



Iowa Influenza Surveillance Network (IISN)
Influenza-like Illness (ILI) and Other Respiratory Viruses
Weekly Activity Report
For the week ending May 18, 2019 - Week 20



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	No viruses subtyped
Percent of influenza rapid test positive	5% (37/797)
Percent of RSV rapid tests positive	1% (1/67)
Influenza-associated hospitalizations	2/1765 inpatients surveyed
Percent of outpatient visits for ILI	0.43% (baseline 1.6%)
Percent school absence due to illness	1.57%
Number of long-term care outbreaks	0
Number of schools with ≥10% absence due to illness	0
Influenza-associated mortality - all ages (Cumulative)	85
Influenza-associated pediatric mortality (Cumulative)	1
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:

This will be the last weekly report for the 2018-2019 influenza surveillance season. Surveillance reports will be published monthly for the summer until weekly reports start again in the fall.

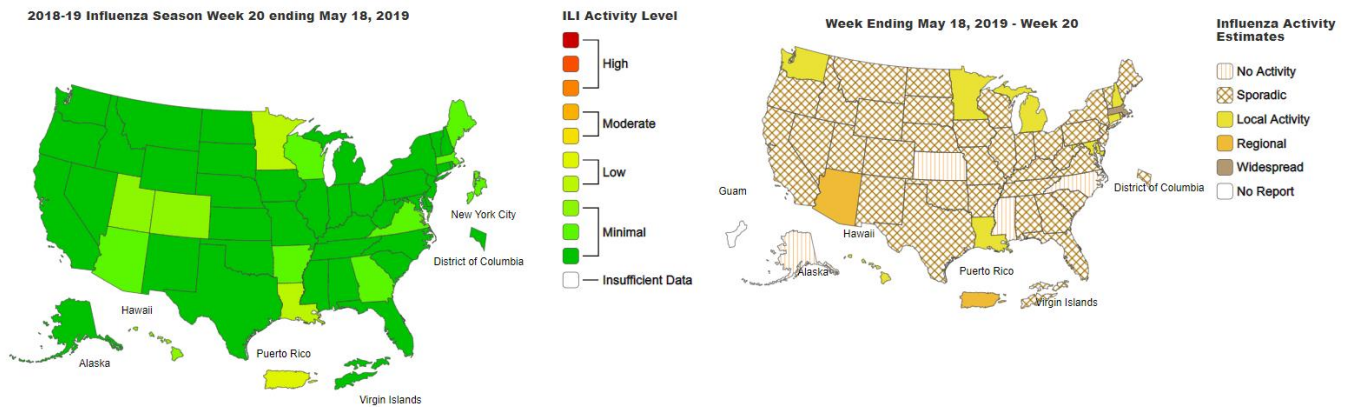
Influenza activity remained low this week and the geographic spread of influenza is sporadic. For this reporting week, the State Hygienic Laboratory did not confirm any influenza viruses from submitted samples. Sentinel hospitals reported two influenza-related hospitalizations. The proportion of outpatient visits due to influenza-like illness (ILI) is 0.43 percent, which is below the regional baseline of 1.6 percent. No long-term care influenza outbreaks were reported with onset in week 20. No schools reported 10 percent absenteeism due to illness. One influenza death was reported. Surveillance sites most frequently detected the following non-influenza respiratory illnesses: 185 rhinovirus/enterovirus, 73 parainfluenza type 3, 41 adenovirus and 37 hMPV.

International activity summary - (WHO):

In the temperate zone of the northern hemisphere influenza activity decreased overall. In North America, influenza activity was low overall. In the temperate zones of the southern hemisphere, influenza detections increased in southern Australia and South Africa. The influenza activity in South America remained at 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 5/13/2019.

National activity summary - (CDC)-Last Updated for Week 20:



Synopsis: Influenza activity remained low in United States and was similar to last week. While influenza A(H1N1)pdm09 viruses predominated from October to mid-February, influenza A(H3N2) viruses have been more commonly identified since late February. Small numbers of influenza B viruses also have been reported. Below is a summary of the key influenza indicators for the week ending May 18, 2019.

Viral Surveillance: The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories remained low. During the most recent three weeks, influenza A(H3) viruses were reported more frequently than influenza A(H1N1)pdm09 viruses nationally. The majority of influenza A(H1N1)pdm09 and influenza B viruses characterized antigenically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses. However, the majority of influenza A(H3N2) viruses are antigenically distinguishable from A/Singapore/INFIMH-16-0019/2016 (3C.2a1), a cell-propagated reference virus representing the A(H3N2) component of 2018-19 Northern Hemisphere influenza vaccines. The vast majority of influenza viruses tested (>99%) show susceptibility to oseltamivir and peramivir. All influenza viruses tested showed susceptibility to zanamivir and baloxavir.

