Division of Acute Disease Prevention and Emergency Response
Center for Acute Disease Epidemiology

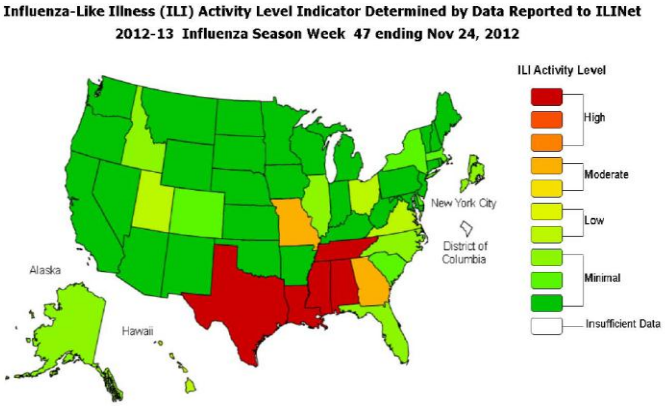
Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses
Weekly Activity Report
For the week ending November 24, 2012, Week 47

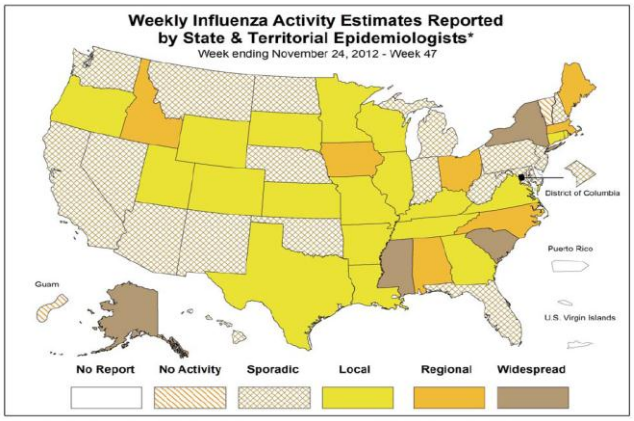
Quick Stats for this reporting week

Iowa activity level[1]	Regional
Percent of outpatient visits for ILI[2]	2.0 % (baseline 2.1%)
Percent of influenza rapid test positive	23.9% (137/573)
Percent of RSV rapid tests positive	18.3% (22/120)
Percent school absence due to illness	3.0% (baseline 2.8%)
Number of schools with ≥10% absence due to illness	1
Influenza-associated hospitalizations*	7/4982 inpatients surveyed
Influenza-associated pediatric mortality**	0

** Hospitalizations due to influenza are voluntarily reported through a weekly survey of Iowa sentinel hospitals.*
***CDC asks states to report any pediatric death (<18 years old) associated with influenza*
Note: All data in this report are provisional and may change as additional reports are received



*This map uses the proportion of outpatient visits to health care providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state.



*This map indicates geographic spread & does not measure the severity of influenza activity.

Iowa statewide activity summary

The influenza activity in Iowa is increasing and upgraded from local activity to regional. For this reporting week, the State Hygienic Laboratory (SHL) confirmed a total of 64 cases of seasonal influenza, including 49 influenza A (H3), seven influenza A (subtyping pending), and eight influenza B. The proportion of outpatient visits due to influenza-like illness (ILI) increased to 2.0 percent, which is close to the regional baseline of 2.1 percent. The percent of both influenza and respiratory syncytial virus (RSV) rapid tests that tested positive was high and continued to increase from previous weeks. There were seven influenza-associated hospitalizations reported from sentinel hospitals for this reporting period. One school reported 10 percent or greater absenteeism due to influenza-like illness and the percent of school absence due to illness reported from sentinel schools increased to 3.0 percent, which is above the baseline of 2.8 percent. In addition, 50 cases of RSV, one case of parainfluenza 2 and one parainfluenza 3 were detected during this reporting week. Thus far this season, the other respiratory viruses that have been identified include adenovirus, rhinovirus, parainfluenza 2-3, RSV, and human metapneumovirus (hMPV).

