

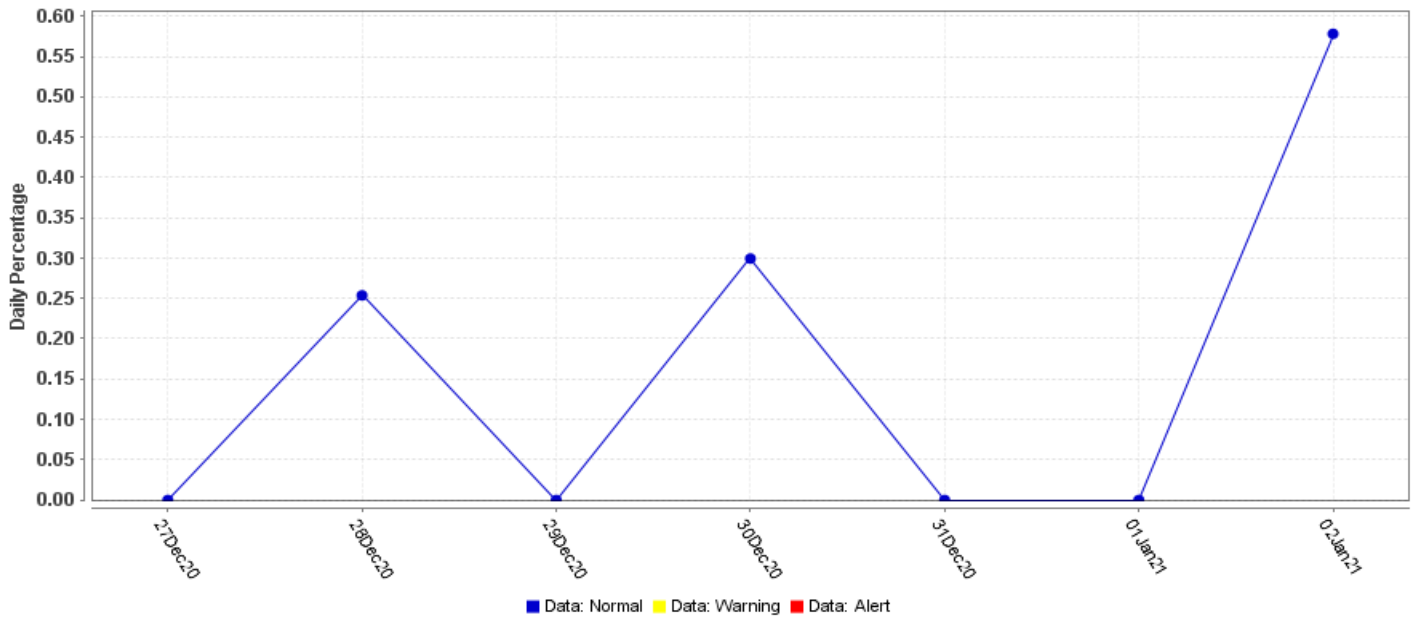


### Influenza Surveillance

The City of St. Louis Department of Health conducts influenza surveillance using passive, active and syndromic surveillance<sup>3</sup>. Although influenza illness can take place year-round, the seasonal influenza reporting begins on Morbidity and Mortality Weekly Report (MMWR)<sup>4</sup> Week 40 of a given year and continues through MMWR Week 20 of the next calendar year. Syndromic Surveillance is conducted by reviewing the number of Influenza-like Illness (ILI)<sup>1</sup> cases reported by hospital emergency departments (EDs) to the Missouri Department of Health and Senior Service (MO-DHSS).

