



Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report

For the week ending January 6, 2018 - Week 1

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

Quick Stats

Percent of influenza rapid test positive	25% (769/3028)
Percent of RSV rapid tests positive	24% (103/426)
Influenza-associated hospitalizations	169/6066 inpatients
Percent of outpatient visits for ILI	2.66% (baseline 1.9%)
Percent school absence due to illness	2.88% *
Number of long-term care influenza outbreaks	10
Number of schools with $\geq 10\%$ absence due to illness	5
Influenza-associated mortality -all ages (Cumulative)	14
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.

*Schools with 10 percent absences only reflect 3 days in week 1 due to holiday closings

Iowa statewide activity summary:

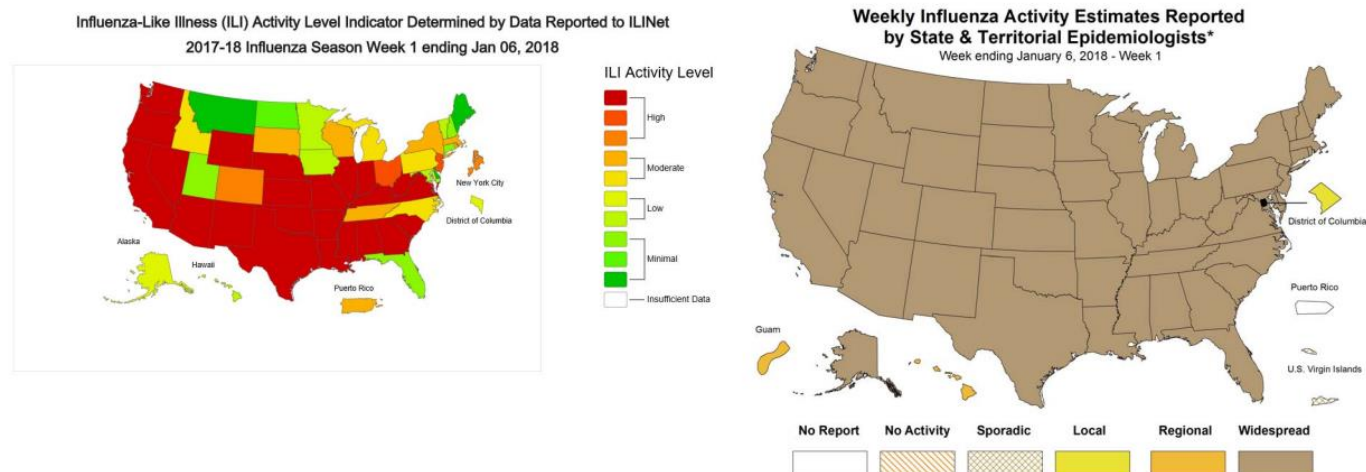
Influenza activity continues to increase in Iowa. The geographic spread of influenza in Iowa is widespread. For this reporting week, the State Hygienic Laboratory confirmed 61 influenza A(H3), one influenza A(H1N1)pdm09, and 12 influenza B (Yamagata Lineage) viruses from submitted samples as well as nine influenza A and ten influenza B positive specimens awaiting subtyping/lineage. There were 169 influenza-related hospitalizations were reported from sentinel hospitals during this reporting week. IDPH investigated 10 influenza outbreaks in long-term care facilities with first illness onset in this reporting week. The proportion of outpatient visits due to influenza-like illness (ILI) was 2.66 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: 130 coronavirus, 115 RSV, 72 rhinovirus/enterovirus, 35 hMPV, and 27 adenovirus.

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 was at inter-seasonal levels. Worldwide, influenza A(H3N2) and B viruses accounted for the majority of influenza detections although influenza A(H1N1)pdm09 viruses were predominant in some countries.

Visit www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/ for more information. It was last updated 1/8/2018.

National activity summary - (CDC)-Last Updated in Week 1:



Synopsis: During week 1 (December 31, 2017-January 6, 2018), influenza activity increased in the United States.

Viral Surveillance: The most frequently identified influenza virus subtype reported by public health laboratories during week 1 was influenza A(H3). The percentage of respiratory specimens testing positive for influenza in clinical laboratories remained elevated.

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

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

Influenza-associated Hospitalizations: A cumulative rate of 22.7 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 5.8%, which is above the national baseline of 2.2%. All 10 regions reported ILI at or above region-specific baseline levels. New York City and 26 states experienced high ILI activity; Puerto Rico and 10 states experienced moderate ILI activity; the District of Columbia and six states experienced low ILI activity; and eight states experienced minimal ILI activity.

