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

Week 52: December 25, 2022 – December 31, 2022

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

Summary:

- Influenza activity remains elevated across Missouri. The estimated influenza activity for Week 52 continues to be widespread[2], however, the overall Influenza-like illness (ILI) activity decreased to Level 9 in the high category.[3]

- During Week 52, a total of 4,016 laboratory-positive[4] influenza cases (3,876 influenza A, 135 influenza B and 5 untyped) were reported. The influenza type for reported season-to-date cases includes 95.8% influenza A, 3.8% influenza B and 0.4% untyped. The percentage of respiratory specimens testing positive for influenza in Missouri laboratories reporting to the National Respiratory and Enteric Virus Surveillance System (NREVSS) was 18.6% for Week 52.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased to 3.28 % for Week 52 (Figure 6).[5]

- Fifty-four influenza-associated deaths have been reported in Missouri as of Week 50 (week ending December 17, 2022).[6]

- Eight influenza outbreaks and two influenza-associated school closures have been reported as of Week 52.

- Seasonal influenza activity continues to be high nationwide but is declining. 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.

---

[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 52**
- **Reported Week-specific Rate per 100,000 Population, CDC Week 52**
- **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 50-52 (December 11, 2022 – December 31, 2022)*

Influenza Type	Week 50	Week 51	Week 52	2022-2023* Season-to-Date
Influenza A	14,285	10,264	3,876	86,746
Influenza B	406	332	135	3,445
Influenza Unknown Or Untyped	37	24	5	330
Total	14,728	10,620	4,016	90,521

†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 52 (December 25, 2022 – December 31, 2022)*‡

Age Group	Week 52 Cases	Week 52 Rate‡	2022-23* Season-to-Date	2022-2023* Season-to-Date Rate‡
00-04	581	157.85	13,358	3,629.10
05-24	1,269	81.14	40,148	2,566.99
25-49	1,001	51.52	18,844	969.80
50-64	582	48.49	9,316	776.20
65+	583	54.89	8,855	833.78
Total	4,016	65.43	90,521	1,474.90

