



Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report

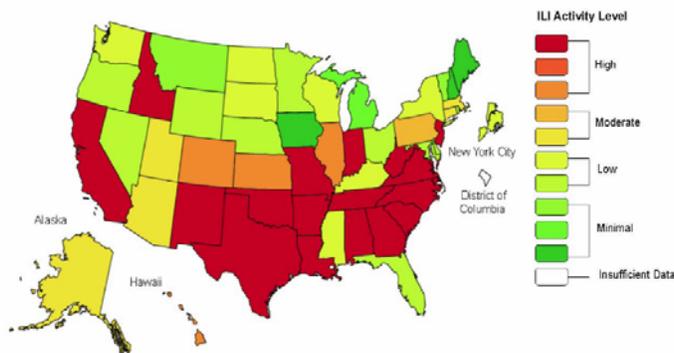
For the week ending February 19, 2011, Week 7

Quick Stats for this reporting week

| | |
|--|--------------------------------|
| Iowa activity level¹ | Widespread |
| Percent of outpatient visits for ILI ² | 2.3% (threshold 2.1%) |
| Percent of influenza rapid test positive | 18.6% (453/2441) |
| Percent of RSV rapid tests positive | 30.7% (166/540) |
| Percent school absence due to illness | 3.7% |
| Number of schools with ≥10% absence due to illness | 37 |
| Influenza-associated hospitalizations ** | 44 of 6339 inpatients surveyed |

** Hospitalizations due to influenza are voluntarily reported through a weekly survey of 21 Iowa hospitals.

Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILInet
2010-11 Influenza Season Week 7 ending Feb 19, 2011



Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*
Week ending February 19, 2011 - Week 7



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

Interactive web tool available at: <http://gis.cdc.gov/qasmp/fluview/main.html>

*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.

Iowa statewide activity summary

Iowa continues to experience widespread influenza activity. In this reporting week, the State Hygienic Laboratory (SHL) again isolated three different strains of influenza in Iowans - influenza A (H3N2), 2009 H1N1, and influenza B. All three strains are well matched with this year's influenza vaccine. Recently, there has been an increase in proportion of 2009 H1N1 virus identified among subtyped influenza A viruses. Now there are more 2009 H1N1 cases than influenza A (H3) cases reported.

The proportion of visits due to influenza-like illness (ILI) has increased to 2.3% overall, which is above the baseline of 2.1%. There were 44 new influenza-associated hospitalizations reported from sentinel hospitals this reporting week. The number has increased from previous weeks and the new hospitalizations are occurring in all age groups. Although the number of influenza and RSV rapid tests continues to increase, the percent of the tests that tested positive has decreased from the last week. Other respiratory viruses have been identified in Iowa include respiratory syncytial virus (RSV), parainfluenza 1, parainfluenza 2, parainfluenza 3, adenovirus, and rhinovirus. The number of schools reporting >10% absence due to illness has also increased to thirty-seven.

National activity summary - www.cdc.gov

Synopsis: During week 7 (February 13-19, 2011), influenza activity in the United States remained elevated.

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

Sporadic: Small numbers of 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.

- Of the 9,154 specimens tested by the U.S. World Health Organization and National Respiratory and the Enteric Virus Surveillance System collaborating laboratories and reported to CDC/Influenza Division, 2,866 (31.3%) were positive for influenza.
- The proportion of deaths attributed to pneumonia and influenza (P&I) was above the epidemic threshold for the fourth consecutive week.
- Six influenza-associated pediatric deaths were reported bringing to season total to 41. Three of these deaths were associated with an influenza B virus, one was associated with an influenza A (H3) virus, one was associated with a 2009 influenza A (H1N1) virus, and one was associated with an influenza A virus for which the subtype was not determined.
- The proportion of outpatient visits for influenza-like illness (ILI) was 4.9%, which is above the national baseline of 2.5%. All 10 regions reported ILI above region-specific baseline levels. Twenty-one states experienced high ILI activity; six states experienced moderate ILI activity; New York City and 16 states experienced low ILI activity; seven states experienced minimal ILI activity, and the District of Columbia had insufficient data.
- The geographic spread of influenza in 44 states was reported as widespread; four states reported regional influenza activity; the District of Columbia reported local influenza activity; Puerto Rico, the U.S. Virgin Islands, and two states reported sporadic influenza activity, and Guam reported no influenza activity.