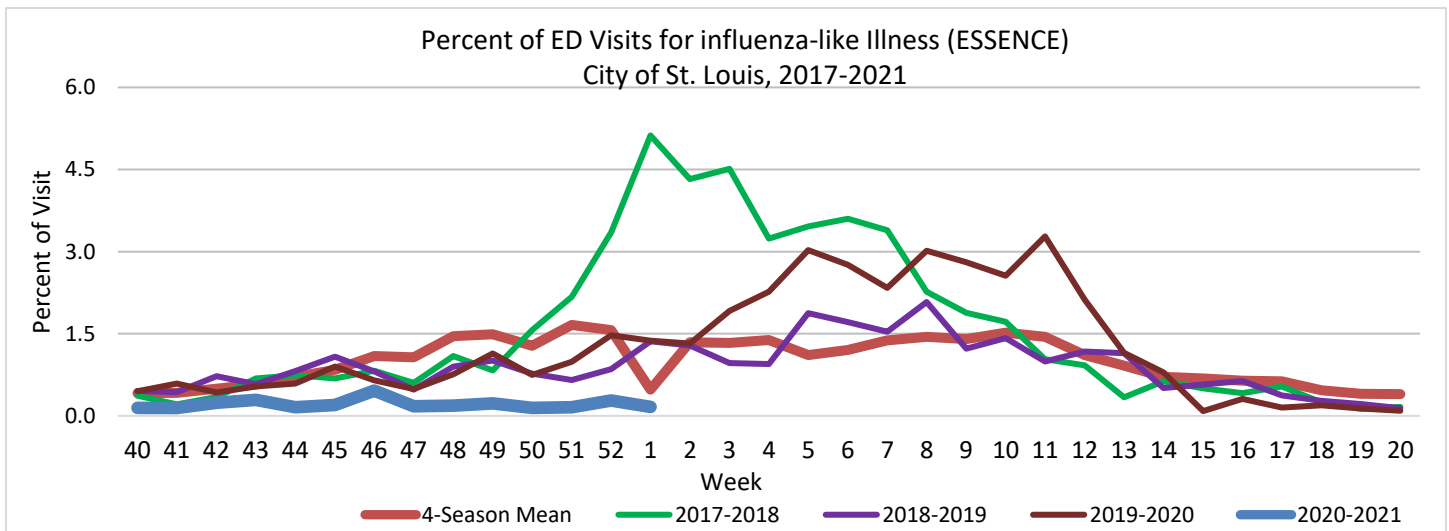
As determined using DHSS Syndromic Surveillance data, Influenza-like Illness (ILI) reports ranged from 0% to 0.578% of daily visits to hospital emergency departments in the City of St. Louis during Week 1 (ending 1/2/2021). The daily number of visits to emergency department for ILI ranged from 0 to 2 with a total visit of 4 during Week 1.

ILI as percentage of daily ED visits - St. Louis City - 12/27/2020 - 1/2/2021



Average of daily visits for ILI as percentage of all visits to EDs in the City of St. Louis was 0.162% for the week ending 1/2/2021 compared to 1.375% in 2019-20 season and 1.359% in 2018-19 season during the same week.

Percent of ED Visits for influenza-like Illness (ESSENCE)  
 City of St. Louis, 2017-2021





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Passive Surveillance is conducted through reporting of confirmed influenza cases<sup>2</sup> from various surveillance sites like hospitals, offices of healthcare providers, and laboratories. As of the current influenza season, for the week ending 1/2/2021, there have been 4 cases of Influenza A and 7 cases of Influenza B for a total of 11 influenza cases from the city of St. Louis. Influenza A accounted for 36% and influenza B accounted for 64% of total influenza cases. The data of the latest weeks is provisional and is subject to change in the following weeks.

**Table 1: Number of Laboratory Positive Influenza Cases by Influenza Type**

Influenza Type	Week 50 (12/6/2020-12/12/2020)	Week 51 (12/13/2020-12/19/2020)	Week 52 (12/20/2020-12/26/2020)	Week 1 (12/27/2020-1/2/2020)	2020-2021* Season-to-Date	Percentage
Influenza A	0	0	1	0	4	36%
Influenza B	0	1	0	2	7	64%
Influenza unknown /Untyped	0	0	0	0	0	0%
<b>Total</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>11</b>	<b>100%</b>

**Table 2: Number of Laboratory Confirmed Influenza Cases by Age Group**

Age Group	Week 50 (12/6/2020-12/12/2020))	Week 51 (12/13/2020-12/19/2020))	Week 52 (12/20/2020-12/26/2020)	Week 1 (12/27/2020-1/2/2020)	2020-2021* Season-to-Date	Percentage
0 to 4 years	0	0	0	0	0	0%
5 to 14 years	0	0	1	0	2	18%
15 to 24 years	0	0	0	0	1	9%
25 to 49 years	0	0	0	1	4	36%
50 to 64 years	0	1	0	0	2	18%
65+ years	0	0	0	1	2	18%
<b>Total</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>11</b>	<b>100%</b>