H3N2v virus infection: CDC and SHL have confirmed a case of influenza A H3N2v (variant strain) in a Cedar County child with no reported livestock contact, who has now recovered. H3N2v has been circulating in the US over the past year. Three cases were previously identified in Iowa last November.

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[1] **No Activity:** No laboratory-confirmed cases of influenza and no reported increase in the number of cases of influenza-like illness (ILI[2]).
Sporadic: Isolated laboratory-confirmed influenza cases or a single influenza outbreak has been reported, but there is no increase in cases of ILI[2].
Local: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in a single region of the state.
Regional: Outbreaks of influenza or increases in ILI and recent laboratory-confirmed influenza in at least two but less than half the regions of the state.
Widespread: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state.
[2] ILI: Influenza-like Illness is defined as a fever of ≥100° F as well as cough and/or sore throat.

National activity summary - www.cdc.gov

Synopsis: During week 47 (November 18-24, 2012), influenza activity increased in the U.S.

- **Viral Surveillance**: Of 5,342 specimens tested and reported by the U.S. World Health Organization and National Respiratory and Enteric Virus Surveillance System collaborating laboratories during week 47, 812 (15.2 percent) were positive for influenza.
- **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 was below the epidemic threshold.
- **Influenza-associated Pediatric Deaths**: No influenza-associated pediatric deaths were reported.
- **Outpatient Illness Surveillance**: The proportion of outpatient visits for influenza-like illness (ILI) was 2.2 percent, which is at the national baseline of 2.2 percent. Five regions reported ILI above region-specific baseline levels. Five states experienced high ILI activity, two states experienced moderate ILI activity; four states experienced low ILI activity; New York City and 39 states experienced minimal ILI activity, and the District of Columbia had insufficient data.
- **Geographic Spread of Influenza**: The geographic spread of influenza in four states was reported as widespread; seven states reported regional activity; 19 states reported local activity; the District of Columbia and 18 states reported sporadic activity; Guam and one state reported no influenza activity, and Puerto Rico, the U.S. Virgin Islands and one state did not report.

International activity summary - www.who.int

Countries of the Northern Hemisphere temperate region report increasing influenza virus detections; however, none have crossed their seasonal threshold or announced the beginning of their season. Countries in southern and South-east Asia, except Cambodia, reported decreasing influenza virus detections. Cambodia has reported increased detections of influenza A (H3N2) for at least six weeks. In Sub-Saharan Africa, Cameroon has continued to experience circulation of influenza A (H3N2) but appears to have peaked and the rate of detections has decreased. Ethiopia and Ghana reported increases in influenza A (H1N1) pdm09, while Madagascar, Kenya and Togo reported low circulation of mainly influenza B. Influenza activity in the temperate countries of the Southern Hemisphere is now at inter-seasonal levels.

Laboratory surveillance program – *influenza and other respiratory viruses*

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.

Specimens tested by the State Hygienic Laboratory

Table 1. Influenza viruses isolated

	Current week	*Cumulative since 9/2/12*
Flu A	56 (49%)	258 (37%)
A (2009 H1N1)	0 (0%)	1 (<1%)
A (H3)	49 (43%)	246 (35%)
A (H3N2) variant	0 (0%)	1 (<1%)
Subtyping not reported	7 (6%)	10 (1%)
Flu B	8 (7%)	51 (7%)
Equivocal	0 (0%)	0 (0%)
Indeterminate	0 (0%)	2 (<1%)
Negative	50 (44%)	388 (56%)
Total	114	699

