



Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report

For the week ending December 8, 2012, Week 49

Quick Stats for this reporting week

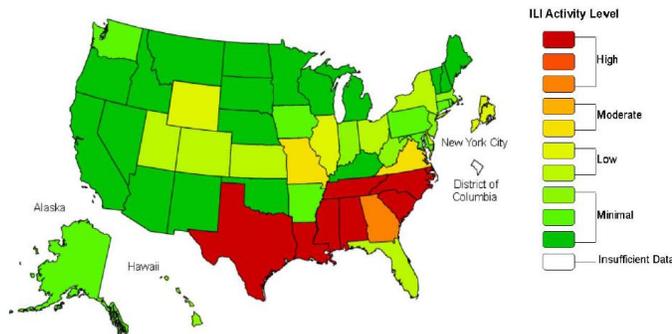
| Iowa activity level ¹ | Widespread |
|--|-----------------------------|
| Percent of outpatient visits for ILI ² | 0.9 % (baseline 2.1%) |
| Percent of influenza rapid test positive | 24.6% (239/971) |
| Percent of RSV rapid tests positive | 16.0% (26/162) |
| Percent school absence due to illness | 3.1% (baseline 2.8%) |
| Number of schools with ≥10% absence due to illness | 14 |
| Influenza-associated hospitalizations* | 23/7131 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

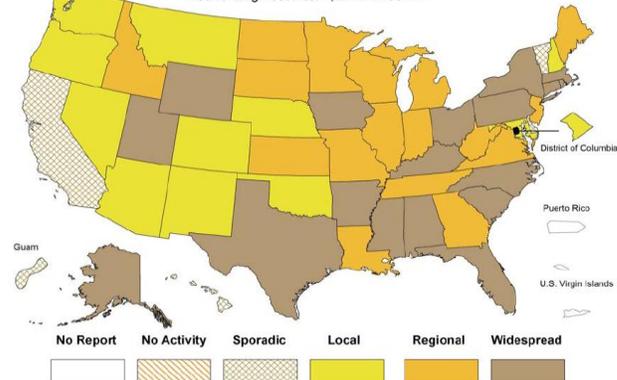
Note: All data in this report are provisional and may change as additional reports are received

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet
2012-13 Influenza Season Week 49 ending Dec 08, 2012



*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.

Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*
Week ending December 8, 2012 - Week 49



*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 regional activity to widespread. For this reporting week, the State Hygienic Laboratory (SHL) confirmed a total of 118 cases of seasonal influenza, including 63 influenza A (H3), 48 influenza A (subtyping pending), and seven influenza B. The proportion of outpatient visits due to influenza-like illness (ILI) increased, but was below the regional baseline of 2.1 percent. The percent of both influenza and respiratory syncytial virus (RSV) rapid tests that tested positive increased from previous weeks. The number of influenza-associated hospitalizations also increased and there were 23 cases reported from sentinel hospitals for this reporting period. 14 schools reported 10 percent or greater absenteeism due to influenza-like illness for this reporting period. In addition, 33 cases of RSV, one case of adenovirus, and one case of parainfluenza 2 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).

National activity summary - www.cdc.gov

Synopsis: During week 49 (December 2-8), influenza activity increased in the U.S.

¹ **No Activity:** No laboratory-confirmed cases of influenza and no reported increase in the number of cases of influenza-like illness (ILI²).

Sporadic: Isolated laboratory-confirmed influenza cases or a single influenza outbreak has been reported, but there is no increase in cases of ILI².

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.

- **Viral Surveillance:** Of 7,663 specimens tested and reported by U.S. World Health Organization and National Respiratory and Enteric Virus Surveillance System collaborating laboratories during week 49, 2,172 (28.3 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:** One influenza-associated pediatric death was reported and was associated with an influenza B virus.
- **Outpatient Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) was 2.8 percent, which is above the national baseline of 2.2 percent. Seven of ten regions reported ILI above region-specific baseline levels. Eight states experienced high ILI activity, two states experienced moderate ILI activity; New York City and nine states experienced low ILI activity; 31 states experienced minimal ILI activity, and the District of Columbia had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in 18 states was reported as widespread; 17 states reported regional activity; the District of Columbia and 11 states reported local activity; Guam and 4 states reported sporadic activity, and Puerto Rico and the U.S. Virgin Islands did not report.

