



Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report

For the week ending January 27, 2018 - Week 4

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	31% (1300/4174)
Percent of RSV rapid tests positive	26% (142/536)
Influenza-associated hospitalizations	143/7264 inpatients
Percent of outpatient visits for ILI	3.92% (baseline 1.9%)
Percent school absence due to illness	3.33%
Number of long-term care influenza outbreaks	5
Number of schools with $\geq 10\%$ absence due to illness	33
Influenza-associated mortality -all ages (Cumulative)	77
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:

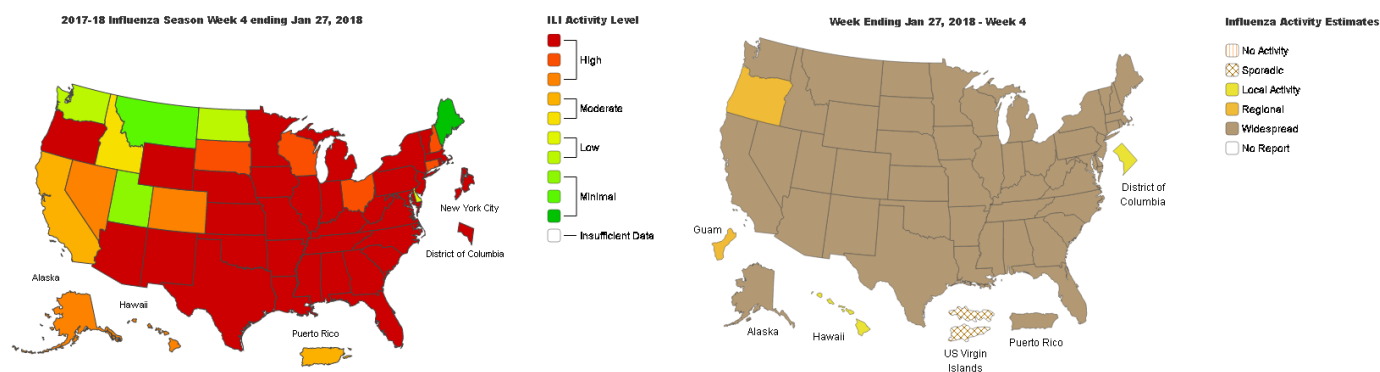
Influenza activity continues to be high in Iowa and geographic spread is widespread. For this reporting week, the State Hygienic Laboratory confirmed 77 influenza A(H3), six influenza A(H1N1)pdm09, and 39 influenza B (Yamagata Lineage) viruses from submitted samples, as well as one influenza A positive specimens awaiting subtyping/lineage. There were 143 influenza-related hospitalizations reported from sentinel hospitals during this reporting week. Thirty-three schools reported 10 percent or more illness at least once this reporting week. There have been a total of 77 influenza-related deaths reported this season. IDPH investigated five 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 3.92 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: 195 RSV, 133 coronavirus, 89 hMPV, 87 rhinovirus/enterovirus, and 35 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 accounted still for the majority of influenza detections (62%) but influenza B (mostly from the Yamagata lineage) has increased proportionally.

Visit www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/ for more information. It was last updated 1/22/2018.

National activity summary - (CDC)-Last Updated in Week 4:



Synopsis: During week 4 (January 21-27, 2018), influenza activity increased in the United States.

Viral Surveillance: The most frequently identified influenza virus subtype reported by public health laboratories during week 4 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 above the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.

Influenza-associated Pediatric Deaths: Seventeen influenza-associated pediatric deaths were reported, one of which occurred during the 2015-2016 season.

Influenza-associated Hospitalizations: A cumulative rate of 51.4 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 7.1%, which is above the national baseline of 2.2%. All 10 regions reported ILI at or above region-specific baseline levels. New York City, the District of Columbia, and 42 states experienced high ILI activity; Puerto Rico and two states experienced moderate ILI activity; three states experienced low ILI activity; and three states experienced minimal ILI activity.

Geographic Spread of Influenza: The geographic spread of influenza in Puerto Rico and 48 states was reported as widespread; Guam and one state reported regional activity; the District of Columbia and one state reported local activity; and the U.S. Virgin Islands reported sporadic activity.

