



MI Flu Focus

Influenza Surveillance Updates Bureaus of Epidemiology and Laboratories



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**MI's Current Influenza
 Activity Level:**
 Regional

Updates of Interest:
 Wild birds in Washington state infected with 2 different highly pathogenic avian influenza viruses – H5N2, H5N8; see full CIDRAP article [here](#).

Influenza Surveillance Report for the Week Ending December 6, 2014

Michigan Disease Surveillance System

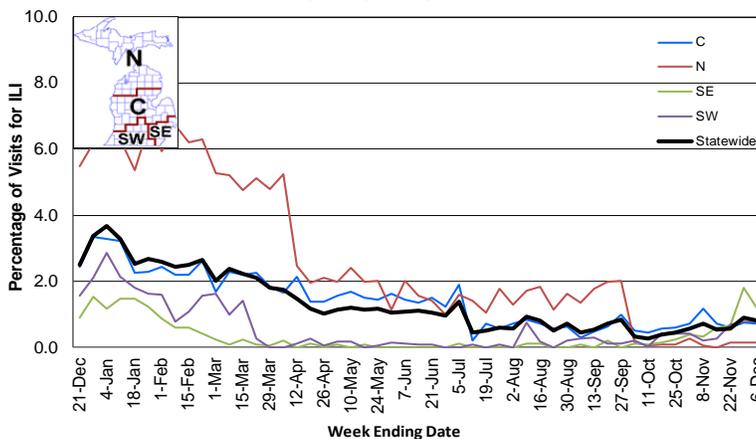
MDSS influenza data indicated that compared to levels from the previous week, aggregate reports increased while individual reports increased drastically. Aggregate reports are similar and individual reports are higher than levels seen during the same time period last year.

Emergency Department Surveillance

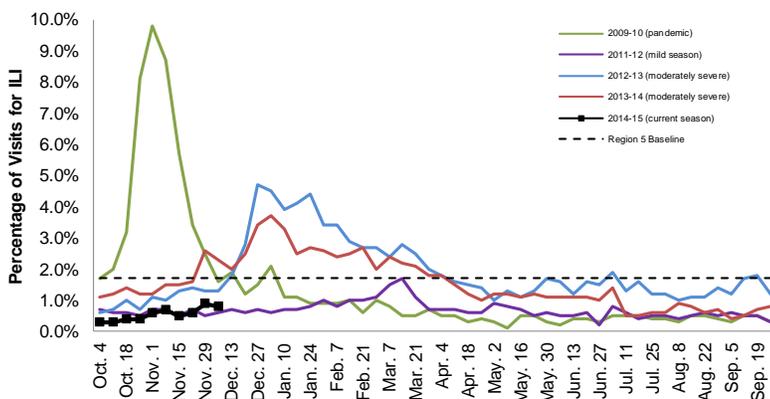
Compared to levels from the week prior, emergency department visits from constitutional complaints increased slightly while respiratory complaints remained the same. Levels of constitutional complaints were higher and respiratory complaints were similar when compared to the same time period last year.

- 10 constitutional alerts (1SE, 3SW, 5C, 1N)
- 3 respiratory alerts (2C, 1N)

**Percentage of Visits for Influenza-like Illness (ILI)
 Reported by Sentinel Providers, Statewide and Regions
 2014-15 Flu Season**



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



Sentinel Provider Surveillance

The proportion of visits due to influenza-like illness (ILI) decreased to 0.8% overall; this is below the regional baseline (1.7%). A total of 76 patient visits due to ILI were reported out of 9,221 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (31 total):

- C (13)
- N (4)
- SE (10)
- SW (4)

Become a Sentinel Provider!

As part of pandemic influenza surveillance, CDC and MDCH highly encourage year-round participation from all sentinel providers. New practices are encouraged to join the sentinel surveillance program today! Contact Stefanie DeVita at devitas1@michigan.gov for more information.

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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, starting on October 1, 2014, for Clinton, Eaton, Genesee, and Ingham counties. Twelve influenza-related hospitalizations were reported (accumulated total since Oct. 1: 16 adults, 9 children).

The MDCH Influenza Sentinel Hospital Network monitors influenza hospitalizations reported voluntarily by hospitals statewide. Six hospitals (SE,SW,C) reported. Results are listed in the table below. **Additional hospitals are welcome to join; please contact Susan Bohm at bohms@michigan.gov.**

Age Group	New Flu Hospitalizations Reported	Total 2014-15 Flu Hospitalizations to Date
0-4 years	0	1 (C)
5-17 years	1 (C)	5 (C)
18-49 years	4 (1C,3SE)	14 (5C,9SE)
50-64 years	6 (1C,5SE)	8 (1C,7SE)
65 years & older	24 (1C,23SE)	46 (1C,45SE)
Total	35 (4C,31SE)	74 (13C,61SE)

Laboratory Surveillance

MDCH Bureau of Laboratories reported 18 new positive influenza results: 17 A/H3 and 1 influenza B. A total of 99 positive influenza results have been reported for the 2014-15 season. Influenza results for the 2014-15 season are reported 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				1	1		
Influenza A/H3	5	9	60	13	87		
Influenza B			10	1	11		

In addition, 14 sentinel labs (5SE,2SW,6C,1N) reported influenza results. Thirteen labs (SE,SW,C) reported influenza A activity, with sites in the C and SW regions beginning to show increases and sites in the SE region showing further substantial increases. Five labs (SE,C) reported sporadic or low influenza B activity. Four labs (SE,SW,C) reported low Parainfluenza activity. Nine labs (SE,SW,C,N) reported low or slightly increasing RSV activity. Three labs (SE,SW) reported sporadic to low Adenovirus activity. Three labs (SE,C) reported sporadic to low hMPV activity. Most testing volumes continue to increase with several sites in the SE region at high or very high levels.

