Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report

For the week ending December 8, 2018 - Week 49

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(H1N1)pdm09
Percent of influenza rapid test positive	1% (12/1101)
Percent of RSV rapid tests positive	9% (19/201)
Influenza-associated hospitalizations	5/5273 inpatients surveyed
Percent of outpatient visits for ILI	0.56% (baseline 1.6%)
Percent school absence due to illness	1.98%
Number of long-term care outbreaks	0
Number of schools with ≥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:

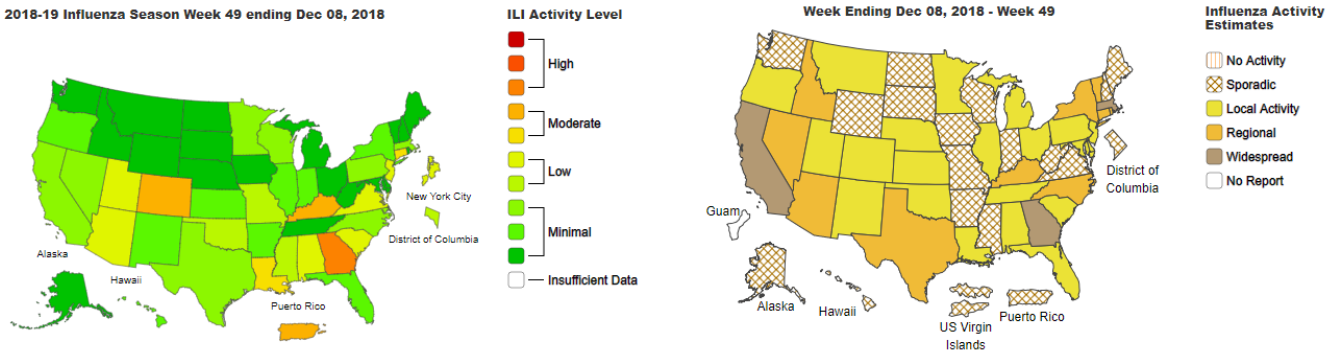
Influenza activity is low in Iowa this week. The geographic spread of influenza in Iowa is sporadic. The State Hygienic Laboratory confirmed one influenza A(H1N1)pdm09 virus from submitted samples. Five influenza-related hospitalizations were reported from sentinel hospitals. The proportion of outpatient visits due to influenza-like illness (ILI) was 0.56 percent, which is below the regional baseline 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: 144 rhinovirus/enterovirus, 46 RSV, 39 coronavirus, and 37 adenovirus.

International activity summary - (WHO):

In the temperate zone of the northern hemisphere influenza activity continued to increase although overall influenza activity remained low. Increased influenza detections were reported in some countries of Southern and South-East Asia. In the temperate zones of the southern hemisphere, influenza activity returned to inter-seasonal levels. Worldwide, seasonal influenza 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 12/10/2018.

National activity summary - (CDC)-Last Updated for Week 49:



Synopsis: Influenza activity in the United States remained slightly elevated. 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. Below is a summary of the key influenza indicators for the week ending December 8, 2018 (week 49):

Viral Surveillance: Influenza A viruses have predominated in the United States since the beginning of October. The percentage of respiratory specimens testing positive for influenza in clinical laboratories remains 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 show susceptibility to the neuraminidase inhibitors (oseltamivir, zanamivir, and peramivir).

Outpatient Illness Surveillance: The proportion of outpatient visits for influenza-like illness (ILI) remained at 2.2%, which is at 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 three states was reported as widespread; 10 states reported regional activity; 21 states reported local activity; the District of Columbia, Puerto Rico, the U.S. Virgin Islands and 16 states reported sporadic activity; and Guam did not report.

Influenza-associated Hospitalizations: A cumulative rate of 1.9 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported.

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: One influenza-associated pediatric death was reported to CDC for week 49.

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

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.

