



Champion positive health outcomes and behaviors through innovative programs and community engagement

Respiratory Disease Surveillance Report Jefferson County, Missouri

Week 52: December 26, 2021- January 1, 2022

OVERVIEW: The Jefferson County Health Department (JCHD) monitors influenza and other respiratory pathogens, including COVID-19, throughout Jefferson County, Missouri. The Jefferson County Health Department conducts influenza surveillance using passive surveillance and syndromic surveillance. Although influenza illness can occur year-round, the seasonal influenza reporting begins on the Morbidity and Mortality Weekly Report (MMWR¹) Week 40 of a given year and continues through MMWR Week 20 of the following calendar year. COVID-19 surveillance began in March 2020 and has been ongoing. COVID-19 data reflects cases that are entered into Missouri's communicable disease database. Vaccination data for COVID-19 is reported to the Jefferson County Health Department weekly by the Missouri Department of Health and Senior Services (MO DHSS). *All data and information are conditional and may change as more reports are received.*

¹ Data is reported in epidemiologic weeks established by the CDC's Morbidity and Mortality Weekly Report (MMWR). The MMWR week starts on a Sunday and ends on Saturday. Values for MMWR week range from 1 to 53, although most years consist of 52 weeks.

INFLUENZA SURVEILLANCE

Passive Surveillance

Table 1. Number of Laboratory-positive² Influenza Cases by Week, Jefferson County, Missouri

CDC Reporting Week	Week Start Date	A	B	Unknown	Total
40	10/3/2021	5	2	0	7
41	10/10/2021	0	0	0	0
42	10/17/2021	3	0	0	3
43	10/24/2021	2	1	0	3
44	10/31/2021	7	2	0	9
45	11/7/2021	2	4	0	6
46	11/14/2021	3	1	0	4
47	11/21/2021	3	1	0	4
48	11/28/2021	33	7	0	40
49	12/5/2021	73	6	0	79
50	12/12/2021	217	19	0	236
51	12/19/2021	199	6	0	205
52	12/26/2021	126	6	0	132

Table 2. Number of Laboratory-positive Influenza Cases by Age Group, Jefferson County, Missouri
For Cases Reported 10/3/2021- 1/1/2022

Age Group	Type A	Type B	Unknown Type	Total	% TOTAL
00 to <02	9	0	0	9	1.2%
02 to 04	32	4	0	36	4.9%
05 to 14	253	10	0	263	36.1%
15 to 24	170	10	0	180	24.7%
25 to 49	131	20	0	151	20.7%
50 to 64	44	8	0	52	7.1%
65+	34	3	0	37	5.1%
TOTAL	673	55	0	728	100.0%

² 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.

Figure 1. Percentage of Influenza Cases by Type, Jefferson County, Missouri
For Cases Reported 10/3/2021- 1/1/2022