**Table 3: Number of Laboratory Confirmed Influenza Cases by Age Group and Type**

For Cases Reported between 09/27/2020 and 1/2/2021

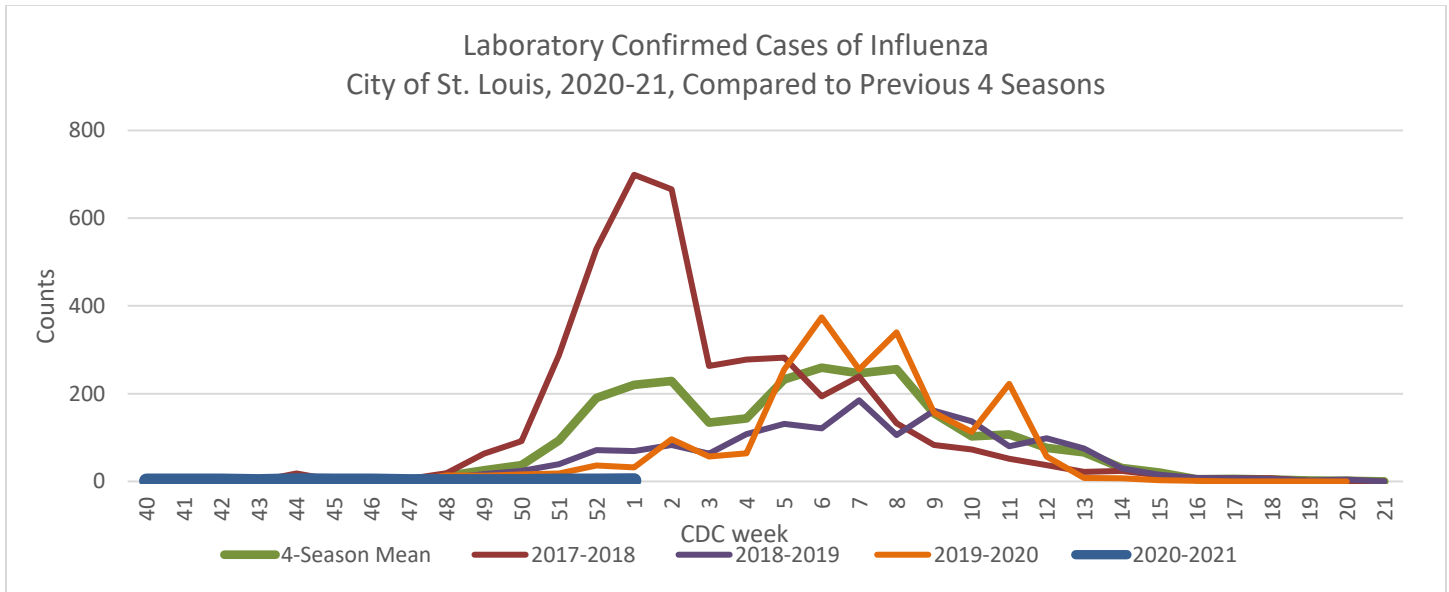
Age Group	Type A		Type B		Unknown Type		Total	
	n	%	n	%	n	%	n	%
0 to 4 years	0	0.0	0	0.0	0	0	0	0.0
5 to 14 years	2	50.0	0	0.0	0	0	2	18.2
15 to 24 years	0	0.0	1	14.3	0	0	1	9.1
25 to 49 years	0	0.0	4	57.1	0	0	4	36.4
50 to 64 years	1	25.0	1	14.3	0	0	2	18.2
65+ years	1	25.0	1	14.3	0	0	2	18.2
<b>Total</b>	<b>4</b>		<b>7</b>		<b>0</b>		<b>11</b>	



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**Table 4: Total Number of Laboratory Confirmed Influenza Cases Through Previous 4 Seasons**

Previous Seasons	2016-2017	2017-2018	2018-2019	2019-2020	2020-2021	4-Season Mean	4-Season Median
Week 50	15	92	24	16	0	37	20
Week 51	28	288	39	18	1	93	34
Week 52	123	530	71	36	1	190	97
Week 53	80	699	69	32	2	220	75



**City of St. Louis Influenza Outbreaks:**

During the week ending 1/2/2021, there have been no outbreaks of influenza reported to 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 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 City of St. Louis 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 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.