



Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report

For the week ending March 31, 2018 - Week 13

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	17% (239/1438)
Percent of RSV rapid tests positive	19% (46/237)
Influenza-associated hospitalizations	30/6201 inpatients
Percent of outpatient visits for ILI	1.39% (baseline 1.9%)
Percent school absence due to illness	1.87%
Number of long-term care influenza outbreaks	1
Number of schools with $\geq 10\%$ absence due to illness	1
Influenza-associated mortality -all ages (Cumulative)	250
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:

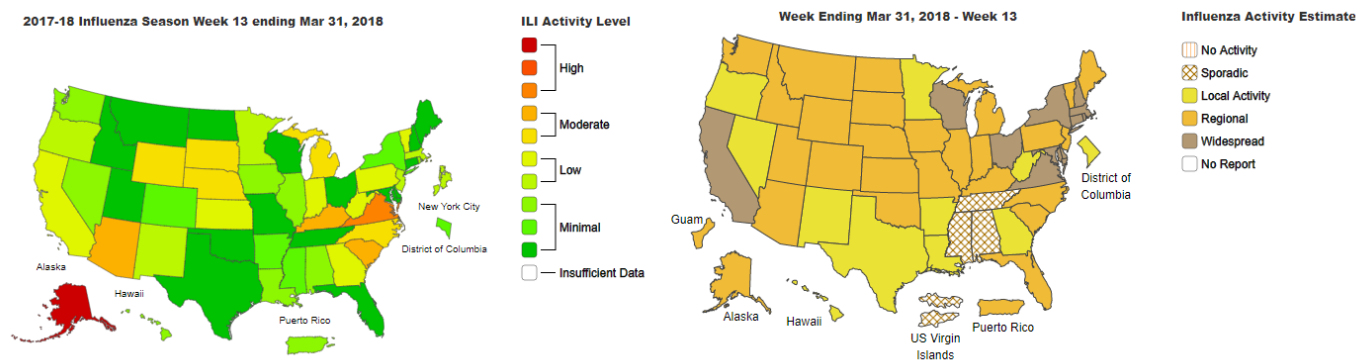
Influenza activity continues to decrease on most measures in Iowa and the geographic spread is regional. For this reporting week, the State Hygienic Laboratory confirmed seven influenza A(H3), two influenza A(H1N1)pdm09, and 13 influenza B (Yamagata Lineage) viruses from submitted samples. There were 30 influenza-related hospitalizations reported from sentinel hospitals during this reporting week. The proportion of outpatient visits due to influenza-like illness (ILI) was 1.39 percent, which is below the regional baseline of 1.9 percent. One long-term care influenza outbreak was reported with first illness onset in this reporting week. One school reported 10 percent or more illness at least once this reporting week. There have been a total of 250 influenza-related deaths reported this season. Surveillance sites reported detecting the following non-influenza respiratory illnesses with the most frequency: 114 rhinovirus/enterovirus, 67 hMPV, 54 RSV, 18 coronavirus, 14 adenovirus, and 13 parainfluenza virus type 3.

International activity summary - (WHO):

Influenza activity appeared to decrease in most of the countries in the temperate zone of the northern hemisphere, with exception of Eastern Europe where activity continued to increase. In the temperate zone of the southern hemisphere, influenza activity remained at inter-seasonal levels. Worldwide, influenza A and influenza B accounted for a similar proportion of influenza detections.

Visit www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/ for more information. It was last updated 4/2/2018.

National activity summary - (CDC)-Last Updated in Week 13:



Synopsis: During week 13 (March 25-31, 2018), influenza activity decreased in the United States.

Viral Surveillance: Overall, influenza A(H3) viruses have predominated this season. Since early March, influenza B viruses have been more frequently reported than influenza A viruses. The percentage of respiratory specimens testing positive for influenza in clinical laboratories remains elevated.

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: Five influenza-associated pediatric deaths were reported.

Influenza-associated Hospitalizations: A cumulative rate of 99.9 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 2.4%, which is above the national baseline of 2.2%. Seven of 10 regions reported ILI at or above region-specific baseline levels. Two states experienced high ILI activity; eight states experienced moderate ILI activity; New York City and 12 states experienced low ILI activity; and the District of Columbia, Puerto Rico, and 28 states experienced minimal ILI activity.

