Missouri Weekly Influenza Surveillance Report
2020-2021 Influenza Season[1]

Week 43: October 18, 2020 – October 24, 2020

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

Summary:

- The estimated influenza activity in Missouri is Sporadic[2].
- During Week 43, a total of 40 laboratory-positive[3] influenza cases (22 influenza A, 16 influenza B and 2 untyped) were reported. A season-to-date total of 169 laboratory-positive influenza cases (80 influenza A, 87 influenza B, and 2 untyped) have been reported in Missouri as of Week 43. The influenza type for reported season-to-date cases includes 47.3% influenza A, 51.5% influenza B, and 1.2% untyped. No laboratory-positive cases of influenza were reported by the Missouri State Public Health Laboratory (MSPHL) during Week 43. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) remained low during Week 43 (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 was 1.21% (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.
- One influenza-associated death has been reported in Missouri as of Week 43.
- No influenza or ILI-associated outbreaks or school closures have been reported in Missouri as of Week 43.
- Seasonal influenza activity remains low in the United States. 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.

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[1]The 2020-2021 influenza season begins CDC Week 40 (week ending October 3, 2020) and ends CDC Week 39 (week ending September 25, 2021).

[2]Sporadic 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.

[3]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.

[4]Influenza-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).

[5]All 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 43**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 43**
- **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 43 (October 18, 2020 - October 24, 2020)*

Influenza Type	Week 41	Week 42	Week 43	2020-2021* Season-to-Date
Influenza A	23	19	22	80
Influenza B	34	19	16	87
Influenza Unknown Or Untyped	0	0	2	2
Total	57	38	40	169

†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 43 (October 18, 2020 - October 24, 2020)*‡

Age Group	Week 43 Cases	Week 43 Rate‡	2020-2021* Season-to-Date	2020-2021* Season-to-Date Rate‡
00-04	5	1.34	16	4.27
05-24	7	0.44	37	2.31
25-49	13	0.68	49	2.56
50-64	6	0.49	35	2.83
65+	9	0.94	32	3.35
Total	40	0.66	169	2.78

