A human infection with a novel influenza A virus has been confirmed in a resident of Michigan. Genetic sequencing at CDC demonstrated that the patient was infected with a variant influenza A virus (H1N1)v of swine origin. This is the first influenza A(H1N1)v infection detected in the United States in 2019.

Influenza A viruses that normally circulate in swine are called variant influenza viruses when isolated from humans. Early identification and investigation of human infections with novel influenza A viruses are critical so that the risk of infection can be more fully understood and appropriate public health measures can be taken.

Additional information on influenza in swine, variant influenza infection in humans, and strategies to interact safely with swine can be found at [http://www.cdc.gov/flu/swineflu/index.htm](http://www.cdc.gov/flu/swineflu/index.htm). Additional information can also be found in the [MDHHS Swine Variant Influenza Tool Kit](https://www.michigan.gov/health).
**Outbreaks and Sentinel Provider Surveillance**  
**Week Ending May 25**

### Congregate Setting Respiratory Virus Outbreaks
There was 1 [C(1), N(0), SE(0), SW(0)] new respiratory virus outbreak reported to MDHHS during this time period. Respiratory outbreaks for the 2019 summer season are listed below.

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>C</th>
<th>N</th>
<th>SE</th>
<th>SW</th>
<th>Summer 2019 Total</th>
<th>2018-19 Flu Season Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools: K-12 &amp; College</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Long-term Care / Assisted Living Facility</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>60</td>
</tr>
<tr>
<td>Healthcare Facility</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Daycare</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Homeless Shelter</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Correctional Facility</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>79</td>
</tr>
<tr>
<td><strong>2018-19 Total</strong></td>
<td>24</td>
<td>13</td>
<td>27</td>
<td>15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Influenza-like Illness (ILI) Activity
During the 2018-2019 influenza season, national activity peaked week ending **February 16, 2019** (Week 7) at 5.1%. Michigan activity peaked week ending **March 23, 2019** (Week 12) at 3.2% and reported above baseline of 1.8% for 12 weeks.

- Total number of reports by region: 26 [C(6), N(3), SE(12), SW(5)]
- Proportion of visits due to ILI: ↓ 0.8% (regional baseline*: 1.8%)
- 77 patient visits due to ILI were reported out of 10,186 office visits

*Regional baseline is developed by calculating the mean percentage of patient visits for ILI during non-influenza weeks for the previous three seasons and adding two standard deviations.

**MI Statewide ILI NET and Syndromic Surveillance Rates, 2018-2019**

**Did you know?**
Congregate setting outbreaks of viral respiratory illnesses are **required** to be reported to your local health department. See:

- [Influenza Guidance for Healthcare Providers](#)
- [Guideline for influenza and Respiratory Virus Outbreaks in Long-Term Care Facilities](#)

**Swine Variant Influenza Toolkit**
The Swine Variant Influenza Toolkit will help local health departments in planning for and responding to suspected influenza outbreaks associated with swine at agricultural fairs and exhibits. See:

- [Swine Variant Influenza Toolkit](#)
- [Swine Variant Influenza Toolkit Templates Document](#)

**Become an ILINET provider!**
Contact Shelly Doebler at [DoeblerM@michigan.gov](mailto:DoeblerM@michigan.gov)
Laboratory Surveillance

Week Ending May 25

MDHHS Bureau of Laboratories (BOL)

There were 5 [C(1), N(2), SE(0), SW(2)] new respiratory virus results reported to MDHHS during this time period. Positive results for the 2019 summer season are listed below.

<table>
<thead>
<tr>
<th>Respiratory Virus</th>
<th># Positive Respiratory Virus Results by Region</th>
<th>Summer 2019 Total</th>
<th>2018-19 Flu Season Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C</td>
<td>N</td>
<td>SE</td>
</tr>
<tr>
<td>2009 A/H1N1pdm</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Influenza A/H3</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Influenza B</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>2018-2019 Total</td>
<td>376</td>
<td>47</td>
<td>95</td>
</tr>
</tbody>
</table>

Michigan Sentinel Clinical Lab
Respiratory Virus Data

Eight (8) sentinel clinical labs (1SE, 15W, 6C, 0N) reported during this week

SE Region
- Influenza A: sporadic- low
- Influenza B: slightly elevated; decreasing
- Parainfluenza: no data available
- RSV: low
- Adenovirus: no data available
- hMPV: no data available

Central Region
- Influenza A: low; decreasing
- Influenza B: low-slightly elevated; decreasing
- Parainfluenza: low-slightly elevated
- RSV: sporadic-low
- Adenovirus: sporadic-low
- hMPV: low-slightly elevated

SW Region
- Influenza A: low
- Influenza B: very low
- Parainfluenza: slightly elevated
- RSV: low
- Adenovirus: low
- hMPV: low

North Region
- Influenza A: no data available
- Influenza B: no data available
- Parainfluenza: no data available
- RSV: no data available
- Adenovirus: no data available
- hMPV: no data available

Note: Flu B subtyping will be reported based on MDHHS BOL testing runs (roughly each month) and will be backtracked into this graph
Most recent MDHHS BOL Flu B subtyping run: May 2, 2019
The CDC Influenza Hospitalization Surveillance Project (IHSP) provides population-based rates of hospitalization due to severe influenza-related illness through active surveillance and chart review of lab-confirmed cases from Oct. 1, 2018 until Apr. 30, 2019, for Clinton, Eaton, Ingham, Genesee, and Washtenaw counties. For the 2018-2019 influenza season, there have been a total of 932* (120 pediatric, 812 adult) influenza-related hospitalizations reported in the catchment area.

Influenza-related Hospitalization Surveillance  Week Ending May 25

Influenza-associated Pediatric Mortality

One (1) pediatric influenza (A/H1N1-09) death has been confirmed by MDHHS for the 2018-2019 flu season.

Nationally, 113 influenza-associated pediatric deaths have been reported for the 2018-2019 flu season.

**Data is preliminary and may change as chart reviews are completed**

### MDHHS Contributors

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For questions or to be added to the distribution list, please contact Sue Kim at KimS2@michigan.gov

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Washtenaw County was added in 2017-2018

Note: IHSP surveillance period has ended as of April 30, 2018 and will resume October 1, 2019