



# MI Flu Focus

## Influenza Surveillance Updates Bureaus of Epidemiology and Laboratories

Michigan Department  
of Community Health



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### MI's Current Influenza

#### Activity Level:

Widespread

### Updates of Interest:

An H5 strain of avian flu reported Jan. 2<sup>nd</sup> in backyard flock in Washington State. See Washington State Department of Agriculture press release [here](#).

## Influenza Surveillance Report for the Week Ending December 27, 2014

### 2014-15 Influenza Season Activity Update

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Influenza activity remains at widespread levels in Michigan and across nearly all of the U.S. Influenza A(H3N2) continues to be the predominant circulating virus (see CDC's latest [FluView](#) report), with low levels of influenza B and very few influenza A(H1N1) viruses circulating.

**Antigenic drift** — From October 1 – December 27, 2014, 68% of H3N2 viruses characterized in the U.S. were drifted from the H3N2 component of the 2014-15 flu vaccine. Vaccine effectiveness against drifted viruses may be reduced. However, flu vaccine that provides even partial protection remains the most important step to prevent flu and its complications. In addition, antiviral drugs are a second line of defense to treat flu illness.

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**Influenza antiviral drugs** — Three FDA-approved influenza antivirals are recommended for use in the U.S. during the 2014-15 flu season: oseltamivir, zanamivir, and peramivir, an intravenous medication. On December 19, 2014, FDA approved Rapivab® (peramivir), a neuraminidase inhibitor, to treat uncomplicated influenza in adults age 18 years and older. CDC is updating their [flu antiviral website](#) and notes Rapivab® is in ample supply and available for ordering.

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**Shortages of oseltamivir** — MDCH continues to hear of difficulties obtaining sufficient supply of oseltamivir in areas with elevated flu activity. If needed, CDC advises that pharmacies work with authorized distributors to obtain additional antiviral supplies. Patients who have been prescribed an influenza antiviral by their healthcare provider may need to call more than one pharmacy to fill their prescription. If the exact prescribed formulation cannot be obtained, patients should consult with their healthcare provider or pharmacist for additional options. CDC and FDA will continue to work with manufacturers to assess influenza antiviral supply.

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**Long-term care facility (LTCF) outbreaks** — Outbreaks in LTCFs should be reported promptly to your local health department, and prevention and control measures need to be implemented immediately. CDC has an updated [toolkit](#) for long-term care employers that includes guidance on best practices and important information on antiviral use during facility outbreaks.

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**Pediatric influenza-associated deaths** — Nationally, 21 pediatric influenza-associated deaths have been reported (see [FluView](#)). None were Michigan residents. Pediatric influenza-associated deaths are reportable in Michigan, and providers must report any such deaths to local public health or MDCH (517-335-8165) **immediately**. MDCH and the local health department will work with providers, laboratories, and the medical examiner/pathologist to investigate suspected cases and coordinate submission of representative pre-mortem and post-mortem specimens to MDCH Bureau of Laboratories. Delays in reporting these deaths to public health could impact the availability of specimens.

### Michigan Disease Surveillance System

MDSS influenza data indicated that compared to levels from the previous week, aggregate reports decreased and individual reports increased slightly. The decrease in aggregate reports may be partially due to the school holiday break. Aggregate reports are higher and individual reports are much higher than levels seen during the same time period last year.

### Emergency Department Surveillance

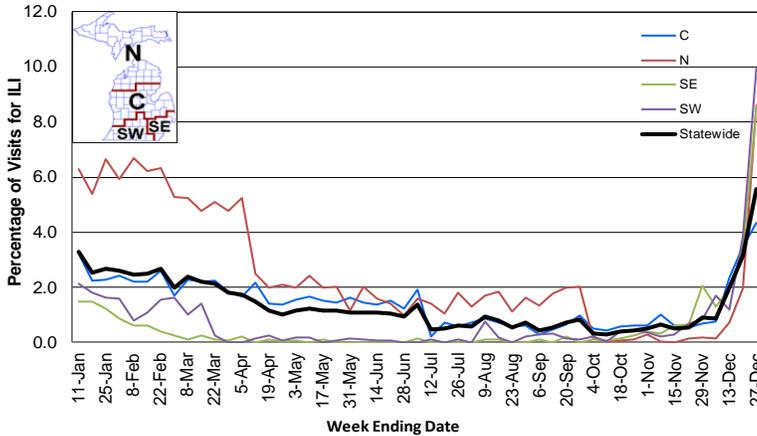
Compared to levels from the week prior, emergency department visits from constitutional complaints increased slightly and respiratory complaints increased. Levels of constitutional and respiratory complaints were higher when compared to the same time period last year.