Outpatient Illness Surveillance: The proportion of outpatient visits for influenza-like illness (ILI) remained at 1.5%, which is below the national baseline of 2.2%. All regions reported ILI below their region-specific baseline level.

Geographic Spread of Influenza. The geographic spread of influenza in one state was reported as widespread; Puerto Rico and one state reported regional activity; eight states reported local activity; the District of Columbia, the U.S. Virgin Islands and 36 states reported sporadic activity; four states reported no activity; and Guam did not report

Influenza-associated Hospitalizations: A cumulative rate of 65.7 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (221.7 hospitalizations per 100,000 population).

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 to CDC during week 20. Two occurred during the 2018-2019 season and one occurred during the 2017-2018 season.

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.

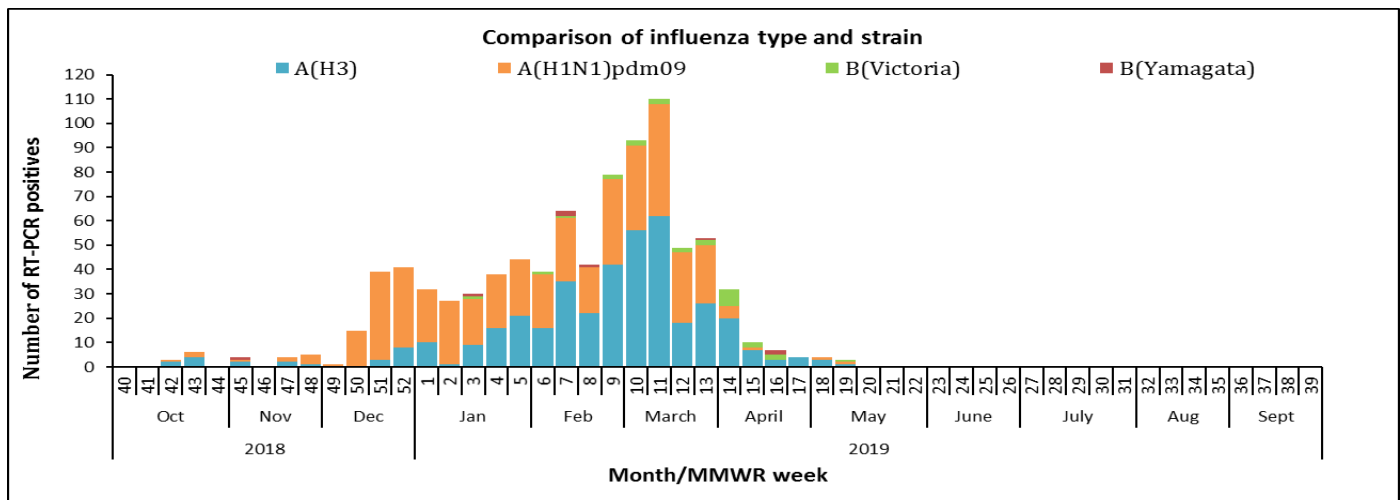
Table 1: Influenza A viruses detected by SHL by age group

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	74	20	0	94 (11%)
5-17	0	0	0	0	73	49	1	123 (14%)
18-24	0	0	0	0	31	100	2	133 (15%)
25-49	0	0	0	0	89	33	2	124 (14%)
50-64	0	0	0	0	99	40	3	142 (16%)
>64	0	0	0	0	85	152	11	248 (29%)
Total	0	0	0	0	451	394	19	864
Pct.	--	--	--		52%	46%	2%	

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	3	0	0	3 (9%)
5-17	0	0	0	0	12	3	0	15 (44%)
18-24	0	0	0	0	4	1	0	5 (15%)
25-49	0	0	0	0	5	3	0	8 (24%)
50-64	0	0	0	0	1	0	0	1 (3%)
>64	0	0	0	0	0	1	1	2 (6%)
Total	0	0	0	0	25	8	1	34
Pct.	--	--	--		74%	24%	3%	

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.