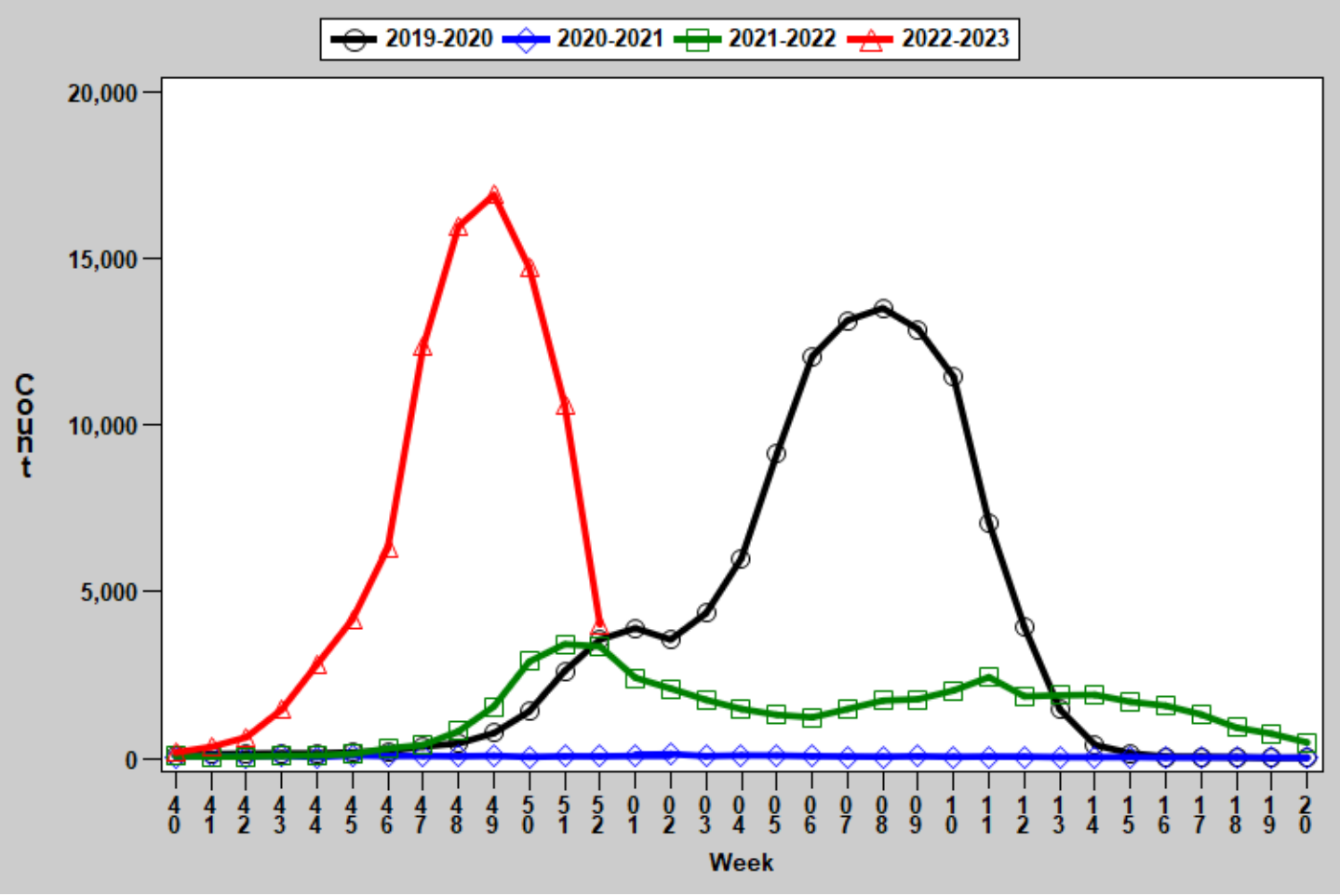
†Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
*Influenza season 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 52 (December 25, 2022 – December 31, 2022)*‡

Region	Week 52 Cases	Week 52 Rate‡	2022-23* Season-to-Date	2022-23* Season-to-Date Rate‡
Central	454	67.28	8,750	1,296.64
Eastern	1,646	72.58	26,670	1,176.03
Northwest	730	44.60	27,253	1,665.08
Southeast	271	62.67	10,035	2,320.56
Southwest	915	87.09	17,813	1,695.46
Total	4,016	65.43	90,521	1,474.90