Influenza-associated Pediatric Mortality

No pediatric influenza-associated influenza mortalities have been reported to MDCH for the 2014-15 season.

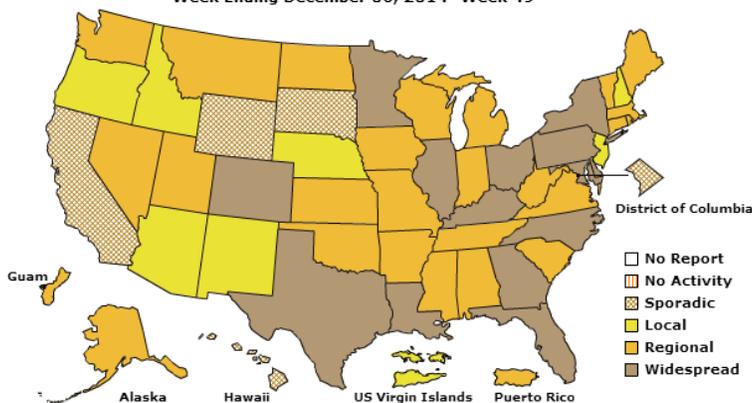
Influenza Congregate Settings Outbreaks

Two respiratory facility outbreaks (1 A/H3, 1 A with subtype pending) in long-term care facilities were reported. There have been a total of five respiratory facility outbreaks reported to MDCH for the 2014-15 season.

National: Influenza activity continued to increase in the United States, with 2.5% of outpatient visits due to influenza-like illness. Two influenza-associated pediatric deaths were reported. Additional information is in the weekly FluView reports available online at: www.cdc.gov/flu/weekly/.

International: Globally, influenza activity was low, with the exception of some Pacific Islands. Summary information is available online 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 December 06, 2014- Week 49





INFLUENZA ACTIVITY THROUGHOUT THE U.S.

- [U.S. flu activity, H3N2 mismatch both increase](#)
- [Washtenaw County already hitting peak flu numbers](#)
- [Flu has arrived in Minnesota, may be worse than usual](#)
- [Colorado flu outbreak turns deadly](#)
- [Flu absenteeism increasing in Illinois schools](#)
- [Different flu strains send more people to Ohio hospitals](#)
- [Dallas County logs twice as many flu cases week-over-week to end November](#)

NATIONAL EARLY 2014-15 FLU COVERAGE

The national flu vaccine coverage estimates for 2014-15 have been [released](#), including coverage for the general population, healthcare personnel, and pregnant women. Nationally, 40.3% of all persons 6 months and older had received flu vaccine through November, similar to the 2013-14 early season estimate.

AVIAN INFLUENZA A(H5N1)

- [Egyptian woman dies of H5N1, total now 8](#)

AVIAN INFLUENZA A(H7N9)

- *Eurosurveillance*: [Clinical severity of human infections with avian influenza A\(H7N9\) virus, China, 2013-14](#)

OTHER AVIAN INFLUENZA NEWS

- [H5N2, H5N8 avian flu viruses surface in U.S.](#)
- [Officials raise estimates of avian flu-related deaths in European seals](#)
- [B.C. farms with H5N2 now total 10; H5 outbreaks sicken nearly 1,000 birds in Vietnam](#)
- [German cull ordered after H5N8 bird flu confirmed](#)

OTHER INFLUENZA-RELATED NEWS

- [Sanofi pasteur announces FDA approval of Fluzone® intradermal quadrivalent vaccine](#)
 - Vaccine will be available in U.S. for adults 18-64 years in 2015-16 season
- [CDC Seasonal Flu Doses Distributed](#): ~145.4 million doses in U.S. as of December 5, 2014

FluBytes is distributed to MDCH flu partners for informational and communication purposes. Please feel free to distribute widely. Archived editions of FluBytes are available [here](#) and MI FluFocus archives are [here](#).

ILLNESSES AVERTED BY 2013-14 VACCINES

CDC released a report in *MMWR* last week titled, "[Estimated Influenza Illnesses and Hospitalizations Averted by Vaccination – U.S., 2013-14 Influenza Season](#)." In total, 2013-14 flu vaccination resulted in ~7.2 million fewer illnesses, ~3.1 million fewer medical visits, and ~90,000 fewer hospitalizations. The highest benefit was seen in children ages 6 months – 4 years. CDC created an [infographic](#) depicting the benefit of flu vaccination in 2013-14.

CDC FLU TOOLKIT FOR LONG-TERM CARE

So far this flu season, H3N2 is predominating which typically hits adults 65 years and older particularly hard. CDC has an updated [toolkit](#) for long-term care employers to increase influenza vaccination among healthcare personnel. The toolkit includes guidance documents, educational resources, community best practices, strategies to overcome vaccination barriers, and more. Share this toolkit with long-term care facilities in your area!

INFLUENZA-RELATED JOURNAL ARTICLES

- [Natural attack rate of influenza in unvaccinated children and adults: a meta-regression analysis](#)
 - Unvaccinated children had much higher flu attack rates than unvaccinated adults
- [Longevity and determinants of protective humoral immunity following pandemic influenza infection](#)
 - Antibodies induced by natural infection persisted at constant high titer for minimum of ~15 months
- [IL-28B is a key regulator of B- and T-cell vaccine responses against influenza](#)
 - Researchers found IL-28B gene plays important role in immune system's response to flu vaccination
- [Does correcting myths about the flu vaccine work? An experimental evaluation of the effects of corrective information](#)
 - Correction significantly reduced intent to vaccinate among respondents with high levels of concern about vaccine side effects

FLU WEBSITES

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

For questions or to be added to the distribution list, please contact Stefanie DeVita at devitas1@michigan.gov.

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