Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report

For the week ending March 28, 2020 - 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

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

Quick Stats	
Predominate influenza subtype	A(H1N1)pdm09
Percent of influenza rapid test positive	4% (76/1695)
Percent of RSV rapid tests positive	5% (11/201)
Influenza-associated hospitalizations	16/3817 inpatients surveyed
Percent of outpatient visits for ILI	1.45% (baseline 1.7%)
Number of long-term care outbreaks	0
Percent school absence due to illness	*
Number of schools with ≥10% absence due to illness	*
Influenza-associated mortality -all ages (Cumulative)	88
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 9/29/2019 to the current week.

***School data not reported for week 52, 2019 due to holiday break and starting week 12, 2020 due to COVID-19 school closures.**

Iowa statewide activity summary:

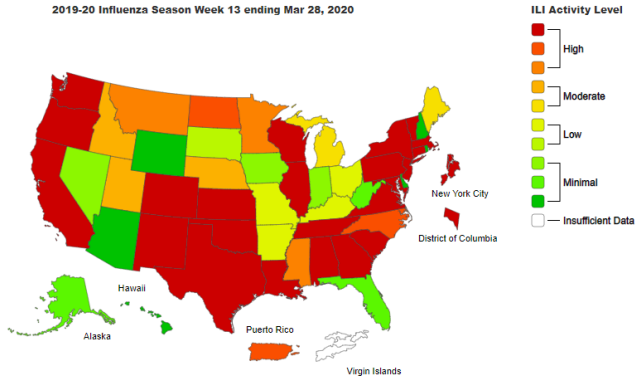
Influenza activity continues to decrease on most indicators. The geographic spread of influenza is regional. For this reporting week, the State Hygienic Laboratory identified two influenza A(H1N1)pdm09 viruses from submitted samples as well as one influenza A positive specimens with no subtype reported. Sixteen influenza-related hospitalizations were reported. The proportion of outpatient visits due to influenza-like illness (ILI) was 1.45%, which is below the regional baseline of 1.7%. No long-term care influenza outbreaks were reported. Twelve influenza-associated deaths were reported. Surveillance sites reported detecting the following non-influenza respiratory illnesses with the most frequency: 96 rhinovirus/enterovirus, 38 coronavirus* and 25 hMPV.

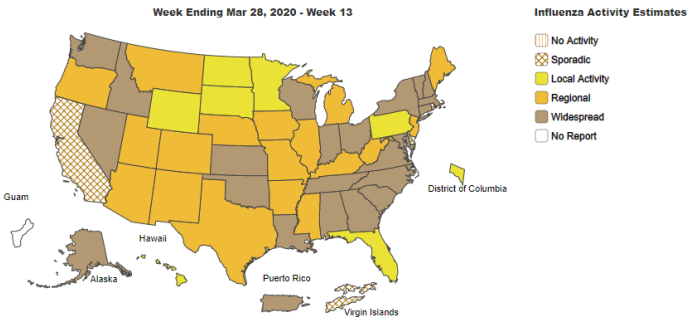
* The coronaviruses mentioned in this report are common and NOT the novel coronavirus that causes COVID-19.

International activity summary - (WHO):

In the temperate zone of the northern hemisphere, respiratory illness indicators and influenza activity appeared to decrease overall. In the temperate zones of the southern hemisphere, influenza activity 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 3/30/2020.