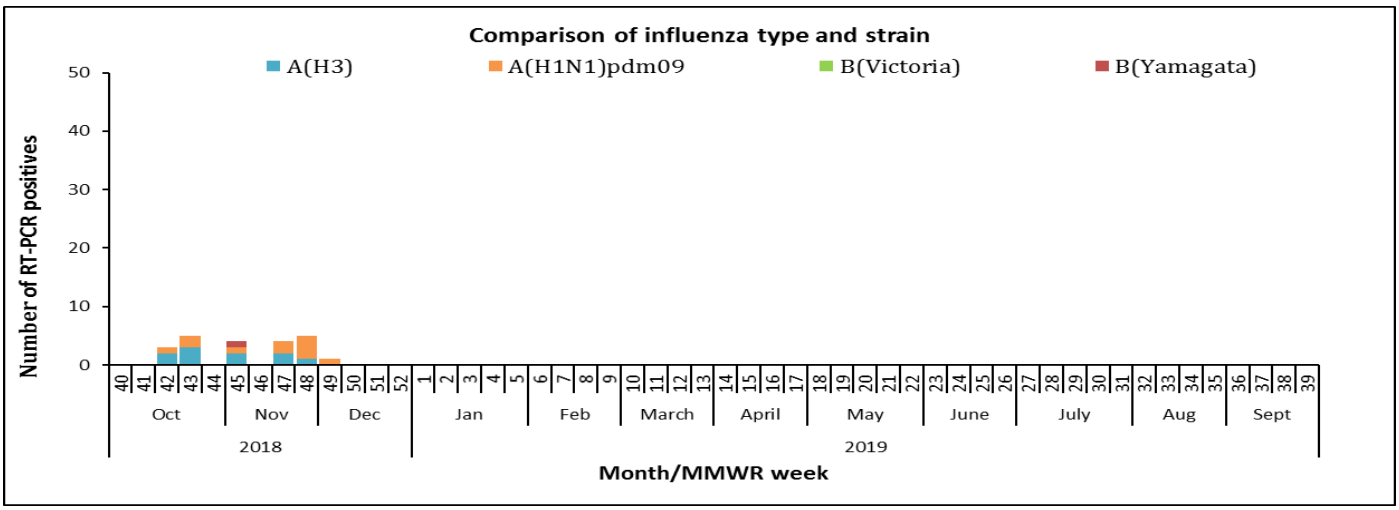
Table 1: Influenza A viruses detected by SHL by age group

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	0	0	0	0 (0%)	3	1	0	4 (19%)
5-17	0	0	0	0 (0%)	5	1	0	6 (29%)
18-24	0	0	0	0 (0%)	0	0	0	0 (0%)
25-49	1	0	0	1 (100%)	2	1	0	3 (14%)
50-64	0	0	0	0 (0%)	1	4	0	5 (24%)
>64	0	0	0	0 (0%)	0	3	0	3 (14%)
Total	1 (100%)	0 (0%)	0 (0%)	1	11 (52%)	10 (48%)	0 (0%)	21

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.



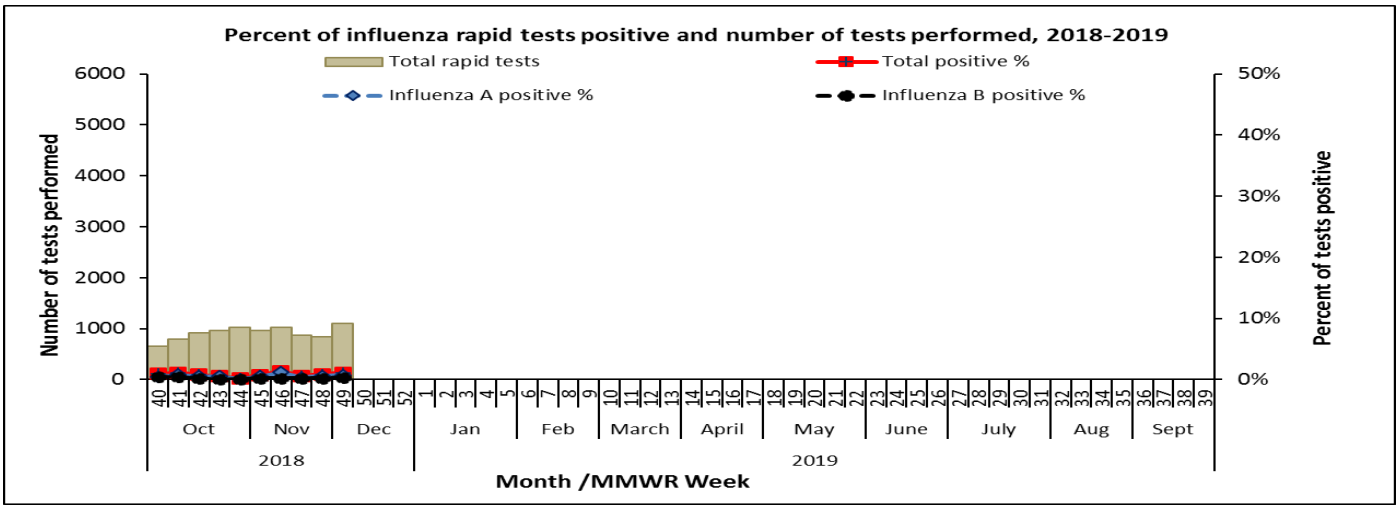
Rapid influenza and RSV test surveillance:

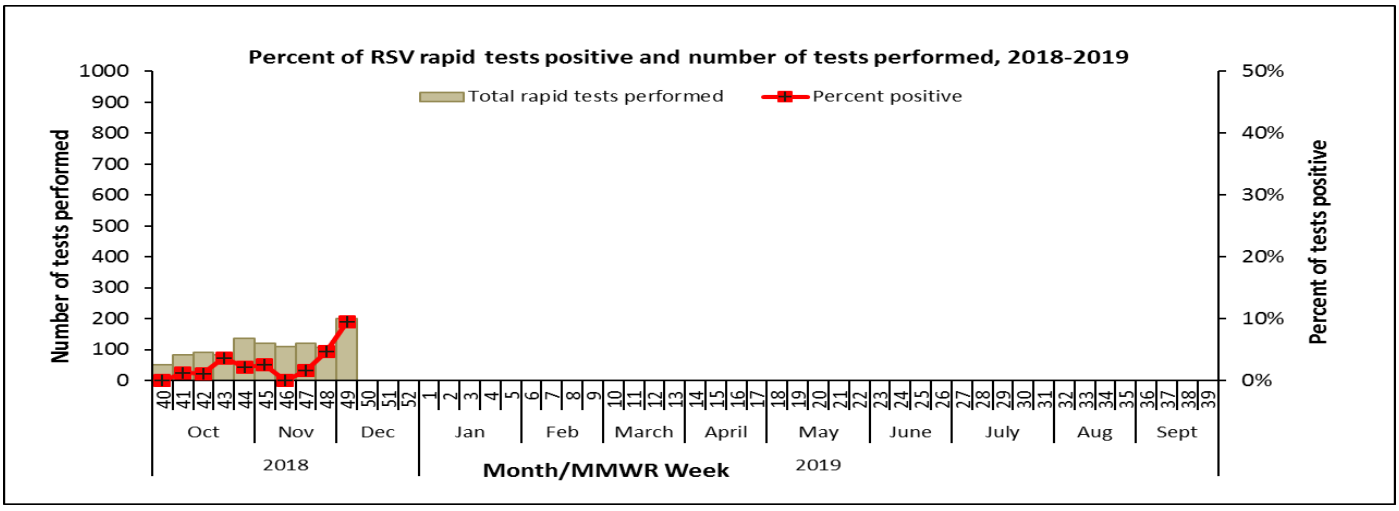
The State Hygienic Laboratory (SHL) runs a weekly web-based survey program where laboratorians report the number of influenza and respiratory syncytial virus (RSV) rapid tests performed and the number of tests positive. This table includes only the number of patients tested for influenza or RSV at laboratory 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)	425	5	2	2	15	1	7
Region 2 (NE)	43	0	0	0	11	1	9
Region 3 (NW)	107	1	1	2	89	5	6
Region 4 (SW)	47	0	0	0	5	1	20
Region 5 (SE)	87	0	0	0	18	3	17
Region 6 (Eastern)	392	2	1	1	63	8	13
Total	**1101**	**8**	**4**	**1**	**201**	**19**	**9**

