

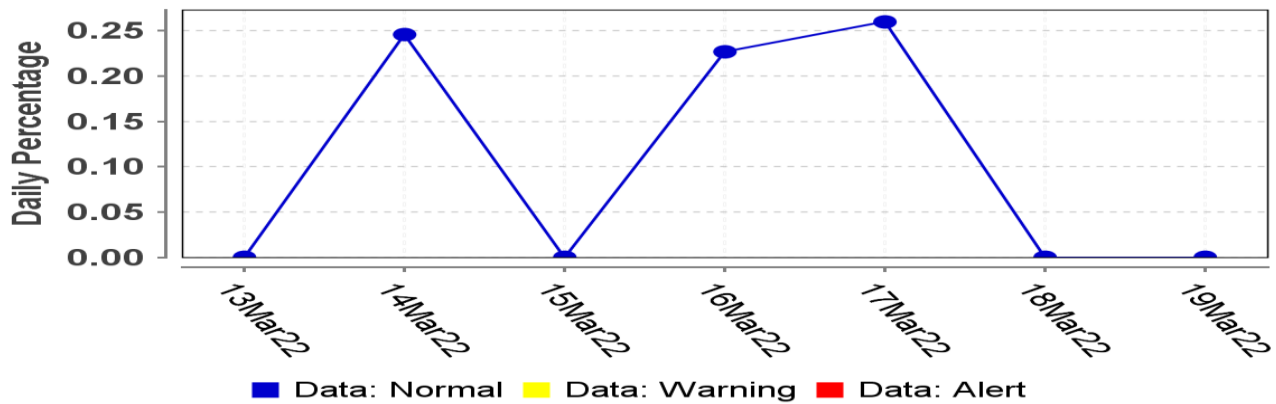


Influenza Surveillance

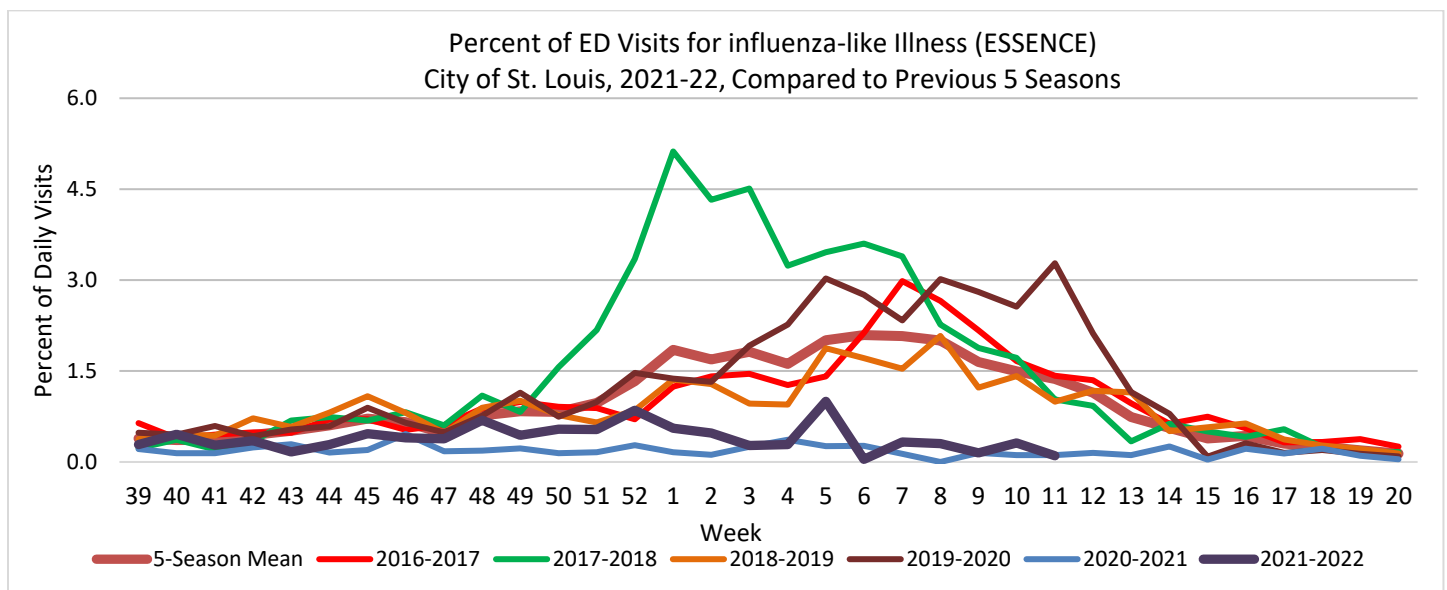
The City of St. Louis Department of Health conducts influenza surveillance using passive, active and syndromic surveillance³. Although influenza illness can occur year-round, the seasonal influenza reporting begins on Morbidity and Mortality Weekly Report (MMWR)⁴ **Week 40** of a given year and continues through MMWR **Week 20** of the following calendar year. Syndromic Surveillance is conducted by reviewing the number of **Influenza-like Illness (ILI)**¹ cases reported by hospital emergency departments (EDs) to the Missouri Department of Health and Senior Service (MO-DHSS).