Geographic Spread of Influenza: The geographic spread of influenza in 11 states was reported as widespread; Guam, Puerto Rico and 26 states reported regional activity; the District of Columbia and 10 states reported local activity; and the U.S. Virgin Islands and three states 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

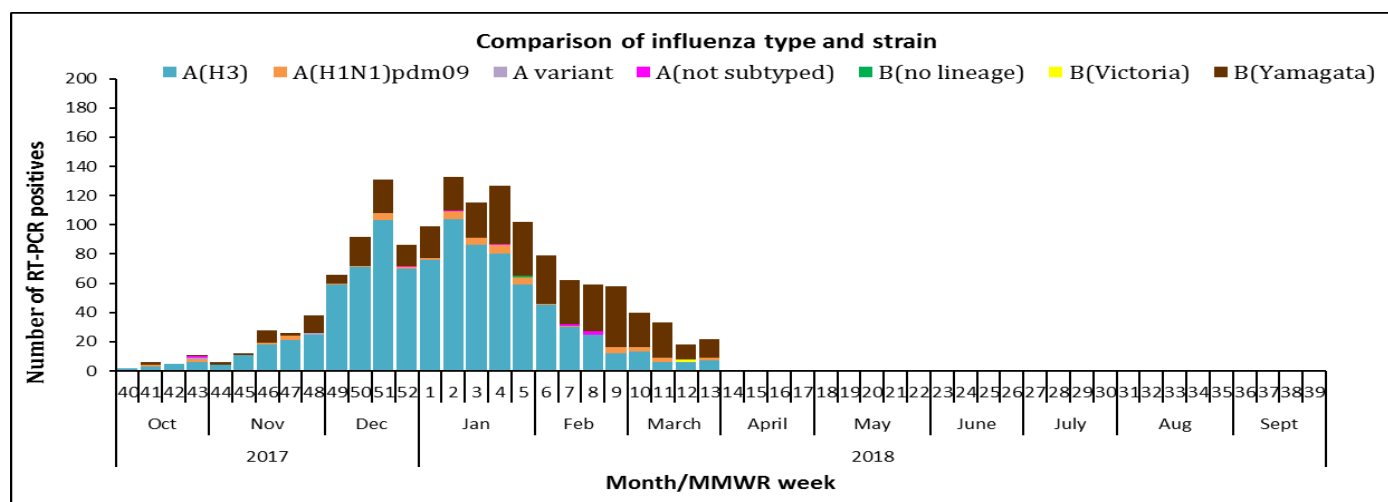
Age Group	CURRENT WEEK				CUMULATIVE (10/1/17– CURRENT WEEK)				
	A(H1N1) pdm09	A (H3)	Pending/ Not subtyped	Total	A(H1N1) pdm09	A variants	A (H3)	Pending/ Not subtyped	Total
0-4	0	0	0	0 (0%)	9	0	73	1	83 (8%)
5-17	0	0	0	0 (0%)	8	0	82	1	91 (9%)
18-24	0	2	0	2 (22%)	9	1	120	0	130(13%)
25-49	0	0	0	0 (0%)	11	1	77	1	90 (9%)
50-64	0	2	0	2 (22%)	7	0	112	1	120 (12%)
>64	2	3	0	5 (56%)	7	0	483	3	493 (49%)
Total	2 (22%)	7 (78%)	0 (0%)	9	51 (5%)	2 (0%)	947 (94%)	7 (1%)	1007

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	2	0	2 (15%)	0	20	0	22 (5%)
5-17	0	2	0	2 (15%)	0	83	1	84 (19%)
18-24	0	2	0	2 (15%)	1	41	0	42 (9%)
25-49	0	1	0	1 (8%)	1	60	0	61 (14%)
50-64	0	2	0	2 (15%)	0	66	0	66 (15%)
>64	0	4	0	4 (31%)	0	174	0	174 (39%)
Total	0 (0%)	13 (100%)	0 (0%)	13	2 (0%)	446 (99%)	1 (0%)	449

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.