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



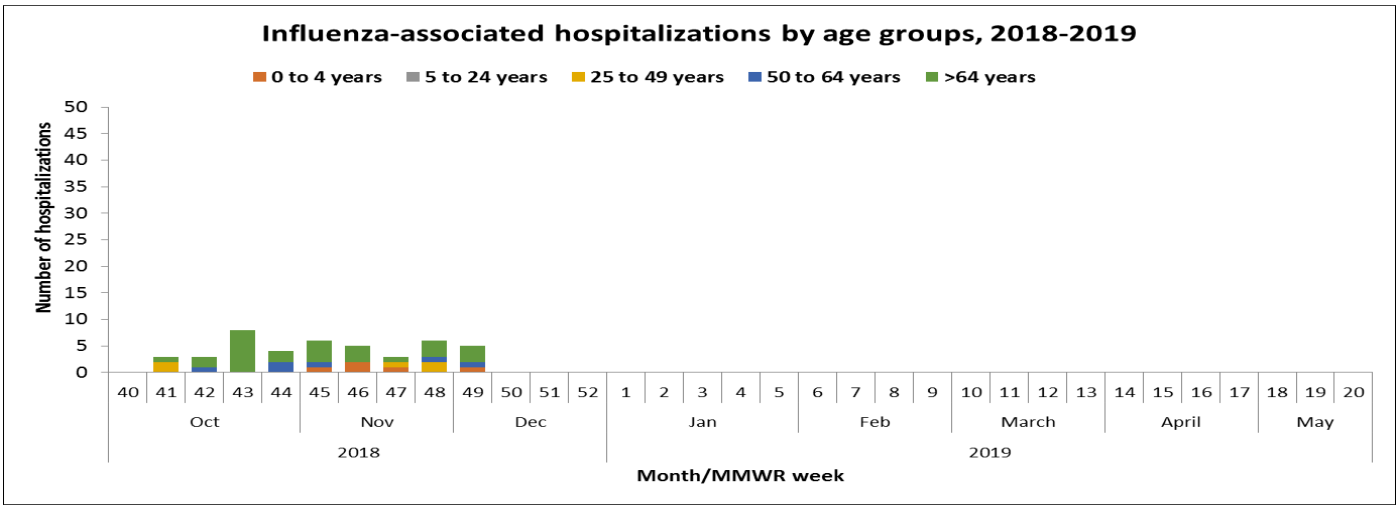


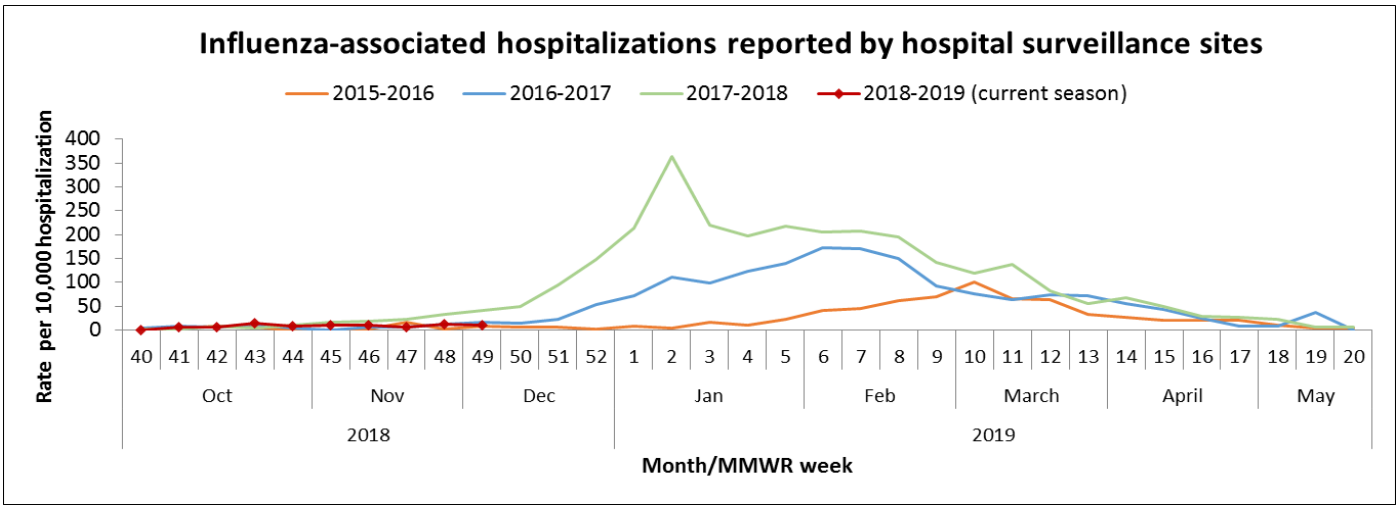
Influenza-associated hospitalizations:

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	5
Age 5-24	0	0
Age 25-49	0	5
Age 50-64	1	6
Age >64	3	27
Total	**5**	**43**





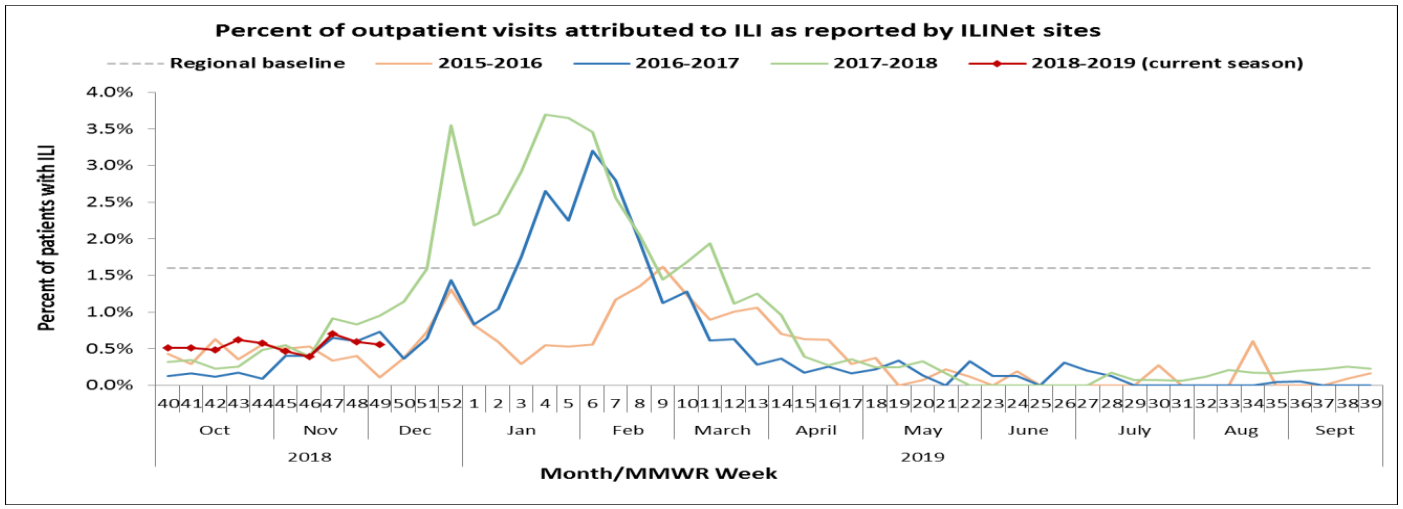
Outpatient health care provider surveillance program (ILINet):

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)

