



Missouri Weekly Influenza Surveillance Report 2022-2023 Influenza Season¹

Week 51: December 18, 2022 – December 24, 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 51 continues to be widespread², however, the overall Influenza-like illness (ILI) activity decreased to Level 10 in the high category.³
- During Week 51, a total of 7,166 laboratory-positive⁴ influenza cases (6,967 influenza A, 177 influenza B and 22 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 23.7% for Week 51.
- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased to 4.78 % for Week 51 (Figure 6).⁵
- Thirty-three influenza-associated deaths have been reported in Missouri as of Week 49 (week ending December 10, 2022).⁶
- Eight influenza outbreaks and two influenza-associated school closures have been reported as of Week 51.
- 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>.

¹The 2022- 2023 influenza season begins CDC Week 40 (week ending October 8, 2022) and ends CDC Week 39 (week ending September 30, 2023).

²Widespread 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.

³ILI 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>

⁴Laboratory-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.

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

⁶Influenza 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 through 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 51
- Reported Week-specific Rate per 100,000 Population, CDC Week 51
- 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 49-51 (December 4, 2022 – December 24, 2022)*

Influenza Type	Week 49	Week 50	Week 51	2022-2023* Season-to-Date
Influenza A	16,341	13,778	6,967	78,904
Influenza B	481	378	177	3,113
Influenza Unknown Or Untyped	29	36	22	321
Total	16,851	14,192	7,166	82,338

[†]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 51 (December 18, 2022 – December 24, 2022)**

Age Group	Week 51 Cases	Week 51 Rate [‡]	2022-23* Season-to-Date	2022-2023* Season-to-Date Rate [‡]
00-04	1,160	315.15	12,199	3,314.23
05-24	3,018	192.97	37,226	2,380.17
25-49	1,420	73.08	16,843	866.81
50-64	766	63.82	8,252	687.55
65+	802	75.52	7,818	736.13
Total	7,166	116.76	82,338	1,341.57

[†]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 51 (December 11, 2022 – December 17, 2022)^{}**