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



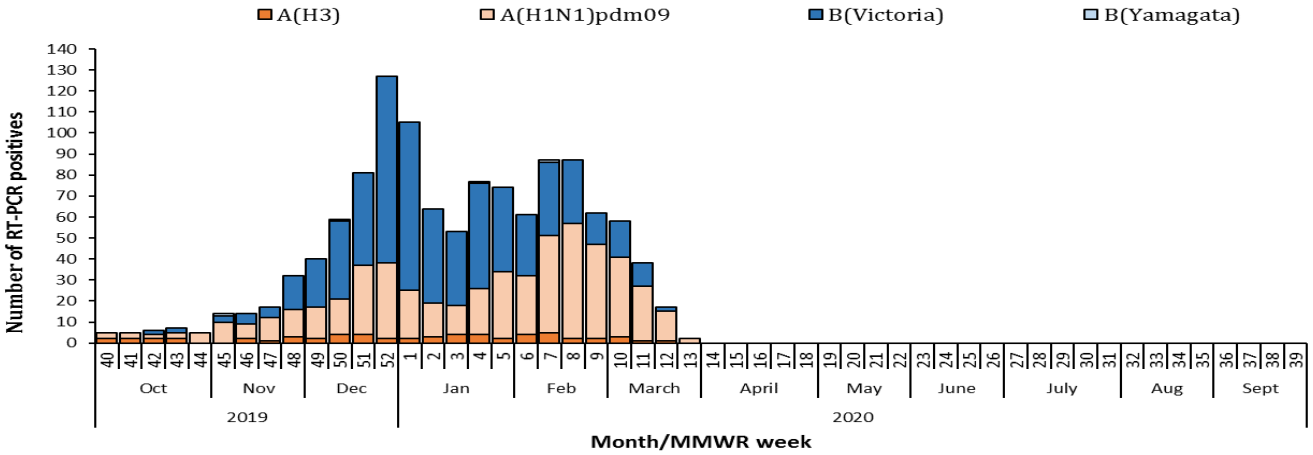


Detailed information can be found online at www.cdc.gov/flu/weekly/.

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.

Influenza viruses detected by SHL by week



Cumulative Influenza viruses detected by SHL by age group (9/29/19 – Current Week)

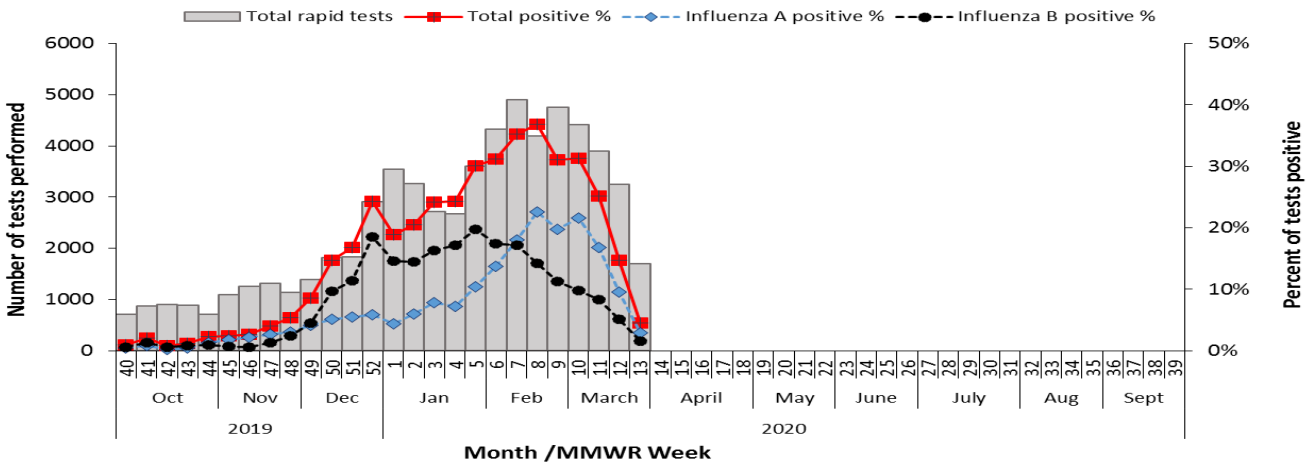
Age Group	Influenza A				Influenza B				Total	Percent
	A(H1N1) pdm09	A(H3)	Not Subtyped	Total A	Victoria Lineage	Yamagata Lineage	Not subtyped	Total B		
0-4	54	7	0	**61**	91	0	2	**93**	**154**	**13%**
5-17	72	6	2	**80**	200	2	2	**204**	**284**	**23%**
18-24	43	9	2	**54**	166	0	3	**169**	**223**	**18%**
25-49	104	7	2	**113**	102	0	1	**103**	**216**	**18%**
50-64	97	7	4	**108**	34	0	0	**34**	**142**	**12%**
>64	149	23	7	**179**	22	2	3	**27**	**206**	**17%**
Total	**519**	**59**	**17**	**595**	**615**	**4**	**11**	**630**	**1225**	
Percent	**87%**	**10%**	**3%**		**98%**	**1%**	**2%**			

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.

