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

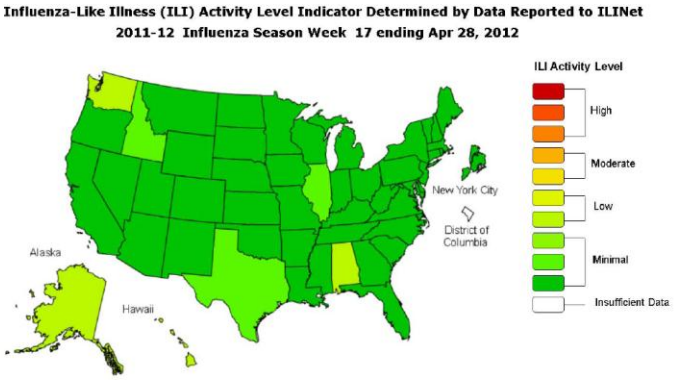
# Iowa Influenza Surveillance Network (IISN)

## Influenza-like Illness (ILI) and Other Respiratory Viruses
## Weekly Activity Report
## For the week ending April 28, 2012, Week 17

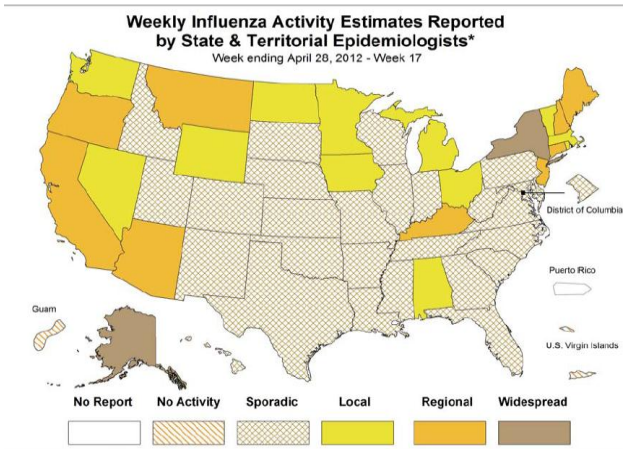
## Quick Stats for this reporting week

| | |
|---|---|
| **Iowa activity level**[1] | Local |
| Percent of outpatient visits for ILI[2] | 0.3 % (baseline 2.3%) |
| Percent of influenza rapid test positive | 7.5% (17/226) |
| Percent of RSV rapid tests positive | 17.4% (16/92) |
| Percent school absence due to illness | 2.1% |
| Number of schools with ≥10% absence due to illness | 0 |
| Influenza-associated hospitalizations* | 0/597 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 local. In this reporting week, the State Hygienic Laboratory (SHL) confirmed 16 seasonal influenza cases, including four influenza A (H3), eight influenza A (subtype pending), and four influenza B. The proportion of outpatient visits due to influenza-like illness (ILI) remained at 0.3 percent, which is below the regional baseline of 2.3 percent. The percent of both influenza and RSV rapid tests that tested positive was slightly increased from the previous week. There was no influenza-associated hospitalization reported from sentinel hospitals for this reporting period. No school reported 10 percent or greater absenteeism due to illness. There were two cases of RSV detected in this reporting week. For the season, other respiratory viruses identified include rhinovirus, adenovirus, parainfluenza 1-2, RSV, and human metapneumovirus (hMPV).

## National activity summary - www.cdc.gov

**Synopsis:** During week 17 (April 22-28, 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 2,886 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, 442 (15.3 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 2009 H1N1 virus and one was associated with a seasonal influenza A (H3) virus.
- **Outpatient Illness Surveillance**: The proportion of outpatient visits for influenza-like illness (ILI) was 1.1 percent, which is below the national baseline of 2.4 percent. All regions reported ILI below region-specific baseline levels. Four states experienced low ILI activity; New York City and 46 states experienced minimal ILI activity, and the District of Columbia had insufficient data to calculate ILI activity.
- **Geographic Spread of Influenza**: Two states reported widespread geographic activity; nine states reported regional influenza activity; 12 states reported local activity; the District of Columbia and 27 states reported sporadic activity; Guam and the U.S. Virgin Islands reported no influenza activity, and Puerto Rico did not report.

## International activity summary - www.who.int

Seasonal influenza activity has peaked in most countries in the temperate regions of the northern hemisphere. Generally in North America, influenza transmission is low and has decreased for four consecutive weeks in the United States of America (USA) and for three weeks in Canada. Influenza A (H3N2) viruses have predominated during the current season nationally and in most regions of USA, whereas influenza B viruses continue to be the predominant in Canada. A(H1N1)pdm09 continued to co circulate in Canada, USA and Mexico. In almost all European countries, the influenza season has peaked for several weeks, now showing a continuously decreasing incidence of ILI/ARI, and a reduction in the number of SARI cases. Influenza A (H3N2) viruses have been predominant this season with increasing proportion of influenza B virus detection. Influenza activity in the temperate countries of Asia has shown an overall decrease. The proportion of influenza A (H3N2) virus detection has increased over influenza B in both northern China and Mongolia, but for Japan, influenza A (H3N2) viruses have been the predominant subtype throughout the season. In the Republic of Korea, influenza B viruses are still predominant over influenza A viruses. Influenza A (H1N1) pdm09 viruses were screened for susceptibility to neuraminidase inhibitors in nine countries in western Europe, and all tested were susceptible. However, in the USA, a slight increase to 2 percent in levels of resistance to oseltamivir has been noticed for influenza A (H1N1) pdm09 isolates.