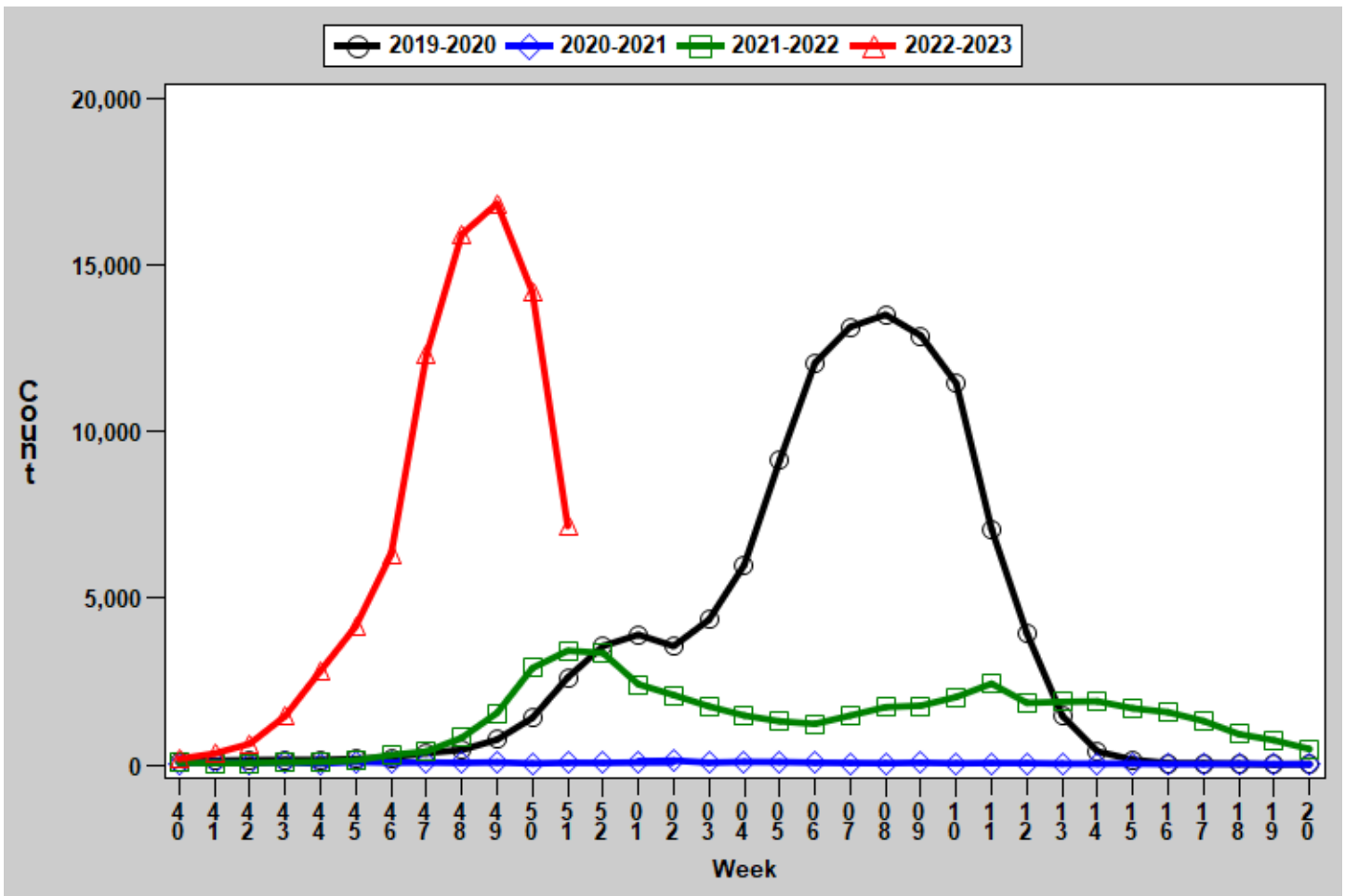
Region	Week 51 Cases	Week 51 Rate [‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate [‡]
Central	633	93.80	7,341	1,087.85
Eastern	3,173	139.92	24,743	1,091.06
Northwest	1,202	73.44	25,454	1,555.17
Southeast	739	170.89	9,675	2,237.31
Southwest	1,419	135.06	15,125	1,439.61
Total	7,166	116.76	82,338	1,341.57

