Missouri Weekly Influenza Surveillance Report
2022-2023 Influenza Season[1]

Week 45: November 6, 2022 – November 12, 2022

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

Summary:

- Influenza activity continued to increase across Missouri during Week 45. The estimated influenza activity in Missouri is now widespread[2], and the overall Influenza-like illness (ILI) activity has increased to Level 7 in the moderate category.[3]

- During Week 45, a total of 2,720 laboratory-positive[4] influenza cases (2,508 influenza A, 188 influenza B and 24 untyped) were reported. The influenza type for reported season-to-date cases includes 89.1% influenza A, 10.2% influenza B and 0.7% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) decreased slightly to 7.7% during Week 45.

- Influenza-like illness activity for Week 45 was above baseline for the hospital emergency room visit chief complaint data reported through ESSENCE. The reported percentage of visits for ILI through ESSENCE increased to 3.99 % (Figure 6).[5]

- Two influenza-associated deaths have been reported in Missouri as of Week 43[6].

- No influenza outbreaks have been reported in Missouri as of Week 45.

- Early increases in seasonal influenza activity continue nationwide, with the southeast and south-central areas of the country reporting the highest levels of activity. 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 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

[2]Widespread is defined as: Outbreaks of influenza or increases in ILI cases and recent laboratory-confirmed influenza in at least half the regions of the state with recent laboratory evidence of influenza in the state.

[3] ILI Activity indicates levels of activity on a scale of 1-13 ranging from minimal to very high. For more information see https://gis.cdc.gov/grasp/fluview/main.html

[4]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.

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

[6]Influenza deaths are collected from Missouri's death certificate data. Decedents with influenza listed as a cause or contributor to death are classified as an influenza-associated death. Death certificate data are generally available two weeks following the current CDC week.

Surveillance Data:

Interactive Maps

The jurisdiction-specific influenza data are provided though interactive maps available at https://arcg.is/DKTSe0. *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 45**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 45**
- **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 43-45 (October 23, 2022 – November 12, 2022)*

Influenza Type	Week 43	Week 44	Week 45	2022-2023* Season-to-Date
Influenza A	1,150	2,260	2,508	6,654
Influenza B	142	163	188	760
Influenza Unknown Or Untyped	10	13	24	55
Total	1,302	2,436	2,720	7,469

†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 with the week ending October 8, 2022 (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 45 (November 6, 2022 – November 12, 2022)*‡

Age Group	Week 45 Cases	Week 45 Rate‡	2022-23* Season-to-Date	2022-2023* Season-to-Date Rate‡
00-04	395	107.31	1,069	290.43
05-24	1,533	98.02	3,915	250.32
25-49	482	24.81	1,437	73.95
50-64	190	15.83	625	52.07
65+	120	11.30	423	39.83
Total	2,720	44.32	7,469	121.70