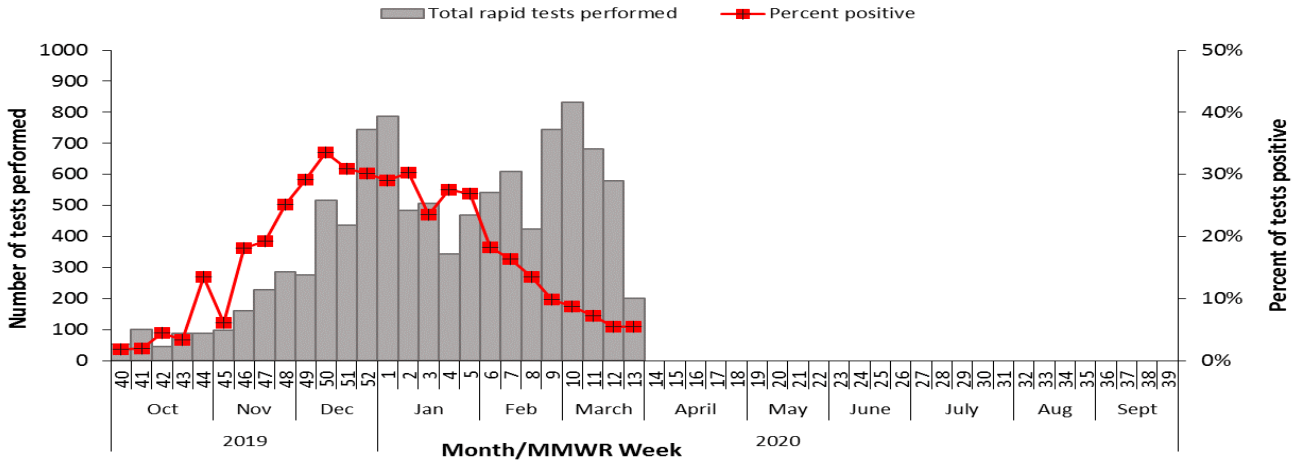
Rapid influenza and RSV test surveillance:

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.

Percent of influenza rapid tests positive and number of tests performed, 2019-2020



Percent of RSV rapid tests positive and number of tests performed, 2019-2020



Percent of influenza rapid tests positive and number of tests performed by region for the present week

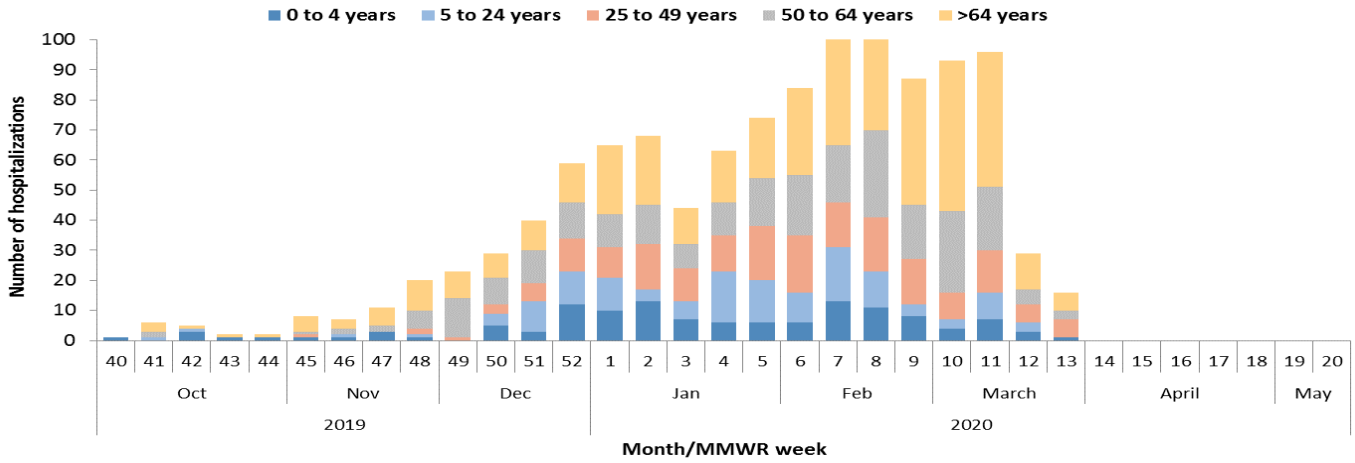
REGION	RAPID INFLUENZA TESTS				RAPID RSV TESTS		
	Tested	Flu A	Flu B	% Positive	Tested	Positive	% Positive
Region 1 (Central)	619	25	11	6	34	1	3
Region 2 (NE)	120	5	2	6	11	2	18
Region 3 (NW)	102	0	3	3	27	1	4
Region 4 (SW)	134	1	2	2	37	0	0
Region 5 (SE)	270	10	5	6	49	4	8
Region 6 (Eastern)	450	8	4	3	43	3	7
Total	**1695**	**49**	**27**	**4**	**201**	**11**	**5**