[†]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

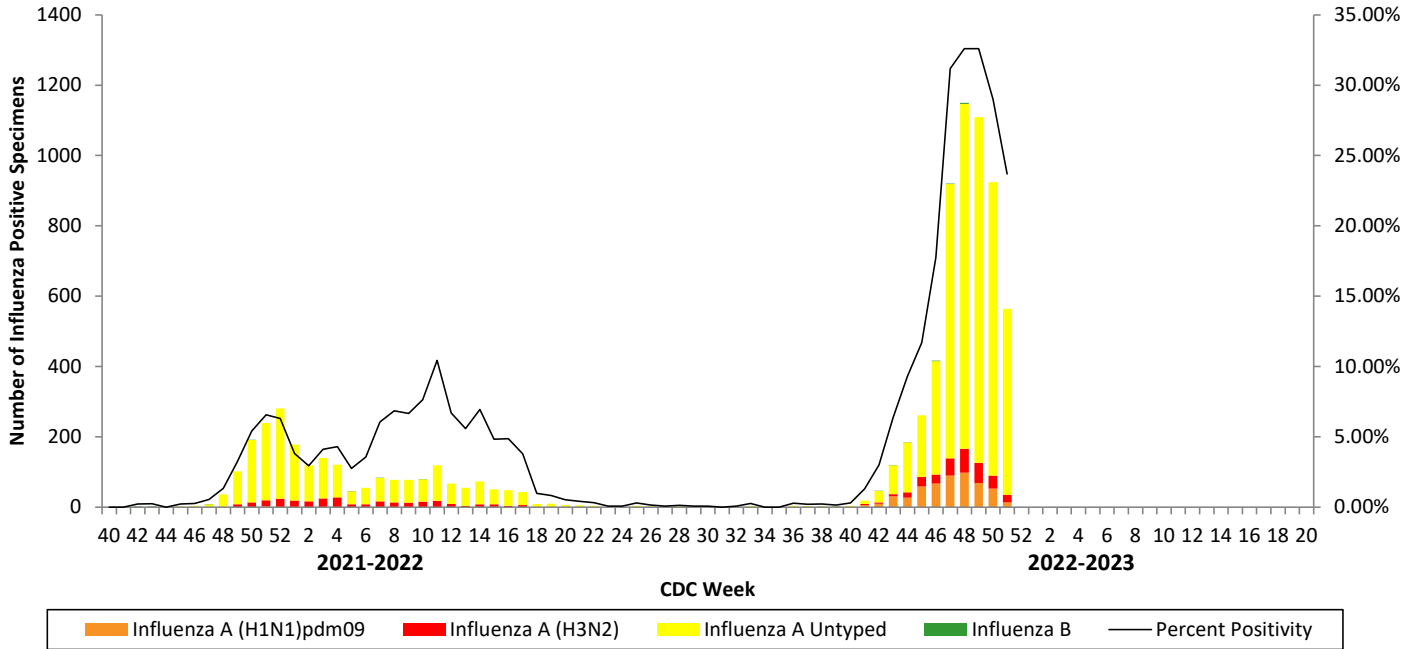
Figure 4. Number of Laboratory-positive[†] Influenza Cases by CDC Week, Missouri, 2019-2023*



[†]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.

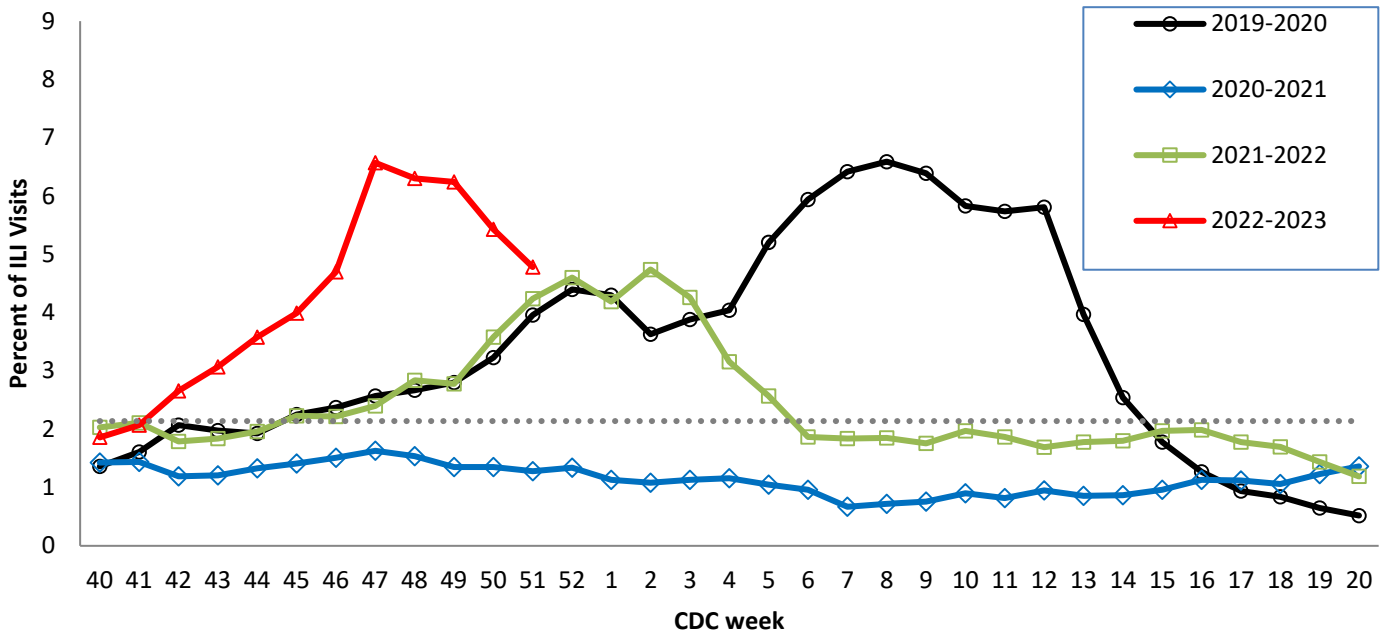
*2022-2023 season-to-date through the week ending December 24, 2022 (Week 51).Data Source: Missouri Health Information Surveillance System (WebSurv)