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

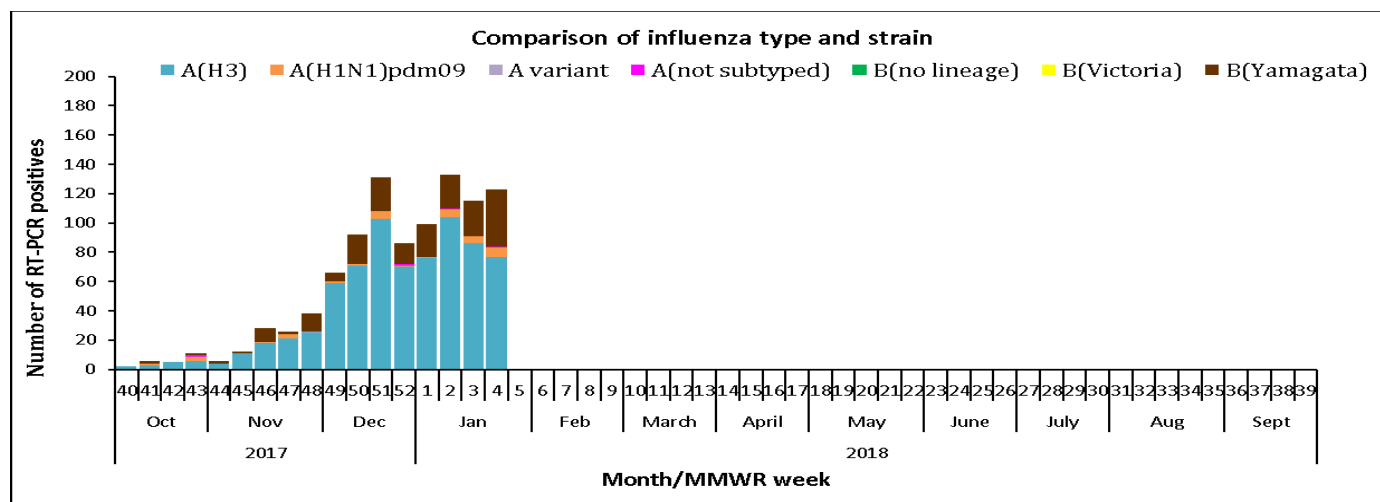
Age Group	CURRENT WEEK				CUMULATIVE (10/1/17– CURRENT WEEK)				
	A(H1N1) pdm09	A (H3)	Pending/ Not subtyped	Total	A(H1N1) pdm09	A variants	A (H3)	Pending/ Not subtyped	Total
0-4	0	2	0	2 (2%)	7	0	67	1	75 (10%)
5-17	0	6	0	6 (7%)	7	0	72	1	80 (10%)
18-24	5	10	0	15 (18%)	7	1	80	0	88 (11%)
25-49	1	2	0	3 (4%)	8	1	63	0	72 (9%)
50-64	0	8	0	8 (10%)	1	0	90	0	91 (12%)
>64	0	49	1	50 (60%)	2	0	369	2	373 (48%)
Total	6 (7%)	77 (92%)	1 (1%)	84	32 (4%)	2 (0%)	741 (95%)	4 (1%)	779

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 (3%)	0	15	0	15 (8%)
5-17	0	16	0	16 (41%)	0	49	0	49 (25%)
18-24	0	3	0	3 (8%)	0	11	0	11 (6%)
25-49	0	6	0	6 (15%)	0	37	0	37 (19%)
50-64	0	0	0	0 (0%)	0	27	0	27 (14%)
>64	0	13	0	13 (33%)	0	61	0	61 (31%)
Total	0 (0%)	39 (100%)	0 (0%)	39	0 (0%)	200 (100%)	0 (0%)	200

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.



