



Chicago Respiratory Virus Weekly Surveillance Report



Brandon Johnson, Mayor

June 2, 2023

Allison Arwady, MD, MPH, Commissioner

This report summarizes key respiratory virus surveillance indicators. The indicators are compiled from laboratory-based data as well emergency department visit data. This report is meant to provide more context for the ongoing COVID-19 pandemic, particularly as co-circulation of respiratory viruses increases. More detailed information on [influenza](#) and [COVID-19](#) activity can be found on their respective online dashboards. All data are preliminary and may change as additional reports are received.

Weekly Surveillance Key Points

COVID-19:

- Cook County's [COVID-19 Hospital Admissions Level](#) is Low.
- The number of new hospitalizations per 100,000 population for Cook County has decreased from 3.1 to 2.4.
- The test positivity for SARS-CoV-2 has decreased from 4.0% to 3.1%.

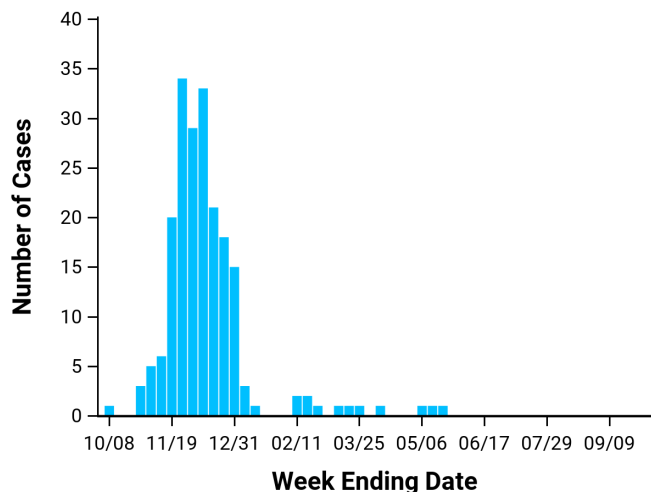
Influenza:

- This is the last report of the season with expanded metrics related to influenza. An abbreviated report will continue to be published in the summer and the full report will resume in October. A summary describing the 2022-2023 influenza season in Chicago is at the end of this report.
- No influenza-associated ICU hospitalizations were reported for the current surveillance week. Since October 2, 2022, 201 influenza-associated ICU hospitalizations have been reported.
- 23 of 2,330 (1.0%) reported specimens tested for influenza were positive. Since October 2, 2022, 12,519 of 160,394 (7.8%) reported specimens tested for influenza were positive.
- The proportion of emergency department visits for influenza-like illness (ILI) and the proportion of outpatient visits for ILI are below local thresholds.
- Influenza viruses are detected throughout the year at low levels and can cause disease. Vaccination is the best way to protect against influenza infection and all Chicagoans six months and older are encouraged to get vaccinated annually.

Other Respiratory Viruses:

- The percent of emergency department visits in children <5 years old due to RSV remains at <1%.
- The test positivity for RSV remains at <1%.
- The test positivity for parainfluenza has increased from 3.1% to 5.1%.
- The test positivity for rhinovirus/enterovirus has decreased from 21.6% to 20.3%.
- The test positivity for adenovirus has increased from 3.4% to 6.0%.
- The test positivity for human metapneumovirus has decreased from 2.5% to 1.7%.

Influenza-Associated ICU Hospitalizations - In Illinois, [influenza-associated ICU hospitalizations are reportable](#) as soon as possible but within 24 hours. The graph below shows the weekly number of reported ICU hospitalizations for Chicago residents for the current season. The table summarizes selected characteristics of reported cases for the current week and cumulative for the season.



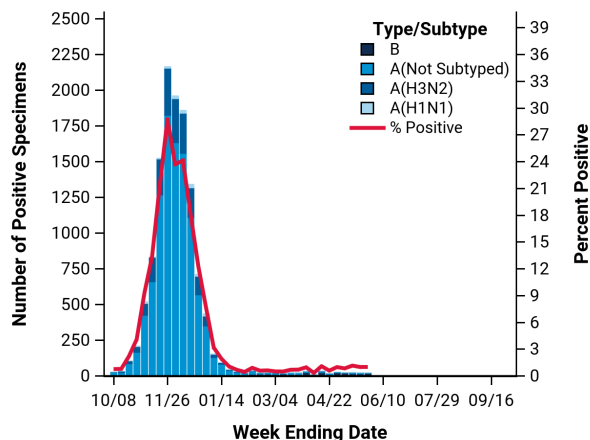
Group	Week Ending May 27, 2023		Since October 2, 2022	
	#	%	#	%
Citywide	0	0	201	100.0
Age				
0-4	0	0.0	26	12.9
5-17	0	0.0	30	14.9
18-24	0	0.0	5	2.5
25-49	0	0.0	25	12.4
50-64	0	0.0	46	22.9
65+	0	0.0	69	34.3
Gender				
Male	0	0.0	105	52.2
Female	0	0.0	96	47.8
Race-Ethnicity				
White Non-Latinx	0	0.0	30	14.9
Black Non-Latinx	0	0.0	111	55.2
Latinx	0	0.0	55	27.4
Asian Non-Latinx	0	0.0	1	0.5
Other Non-Latinx	0	0.0	0	0.0
Unknown-Race	0	0.0	4	2.0

