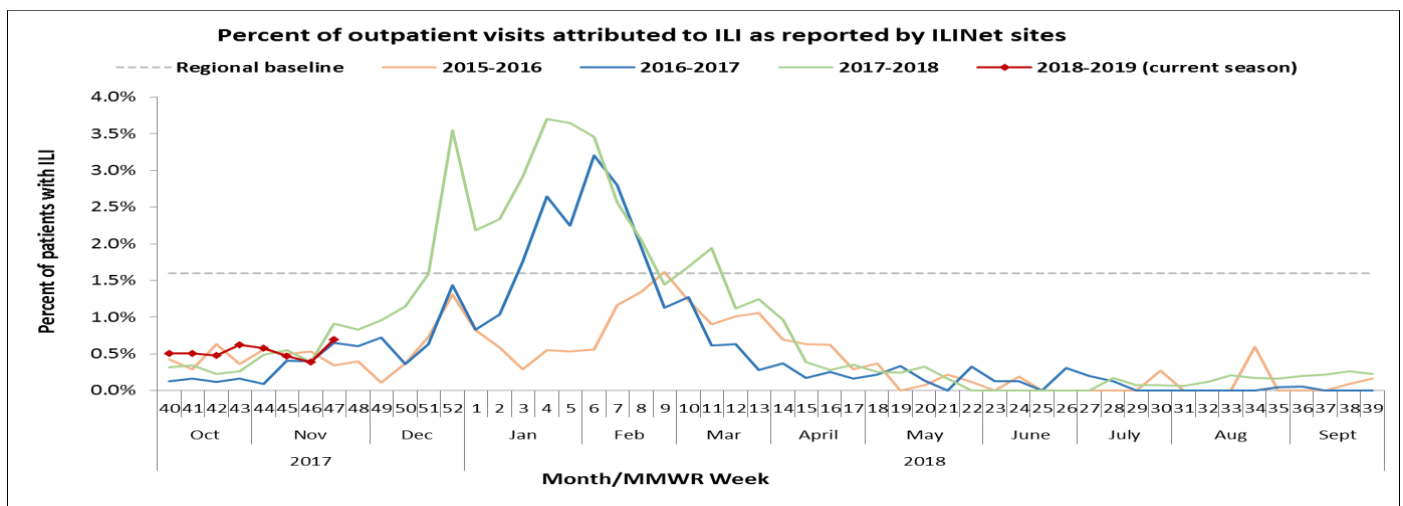
Outpatient health care provider surveillance program (ILINet):

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)

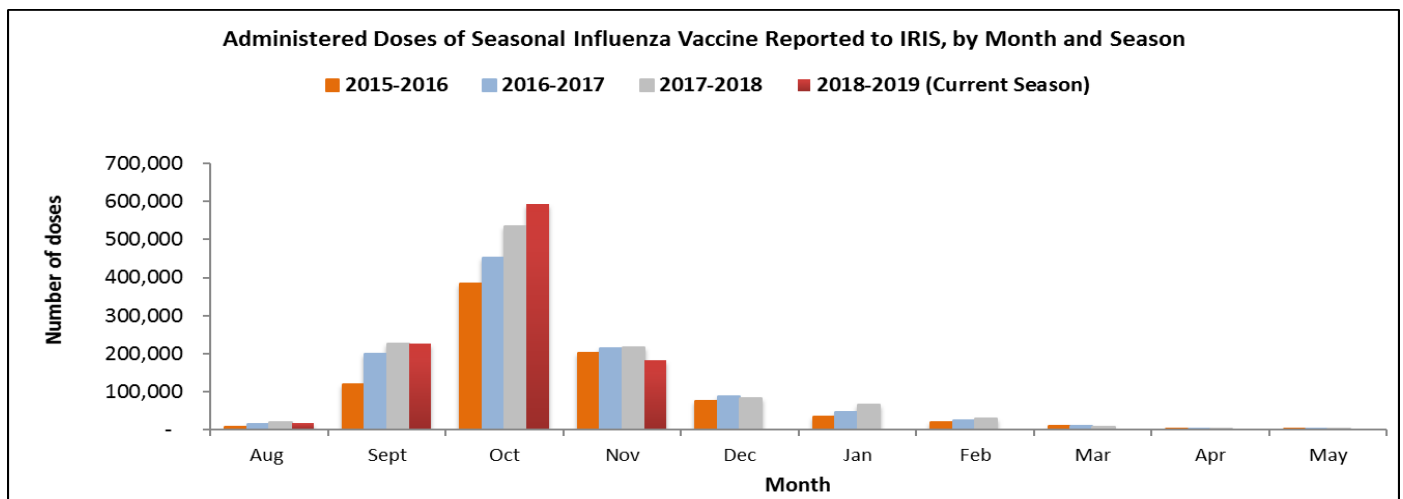
| Week | Age 0-4 | Age 5-24 | Age 25-49 | Age 50-64 | Age >64 | Total ILI | ILI Percent |
|------------------------|---------|----------|-----------|-----------|---------|-----------|-------------|
| Week 45, ending Nov 10 | 10 | 14 | 3 | 2 | 2 | 31 | 0.47 |
| Week 46, ending Nov 17 | 8 | 13 | 3 | 1 | 2 | 27 | 0.39 |
| Week 47, ending Nov 24 | 9 | 13 | 4 | 2 | 2 | 30 | 0.70 |

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 2018-2019 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.