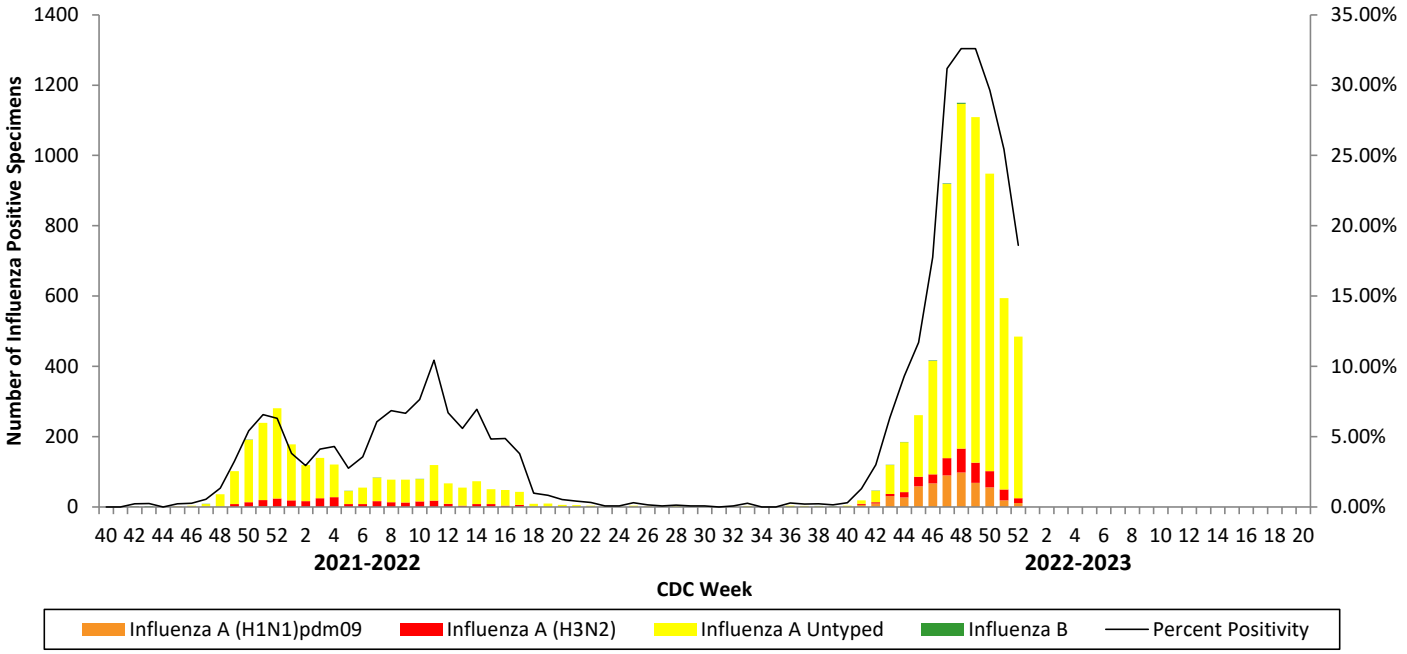
†Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
*Influenza season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



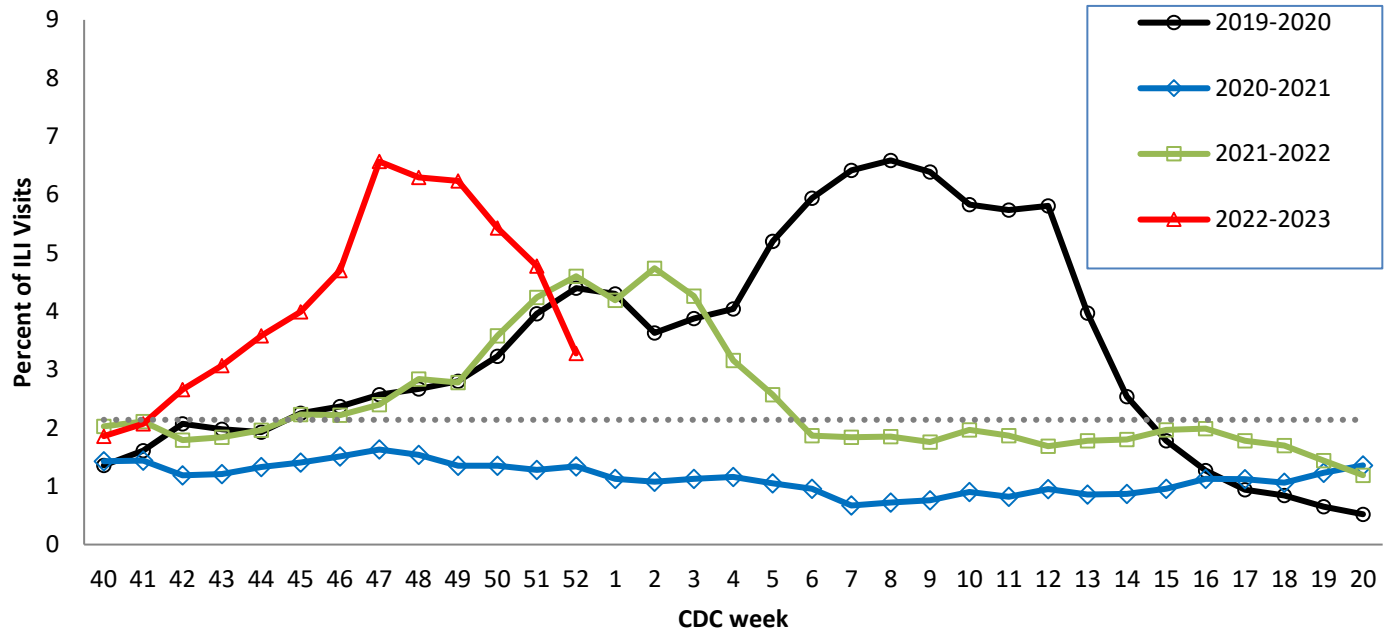
†Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
*2022-2023 season-to-date through the week ending December 31, 2022 (Week 52).Data Source: Missouri Health Information Surveillance System (WebSurv)

