



Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report

For the week ending March 14, 2015 - Week 10



All data presented in this report are provisional and may change as additional reports are received

Quick Stats	
Percent of outpatient visits for ILI ¹	0.5% (baseline 1.7%)
Percent of influenza rapid test positive	19.7% (301/1531)
Percent of RSV rapid tests positive	37.7% (136/361)
Percent school absence due to illness ²	2.45%
Number of schools with ≥10% absence due to illness	5
Influenza-associated hospitalizations ³	37/6,220 inpatients surveyed
Influenza-associated pediatric mortality (Cumulative)	3

¹ ILI: Influenza-like illness is defined as a fever of ≥100° F as well as cough and/or sore throat.
² Percent school absence due to illness are reported through a weekly survey of Iowa sentinel schools
³ Hospitalizations due to influenza are voluntarily reported through a weekly survey of Iowa sentinel hospitals

Iowa Influenza Geographic Spread ²
No Activity
Sporadic
Local
Regional
Widespread

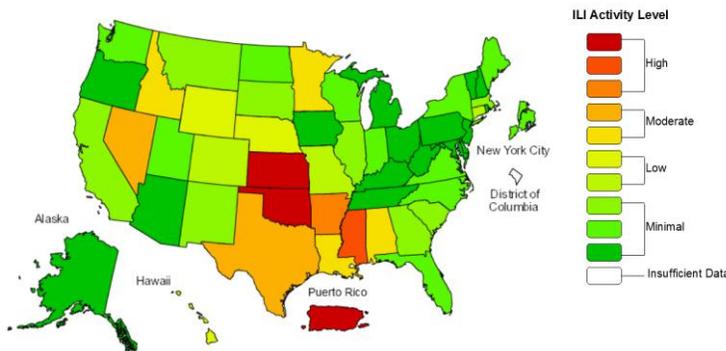
²This is based on CDC's activity estimates definition www.cdc.gov/flu/weekly/overview.htm

Iowa statewide activity summary:

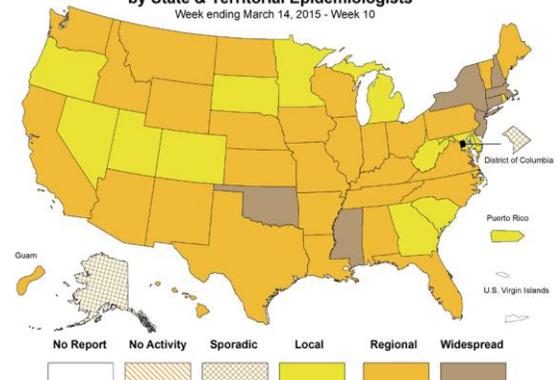
The geographic spread of influenza in Iowa is still regional. For this reporting week, the State Hygienic Laboratory detected three flu A(H3N2), two flu B(Victoria lineage), and 12 flu B(Yamagata lineage) cases. Five schools reported 10 percent or greater absenteeism and 37 influenza-associated hospitalizations were reported from sentinel hospitals. There have been 60 reported influenza outbreaks in Iowa long-term care facilities this influenza season and IDPH has confirmed three influenza-related deaths in children (age 0-17).

National activity summary - (CDC):

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2014-15 Influenza Season Week 10 ending Mar 14, 2015



Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*
Week ending March 14, 2015 - Week 10



Synopsis: During week 10 (March 8-14, 2015), influenza activity continued to decrease, but remained elevated in the United States.

Viral Surveillance: Of 15,033 specimens tested and reported by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories during week 10, 1,685 (11.2 percent) were positive for influenza.

Pneumonia and Influenza Mortality: The proportion of deaths attributed to pneumonia and influenza (P&I) was above the epidemic threshold.

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

Influenza-associated Hospitalizations: A cumulative rate for the season of 57.1 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 2.3 percent, above the national baseline of 2.0 percent. Eight regions reported ILI at or above region-specific baseline levels. Puerto Rico and four states experienced high ILI activity; six states experienced moderate ILI activity; six states experienced low ILI activity; New York City and 34 states experienced minimal ILI activity; and the District of Columbia had insufficient data.

Geographic Spread of Influenza: The geographic spread of influenza in seven states was reported as widespread; Guam and 29 states reported regional activity; Puerto Rico and 13 states reported local activity; the District of Columbia and one state reported sporadic activity; and the U.S. Virgin Islands did not report.

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

International activity summary - (WHO):

Globally, influenza activity remained high in the northern hemisphere with influenza A(H3N2) viruses predominating. Some countries in Africa, Asia and southern part of Europe reported an increased influenza A(H1N1)pdm09 activity. Detailed information can be found online at www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/.