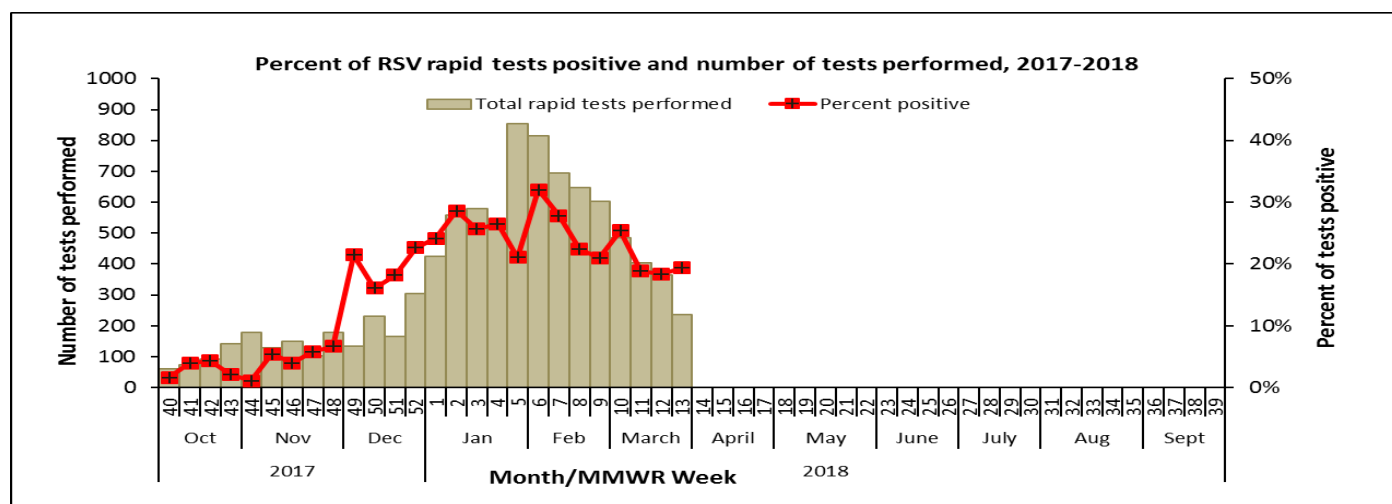
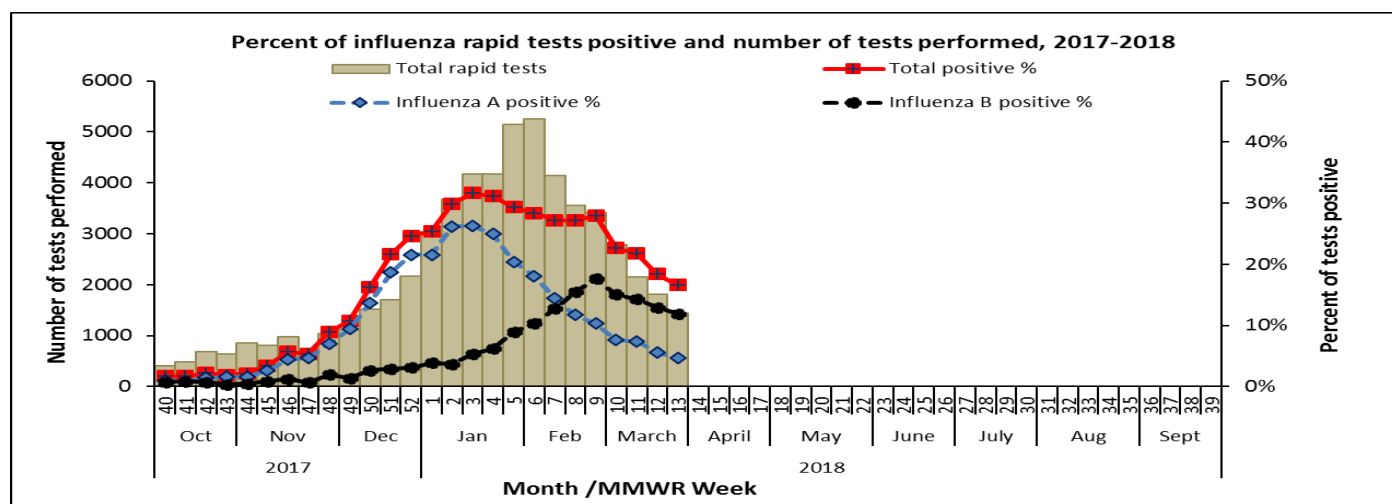
Rapid influenza and RSV test surveillance:

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)	375	19	58	21	18	8	44
Region 2 (NE)	51	2	8	20	7	2	29
Region 3 (NW)	191	18	14	17	87	6	7
Region 4 (SW)	99	7	16	23	16	4	25
Region 5 (SE)	106	6	13	18	14	4	29
Region 6 (Eastern)	616	16	62	13	95	22	23
Total	1438	68	171	17	237	46	19

