



Missouri Weekly Influenza Surveillance Report 2017-2018 Influenza Season¹

Week 44: October 29 – November 4, 2017

All data are preliminary and may change as more reports are received.

Summary:

- The estimated influenza activity in Missouri is Sporadic².
- During Week 44, a total of 141 laboratory-positive³ influenza cases (107 influenza A, 33 influenza B, and one untyped) were reported. A season-to-date total of 618 laboratory-positive influenza cases (464 influenza A, 145 influenza B, and nine untyped) have been reported in Missouri as of Week 44. The influenza type for reported season-to-date cases includes 75% influenza A, 24% influenza B, and 1% untyped. One laboratory-positive case of influenza A (H3) was reported by the Missouri State Public Health Laboratory (MSPHL) during Week 44.
- Influenza-like illness (ILI) activity was below baseline for the Missouri Outpatient ILI Surveillance Network (ILINet). The reported percentage of outpatient visits for ILI was 1.62% (Figure 5).⁴ The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) increased during Week 44 (Figure 6). The ILI data from ESSENCE is currently not available due to system upgrades. The data and subsequent analysis will be included in future reports as available.
- One influenza-associated death has been reported in Missouri as of Week 44.⁵ During Week 43, 27 deaths involving Pneumonia and Influenza (P&I) were reported to the Bureau of Vital Records, resulting in a season-to-date total of 132 P&I associated deaths in Missouri.⁶
- One outbreak of influenza A was reported in a long-term care facility and no influenza or ILI-associated school closures have been reported in Missouri as of Week 44.
- Influenza activity remained low in the U.S. during Week 43. National influenza surveillance information is prepared by CDC and is included in the weekly FluView report, which is available online at <http://www.cdc.gov/flu/weekly/fluactivitysurv.htm>.

¹The 2017-2018 influenza season begins CDC Week 40 (week ending October 7, 2017) and ends CDC Week 39 (week ending September 29, 2018).

²Sporadic is defined as: Small numbers of laboratory-confirmed influenza cases or a single laboratory-confirmed influenza outbreak has been reported, but there is no increase in cases of influenza-like illness.

³Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

⁴Influenza-like illness (ILI) is defined by ILINet as fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat without a known cause other than influenza. Influenza-like illness (ILI) is defined by ESSENCE as Emergency Department chief complaints that contain keywords such as “flu”, “flulike”, “influenza” or “fever” plus “cough” or “fever” plus “sore throat”.

⁵All influenza-associated deaths became reportable in Missouri in 2016.

⁶The P&I data are available one week later. The P&I data for the CDC Week provided is the most current data available.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided through interactive maps available at <http://arcg.is/0q4iKm>. Click on the jurisdiction to view the influenza data specific to that jurisdiction.

- Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, CDC Week 44
- Reported Week-specific Rate per 100,000 Population, CDC Week 44
- Reported Laboratory-positive Influenza Cases by Influenza Type by Jurisdiction, Season-to-Date
- Reported Rate per 100,000 Population, Season-to-Date

Data Figures

Figure 1. Number of Laboratory-positive[†] Influenza Cases by Influenza Type, Missouri, CDC Week 44 (October 29 – November 4, 2017)^{*}

| Influenza Type | Week 42 | Week 43 | Week 44 | 2017-2018* Season-to-Date |
|-------------------------------------|------------|------------|------------|------------------------------|
| Influenza A | 112 | 93 | 107 | 464 |
| Influenza B | 26 | 29 | 33 | 145 |
| Influenza Unknown Or Untyped | 2 | 3 | 1 | 9 |
| Total | 140 | 125 | 141 | 618 |

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

*Influenza season begins week ending October 7, 2017 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 2. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Age Group, Missouri, CDC Week 44 (October 29 – November 4, 2017)^{}**

| Age Group | Week 44 Cases | Week 44 Rate [‡] | 2017-2018* Season-to-Date | 2017-2018* Season-to-Date Rate [‡] |
|--------------|------------------|------------------------------|------------------------------|--|
| 00-04 | 17 | 4.54 | 123 | 32.86 |
| 05-24 | 44 | 2.74 | 181 | 11.28 |
| 25-49 | 15 | 0.78 | 127 | 6.64 |
| 50-64 | 16 | 1.29 | 70 | 5.66 |
| 65+ | 49 | 5.13 | 117 | 12.25 |
| Total | 141 | 2.32 | 618 | 10.16 |