As determined using DHSS Syndromic Surveillance data, Influenza-like Illness (ILI) reports ranged from 0 % to 0.26 % of daily visits to hospital emergency departments in the City of St. Louis during **Week 11 (ending 3/19/2022)**. The daily number of reports of ILI ranged from 0 to 1 with a total of 3 during Week 11.

ILI as a daily percentage of ED visits - St. Louis City - 03/13/2022 to 03/19/2022



Average of daily visits for ILI (as percentage of all visits to EDs in the City of St. Louis) was 0.105% for the week ending 3/19/2022, compared to 0.115% in 2020-2021 season and 3.278% in 2019-2020 season for the corresponding weeks.





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 2021-2022 Influenza Season
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Passive Surveillance is conducted through reporting of confirmed influenza cases² from various surveillance sites (hospitals, offices of healthcare providers, and laboratories). For the current influenza season, there have been **586** reports of Influenza A and **28** reports of Influenza B with a total of **614** influenza reports from the City of St. Louis. Influenza A accounted for 95% while Influenza B accounted for 5% of total influenza reports.

**The data for the latest two weeks is provisional and is subject to change in the following weeks.*

Table 1: Number of Influenza Reports by Influenza Type

| Influenza Type | Week 9 (2/27/2022– 3/5/2022) | Week 10 (3/6/2022– 3/12/2022) | Week 11 (3/13/2022– 3/19/2022) | 2021-2022* Season-to-Date | Percentage |
|----------------------------|------------------------------------|-------------------------------------|--------------------------------------|------------------------------|-------------|
| Influenza A | 19 | 30 | 64 | 586 | 95% |
| Influenza B | 0 | 2 | 1 | 28 | 5% |
| Influenza unknown /Untyped | 0 | 0 | 0 | 0 | 0% |
| Total | 19 | 32 | 65 | 614 | 100% |

Table 2: Number of Influenza Reports by Age Group

| Age Group | Week 9 (2/27/2022– 3/5/2022) | Week 10 (3/6/2022– 3/12/2022) | Week 11 (3/13/2022– 3/19/2022) | 2021-2022* Season-to-Date | Percentage |
|----------------|------------------------------------|-------------------------------------|--------------------------------------|------------------------------|-------------|
| 0 to 4 years | 1 | 8 | 21 | 141 | 23% |
| 5 to 14 years | 2 | 10 | 8 | 118 | 19% |
| 15 to 24 years | 5 | 6 | 18 | 114 | 19% |
| 25 to 49 years | 8 | 7 | 13 | 174 | 28% |
| 50 to 64 years | 2 | 0 | 3 | 39 | 6% |
| 65+ years | 1 | 1 | 2 | 28 | 5% |
| Total | 19 | 32 | 65 | 614 | 100% |