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

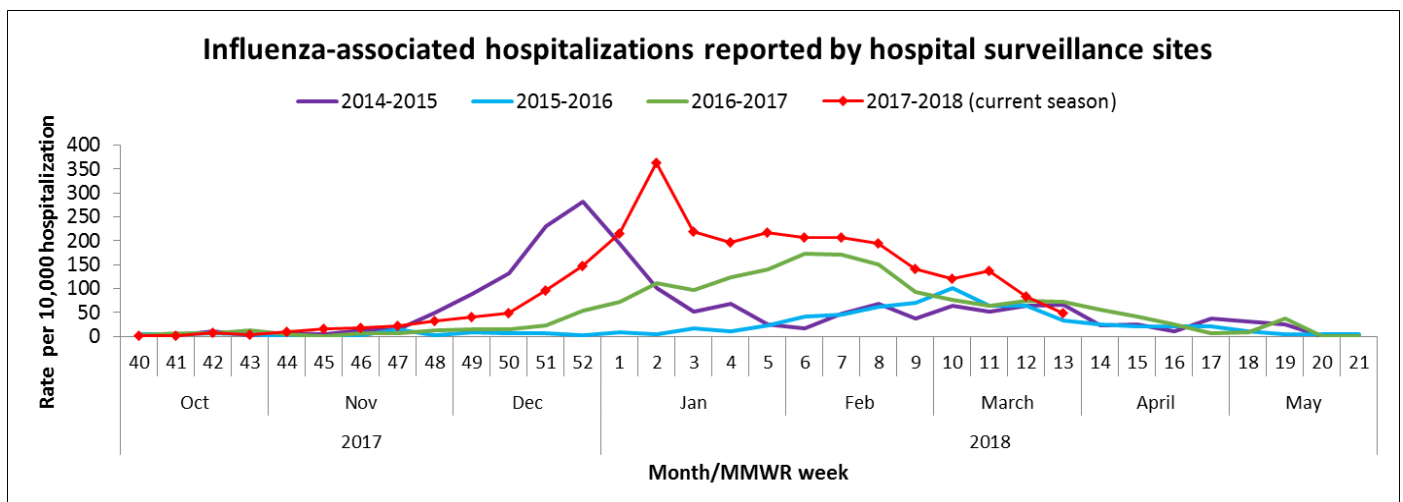
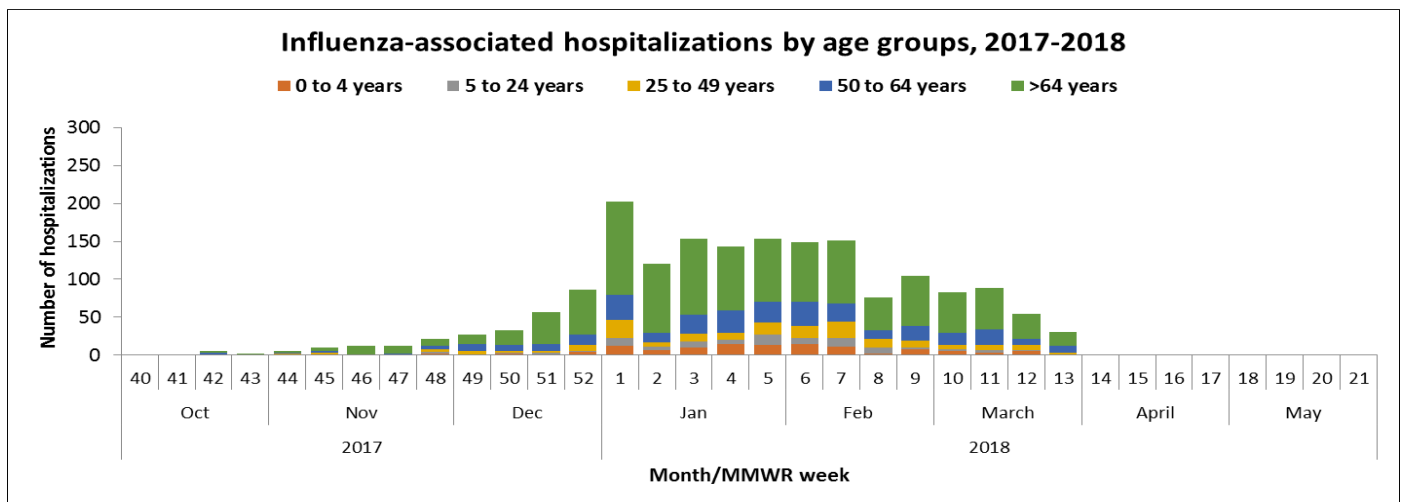