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



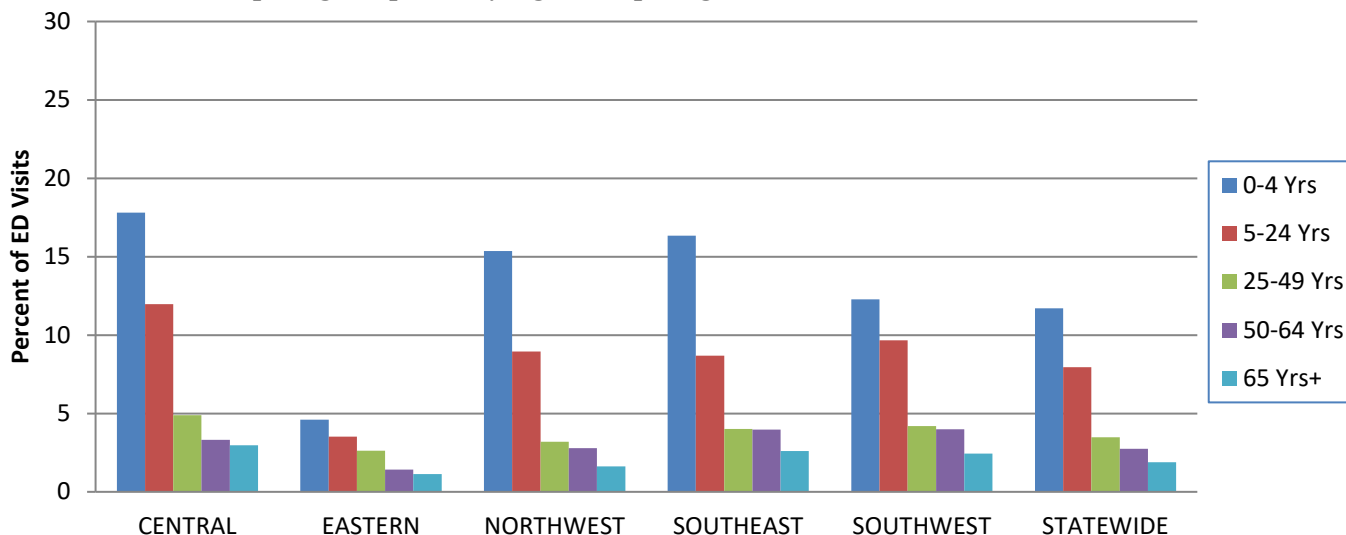
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC). 2022-2023 season-to-date through the week ending December 24, 2022 (Week 51).