Respiratory Virus Laboratory Surveillance - Current Week and Cumulative The table below includes respiratory viral PCR tests performed by several hospital laboratories in Chicago as well as two commercial laboratories serving Chicago facilities. Reporting facilities represent nearly half of all acute care hospitals in the city. Data reported include Chicago and non-Chicago residents.

Respiratory Pathogen	Week Ending May 27, 2023		Since October 2, 2022	
	# Tested	% Positive	# Tested	% Positive
Influenza*	2,330	1.0	160,394	7.8
RSV*	1,265	0.2	116,570	5.6
SARS-CoV-2*	1,441	3.1	187,581	7.1
Parainfluenza	1,188	5.1	55,116	3.1
Rhinovirus/Enterovirus	597	20.3	36,775	16.3
Adenovirus	597	6.0	36,674	3.9
Human Metapneumovirus	597	1.7	37,062	3.8
Seasonal Coronaviruses [†]	1,188	0.3	55,531	2.8

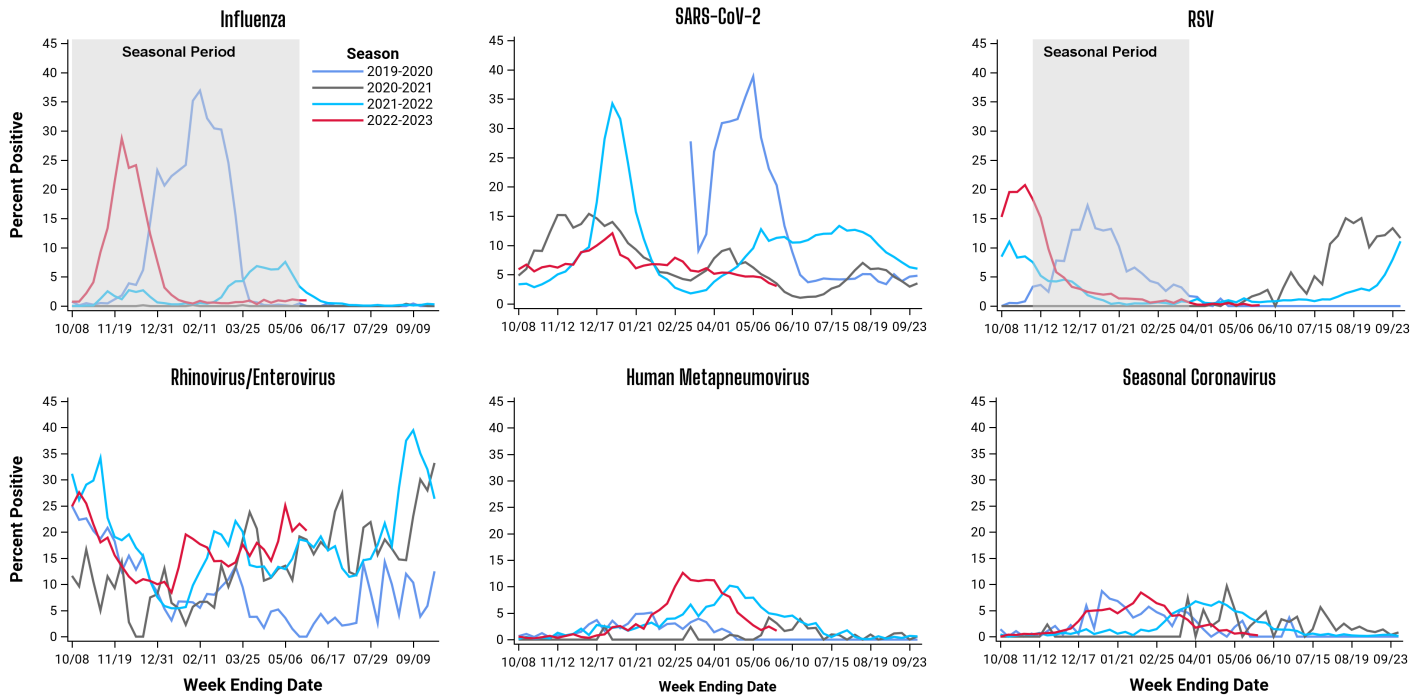
*Represents both dualplex and multiplex PCR data. All other data represents only multiplex panels that include the specified pathogens;† Four seasonal coronavirus strains include 229E, NL63, OC43, and HKU1.