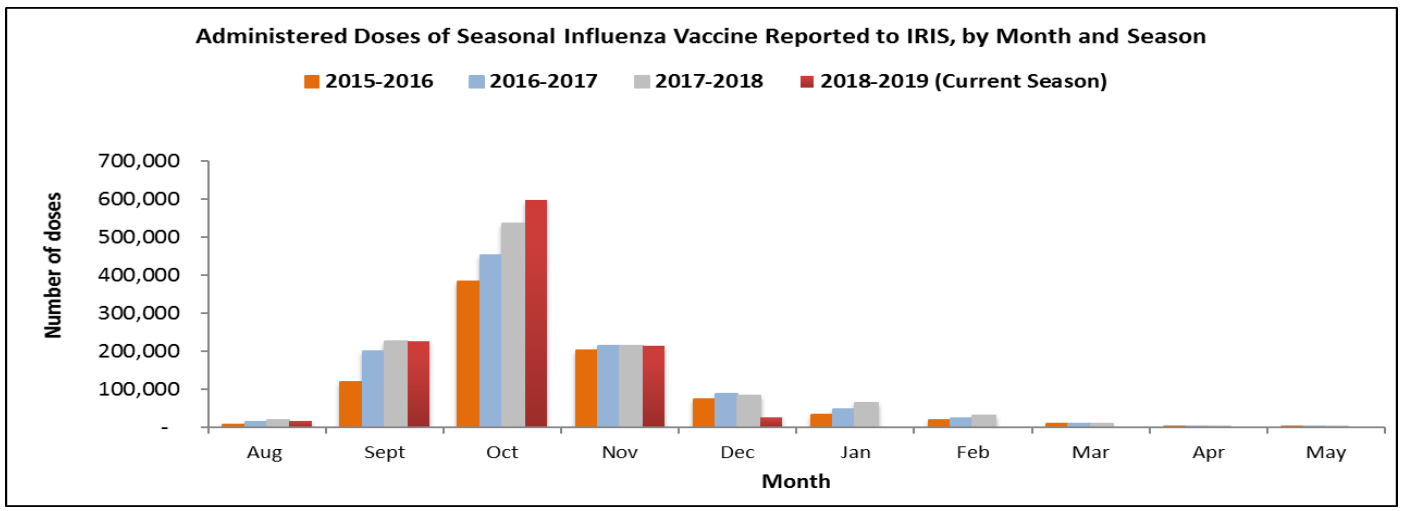
Week	Age 0-4	Age 5-24	Age 25-49	Age 50-64	Age >64	Total ILI	ILI Percent
Week 47, ending Nov 24	10	13	5	2	2	32	0.70
Week 48, ending Dec 1	15	11	2	5	1	34	0.59
Week 49, ending Dec 8	9	14	5	3	7	38	0.56

Note: Influenza-like Illness is defined as a fever of ≥100° 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 adjustedas 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.