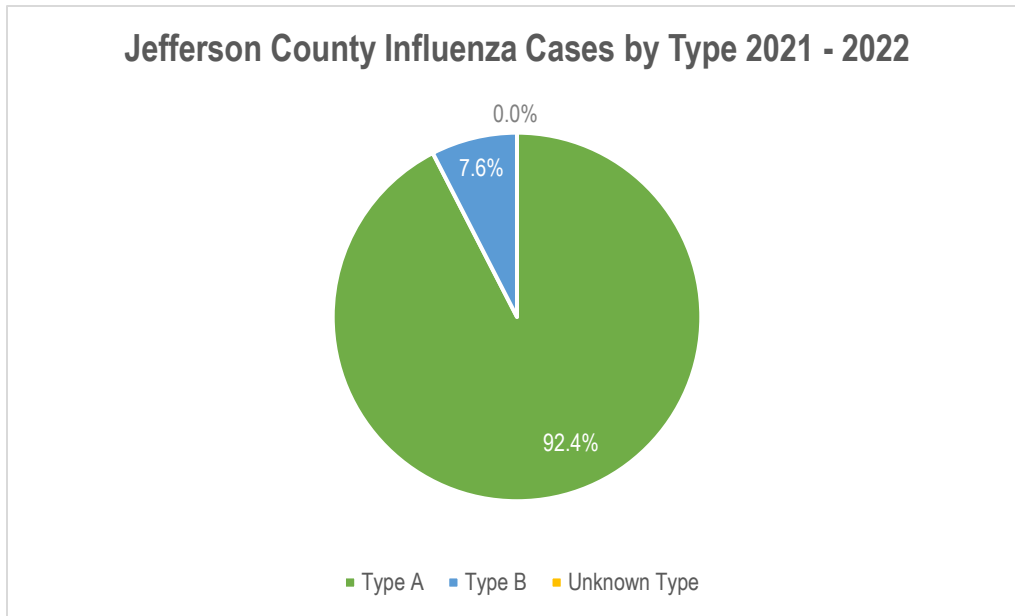
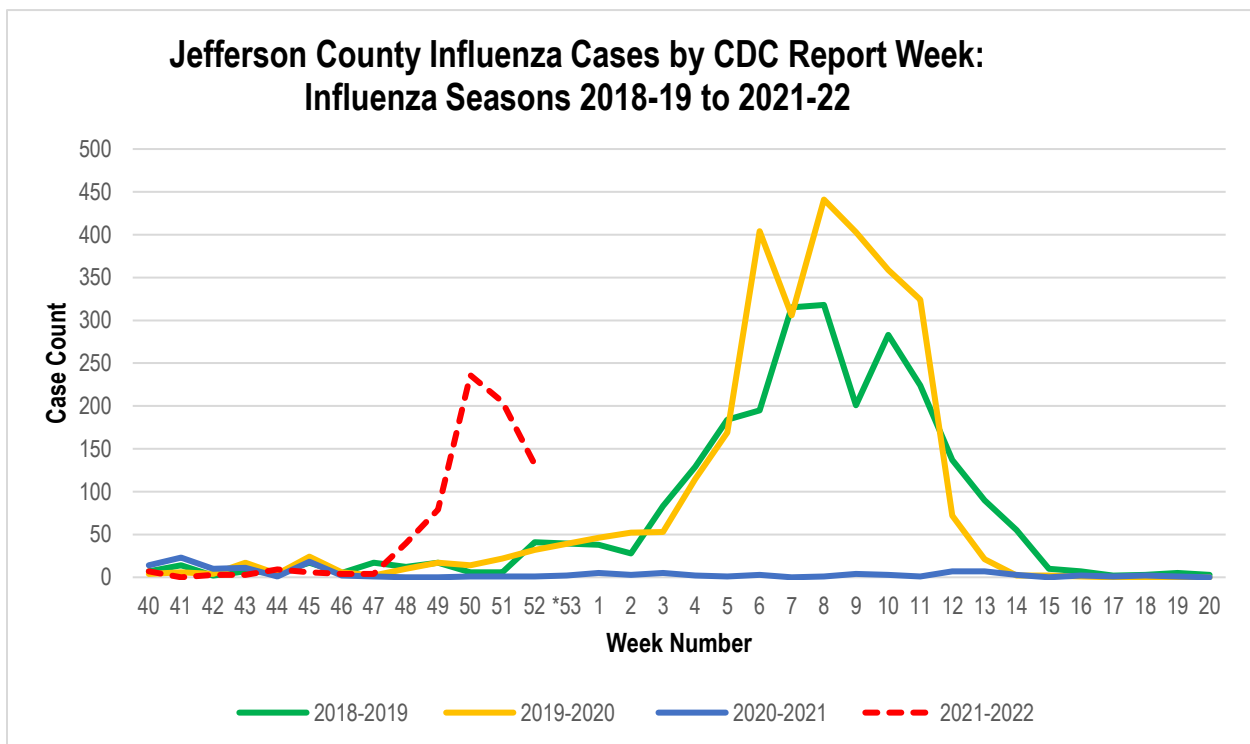


Figure 2. Number of Laboratory-positive Influenza Cases by Week, Influenza Seasons 2018-19 to 2021-22, Jefferson County, Missouri