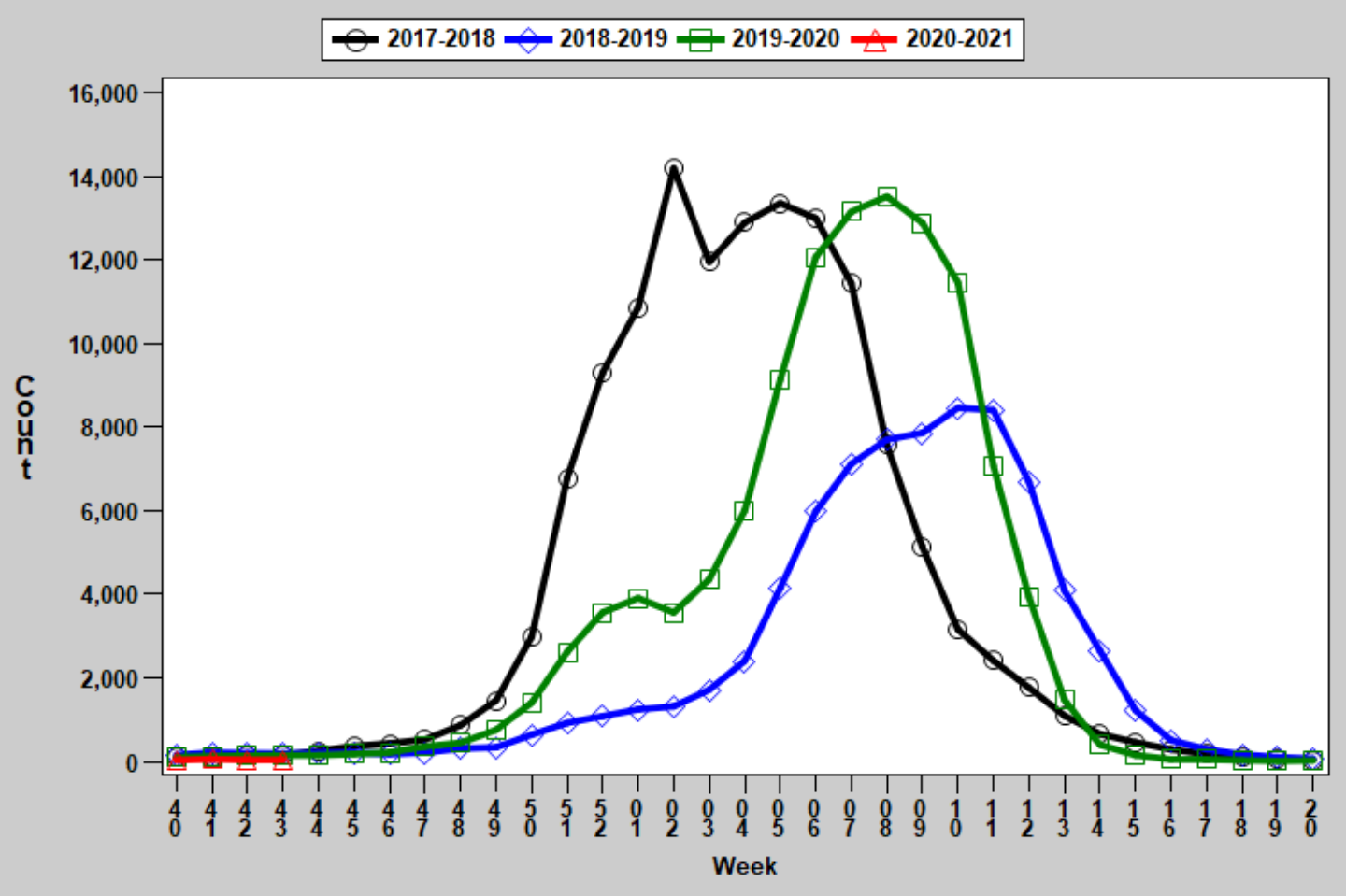
†Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
*Influenza season 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 43 (October 18, 2020 - October 24, 2020)[*‡]

Region	Week 43 Cases	Week 43 Rate[‡]	2020-2021* Season-to-Date	2020-2021* Season-to-Date Rate[‡]
Central	0	0.00	5	0.74
Eastern	13	0.57	106	4.68
Northwest	4	0.25	15	0.94
Southeast	10	2.12	19	4.03
Southwest	13	1.21	24	2.24
Total	40	0.66	169	2.78