Weekly number and percent of specimens testing positive for influenza by subtype (graph) and the number of positive specimens by subtype for the current week and cumulative for the season (table).



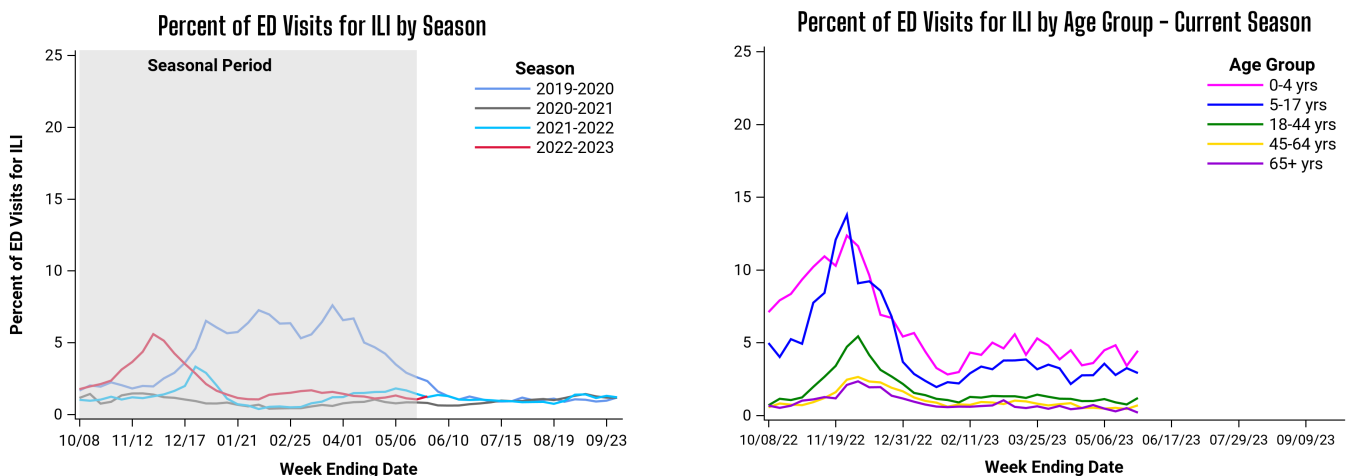
Type / Subtype	Week Ending May 27, 2023		Since October 2, 2022	
	# Positive	%	# Positive	%
Influenza A	6	26.1	12,245	97.8
(H1N1)pdm09	1	16.7	213	1.7
H3N2	1	16.7	1,971	16.1
Subtyping not performed	4	66.7	10,061	82.2
Influenza B	17	73.9	274	2.2
Total Positive	23	100.0	12,519	100.0

Respiratory Virus Laboratory Surveillance - Seasonal Trends These graphs show seasonal trends of selected respiratory virus testing data presented in the previous table. Typical seasonal periods when activity tends to increase for influenza and RSV are indicated by shaded areas. Elevated test positivity outside of typical seasonal periods suggests atypical activity, and increased clinician awareness and testing may be warranted. Yearly data can also be used to compare the timing and intensity of viral activity, although changes in testing patterns also influence yearly trends, and data should be interpreted in the context of other surveillance indicators.

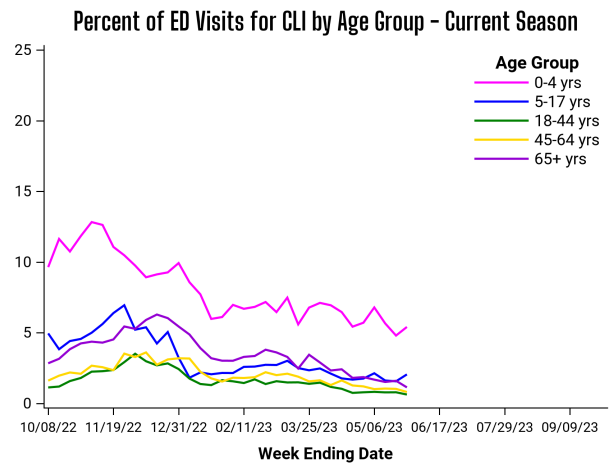
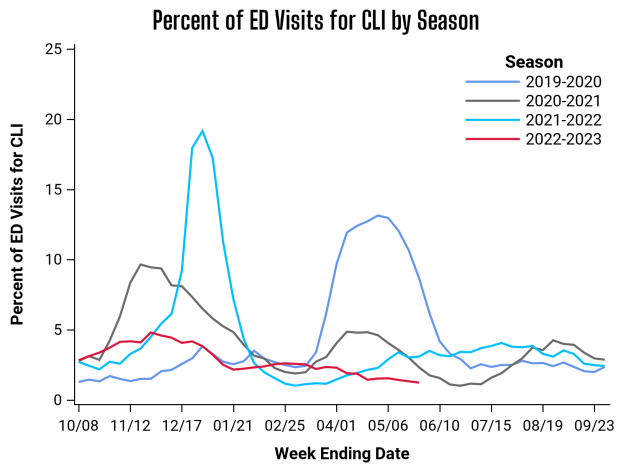