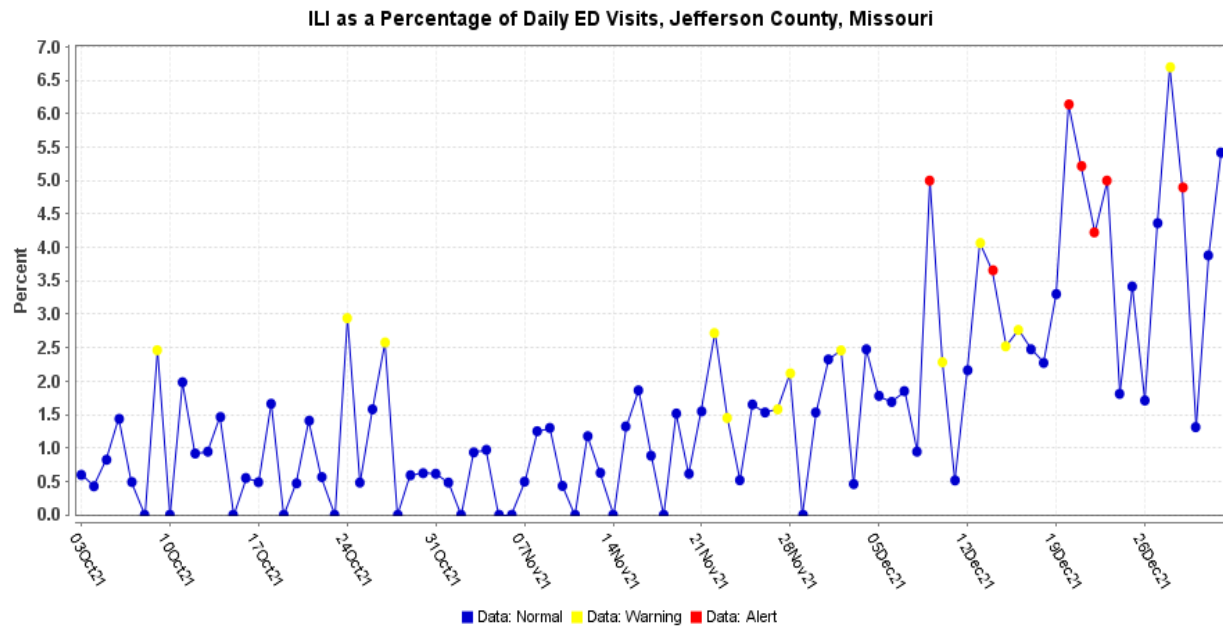


*There were 53 weeks in 2020. The estimates for the other three years' values for the weeks 53 are the averages of weeks 52 and weeks 1.

Syndromic Surveillance

As determined by ESSENCE, Influenza-Like-Illness (ILI³) accounted for 1.31% to 6.69% of daily visits to hospital emergency departments (EDs) for Jefferson County residents during Week 52. The number of visits to local hospital EDs for ILI ranged from three to sixteen per day during Week 52.

**Figure 3. Syndromic Surveillance for Influenza-Like-Illness (ILI)
Jefferson County, Missouri**



Jefferson County Influenza Outbreaks

No influenza outbreaks have been reported in Jefferson County as of Week 52.

Jefferson County Influenza Deaths⁴

One influenza-associated death has been reported in Jefferson County as of Week 52.