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

*Influenza season begins week ending October 7, 2017 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)

[‡]Incidence Rate per 100,000 population

Figure 3. Number of Laboratory-positive[†] Influenza Cases and Case Rates by Region, Missouri, CDC Week 44 (October 29 – November 4, 2017)^{}**

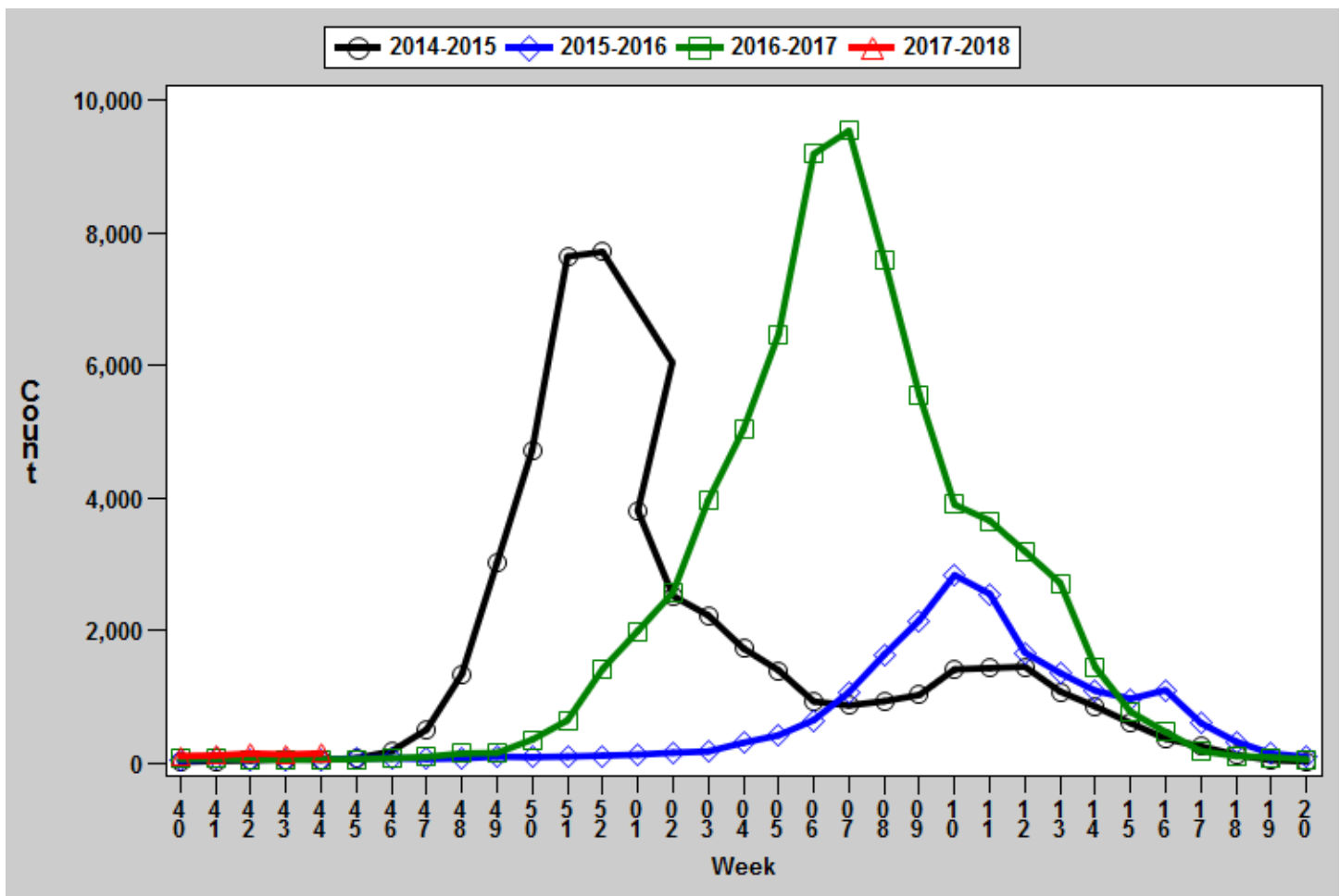
| District | Week 44 Cases | Week 44 Rate [‡] | 2017-2018* Season-to-Date | 2017-2018* Season-to-Date Rate [‡] |
|--------------|---------------|---------------------------|---------------------------|---|
| Central | 3 | 0.44 | 53 | 7.83 |
| Eastern | 25 | 1.10 | 148 | 6.53 |
| Northwest | 54 | 3.38 | 143 | 8.95 |
| Southeast | 20 | 4.24 | 194 | 41.13 |
| Southwest | 39 | 3.64 | 80 | 7.47 |
| Total | 141 | 2.32 | 618 | 10.16 |