Geographic Spread of Influenza: The geographic spread of influenza in 49 states was reported as widespread; Guam and one state reported regional activity; the District of Columbia reported local activity; the U.S. Virgin Islands reported sporadic activity; and Puerto Rico did not report.

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

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 daily.

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

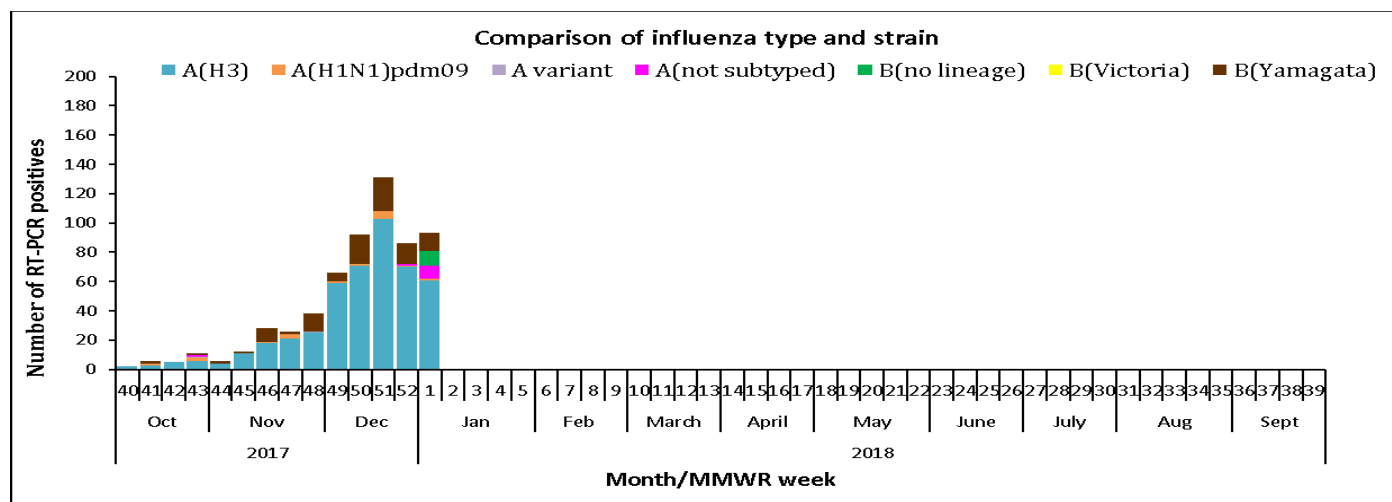
Age Group	CURRENT WEEK				CUMULATIVE (10/1/17– CURRENT WEEK)				
	A(H1N1) pdm09	A (H3)	Pending/ Not subtyped	Total	A(H1N1) pdm09	A variants	A (H3)	Pending/ Not subtyped	Total
0-4	0	5	0	5 (7%)	6	0	49	1	56 (11%)
5-17	0	2	0	2 (3%)	3	0	49	1	53 (11%)
18-24	0	2	0	2 (3%)	1	1	48	0	50 (10%)
25-49	1	6	1	8 (11%)	5	1	47	1	54 (11%)
50-64	0	5	2	7 (10%)	1	0	56	2	59 (12%)
>64	0	41	6	47 (66%)	0	0	210	6	216 (44%)
Total	1 (1%)	61 (86%)	9 (13%)	71	16 (3%)	2 (0%)	459 (94%)	11 (2%)	488

Note: 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” 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. Influenza A variants detected in 2017-18 include A(H1N1)v and A(H3N2)v.

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

Age Group	CURRENT WEEK				CUMULATIVE (10/1/17– CURRENT WEEK)			
	Victoria Lineage	Yamagata Lineage	Lineage Pending	Total	Victoria Lineage	Yamagata Lineage	Lineage Pending	Total
0-4	0	0	1	1 (5%)	0	10	1	11 (10%)
5-17	0	1	1	2 (9%)	0	26	1	27 (24%)
18-24	0	0	1	1 (5%)	0	5	1	6 (5%)
25-49	0	4	2	6 (27%)	0	20	2	22 (19%)
50-64	0	2	0	2 (9%)	0	22	0	22 (19%)
>64	0	5	5	10 (45%)	0	21	5	26 (23%)
Total	0 (0%)	12 (55%)	10 (45%)	22	0 (0%)	104 (91%)	10 (9%)	114

Note: 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.



