



Missouri Weekly Influenza Surveillance Report 2020-2021 Influenza Season¹

Week 50: December 6, 2020 – December 12, 2020

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

Summary:

- The estimated influenza activity in Missouri is Sporadic².
- During Week 50 a total of 22 laboratory-positive³ influenza cases (10 influenza A and 12 influenza B) were reported. A season-to-date total of 588 laboratory-positive influenza cases (293 influenza A, 292 influenza B, and 3 untyped) have been reported in Missouri as of Week 50. The influenza type for cases reported season-to-date includes 49.8% A, 49.7 % B and 0.5 % untyped. One laboratory-positive case of influenza A (2009 H1N1) was reported by the Missouri State Public Health Laboratory (MSPHL) during Week 50. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) also remained low during Week 50 (Figure 5).
- Influenza-like illness (ILI) activity was below baseline for the hospital emergency room visit chief complaint data reported through ESSENCE. The reported percentage of visits for ILI 1.35% (Figure 6) through ESSENCE.⁴ The ILI data from a small number of sites located in the Northwest Region of the state is currently unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.
- A season-to-date total of one influenza-associated death has been reported in Missouri as of Week 50.⁵
- No influenza or ILI-associated outbreaks or school closures have been reported in Missouri as of Week 50.
- Seasonal influenza activity in the United States remains low. 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 2020-2021 influenza season begins CDC Week 40 (week ending October 3, 2020) and ends CDC Week 39 (week ending October 2, 2021).

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 ILI.

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. ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

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

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided through interactive maps available at <https://arcg.is/004CCr0>. 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 50
- Reported Week-specific Rate per 100,000 Population, CDC Week 50
- 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 Weeks 48 - 50 (December 6 – December 12, 2020)*

Influenza Type	Week 48	Week 49	Week 50	2020-2021* Season-to-Date
Influenza A	20	36	10	293
Influenza B	25	23	12	292
Influenza Unknown Or Untyped	0	0	0	3
Total	45	59	22	588

[†]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 3, 2020 (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 50 (December 6 – December 12, 2020)*

Age Group	Week 50 Cases	Week 50 Rate [‡]	2020-2021* Season-to-Date	2020-2021* Season-to-Date Rate [‡]
00-04	3	0.80	51	13.62
05-24	5	0.31	139	8.66
25-49	6	0.31	171	8.94
50-64	2	0.16	117	9.46
65+	6	0.63	110	11.52
Total	22	0.36	588	9.67

[†]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 3, 2020 (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 50 (December 6, 2020 – December 12, 2020)^{*‡}