[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

^{**}Influenza season begins week ending October 7, 2017 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)

[‡]Incidence Rate per 100,000 population

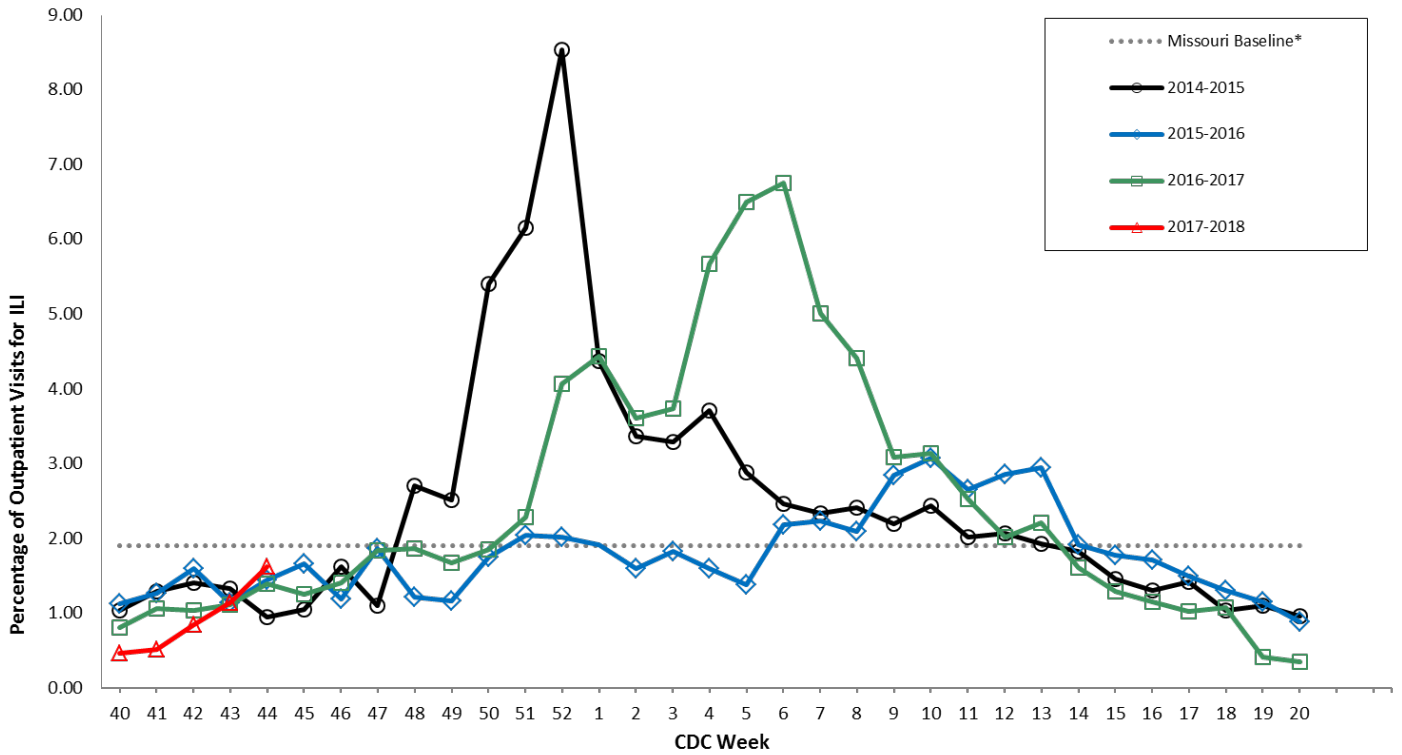
Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2014-2018^{*}



[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.

^{*}2017-2018 season-to-date through the week ending May 19, 2018 (Week 20). The 2014-2015 season had 53 weeks rather than the usual 52. Week 53, 2014-2015 flu season has 3,082 reported confirmed cases. Data Source: Missouri Health Information Surveillance System (WebSurv).