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 strain of positive tests to the influenza surveillance network several times every week. In addition, SHL surveys clinical and reference labs for the number of rapid-antigen tests performed and number positive weekly. This report also includes the positive non-influenza virus tests reported from SHL, the Dunes Medical Laboratories at Mercy Medical Center in Sioux City, and Iowa Methodist Medical Center in Des Moines.

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

Age Group	CURRENT WEEK				YEAR TO DATE (9/1/14 – PRESENT WEEK)			
	Flu A				Flu A			
	A(H1N1)pdm09	A(H3)	Subtype Pending	Not subtyped	A(H1N1)pdm09	A(H3)	Subtype Pending	Not subtyped
0-4	0(0%)	0(0%)	0(0%)	0(0%)	3(38%)	64(9%)	0(0%)	1(9%)
5-17	0(0%)	0(0%)	0(0%)	0(0%)	1(13%)	122(17%)	0(0%)	2(18%)
18-24	0(0%)	0(0%)	0(0%)	0(0%)	0(0%)	61(8%)	0(0%)	1(9%)
25-49	0(0%)	0(0%)	0(0%)	0(0%)	2(25%)	83(12%)	0(0%)	1(9%)
50-64	0(0%)	0(0%)	0(0%)	0(0%)	1(12%)	63(9%)	0(0%)	3(27%)
>64	0(0%)	3(100%)	0(0%)	0(0%)	1(12%)	326(45%)	0(0%)	3(27%)
Total	0	3	0	0	8	719	0	11

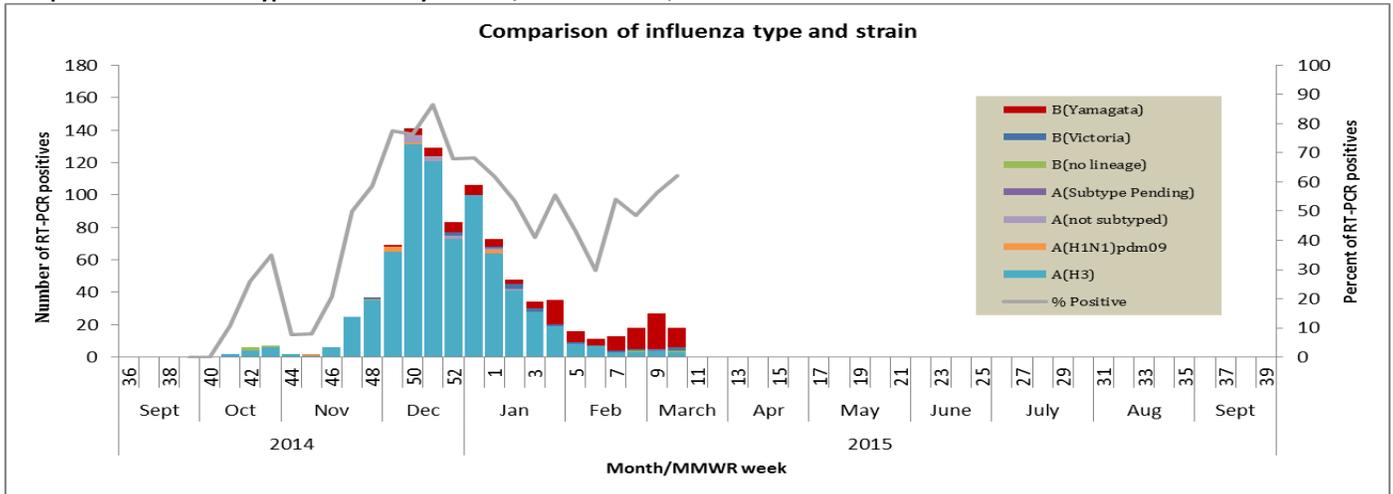
*Counts of three or less are sometimes suppressed to protect confidentiality. Note that counts may not add up to the total due to missing age information
Only cases of Iowa residents are included
"Not subtyped" column is due to weak detections. This can be due to poor collection, timing of collection or stage of infection.