International activity summary - www.who.int

Influenza activity is increasing in parts of North America coincident with increasing numbers of detections of influenza A(H1N1)2009 and influenza type B, though the dominant virus in North America is still currently influenza A(H3N2). Rates of pneumonia and influenza mortality in the United States of America (USA) have remained above the epidemic threshold for the past two to three weeks. Transmission of influenza appears to have peaked in much of Western Europe, though case counts of severe and fatal cases continue to accumulate. The appearance of severe cases in Europe is similar to the 2009-2010 season; the highest number have been in the age group from 15-64 years, 60-70% have a pre-existing medical condition associated with increased risk of severe influenza, and most have not been vaccinated. Transmission in tropical zones of the world is sporadic (the Americas) or low (tropical Asia). Countries in the southern temperate zone have little influenza activity; however Australia continues to have transmission of influenza A at low-levels. The majority of the viruses characterized from North America and Europe are closely related to the vaccine viruses for the current seasonal vaccines, though small numbers of influenza type B of the Yamagata lineage are reported in both regions.

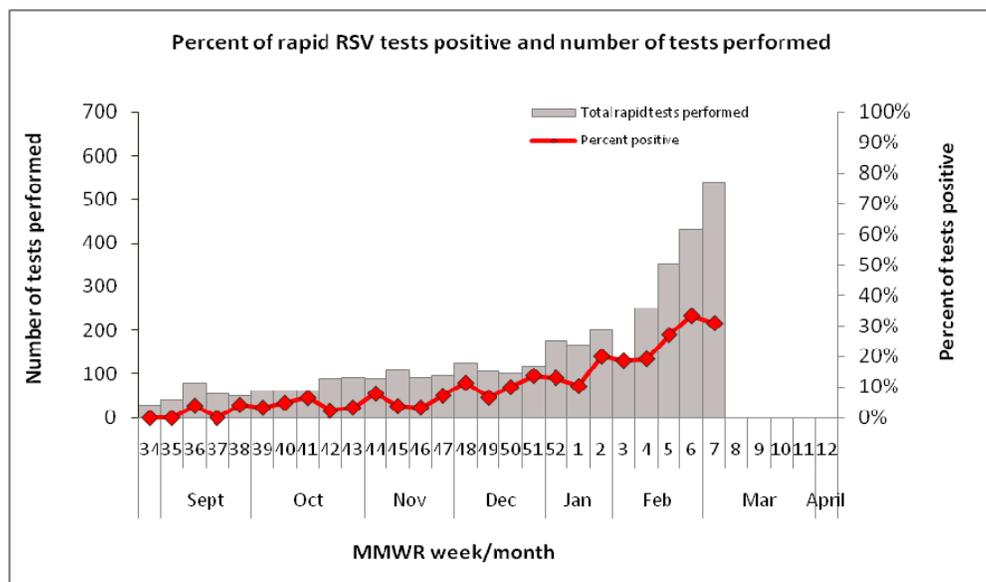
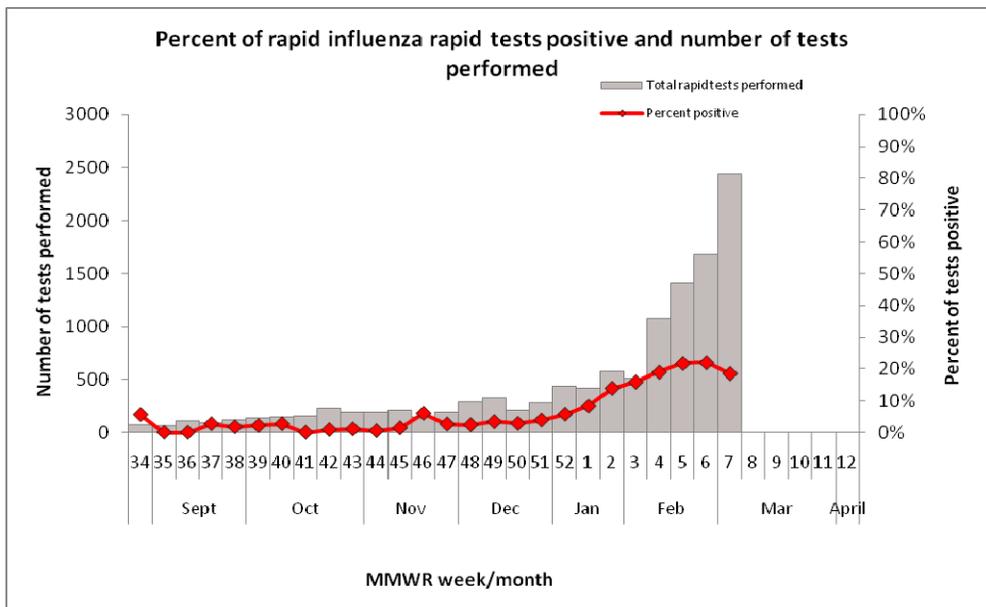
Laboratory surveillance program - *Influenza and Other Respiratory Viruses*

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 virus cultures tests reported from the Dunes Medical Laboratories at Mercy Medical Center-Sioux City. The Mercy Medical Center-Sioux City reports the number of virus cultures performed, the number of virus cultures positive and negative, as well as the number of viral types every week.

