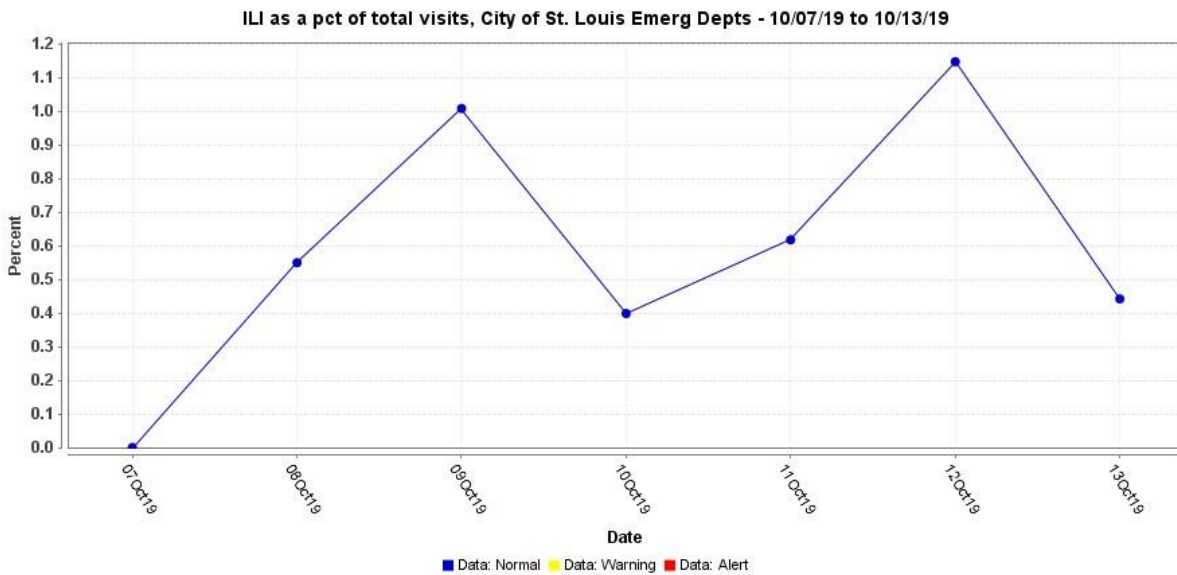


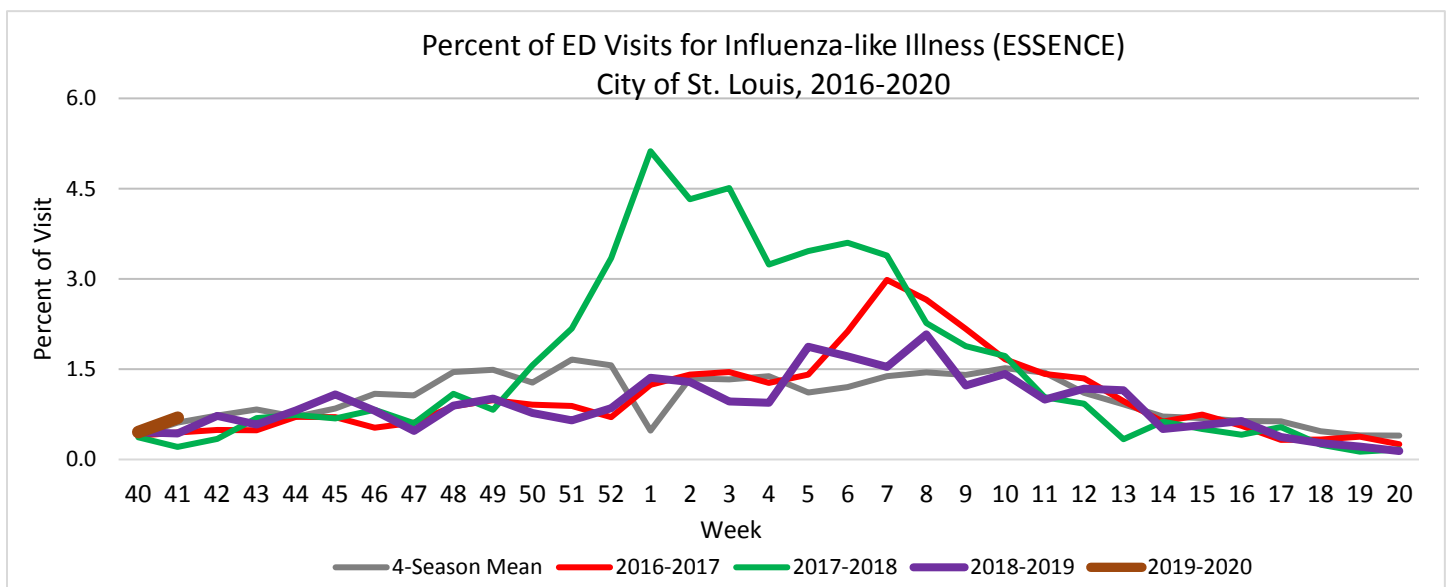


Influenza Surveillance

The City of St. Louis Department of Health conducts influenza surveillance using passive, active and syndromic surveillance. Each surveillance method contributes unique information, allowing the Department of Health to have a fuller picture of influenza cases and activity in the City. Although influenza illness can take place year-round, the seasonal influenza reporting begins in week 40 of one year (i.e., 2019) and continues through week 20 of the following year (2020) to capture the data during a complete “flu season”.



As determined using ESSENCE data, ILI accounted for 0 to 1.147% of daily visits to City of St. Louis hospital emergency departments (EDs) during the week ending 10/13/2019. The number of visits to local hospitals or ILI ranged from zero to five during the week ending 10/13/2019.



ILI as a weekly percentage of all visits in the City of St. Louis hospital EDs was 0.69%, compared to 0.43% in 2018 and 0.21% in 2017, for week 41.



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Active Influenza Surveillance