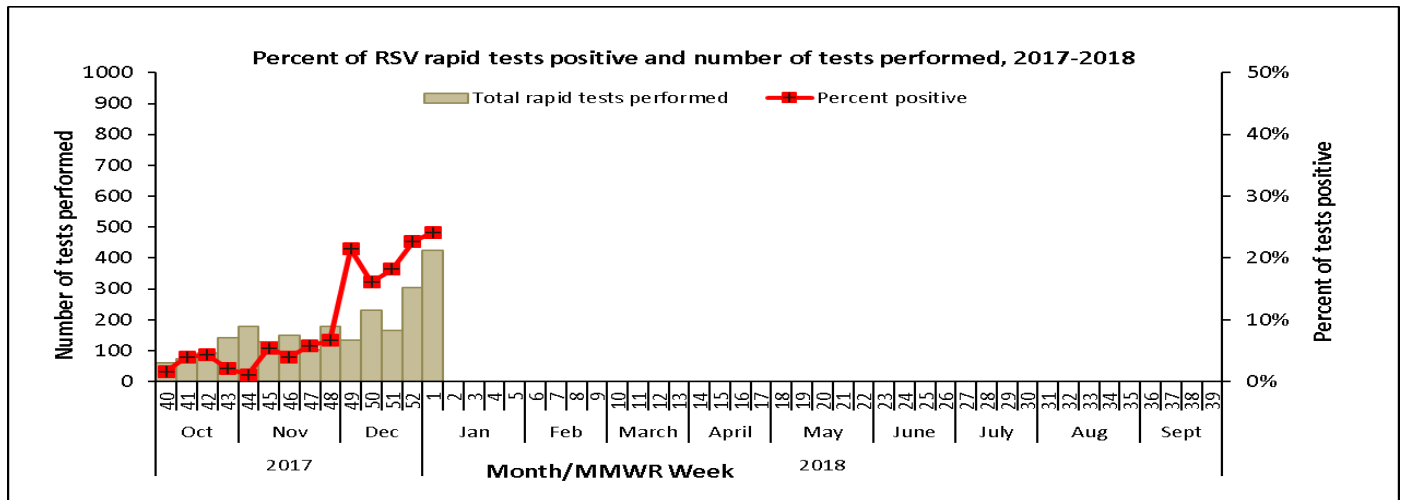
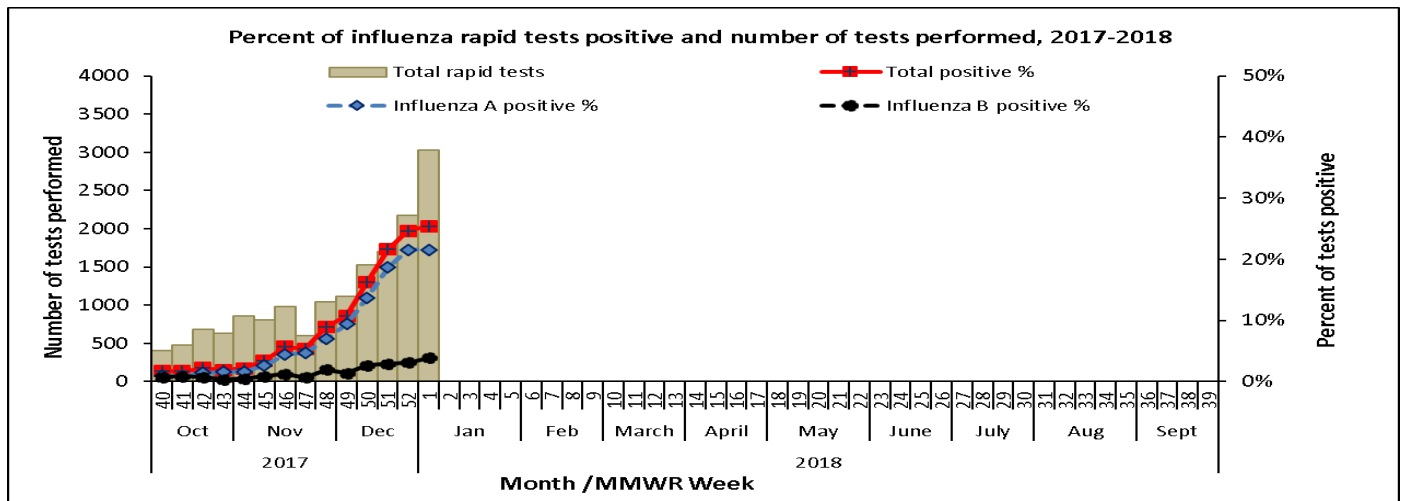
Rapid influenza and RSV test surveillance:

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)	862	227	33	30	39	11	28
Region 2 (NE)	90	21	3	27	12	3	25
Region 3 (NW)	381	82	7	23	163	38	23
Region 4 (SW)	267	68	4	27	51	13	25
Region 5 (SE)	269	41	29	26	47	12	26
Region 6 (Eastern)	1159	213	41	22	114	26	23
Total	3028	652	117	25	426	103	24

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

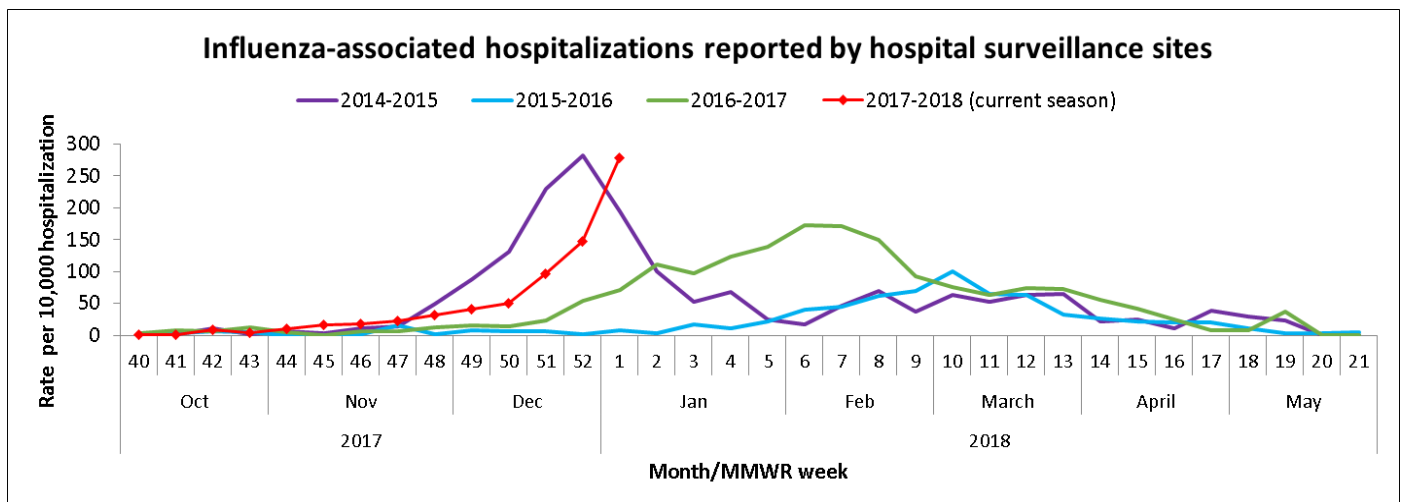
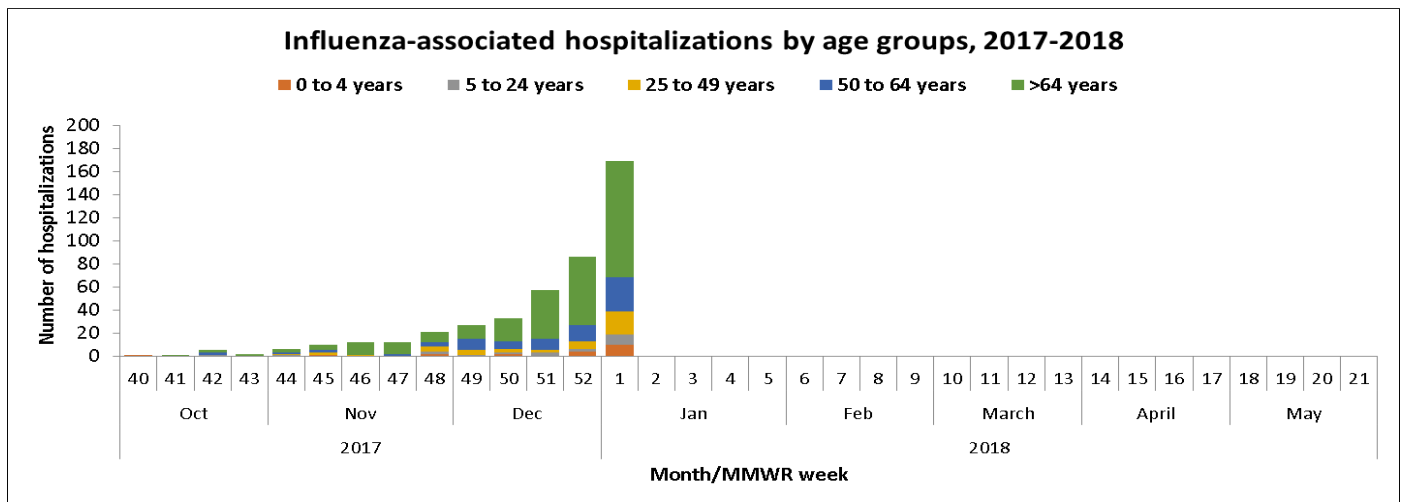


