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

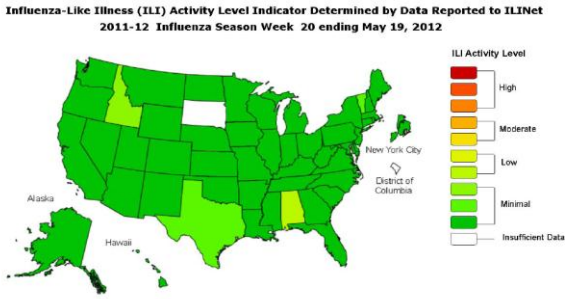
Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses
Weekly Activity Report
For the week ending May 19, 2012, Week 20

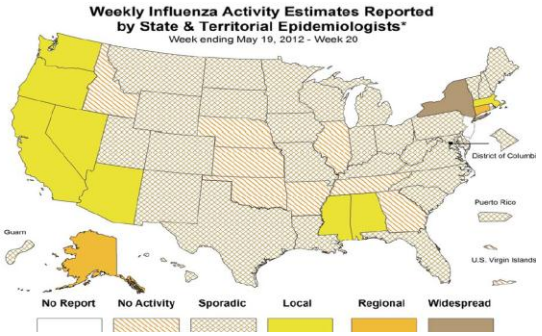
Quick Stats for this reporting week

Iowa activity level[1]	Sporadic
Percent of outpatient visits for ILI[2]	0.04 % (baseline 2.3%)
Percent of influenza rapid test positive	1.6% (2/127)
Percent of RSV rapid tests positive	14.6% (7/48)
Percent school absence due to illness	1.5%
Number of schools with ≥10% absence due to illness	0
Influenza-associated hospitalizations*	0/5053 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*



*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

Influenza activity in Iowa remains sporadic. In this reporting week, the State Hygienic Laboratory (SHL) confirmed one case of influenza B. The proportion of outpatient visits due to influenza-like illness (ILI) was at 0.04 percent, which is well below the regional baseline of 2.3 percent. The percent of both influenza and respiratory syncytial virus (RSV) rapid tests that tested positive decreased from the previous week. There were no influenza-associated hospitalizations reported from sentinel hospitals for this reporting period. No schools reported 10 percent or greater absenteeism due to illness. One adenovirus and one RSV were also detected during this reporting week. For the season, other respiratory viruses identified include rhinovirus, adenovirus, parainfluenza 1-2, RSV, and human metapneumovirus (hMPV). This is the last weekly report for the 2011-2012 season, however, IISN will provide monthly updates over the summer months.

With increasing cases of pertussis (whooping cough) being reported around the state, an update (similar to this flu update) will be posted weekly. To access the report, visit www.idph.state.ia.us/Cade/default.aspx?group=3, and click on "Pertussis Update" at the bottom of the page.

National activity summary - www.cdc.gov

Synopsis: During week 20 (May 13-19, 2012), influenza activity declined nationally and in most regions, but remained elevated in some areas of the United States.

- **U.S. Virologic Surveillance**: Of the 2,054 specimens tested by the U.S. World Health Organization and National Respiratory and Enteric Virus Surveillance System collaborating laboratories and reported to CDC/Influenza Division, 286 (13.9 percent) were positive for influenza.

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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.

- **Pneumonia and Influenza (P&I) Mortality Surveillance**: The proportion of deaths attributed to P&I was below the epidemic threshold.
- **Influenza-Associated Pediatric Mortality**: Two influenza-associated pediatric deaths were reported. One was associated with a seasonal influenza A (H3) virus and one was associated with an influenza B virus.
- **Outpatient Illness Surveillance**: The proportion of outpatient visits for influenza-like illness (ILI) was 1.0 percent, which is below the national baseline of 2.4 percent. All regions reported ILI below region-specific baseline levels. One state experienced low ILI activity; New York City and 48 states experienced minimal ILI activity, and the District of Columbia and 1 state had insufficient data to calculate ILI activity.
- **Geographic Spread of Influenza**: One state reported widespread geographic activity; two states reported regional influenza activity; eight states reported local activity; the District of Columbia, Guam, Puerto Rico, and 30 states reported sporadic activity; the U.S. Virgin Islands and eight states reported no influenza activity, and one state did not report.