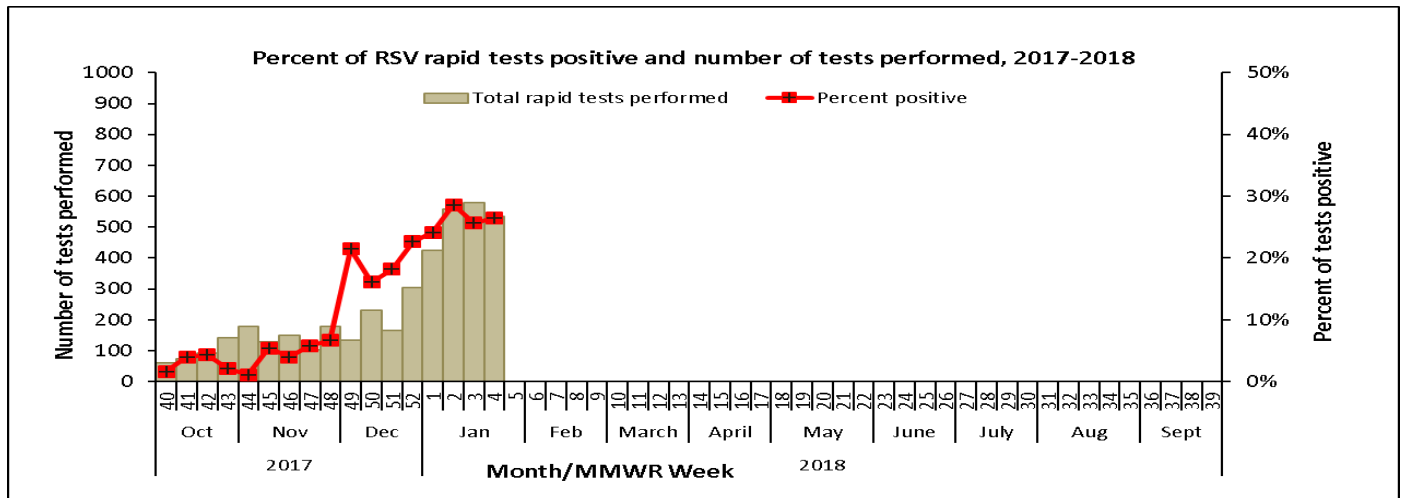
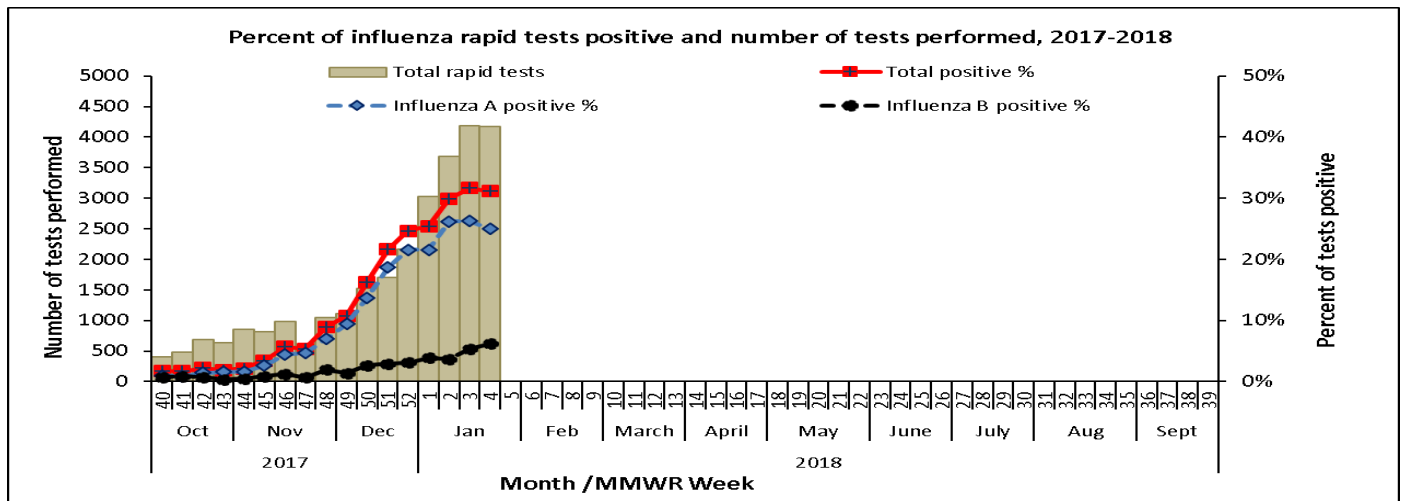
Rapid influenza and RSV test surveillance:

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)	1539	478	66	35	74	30	41
Region 2 (NE)	118	30	3	28	16	2	13
Region 3 (NW)	692	157	39	28	252	60	24
Region 4 (SW)	276	61	16	28	54	12	22
Region 5 (SE)	457	79	49	28	57	19	33
Region 6 (Eastern)	1092	237	85	29	83	19	23
Total	4174	1042	258	31	536	142	26