International activity summary - www.who.int

Many countries of the northern hemisphere temperate region, especially in North America, reported increasing influenza virus detections. Canada and the United States of America (USA) crossed their seasonal threshold but activity was highest in the southern part of the USA. Influenza activity remained low in Europe but has continued to increase slightly. Low levels of influenza activity were reported in countries in southern and southeast Asia, except Cambodia. In Sub-Saharan Africa, influenza activity remains at low levels. Influenza activity in the temperate countries of the southern hemisphere continued 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

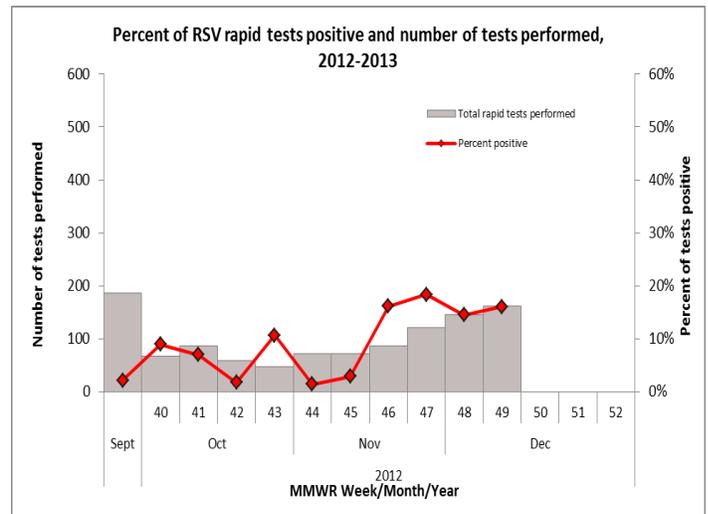
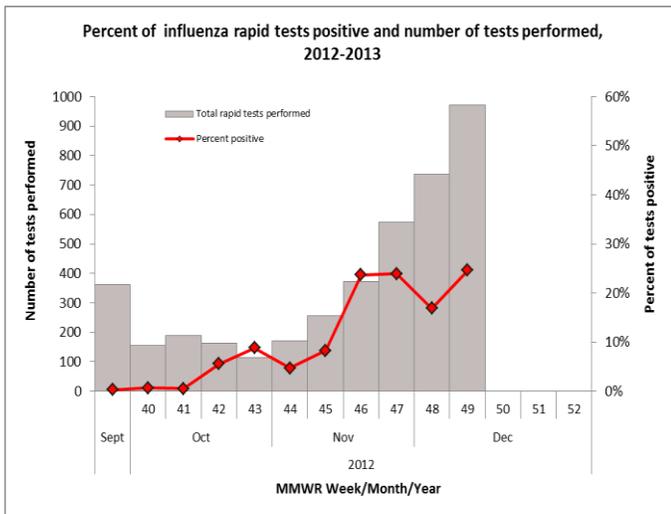
| | Current week | Cumulative since 9/2/12 |
|------------------------|--------------|-------------------------|
| Flu A | 111 (62%) | 472 (44%) |
| A (2009 H1N1) | 0 (0%) | 1 (<1%) |
| A (H3) | 63 (3%) | 419 (39%) |
| A (H3N2) variant | 0 (0%) | 1 (<1%) |
| Subtyping not reported | 48 (27%) | 51 (5%) |
| Flu B | 7 (4%) | 66 (6%) |
| Equivocal | 0 (0%) | 0 (0%) |
| Indeterminate | 1 (<1%) | 4 (<1%) |
| Negative | 61 (34%) | 536 (50%) |
| Total | 180 | 1078 |

| Age group | Flu A (2009 H1N1) | Flu A (H3) | Flu A (H3N2) Variant | Flu A (no typing) | Flu B |
|---------------|-------------------|------------|----------------------|-------------------|----------|
| 0-4 | 0 (0%) | 69 (16%) | * (*%) | 6 (12%) | 17 (26%) |
| 5-17 | 1 (100%) | 124 (30%) | * (*%) | 11 (22%) | 24 (36%) |
| 18-24 | 0 (0%) | 35 (8%) | 0 (0%) | 6 (12%) | 4 (6%) |
| 25-49 | 0 (0%) | 87 (21%) | 0 (0%) | 12 (24%) | 11 (17%) |
| 50-64 | 0 (0%) | 33 (8%) | 0 (0%) | 5 (10%) | 6 (9%) |
| >64 | 0 (0%) | 71 (17%) | 0 (0%) | 11 (22%) | 4 (6%) |
| Total | 1 | 419 | 1 | 51 | 66 |

