



Iowa Influenza Surveillance Network (IISN)
Influenza-like Illness (ILI) and Other Respiratory Viruses
Weekly Activity Report
For the week ending December 9, 2017 - 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	
Percent of influenza rapid test positive	11% (120/1114)
Percent of RSV rapid tests positive	7% (12/179)
Influenza-associated hospitalizations	27/6587 inpatients
Percent of outpatient visits for ILI	1.10% (baseline 1.9%)
Percent school absence due to illness	2.5%
Number of schools with ≥10% absence due to illness	7
Influenza-associated mortality -all ages (Cumulative)	1
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:

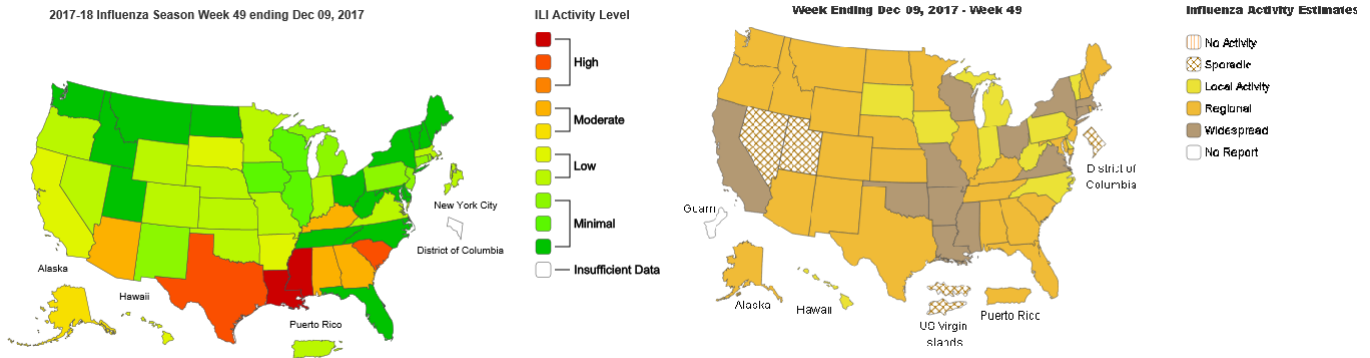
Influenza activity continues to increase in Iowa. The geographic spread of influenza in Iowa is local. For this reporting week, the State Hygienic Laboratory confirmed 55 influenza A(H3), one influenza A(H1N1)pdm09, and six influenza B (Yamagata Lineage) viruses from submitted samples as well three influenza A positive specimens pending subtyping/lineage. In addition, IDPH investigated an influenza A(H3N2) variant, or A(H3N2)v, in an adult with exposure to swine. No human-to-human transmission has been identified with this case. Twenty-seven influenza-related hospitalizations were reported from sentinel hospitals during this reporting week. The proportion of outpatient visits due to influenza-like illness (ILI) was 1.10 percent, which is below the regional baseline of 1.9. One long-term care facility reported an influenza outbreak this week and another facility reported an outbreak with the first illness onset during week 48. Surveillance sites reported detecting the following non-influenza respiratory illnesses with the most frequency: 99 rhinovirus/enterovirus, 63 coronavirus, 45 RSV, 22 adenovirus, and 18 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 appeared to have 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 12/11/2017.

National activity summary - (CDC)-Last Updated in Week 48:



Synopsis: During week 49 (December 3-9, 2017), influenza activity increased in the United States.

Viral Surveillance: The most frequently identified influenza virus type reported by public health laboratories during week 49 was influenza A. The percentage of respiratory specimens testing positive for influenza in clinical laboratories increased.

Novel Influenza A Virus: One human infection with a novel influenza A virus 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 deaths was reported.

Influenza-associated Hospitalizations: A cumulative rate of 4.3 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 2.7%, which is above the national baseline of 2.2%. Seven of the 10 regions reported ILI at or above region-specific baseline levels. Four states experienced high ILI activity; five states experienced moderate ILI activity; New York City, Puerto Rico, and 16 states experienced low ILI activity; 25 states experienced minimal ILI activity; and the District of Columbia had insufficient data.