Influenza-associated hospitalizations:

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	1	115
Age 5-24	0	93
Age 25-49	2	164
Age 50-64	9	322
Age >64	18	1089
Total	30	1783



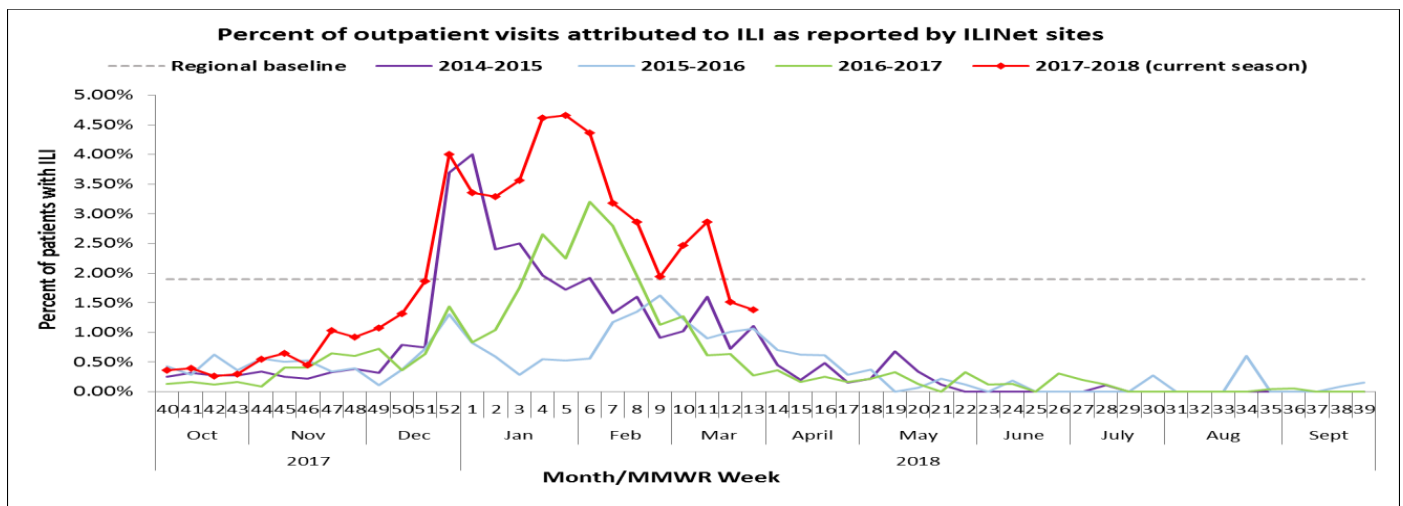
Outpatient health care provider surveillance program (ILINet):

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)

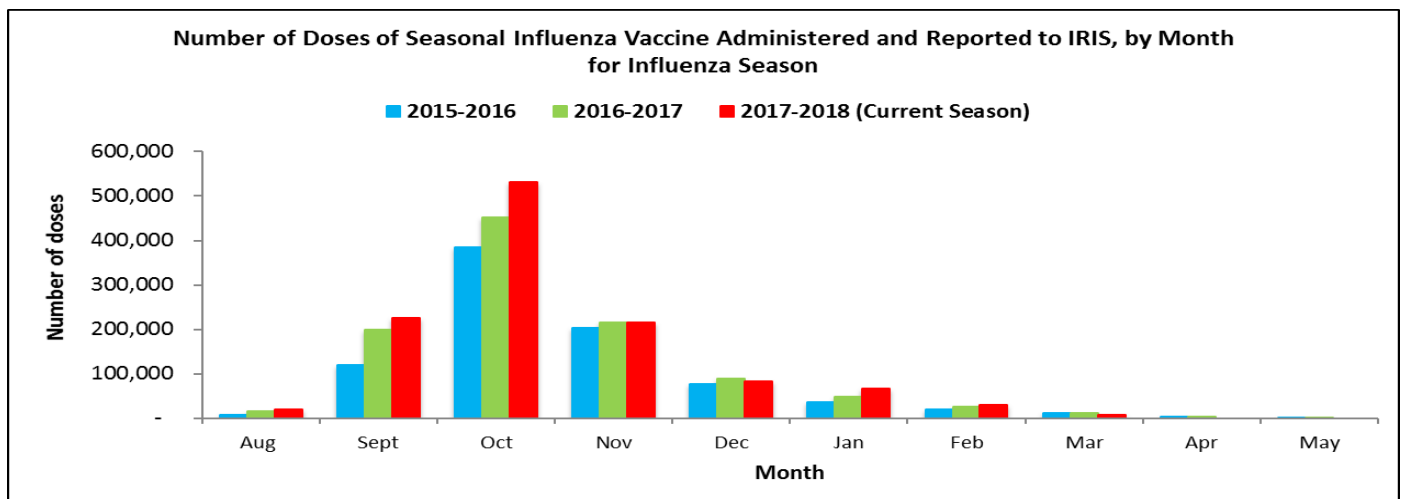
Week	Age 0-4	Age 5-24	Age 25-49	Age 50-64	Age > 64	Total ILI	ILI Percent
Week 11, ending March 17	12	28	10	11	12	73	2.86
Week 12, ending March 24	5	20	5	1	6	37	1.52
Week 13, ending March 31	8	9	6	3	8	34	1.39

