



MI Flu Focus

Influenza Surveillance Updates Bureaus of Epidemiology and Laboratories



Editor: Stefanie Cole, RN, MPH ColeS4@michigan.gov March 23, 2016 Vol. 13; No. 10

Influenza Surveillance Report for the Week Ending March 12, 2016

**MI's Influenza
Activity Level:**
Widespread

Updates of Interest:

An animal shelter in Chicago has put dog adoptions on hold while they try to contain an outbreak of [canine influenza](#).

Michigan Disease Surveillance System

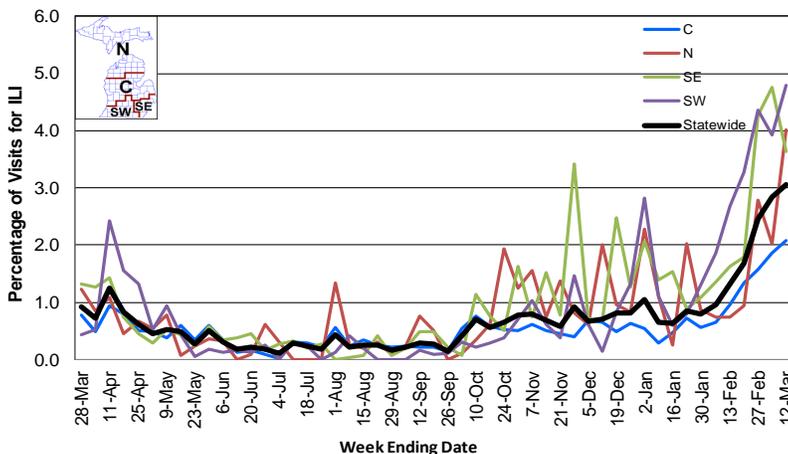
MDSS influenza data indicated that compared to levels from the previous week, both aggregate and individual reports had increased. Aggregate reports were lower than levels seen during the same time period last year, while individual reports were higher.

Emergency Department Surveillance

Compared to levels from the week prior, emergency department visits from constitutional complaints had increased, while respiratory complaints were similar. Levels of constitutional complaints were higher than those recorded during the same time period last year, while respiratory complaints were similar.

- 4 constitutional alerts (3SW, 1N)
- 4 respiratory alerts (1SW, 3C)
- Last MIFF report: 5 constitutional alerts (2SW, 2C, 1N), 3 respiratory alerts (1C, 2N)

Percentage of Visits for Influenza-like Illness (ILI) Reported by Sentinel Providers, Statewide and Regions 2015-16 Flu Season



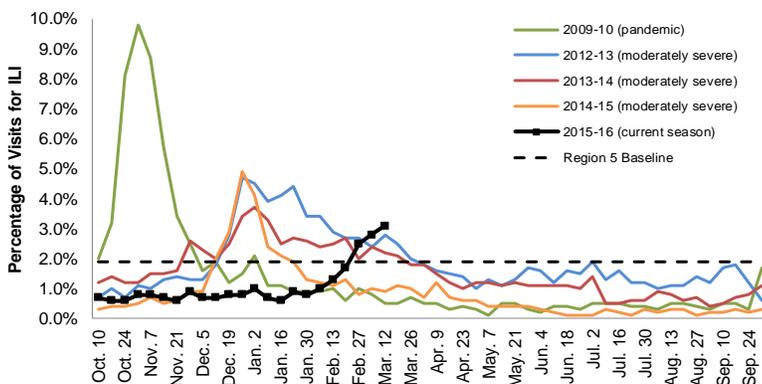
Sentinel Provider Surveillance

The proportion of visits due to influenza-like illness (ILI) increased to 3.1% overall; this is above the regional baseline (1.9%). A total of 471 patient visits due to ILI were reported out of 15,404 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (39 total):

- C (15)
- N (4)
- SE (11)
- SW (9)

Percentage of Visits for Influenza-like Illness (ILI) Reported by the US Outpatient Influenza-like Illness Surveillance Network (ILINet): Michigan, Select Seasons



Become a Sentinel Provider!