* 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

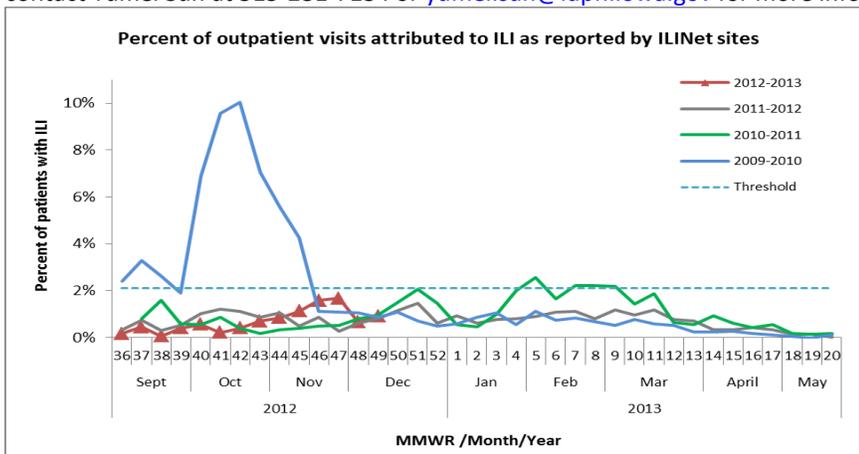
Table 3. Number of positive results for non-influenza respiratory virus isolated by the State Hygienic Laboratory, Mercy Dunes in Sioux City, and Iowa Methodist Medical Center

| | <i>Current week</i> | <i>Cumulative since 9/2/12</i> |
|--|---------------------|--------------------------------|
| Adenovirus | 1 | 7 |
| Parainfluenza Virus Type 1 | 0 | 0 |
| Parainfluenza Virus Type 2 | 1 | 12 |
| Parainfluenza Virus Type 3 | 0 | 32 |
| Rhinovirus | 0 | 36 |
| Respiratory syncytial virus (RSV) | 33 | 116 |
| human metapneumovirus (hMPV) | 0 | 1 |



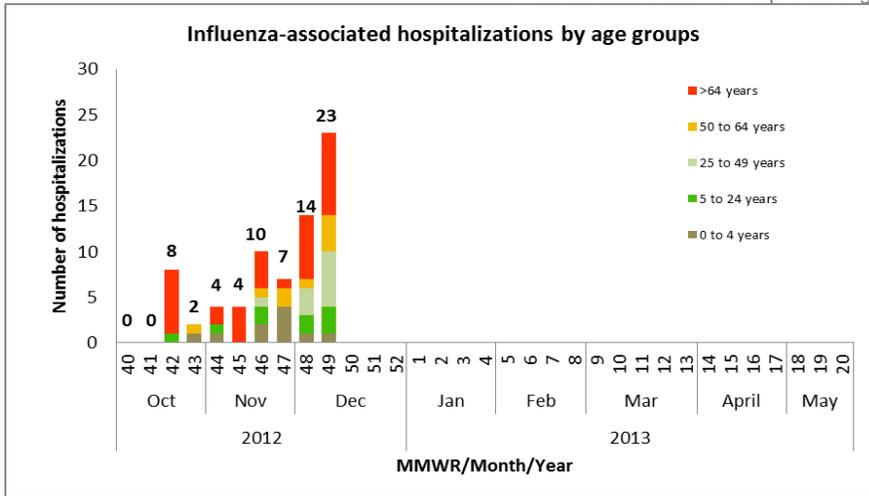
Outpatient health care provider surveillance program (ILINet)

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.