Geographic Spread of Influenza: The geographic spread of influenza in 12 states was reported as widespread; Puerto Rico and 26 states reported regional activity; 10 states reported local activity; the District of Columbia, the U.S. Virgin Islands and two states reported sporadic activity; and Guam 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

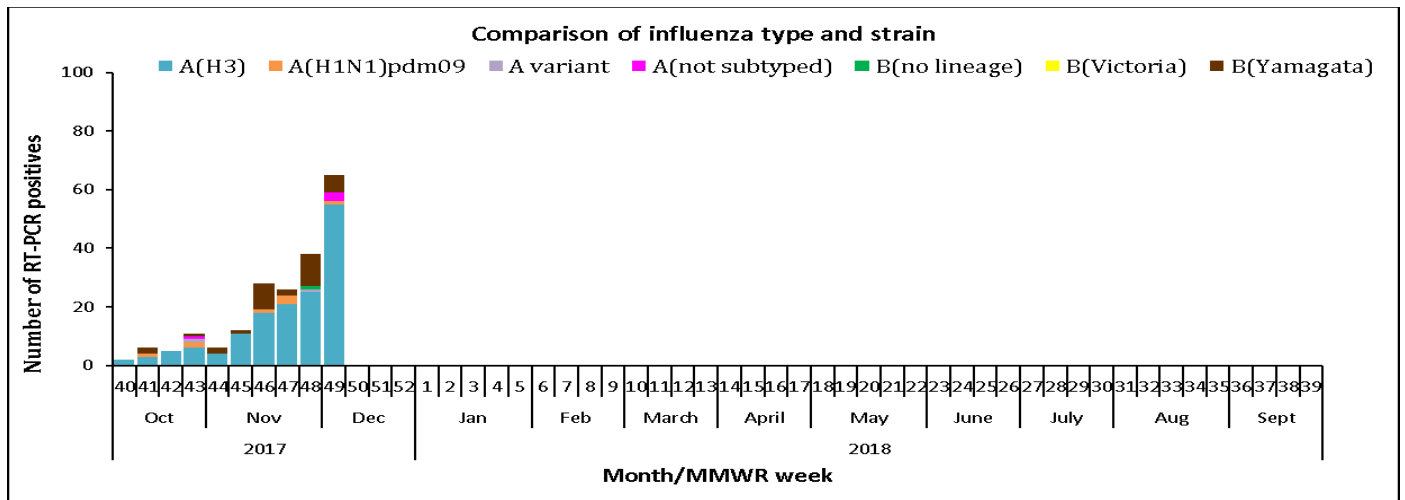
Age Group	CURRENT WEEK				CUMULATIVE (10/1/17– CURRENT WEEK)				
	A(H1N1) pdm09	A (H3)	Pending/ Not subtyped	Total	A(H1N1) pdm09	A variants	A (H3)	Pending/ Not subtyped	Total
0-4	0	4	1	5 (8%)	6	0	16	2	24 (15%)
5-17	1	5	0	6 (10%)	1	0	19	0	20 (12%)
18-24	0	21	0	21 (36%)	0	1	28	0	29 (18%)
25-49	0	6	1	7 (12%)	1	1	17	1	20 (12%)
50-64	0	6	1	7 (12%)	0	0	19	1	20 (12%)
>64	0	13	0	13 (22%)	0	0	51	0	51 (31%)
Total	1 (2%)	55 (93%)	3 (5%)	59	8 (5%)	2 (1%)	150 (91%)	4 (2%)	164

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	1	0	1 (17%)	0	3	0	3 (9%)
5-17	0	3	0	3 (50%)	0	6	0	6 (17%)
18-24	0	0	0	0 (0%)	0	5	0	5 (14%)
25-49	0	1	0	1 (17%)	0	7	0	7 (20%)
50-64	0	1	0	1 (17%)	0	7	0	7 (20%)
>64	0	0	0	0 (0%)	0	6	1	7 (20%)
Total	0 (0%)	6 (100%)	0 (0%)	6	0 (0%)	34 (97%)	1 (3%)	35

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.



