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

Week 48: November 27, 2022 – December 3, 2022

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

Summary:

- Influenza activity remains high across Missouri. The estimated influenza activity for Week 48 is widespread[2], and the overall Influenza-like illness (ILI) activity remains at Level 11 in the very high category.[3]

- During Week 48, a total of 10,896 laboratory-positive[4] influenza cases (10,593 influenza A, 263 influenza B and 40 untyped) were reported. The influenza type for reported season-to-date cases includes 97.2% influenza A, 2.4% 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) is 26.6% Week 48.

- Influenza-like illness activity for the hospital emergency room visit chief complaint data reported through ESSENCE decreased slightly during Week 48. The reported percentage of visits for ILI through ESSENCE increased to 6.30 % (Figure 6).[5]

- Five influenza-associated deaths have been reported in Missouri as of Week 46[6].

- Four influenza outbreaks have been reported in Missouri as of Week 48.

- Seasonal influenza activity continues to be high nationwide. 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 48**

- **Reported Week-specific Rate per 100,000 Population, CDC Week 48**

- **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 46-48 (November 13, 2022 – December 3, 2022)[*]

Influenza Type	Week 46	Week 47	Week 48	2022-2023[*] Season-to-Date
Influenza A	5,534	10,802	10,593	35,387
Influenza B	321	303	263	1,846
Influenza Unknown Or Untyped	76	33	40	219
Total	5,931	11,138	10,896	37,452

[†]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 48 (November 27, 2022 – December 3, 2022)[*‡]

Age Group	Week 48 Cases	Week 48 Rate[‡]	2022-23[*] Season-to-Date	2022-2023[*] Season-to-Date Rate[‡]
00-04	1,699	461.58	5,284	1,435.56
05-24	4,518	288.87	18,046	1,153.83
25-49	2,371	122.02	7,584	390.31
50-64	1,195	99.57	3,521	293.37
65+	1,113	104.80	3,017	284.08
Total	10,896	177.53	37,452	610.22

[†]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 48 (November 27, 2022 – December 3, 2022)[*‡]

Region	Week 48 Cases	Week 48 Rate[‡]	2022-23* Season-to-Date	2022-23* Season-to-Date Rate[‡]
Central	843	124.92	2,306	341.72
Eastern	4,417	194.77	11,850	522.54
Northwest	2,798	170.95	13,725	838.56
Southeast	1,406	325.13	4,557	1,053.79
Southwest	1,432	136.30	5,014	477.24
Total	10,896	177.53	37,452	610.22