Emergency Department Illness Surveillance In [Illinois](#), all 185 acute-care hospitals report emergency department visit data in near-real time to the Illinois Department of Public Health (IDPH). By tracking symptoms (or chief complaints) of patients in emergency departments, public health can promptly detect unusual levels of illness to determine whether a response is warranted. A [map of influenza-like illness \(ILI\) activity levels](#) by patient zip code determined by the emergency department chief complaint data can be found on the [influenza dashboard](#).

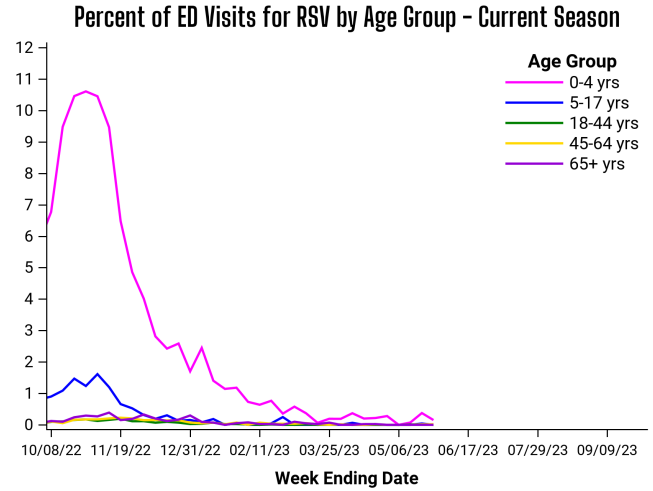
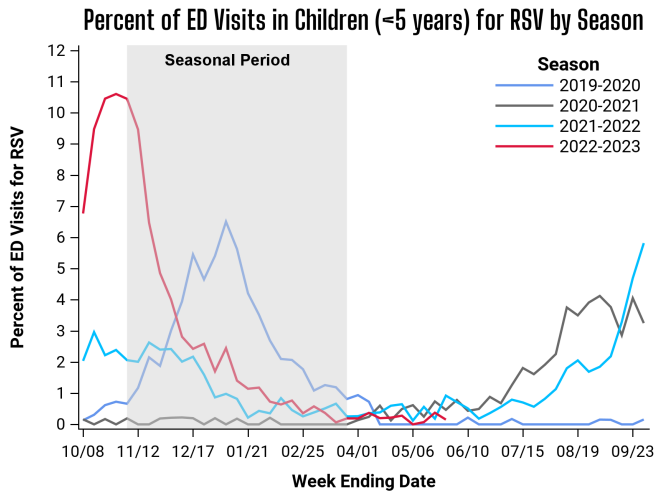
Percent of emergency department visits attributed to **influenza-like illness (ILI)** for residents of Chicago zip codes based on chief complaint data.



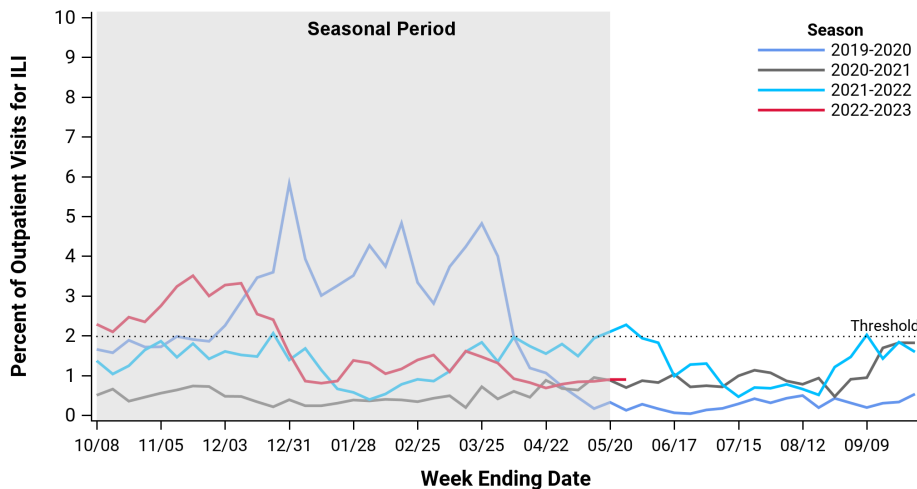
Percent of emergency department visits attributed to **COVID-like illness (CLI)** for residents of Chicago zip codes based on chief complaint data.