Table 2. Influenza viruses by age group 9/2/12 to present week

Age group	*Flu A (2009 H1N1)*	*Flu A (H3)*	*Flu A (H3N2) Variant*	*Flu A (no typing)*	*Flu B*
0-4	0 (0%)	49 (20%)	* (*%)	2 (20%)	15 (29%)
5-17	1 (100%)	80 (33%)	* (*%)	4 (40%)	19 (37%)
18-24	0 (0%)	17 (7%)	0 (0%)	0 (0%)	2 (4%)
25-49	0 (0%)	45 (18%)	0 (0%)	1 (10%)	8 (16%)
50-64	0 (0%)	16 (6%)	0 (0%)	1 (10%)	3 (6%)
>64	0 (0%)	39 (16%)	0 (0%)	2 (20%)	4 (8%)
Total	1	246	1	10	51

* Counts of three or less of reportable diseases are suppressed to protect confidentiality.
Note that counts may not add up to the total due to missing age information

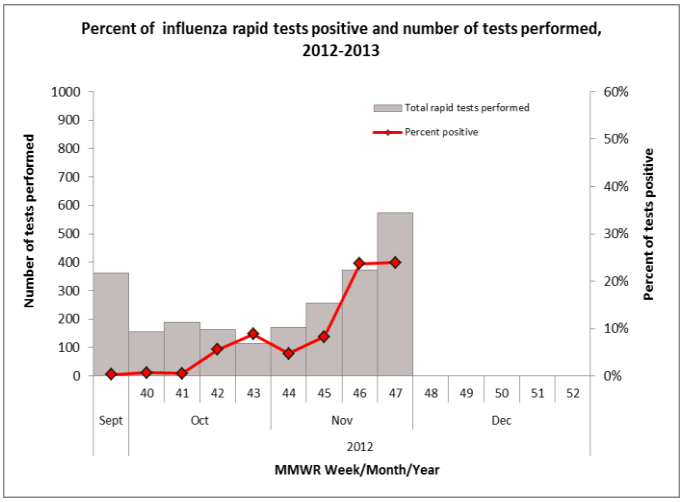
Table 3. Number of positive results for non-influenza respiratory virus isolated by the State Hygienic Laboratory, Mercy Dunes in Sioux City, and Iowa Methodist Medical Center

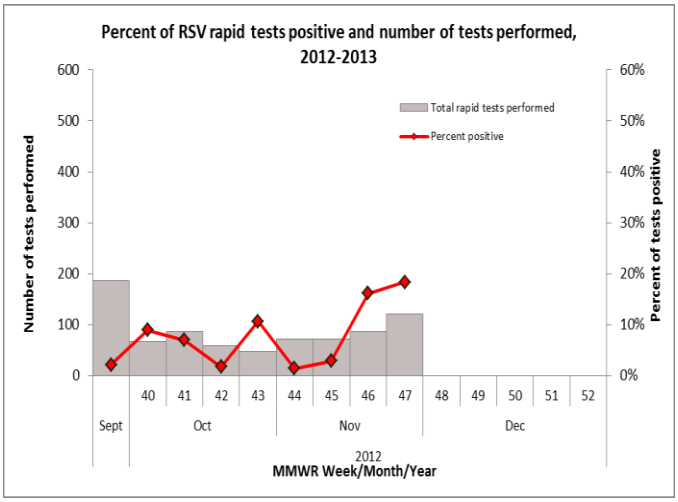
	Current week	*Cumulative since 9/2/12*
Adenovirus	0	3
Parainfluenza Virus Type 1	0	0
Parainfluenza Virus Type 2	1	8
Parainfluenza Virus Type 3	1	29
Rhinovirus	0	28
Respiratory syncytial virus (RSV)	53	78
human metapneumovirus (hMPV)	0	1

Table 4. Percent of influenza rapid tests positive and number of tests performed by region for the present week

Region*	Influenza					RSV		
	Tested	*Flu A*	*Flu B*	*Both*	*% Positive*	*Tested*	*Positive*	*% Positive*
Region 1	133	33	3	2	28.6%	33	12	36.4%
Region 2	45	12	2	0	31.1%	8	1	12.5%
Region 3	49	2	6	0	16.3%	5	0	0.0%
Region 4	22	0	0	0	0.0%	1	0	0.0%
Region 5	27	6	1	0	25.9%	7	3	42.9%
Region 6	297	70	0	0	23.6%	66	6	9.1%