Influenza-associated hospitalizations:

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	10	20
Age 5-24	9	20
Age 25-49	20	44
Age 50-64	29	81
Age >64	101	277
Total	169	442



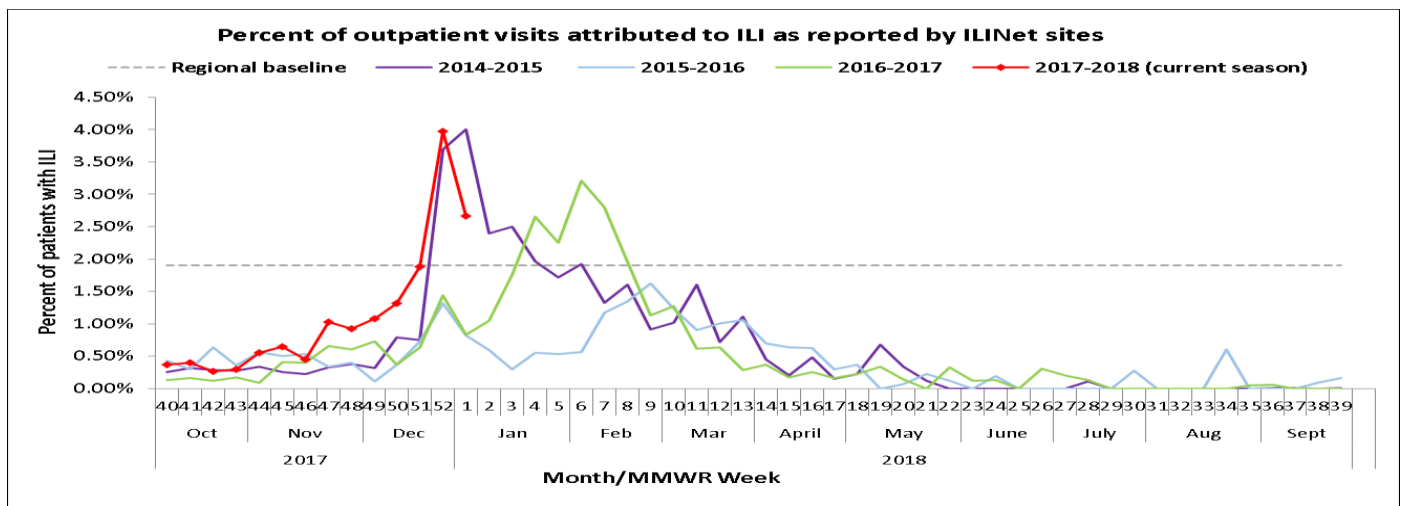
Outpatient health care provider surveillance program (ILINet):

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)