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

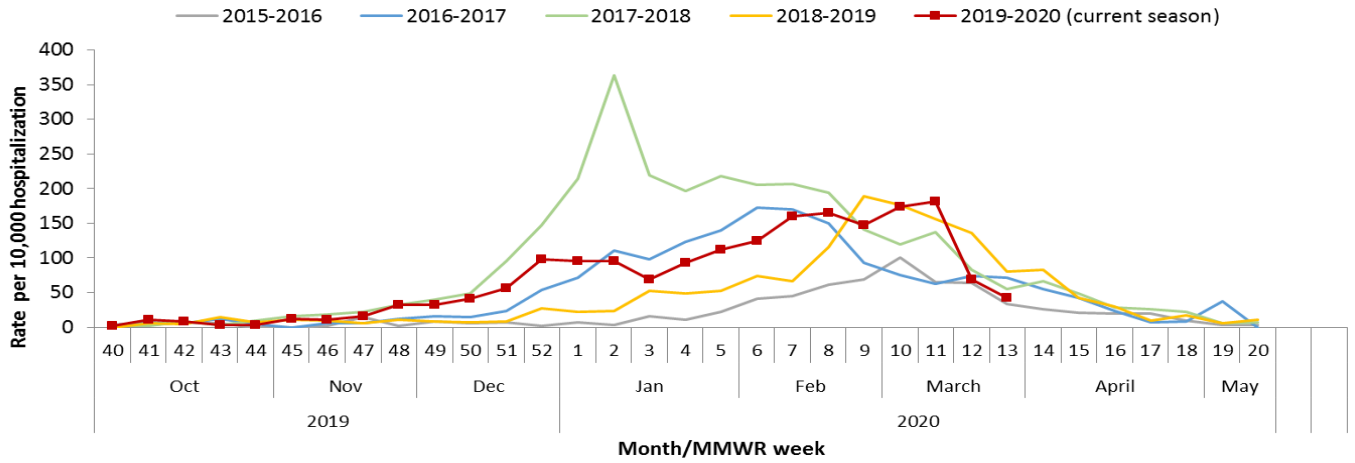
Influenza-associated hospitalizations:

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.