[†]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[*]
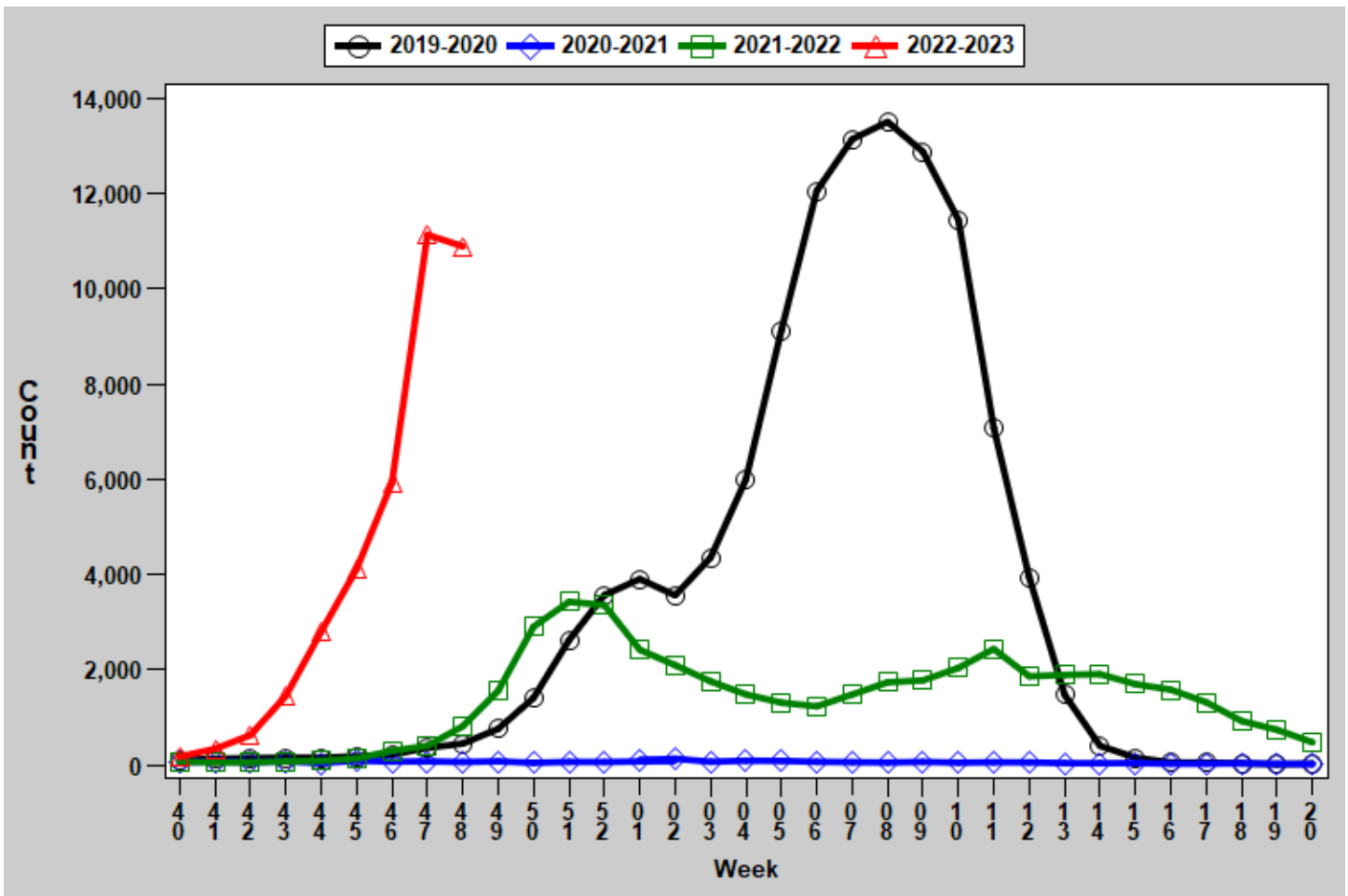
[†]Laboratory-positive influenza includes the following test methods: rapid influenza diagnostic tests (antigen), reverse transcriptase polymerase chain reaction (RT-PCR) and other molecular assays, immunofluorescence antibody staining (Direct (DFA) or Indirect (IFA)), or viral culture.
[*]2022-2023 season-to-date through the week ending December 3, 2022 (Week 48).Data Source: Missouri Health Information Surveillance System (WebSurv)