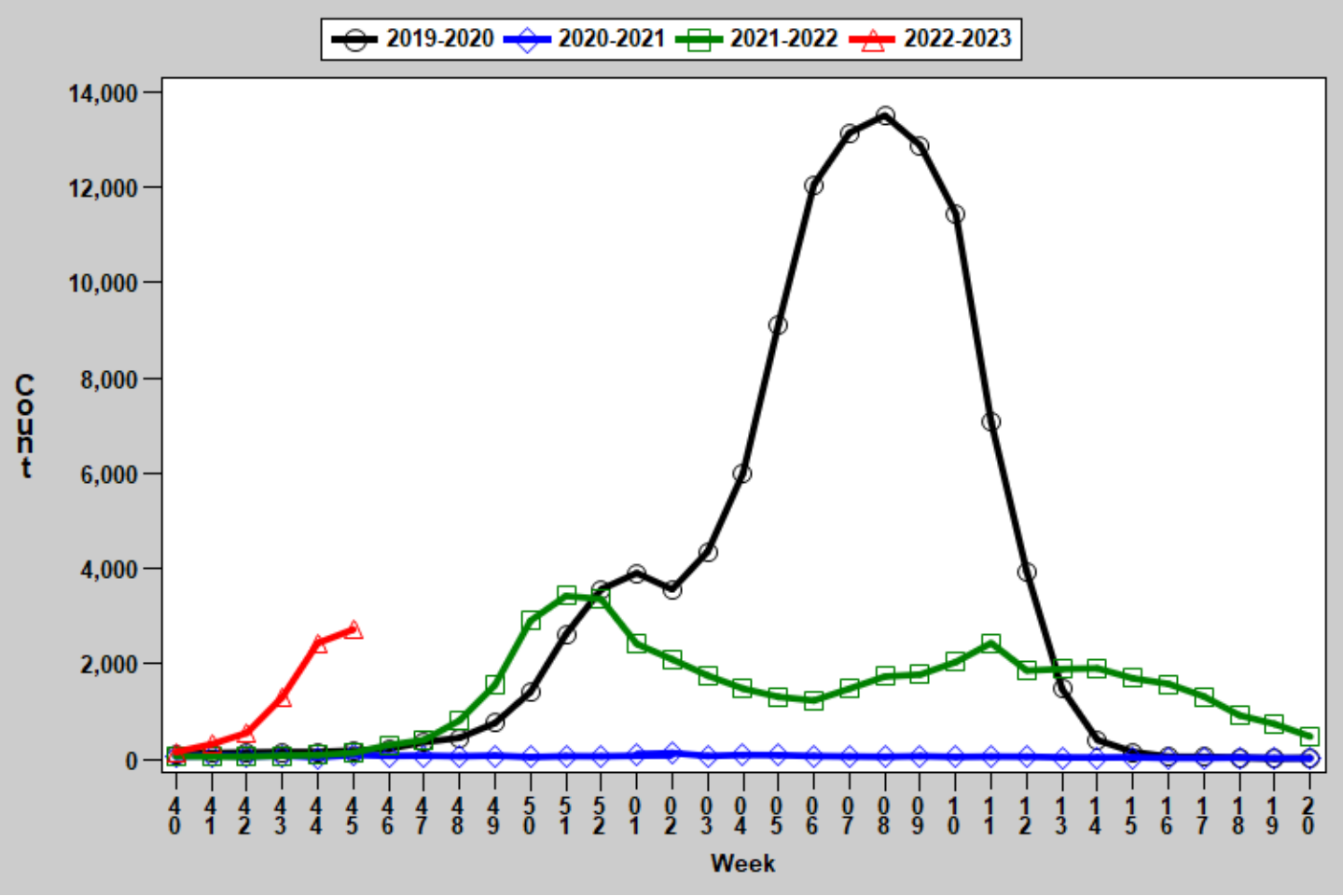
†Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
*Influenza season begins week ending October 8, 2022 (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 45 (November 6, 2022 – November 12, 2022)[*‡]

Region	Week 45 Cases	Week 45 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	128	18.97	441	65.35
Eastern	988	43.57	2,074	91.45
Northwest	987	60.30	2,902	177.30
Southeast	259	59.89	1,077	249.05
Southwest	358	34.07	975	92.80
Total	2,720	44.32	7,469	121.70