International activity summary - www.who.int

The 2011-2012 influenza season is coming to an end in most northern temperate regions of the world. Countries in the southern hemisphere temperate zone are still at low or inter-seasonal levels, though some very small increases in detections have been reported in Chile. Some activity persists in sub-Saharan Africa. Throughout the 2011-12 influenza season, different viruses have predominated in different parts of the world in the northern hemisphere. In North America, Canada had a slight predominance nationally of influenza B over influenza A (H3N2) (67% vs. 33% respectively) particularly later in the season but the distribution was not uniform across the country. In the United States of America (USA), the proportions were reversed, and A (H3N2) was more common. The season in Mexico was dominated by influenza A (H1N1) pdm09. In Europe, the large majority of influenza viruses have been influenza A (H3N2) with only very small numbers of A (H1N1) pdm09 and B. In Asia, northern China and Mongolia reported mostly influenza B early in the season with influenza A (H3N2) appearing later, and this sequence was reversed in the Republic of Korea and Japan where, A (H3N2) was predominant in the beginning and type B appeared later. Early in the season, most viruses tested were antigenically related to those found in the current trivalent seasonal vaccine. However, by mid-season, divergence was noted in both the USA and Europe in the A (H3N2) viruses tested. Significant numbers of A (H3N2) viruses tested in recent months have shown reduced cross reactivity with the 2011-12 vaccine virus. Influenza type B virus detections have been both from the Victoria and Yamagata lineages with the former slightly more common in China and parts of Europe. Resistance to neuraminidase inhibitors has been low or undetectable throughout the season; however, a slight increase in levels of resistance to oseltamivir has been reported in influenza A (H1N1) pdm09 isolates in the USA. Most (11/16) of these oseltamivir resistant cases have been from the state of Texas, where influenza A (H1N1) pdm09 has been the most common virus circulating.

Laboratory surveillance program – *influenza and other respiratory viruses*

The State Hygienic Laboratory (SHL) is the primary lab testing and reporting influenza tests 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 10/2/11 to present week

	Current week	*Cumulative*
Flu A	0 (0%)	1182 (49%)
Flu A (2009 H1N1)	0 (0%)	117 (5%)
Flu A (H3)	0 (0%)	1037 (43%)
Novel A (H3N2)	0 (0%)	3 (<1%)
Subtyping not reported	0 (0%)	25 (1%)
Flu B	1 (5%)	32 (1%)
Equivocal	0 (0%)	3 (<1%)
Indeterminate	0 (0%)	11 (<1%)
Negative	18 (95%)	1227 (50%)
Total	19	2455

Table 2. Influenza viruses by age group 10/2/11 to present week

Age group	*Flu A (2009 H1N1)*	*Flu A (H3)*	*Novel A (H3N2)*	*Flu A (no typing)*	*Flu B*
0-4	16 (14%)	231 (22%)	* (*%)	5 (20%)	7 (22%)
5-17	23 (20%)	259 (25%)	* (*%)	2 (8%)	10 (31%)
18-24	24 (20%)	75 (7%)	0 (0%)	2 (8%)	3 (9%)
25-49	49 (42%)	215 (21%)	0 (0%)	10 (40%)	5 (16%)
50-64	4 (3%)	97 (9%)	0 (0%)	2 (8%)	4 (13%)
>64	1 (1%)	158 (15%)	0 (0%)	4 (16%)	3 (9%)
Total	117	1037	3	25	32

* Counts of three or less of reportable diseases (novel flu A) are suppressed to protect confidentiality.
Note that counts may not add up to the total due to missing age information and all data in this report are provisional and may change as reports are updated