- 11 constitutional alerts (4SW, 3C, 4N)
- 18 respiratory alerts (1SE, 4SW, 9C, 4N)

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



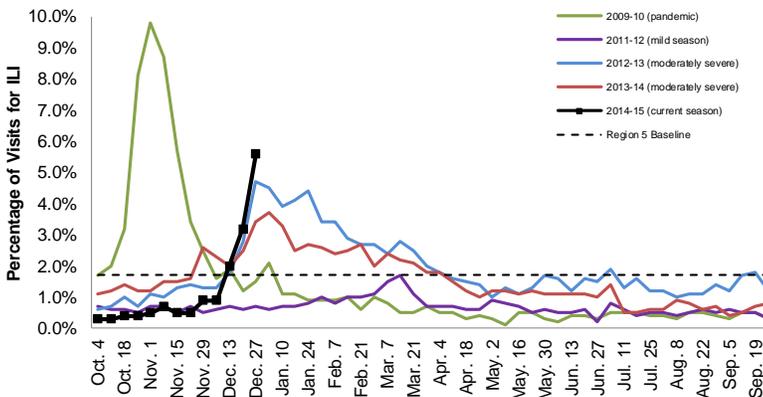
**Sentinel Provider Surveillance**

The proportion of visits due to influenza-like illness (ILI) increased to 5.6% overall; this is above the regional baseline (1.7%). A total of 258 patient visits due to ILI were reported out of 4,619 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (23 total):

- C (11)
- N (2)
- SE (8)
- SW (2)

**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 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](mailto:devitas1@michigan.gov) for more information.

**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. There were 53 influenza-related hospitalizations reported (accumulated total since Oct. 1: 40 children, 108 adults).

Based on these counts, there have been 20.7 pediatric influenza hospitalizations per 100,000 population and 15.8 adult influenza hospitalizations per 100,000 population within the catchment area.

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 Seth Eckel at [eckels1@michigan.gov](mailto:eckels1@michigan.gov).**

| Age Group        | New Flu Hospitalizations Reported | Total 2014-15 Flu Hospitalizations to Date |
|------------------|-----------------------------------|--|
| 0-4 years        | 9 (8C, 1SE)                       | 15 (14C, 1SE)                              |
| 5-17 years       | 5 (4C, 1SE)                       | 22 (21C, 1SE)                              |
| 18-49 years      | 9 (SE)                            | 32 (6C, 26SE)                              |
| 50-64 years      | 18 (4C, 14SE)                     | 43 (8C, 34SE, 1SW)                         |
| 65 years & older | 99 (3C, 94SE, 2SW)                | 213 (9C, 202SE, 2SW)                       |
| <b>Total</b>     | <b>140 (19C, 119SE, 2SW)</b>      | <b>325 (58C, 264SE, 3SW)</b>               |

### Laboratory Surveillance

MDCH Bureau of Laboratories reported 33 new positive influenza results: 33 A/H3. A total of 235 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             | 56   | 21 | 77 | 61 | 215   | 8* (3 A/Texas/50/2012-like**, 5 A/Switzerland/9715293/2013-like) | 0 / 34                            |
| Influenza B                | 3  |    | 11 | 4  | 18    | 18 (17 B/Yamagata lineage, 1 inconclusive)                       |                                   |
| Influenza A, unsubtypeable | 1  |    |    |    | 1     |  |                                   |

\*Specimens antigenically characterized by CDC; \*\*A/Texas/50/2012 (H3N2) virus is the H3N2 component of the 2014-15 Northern Hemisphere flu vaccine. A/Switzerland/9715293/2013-like is an antigenic variant of the current vaccine virus.

In addition, 14 sentinel labs (4SE,2SW,6C,2N) reported influenza results. All 14 labs (SE,SW,C,N) reported influenza A activity, with the majority of sites showing continued strong increases except for sites in the SE region which are at sustained high levels or beginning to show some declines. Six labs (SE,SW,C,N) reported sporadic or low influenza B activity. Four labs (SE,SW,C) reported low or slightly increasing Parainfluenza activity. Twelve labs (SE,SW,C,N) reported RSV activity, with elevated levels continuing in the SE region. Five labs (SE,SW,C) reported low Adenovirus activity. Four labs (SE,SW,C) reported low hMPV activity. Most testing volumes continue to rise further into the very high range with several sites (SE,SW) at sustained historic levels.

### Influenza-associated Pediatric Mortality

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

### Influenza Congregate Settings Outbreaks

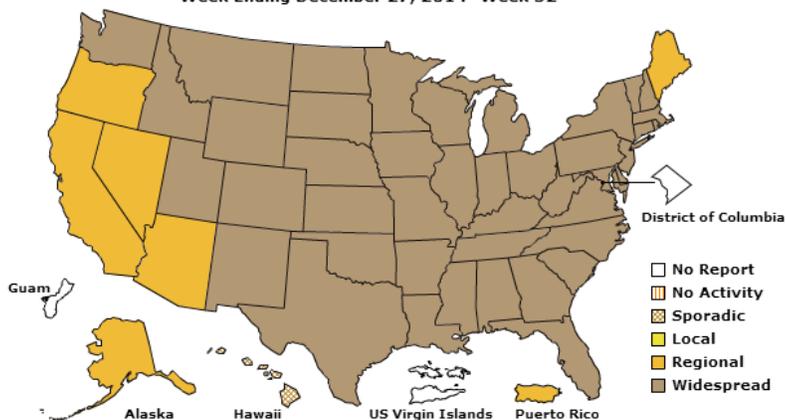
There were 9 respiratory facility outbreaks (6 confirmed flu A, 1 confirmed flu A and B, 1 testing pending, 1 unknown etiology/no testing) reported. There have been a total of 40 respiratory facility outbreaks reported to MDCH for the 2014-15 season. Respiratory facility outbreaks are listed in the table below by facility type and surveillance region.