## Figure 5. Season-to-Date PCR (+) Tests for Influenza in Missouri
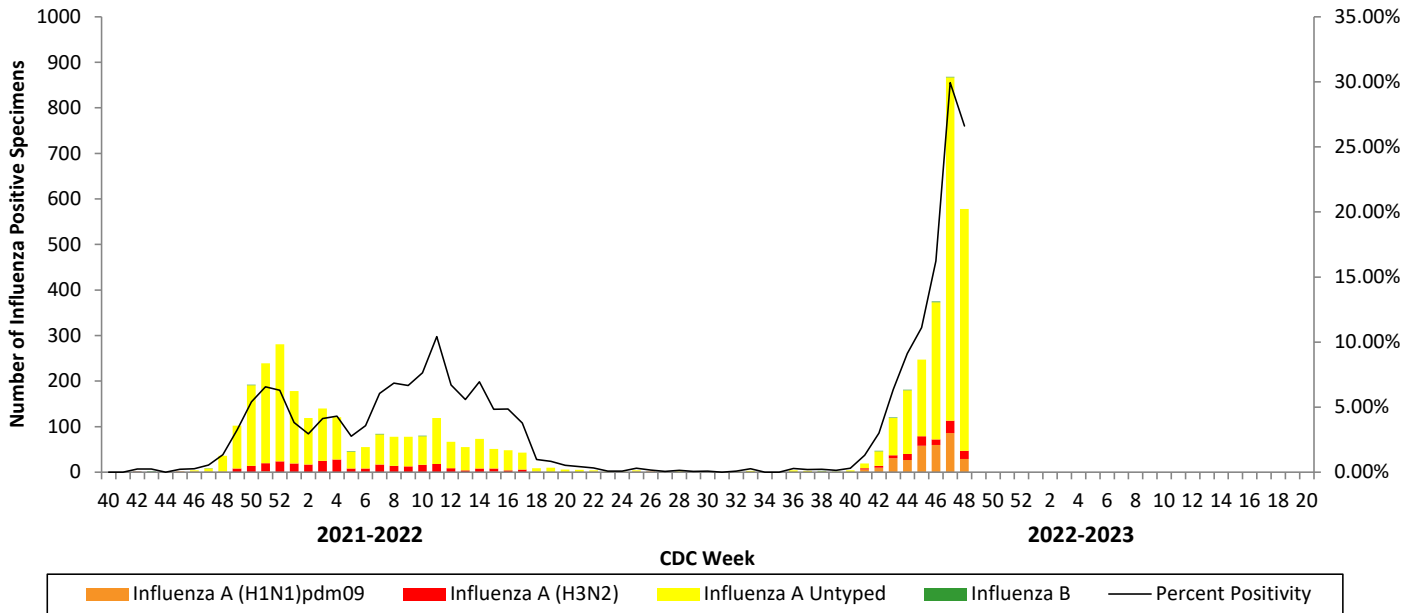
Data Source: National Respiratory and Enteric Virus Surveillance System (NREVSS), Centers for