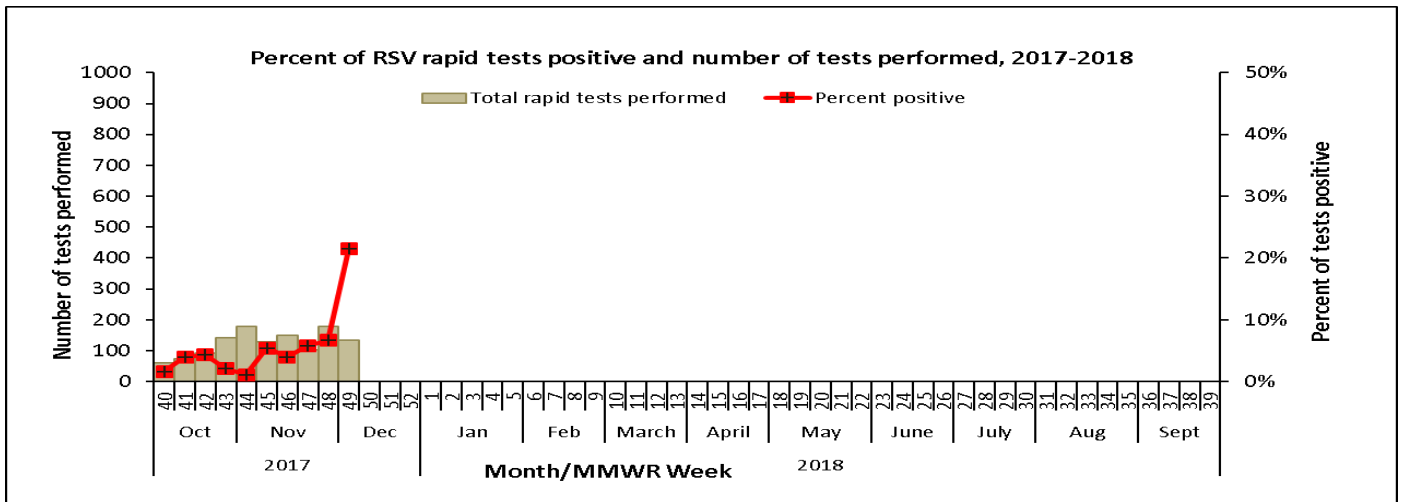
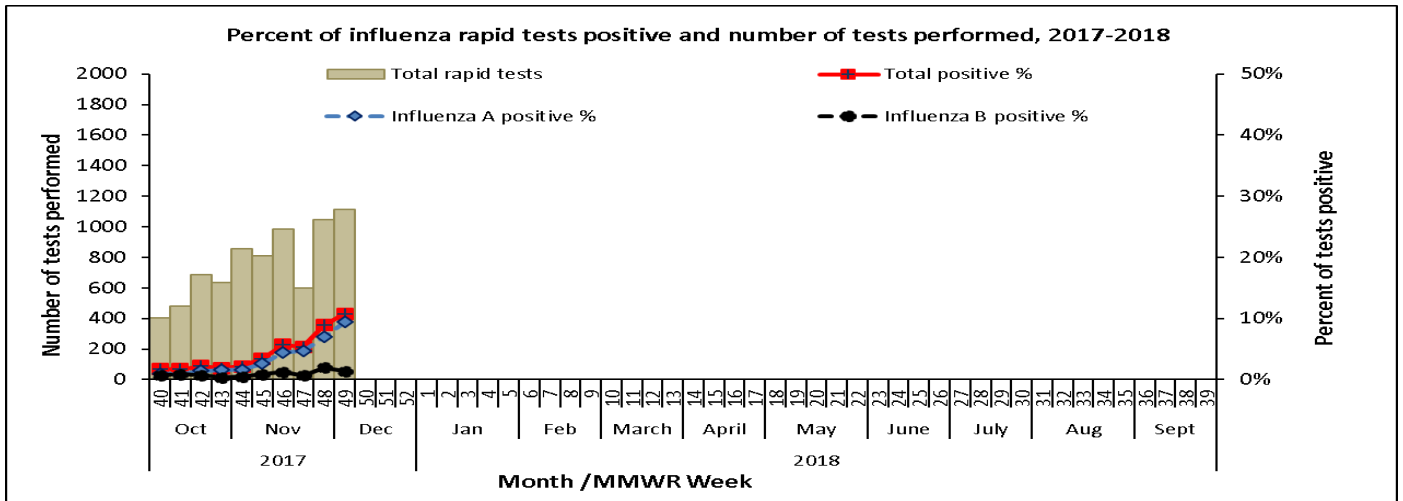
Rapid influenza and RSV test surveillance:

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)	260	31	3	13	19	6	32
Region 2 (NE)	30	3	0	10	3	0	0
Region 3 (NW)	87	7	1	9	26	5	19
Region 4 (SW)	73	12	1	18	13	2	15
Region 5 (SE)	96	6	1	7	17	3	18
Region 6 (Eastern)	568	46	9	10	57	13	23
Total	1114	105	15	11	135	29	21

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

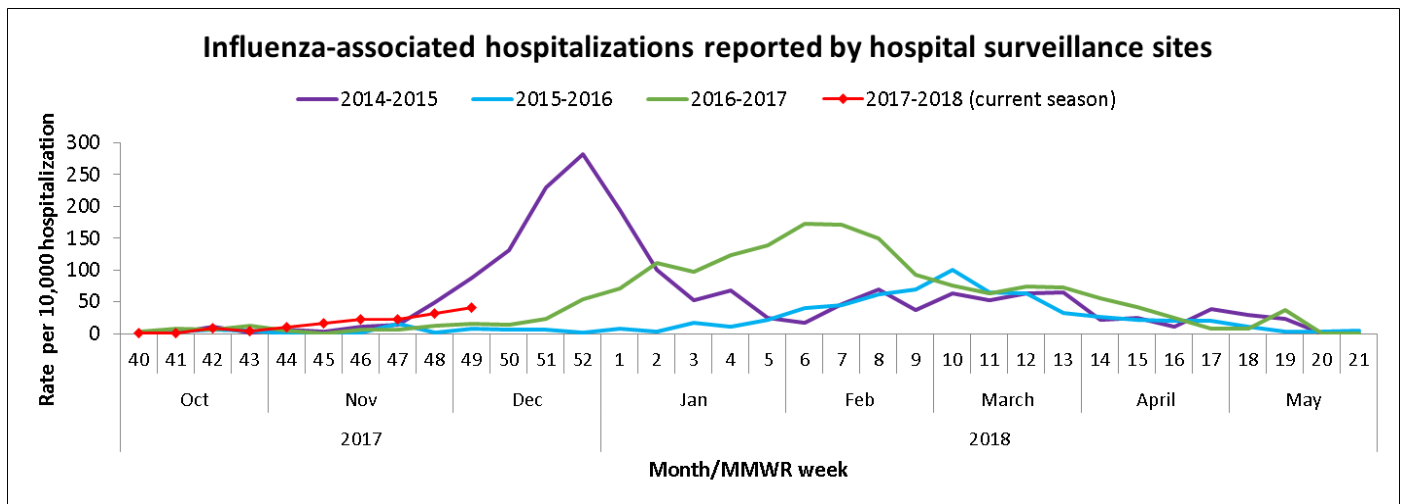
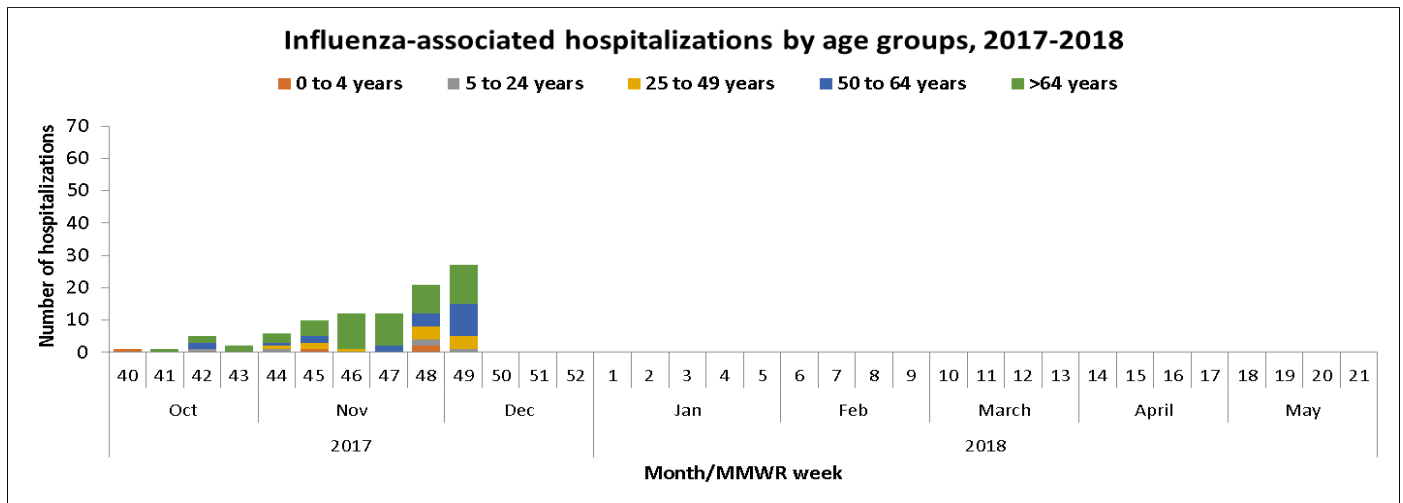


