



# MI Flu Focus

## Influenza Surveillance Updates

### Bureaus of Epidemiology and Laboratories



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### Influenza Surveillance Report for the Week Ending June 18, 2016

#### Updates of Interest:

The Advisory Committee on Immunization Practices has voted that live attenuated influenza vaccine (LAIV), also known as the nasal mist, [should not be used during the 2016-2017 flu season](#).

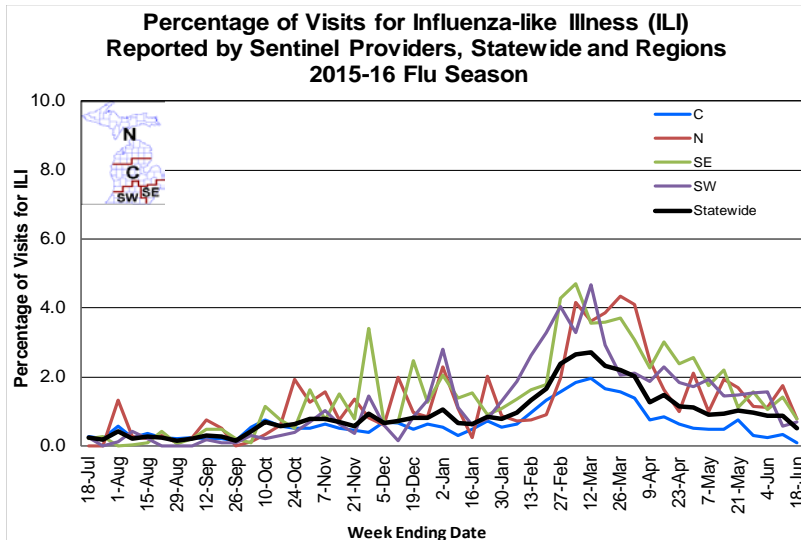
#### Michigan Disease Surveillance System

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

#### Emergency Department Surveillance

Compared to levels from the week prior, emergency department visits from constitutional and respiratory complaints were both similar. Levels of constitutional and respiratory complaints were both similar to those recorded during the same time period last year.

- 12 constitutional alert (6C, 2SW, 4SE)
- 5 respiratory alerts (5SE)

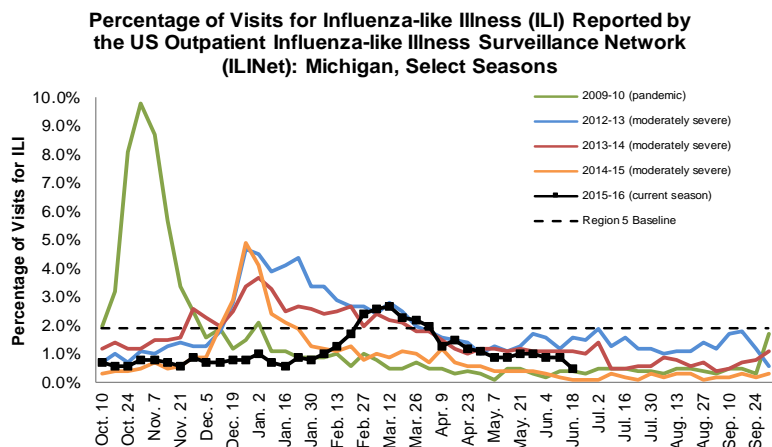


#### Sentinel Provider Surveillance

The proportion of visits due to influenza-like illness (ILI) decreased to 0.5% overall, which is below the regional baseline of 1.9%. A total of 39 patient visits due to ILI were reported out of 7,703 office visits. Please note: These rates may change as additional reports are received.

Number of Reports by Region (29 total):

- C (8)
- N (3)
- SE (14)
- SW (4)



#### 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](mailto:ColeS4@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 from Oct. 1, 2015 until Apr. 30, 2016, for Clinton, Eaton, Genesee, and Ingham counties. During the surveillance period, there were 75 pediatric (39.3 per 100,000 population) and 217 adult (31.6 per 100,000 population) hospitalizations reported within the catchment area. Note: The catchment period for the IHSP has ended for the 2015-2016 influenza season.

The MDHHS Influenza Sentinel Hospital Network monitors influenza hospitalizations reported voluntarily by hospitals statewide. During the summer months, hospitalizations are reported on a case-by-case basis. 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](mailto:eckels1@michigan.gov).