Disease Control and Prevention (CDC).
2022-2023 season-to-date through the week ending December 3, 2022 (Week 48).

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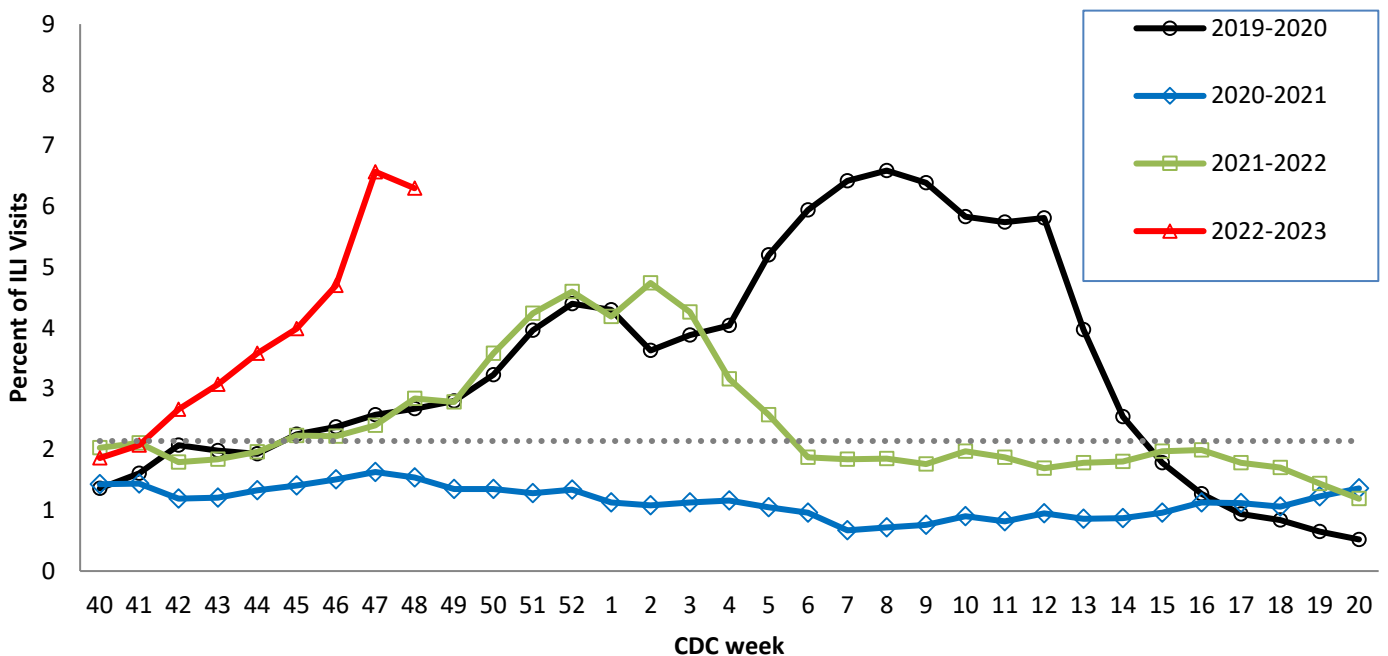