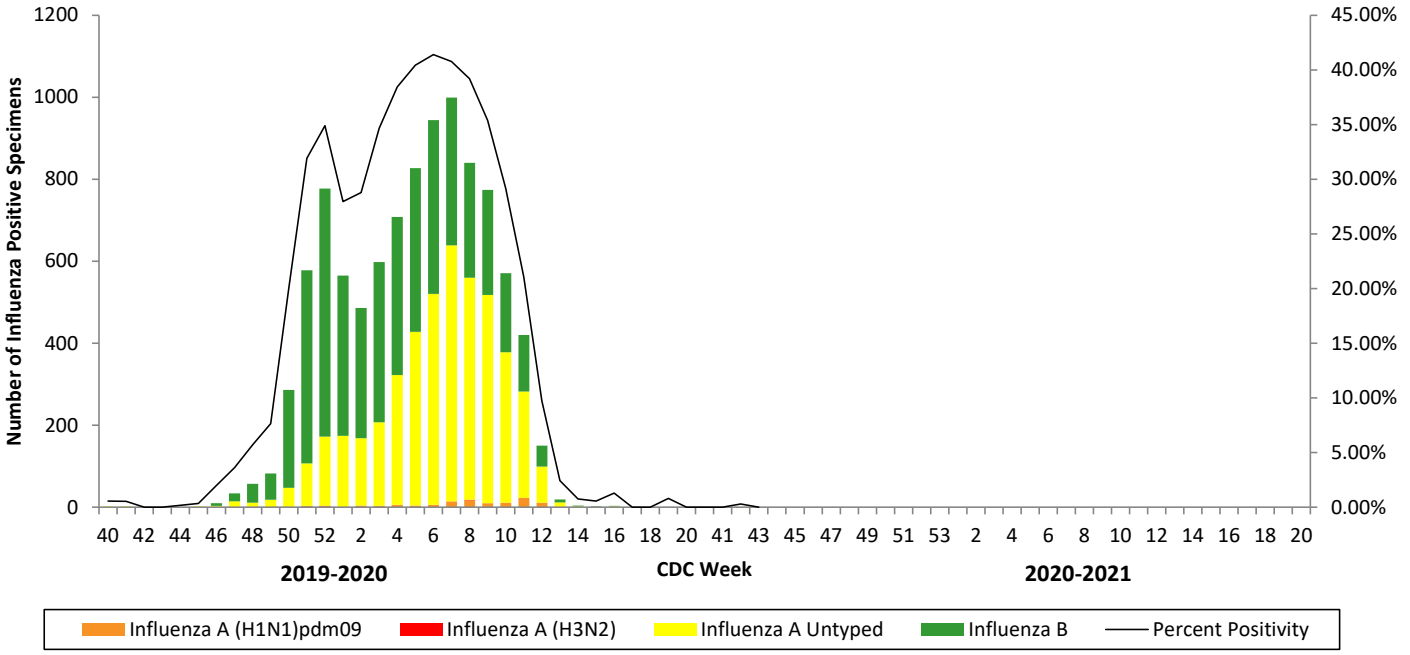
[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza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



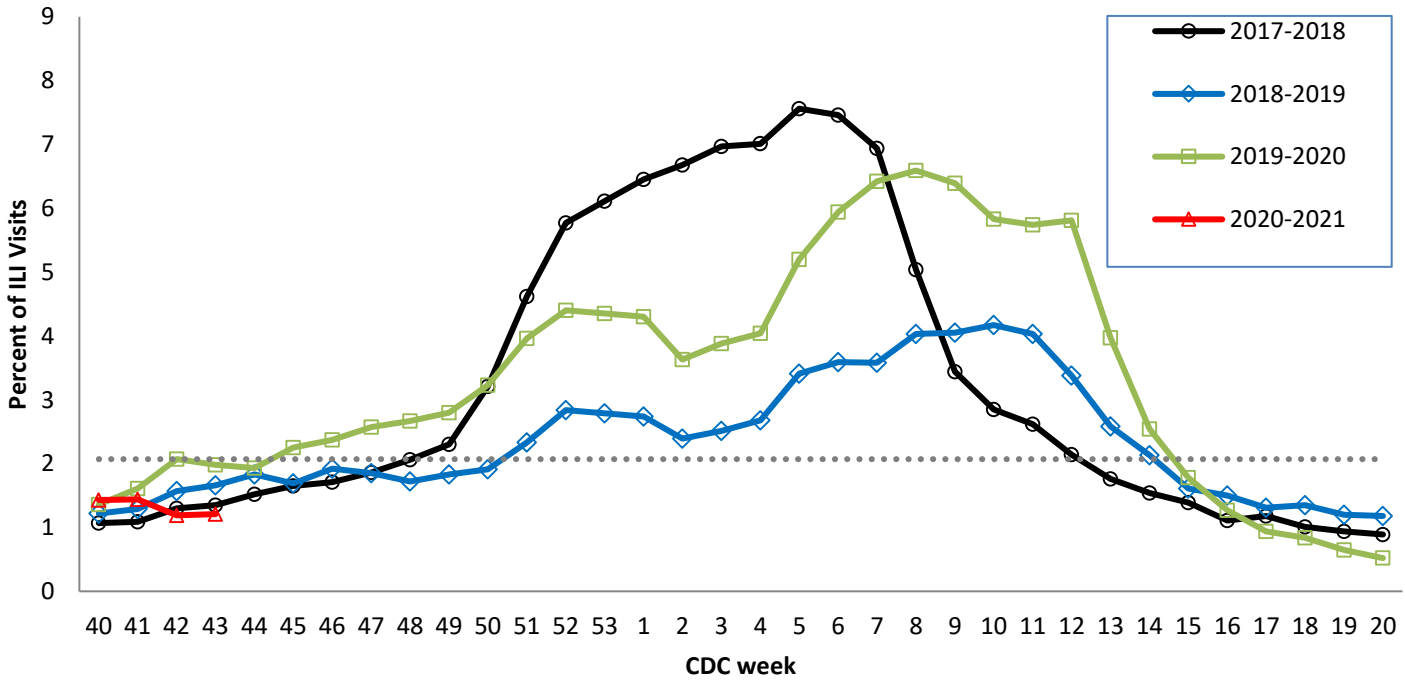
[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2020-2021 season-to-date through the week ending May 15, 2021 (Week 20).Data Source: Missouri Health Information Surveillance System (WebSurv).

Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri



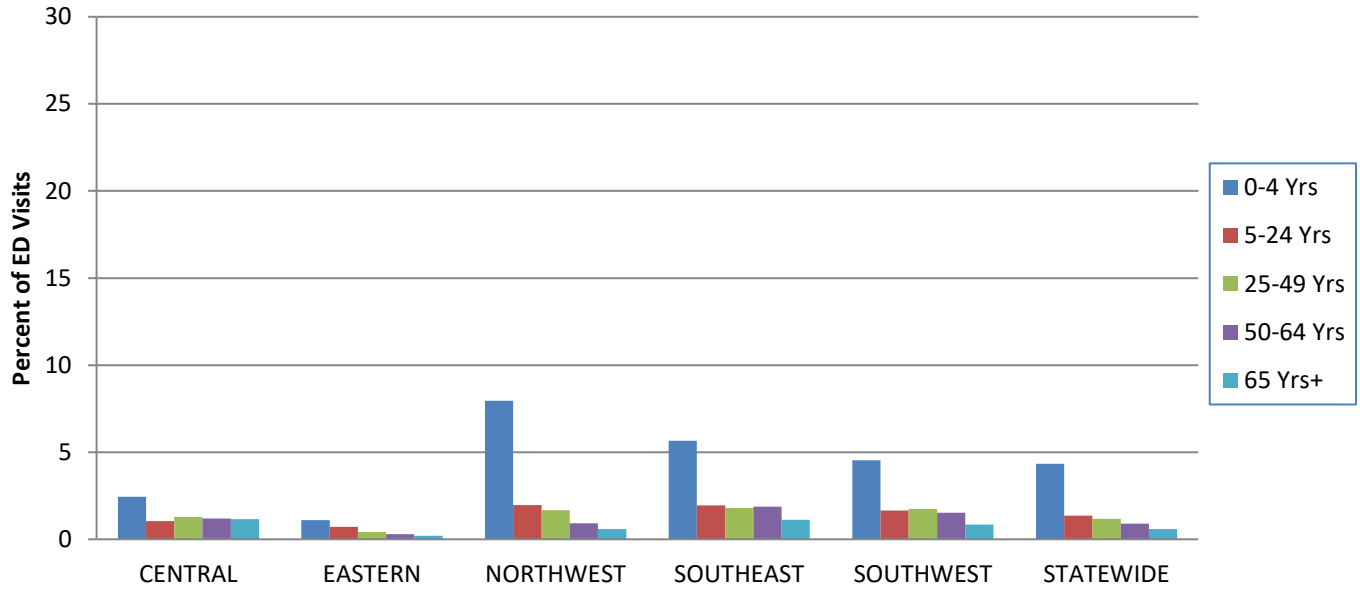
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
2020-2021 season-to-date through the week ending May 15, 2021 (Week 20).