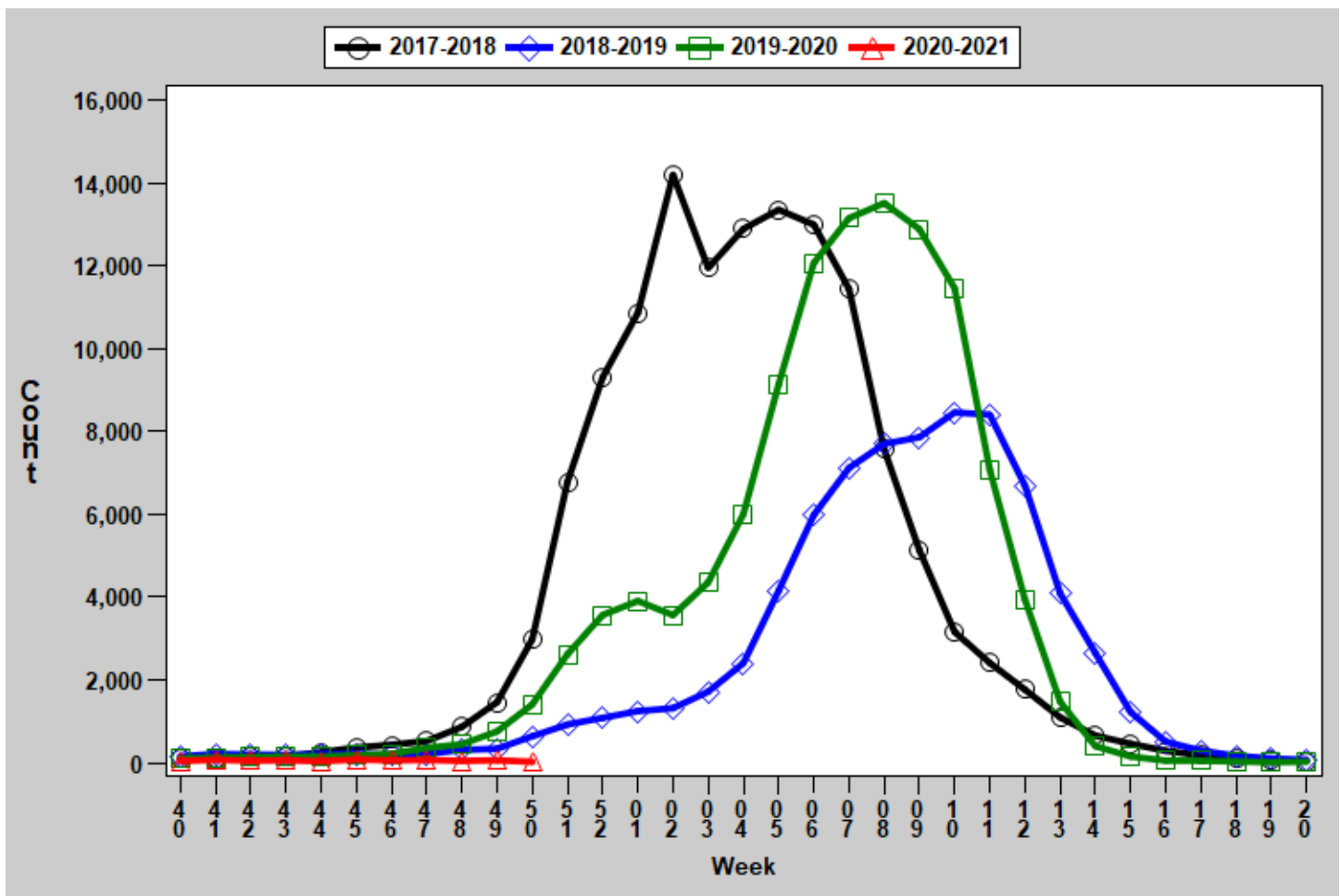
Region	Week 50 Cases	Week 50 Rate [‡]	2020-2021* Season-to-Date	2020-2021* Season-to-Date Rate [‡]
Central	4	0.59	68	10.04
Eastern	4	0.18	238	10.50
Northwest	5	0.31	83	5.20
Southeast	1	0.21	99	20.99
Southwest	8	0.75	100	9.33
Total	22	0.36	588	9.67

[†]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 3, 2020 (CDC Week 40) Data Source: Missouri Health Information Surveillance System (WebSurv)

[‡]Incidence Rate per 100,000 population

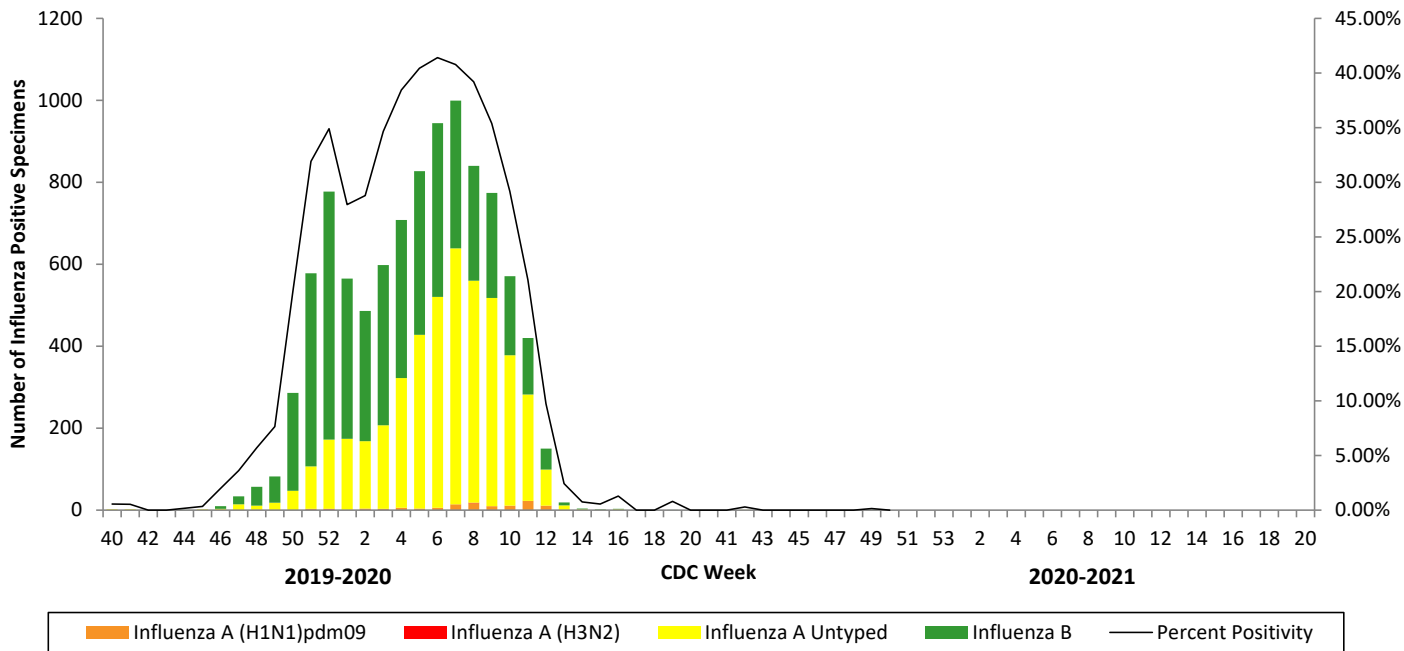
Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2017-2021^{*}