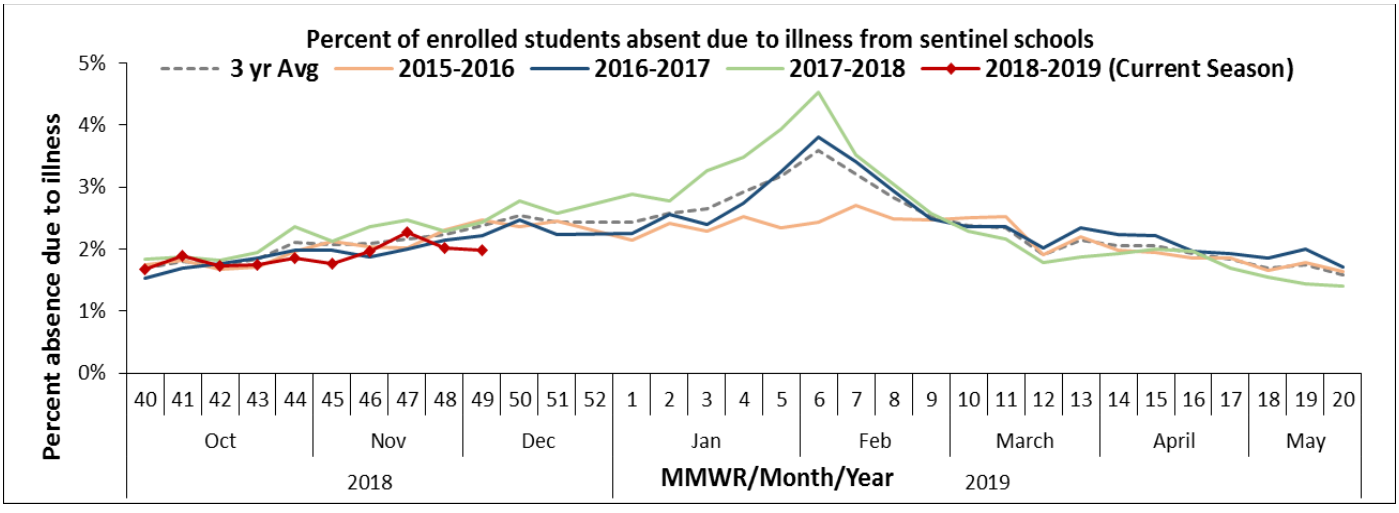
School surveillance program

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.

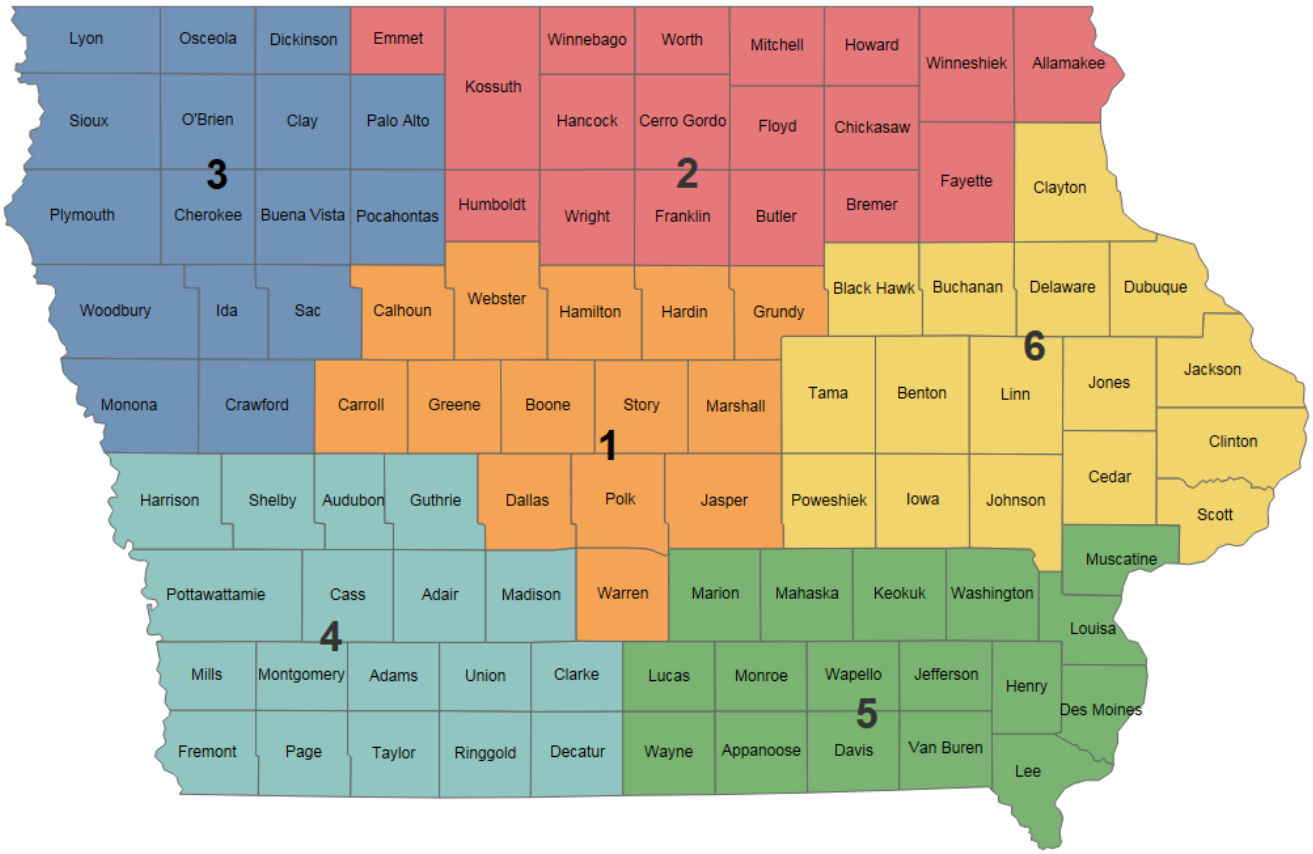
Table 7: Number of schools reporting >10% absenteeism due to any illness