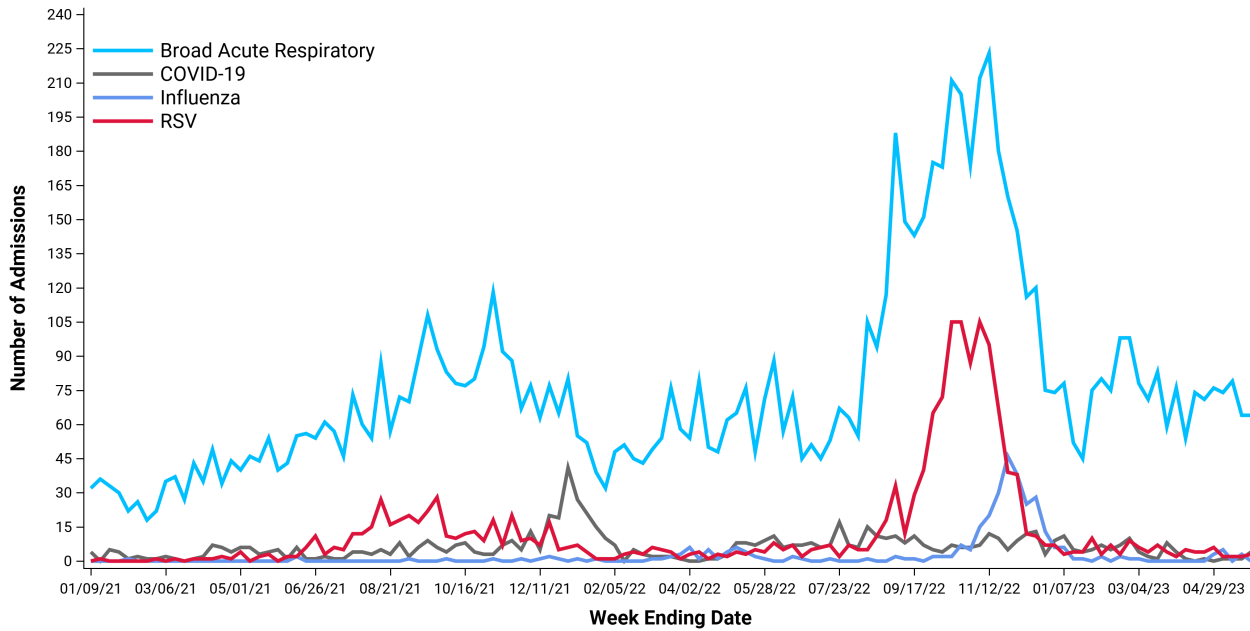
Percent of emergency department visits attributed to **respiratory syncytial virus (RSV)** diagnoses for residents of Chicago zip codes based on chief complaint data. Seasonal trends are displayed for children younger than 5 years old who are most impacted by RSV.



Outpatient Visit Illness Surveillance Several outpatient clinics throughout Chicago participate in CDC's Influenza-like Illness Surveillance Network ([ILINet](#)) by reporting on a weekly basis the total number of outpatient clinic visits, and of those visits, the number with influenza-like illness (ILI). This graph shows the percent of medically-attended outpatient visits attributed to ILI as reported by ILINet facilities in Chicago by week for the current season and previous three seasons.



Weekly Pediatric Admissions Emergency department visit data includes information on whether the visit resulted in a hospital admission at any time during the course of the clinical encounter. The syndromes or disease associated with the hospitalization are based on chief complaint and discharge diagnosis codes and no not necessarily represent lab-confirmed cases. The chart below represents hospital admissions among children <18 years-old at Chicago hospitals due to acute respiratory illnesses.