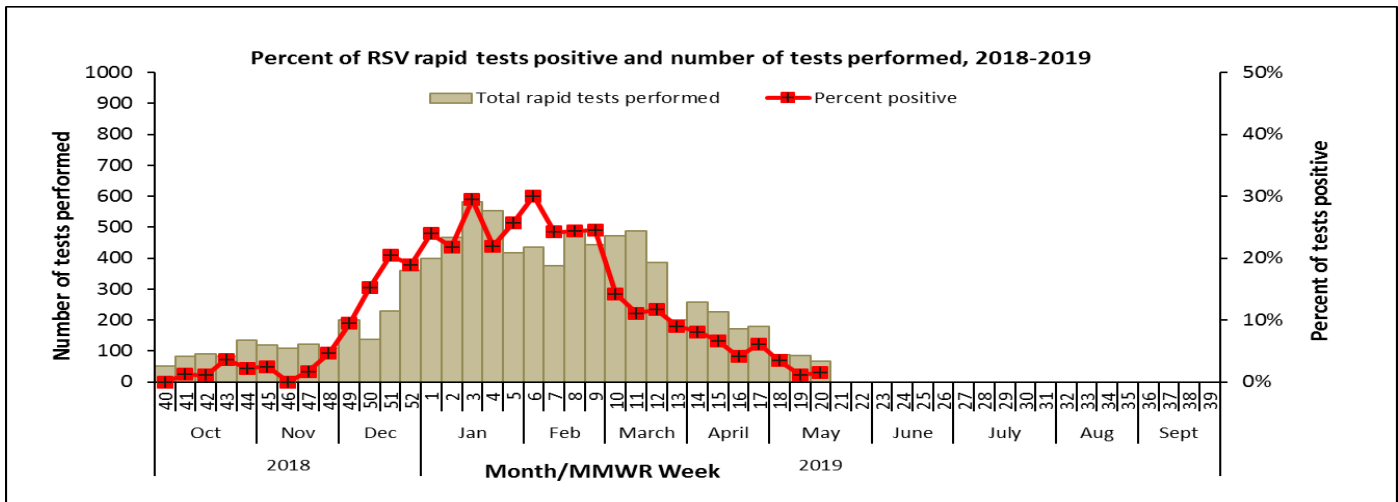
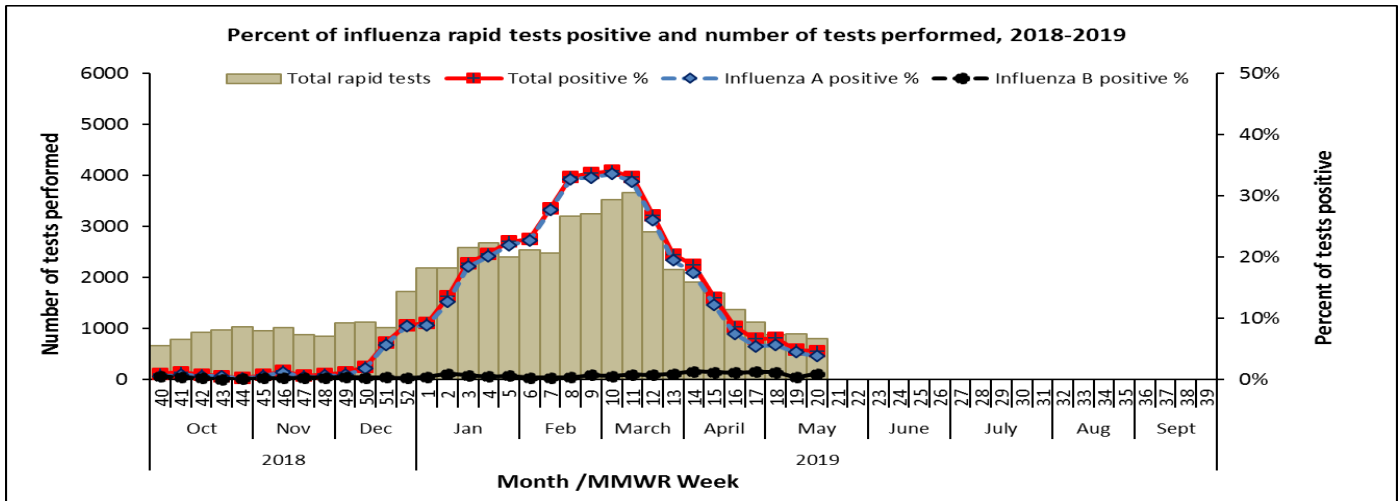
Rapid influenza and RSV test surveillance:

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)	307	4	2	2	9	0	0
Region 2 (NE)	29	2	0	7	11	1	9
Region 3 (NW)	11	1	0	9	7	0	0
Region 4 (SW)	8	0	0	0	4	0	0
Region 5 (SE)	55	3	0	5	8	0	0
Region 6 (Eastern)	387	20	5	6	28	0	0
Total	797	30	7	5	67	1	1

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

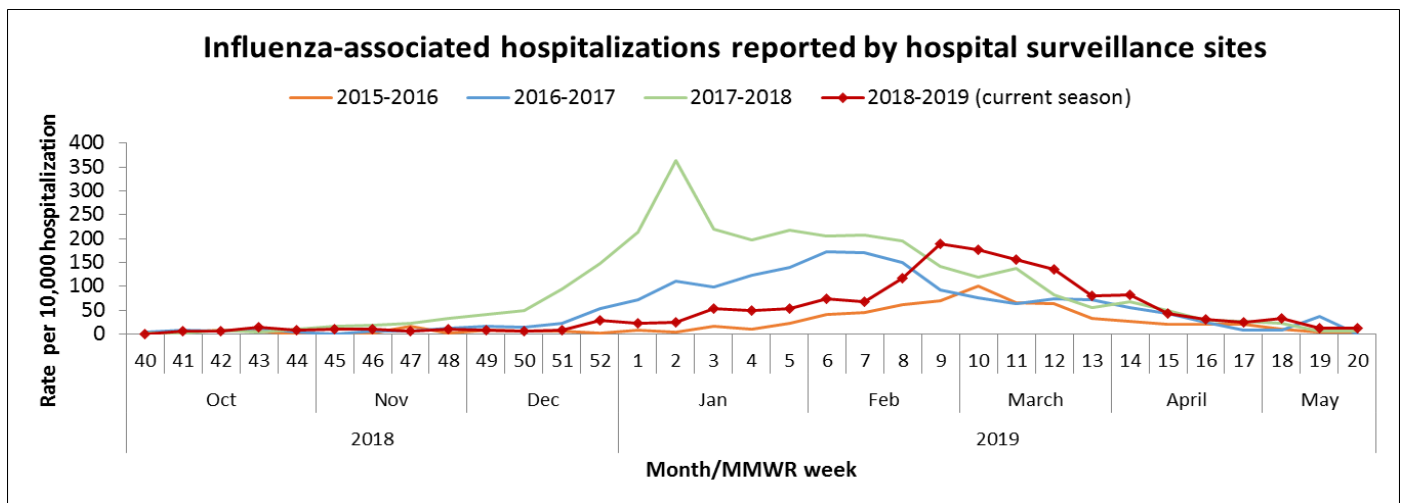
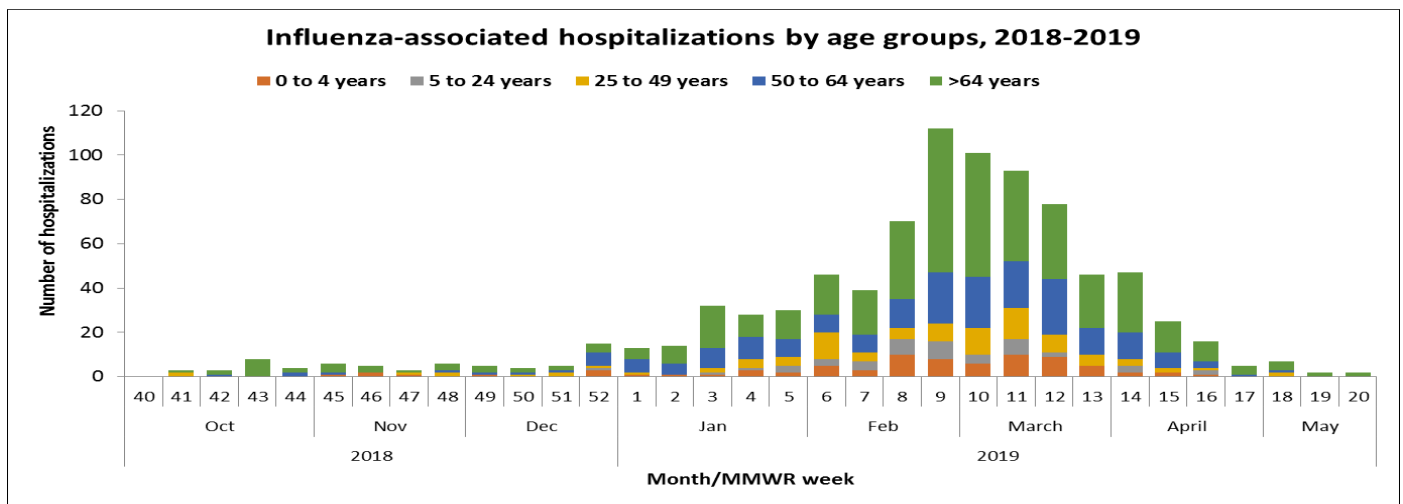