[†]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.

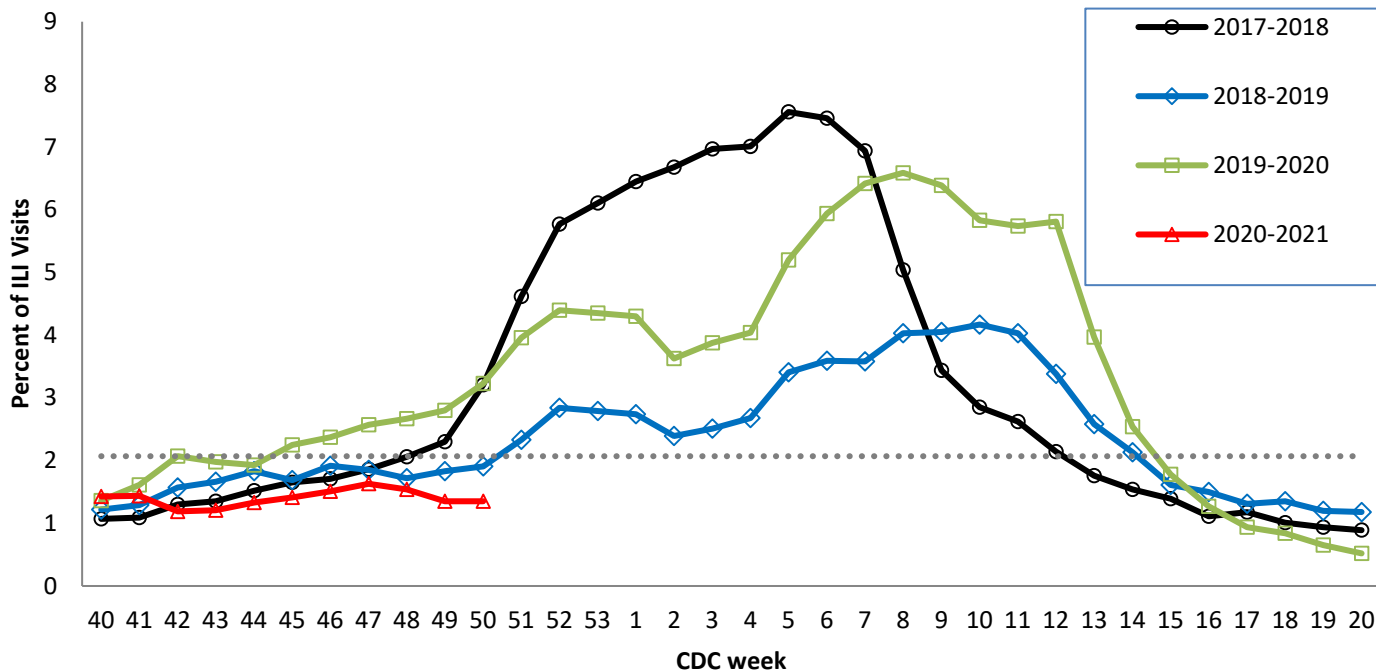
^{*}2020-2021 season-to-date through the week ending May 22, 2021 (Week 20).Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 5. 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). 2020-2021 season-to-date through the week ending May 22, 2021 (Week 20).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2017-2021 Influenza Seasons**