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

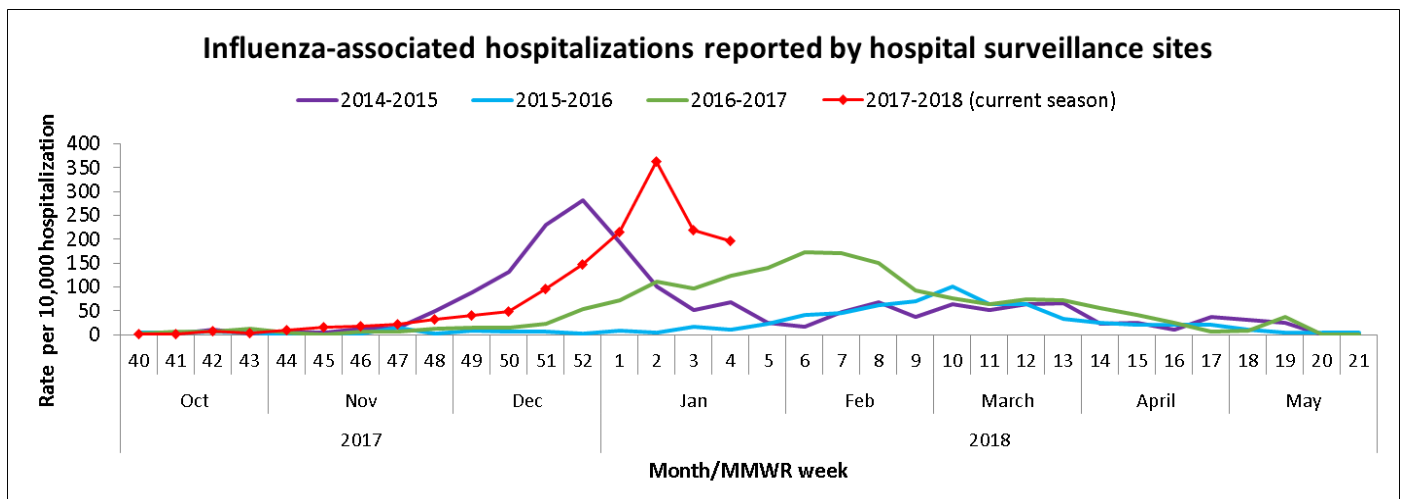
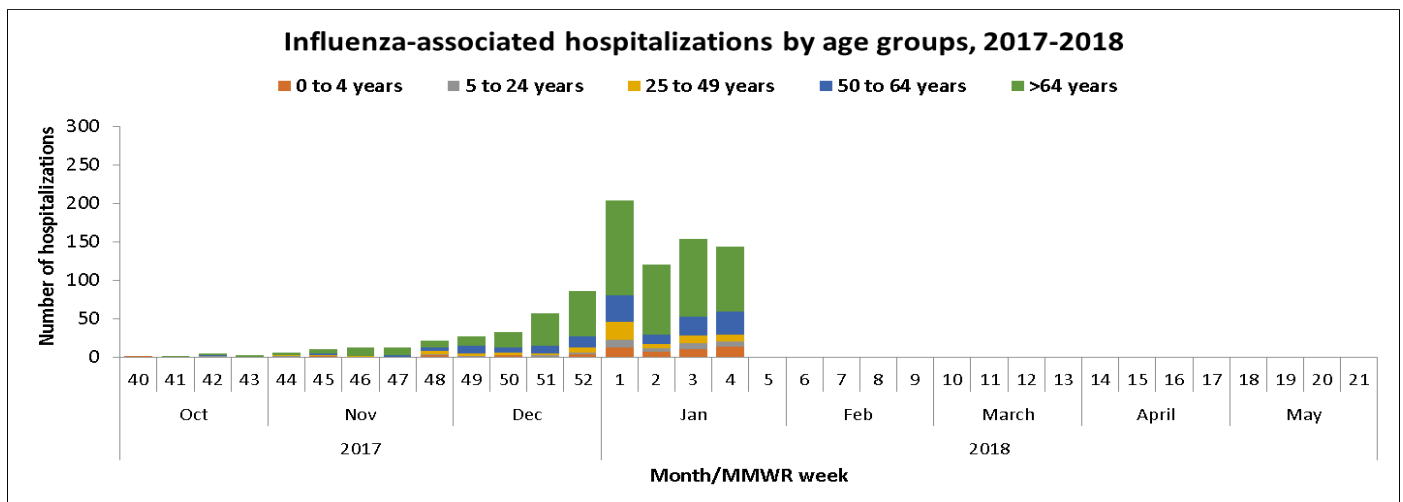