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

Age Group	CURRENT WEEK			YEAR TO DATE (9/1/14 – PRESENT WEEK)		
	Flu B			Flu B		
	Victoria Lineage	Yamagata Lineage	Lineage Pending	Victoria Lineage	Yamagata Lineage	Lineage Pending
0-4	0(0%)	1(8%)	0(0%)	3(22%)	12(11%)	0(0%)
5-17	0(0%)	2(17%)	0(0%)	3(22%)	35(31%)	0(0%)
18-24	2(100%)	1(8%)	0(0%)	2(14%)	5(4%)	0(0%)
25-49	0(0%)	2(17%)	0(0%)	2(14%)	25(22%)	0(0%)
50-64	0(0%)	3(25%)	0(0%)	2(14%)	18(16%)	3(100%)
>64	0(0%)	3(25%)	0(0%)	2(14%)	18(16%)	0(0%)
Total	2	12	0	14	113	3

*Counts of three or less are sometimes suppressed to protect confidentiality. Note that counts may not add up to the total due to missing age information
Only cases of Iowa residents are included

Comparison of influenza type and strain by MMWR/calendar week, 2014-2015 season



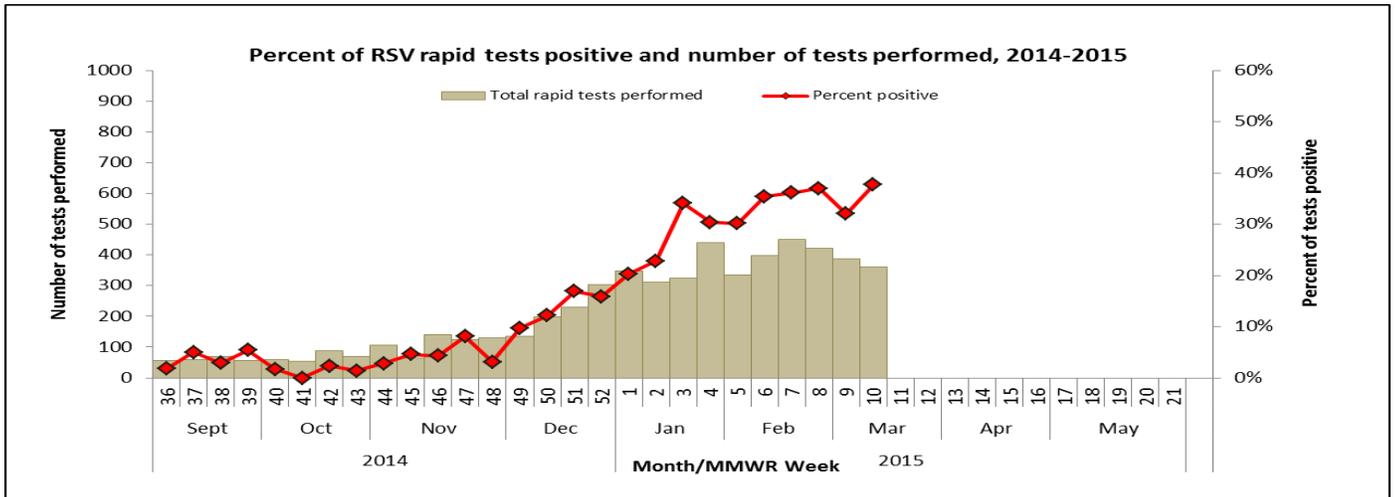
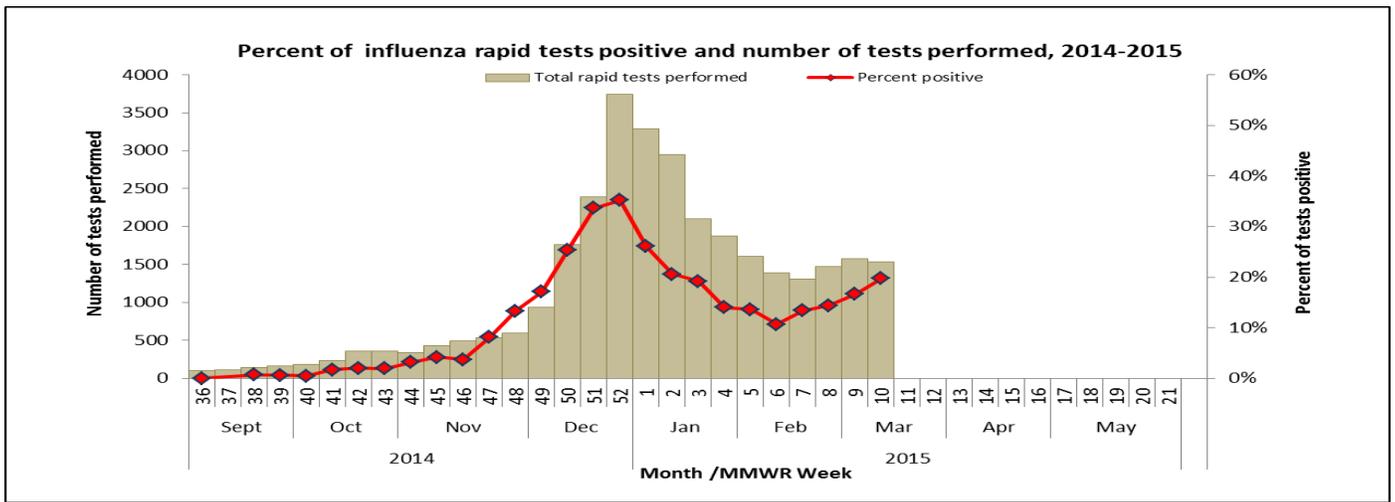
Rapid influenza and RSV test surveillance:

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

REGION*	RAPID ANTIGEN INFLUENZA TESTS					RAPID ANTIGEN RSV TESTS		
	Tested	Flu A	Flu B	Undefined	% Positive	Tested	Positive	% Positive
Region 1	180	4	19	0	12.8	50	19	38.0
Region 2	29	0	4	0	13.8	6	2	33.3
Region 3	132	8	26	0	25.8	34	13	38.2
Region 4	202	7	27	0	16.8	21	7	33.3
Region 5	185	1	35	0	19.5	56	22	39.3
Region 6	803	30	140	0	21.2	194	73	37.6
Total	1531	50	251	0	19.7	361	136	37.7

*Region 1- Boone, Calhoun, Carroll, Dallas, Greene, Grundy, Hamilton, Hardin, Jasper, Marshall, Polk, Poweshiek, Story, Tama, Warren, Webster; Region 2- Allamakee, Bremer, Butler, Cerro Gordo, Chickasaw, Emmet, Fayette, Floyd, Franklin, Hancock, Howard, Humboldt, Kossuth, Mitchell, Winnebago, Winneshiek, Worth, Wright; Region 3- Buena Vista, Cherokee, Clay, Crawford, Dickinson, Ida, Lyon, Monona, O'Brien, Osceola, Palo Alto, Plymouth, Pocahontas, Sac, Sioux, Woodbury; Region 4- Adair, Adams, Audubon, Cass, Clarke, Decatur, Fremont, Guthrie, Harrison, Madison, Mills, Montgomery, Page, Pottawattamie, Ringgold, Shelby, Taylor, Union; Region 5- Appanoose, Davis, Des Moines, Henry, Jefferson, Keokuk, Lee, Louisa, Lucas, Mahaska, Marion, Monroe, Muscatine, Van Buren, Wapello, Washington, Wayne; Region 6- Benton, Black Hawk, Buchanan, Cedar, Clayton, Clinton, Delaware, Dubuque, Iowa, Jackson, Johnson, Jones, Linn, Scott.



Non-influenza respiratory virus:

Table 4: Number of positive results for non-influenza respiratory virus isolated by SHL, Mercy Dunes in Sioux City and Iowa Methodist Medical Center