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



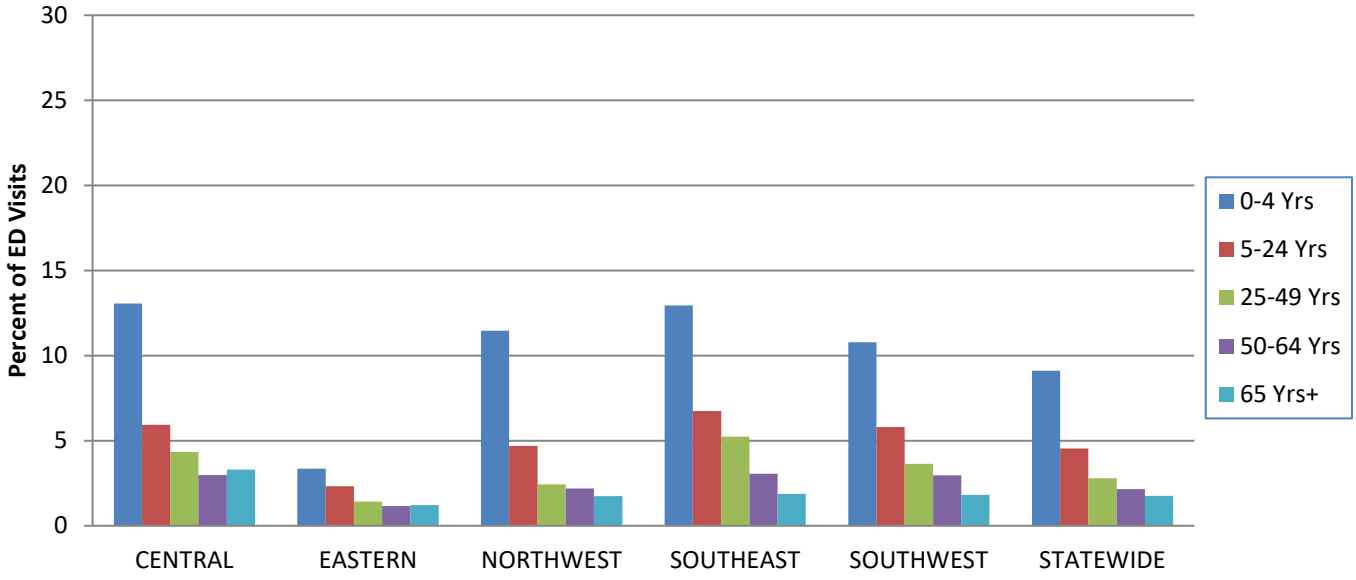
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC). 2022-2023 season-to-date through the week ending December 31, 2022 (Week 52).