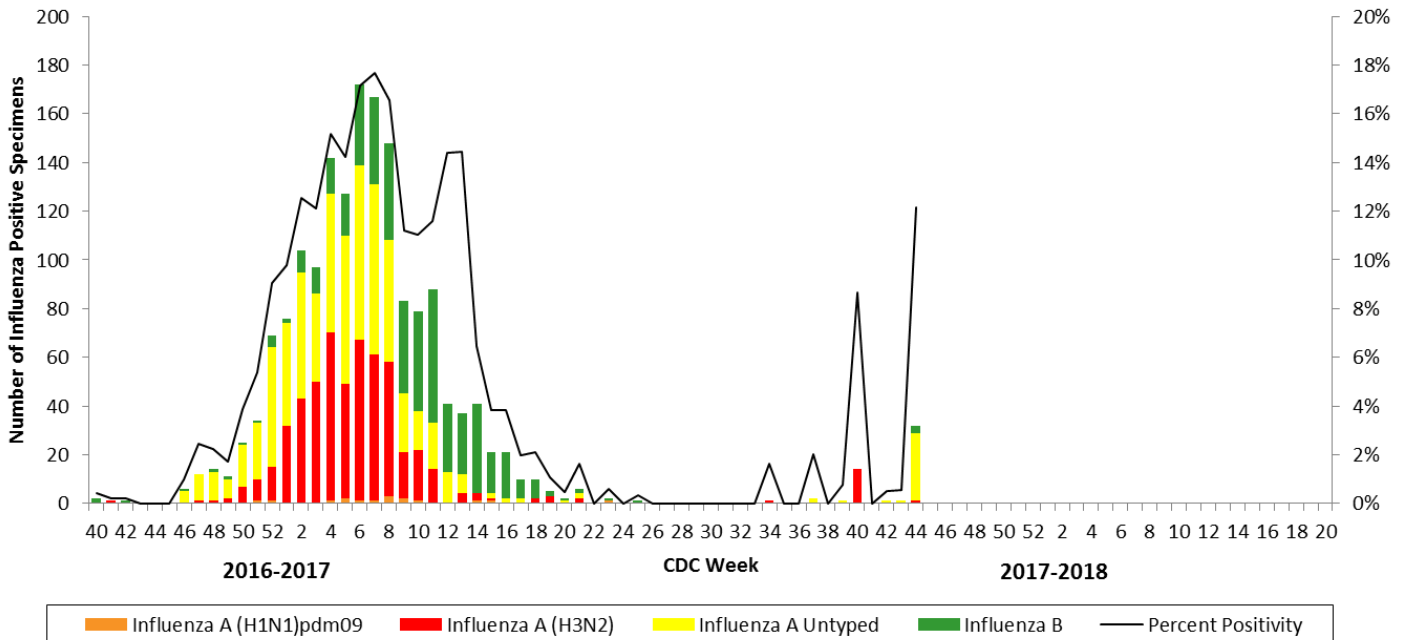
Figure 5. Percentage of Outpatient Visits for Influenza-like Illness (ILI), Missouri Outpatient ILI Surveillance Network (ILINet) 2014-2018*†



*The ILINet Region 7 (MO, IA, KS, NE) baseline is the mean percentage of patient visits for ILI during non-influenza weeks for the previous three seasons, plus two standard deviations. A non-influenza week is defined as periods of two or more consecutive weeks in which each week accounted for less than 2% of the season's total number of specimens that tested positive for influenza.

†2017-2018 season-to-date through the week ending May 19, 2018 (Week 20). The 2014-2015 season had 53 weeks rather than the usual 52. The percentage of outpatient visits for ILI during Week 53 was 7.63.

Figure 6. Season-to-Date PCR (+) Tests for Influenza in Missouri



Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC). 2016-2017 season-to-date through the week ending May 19, 2018 (Week 20).

Additional Influenza Data Sources:

Centers for Disease Control and Prevention: National Influenza Surveillance (FluView):
<http://www.cdc.gov/flu/weekly/fluactivitysurv.htm>

The National Respiratory and Enteric Virus Surveillance System (NREVSS):
<https://www.cdc.gov/surveillance/nrevss/>

World Health Organization: International Influenza Surveillance:
http://www.who.int/influenza/surveillance_monitoring/en/