Influenza-associated hospitalizations:

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	4
Age 5-24	1	5
Age 25-49	4	12
Age 50-64	10	21
Age >64	12	55
Total	27	97



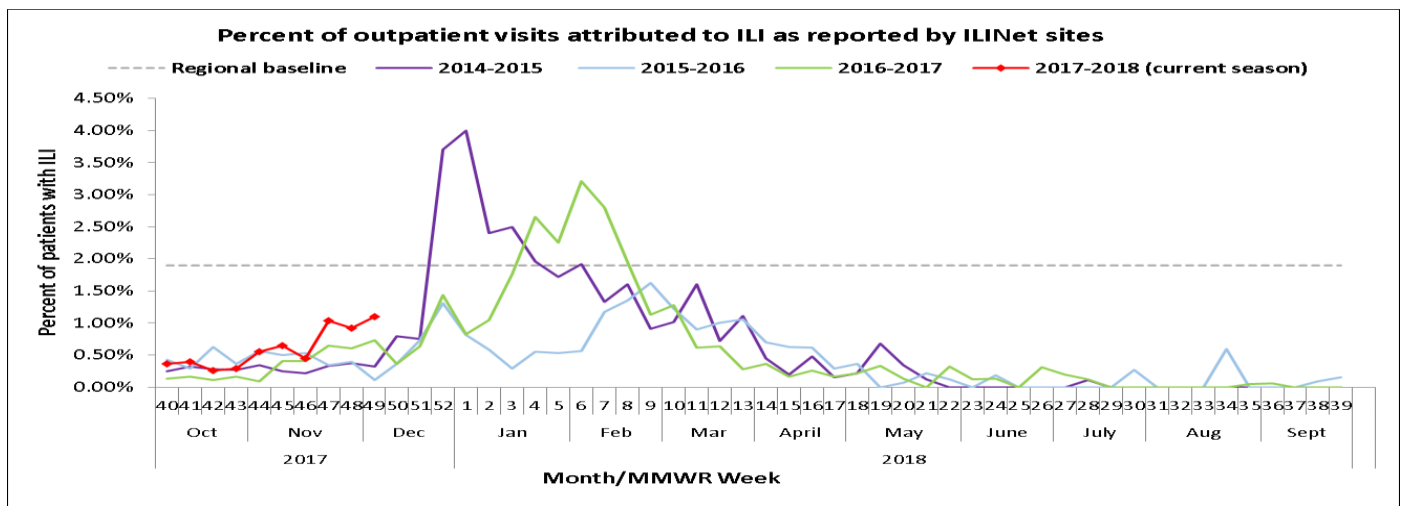
Outpatient health care provider surveillance program (ILINet):