Age Group	New Flu Hospitalizations Reported	Total 2015-16 Flu Hospitalizations Reported to Date
0-4 years	0	40 (22N, 1C, 8SW, 9SE)
5-17 years	0	28 (13N, 1C, 4SW, 10SE)
18-49 years	0	166 (30N, 3C, 34SW, 99SE)
50-64 years	0	225 (30N, 9C, 40SW, 146SE)
65 years & older	0	262 (30N, 9C, 43SW, 180SE)
<b>Total</b>	<b>0</b>	<b>721 (125N, 23C, 129SW, 444SE)</b>

### Laboratory Surveillance

MDHHS Bureau of Laboratories reported no new positive influenza results. A total of 381 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	62	23	72	113	270	21* (21 A/California/07/2009-like (H1N1)pdm09**)	2 / 96
Influenza A/H3	15	7	12	17	51	8* (6 A/Switzerland/9715293/2013-like <sup>†</sup> )	0 / 20
Influenza B	8	6	17	24	55	43 (18 B/Yamagata lineage [5 B/Phuket/3073/2013-like <sup>††</sup> ], 21 B/Victoria lineage [3 B/Brisbane/60/2008-like])	
A / unsubtypeable				5	5		
LAIV recovery				1	1		
RSV			2		2		
Adenovirus	2		1		3		
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; <sup>†</sup>A/Switzerland/9715293/2013-like (H3N2) is the H3N2 component of the 2015-16 Northern Hemisphere flu vaccines; <sup>††</sup>B/Phuket/3073/2013-like virus is the B/Yamagata component of the 2015-16 Northern Hemisphere trivalent and quadrivalent flu vaccines.

In addition, 10 sentinel clinical labs (3SE, 1SW, 6C) reported influenza results. One lab (SE) reported sporadic influenza A activity. One lab (SE) reported very low influenza B activity. Four labs (SE, SW, C) reported low or sporadic Parainfluenza activity. One lab (SE) reported sporadic RSV activity. Three labs (SE, C) reported low Adenovirus activity. One lab (C) reported sporadic hMPV activity. Testing volumes generally remain low or very low.

### Influenza Congregate Settings Outbreaks

There was one (N) new respiratory facility outbreaks reported. There have been a total of 33 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	1	2		4	7
Long-term Care / Assisted Living Facility	8	2	5	8	23
Healthcare Facility		1	1		2
Daycare				1	1
Correctional Facility		1			1
<b>Total</b>	<b>9</b>	<b>6</b>	<b>6</b>	<b>13</b>	<b>33</b>

### 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.

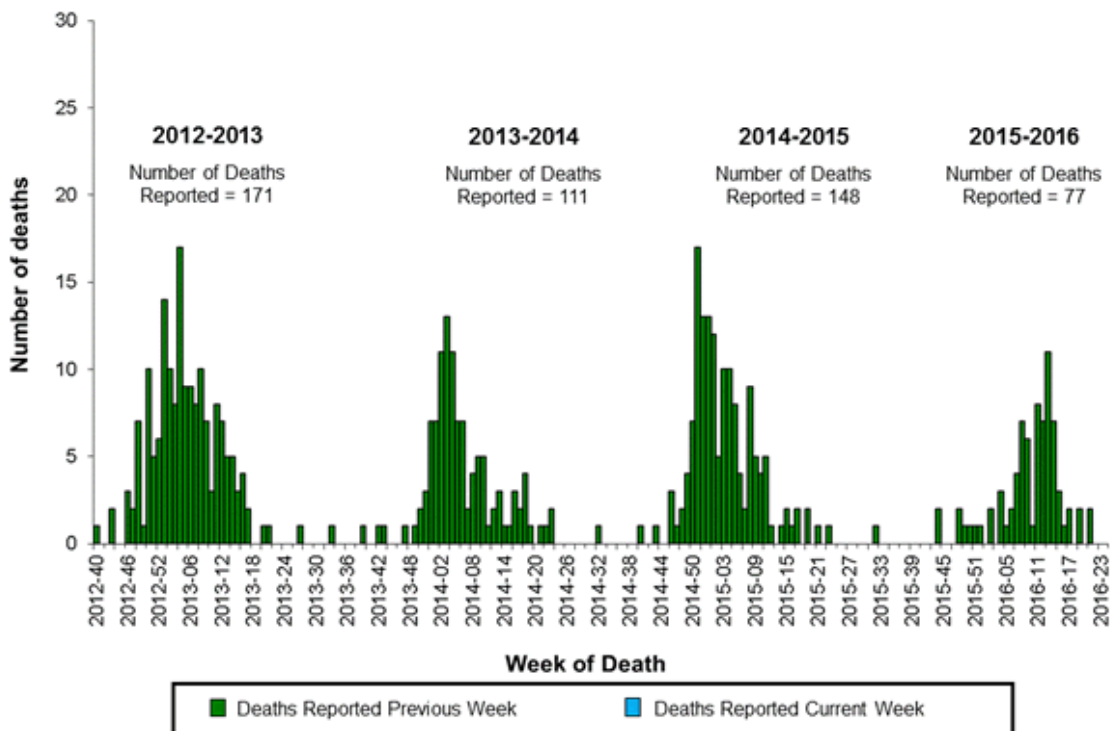
**National:** In the United States, 1.2% of outpatient visits due to influenza-like illness, which is below the national baseline of 2.1%. No new influenza-associated pediatric deaths was reported, for a total of 77 pediatric deaths for the 2015-16 flu season. Additional information is in the weekly FluView reports available at: [www.cdc.gov/flu/weekly/](http://www.cdc.gov/flu/weekly/).