As part of pandemic influenza surveillance, CDC and MDHHS highly encourage year-round participation from all sentinel providers. New practices are encouraged to join the sentinel surveillance program today! Contact Stefanie Cole (ColeS4@michigan.gov) for more information.

Table of Contents:

Michigan Surveillance.....1-3
National Surveillance.....3
International Surveillance....3
FluBytes4

Hospital Surveillance

The CDC Influenza Hospitalization Surveillance Project provides population-based rates of hospitalization due to severe influenza illness through active surveillance and chart review of lab-confirmed cases beginning on Oct. 1, 2015, for Clinton, Eaton, Genesee, and Ingham counties. Since Oct. 1, there have been 22 pediatric (11.5 per 100,000 population) and 102 adult (14.8 per 100,000 population) hospitalizations reported within the catchment area. Note: Some hospitalizations are ruled out after they are reported so the cumulative totals may change from week to week.

The MDHHS Influenza Sentinel Hospital Network monitors influenza hospitalizations reported voluntarily by hospitals statewide, and 13 hospitals (C, N, SE, & SW) reported. Results for the 2015-16 flu season are listed in the table below. Additional hospitals are welcome to join; please contact Seth Eckel at eckels1@michigan.gov.

Age Group	New Flu Hospitalizations Reported	Total 2015-16 Flu Hospitalizations Reported to Date
0-4 years	3 (N)	24 (9N, 7SE, 8SW)
5-17 years	5 (2N, 1SE, 2SW)	16 (7N, 7SE, 2SW)
18-49 years	22 (5N, 14SE, 3SW)	112 (15N, 1C, 71SE, 25SW)
50-64 years	32 (8N, 21SE, 3SW)	141 (16N, 3C, 93SE, 29SW)
65 years & older	33 (3N, 2C, 26SE, 2SW)	159 (13N, 4C, 118SE, 24SW)
Total	95 (21N, 2C, 62SE, 10SW)	452 (60N, 8C, 296SE, 88SW)

Laboratory Surveillance

MDHHS Bureau of Laboratories reported 46 new positive influenza results: 35 2009 A/H1N1pdm, 6 influenza A/H3, 4 influenza B (one was a co-infection with A/H3), and 1 unsubtypeable influenza A. A total of 269 positive influenza results have been reported for the 2015-16 season. Influenza results for the 2015-16 season are in the table below.

Respiratory Virus	# Positive Respiratory Virus Results by Region				Total	# Specimens Antigenically Characterized	# Tested for Antiviral Resistance
	C	N	SE	SW			# Resistant / Total # Tested
2009 A/H1N1pdm	50	18	66	78	212	17* (17 A/California/07/2009-like (H1N1)pdm09**)	1 / 43
Influenza A/H3	9	1	10	12	32	4* (4 A/Switzerland/9715293/2013-like [†])	0 / 6
Influenza B	4	2	8	6	20	13 (9 B/Yamagata lineage [2 B/Phuket/3073/2013-like ^{††}], 4 B/Victoria lineage)	
A / unsubtypeable				5	5		
LAIV recovery				1	1		
RSV			2		2		
Adenovirus	2				2		
Parainfluenza type 1			1		1		

*Specimens antigenically characterized by CDC; **A/California/07/2009-like (H1N1)pdm09 is the H1N1 component of the 2015-16 Northern Hemisphere flu vaccines; [†]A/Switzerland/9715293/2013-like (H3N2) is the H3N2 component of the 2015-16 Northern Hemisphere flu vaccines; ^{††}B/Phuket/3073/2013-like virus is the B/Yamagata component of the 2015-16 Northern Hemisphere trivalent and quadrivalent flu vaccines.