National and State Respiratory Virus Surveillance

The Centers for Disease Control and Prevention’s [FluView report](#) provides national updates and trends related to influenza activity across the United States, and the National Respiratory and Enteric Virus Surveillance System ([NREVSS](#)) is a voluntary laboratory-based system that monitors temporal and geographic circulation patterns of several respiratory viruses in the U.S. The Respiratory Syncytial Virus (RSV) Hospitalization Surveillance Network ([RSV-NET](#)) is a CDC population-based surveillance system that collects data on severe RSV hospitalizations, including those resulting in ICU admission or death, among children and adults. The Respiratory Virus Hospitalization Surveillance Network ([RESP-NET](#)) comprises three platforms that conduct population-based surveillance for laboratory-confirmed hospitalizations associated with COVID-19, Influenza, and Respiratory Syncytial Virus (RSV) among children and adults. CDC is tracking the COVID-19 pandemic in a weekly publication called [COVID Data Tracker Weekly Review](#). The [Illinois](#) and [Suburban Cook County](#) influenza surveillance reports are also available online. Current and archived issues of the *Chicago Influenza and Respiratory Virus Surveillance Report* can be found on the CDPH website section [Current Flu Situation in Chicago](#).



Chicago 2022-2023 Influenza Season Surveillance Summary



Brandon Johnson, Mayor

June 2, 2023

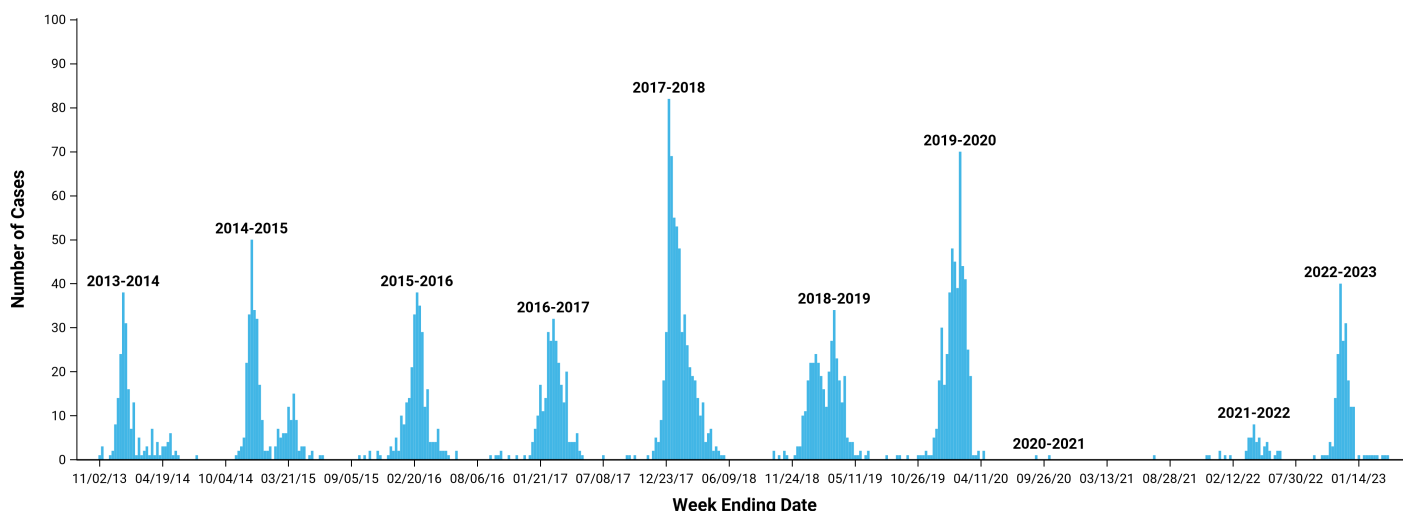
Allison Arwady, MD, MPH, Commissioner

This report summarizes key influenza surveillance indicators for the 2022-2023 season. The indicators are compiled from influenza ICU hospitalizations, laboratory-based data as well emergency department and outpatient visits data. More detailed information on [influenza](#) and [COVID-19](#) activity can be found on their respective online dashboards. All data are preliminary and may change as additional reports are received.

Overall, the 2022-2023 season had low to moderate influenza activity with most metrics rising quickly, peaking early in the season and decreasing by the end of 2022. Among positive influenza specimens that were subtyped, influenza A (H3N2) was the predominant subtype.