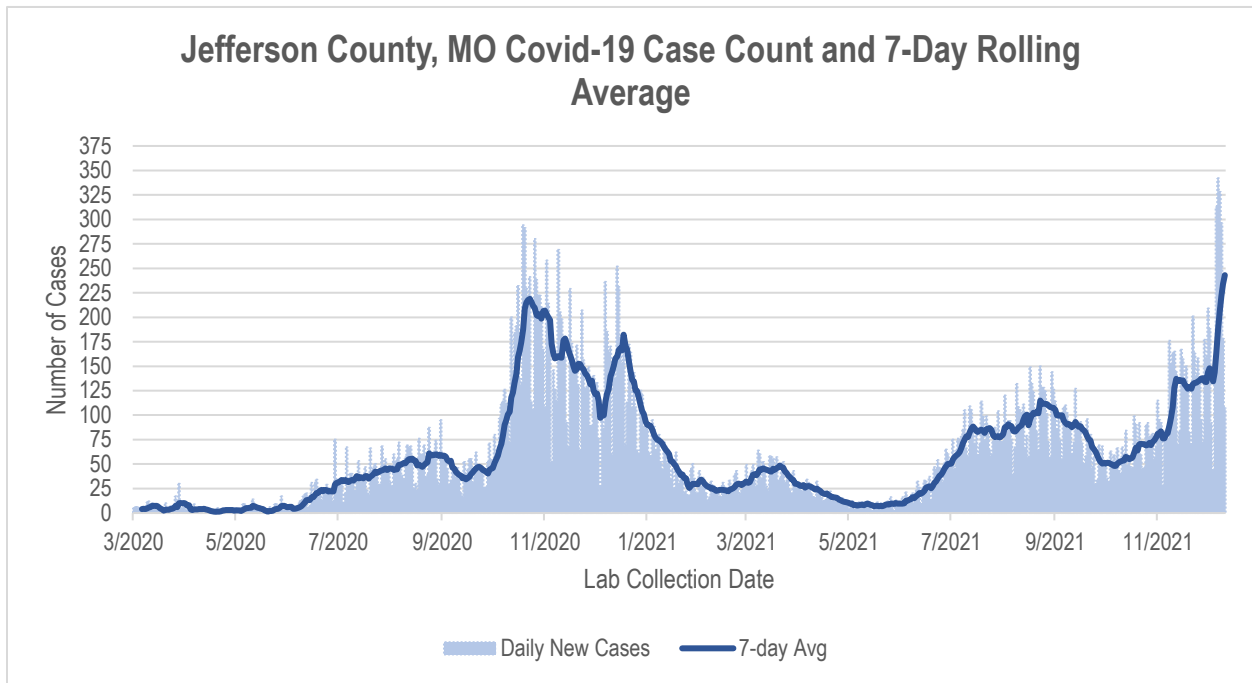
³ ILI is defined by ESSENCE as Emergency Department chief complaints for Influenza or (FeverPlus and (Cough or SoreThroat) and not NonILIFevers).

⁴ All influenza-associated deaths became reportable in Missouri in 2016.

COVID-19 SURVEILLANCE

From 12/25/21 to 1/1/22, the average number of new COVID-19 cases diagnosed among Jefferson County residents increased by 80.76 percent from 134.43 to 243.00 cases per day. The current rate of weekly COVID-19 diagnoses (756.00 cases per 100,000 residents per week) is very high.

Figure 4. Confirmed and Probable Covid-19 Cases Over Time and 7-Day Average, Jefferson County, Missouri



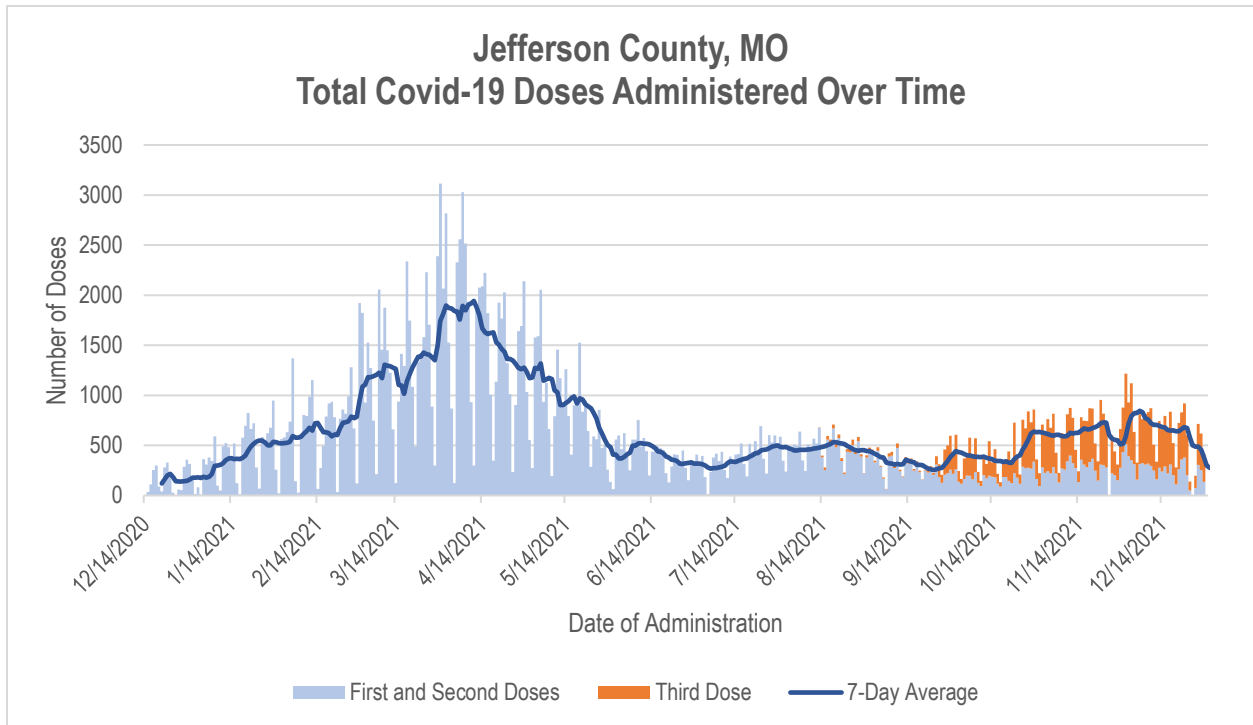
During Week 52 a total of zero Covid-19 associated deaths were reported in Jefferson County. A cumulative total of 378 Covid-19 associated deaths have been reported in Jefferson County as of Week 52.