Influenza-associated hospitalizations:

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	14	53
Age 5-24	6	40
Age 25-49	9	72
Age 50-64	30	153
Age >64	84	574
Total	143	892



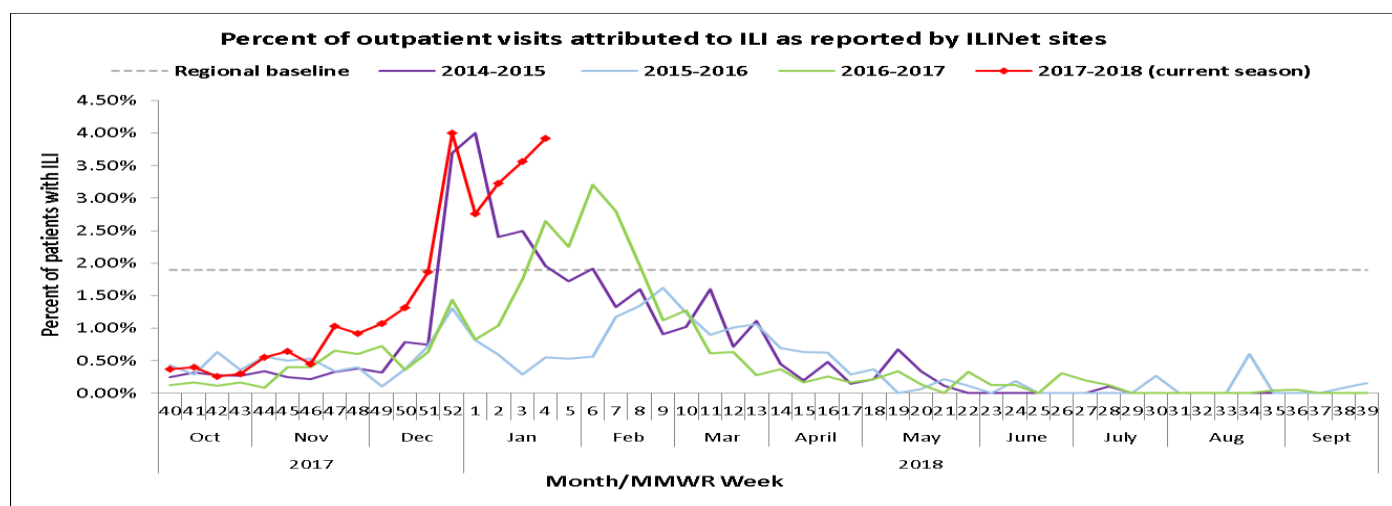
Outpatient health care provider surveillance program (ILINet):

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)

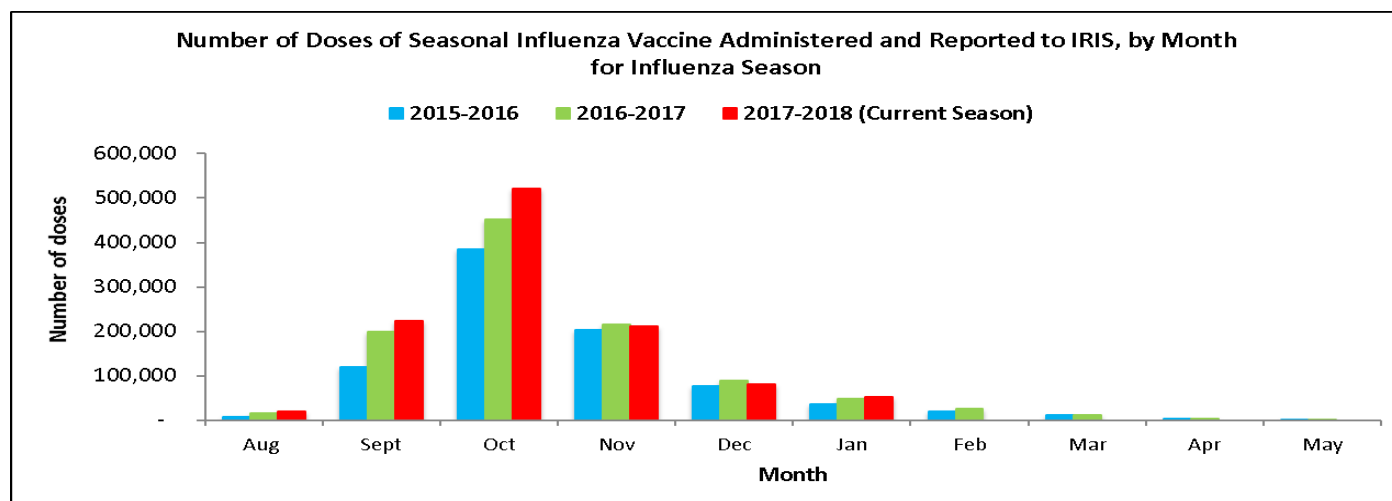
Week	Age 0-4	Age 5-24	Age 25-49	Age 50-64	Age > 64	Total ILI	ILI Percent
Week 2, ending January 13	23	51	12	12	13	111	3.23
Week 3, ending January 20	29	55	29	11	10	134	3.56
Week 4, ending January 27	18	78	22	15	17	150	3.92