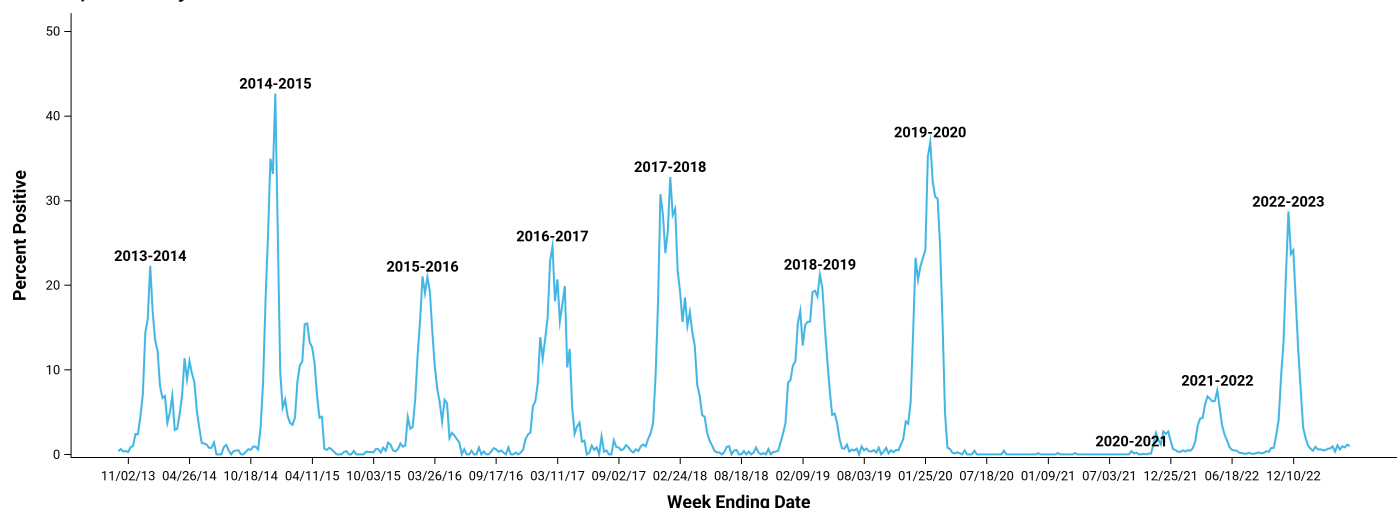
Influenza-Associated ICU Hospitalizations - In Illinois, [influenza-associated ICU hospitalizations are reportable](#) as soon as possible but within 24 hours. The graph below shows the weekly number of reported ICU hospitalizations for Chicago residents for the current season. The table summarizes selected characteristics of reported cases for the current week and cumulative for the season.

- There were 201 influenza-associated ICU hospitalizations reported during the 2022-2023 season. Excluding the previous two seasons, this is the lowest number of ICU hospitalizations in the last 10 seasons. The peak number of reported hospitalizations (40) occurred in November with 95% of cases reported by December 31, 2022.



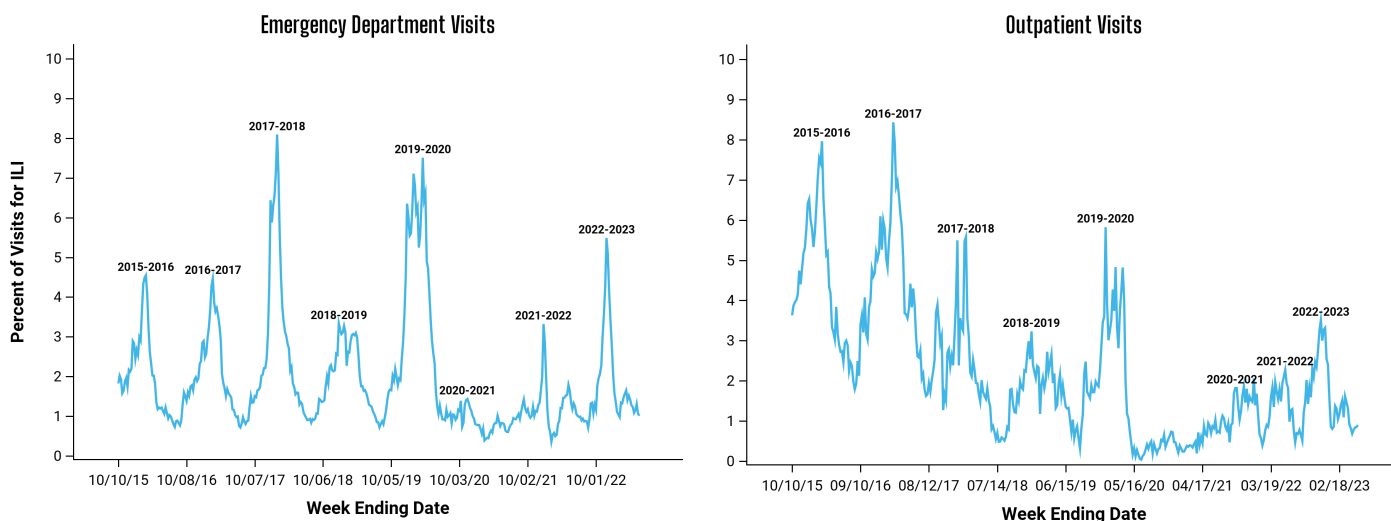
Influenza Virus Laboratory Surveillance The chart below includes data on influenza viral PCR tests performed by several hospital laboratories in Chicago as well as two commercial laboratories serving Chicago facilities. Reporting facilities represent nearly half of all acute care hospitals in the city. Data reported include Chicago and non-Chicago residents.