| Facility Type                           | C        | N        | SE        | SW        | Total     |
|---|----------|----------|-----------|-----------|-----------|
| Adult Care Facility                     |          |          | 2         |           | 2         |
| Long-Term Care/Assisted Living Facility | 8        | 3        | 14        | 10        | 35        |
| K-12 School                             | 1        |          | 1         |           | 2         |
| Daycare                                 |          |          |           | 1         | 1         |
| <b>Total</b>                            | <b>9</b> | <b>3</b> | <b>17</b> | <b>11</b> | <b>40</b> |

**National:** Influenza activity continued to increase in the United States, with 5.9% of outpatient visits due to influenza-like illness. Six influenza-associated pediatric deaths were reported, bringing the 2014-15 total to 21. Additional information is in the weekly FluView reports available online at: [www.cdc.gov/flu/weekly/](http://www.cdc.gov/flu/weekly/).

**International:** Influenza activity continued to increase in the Northern Hemisphere with influenza A(H3N2) viruses predominating so far. Summary information is available online at [www.who.int/influenza/surveillance\\_monitoring/updates/latest\\_update\\_GIP\\_surveillance/en/](http://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 27, 2014- Week 52





## INFLUENZA ACTIVITY THROUGHOUT THE U.S.

- [New U-M hospital policy during flu outbreak limits visitors](#)
- [Flu prompts some U.P. hospitals to restrict visitors](#)
- [Number of reported flu cases spike in Kent County](#)
- [New deaths raise Indiana flu toll to 36](#)
- [Doctors use telemedicine to diagnose flu](#)
- [Family says 3-year-old Iowa girl died from flu](#)
- [Flu-related ER visits way up in Miami-Dade](#)
- [Flu cases slam Colorado hospitals; assisted-living centers hit hard](#)

## AVIAN INFLUENZA A(H5N1)

- [Four more H5N1 cases reported in Egypt](#)
- [Egyptian child dies of H5N1, second death this year](#)
- [Avian influenza H5N1 viral and bird migration networks in Asia](#)

## AVIAN INFLUENZA A(H7N9)

- [CHP notified of human case of H7N9 in Shenzhen](#)
- [Guangdong reports 2nd human H7N9 case in 2015](#)
  - Global case count up to [478](#) cases
- [Tests confirm H7N9 in Hong Kong poultry imports](#)
- [PNAS: Evolution of the H9N2 influenza genotype that facilitated the genesis of the novel H7N9 virus](#)
  - Prevalence and variation of H9N2 in farmed poultry could provide early warning of emergence of novel reassortants

## OTHER AVIAN INFLUENZA NEWS

- [Avian flu in Russia, Taiwan, South Korea, Japan](#)

## INFLUENZA RESOURCE DATABASE

The National Public Health Information Coalition (NPHIC) offers many resources to help healthcare providers communicate about influenza. Check out NPHIC's [website](#) with searchable databases to find the flu resources you're looking for, including materials on prevention, vaccination, and advice for pregnant women, parents, and other targeted audiences; news releases; brochures; fact sheets; radio and TV PSAs; and websites.

## INFLUENZA-RELATED JOURNAL ARTICLES

- [Adenoviral vectors as novel vaccines for influenza](#)
- [Reverse zoonosis of influenza to swine: new perspectives on the human-animal interface](#)
  - Humans transmit far more flu viruses to swine than swine transmit to humans

## CLINICIANS LOOKING FOR FLU VACCINE

The [Influenza Vaccine Availability Tracking System](#) (IVATS) helps clinicians find influenza vaccine by providing information from wholesale vaccine distributors and manufacturers of U.S. licensed flu vaccine. Updates to IVATS are made throughout the flu season, so make sure to check back!

## INFLUENZA UPDATE FOR PEDIATRICIANS

CDC posted an [Influenza Update for Pediatricians](#) for the 2014-15 season which includes a summary of guidance for healthcare providers. Please share this update with pediatricians in your area!

## FLU WEBSITES

[www.michigan.gov/flu](http://www.michigan.gov/flu)  
[www.cdc.gov/flu](http://www.cdc.gov/flu)  
[www.flu.gov](http://www.flu.gov)  
<http://vaccine.healthmap.org/>

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For questions or to be added to the distribution list, please contact Stefanie DeVita at [devitas1@michigan.gov](mailto:devitas1@michigan.gov).

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