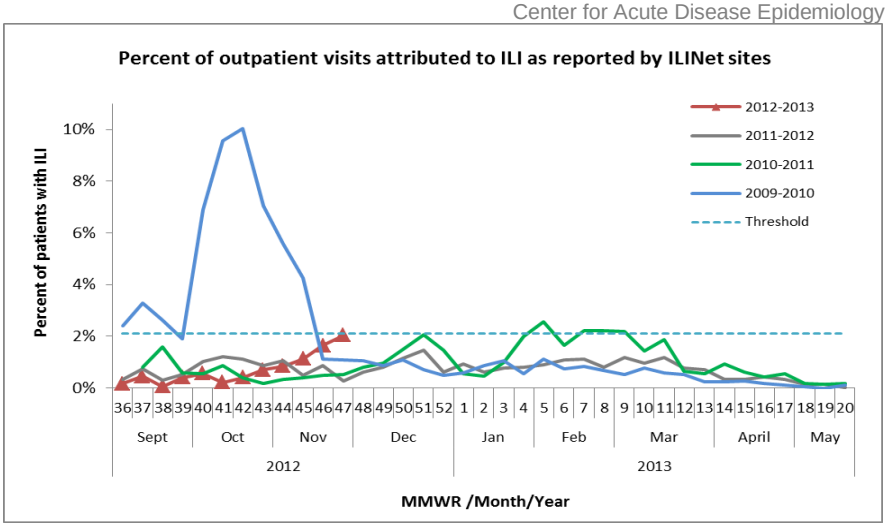
*Region 1- Boone, Calhoun, Carroll, Dallas, Greene, Grundy, Hamilton, Hardin, Jasper, Marshall, Polk, Poweshiek, Story, Tama, Warren, Webster; **Region 2**- Allamakee, Bremer, Butler, Cerro Gordo, Chickasaw, Emmet, Fayette, Floyd, Franklin, Hancock, Howard, Humboldt, Kossuth, Mitchell, Winnebago, Winneshiek, 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.





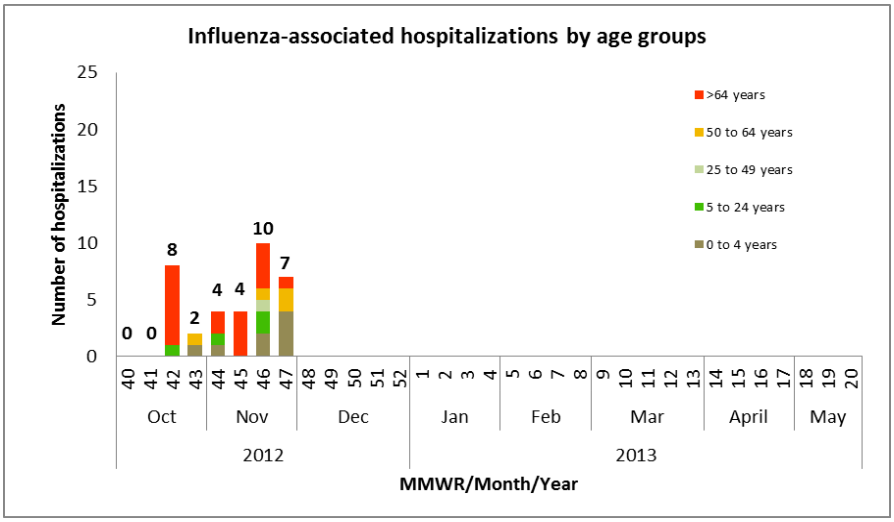
Outpatient health care provider surveillance program (ILINet)

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. Any Iowa health care providers, who are interested in joining this important surveillance program, please contact Yumei Sun at 515-281-7134 or yumei.sun@idph.iowa.gov for more information.