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



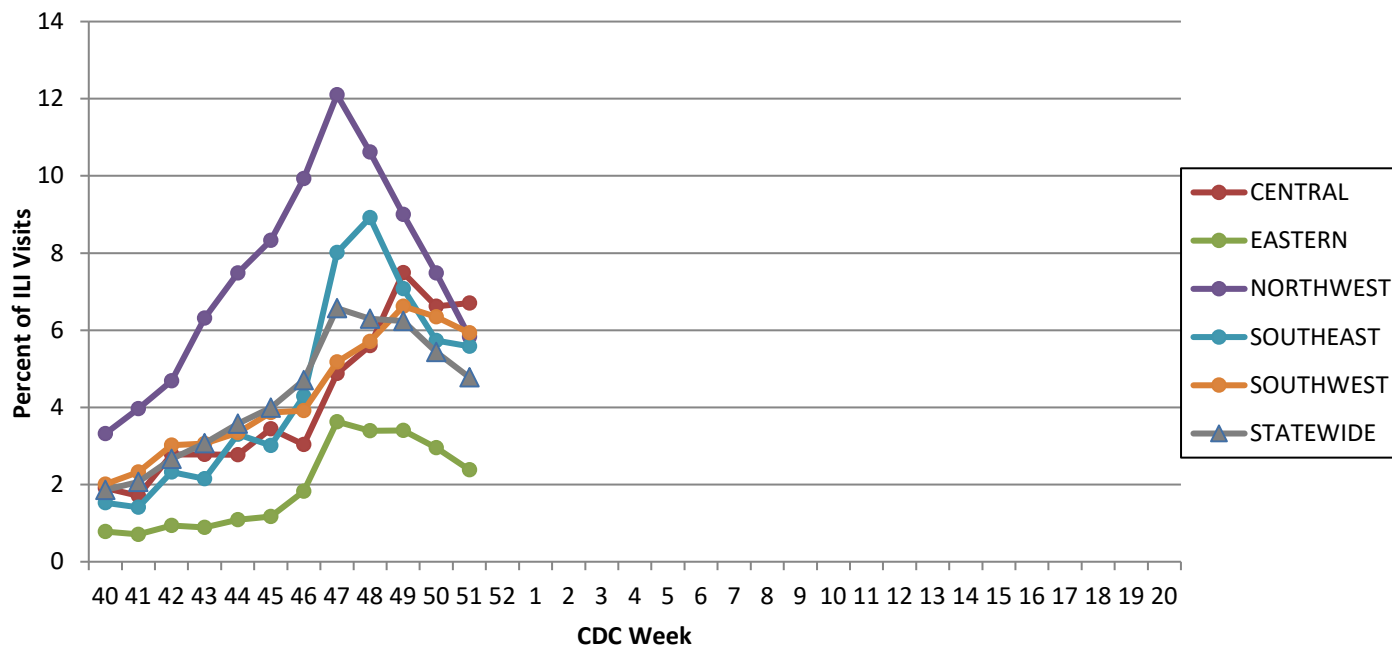
**The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease 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 51, 2022*