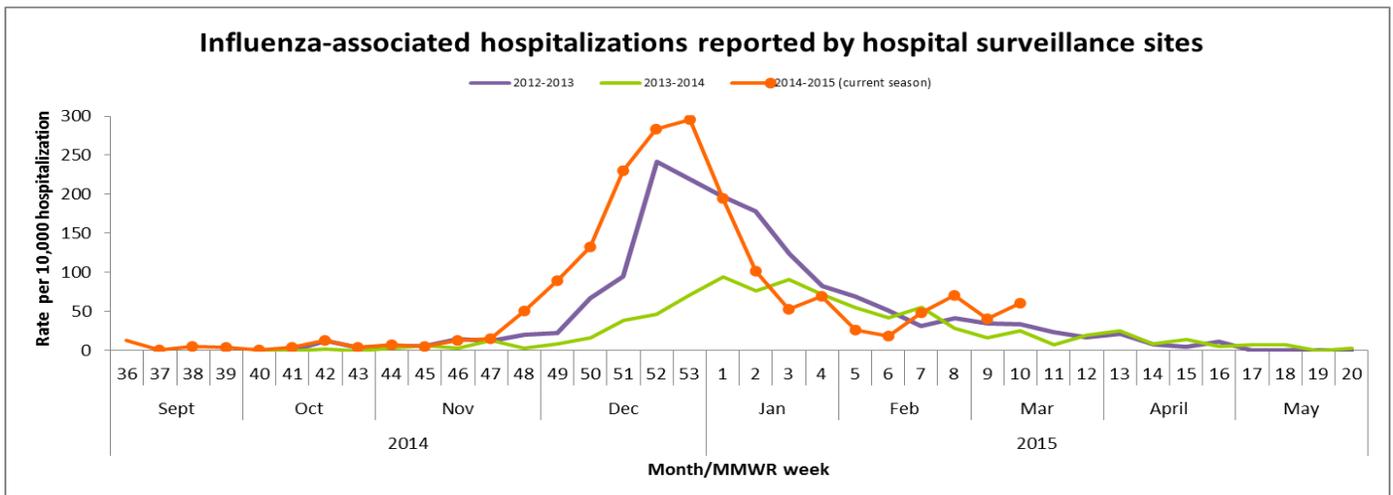
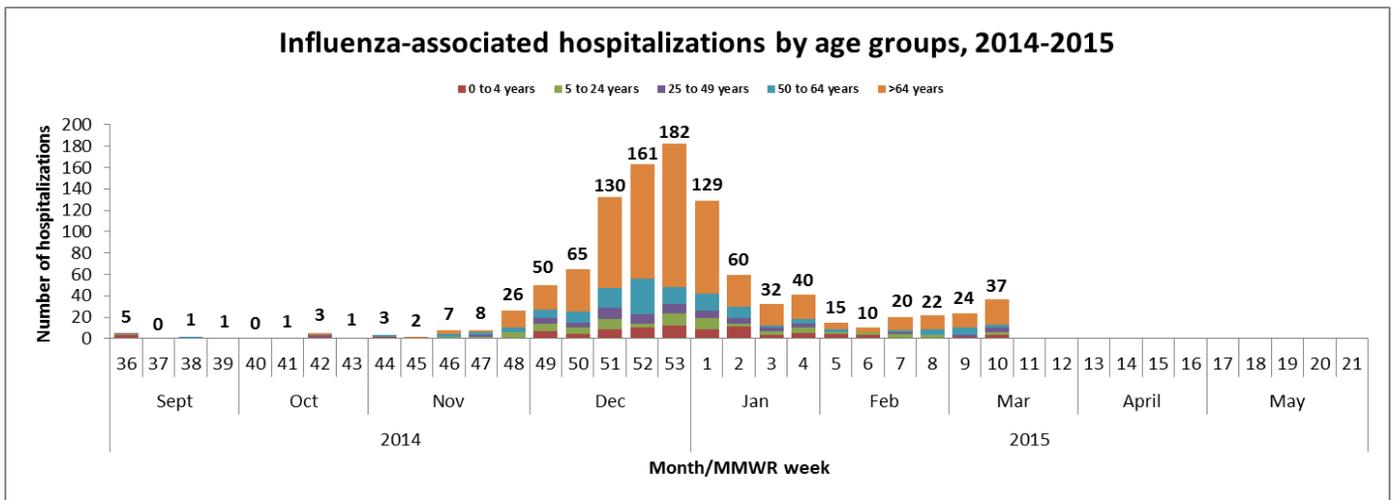
Viruses	CURRENT WEEK	CUMULATIVE (9/1/14 – PRESENT WEEK)
Adenovirus	8	212
Parainfluenza Virus Type 1	0	2
Parainfluenza Virus Type 2	0	100
Parainfluenza Virus Type 3	3	71
Parainfluenza Virus Type 4	2	19
Rhinovirus/Enterovirus	20	752
Respiratory syncytial virus (RSV)	31	346
Human metapneumovirus (hMPV)	10	101
Total	74	1603

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.

Table 5: Number of influenza-associated hospitalization reported by age group

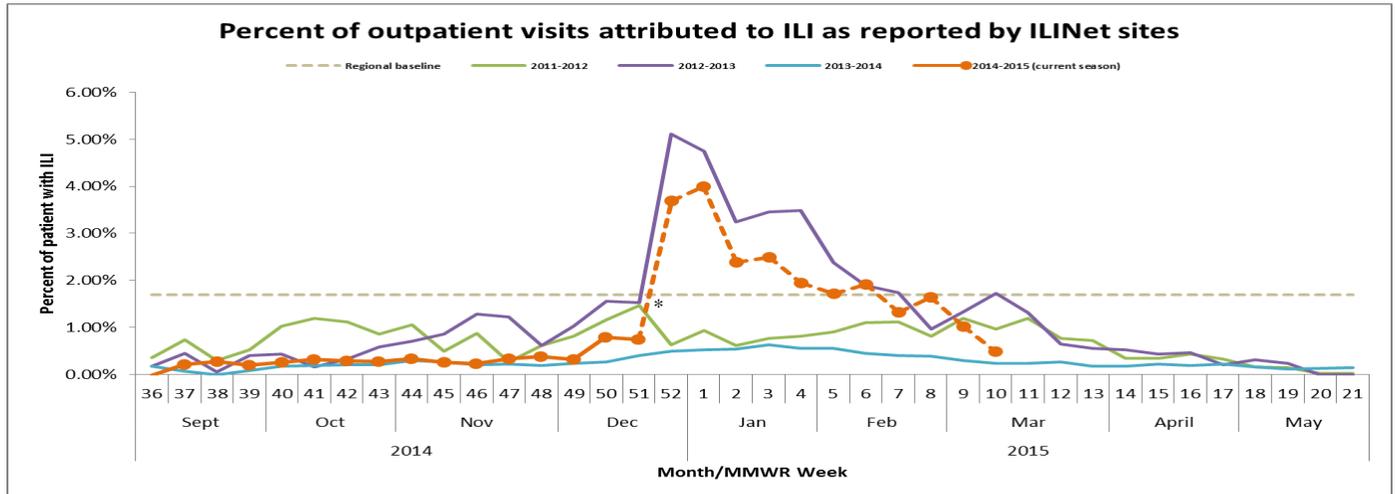
AGE	CURRENT WEEK	CUMULATIVE (9/1/14 – PRESENT WEEK)
Age 0-4	3	94
Age 5-24	3	82
Age 25-49	4	68
Age 50-64	3	152
Age >64	24	649
Total	37	1045