Number of influenza-associated hospitalizations reported by age group and week



Rate of influenza-associated hospitalizations by season and week



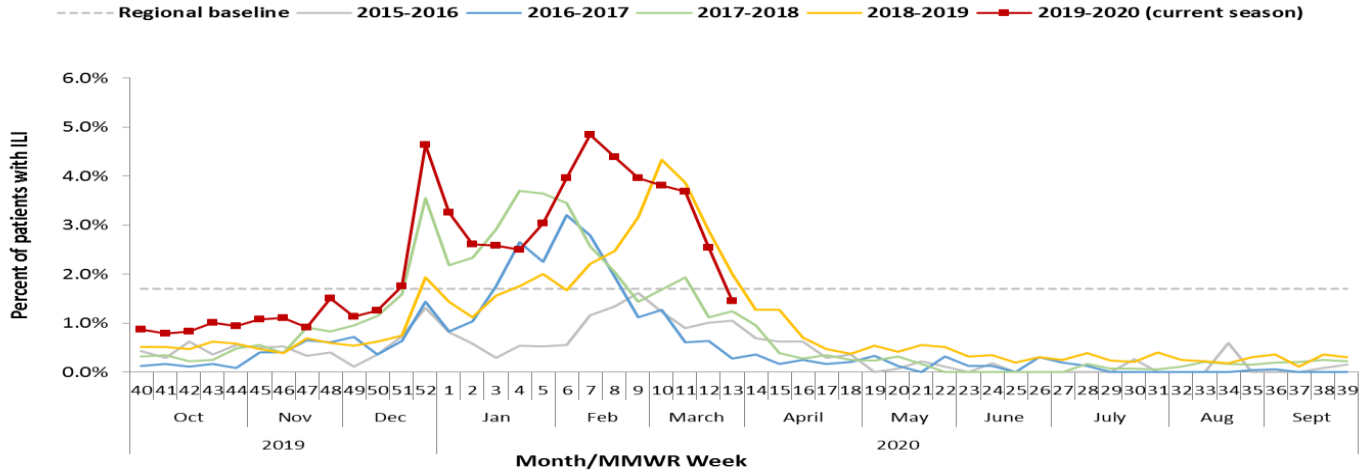
Number of influenza-associated hospitalizations reported by age group

AGE	CURRENT WEEK	CUMULATIVE (9/29/19– CURRENT WEEK)
Age 0-4	1	127
Age 5-24	0	140
Age 25-49	6	192
Age 50-64	3	259
Age >64	6	421
Total	**16**	**1139**

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.

Percent of outpatient visits attributed to ILI as reported by ILINet sites



Outpatient visits for influenza-like illness (ILI)

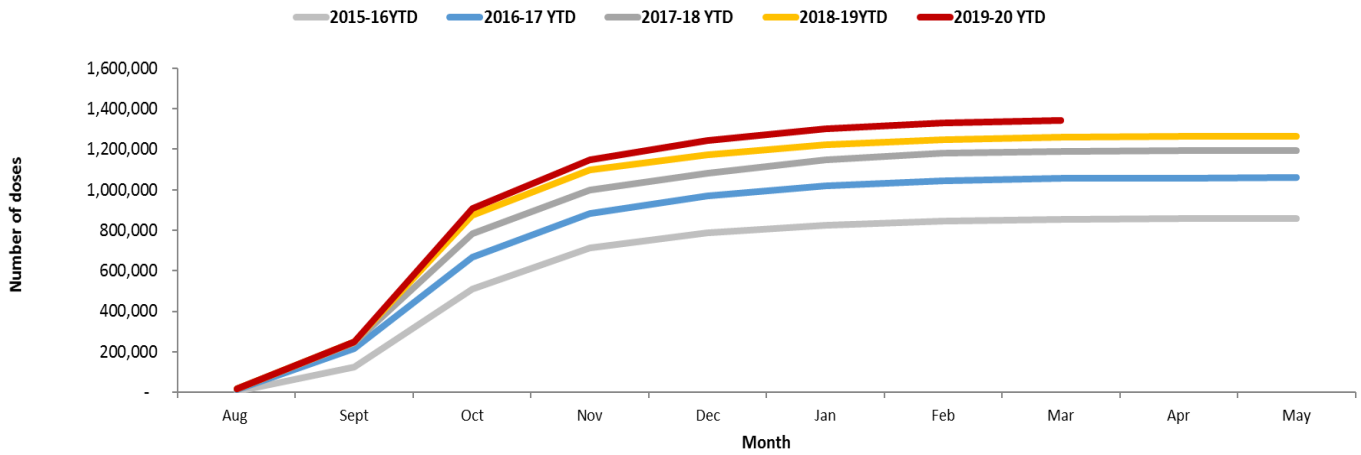
Week, End Date	Age 0-4	Age 5-24	Age 25-49	Age 50-64	Age >64	Total ILI	%ILI
Week 11, March 14	56	62	32	9	10	169	3.69
Week 12, March 21	19	23	17	6	6	71	2.55
Week 13, March 28	5	5	11	5	4	30	1.45

Note: Influenza-like Illness is defined as a fever of ≥100° 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.