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



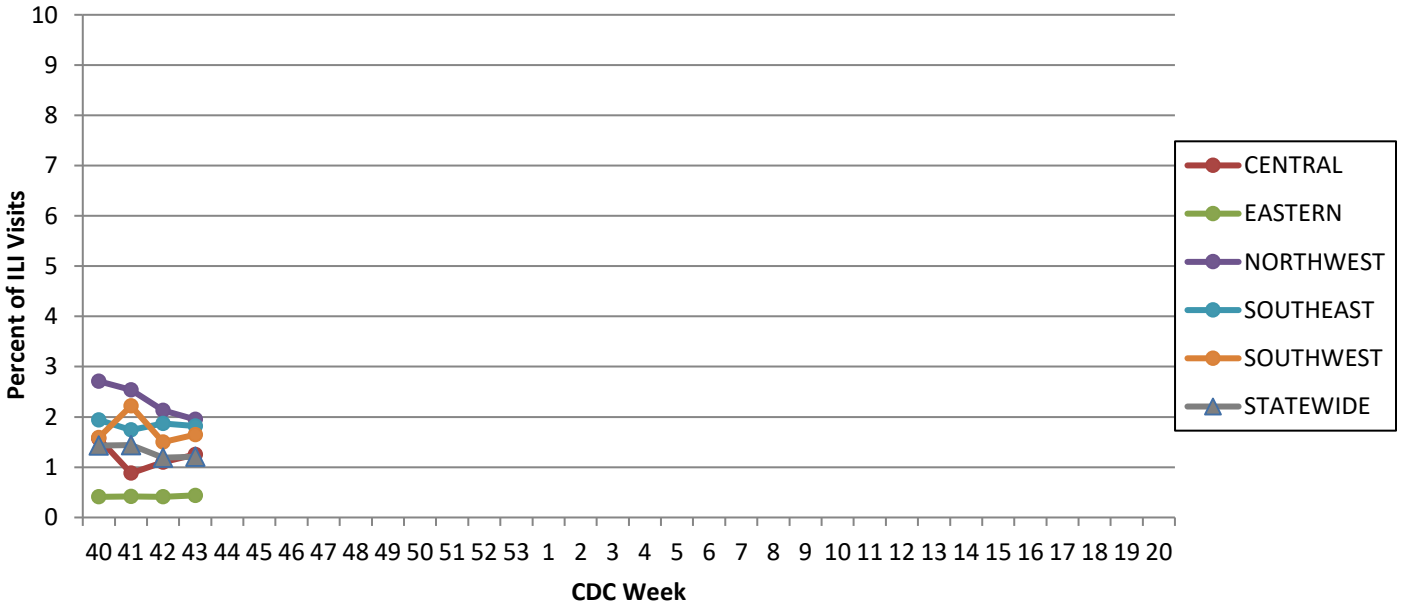
Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics ESSENCE version 1.20.
*The ESSENCEILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total 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 43, 2020*