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)

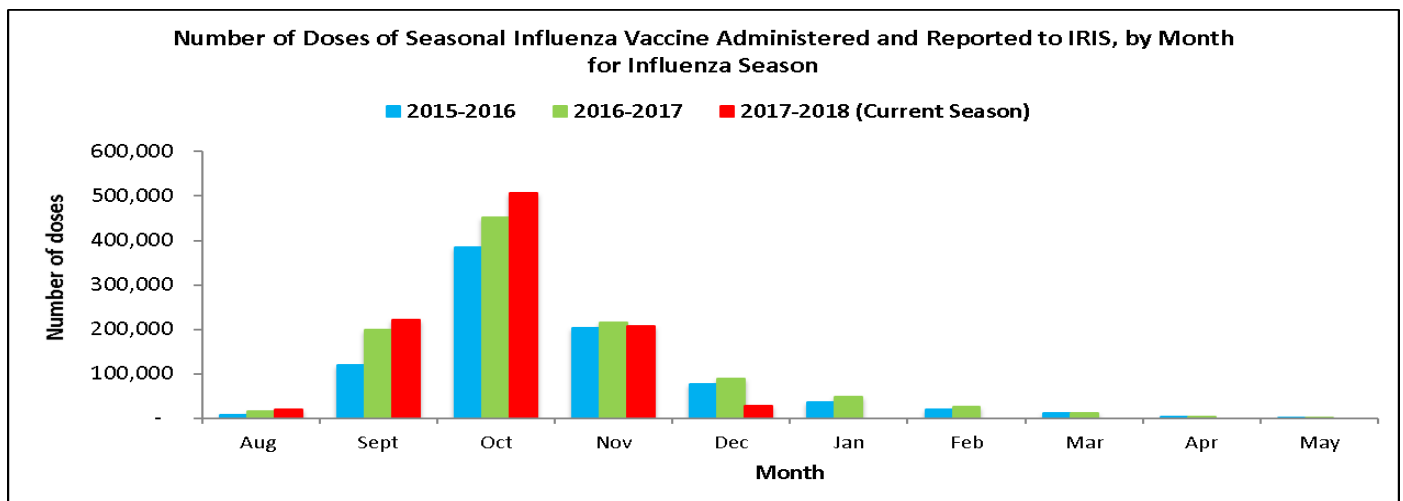
Week	Age 0-4	Age 5-24	Age 25-49	Age 50-64	Age > 64	Total ILI	ILI Percent
Week 47, ending November 25	7	5	3	4	5	24	1.03
Week 48, ending December 2	8	5	111	2	10	39	0.92
Week 49, ending December 9	5	30	5	4	3	47	1.10

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)	0	0
Region 2 (NE)	0	0
Region 3 (NW)	0	0
Region 4 (SW)	0	0
Region 5 (SE)	1	2
Region 6 (Eastern)	0	2
Total	1	4

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.