Influenza-associated hospitalizations:

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	0	77
Age 5-24	0	46
Age 25-49	0	96
Age 50-64	0	209
Age >64	2	445
Total	2	873



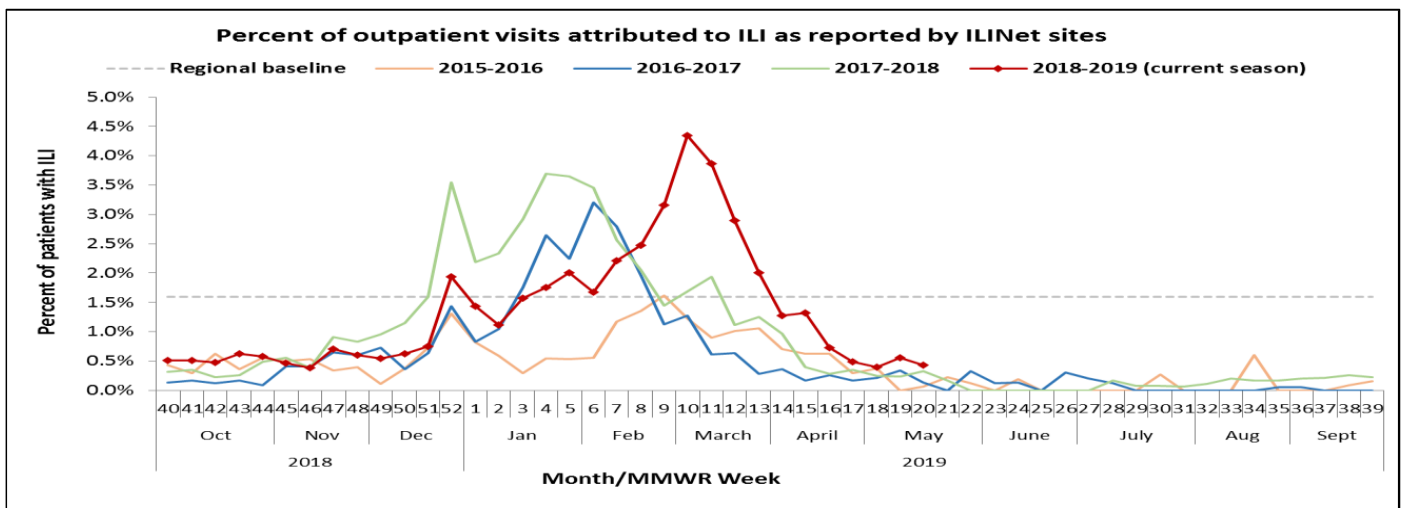
Outpatient health care provider surveillance program (ILINet):

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)

