



# Chicago Respiratory Virus Weekly Surveillance Report



Brandon Johnson, Mayor

May 31, 2024

Olusimbo Ige, MD, MS, 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

During the summer, an abbreviated report will be published with the full report to resume in the fall. A summary describing the 2023-2024 influenza season in Chicago is at the end of this report.

### COVID-19:

- The proportion of emergency department visits attributed to COVID-19 diagnoses is <1%.
- The test positivity for SARS-CoV-2 has decreased from 3.8% to 2.5%.

### Influenza:

- The risk of influenza infection remains low; the percent of specimens testing positive for influenza is <1%.
- The proportion of emergency department visits for influenza-like illness (ILI) and the proportion of outpatient visits for ILI are below local thresholds.
- For situational awareness of the ongoing outbreak of highly pathogenic avian influenza see, [H5N1 Bird Flu: Current Situation Summary](#).

### Other Respiratory Viruses:

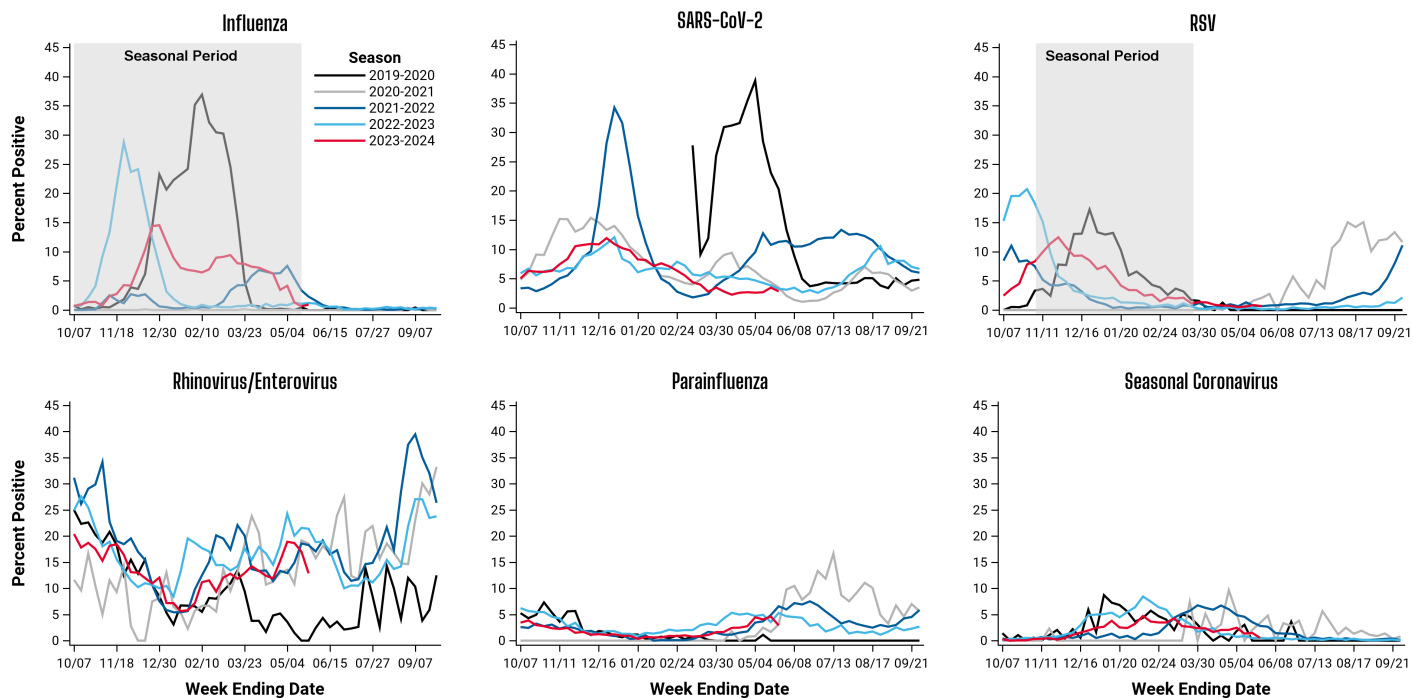
- The percent of emergency department visits in children <5 years old due to RSV remains at <1%.
- The test positivity for RSV remains at <1%.
- The test positivity for parainfluenza has decreased from 4.6% to 2.9%.
- The test positivity for rhinovirus/enterovirus has decreased from 17.3% to 12.9%.
- The test positivity for adenovirus has decreased from 2.9% to <1%.
- The test positivity for human metapneumovirus remains at 4.6%.