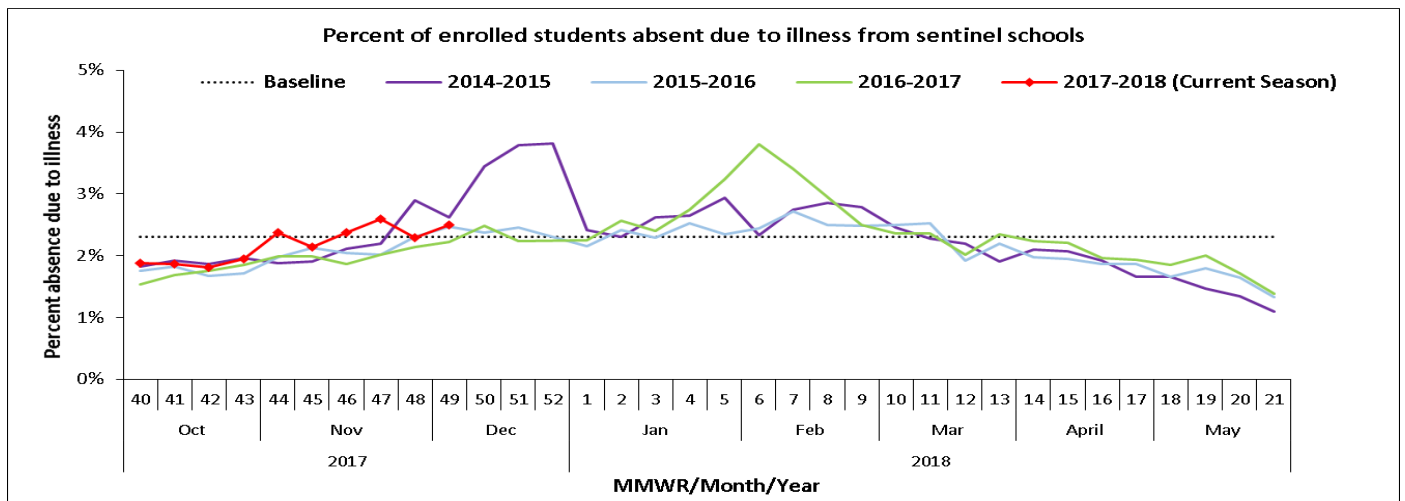
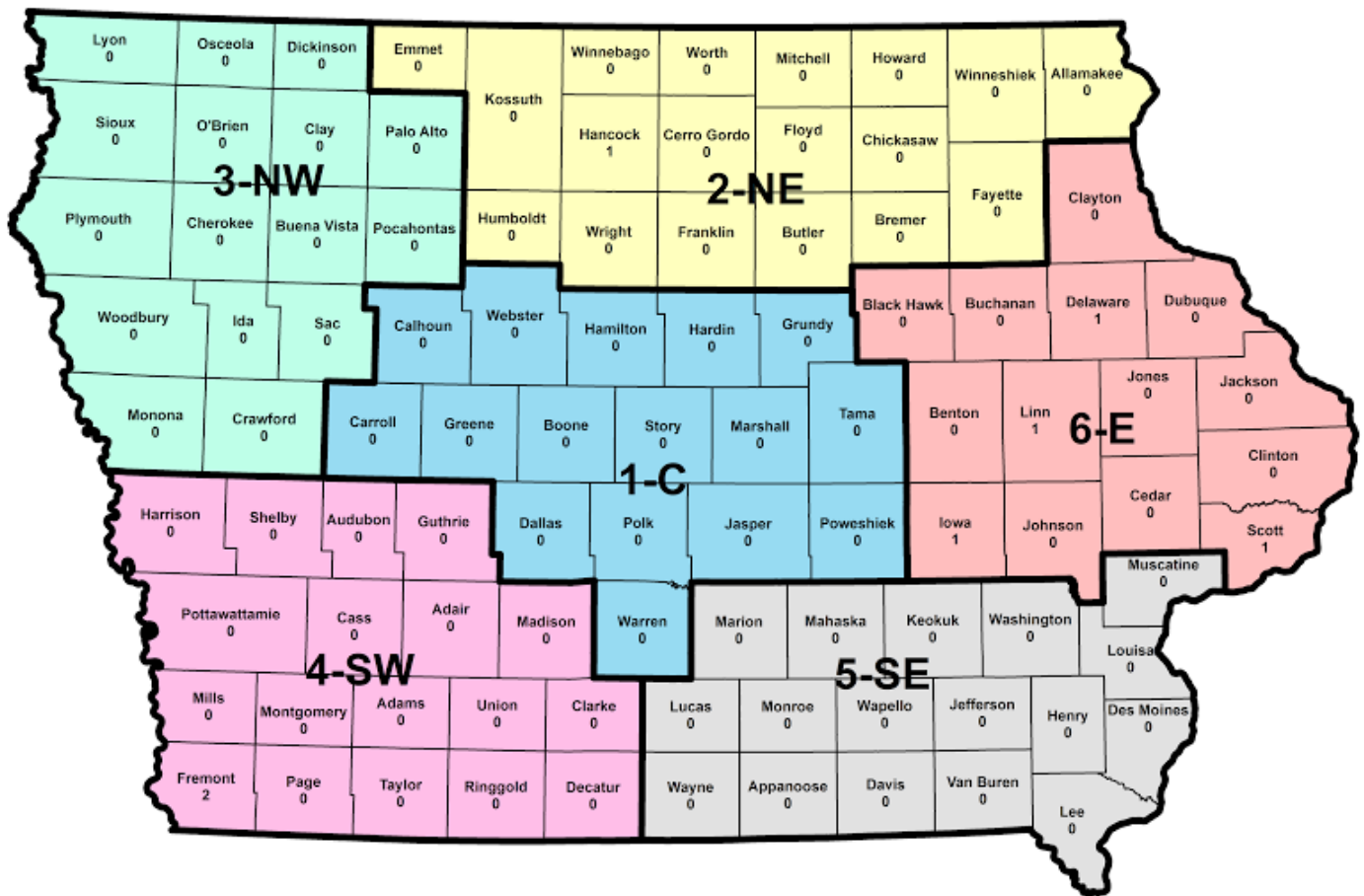