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 Kemi Oni at 515-725-2136 or oluwakemi.oni@idph.iowa.gov for more information.

Hospitalization	%ILI	Total ILI	Age 0-4	Age 5-24	Age 25-49	Age 50-64	Age >64
Week 8, ending Feb 28	1.7	31	8	12	5	3	3
Week 9, ending Mar 7	1.0	19	3	8	3	2	3
Week 10, ending Mar 14	0.5	9	2	2	2	1	2

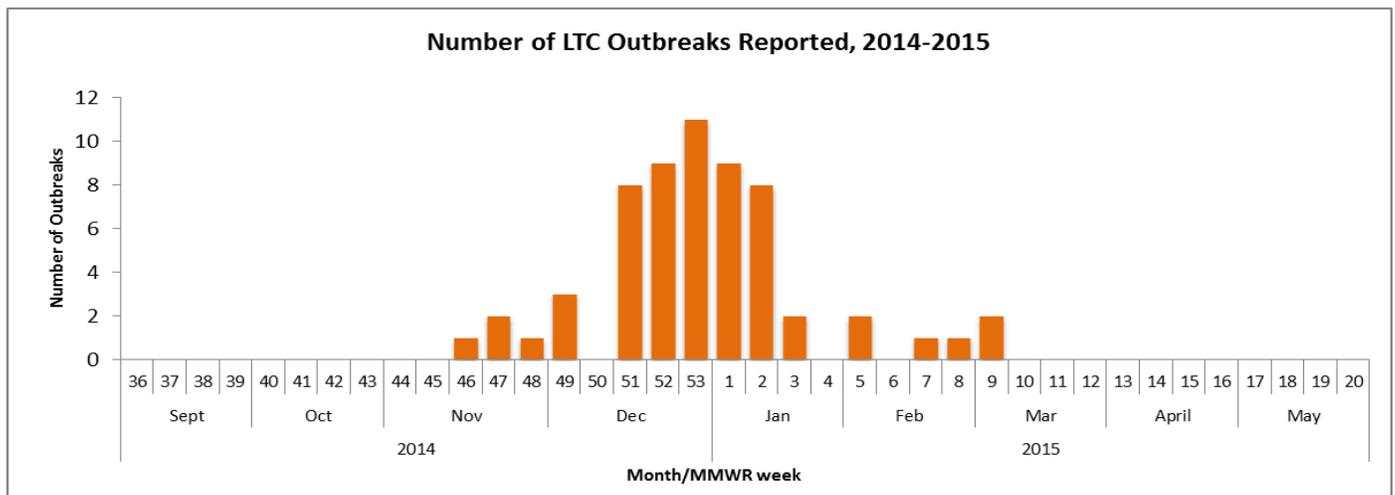


*Database used to calculate this percentage has been modified to more accurately reflect what is occurring in acute care outpatient clinics in Iowa.