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.



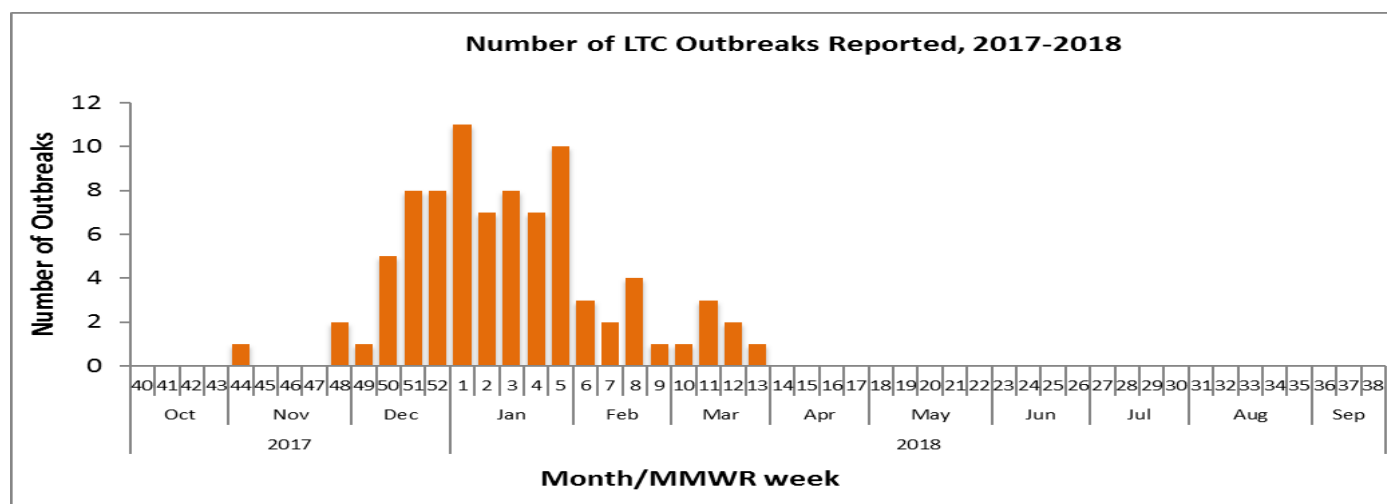
Note: The data for the 2017-2018 season is provisional due to the lag between the vaccine administration date and the date reported to IRIS.

Long-term care outbreaks:

Table 6: Number of long-term care outbreaks investigated

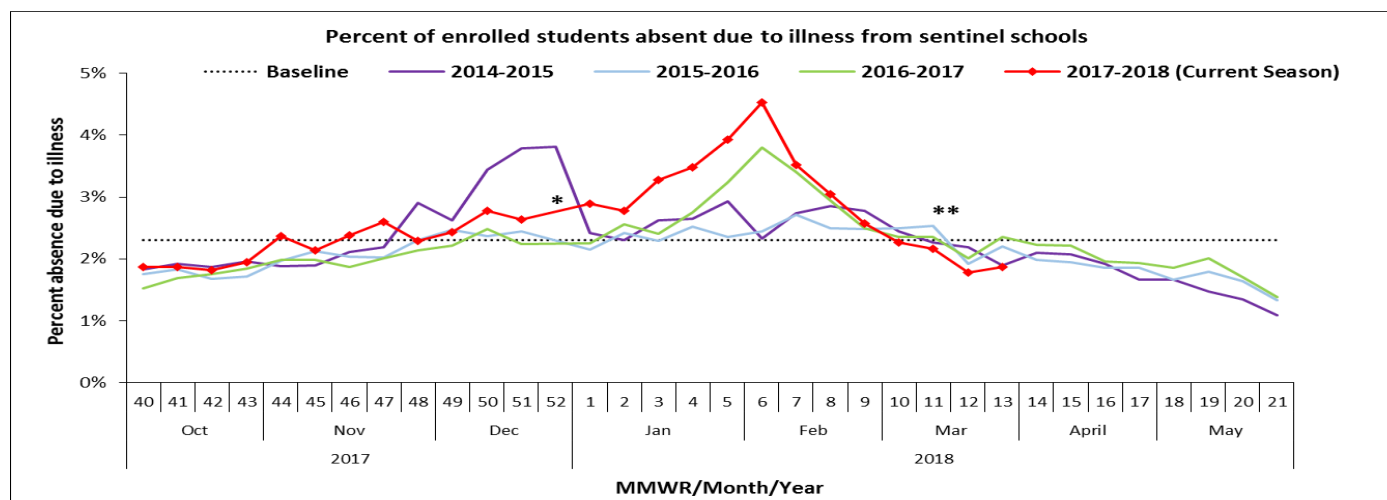
REGION	CURRENT WEEK	CUMULATIVE (10/1/17 – CURRENT WEEK)
Region 1 (Central)	0	21
Region 2 (NE)	0	11
Region 3 (NW)	0	5
Region 4 (SW)	0	12
Region 5 (SE)	0	19
Region 6 (Eastern)	1	17
Total	1	85

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

**School data may underestimate influenza illness for week 11 when many schools closed for spring break

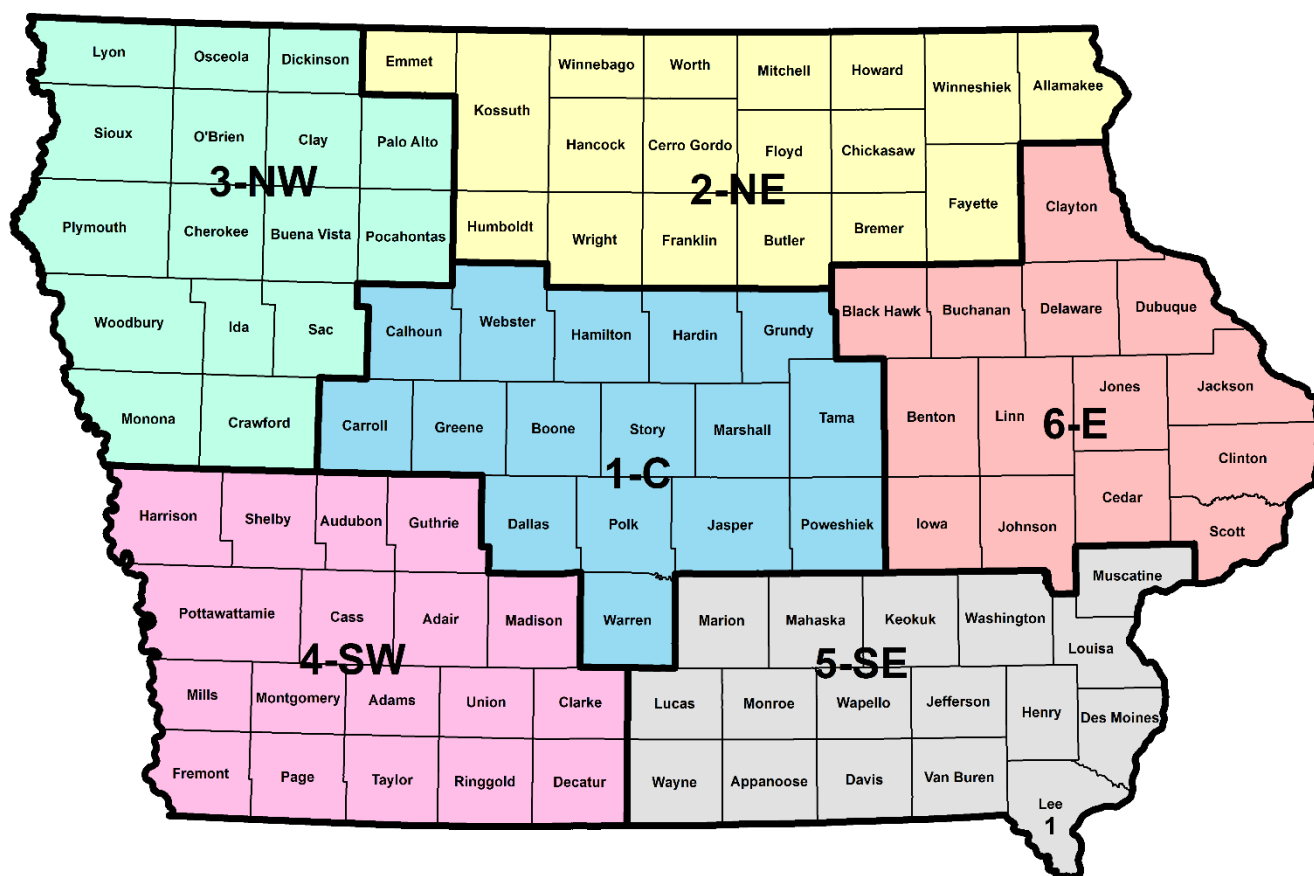
Table 7: Number of schools reporting >10% absenteeism due to any illness

