



Iowa Influenza Surveillance Network (IISN)

Influenza-like Illness (ILI) and Other Respiratory Viruses

Weekly Activity Report

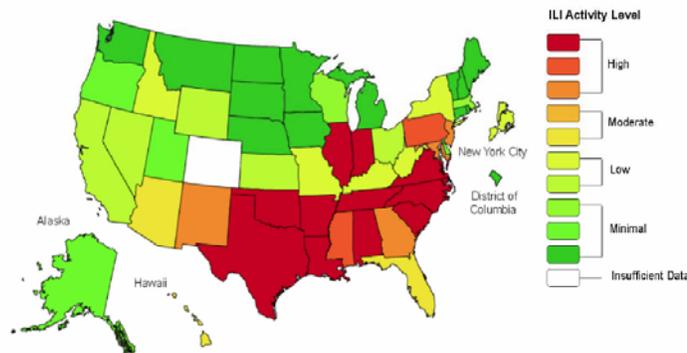
For the week ending January 29, 2011, Week 4

Quick Stats for this reporting week

Iowa activity level ¹	Regional
Percent of outpatient visits for ILI ²	1.9% (threshold 2.1%)
Percent of influenza rapid test positive	19.0% (205/1079)
Percent of RSV rapid tests positive	19.2% (48/250)
Percent school absence due to illness	3.3 %
Number of schools with ≥10% absence due to illness	20
Influenza-associated hospitalizations**	15 of 5546 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 4 ending Jan 29, 2011



Weekly Influenza Activity Estimates Reported by State & Territorial Epidemiologists*
Week ending January 29, 2011 - Week 4



Interactive web tool available at: <http://ais.cdc.gov/araso/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.

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

Iowa statewide activity summary

Influenza activity continues to increase in Iowa. Eighty-five new cases of influenza A and 43 new cases of influenza B were identified this reporting week from the sentinel system. 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.

There were 15 new cases of influenza-associated hospitalizations in this reporting week from sentinel hospitals. Most of these new hospitalizations are occurring in people younger than 50 years of age. The number of influenza and RSV rapid tests has increased as well as the percent of the tests that tested positive. Other respiratory viruses recently identified in Iowa include respiratory syncytial virus (RSV), parainfluenza 1, parainfluenza 2, parainfluenza 3, adenovirus, and rhinovirus. The number of schools with 10% or greater absence due to all illness has also increased.

National activity summary - www.cdc.gov

Synopsis: During week 4 (January 23-29, 2011), influenza activity in the United States increased.

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 6,209 specimens tested by the U.S. World Health Organization and the National Respiratory and Enteric Virus Surveillance System collaborating laboratories and reported to CDC/Influenza Division, 2,044 (32.9%) were positive for influenza.
- One human infection with a novel influenza A virus was reported.
- The proportion of deaths attributed to pneumonia and influenza (P&I) was above the epidemic threshold.
- Six influenza-associated pediatric deaths were reported. Four of these deaths were associated with influenza B viruses, one of these deaths was associated with an influenza A (H3) virus, and one was associated with a 2009 influenza A (H1N1) virus.
- The proportion of outpatient visits for influenza-like illness (ILI) was 4.0%, which is above the national baseline of 2.5%. Seven of the 10 regions (Regions 1, 2, 3, 4, 5, 6, and 7) reported ILI at or above region-specific baseline levels. Seventeen states experienced high ILI activity; three states experienced moderate ILI activity; New York City and 10 states experienced low ILI activity; the District of Columbia and 19 states experienced minimal ILI activity, and one state had insufficient data.
- The geographic spread of influenza in 30 states was reported as widespread; 15 states reported regional influenza activity; the District of Columbia and one state reported local influenza activity; Puerto Rico, the U.S. Virgin Islands, and four states reported sporadic influenza activity, and Guam reported no influenza activity.

International activity summary - www.who.int

Influenza transmission in North America appears to be leveling off or decreasing according to several national influenza indicators, though not all regions have experienced a peak yet. Influenza activity in North America has been related primarily to influenza A (H3N2) virus with some co-circulation of influenza type B in the United States (U.S.). Influenza transmission in the United Kingdom (U.K.), predominantly related to influenza A (H1N1) 2009, is now decreasing. Influenza activity on the European continent is increasing, particularly in the west, and countries are increasingly reporting severe and fatal cases. Severe cases have been reported in association with all three influenza viruses, H1N1 (2009), influenza A (H3N2), and influenza type B, but H1N1 (2009) appears to be disproportionately over-represented among severe cases when compared to the distribution of viruses in the community. The large majority of the viruses characterized from North America and Europe continue to be of the same lineages as those found in the current seasonal trivalent vaccine. Transmission in Northern Africa and Northern Asia has peaked recently and is declining. In the tropics, several countries of southern Asia have seen increasing trends recently mainly due to H1N1 (2009). Other tropical areas of the world and the temperate countries of the Southern Hemisphere are currently reporting very little influenza circulation.