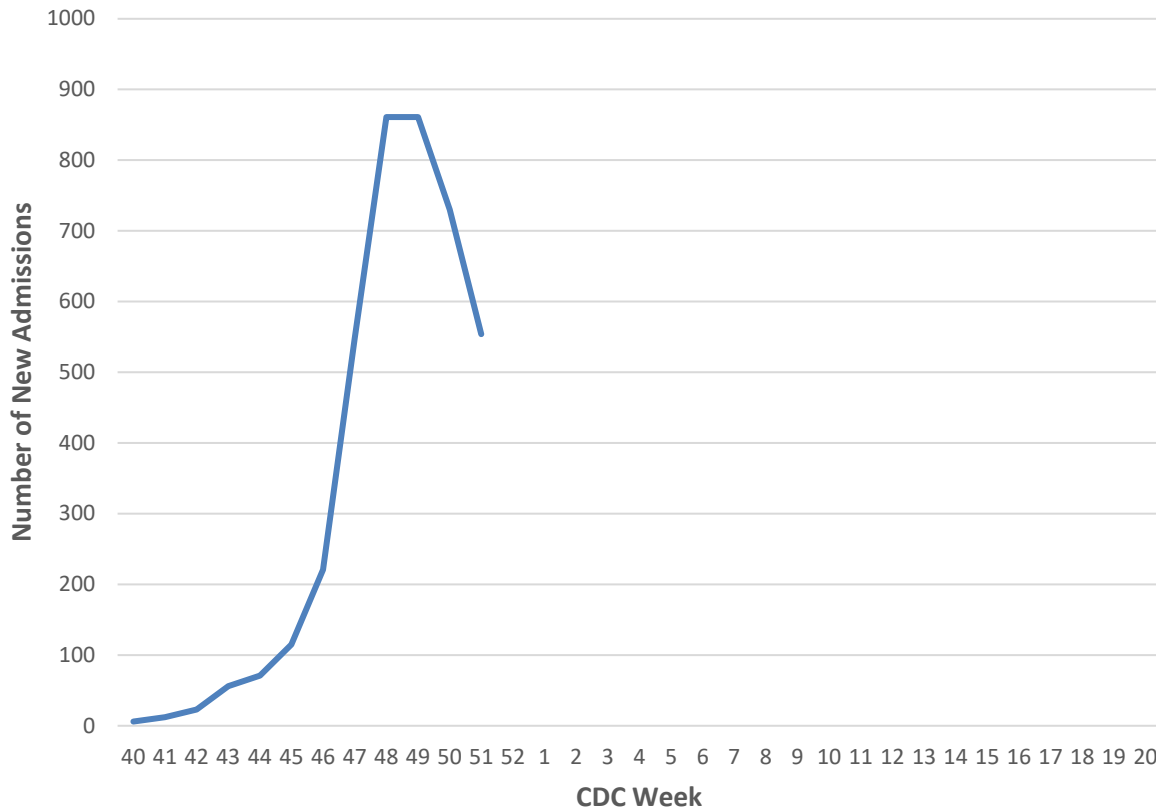
Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
 *The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest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



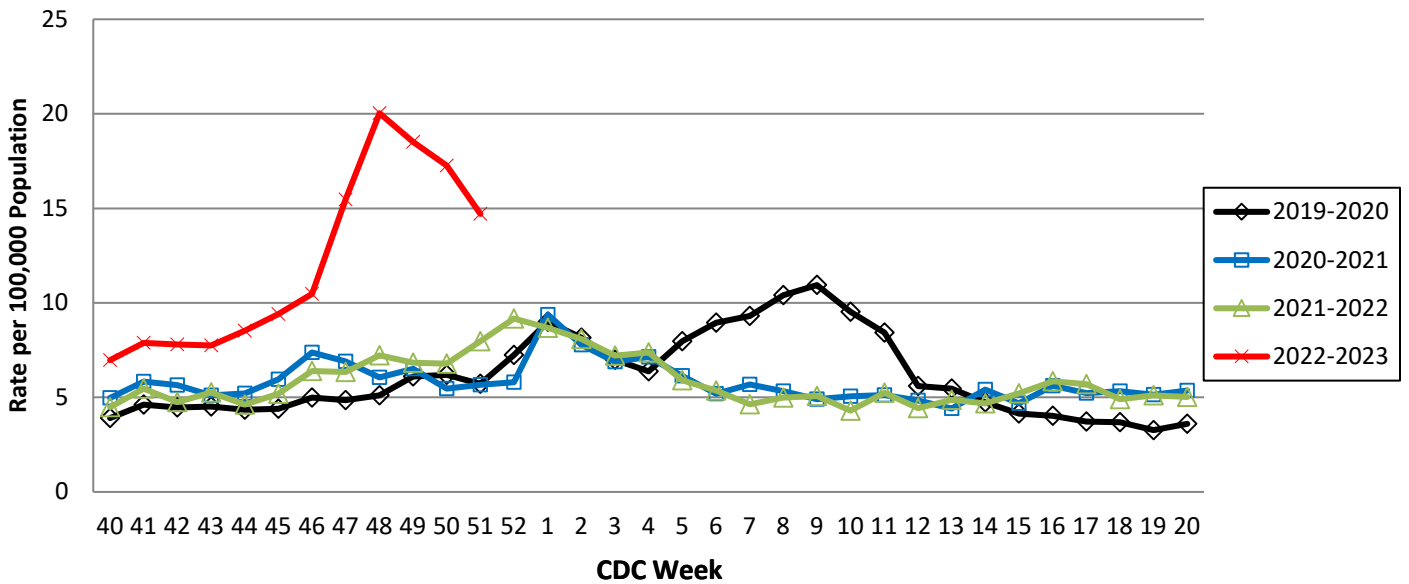
Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
 *The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest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