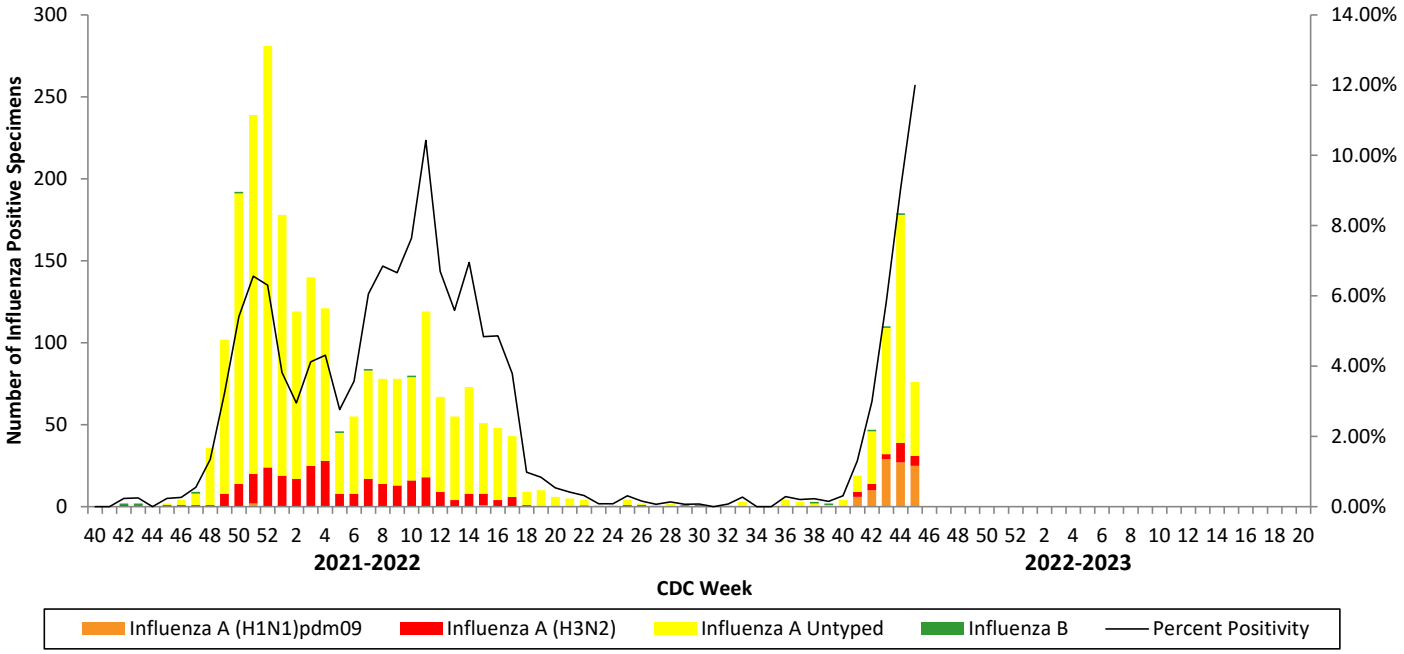
[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]Influenza season begins week ending October 8, 2022 (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, 2019-2023[*]



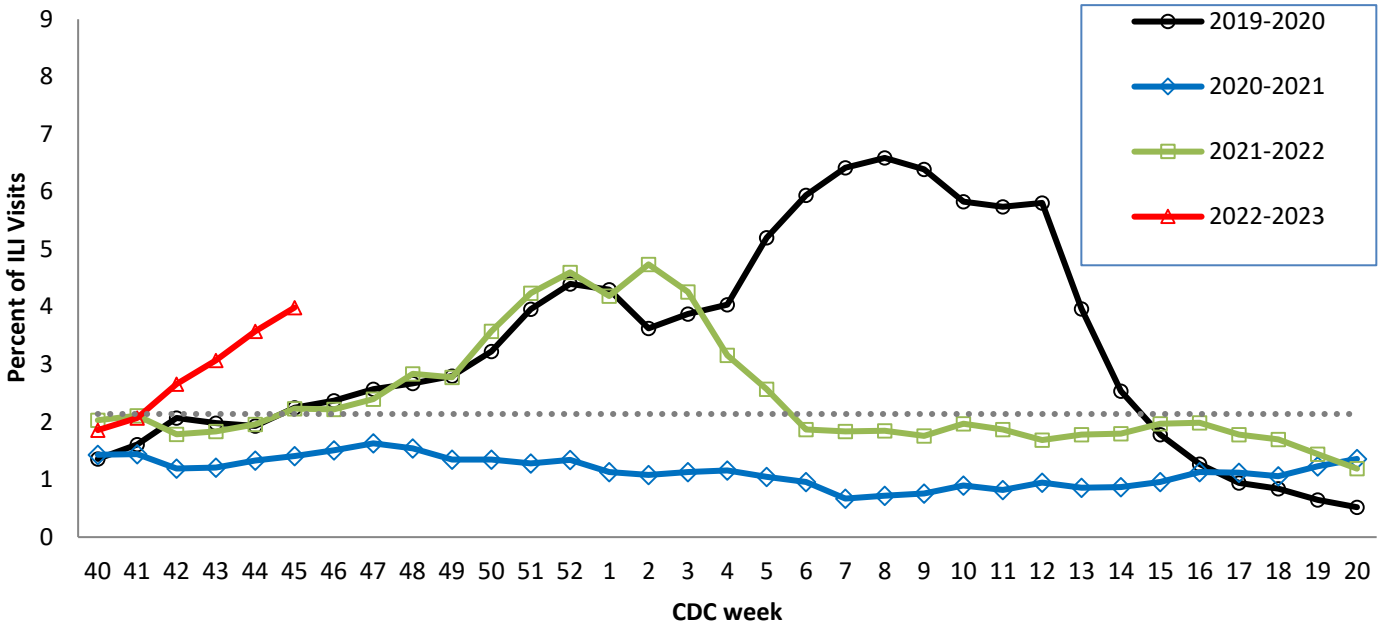
[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending November 12, 2022 (Week 45).Data Source: Missouri Health Information Surveillance System (WebSurv)