REGION	CURRENT WEEK	CUMULATIVE (10/1/17 – CURRENT WEEK)*
Region 1 (Central)	0	78
Region 2 (NE)	0	33
Region 3 (NW)	0	25
Region 4 (SW)	0	24
Region 5 (SE)	1	34
Region 6 (Eastern)	0	105
Total	1	299

*School data may underestimate influenza illness for week 11 when many schools closed for spring break

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

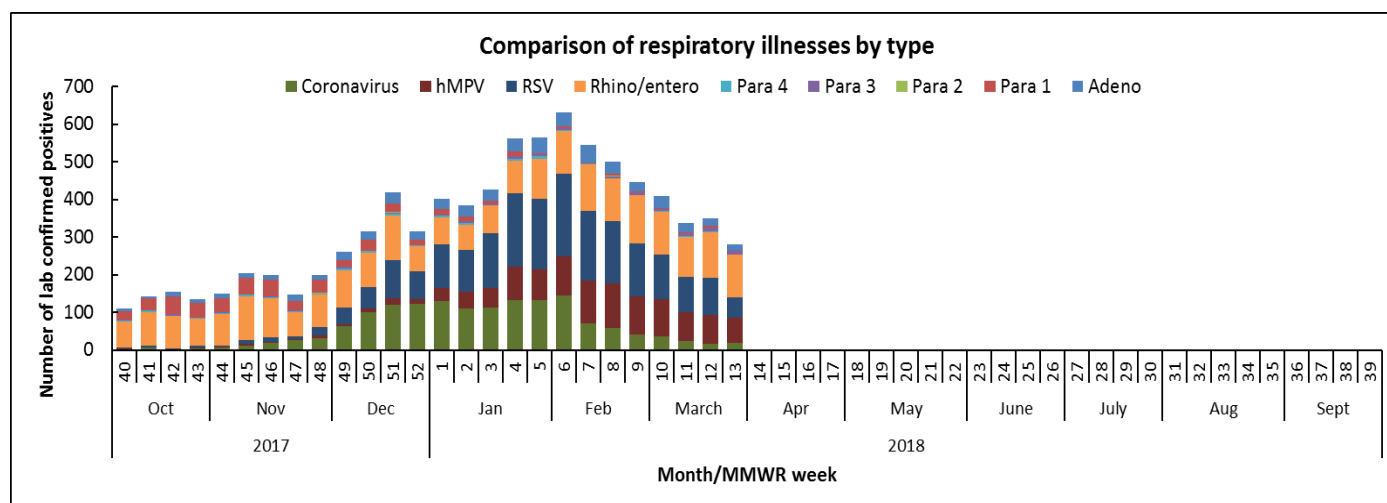


Non-influenza respiratory viruses:

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	14	590
Parainfluenza Virus Type 1	0	482
Parainfluenza Virus Type 2	0	8
Parainfluenza Virus Type 3	13	106
Parainfluenza Virus Type 4	0	68
Rhinovirus/Enterovirus	114	2496
Respiratory syncytial virus (RSV)	54	2170
Human metapneumovirus (hMPV)	67	1124
Coronavirus	18	1540
Total	280	8584



Other resources:

Vaccine:

Influenza vaccine recommendation: idph.iowa.gov/immtb/immunization/vaccine

CDC vaccine information: www.cdc.gov/flu/fag/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/