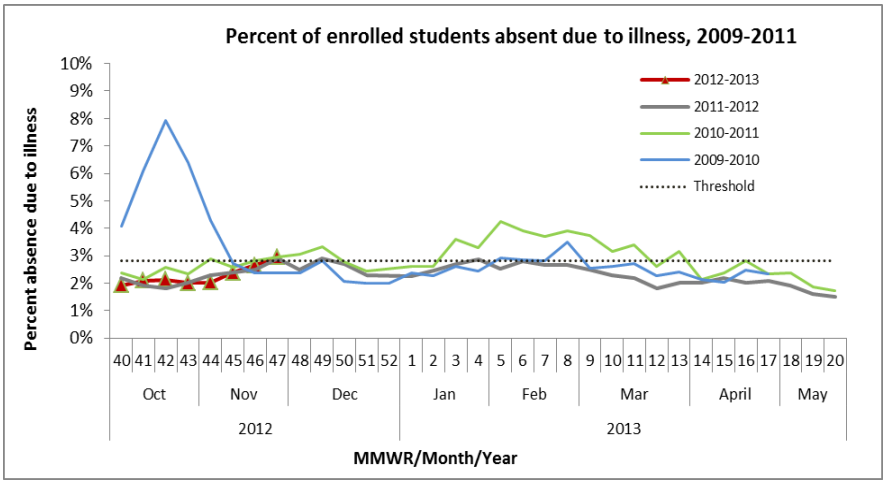
Influenza-associated hospitalizations

Twenty-one sentinel hospitals that participate in IISN voluntarily track and report the number of influenza-associated hospitalizations and the total number of inpatients each week.



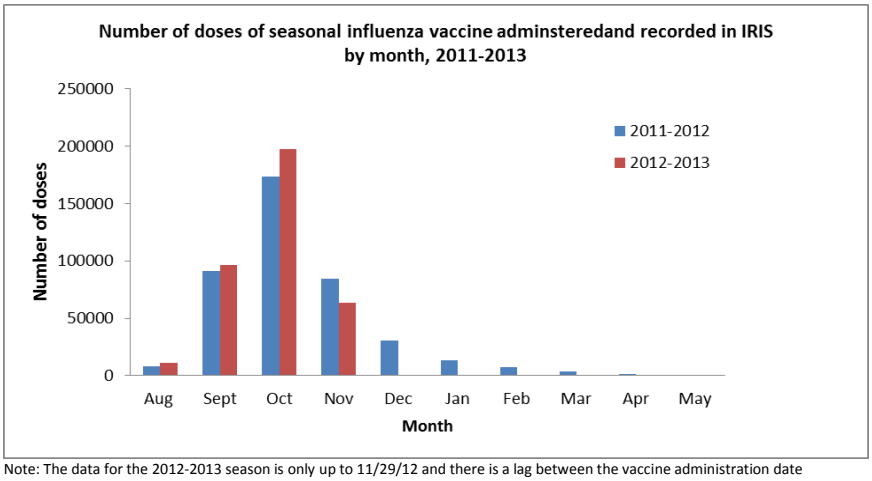
School surveillance program

Approximately 80 schools participating 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 in Iowa is based on doses reported to the Iowa Immunization Registry Information System[3] (IRIS). IRIS is a confidential, computerized, population-based system that tracks immunizations for children, adolescents and adults who are seen in a variety of public and private healthcare provider sites throughout the state.



Note: The data for the 2012-2013 season is only up to 11/29/12 and there is a lag between the vaccine administration date and the date reported to the IRIS. Therefore, the current season's data will be adjusted as additional data is received.

[3] For information on the immunization data, contact Kim Tichy, IRIS coordinator, at 515-281-4288 or Kimberly.Tichy@idph.iowa.gov