Long-term Care Outbreaks

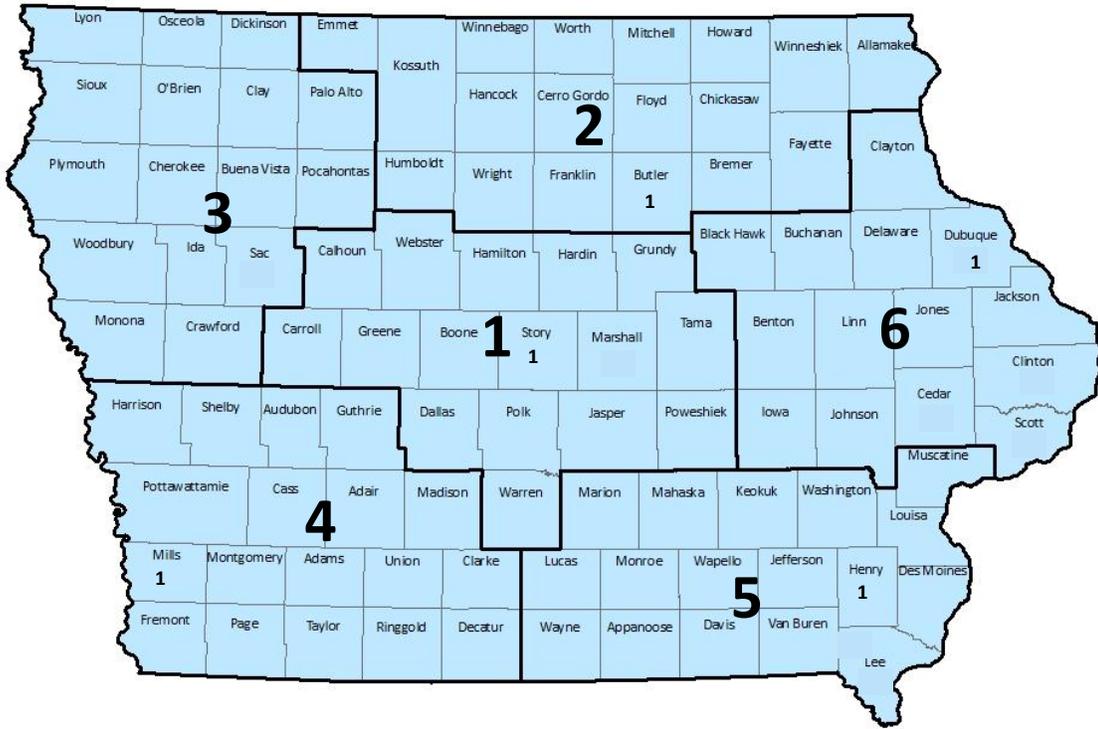
REGION*	CURRENT WEEK	CUMULATIVE (9/1/14 – PRESENT WEEK)
Region 1 (Central)	0	15
Region 2 (NE)	0	12
Region 3 (NW)	0	10
Region 4 (SW)	0	10
Region 5 (SE)	0	4
Region 6 (Eastern)	0	9
Total	0	60

*Region 1- Boone, Calhoun, Carroll, Dallas, Greene, Grundy, Hamilton, Hardin, Jasper, Marshall, Polk, Poweshiek, Story, Tama, Warren, Webster; Region 2- Allamakee, Bremer, Butler, Cerro Gordo, Chickasaw, Emmet, Fayette, Floyd, Franklin, Hancock, Howard, Humboldt, Kossuth, Mitchell, Winnebago, Winneshiek, Worth, Wright; Region 3- Buena Vista, Cherokee, Clay, Crawford, Dickinson, Ida, Lyon, Monona, O'Brien, Osceola, Palo Alto, Plymouth, Pocahontas, Sac, Sioux, Woodbury; Region 4- Adair, Adams, Audubon, Cass, Clarke, Decatur, Fremont, Guthrie, Harrison, Madison, Mills, Montgomery, Page, Pottawattamie, Ringgold, Shelby, Taylor, Union; Region 5- Appanoose, Davis, Des Moines, Henry, Jefferson, Keokuk, Lee, Louisa, Lucas, Mahaska, Marion, Monroe, Muscatine, Van Buren, Wapello, Washington, Wayne; Region 6- Benton, Black Hawk, Buchanan, Cedar, Clayton, Clinton, Delaware, Dubuque, Iowa, Jackson, Johnson, Jones, Linn, Scott.



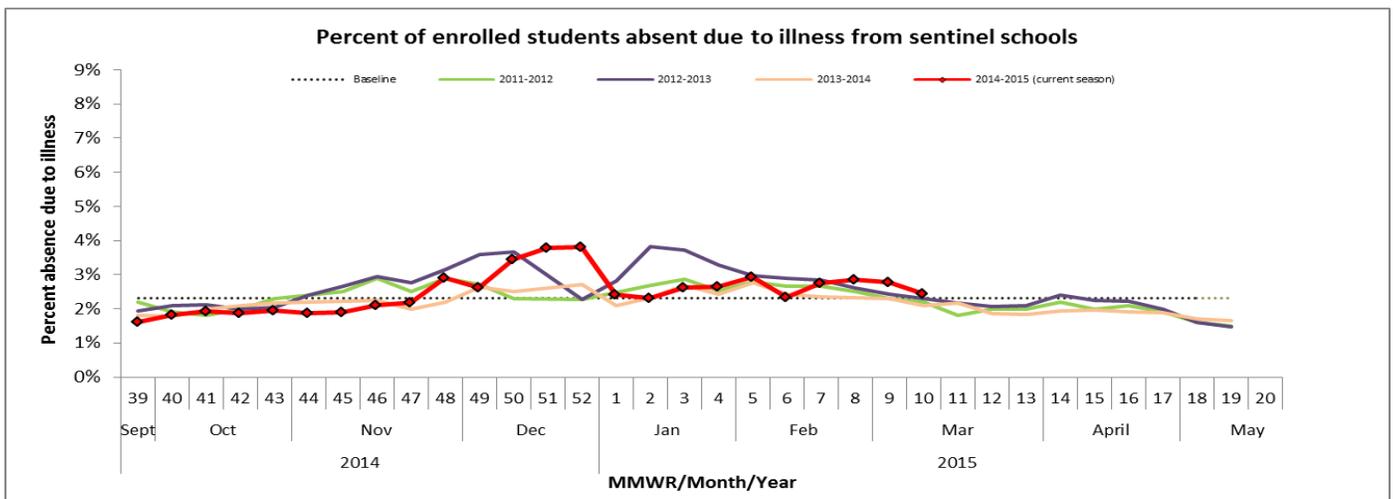
10 percent school absenteeism:

Schools (k-12) track and report outbreaks of influenza-like illness when the number of students absent with illness reaches or exceeds 10 percent of total student enrollment. Regional map with schools that have $\geq 10\%$ absence due to illness for this current reporting week is displayed below.



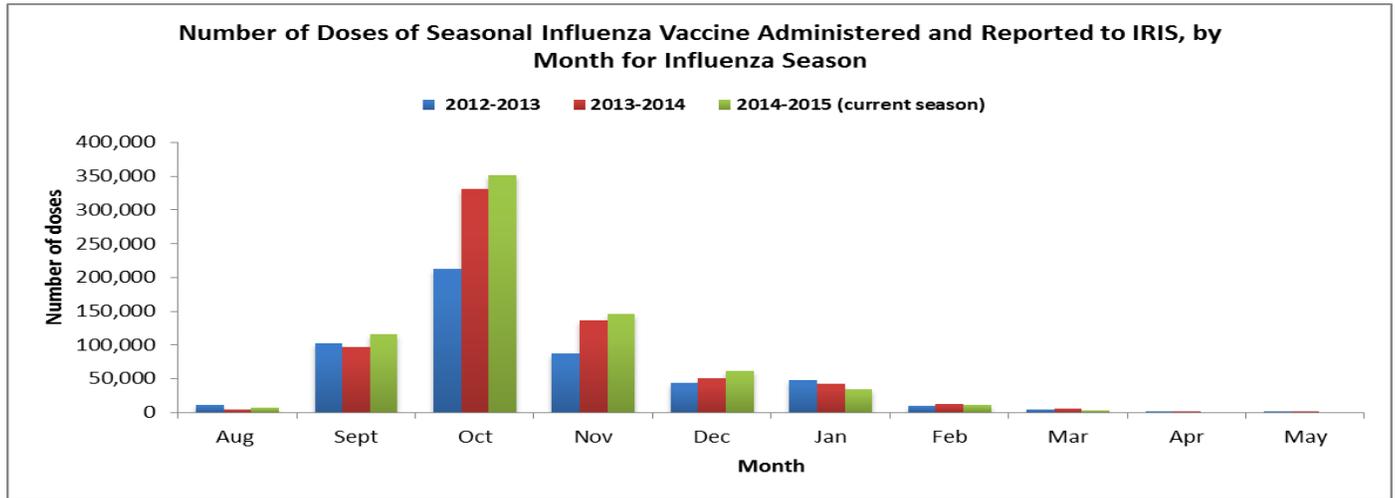
School surveillance program:

Sentinel schools that participate in IISN voluntarily track and report absence due to all illness (including non-influenza illnesses) and the total enrollment each week.



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 2014-2015 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.

Other resources:

Vaccine:

Influenza vaccine recommendation: <http://www.idph.state.ia.us/ImmTB/Immunization.aspx?prog=Imm&pg=Flu>

CDC vaccine information: <http://www.cdc.gov/flu/faq/flu-vaccine-types.htm>

Vaccine finder: <http://vaccinefinder.org/>

Neighboring states' influenza information:

Illinois: <http://www.idph.state.il.us/flu/surveillance.htm>

Minnesota: <http://www.health.state.mn.us/divs/idepc/diseases/flu/stats/index.html>

Missouri: <http://health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php>

South Dakota: <http://doh.sd.gov/diseases/infectious/flu/>

Wisconsin: www.dhs.wisconsin.gov/communicable/influenza/surveillance.htm

Google Flu Trends: <http://www.google.org/flutrends/us/#US-IA>