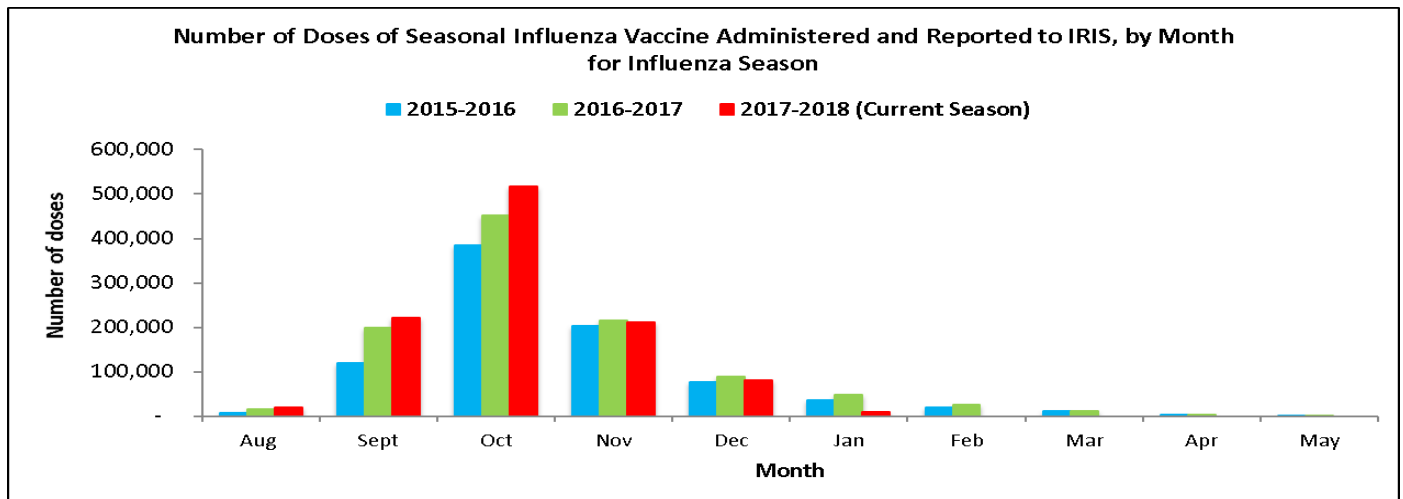
Week	Age 0-4	Age 5-24	Age 25-49	Age 50-64	Age > 64	Total ILI	ILI Percent
Week 51, ending December 23	7	14	11	6	11	49	1.88
Week 52, ending December 30	17	19	17	19	9	81	3.97
Week 1, ending January 6	7	13	9	7	10	46	2.66

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.



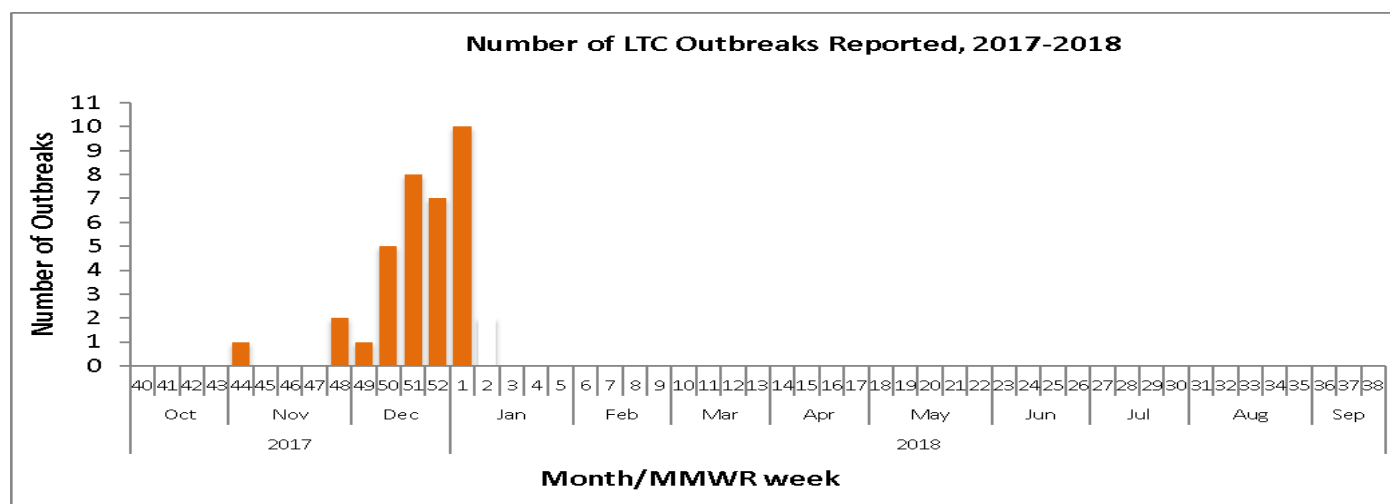
Note: The data for the 2017-2018 season is provisional due to the lag between the vaccine administration date and the date reported to IRIS.