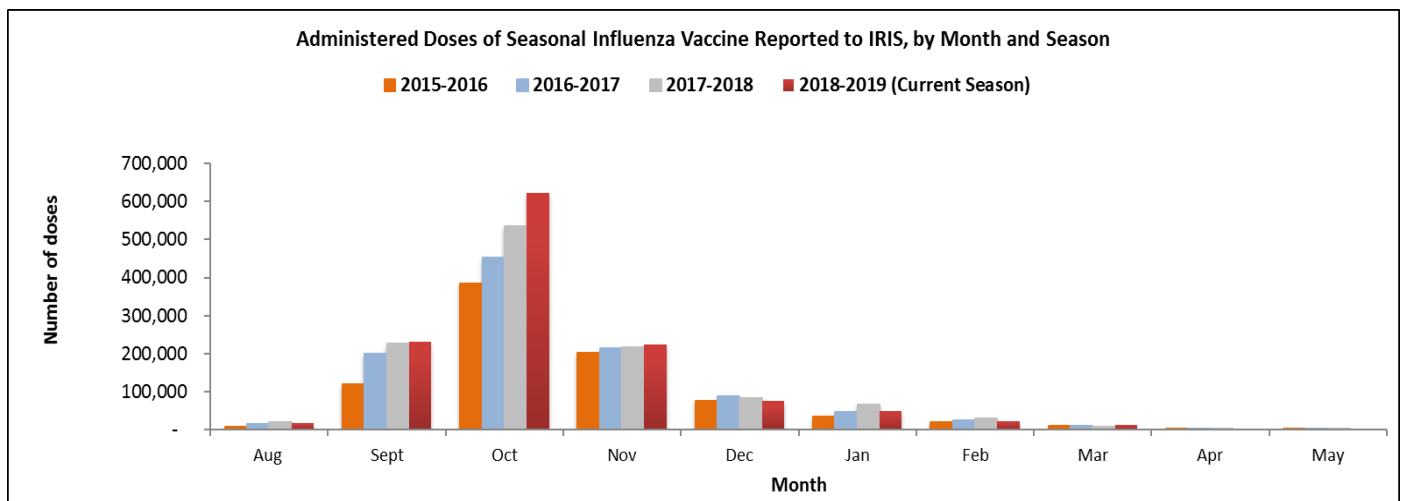
Week	Age 0-4	Age 5-24	Age 25-49	Age 50-64	Age >64	Total ILI	ILI Percent
Week 18, ending May 4	5	9	2	2	2	20	0.40
Week 19, ending May 11	9	11	1	1	2	24	0.56
Week 20, ending May 18	2	10	3	1	4	20	0.43

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.



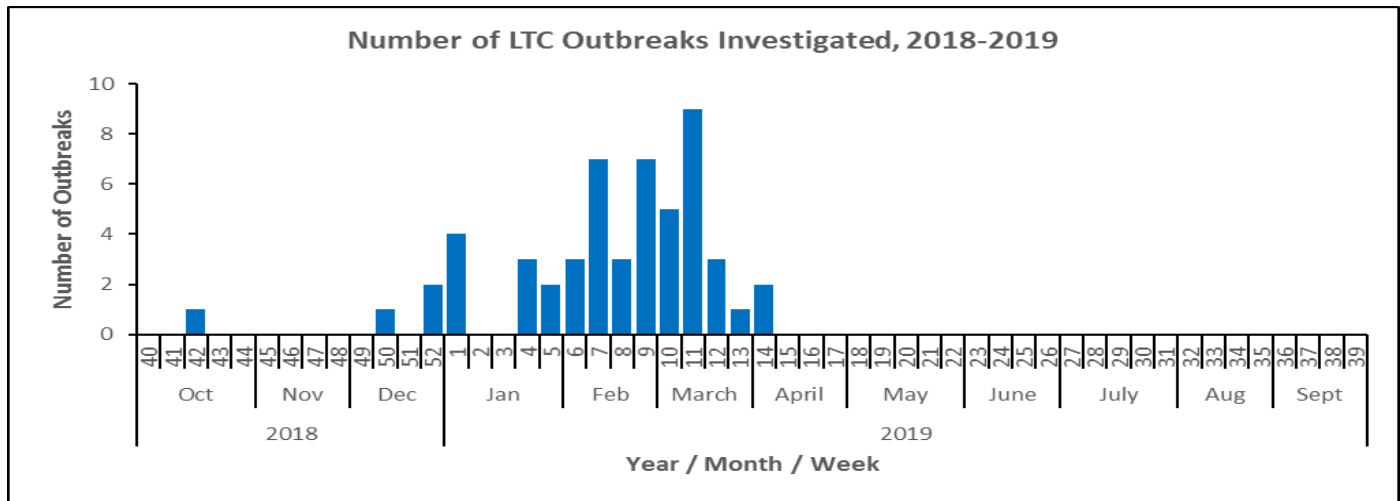
Note: The data for the 2018-2019 season is only up to the current week and there is a lag between the vaccine administration date and the date reported to the IRIS. The current season’s data will be adjusted as additional data is received.

Long-term Care Outbreaks:

Table 6: Number of long-term care outbreaks investigated

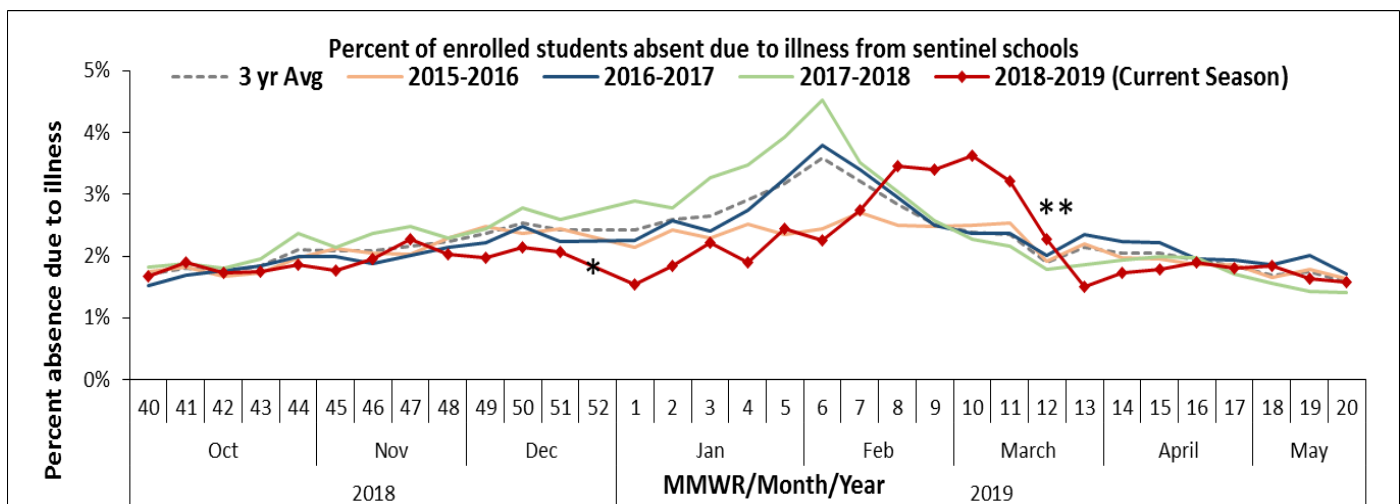
REGION	CURRENT WEEK	CUMULATIVE (9/30/18– CURRENT WEEK)
Region 1 (Central)	0	24
Region 2 (NE)	0	2
Region 3 (NW)	0	5
Region 4 (SW)	0	7
Region 5 (SE)	0	7
Region 6 (Eastern)	0	8
Total	0	53

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.



*School data not reported for week 52 due to holiday closings

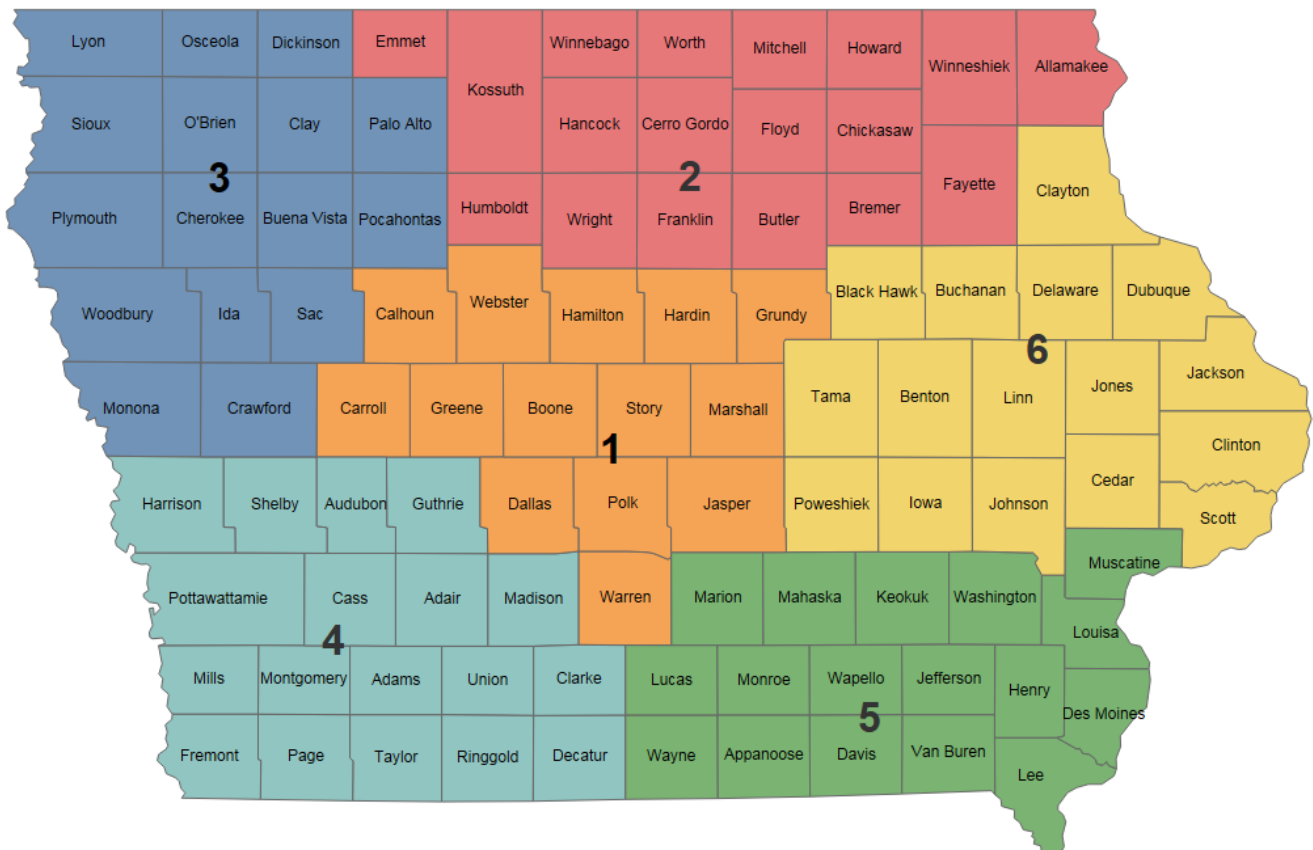
**School data may not accurately reflect illness for week 12 when many schools closed for spring break