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



Respiratory Synctial Virus (RSV) Key Facts

- RSV usually causes mild, cold-like symptoms such as runny nose, decrease in appetite, coughing, sneezing, fever, and wheezing.
- Infants and older adults may develop severe infections from RSV, such as pneumonia or bronchiolitis.
- Most kids get an RSV infection by age 2. However, you can get an RSV infection at any age and more than once in your life.
- RSV spreads when an infected person coughs or sneezes, or shares cups and eating utensils with others.
- You can help protect yourself and others from RSV infections by washing your hands often with soap and water for 20 seconds.

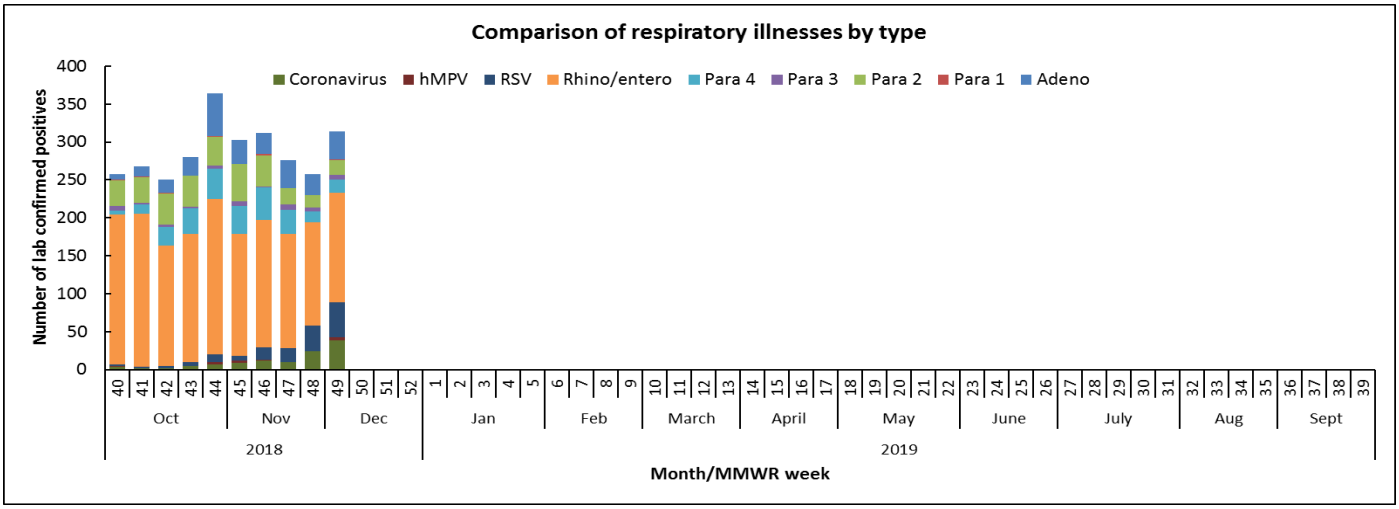
Source: https://www.cdc.gov/dotw/rsv/index.html#

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	280
Parainfluenza Virus Type 1	1	7
Parainfluenza Virus Type 2	19	333
Parainfluenza Virus Type 3	7	43
Parainfluenza Virus Type 4	17	262
Rhinovirus/Enterovirus	144	1690
Respiratory syncytial virus (RSV)	46	142
Human metapneumovirus (hMPV)	4	12
Coronavirus	39	114
Total	**314**	**2883**



Other resources:

Vaccine:

Influenza vaccine recommendation: idph.iowa.gov/immtb/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/influenza-surveillance#publications
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