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.



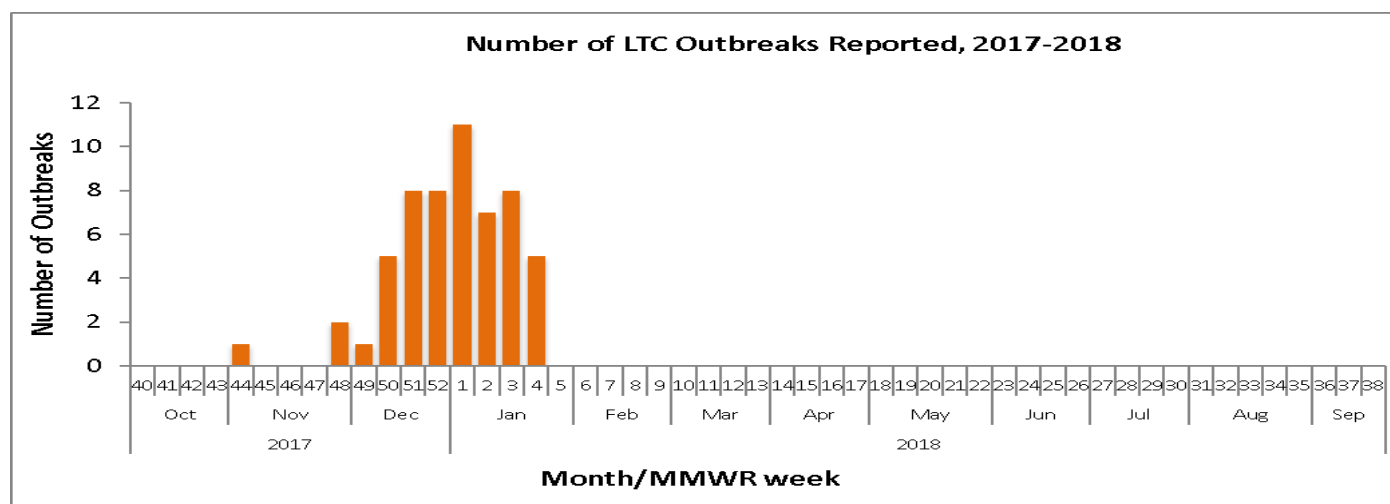
Note: The data for the 2017-2018 season is provisional due to the lag between the vaccine administration date and the date reported to IRIS.

Long-term care outbreaks:

Table 6: Number of long-term care outbreaks investigated

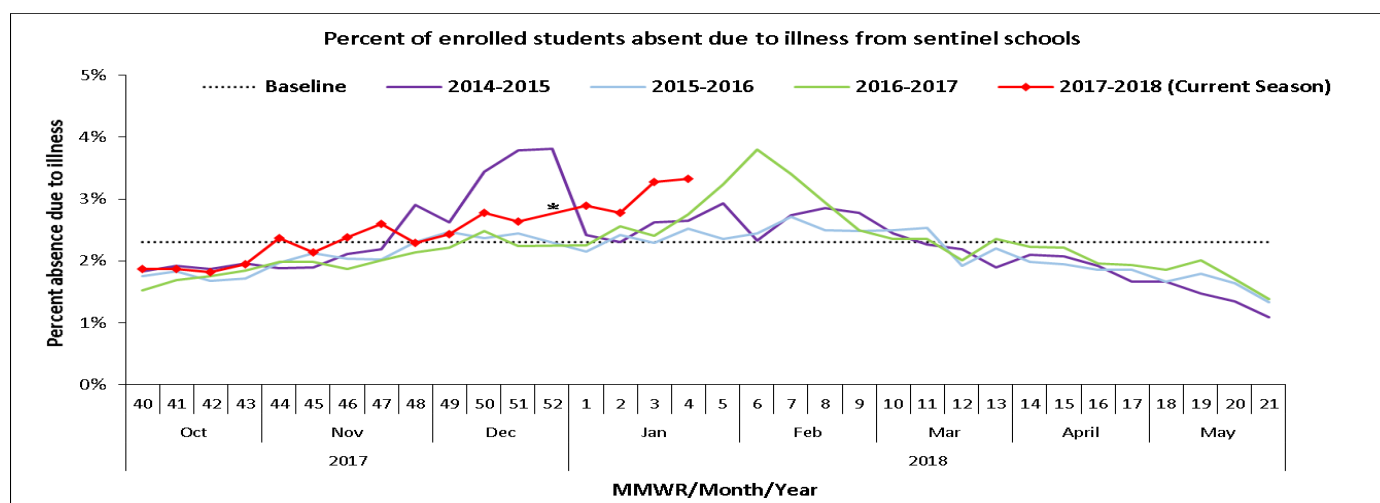
REGION	CURRENT WEEK	CUMULATIVE (10/1/17 – CURRENT WEEK)
Region 1 (Central)	0	15
Region 2 (NE)	1	9
Region 3 (NW)	1	3
Region 4 (SW)	0	7
Region 5 (SE)	0	12
Region 6 (Eastern)	3	10
Total	5	56

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.



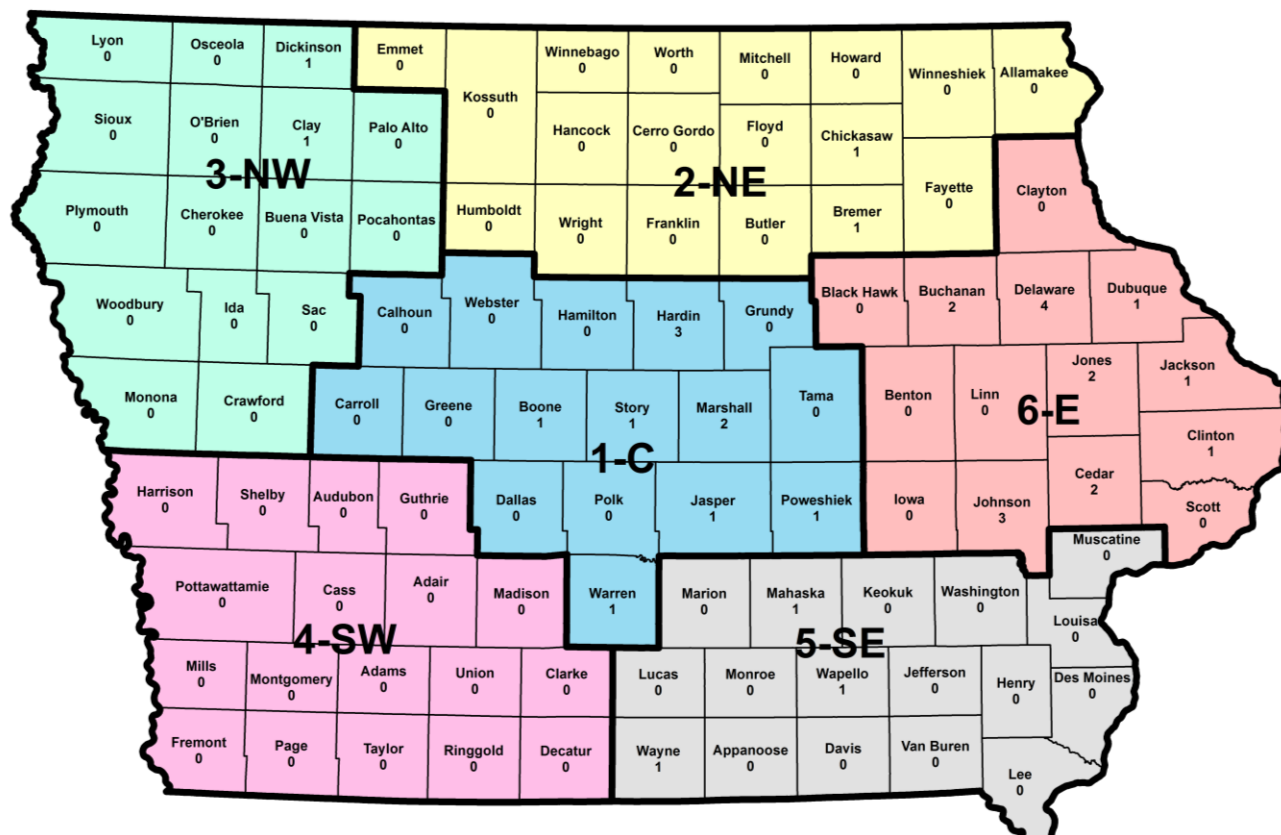
*School data not reported for week 52 due to holiday closings