## 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** | 12 (30%) | 1164 (49%) |
| Flu A (2009 H1N1) | 0 (0%) | 115 (5%) |
| Flu A (H3) | 4 (10%) | 1016 (43%) |
| Novel A (H3N2) | 0 (0%) | 3 (<1%) |
| Subtyping not reported | 8 (20%) | 30 (1%) |
| **Flu B** | 4 (10%) | 31 (1%) |
| **Equivocal** | 0 (0%) | 3 (<1%) |
| **Indeterminate** | 0 (0%) | 11 (<1%) |
| **Negative** | 24 (60%) | 1160 (49%) |
| **Total** | 40 | 2369 |

**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%) | 229 (23%) | * (*%) | 4 (13%) | 6 (19%) |
| ***5-17*** | 23 (20%) | 256 (25%) | * (*%) | 3 (10%) | *10 (32%)* |
| ***18-24*** | 22 (19%) | 74 (7%) | 0 (0%) | 2 (7%) | 3 (10%) |
| ***25-49*** | 49 (43%) | 210 (21%) | 0 (0%) | 10 (33%) | 5 (16%) |
| ***50-64*** | 4 (3%) | 95 (9%) | 0 (0%) | 2 (7%) | 4 (13%) |
| ***>64*** | 1 (1%) | 150 (15%) | 0 (0%) | 9 (30%) | 3 (10%) |
| ***Total*** | 115 | 1016 | 3 | 30 | 31 |

* 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

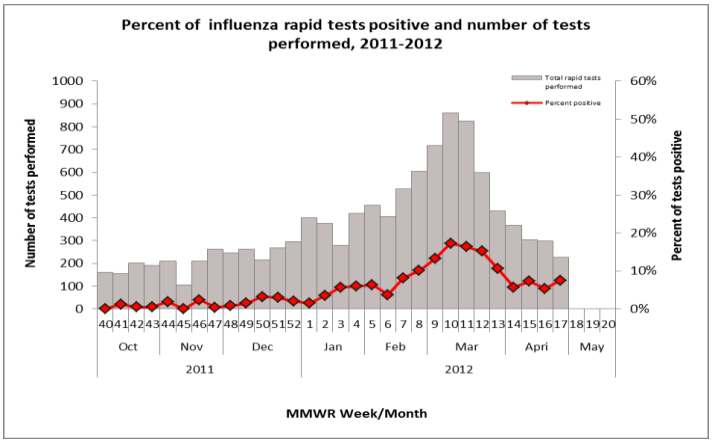
**Table 3. Number of positive results for non-influenza respiratory virus isolated since 10/2/11 by the State Hygienic Laboratory, Mercy Dunes in Sioux City, and Iowa Methodist Medical Center**

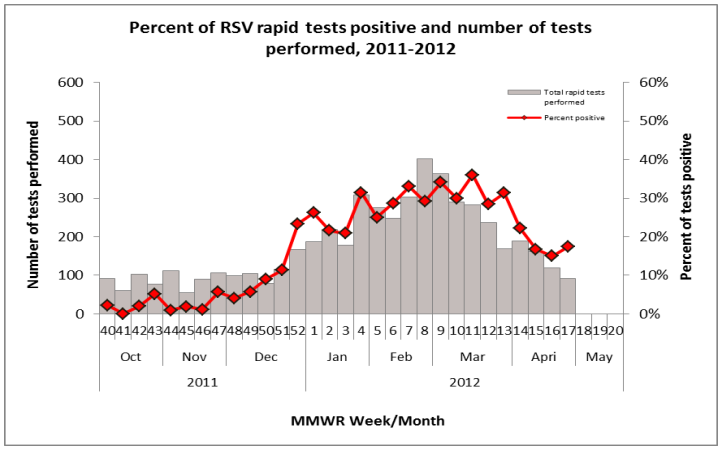
| | *Current week* | *Cumulative* |
|---|---|---|
| ***Adenovirus*** | 0 | 33 |
| ***Parainfluenza Virus Type 1*** | 0 | 32 |
| ***Parainfluenza Virus Type 2*** | 0 | 11 |
| ***Parainfluenza Virus Type 3*** | 0 | 0 |
| ***Rhinovirus*** | 0 | 57 |
| ***Respiratory syncytial virus (RSV)*** | 3 | 194 |
| ***human metapneumovirus (hMPV)*** | 0 | 19 |