In addition, 12 sentinel clinical labs (4SE,2SW,5C,1N) reported influenza results. All 12 labs (SE,SW,C,N) reported influenza A positives with all regions showing sustained elevated levels and multiple sites showing further pronounced increases. Eleven labs (SE,SW,C,N) reported influenza B activity, ranging from low or gradually increasing levels at most sites, to more notable increases in the SE region. Three labs (SE,SW) reported sporadic to low Parainfluenza activity. Eleven labs (SE,SW,C,N) reported low to upper moderate RSV activity, with an overall steady or gradually decreasing trend. Five labs (SE,SW,C) reported low or mildly elevated Adenovirus activity. Six labs (SE,SW,C) reported low to moderate hMPV activity, with several sites showing upward trends. Testing volumes remained high to very high, but with several sites now at steady levels.

Influenza Congregate Settings Outbreaks

There were 5 new respiratory facility outbreaks (2 influenza A, 1 RSV, 2 no testing done) reported. There have been a total of 25 respiratory facility outbreaks reported to MDHHS for the 2015-16 season. Respiratory facility outbreaks are listed in the table below by facility type and surveillance region.

Facility Type	C	N	SE	SW	Total
K-12 School		2		3	5
Long-term Care / Assisted Living Facility	6	1	4	6	17
Healthcare Facility			1		1
Daycare				1	1
Correctional Facility		1			1
Total	6	4	5	10	25

Influenza-associated Pediatric Mortality

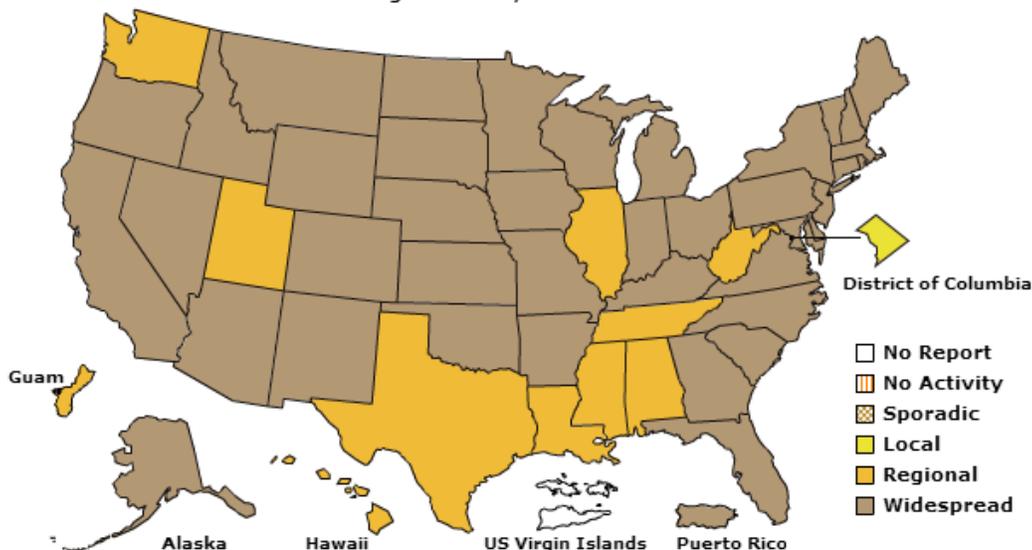
No new influenza-associated pediatric deaths were reported to MDHHS. One influenza-associated pediatric death (SE) has been reported to MDHHS for the 2015-16 season.

National: In the United States, flu activity increased with 3.7% of outpatient visits due to influenza-like illness, which was above the national baseline of 2.1%. All 10 regions reported ILI at or above region-specific baselines. Eight new influenza-associated pediatric deaths were reported, for a total of 28 pediatric deaths for the 2015-16 flu season. Additional information is in the weekly FluView reports available at: www.cdc.gov/flu/weekly/.

International: Globally, high levels of flu activity continued to be reported. In some countries in northern Europe, flu B virus detections increased. In North America, flu activity continued to increase. In northern temperate Asia, flu activity was ongoing with increasing levels of flu B virus. More information is available at: www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/.