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



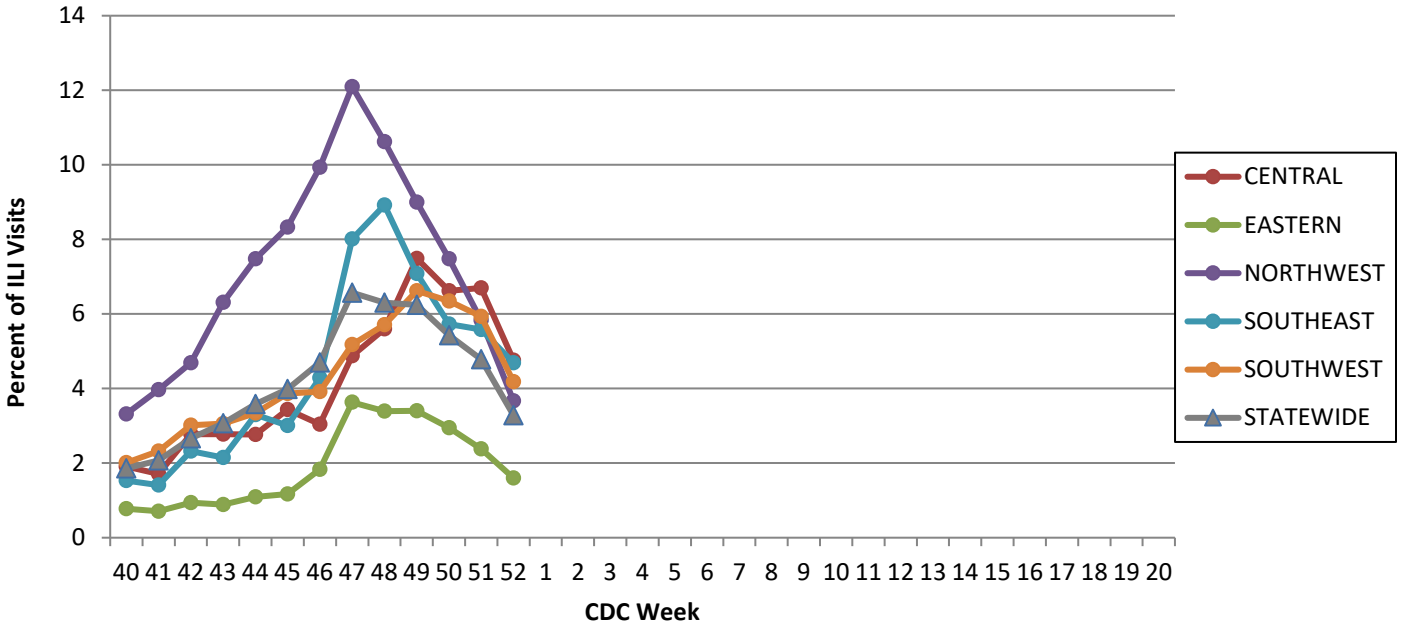
*The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease 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 52, 2022*