Administered doses of seasonal influenza vaccine reported to IRIS, year to date by season



Note: The data for the 2019-2020 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.

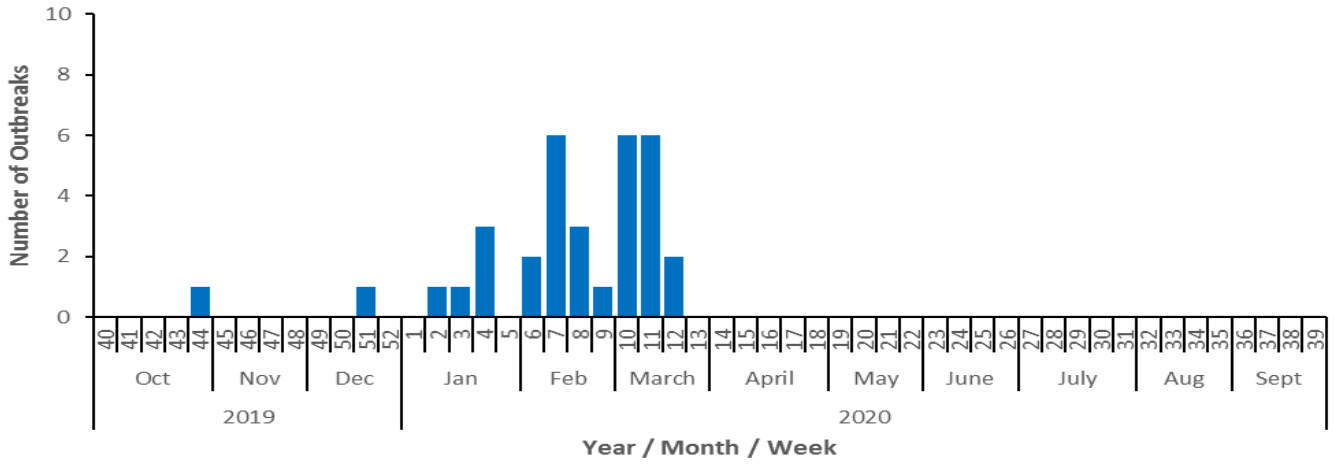
Long-term Care Outbreaks:

Number of long-term care outbreaks investigated

REGION	CURRENT WEEK	CUMULATIVE (9/29/19– CURRENT WEEK)
Region 1 (Central)	0	15
Region 2 (NE)	0	4
Region 3 (NW)	0	1
Region 4 (SW)	0	3
Region 5 (SE)	0	3
Region 6 (Eastern)	0	7
Total	**0**	**33**

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

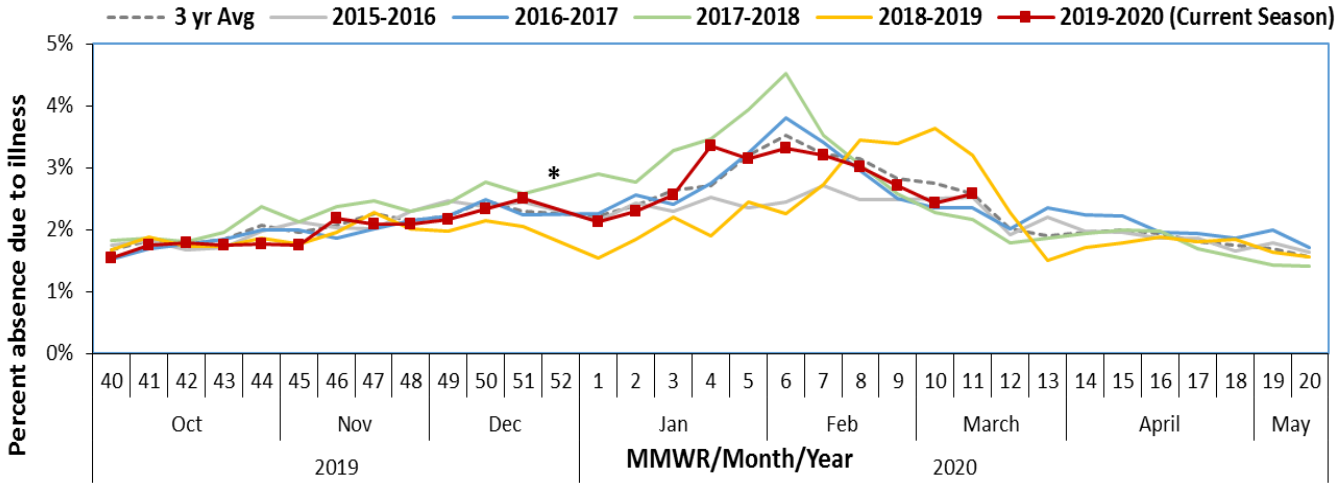
Number of long-term care facility influenza outbreaks investigated by week, 2019-2020