A Weekly Influenza Surveillance Report Prepared by the Influenza Division Weekly Influenza Activity Estimates Reported by State and Territorial Epidemiologists*

Week Ending March 12, 2016- Week 10



FluBytes



U.S. SEASONAL INFLUENZA NEWS

- MI: [Holton schools cleaned again after closure for illness](#)
- [Flu continues late-season surge, claims more children](#)
- [2 additional deaths due to influenza reported in Oklahoma](#)
- [Flu numbers continue to rise in Pennsylvania](#)

INFLUENZA-RELATED JOURNAL ARTICLES

- [Association of state laws and healthcare workers' influenza vaccination rates](#)
 - Although laws varied widely in scope and applicability, states with healthcare worker (HCW) influenza vaccination laws reported higher HCW vaccination rates
- [Viable influenza A virus in airborne particles expelled during coughs vs. exhalations](#)
 - Viable influenza A virus detected more often in cough aerosol particles than in exhalation aerosol particles
- [Interim estimates of 2015-16 vaccine effectiveness against influenza A\(H1N1\)pdm09, Canada, February 2016](#)
 - Adjusted VE showed overall effectiveness 64%, 56% for adults 20-64 years
- [Safety of seasonal influenza vaccination in hospitalized surgical patients: a cohort study](#)
 - No strong evidence of increased risk for adverse outcomes was found in comparisons of patients who received flu vaccine during a surgical hospitalization and those who did not
- *Virology Journal*: [Characterization of the epidemic strain of H3N8 equine influenza virus responsible for outbreaks in South America in 2012](#)
 - Extensive outbreak caused by virus closely related to strains circulating in U.S. in 2011
- [The case test-negative design for studies of the effectiveness of influenza vaccine in inpatient settings](#)
- [The role of the priming loop in influenza A virus RNA synthesis](#)

FLU WEBSITES

www.michigan.gov/flu
www.cdc.gov/flu
www.flu.gov
<http://vaccine.healthmap.org/>

NAT'L INFANT IMMUNIZATION WEEK

[National Infant Immunization Week](#) (NIIW) is April 16-23, 2016. NIIW is an annual observance to highlight the importance of protecting infants from vaccine-preventable diseases.

Are you looking for ideas on how you can educate others on and promote childhood immunizations in your community? Check out the [NIIW Activity Register](#). It provides an overview of educational and promotional events and campaigns that partners and immunization programs will be hosting throughout this year's NIIW. If you are hosting an NIIW activity, [share it here](#) with others!

AVIAN INFLUENZA INTERNATIONAL NEWS

- [CHP investigates imported human case of avian influenza A\(H7N9\)](#)
- [H7N9 sickens 2 more in China, report notes H9N2 and H1N1v cases; tests turn up H5N9 at French duck farm](#)
- [H5N6 sickens another in China as Egypt notes 2 H5N1 cases](#)
- [Avian flu outbreaks reported in Nigeria and South Africa](#)
- [Egypt reports 4th human H5N1 avian influenza case, 2nd from Giza](#)
- [More H5N6 found in China](#)
- [Sichuan woman contracts H9N2 avian influenza](#)
- [Jakarta on alert for bird flu after fowl deaths](#)
- [Seasonality of influenza A\(H7N9\) virus in China – fitting simple epidemic models to human cases](#)

OTHER INFLUENZA-RELATED NEWS

- [Iowa bird farmers prep for possible bird flu return](#)
- [South Dakota poultry farmers still recovering from flu](#)
- [H3N2 outbreak in Chicago dogs](#)
- [Chicago animal shelter halts adoptions after 100 dogs sickened by canine influenza](#)
- [Flu trap that captures viruses stops spread of infection](#)
- CDC: [146.4 million doses of flu vaccine distributed in U.S.](#)

Archived editions of FluBytes are available [here](#) and MI FluFocus archives are [here](#).

For questions or to be added to the distribution list, please contact Stefanie Cole at ColeS4@michigan.gov.

MDHHS Contributors

Bureau of Epidemiology – S. Bidol, MPH, S. Cole, RN, MPH, S. Eckel, MPH
Bureau of Labs – B. Robeson, MT, V. Vavricka, MS