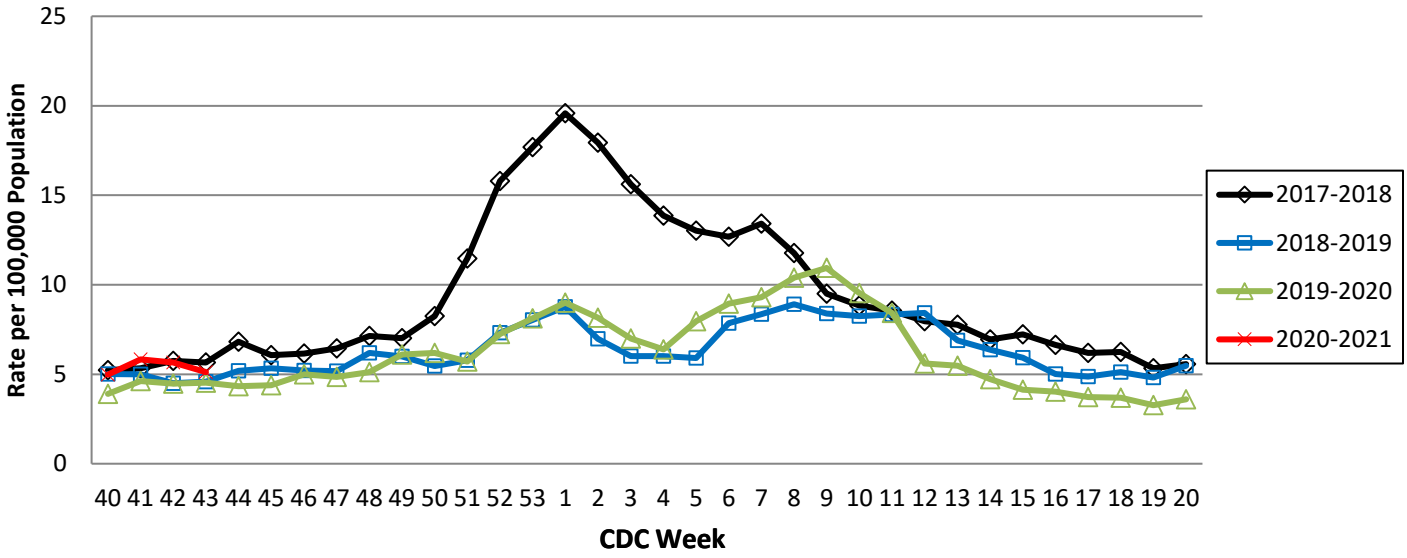
Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
*The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest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



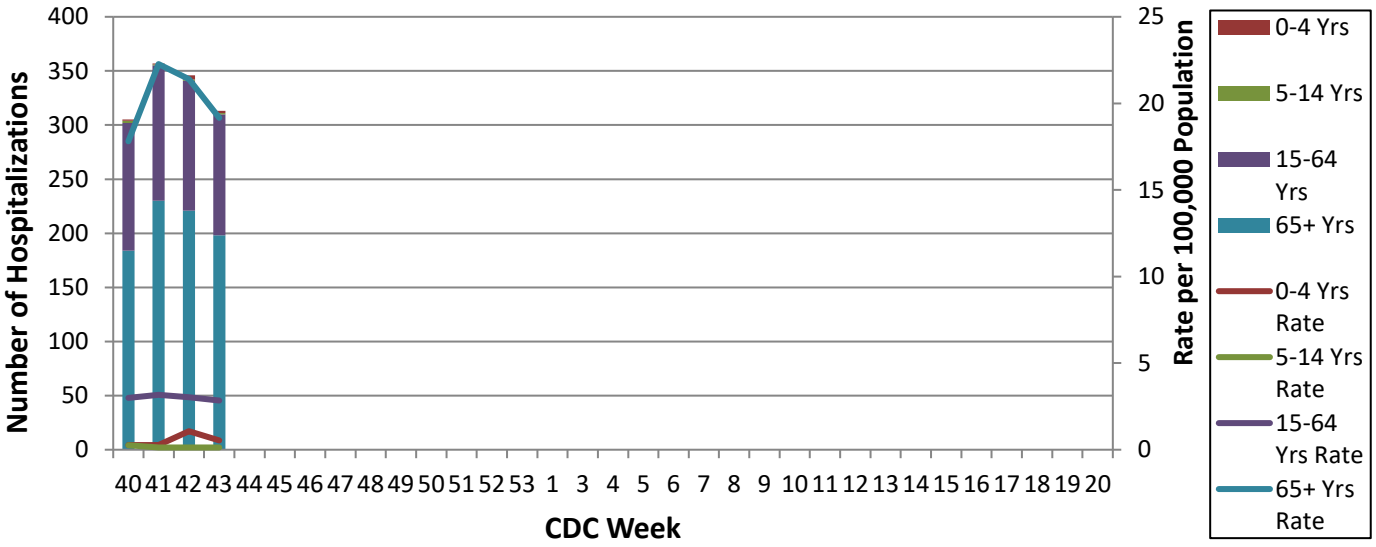
Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
*The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest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

Figure 10. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals, by Age Group, Week 43, 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/