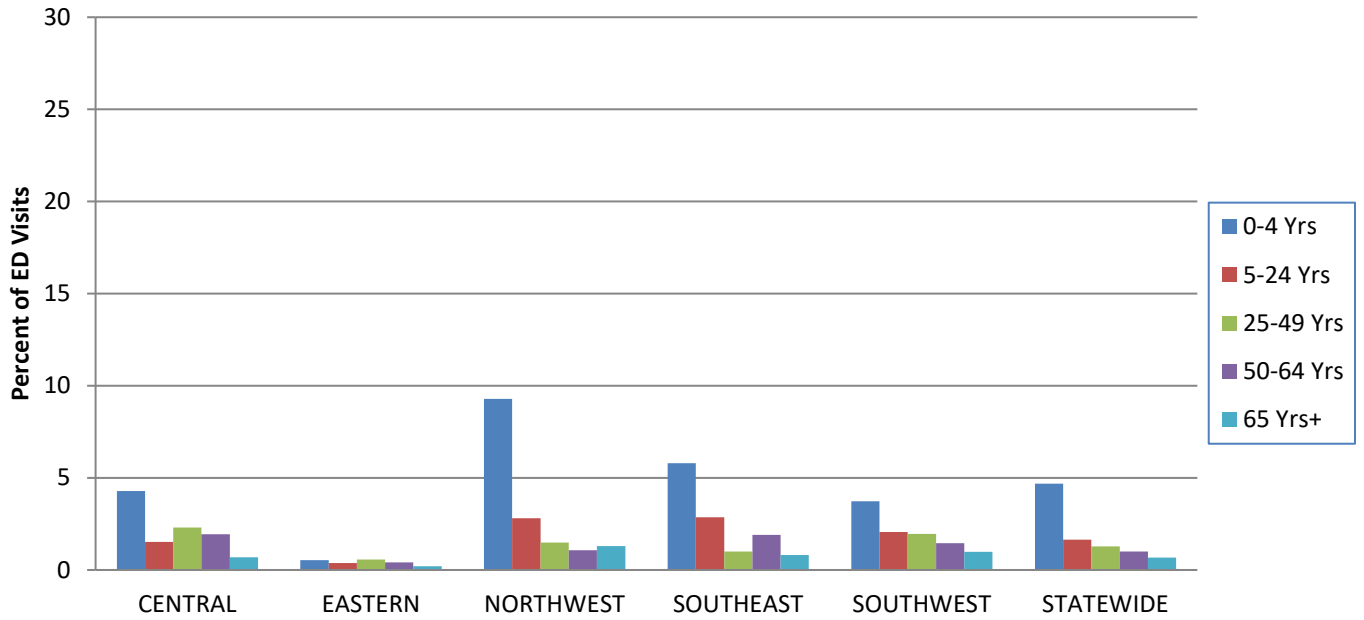


Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics ESSENCE version 1.20.

*The ESSENCEILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits plus two standard deviations.