Long-term care outbreaks:

Table 6: Number of long-term care outbreaks investigated

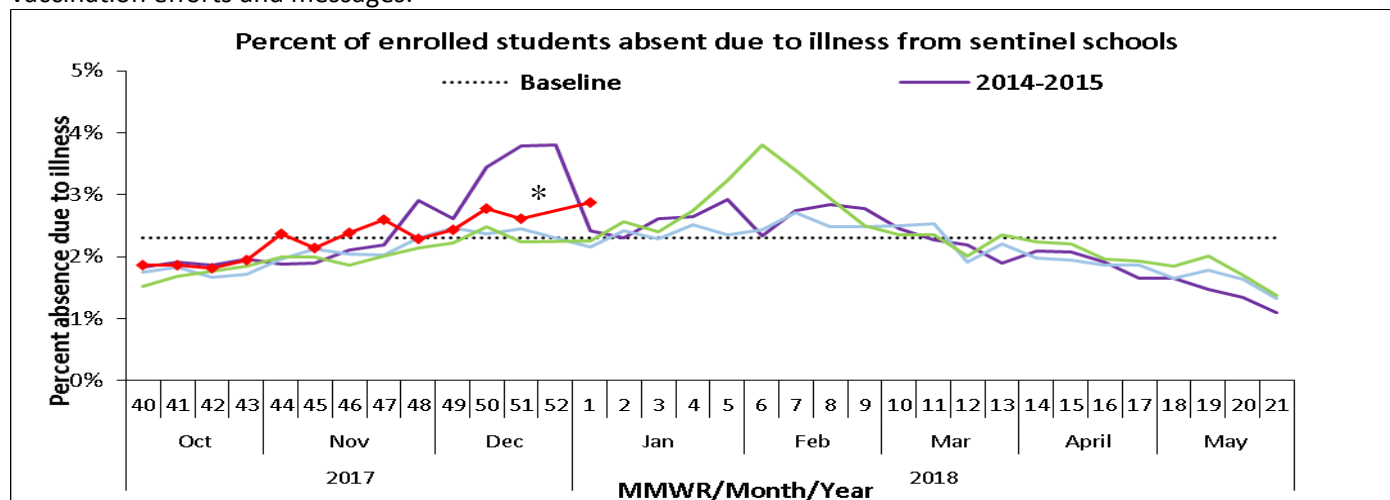
REGION	CURRENT WEEK	CUMULATIVE (10/1/17 – CURRENT WEEK)
Region 1 (Central)	3	6
Region 2 (NE)	3	6
Region 3 (NW)	1	1
Region 4 (SW)	1	5
Region 5 (SE)	2	12
Region 6 (Eastern)	0	4
Total	10	34

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.



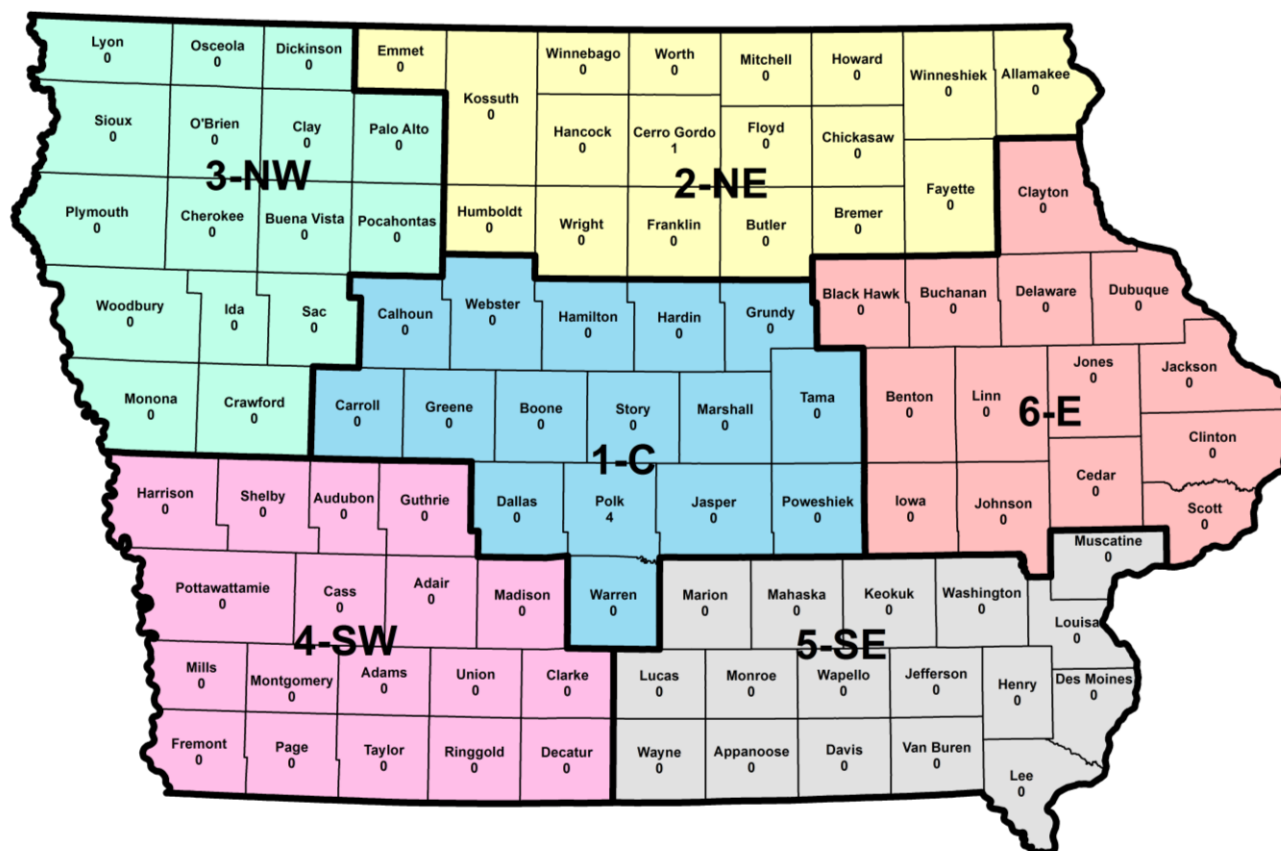
*School data not reported for week 52 due to holiday closings