Laboratory surveillance program - *Influenza and Other Respiratory Viruses*

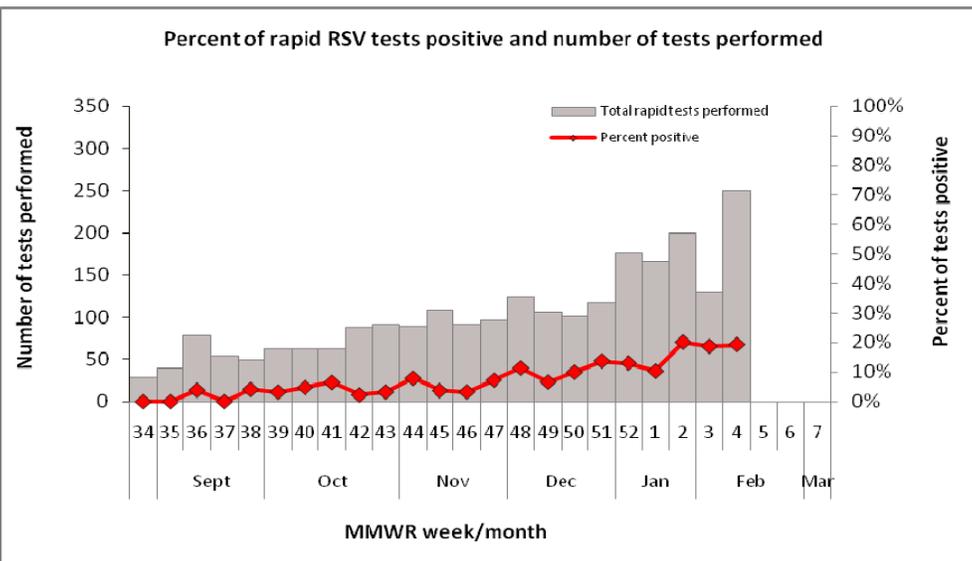
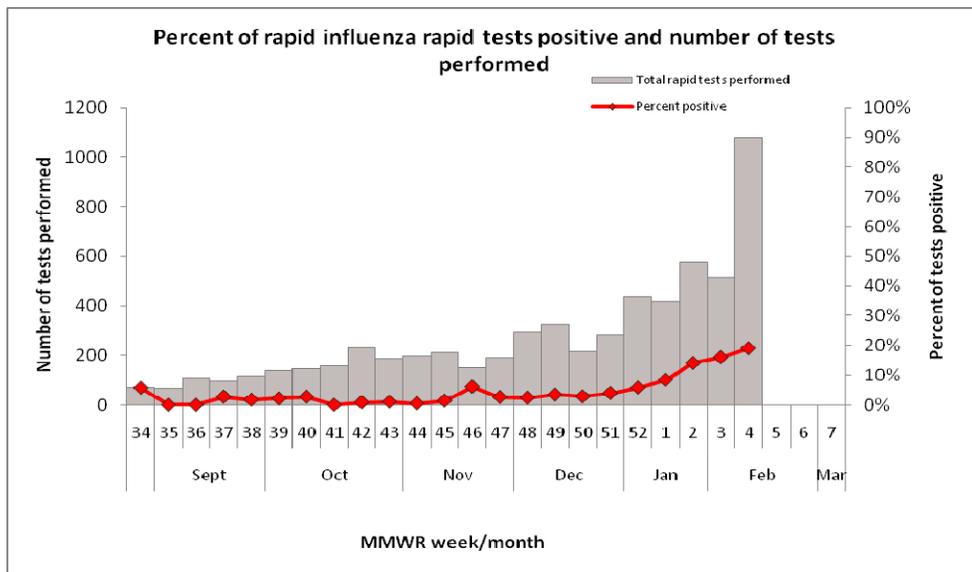
The State Hygienic Laboratory (SHL) is the primary lab testing and reporting influenza tests in Iowa. SHL reports the number of tests performed and the type and strain of positive tests to the influenza surveillance network several times every week. In addition, SHL surveys clinical and reference labs for the number of rapid-antigen tests performed and number positive weekly. Starting from this reporting week, this report also includes the virus cultures tests positive 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	85 (43%)	284 (15%)	0-4	13 (10%)	33 (22%)	1 (25%)	29 (22%)
Flu A (2009 H1N1)	51 (26%)	133 (8%)	5-17	32 (24%)	30 (20%)	0 (0%)	60 (46%)
Flu A (H3)	32 (16%)	147 (9%)	18-24	45 (34%)	9 (6%)	1 (25%)	18 (14%)
Subtyping not reported	2 (1%)	4 (<1%)	25-49	34 (25%)	29 (20%)	2 (50%)	15 (12%)
Flu B	43 (22%)	129 (7%)	50-64	8 (6%)	9 (6%)	0 (0%)	5 (4%)
Indeterminate/Equivocal	3 (2%)	35 (2%)	>64	1 (<1%)	37 (25%)	0 (0%)	2 (2%)
Negative	64 (33%)	1258 (74%)	Total	133	147	4	129
Total	195	1706					