Surveillance sites reported one case of Influenza A and three cases of Influenza B for the week ending 10/13/2019. Influenza A accounted for 25% of influenza cases (vs. 75% for Influenza B) for the week ending on 10/13/2019. Overall for the 2019-2020 influenza season, influenza B has accounted for 75% of influenza cases.

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

Influenza Type	Week 49 (12/2/18 – 12/8/18)	Week 50 (12/9/2018 – 12/15/18)	Week 51 (12/16/18 – 12/22/2018)	Week 52 (12/23/18 – 12/29/18)	Week 1 (9/29/2019 – 10/6/2019)	Week 2 (10/7/2019- 10/13/2019)	2019-2020* Season-to-Date	Percentage
Influenza A	16	23	38	35	1	0	1	25%
Influenza B	7	0	0	0	3	0	3	75%
Influenza unknown /Untyped	0	0	0	0	0	0	0	0%
Total	23	23	38	35	4	0	4	100%

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

Age Group	Week 49	Week 50	Week 51	Week 52	Week 1	Week 2	2019-2020* Season-to-Date
0 to 4 years	4	10	8	16	2	0	2
5 to 14 years	2	8	10	5	0	0	0
15 to 24 years	2	0	3	1	1	0	1
25 to 49 years	4	2	7	8	0	0	0
50 to 64 years	3	1	9	2	1	0	1
65+ years	1	1	1	3	0	0	0
Total	16	23	38	35	4	0	4