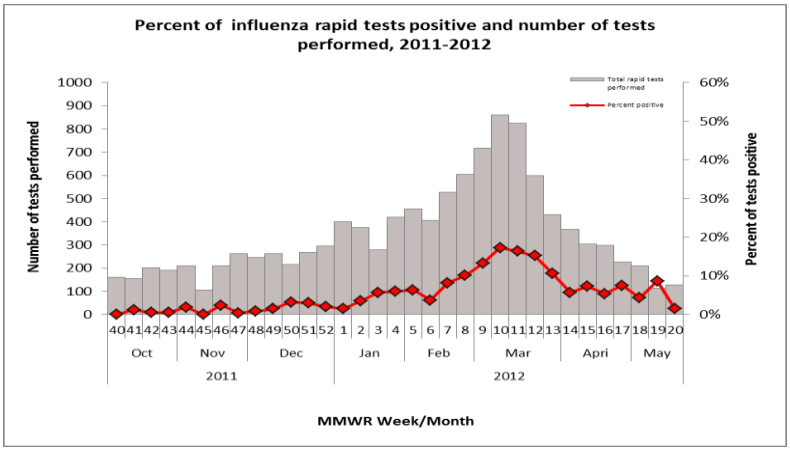
Table 3. Number of positive results for non-influenza respiratory virus isolated since 10/2/11 by the State Hygienic Laboratory, Mercy Dunes in Sioux City, and Iowa Methodist Medical Center

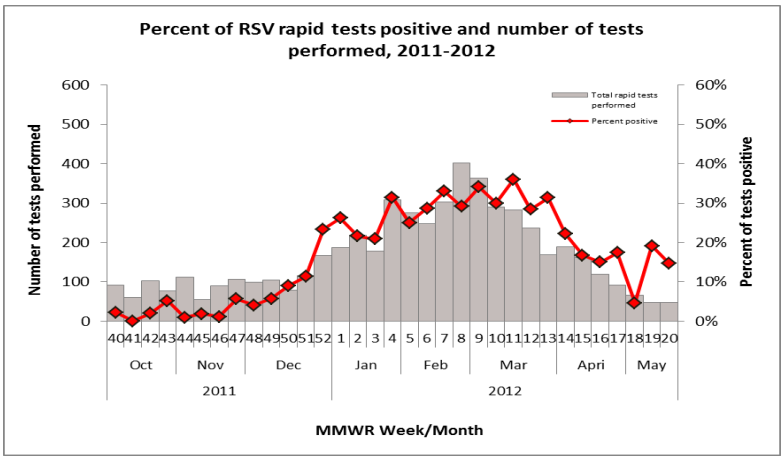
	Current week	*Cumulative*
Adenovirus	1	40
Parainfluenza Virus Type 1	0	32
Parainfluenza Virus Type 2	0	12
Parainfluenza Virus Type 3	0	0
Rhinovirus	0	63
Respiratory syncytial virus (RSV)	1	198
human metapneumovirus (hMPV)	0	22

Table 4. Percent of influenza rapid tests positive and number of tests performed by region for week 17

Region*	Influenza					RSV		
	Tested	*Flu A*	*Flu B*	*Both*	*% Positive*	*Tested*	*Positive*	*% Positive*
Region 1	13	0	0	0	0.0%	13	1	7.7%
Region 2	5	0	0	0	0.0%	0	0	0.0%
Region 3	2	0	0	0	0.0%	0	0	0.0%
Region 4	2	0	0	0	0.0%	1	0	0.0%
Region 5	12	0	0	0	0.0%	1	0	0.0%
Region 6	93	1	1	0	2.2%	33	6	18.2%