[*]The ESSENCE ILI Baseline is the mean percent of ILI visits for each week during the previous three flu seasons when percentage of ILI visits were less than 2% of total visits, plus two standard deviations. Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable 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 48, 2022[*]
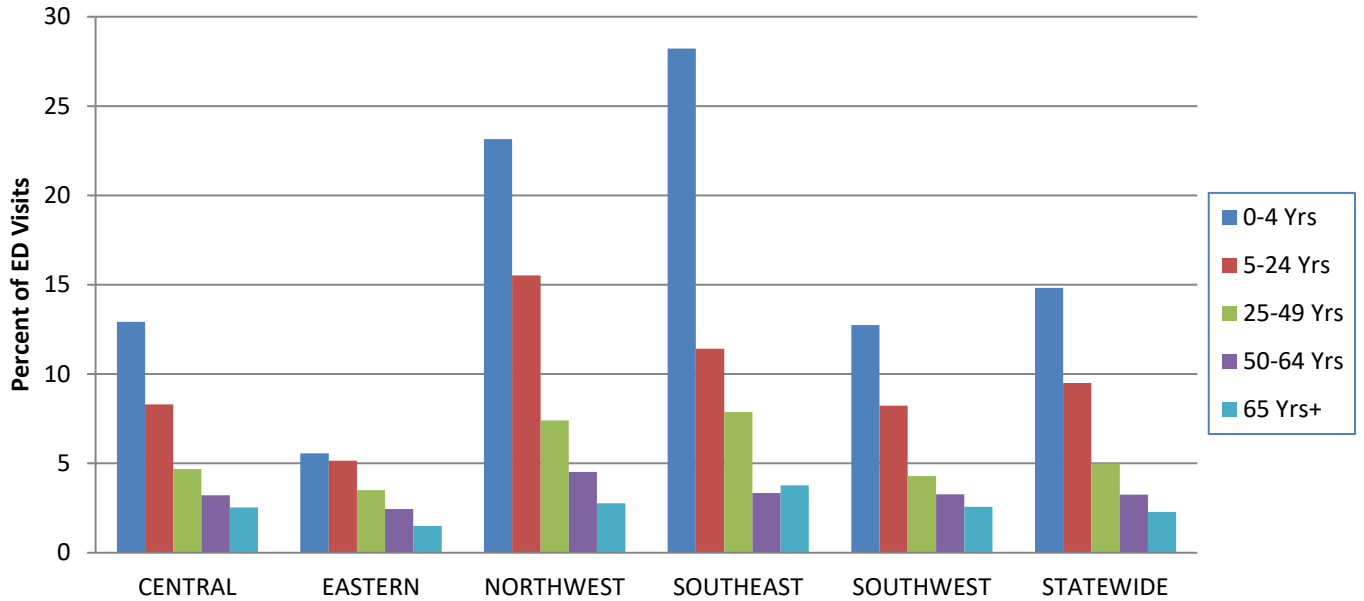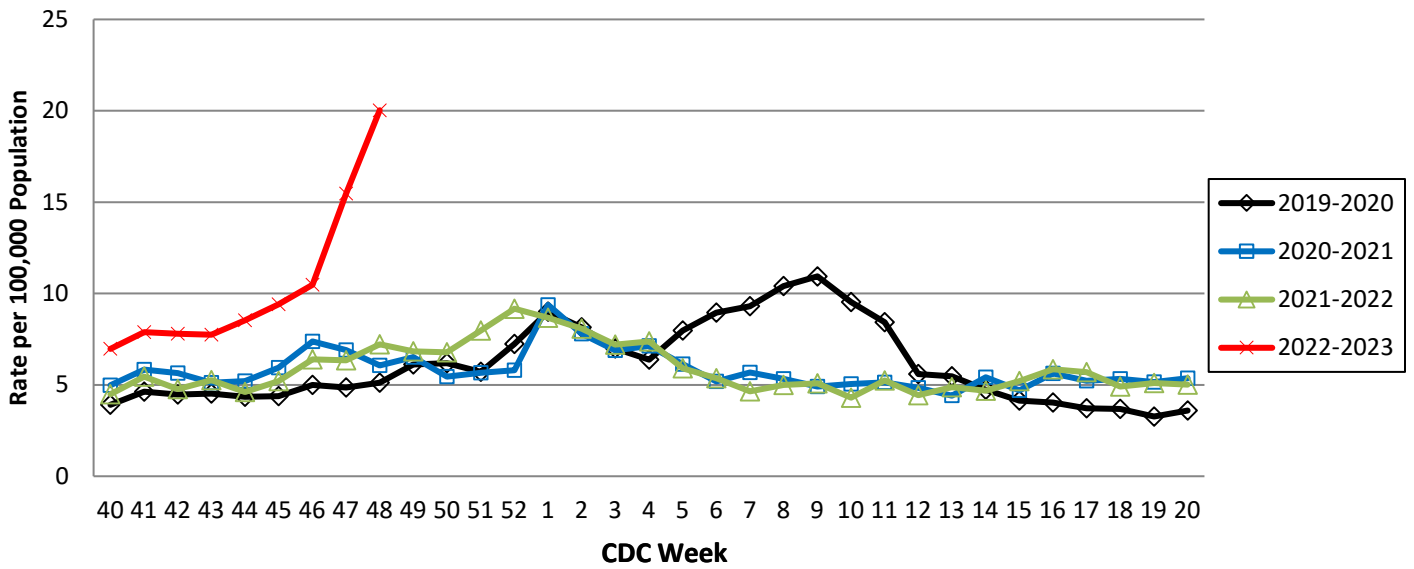