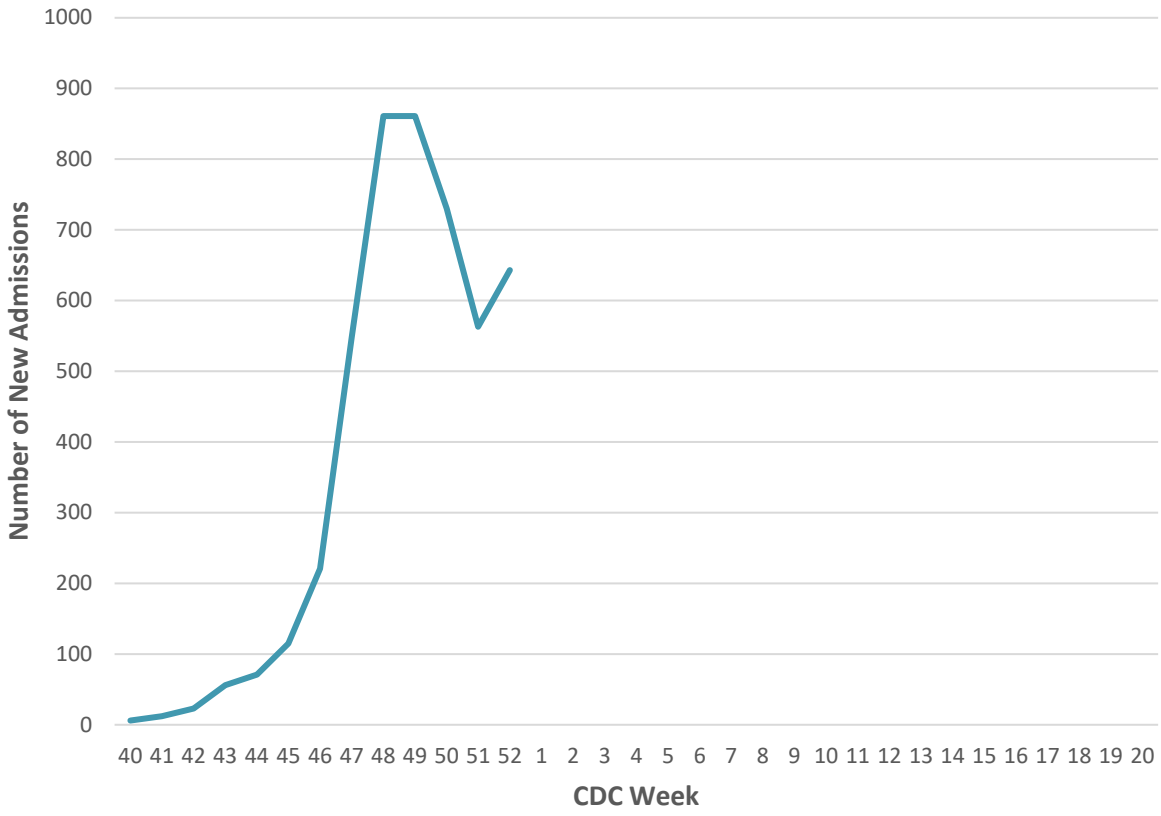
Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
*The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest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



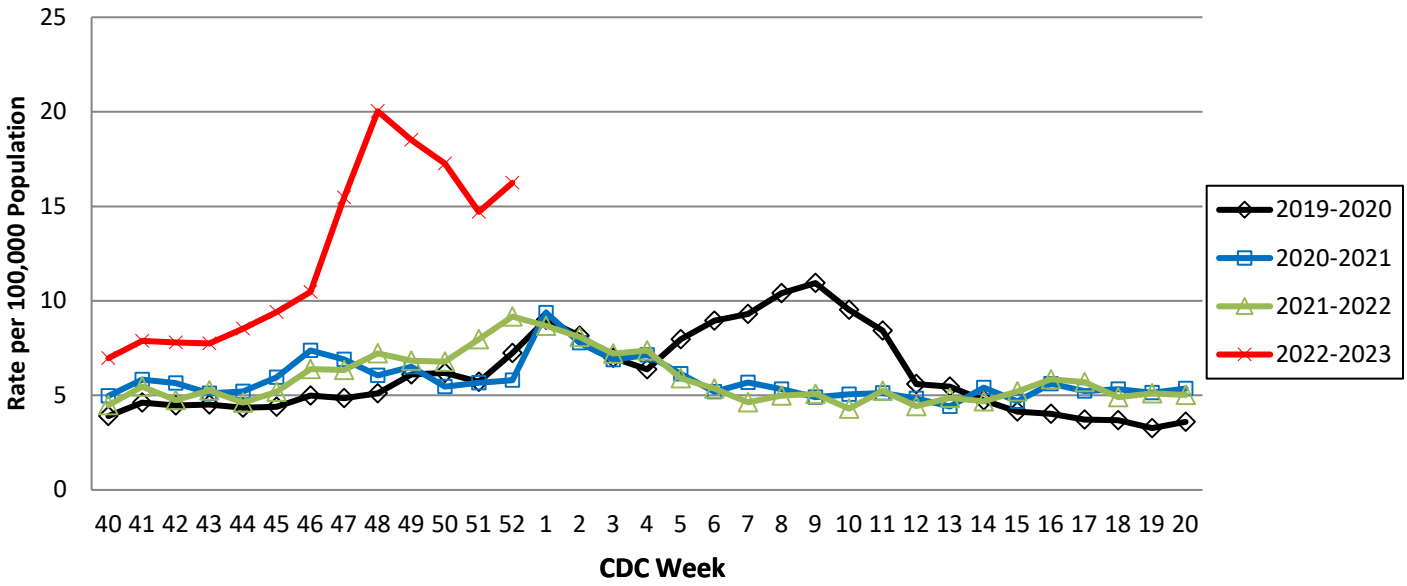
Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
*The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest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