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



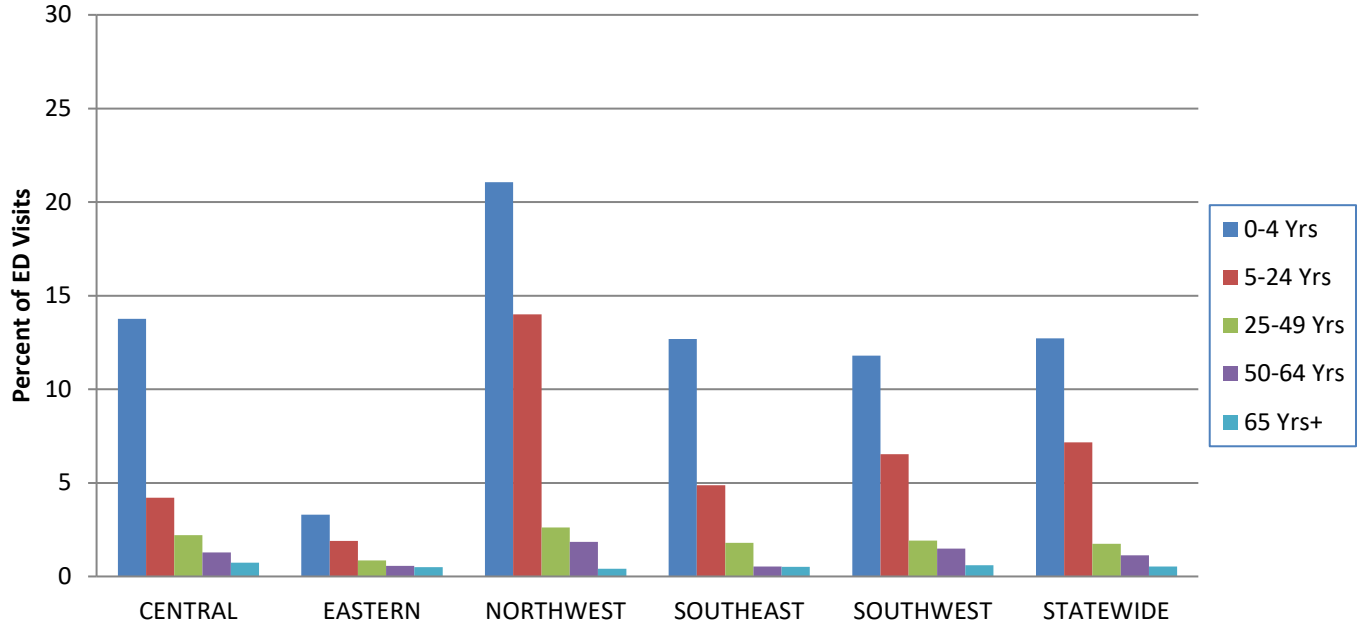
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC). 2022-2023 season-to-date through the week ending November 12, 2022 (Week 45).