**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*** | 28 | 0 | 0 | 0 | 0.0% | 14 | 4 | 28.6% |
| ***Region 2*** | 10 | 0 | 0 | 0 | 0.0% | 5 | 0 | 0.0% |
| ***Region 3*** | 20 | 1 | 1 | 0 | 10.0% | 8 | 2 | 25.0% |
| ***Region 4*** | 9 | 1 | 0 | 0 | 11.1% | 9 | 2 | 22.2% |
| ***Region 5*** | 48 | 1 | 2 | 0 | 6.3% | 14 | 1 | 7.1% |
| ***Region 6*** | 111 | 8 | 3 | 0 | 9.9% | 42 | 7 | 16.7% |

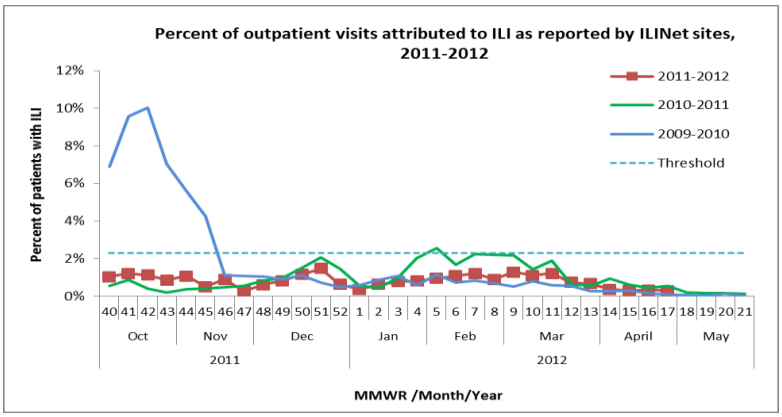
*__Region 1__- Boone, Calhoun, Carroll, Dallas, Greene, Grundy, Hamilton, Hardin, Jasper, Marshall, Polk, Poweshiek, Story, Tama, Warren, Webster; **Region 2**- Allamakee, Bremer, Butler, Cerro Gordo, Chickasaw, Emmet, Fayette, Floyd, Franklin, Hancock, Howard, Humboldt, Kossuth, Mitchell, Winnebago,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



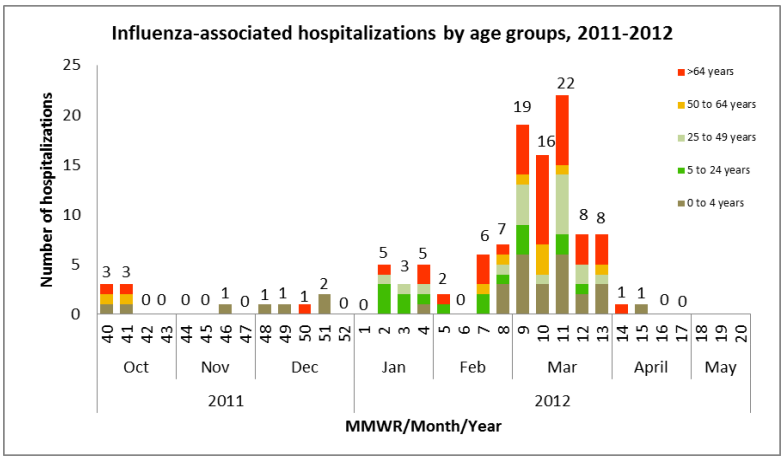
## Outpatient health care provider surveillance program (ILINet)

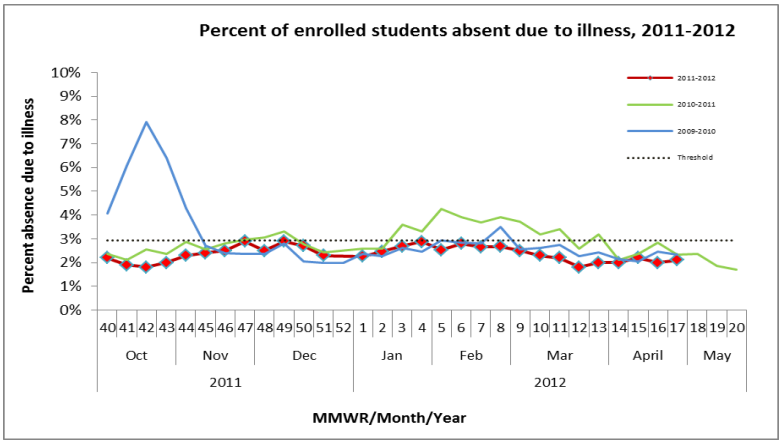
Outpatient health care providers who participate in the ILINet (a national influenza surveillance program) report the number of patients seen with influenza-like illness and the total number of patient visits each week.




## 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.