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



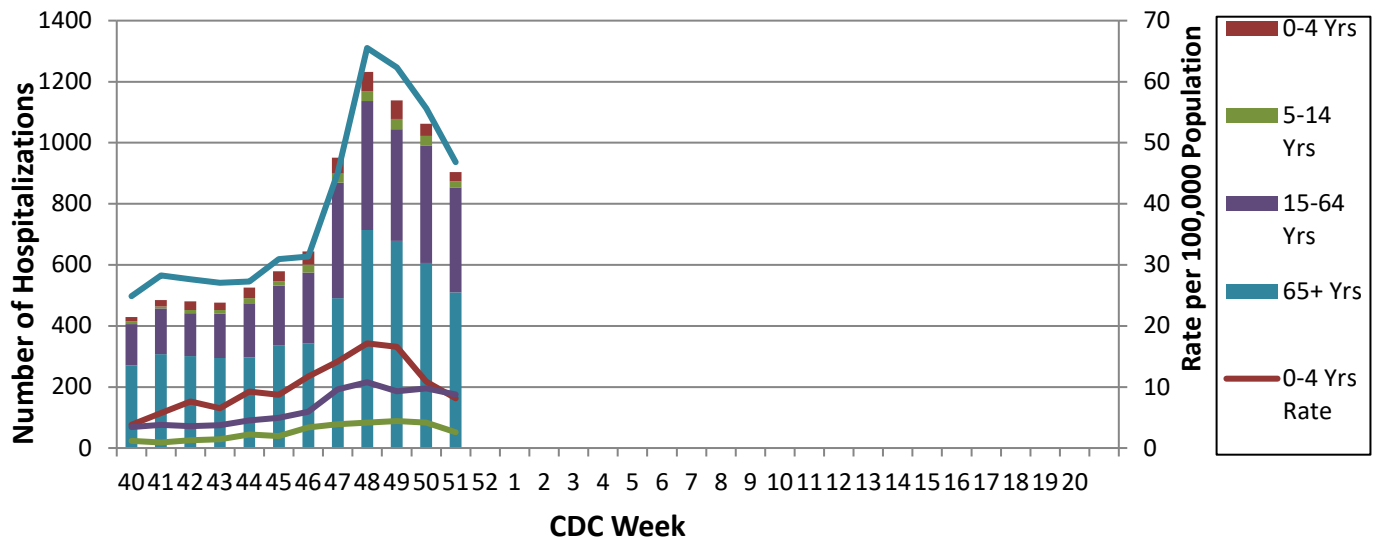
Data Source: [https://healthdata.gov/Hospital/COVID-19 Reported Patient Impact and Hospital Capacity by State Timeseries](https://healthdata.gov/Hospital/COVID-19%20Reported%20Patient%20Impact%20and%20Hospital%20Capacity%20by%20State%20Timeseries) | HealthData.gov. 2022-2023 season-to-date through the week ending December 24, 2022 (Week 51).

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 51, 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/