Figure 6. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, 2019-2023 Influenza Seasons*‡



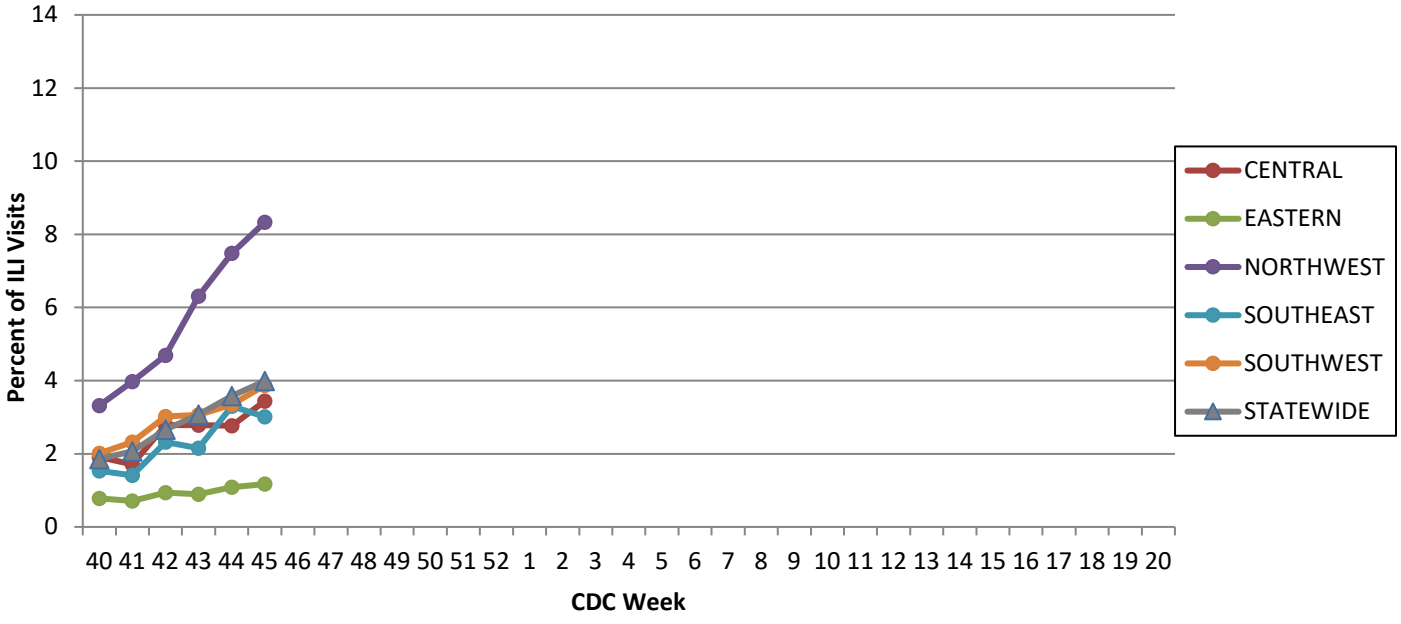
*The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease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

Figure 7. Percentage of Emergency Department (ED) Visits for Influenza-like Illness (ILI) in ESSENCE Participating Hospitals, by Age Group, Region and Statewide, Week 45, 2022*



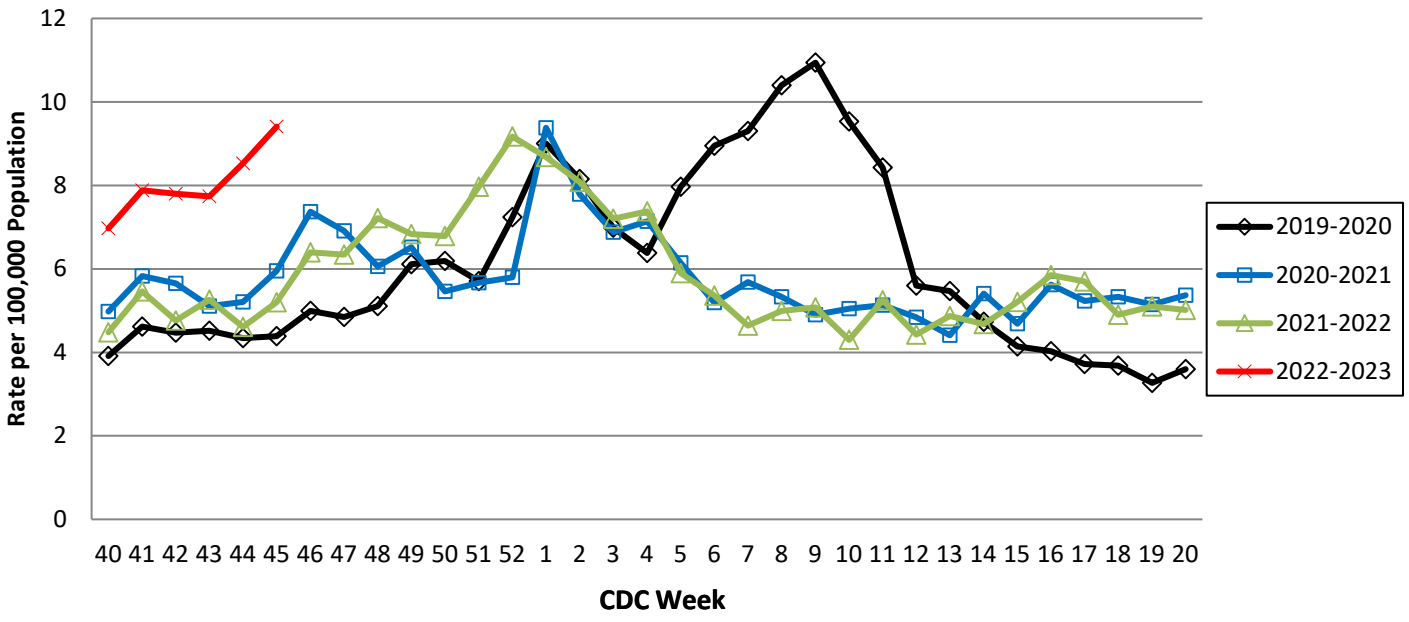
Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
*The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest 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, 2022-2023 Influenza Season*