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

REGION	CURRENT WEEK	CUMULATIVE (10/1/17 – CURRENT WEEK)
Region 1 (Central)	4	13
Region 2 (NE)	1	5
Region 3 (NW)	0	4
Region 4 (SW)	0	5
Region 5 (SE)	0	0
Region 6 (Eastern)	0	8
Total	5	35

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*



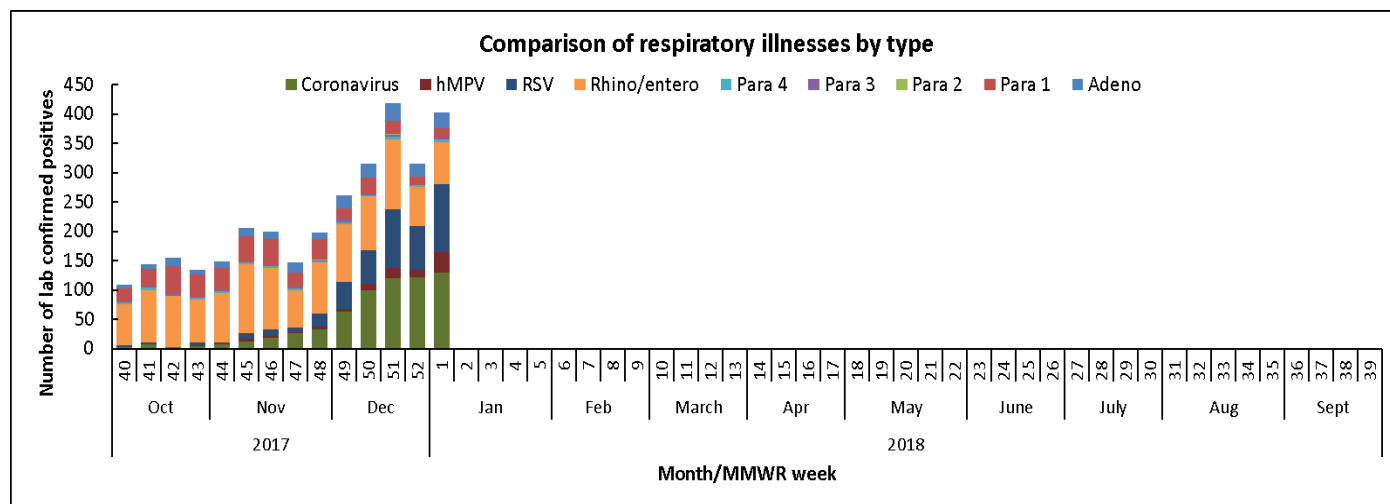
*Schools with 10 percent absences only reflect 3 days in week 1 due to holiday closings

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	27	225
Parainfluenza Virus Type 1	16	426
Parainfluenza Virus Type 2	0	4
Parainfluenza Virus Type 3	2	28
Parainfluenza Virus Type 4	5	44
Rhinovirus/Enterovirus	72	1224
Respiratory syncytial virus (RSV)	115	455
Human metapneumovirus (hMPV)	35	101
Coronavirus	130	645
Total	402	3152



Other resources:

Vaccine:

Influenza vaccine recommendation: idph.iowa.gov/immtnb/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: flu.wisconsin.gov/