Specimens tested by the State Hygienic Laboratory and Mercy Dunes in Sioux City

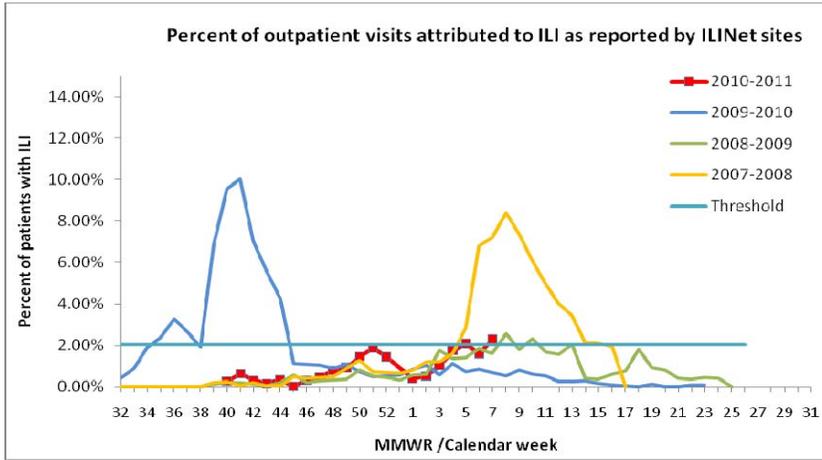
| Influenza viruses isolated 9/1/10 to present week | | | Influenza viruses by age group 9/1/10 to present week | | | | |
|---|--------------|------------|---|-------------------|------------|----------------------|-----------|
| | Current week | Cumulative | Age group | Flu A (2009 H1N1) | Flu A (H3) | Flu A (no subtyping) | Flu B |
| Flu A | 39 (31%) | 471 (22%) | 0-4 | 32 (14%) | 44 (20%) | 9 (13%) | 47 (18%) |
| Flu A (2009 H1N1) | 10 (8%) | 230 (10%) | 5-17 | 45 (20%) | 43 (20%) | 12 (18%) | 124 (48%) |
| Flu A (H3) | 7 (5%) | 218 (9%) | 18-24 | 79 (34%) | 16 (7%) | 11 (16%) | 35 (14%) |
| Subtyping not reported | 22 (18%) | 67 (3%) | 25-49 | 51 (22%) | 44 (21%) | 18 (27%) | 30 (12%) |
| Flu B | 25 (20%) | 257 (11%) | 50-64 | 20 (9%) | 18 (8%) | 8 (12%) | 8 (3%) |
| Indeterminate/Equivocal | 6 (5%) | 49 (2%) | >64 | 3 (1%) | 53 (23%) | 9 (13%) | 13 (5%) |
| Negative | 55 (44%) | 1551 (66%) | Total | 230 | 218 | 67 | 257 |
| Total | 125 | 2372 | | | | | |

| Number of positive results for non-influenza respiratory virus isolated since 9/1/10 | | |
|--|---------------------|-------------------|
| | <i>Current week</i> | <i>Cumulative</i> |
| Adenovirus Isolated | 0 | 31 |
| Enteroviruses (presumptive) | 0 | 4 |
| <i>Coxsackievirus A9 Isolated</i> | 0 | 2 |
| <i>Coxsackievirus B4 Isolated</i> | 0 | 1 |
| <i>Echovirus 9 Isolated</i> | 0 | 2 |
| Parainfluenza Virus Type 1 Isolated | 0 | 2 |
| Parainfluenza Virus Type 2 Isolated | 1 | 17 |
| Parainfluenza Virus Type 3 Isolated | 0 | 11 |
| Rhinovirus Isolated | 0 | 13 |
| Respiratory syncytial virus (RSV) | 4 | 10 |