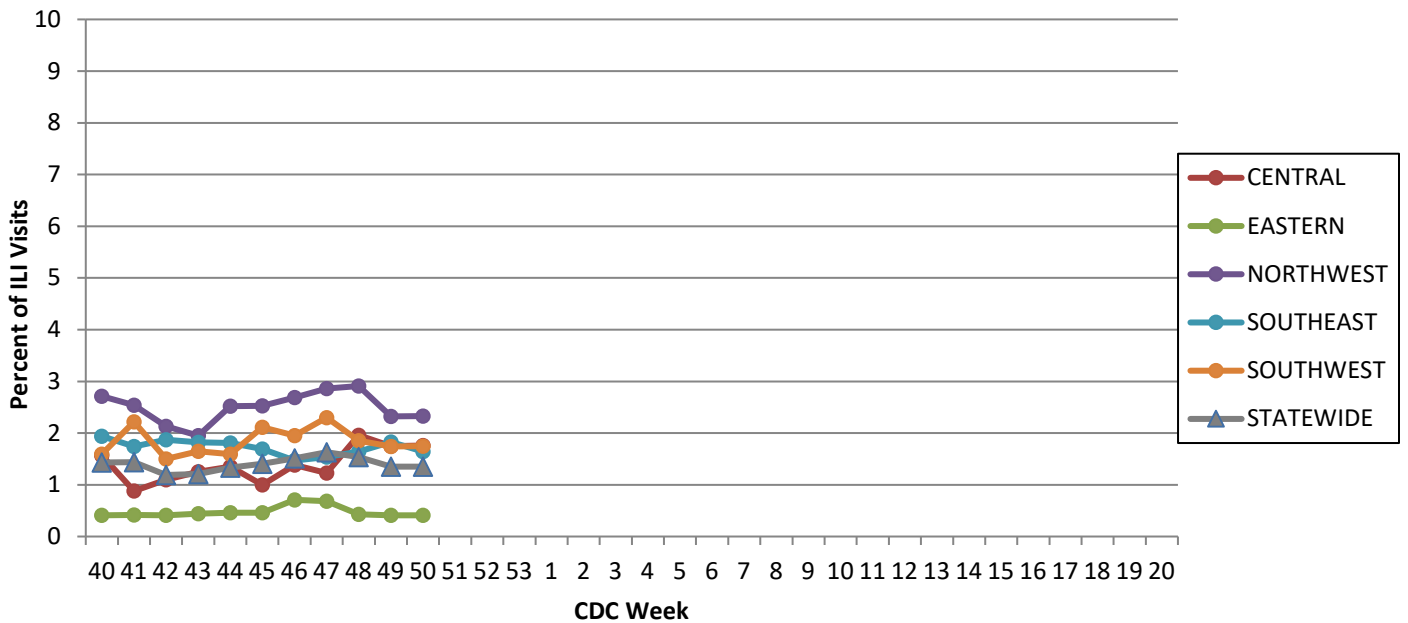
**There are 53 weeks in 2020. The estimates for the previous three years' values for the weeks 53 are the average of weeks 52 and 1.

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 50, 2020*



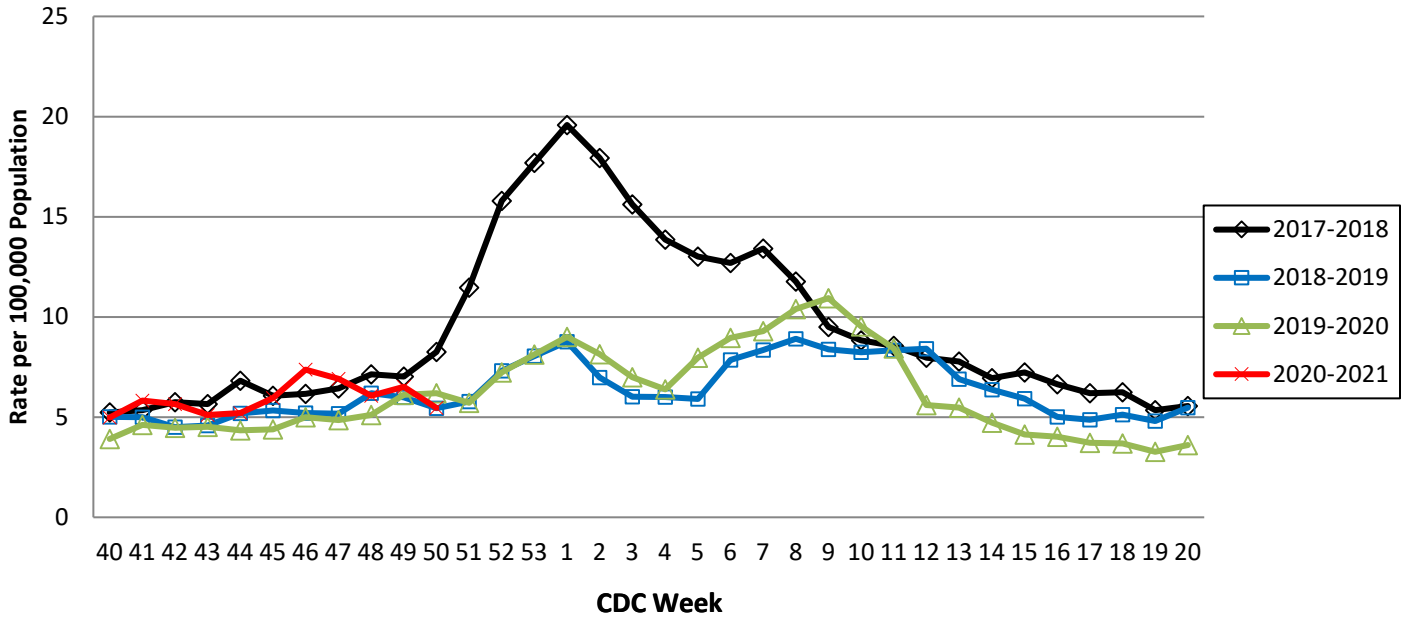
Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
 *The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 8. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Region and Statewide, 2020-2021 Influenza Season*