Long-term Care Outbreaks:

Table 6: Number of long-term care outbreaks investigated

| REGION | CURRENT WEEK | CUMULATIVE (9/30/18– 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 | 1 |
| Region 6 (Eastern) | 0 | 0 |
| Total | 0 | 1 |

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

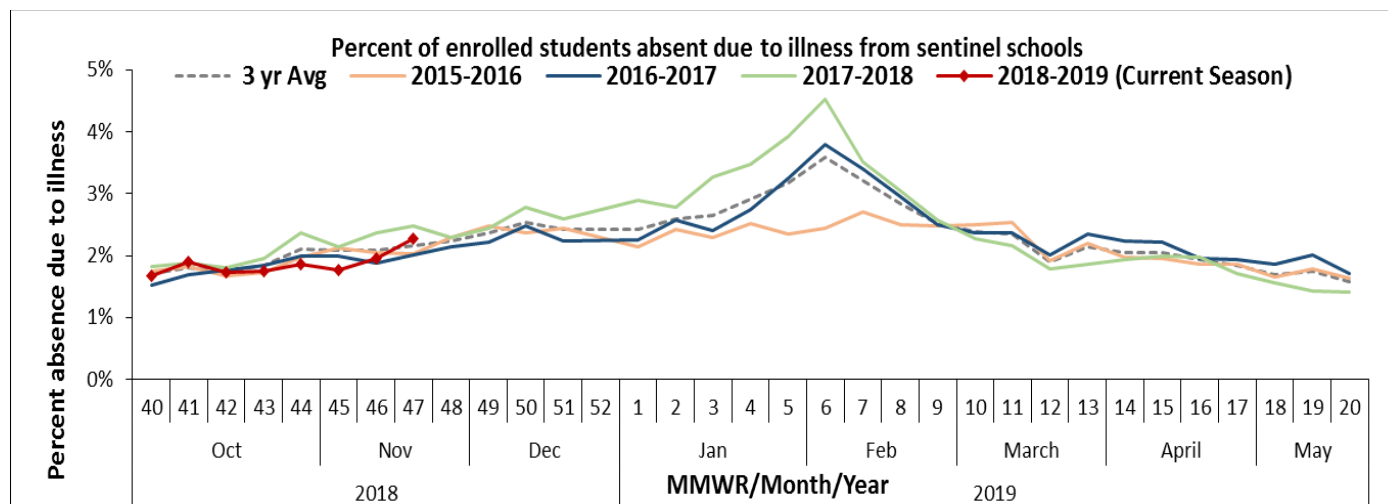
School surveillance program

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.

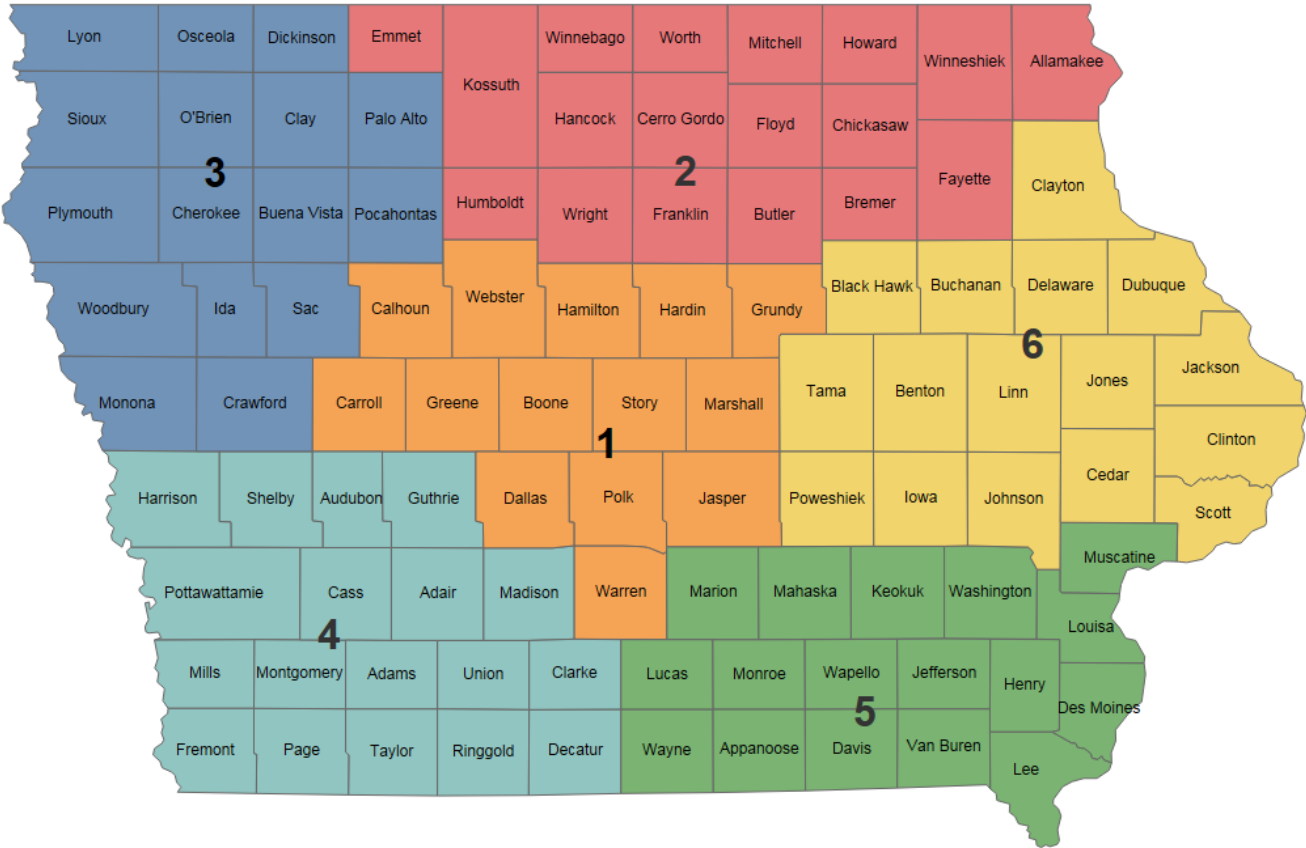
Table 7: Number of schools reporting >10% absenteeism due to any illness