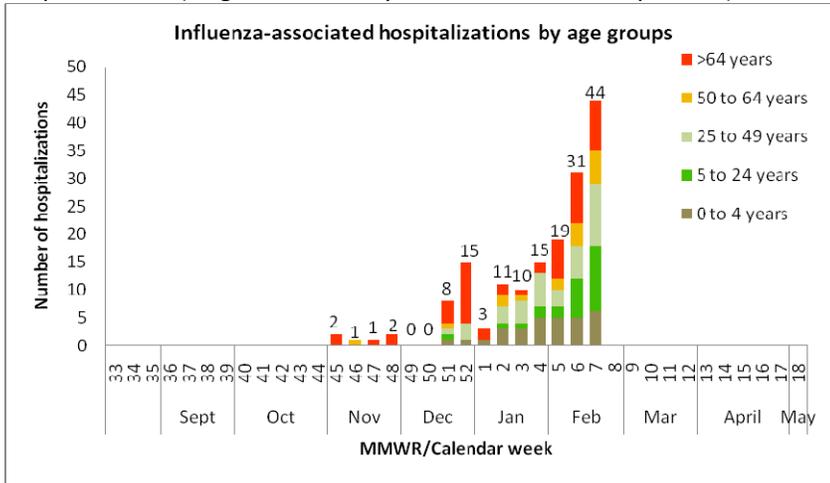
Outpatient health care provider surveillance program (ILINet)

There are approximately 10 outpatient health care provider surveillance sites surveying patient populations for ILI each week. These sites report the number of patients seen with influenza-like illness and the total number of patient visits each week.



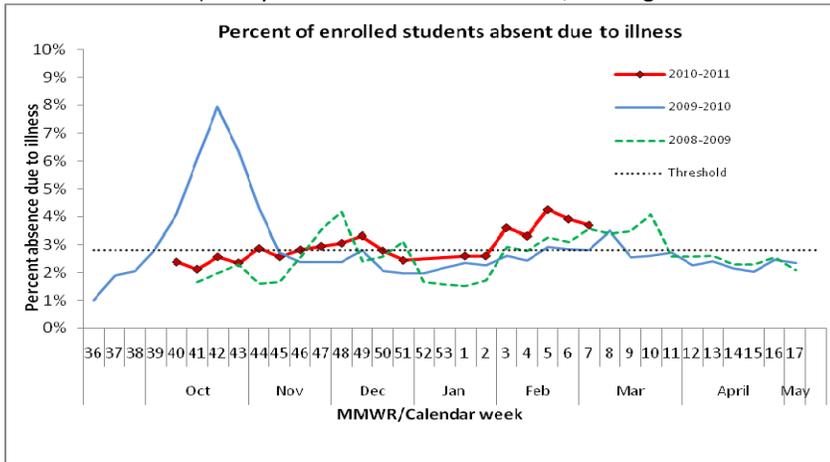
Influenza-associated hospitalizations

Twenty-one Iowa hospitals participate in the IISN. These hospitals track and report the number of influenza-associated hospitalizations (diagnosed clinically or based on laboratory results) and the total number of inpatients.



School surveillance program

Forty-two Iowa schools participate in the IISN system for tracking and reporting absence due to all illness (including non-influenza illnesses). They also track total enrollment, and log the number of days school was in session each week.



Regional activity

| Region 1 (Central) | |
|--|----------------|
| Percent of influenza rapid test positive | 17.4% (55/317) |
| Percent of RSV rapid tests positive | 35.1% (26/74) |
| Schools with ≥10% absence due to illness | 10 |

| Region 2 (North Central) | |
|--|---------------|
| Percent of influenza rapid test positive | 21.1% (12/57) |
| Percent of RSV rapid tests positive | 36.0% (9/25) |
| Schools with ≥10% absence due to illness | 1 |

| Region 3 (Northwest) | |
|--|----------------|
| Percent of influenza rapid test positive | 14.4% (81/564) |
| Percent of RSV rapid tests positive | 19.0% (11/58) |
| Schools with ≥10% absence due to illness | 2 |

| Region 4 (Southwest) | |
|--|----------------|
| Percent of influenza rapid test positive | 17.5% (28/160) |
| Percent of RSV rapid tests positive | 28.3% (13/46) |
| Schools with ≥10% absence due to illness | 5 |

| Region 5 (Southeast) | |
|--|----------------|
| Percent of influenza rapid test positive | 24.6% (77/313) |
| Percent of RSV rapid tests positive | 30.7% (N/S) |
| Schools with ≥10% absence due to illness | 10 |

| Region 6 (East Central) | |
|--|-----------------|
| Percent of influenza rapid test positive | 19.4%(200/1030) |
| Percent of RSV rapid tests positive | 32.8% (83/253) |
| Schools with ≥10% absence due to illness | 9 |

N/S: too few labs reported RSV results, therefore the percentage for the state is assumed for this region.

Iowa map with regions and number of schools that have ≥10% absence due to illness