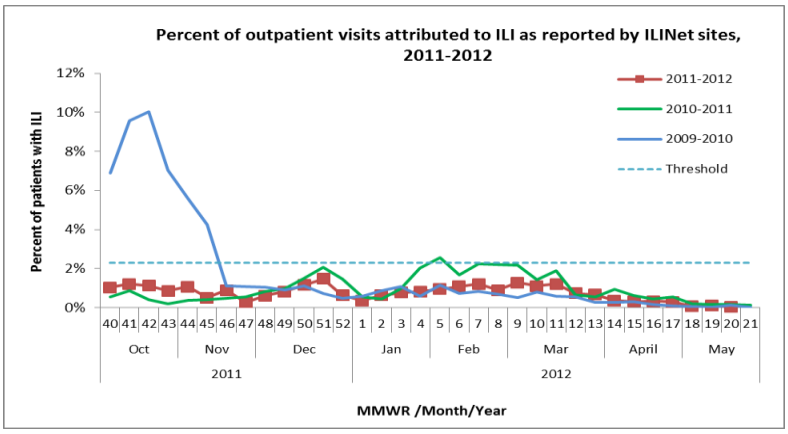
*Region 1- Boone, Calhoun, Carroll, Dallas, Greene, Grundy, Hamilton, Hardin, Jasper, Marshall, Polk, Poweshiek, Story, Tama, Warren, Webster; **Region 2**- Allamakee, Bremer, Butler, Cerro Gordo, Chickasaw, Emmet, Fayette, Floyd, Franklin, Hancock, Howard, Humboldt, Kossuth, Mitchell, Winnebago, Winneshiek,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





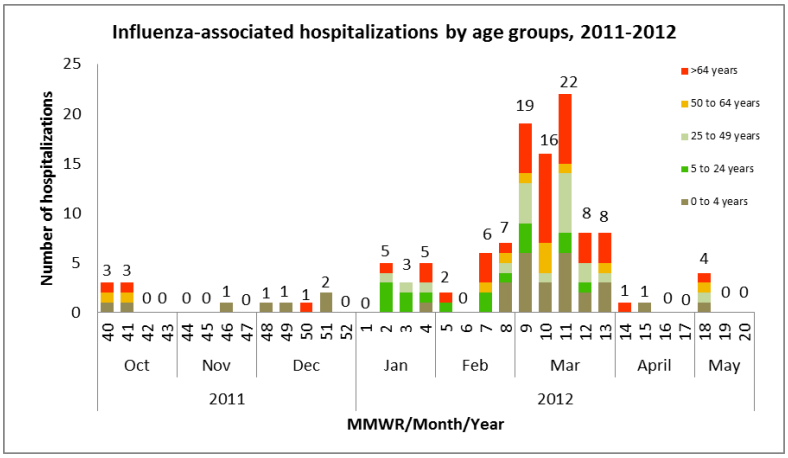
Outpatient health care provider surveillance program (ILINet)

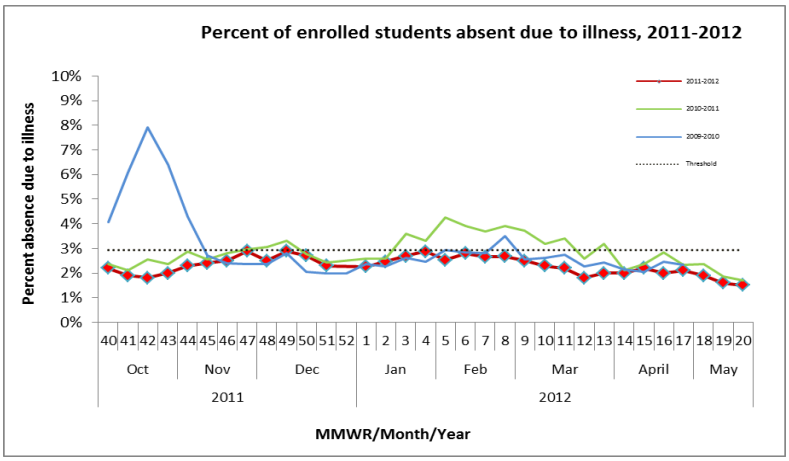
Outpatient health care providers who participate in the ILINet (a national influenza surveillance program) report the number of patients seen with influenza-like illness and the total number of patient visits each week.



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.



School surveillance program

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