Figure 9. New Influenza Hospital Admissions Reported to HHS Protect, Missouri Hospitals, 2022-2023 Season



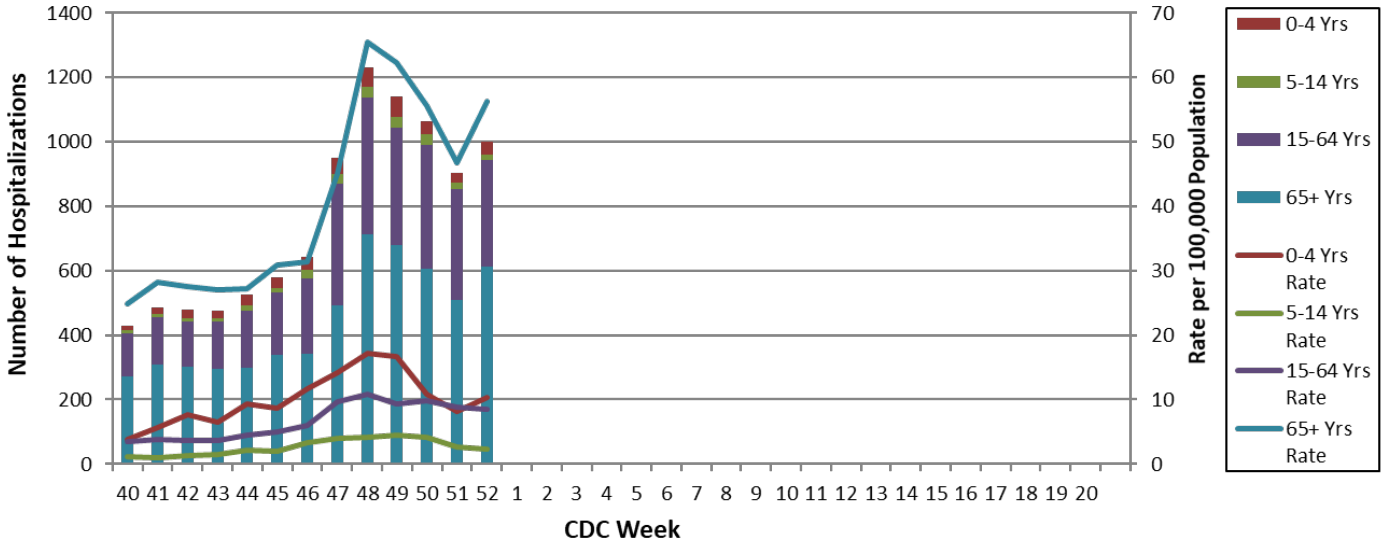
Data Source: https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries | HealthData.gov. 2022-2023 season-to-date through the week ending December 24, 2022 (Week 52).

Figure 10. 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 11. Number of Patients Hospitalized with Influenza and/or Pneumonia Syndromes in Participating Missouri Hospitals by Age Group, Week 52, 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/