**NOTE:** Influenza surveillance in the U.S. will continue through the summer months with condensed reports available at [www.cdc.gov/flu/weekly/](http://www.cdc.gov/flu/weekly/); the full FluView resumes on October 16, 2015. [FluView interactive](#) will be updated over the summer months.

**International:** In the Northern Hemisphere, influenza activity was low with influenza B detections predominating, and ILI levels below seasonal thresholds. In the Southern Hemisphere, influenza activity has increased steadily in South America and South Africa, but still remained low overall in most of Oceania. More information is available 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/).

## Number of Influenza-Associated Pediatric Deaths by Week of Death: 2012-2013 season to present





## ACIP MEETING RECAP, 2016-17 FLU RECS

An [article](#) was published in *Morbidity and Mortality Weekly Report (MMWR)* on June 10 summarizing influenza activity in the United States during the 2015-16 flu season. The 2015-16 season was less severe overall compared with the preceding three seasons. Flu activity began later and continued for a longer period, peaking in mid-March. During the most recent 18 flu seasons, only two other seasons have peaked in March (2011-12 and 2005-06).

Based on [data](#) provided at the ACIP meeting, the committee has voted that live attenuated influenza vaccine (LAIV), also known as the nasal mist, should **not** be used during the [2016-2017](#) flu season. Studies showed that LAIV was only 3% effective in flu prevention. In comparison, the inactivated influenza vaccine (IIV), was 63% effective.

### Key Points:

- The ACIP still recommends that everyone 6 months and older receive a flu shot this season.
- This change in recommendation is an example of scientific research influencing new policies that improve public health responses and overall population health.

## INFLUENZA-RELATED JOURNAL ARTICLES

- [Total economic consequences of an influenza outbreak in the United States](#)
  - Authors' results indicated a pandemic influenza outbreak could result in loss in U.S. GDP of \$25.4 billion, but vaccination could reduce the losses to \$19.9 billion
- [Origins of the 2009 H1N1 influenza pandemic in swine in Mexico](#)
  - The swine virus responsible for 2009 pandemic evolved in central Mexico
- [Evolution of 2009 H1N1 influenza viruses during the pandemic correlates with increased viral pathogenicity and transmissibility in the ferret model](#)
- [Pathogenicity of reassortant H9 influenza viruses with different NA genes in mice and chickens](#)
  - 3 reassortant H9 viruses (rH9N1, H9N2, and rH9N3) were generated and characterized
  - All 3 viruses replicated efficiently in eggs and MDCK cells

## UPCOMING NFID WEBINAR JULY 7, 2016

The National Foundation for Infectious Diseases (NFID) is offering a free webinar on July 7, 2016 at 12:00-1:00 PM ET to provide updates from the June 2016 ACIP meeting. This includes updates recommendations for adult vaccination and discussion around vote taken regarding flu, meningococcal, and cholera vaccines. Continuing education is available for live webinar participation. To register for the webinar, visit their [website](#)

## AVIAN INFLUENZA INTERNATIONAL NEWS

- [CHP closely monitors first human case of avian influenza A\(H7N9\) in Liaoning province](#)
- [Egypt reports 2 more H5N1 outbreaks in poultry](#)
- [Chinese girl sick with H9N2 infection; avian flu viruses hit poultry and wild birds in China, Taiwan, and Russia](#)
- [China reports 3 new H7N9 cases in Hebei province](#)
- [Emerging Infectious Diseases: Influenza A\(H7N7\) virus among poultry workers, Italy, 2013](#)
- [H5N6 outbreak reported in China's Hunan province](#)

## OTHER INFLUENZA-RELATED NEWS

- [West Virginia horse owners warned of equine flu outbreak](#)
- [FDA Information Regarding FluMist Quadrivalent Vaccine](#)
- [FDA Approved Longer Shelf Life for the Game Changer, Flublok Influenza Vaccine](#)

## 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/>

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

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