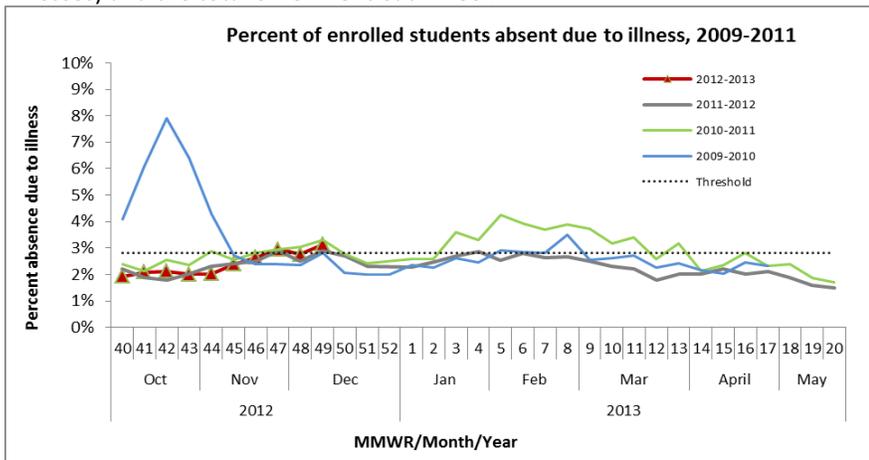
Influenza-associated hospitalizations

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.



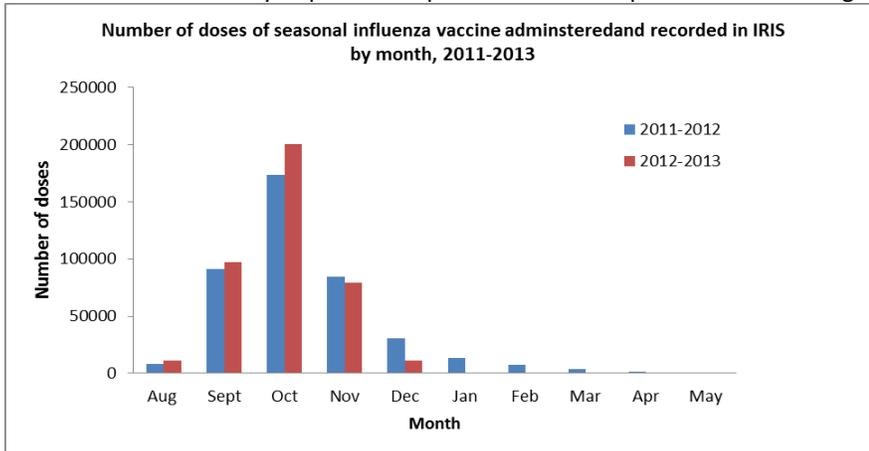
School surveillance program

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 System³ (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 12/13/12 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

Regional activity (Data from sentinel surveillance system surveillance sites, except all schools with $\geq 10\%$ absence due to illness must report.)

| Region 1 (Central) | |
|---|----------------|
| Influenza-associated hospitalizations | 16/4376 |
| Percent of influenza rapid test positive | 24.4% (47/193) |
| Percent of RSV rapid tests positive | 22.9% (8/35) |
| Schools with $\geq 10\%$ absence due to illness | 2 |

| Region 2 (North Central) | |
|---|---------------|
| Influenza-associated hospitalizations | 0/467 |
| Percent of influenza rapid test positive | 42.4% (14/33) |
| Percent of RSV rapid tests positive | 25.0% (1/4) |
| Schools with $\geq 10\%$ absence due to illness | 1 |

| Region 3 (Northwest) | |
|---|---------------|
| Influenza-associated hospitalizations | 0/128 |
| Percent of influenza rapid test positive | 12.1% (12/99) |
| Percent of RSV rapid tests positive | 24.0% (6/25) |
| Schools with $\geq 10\%$ absence due to illness | 0 |

| Region 4 (Southwest) | |
|---|---------------|
| Influenza-associated hospitalizations | 1/22 |
| Percent of influenza rapid test positive | 20.6% (14/68) |
| Percent of RSV rapid tests positive | 0.0% (0/7) |
| Schools with $\geq 10\%$ absence due to illness | 1 |

| Region 5 (Southeast) | |
|---|---------------|
| Influenza-associated hospitalizations | 0/45 |
| Percent of influenza rapid test positive | 41.9% (39/93) |
| Percent of RSV rapid tests positive | 18.8% (3/16) |
| Schools with $\geq 10\%$ absence due to illness | 6 |

| Region 6 (East Central) | |
|---|-----------------|
| Influenza-associated hospitalizations | 6/2093 |
| Percent of influenza rapid test positive | 23.3% (113/485) |
| Percent of RSV rapid tests positive | 10.7% (8/75) |
| Schools with $\geq 10\%$ absence due to illness | 4 |

Iowa map with regions and in red the number of schools that have $\geq 10\%$ absence due to illness