Table 3: Number of Influenza Reports by Age Group and Type

For Cases Reported between 09/26/2021 and 3/19/2022

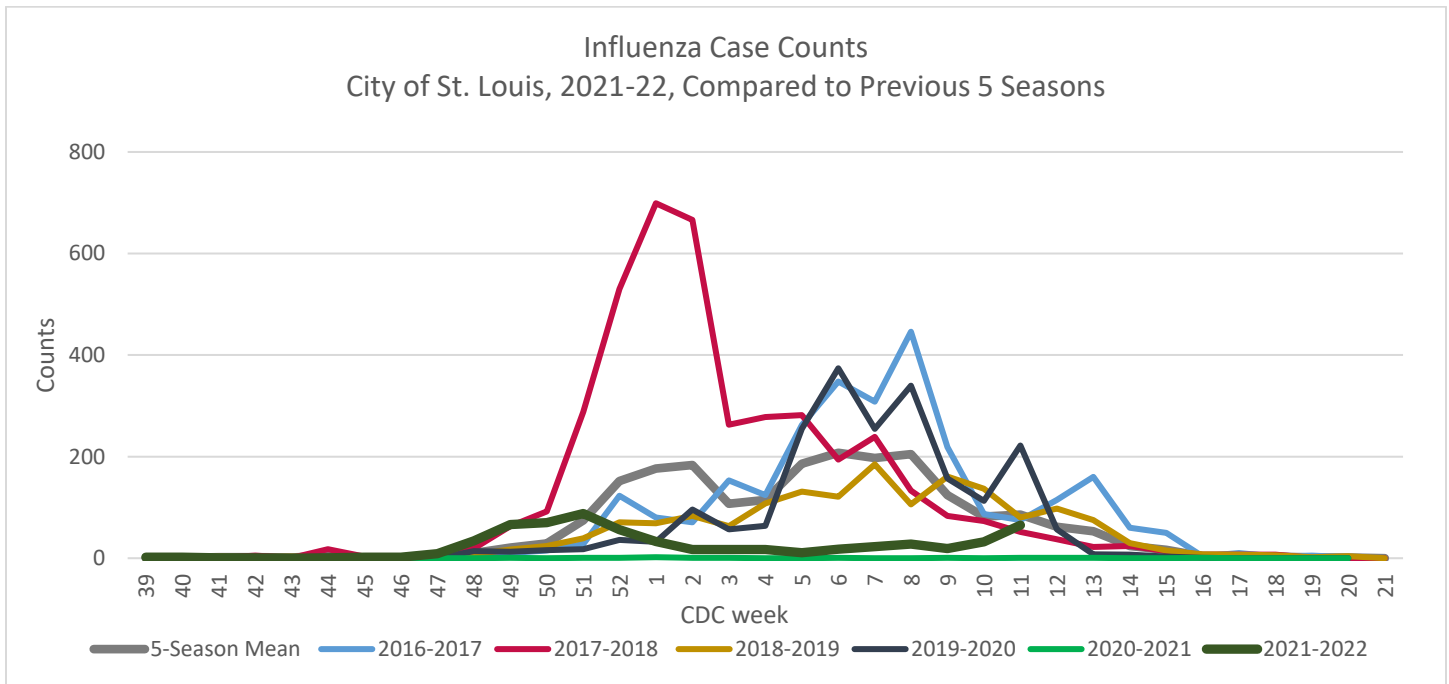
| Age Group | Type A | | Type B | | Unknown Type | | Total | |
|----------------|------------|------|-----------|------|--------------|---|------------|------------|
| | n | % | n | % | n | % | n | % |
| 0 to 4 years | 140 | 21.3 | 1 | 4.5 | 0 | 0 | 141 | 23% |
| 5 to 14 years | 117 | 19.5 | 1 | 4.5 | 0 | 0 | 118 | 19% |
| 15 to 24 years | 108 | 18.7 | 6 | 22.7 | 0 | 0 | 114 | 19% |
| 25 to 49 years | 159 | 28.8 | 15 | 45.5 | 0 | 0 | 174 | 28% |
| 50 to 64 years | 35 | 7.2 | 4 | 18.2 | 0 | 0 | 39 | 6% |
| 65+ years | 27 | 4.5 | 1 | 4.5 | 0 | 0 | 28 | 5% |
| Total | 586 | | 28 | | 0 | | 614 | |