School surveillance program

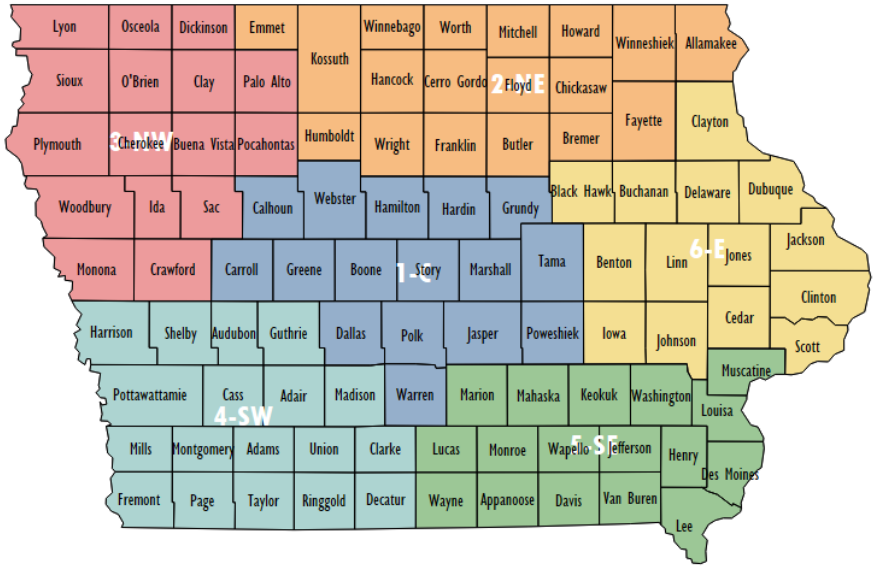
IDPH monitors illnesses in schools from two different types of reporting: 10% school absence reports and weekly sentinel illness reporting. Iowa schools (K-12) track and report (including non-influenza illnesses) whn the number of students absent with illness reaches or exceeds 10% of total student enrollment. 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.

Percent of enrolled students absent due to illness reported by sentinel schools



***School data not reported for week 52, 2019 due to holiday break and starting week 12, 2020 due to COVID-19 school closures.**

Number of schools reporting >10% absenteeism due to any illness by Flu Region and County



***School data not reported for week 52, 2019 due to holiday break and starting week 12, 2020 due to COVID-19 school closures.**

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

REGION	CURRENT WEEK	CUMULATIVE (9/29/19–CURRENT WEEK)*
Region 1 (Central)	*	75
Region 2 (NE)	*	32
Region 3 (NW)	*	41
Region 4 (SW)	*	29
Region 5 (SE)	*	47
Region 6 (Eastern)	*	76
Total	*	**300**

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.