**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 25, 2024		Since October 1, 2023	
	# Tested	% Positive	# Tested	% Positive
Influenza*	2,452	0.9	173,748	6.4
RSV*	1,319	0.7	115,868	4.8
SARS-CoV-2*	1,162	2.8	127,280	6.8
Parainfluenza	1,469	2.9	62,806	1.8
Rhinovirus/Enterovirus	567	12.9	35,767	13.1
Adenovirus	567	0.9	35,755	3.4
Human Metapneumovirus	569	4.6	35,996	2.7
Seasonal Coronaviruses <sup>†</sup>	1,467	0.5	62,588	2.0

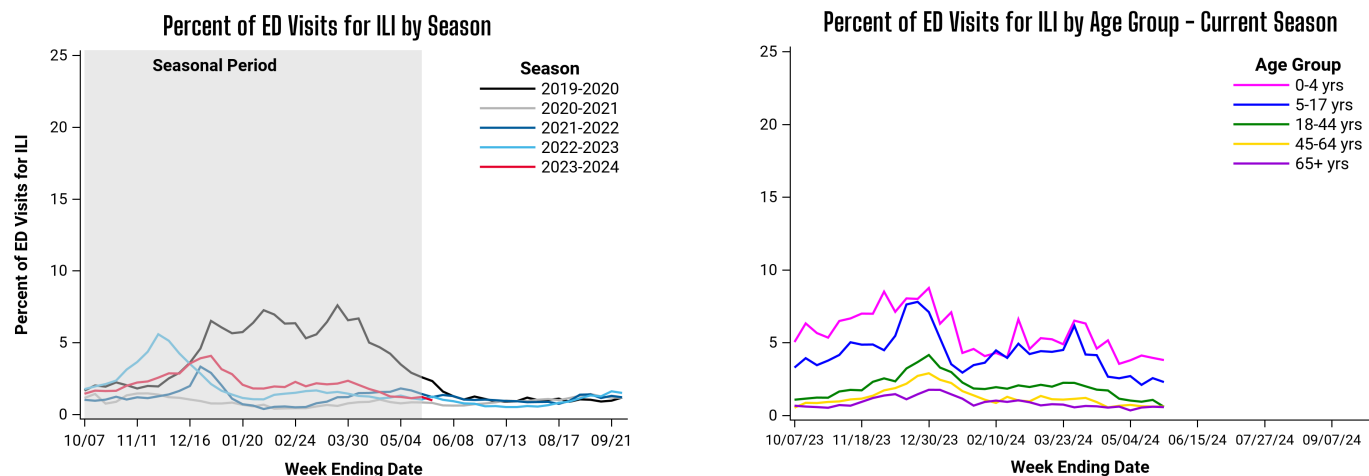
\*Represents both dualplex and multiplex PCR data. All other data represents only multiplex panels that include the specified pathogens;† Four seasonal coronavirus strains include 229E, NL63, OC43, and HKU1.