Table 7: Number of schools reporting >10% absenteeism due to any illness

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

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).

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

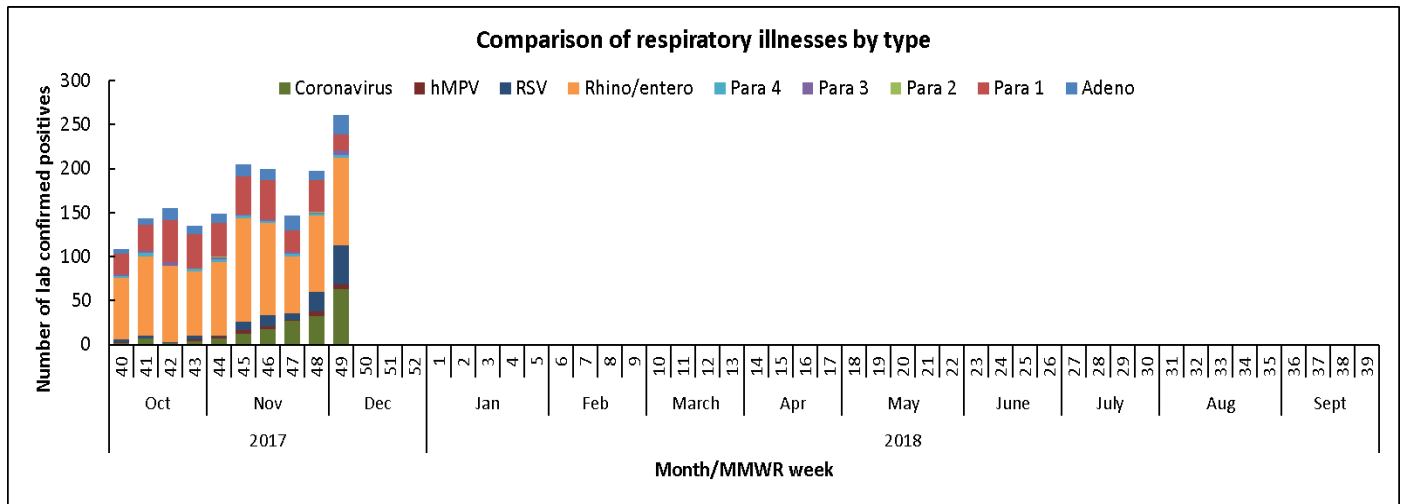


Non-influenza respiratory viruses:

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	22	124
Parainfluenza Virus Type 1	18	345
Parainfluenza Virus Type 2	0	2
Parainfluenza Virus Type 3	5	21
Parainfluenza Virus Type 4	4	28
Rhinovirus/Enterovirus	99	876
Respiratory syncytial virus (RSV)	45	108
Human metapneumovirus (hMPV)	5	24
Coronavirus	63	174
Total	261	1702



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: flu.wisconsin.gov/