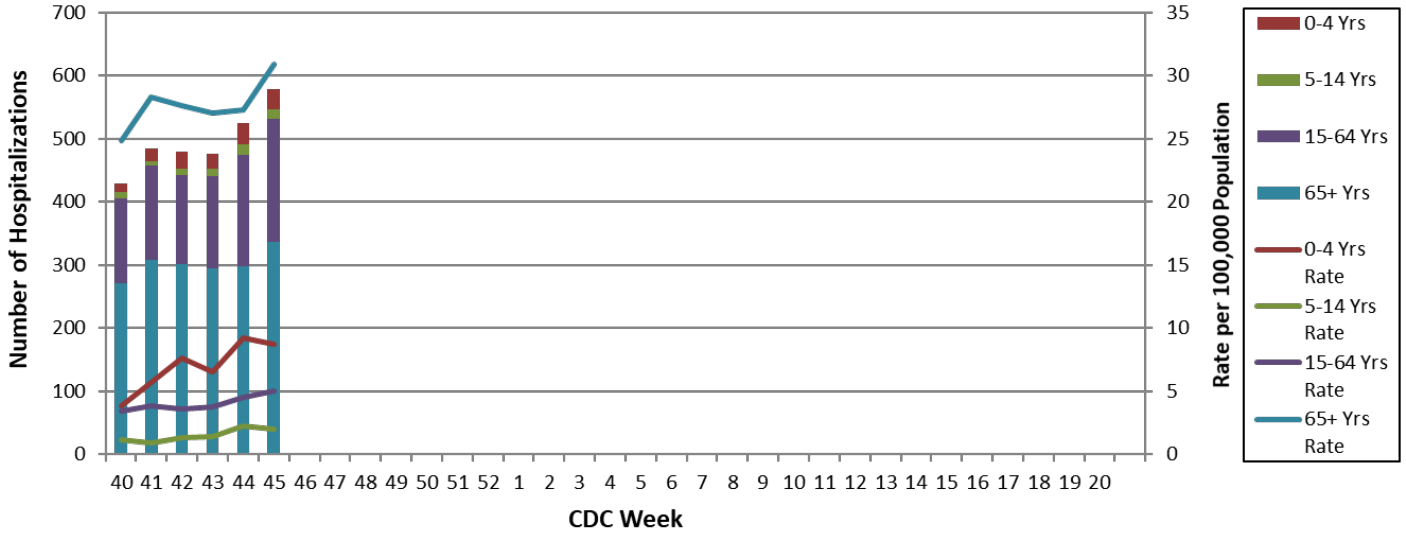
Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
*The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest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

Figure 9. Weekly Rate of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Missouri Hospitals, 2019-2023 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 45, 2022-2023 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/