***School data not reported for week 52, 2019 due to holiday break and starting week 12, 2020 due to COVID-19 school closures.**

Common Coronavirus vs. COVID-19

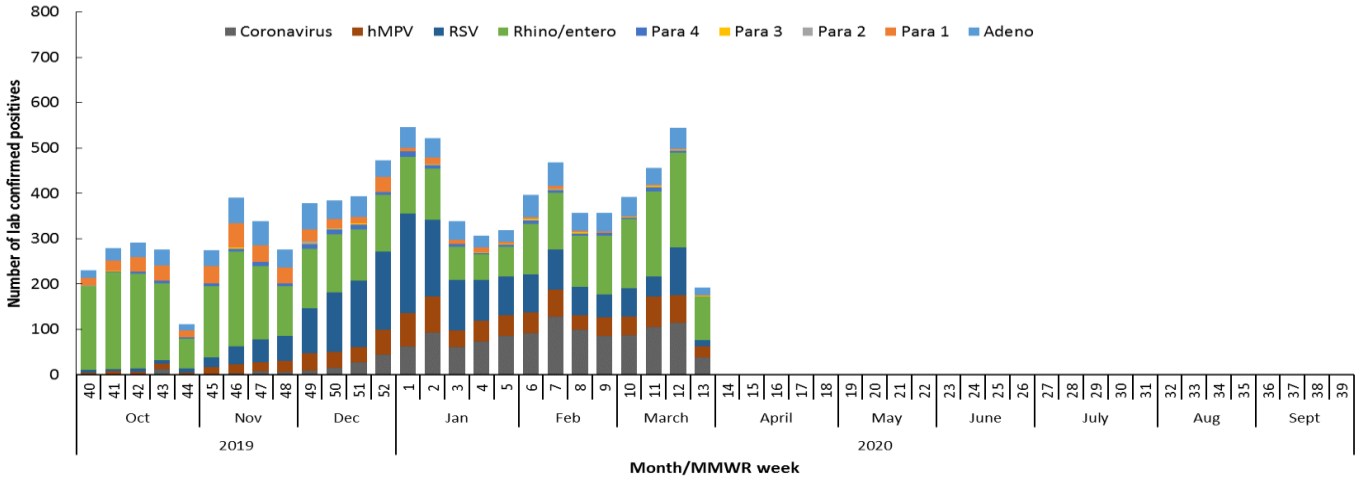
There are seven different coronaviruses known to infect humans. Four of the seven coronaviruses are very common, more mild (similar to the common cold) and most people will be infected with at least one of them in their lifetime. These common coronaviruses are the ones reported by Iowa labs mentioned in this report. People infected with the common coronaviruses, influenza and many other respiratory infections can avoid passing them to others by covering their coughs and sneezes, cleaning their hands frequently and containing germs by staying home when ill.

Three of the seven coronaviruses are rare and can cause more severe illness; this includes the 2019 Novel Coronavirus that causes COVID-19. These three rare coronaviruses can be associated with more severe symptoms that may lead to pneumonia and life-threatening illness.

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.

Comparison of respiratory illnesses by type



Number of positive results for non-influenza respiratory virus reported by clinical laboratories

Viruses	CURRENT WEEK	CUMULATIVE (9/29/19–CURRENT WEEK)
Adenovirus	17	994
Parainfluenza Virus Type 1	2	444
Parainfluenza Virus Type 2	0	16
Parainfluenza Virus Type 3	1	30
Parainfluenza Virus Type 4	1	155
Rhinovirus/Enterovirus	96	3537
Respiratory syncytial virus (RSV)	13	1932
Human metapneumovirus (hMPV)	25	929
Coronavirus*	38	1257

* The coronaviruses mentioned in this report are common and NOT the novel coronavirus that causes COVID-19.

Other resources:

Vaccine:

Influenza vaccine recommendation: idph.iowa.gov/immtb/immunization/influenza/recommendations
CDC vaccine information: www.cdc.gov/flu/prevent/keyfacts.htm
Vaccine finder: http://vaccinefinder.org/

Neighboring states' influenza information:

Illinois: dph.illinois.gov/topics-services/diseases-and-conditions/influenza/influenza-surveillance
Minnesota: health.state.mn.us/divs/idepc/diseases/flu/stats/index.html
Missouri: health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php
Nebraska: http://dhhs.ne.gov/Pages/Flu-Activity.aspx
South Dakota: doh.sd.gov/diseases/infectious/flu/
Wisconsin: dhs.wisconsin.gov/influenza/index.htm