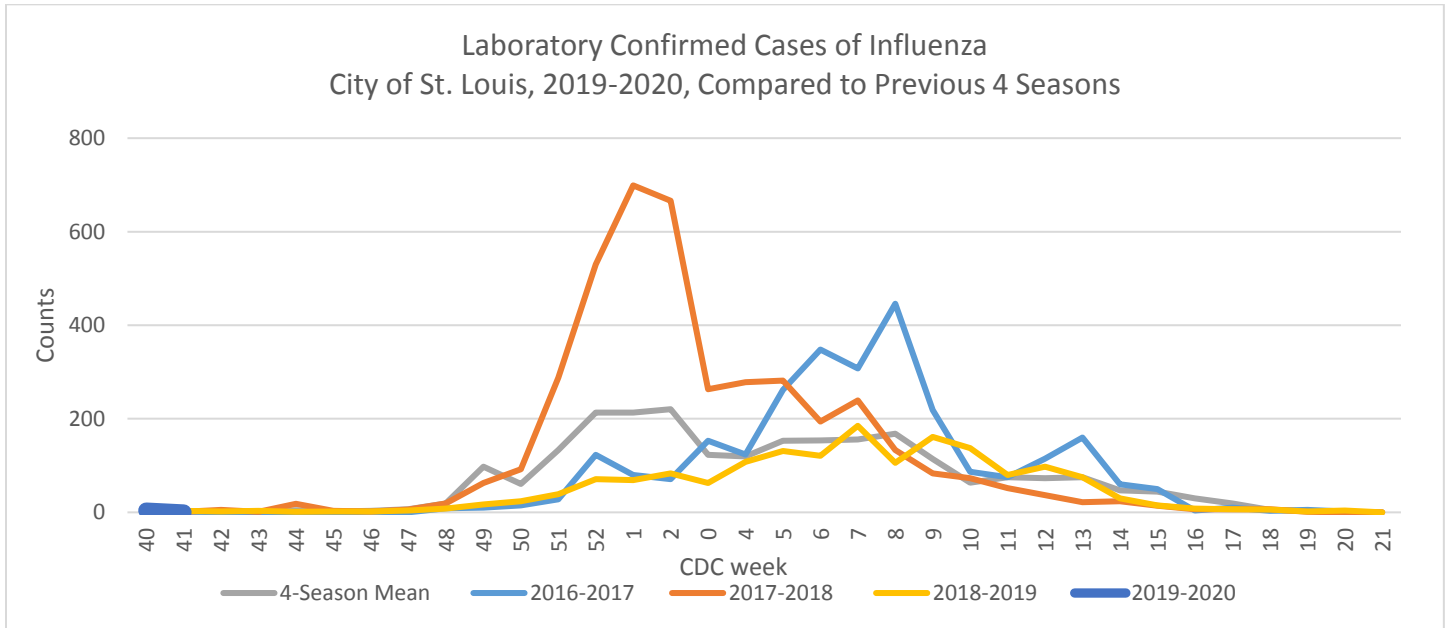


Table 3: Number of Laboratory Confirmed Influenza Cases by Age Group and Type
 For Cases Reported between 9/29/2019 and 10/13/2019

Age Group	Type A n (% of total)	Type B n (% of total)	Unk Type n (% of total)	Total n (%)
0 to 4 years	0	2	0	2
5 to 14 years	0	0	0	0
15 to 24 years	1	0	0	1
25 to 49 years	0	0	0	0
50 to 64 years	0	1	0	1
65+ years	0	0	0	0
Total	1 (25%)	3 (75%)	0	4 (100)

Passive Influenza Surveillance

One case of Influenza A and three cases of Influenza B were reported to the City of St. Louis during the week ending 10/6/2019. Overall, for the 2019-2020 influenza season, Influenza B has accounted for 75% of the total influenza cases.

City of St. Louis Influenza Outbreaks:

Of the week ending 10/13/2019, 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=fa9bd218-475a-4190-bfc2-62102ec4cafc>

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, please visit the Missouri Department of Health and Senior Services website:

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

Definitions

Influenza-Like Illness is defined by ESSENCE as Emergency Department chief complaints for Influenza or (Fever_Plus and (Cough or Sore_Throat) and not non-ILI_Fevers).

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.

Active, Passive, and Syndromic influenza Surveillance

Passive surveillance

Influenza is a reportable condition in the state of Missouri; positive influenza tests are reported to the City of St. Louis year-round. City of St. Louis Department of Health conducts passive influenza surveillance by collecting and aggregating data on all positive influenza tests in City of St. Louis residents. Passive surveillance provides information on the true burden of influenza illness in City of St. Louis, but is limited by variations in testing and reporting practices. If diagnostic tests are not conducted on patients presenting to healthcare providers with influenza-like-illness, or if test results (e.g., of rapid influenza tests) are not reported to DPH, 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 the City of St. Louis.

Active Surveillance

The City of St. Louis Department of Health conducts active influenza surveillance through a network of sentinel providers. This network is geographically distributed throughout the City, comprised of a wide range of care providers, designed to capture a representative sample of provider types. Although active influenza surveillance does not capture the true magnitude of disease burden, it allows for year-to-year comparisons of influenza data. The Department of Health can then assess trends in influenza data, as well as the relative magnitude of disease burden with respect to previous influenza seasons. Further, the Department of Health works closely with sentinel sites throughout the influenza season, making the active surveillance data less susceptible to bias arising from testing or reporting variation. Because of these advantages, active surveillance using a network of sentinel providers is the primary method of influenza surveillance utilized by the City.

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



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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.