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Table 4: Weekly Counts of Influenza Reports Through Previous 5 Seasons

| Previous Seasons | 2016-2017 | 2017-2018 | 2018-2019 | 2019-2020 | 2020-2021 | 2021-2022 | 5-Season Mean | 5-Season Median |
|------------------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|-----------------|
| Week 9 | 219 | 83 | 161 | 157 | 1 | 19 | 124 | 157 |
| Week 10 | 87 | 73 | 137 | 113 | 0 | 32 | 82 | 87 |
| Week 11 | 75 | 52 | 80 | 222 | 1 | 65 | 86 | 75 |



City of St. Louis, Influenza Outbreaks:

As of the week ending 3/19/2022, **1 influenza outbreak** has been reported to the City of St. Louis Department of Health.

City of St. Louis, Influenza Related Deaths:

As of the week ending 3/19/2022, **3 influenza-related deaths** have been reported and confirmed with the City of St. Louis Department of Health.



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Weekly Virus/Microbiology Update, St. Louis Children's Hospital:

<http://slchlabtestguide.bjc.org/Default.aspx?url=c07848be-283d-470e-ad0f-4b833e58ebcf>

For additional information on national influenza surveillance, please visit the Centers for Disease Control and Prevention website:

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

For additional information on statewide influenza surveillance reports, please visit the Missouri Department of Health and Senior Services website:

<http://health.mo.gov/living/healthconditions/communicable/influenza/reports.php>

Definitions

1. Influenza-like Illness (ILI) is a case definition used to conduct surveillance for influenza infections. Hospitals, healthcare providers and laboratories are required to report to the state health department or local public health agency, any patient visit with symptoms of fever 100°F or greater, and cough and/or sore throat as ILI under influenza surveillance requirement.

2. Influenza is confirmed by laboratory tests through the following methods: molecular assays for influenza virus nucleic acids including rapid assays as well as Reverse Transcription-Polymerase Chain Reaction (RT-PCR) and other assays, detection of influenza viral antigen through rapid influenza diagnostic tests as well as immunofluorescence assays for antibodies and isolation of virus through viral culture.

3. Active, Passive, and Syndromic influenza Surveillance

Passive surveillance

Passive Surveillance is conducted through assessing the reports of confirmed influenza cases from various surveillance sites. Typical surveillance sites are hospitals, offices of healthcare providers and laboratories. Influenza is a reportable condition in the state of Missouri and hence these sites are required to report confirmed influenza cases to state health department or local public health agency (city of St. Louis). 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.

Active Surveillance

Active surveillance becomes essential when there is suspicion of potential outbreaks from the passive and syndromic surveillance data. It would involve looking for potential cases that are not showing up in the passive surveillance system and also those exposed to the cases followed by implementing appropriate control measures to ensure that influenza situation doesn't rise up to a full-blown epidemic in the community.

Syndromic surveillance

The Department of Health uses the ESSENCE system to conduct syndromic surveillance for ILI at the City of St. Louis 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 visits for ILI (regardless of county of residence) to the City of St. Louis hospital EDs that contribute data to the ESSENCE system. 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 or influenza with respect to other illnesses.

4. 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. The first MMWR week in a given year will be the week that includes January 1.