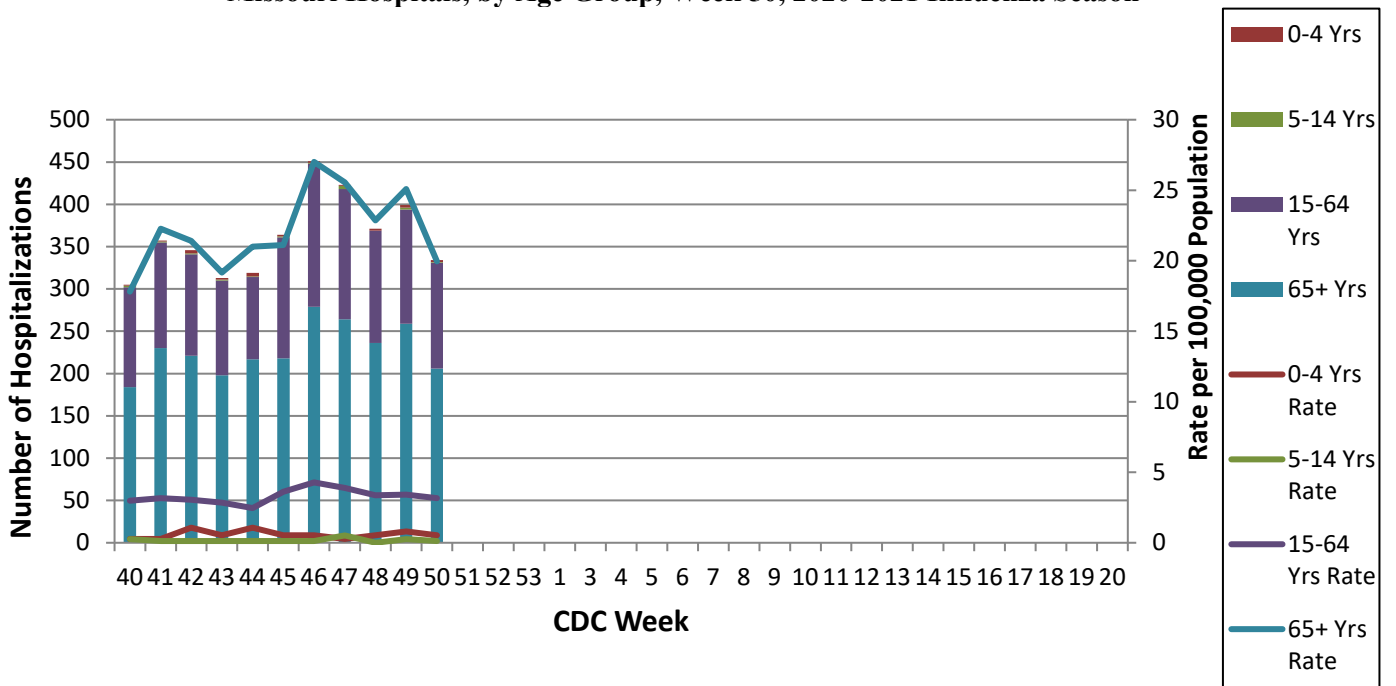
Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
 *The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest Region should be interpreted with caution.

Figure 9. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2017-2021 Influenza Seasons



Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal.
 Population data from Missouri Census Data Center 2017 (<https://census.missouri.edu>).
 *There are 53 weeks in 2020. The estimates for the previous 3 years' values for the weeks 53 are the averages of weeks 52 and weeks 1.

Figure 10. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals, by Age Group, Week 50, 2020-2021 Influenza Season



Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, HL7 Messaging Portal.

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/