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest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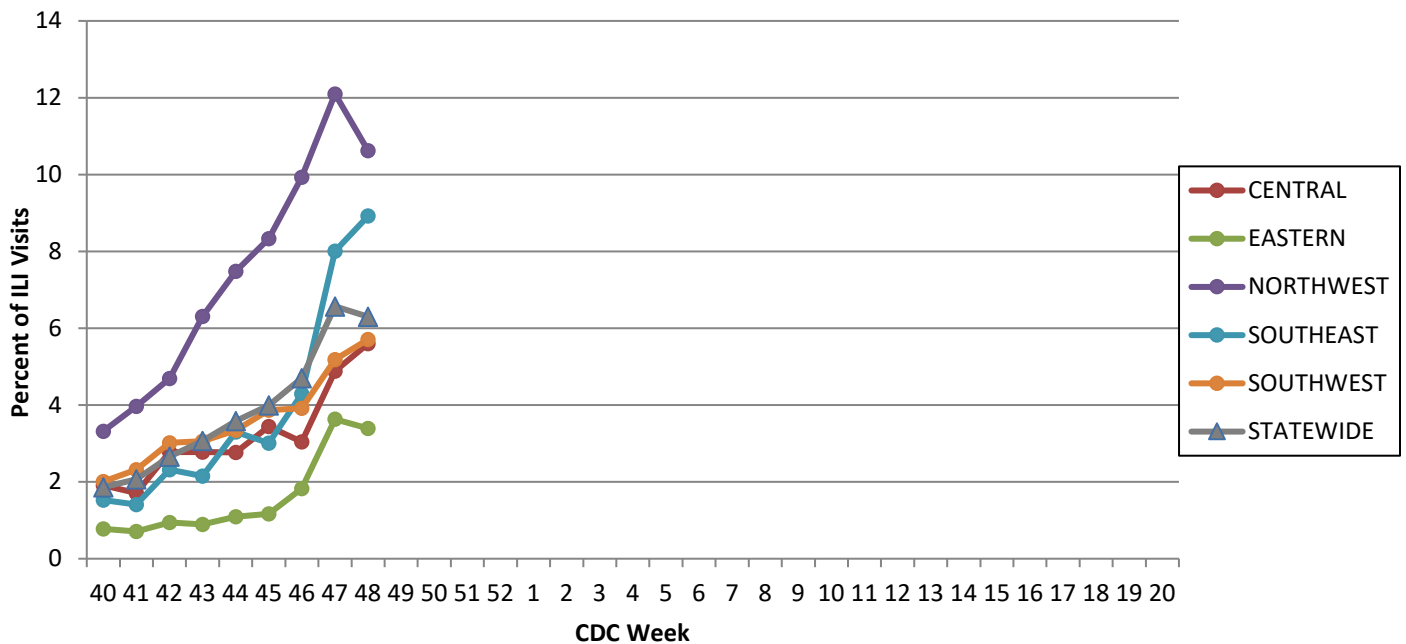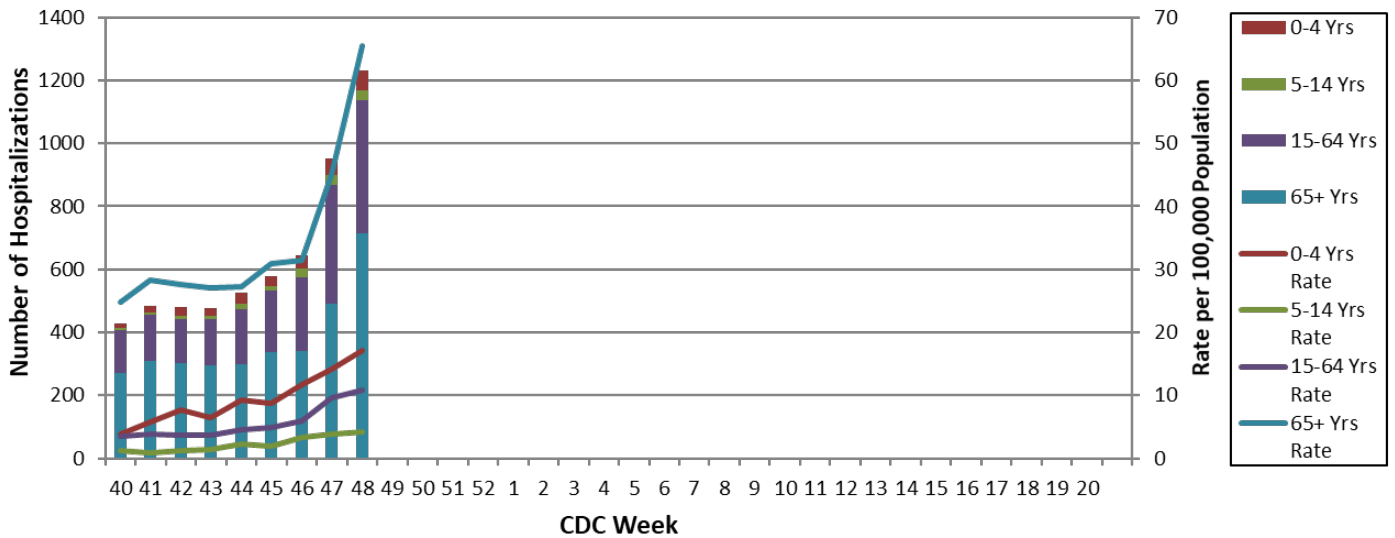

Data Source: Missouri Department of Health and Senior Services (DHSS), Bureau of Reportable Disease Informatics, ESSENCE version 1.20.
[*]The ILI data from a small number of sites located in the Northwest Region of the state is temporarily unavailable in ESSENCE. Therefore, the ILI data for the Northwest 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 48, 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/