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	45
Region 2 (NE)	0	17
Region 3 (NW)	0	27
Region 4 (SW)	0	20
Region 5 (SE)	0	25
Region 6 (Eastern)	0	62
Total	0	196

Note: See map in the school section for the counties in each region. Each school that reports 10 percent illness is counted only once per week for weekly numbers and only once per season for the cumulative reports.

Iowa Inﬂuenza Region Map

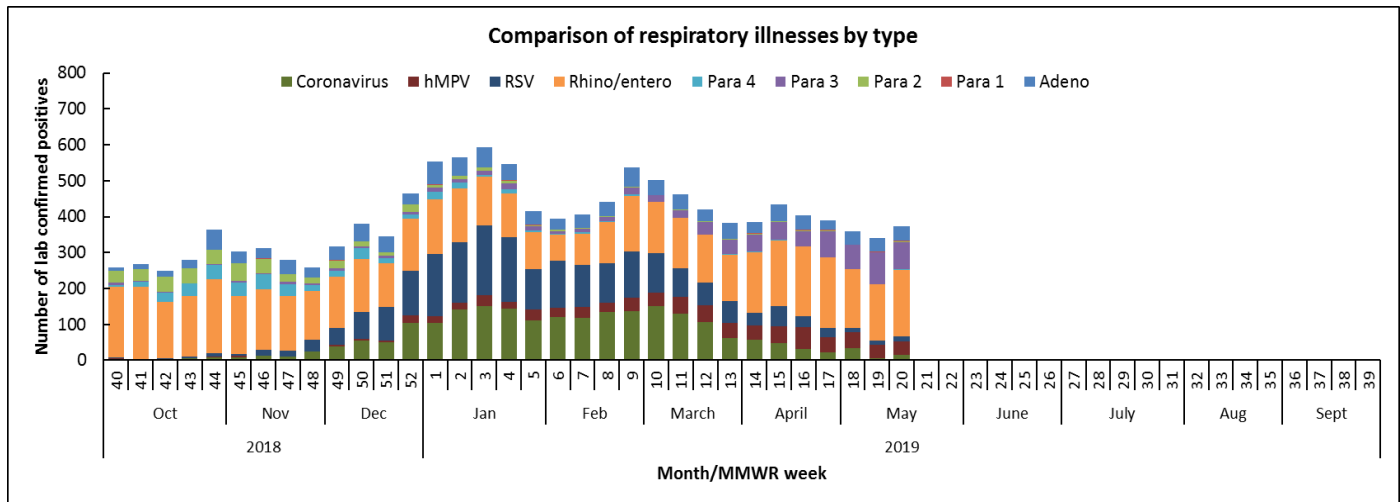


Non-influenza respiratory viruses:

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	41	1233
Parainfluenza Virus Type 1	1	25
Parainfluenza Virus Type 2	4	448
Parainfluenza Virus Type 3	73	725
Parainfluenza Virus Type 4	4	406
Rhinovirus/Enterovirus	185	4981
Respiratory syncytial virus (RSV)	14	2251
Human metapneumovirus (hMPV)	37	754
Coronavirus	15	2153
Total	374	12976



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