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

REGION	CURRENT WEEK	CUMULATIVE (10/1/17 – CURRENT WEEK)
Region 1 (Central)	10	33
Region 2 (NE)	2	11
Region 3 (NW)	2	16
Region 4 (SW)	0	11
Region 5 (SE)	3	9
Region 6 (Eastern)	16	45
Total	33	125

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*

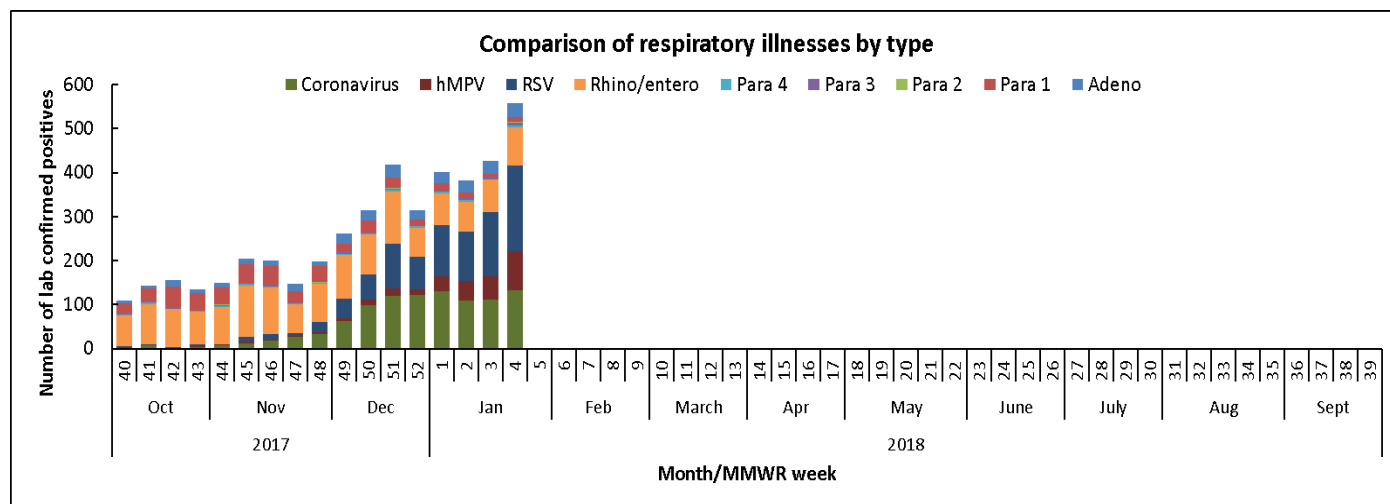


Non-influenza respiratory viruses:

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	35	318
Parainfluenza Virus Type 1	12	456
Parainfluenza Virus Type 2	1	6
Parainfluenza Virus Type 3	7	44
Parainfluenza Virus Type 4	3	53
Rhinovirus/Enterovirus	87	1452
Respiratory syncytial virus (RSV)	195	908
Human metapneumovirus (hMPV)	89	287
Coronavirus	133	999
Total	562	4523



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/