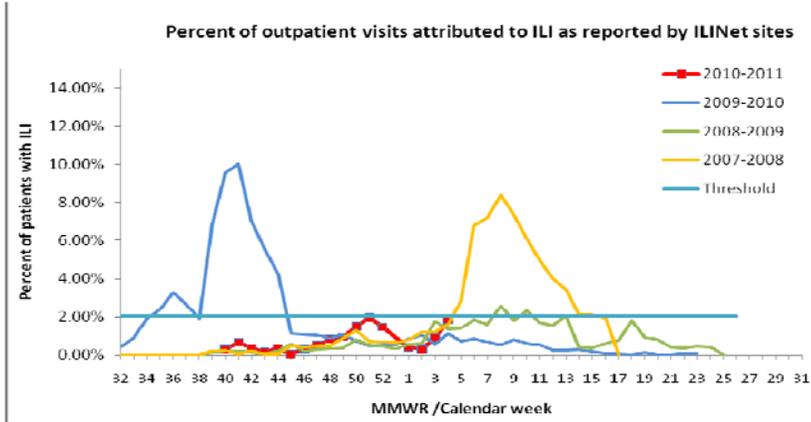
Number of positive results for non-influenza respiratory virus isolated since 9/1/10

	<i>Current week</i>	<i>Cumulative</i>
Adenovirus Isolated	2	26
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	0	16
Parainfluenza Virus Type 3 Isolated	0	10
Rhinovirus Isolated	0	13
Respiratory syncytial virus (RSV)	0	3



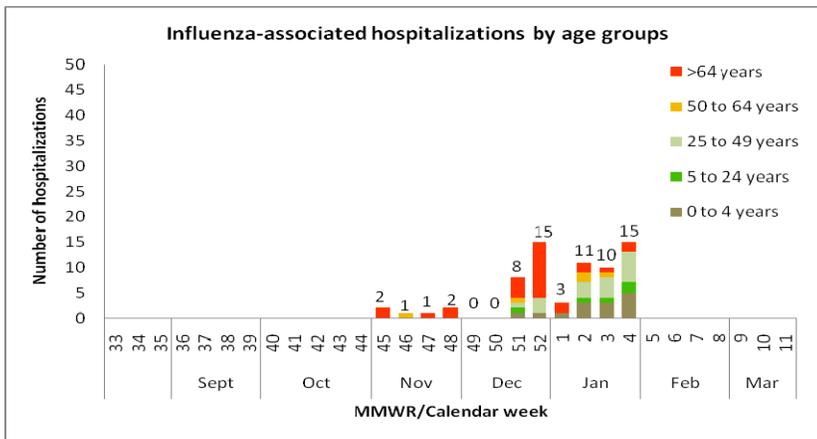
Outpatient health care provider surveillance program (ILINet)

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.



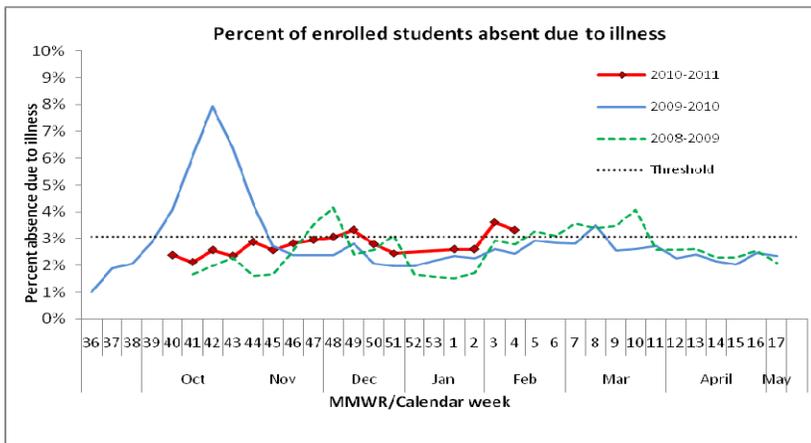
Influenza-associated hospitalizations

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	21.9% (55/251)
Percent of RSV rapid tests positive	20.7% (12/58)
Schools with ≥10% absence due to illness	5

Region 2 (North Central)	
Percent of influenza rapid test positive	43.2% (19/44)
Percent of RSV rapid tests positive	16.7% (1/6)
Schools with ≥10% absence due to illness	1

Region 3 (Northwest)	
Percent of influenza rapid test positive	32.0% (57/178)
Percent of RSV rapid tests positive	32.3% (10/31)
Schools with ≥10% absence due to illness	3

Region 4 (Southwest)	
Percent of influenza rapid test positive	10.7% (8/75)
Percent of RSV rapid tests positive	15.4% (4/26)
Schools with ≥10% absence due to illness	7

Region 5 (Southeast)	
Percent of influenza rapid test positive	15.1% (11/73)
Percent of RSV rapid tests positive	19.2% (N/S)
Schools with ≥10% absence due to illness	1

Region 6 (East Central)	
Percent of influenza rapid test positive	12.0% (55/458)
Percent of RSV rapid tests positive	16.4% (19/116)
Schools with ≥10% absence due to illness	3

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