Table 3. Covid-19 Fatalities and Fatality Rates by Age Group, Jefferson County, Missouri

<i>Age Range:</i>	<i>Fatalities</i>	<i>Rate Per 100</i>
0-9	0	0.0
10-19	0	0.0
20-29	2	0.0
30-39	7	0.1
40-49	13	0.2
50-59	30	0.6
60-69	80	2.0
70-79	108	5.1
80+	138	12.0

As of December 30, 2021, the percentage of Jefferson County residents who have initiated vaccination for COVID-19 is 52.51%. The percentage of residents who have completed the full series of vaccination is 47.77%. The percentage of residents who have received a third dose or booster is 14.64%.

Figure 5. Covid-19 Doses Administered to Jefferson County Residents Over Time and 7-Day Average, Jefferson County, Missouri



ADDITIONAL DATA SOURCES AND INFORMATION

Jefferson County Health Department's Covid-19 Data Dashboard

<https://www.jeffcohealth.org/covid19-data>

Centers for Disease Control and Prevention, National Influenza Surveillance:

<https://www.cdc.gov/flu/weekly/>

Missouri Department of Health and Senior Services, Statewide Influenza Surveillance:

<https://health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php>

World Health Organization, International Influenza Surveillance:

http://www.who.int/influenza/surveillance_monitoring/en/

The National Respiratory and Enteric Virus Surveillance System (NREVSS):

<https://www.cdc.gov/surveillance/nrevss/>

Passive Surveillance

Influenza is a reportable condition in the state of Missouri. JCHD conducts passive influenza surveillance by collecting and aggregating data on all laboratory-positive influenza tests in Jefferson County residents. Passive surveillance provides information on the true burden of influenza illness in Jefferson County but is limited by variations in testing and reporting practices. If diagnostic tests are not conducted on patients presenting to health care providers with influenza-like-illness, or if test results (e.g., of rapid influenza tests) are not reported to JCHD, those persons will not be included in the passive surveillance data. Thus, passive surveillance is likely an underestimate of the true burden of influenza illness in Jefferson County. Passive surveillance helps the health department to keep track of the incidence of influenza cases in the community and facilitates early detection of potential outbreaks.

Syndromic Surveillance

JCHD uses the ESSENCE system to conduct syndromic surveillance for Influenza-Like-Illness (ILI) at Missouri hospital emergency departments (EDs). ESSENCE captures data on all ED visits in persons with chief complaints (rather than final diagnoses or positive laboratory tests) of ILI. ILI chief complaints are those which include the word "influenza" or those that the ESSENCE system parses to [fever and (cough or sore throat)]. The syndromic surveillance data presented above include all ED visits for ILI from those with a Jefferson County residential address. Data from private physicians, clinics, or urgent care centers are not included in ESSENCE. Syndromic surveillance contributes to our understanding of the burden of influenza experienced by the health care system, as well as demonstrating the relative impact over time of influenza with respect to other illnesses.