| REGION | CURRENT WEEK | CUMULATIVE (9/30/18–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 | 4 |
| Total | 0 | 4 |

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



Iowa Influenza Region Map



National Influenza Vaccination Week is December 2 – 8

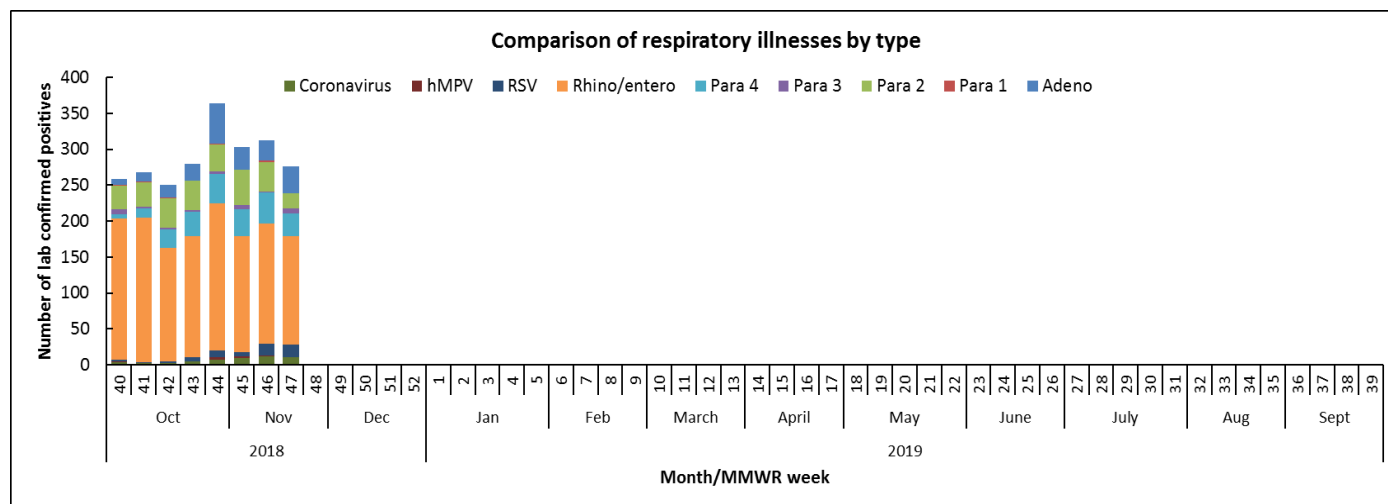


Non-influenza respiratory viruses:

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 (9/30/18–CURRENT WEEK) |
|-----------------------------------|--------------|-----------------------------------|
| Adenovirus | 37 | 215 |
| Parainfluenza Virus Type 1 | 0 | 6 |
| Parainfluenza Virus Type 2 | 21 | 298 |
| Parainfluenza Virus Type 3 | 7 | 31 |
| Parainfluenza Virus Type 4 | 32 | 230 |
| Rhinovirus/Enterovirus | 151 | 1410 |
| Respiratory syncytial virus (RSV) | 18 | 62 |
| Human metapneumovirus (hMPV) | 0 | 8 |
| Coronavirus | 10 | 51 |
| Total | 276 | 2311 |



Other resources:

Vaccine:

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

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

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