- Overall influenza laboratory percent positivity was 8.0% for the season. Excluding the previous two seasons, this is the lowest overall percent positivity since 2016-2017; however the number of influenza tests performed and reported was higher than any prior season. Peak positivity (28.7%) occurred in November with 94% of positive specimens reported by December 31, 2022.



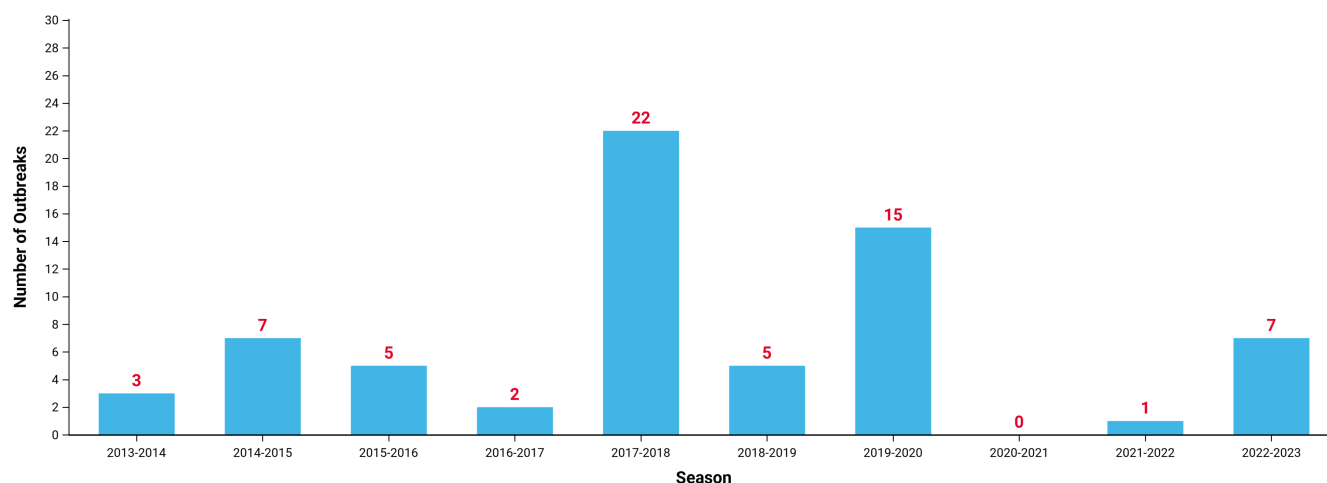
Influenza-like Illness (ILI) Surveillance Two data sources are utilized to conduct syndromic surveillance for influenza-like illness, emergency department visit data and outpatient visit data ([ILINet](#)). In [Illinois](#), all 185 acute-care hospitals report emergency department visit data in near-real time to the Illinois Department of Public Health (IDPH). For ILINet, several outpatient clinics throughout Chicago report on a weekly basis the total number of outpatient clinic visits, and of those visits, the number with ILI. The graphs below show the percent of emergency department and outpatient visits attributed to ILI by week for the 2015-2016 - 2022-2023 seasons.

- The proportion of emergency department visits for influenza-like illness (ILI) was 2.1% for the season. This is consistent with the previous seven seasons where the proportion ranged from 2-3%. The peak (5.5%) occurred in November with 63% of visits due to ILI reported by December 31, 2022; 95% were reported by the end of April.
- The proportion of outpatient visits for ILI was 1.7% for the season. This is slightly lower than the previous seven seasons where the proportion ranged from 2-4%. The peak (3.5%) occurred in November with 61% of visits due to ILI reported by December 31, 2022; 95% were reported by the end of April.



Influenza Outbreaks in Congregate Settings - In [Illinois](#), [outbreaks of influenza or ILI in a congregate setting are reportable](#) as soon as possible but within 24 hours. The graph below shows the number of reported influenza outbreaks in congregate settings in Chicago for the 2013-2014 to 2022-2023 seasons.

- There were seven influenza outbreaks in congregate settings reported this season with a total of 27 laboratory-confirmed influenza cases. Like other metrics, all but one were reported by December 31, 2022. The highest number of reported outbreaks occurred in 2017-2018 with 22 outbreaks reported.



Influenza-Associated Pediatric Deaths - Influenza-associated pediatric deaths are nationally notifiable to CDC and are also [reportable in Illinois](#).

- There was one influenza-associated pediatric death reported for the season. This is consistent with the previous ten seasons where the median number of deaths reported was one (range of 1-4 deaths).