**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.

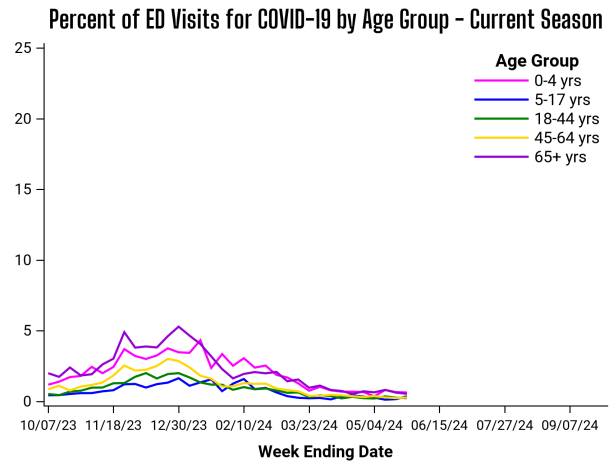
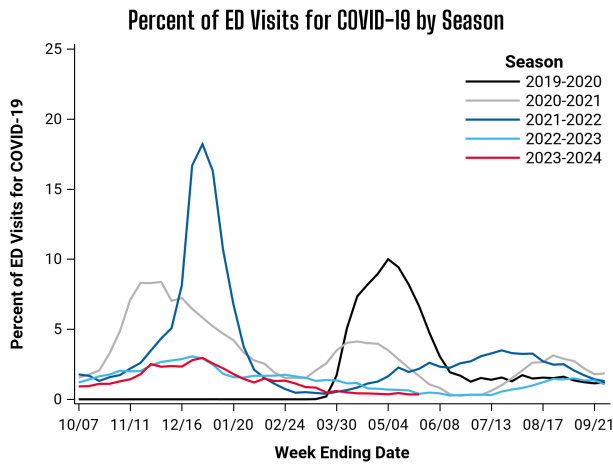


**Emergency Department Illness Surveillance** In [Illinois](#), all 185 acute-care hospitals report emergency department visit data in near-real time to the Illinois Department of Public Health (IDPH). By tracking symptoms (or chief complaints) of patients in emergency departments, public health can 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](#).

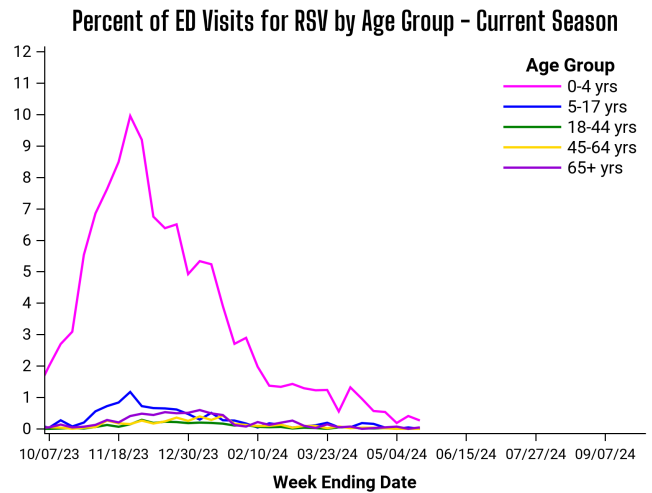
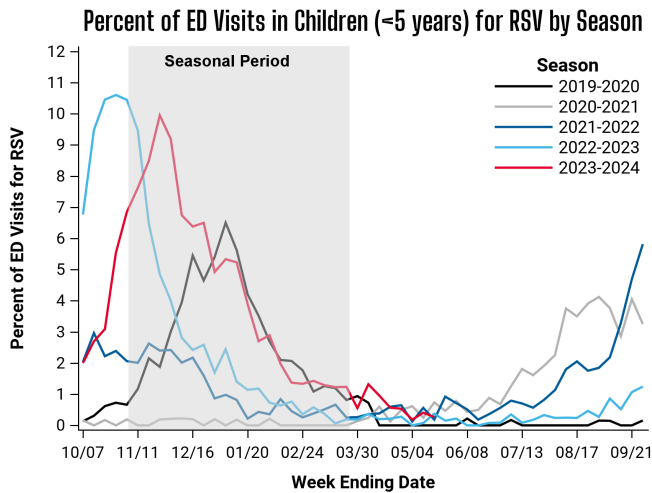
Percent of emergency department visits attributed to **influenza-like illness (ILI)** for residents of Chicago zip codes based on chief complaint data.



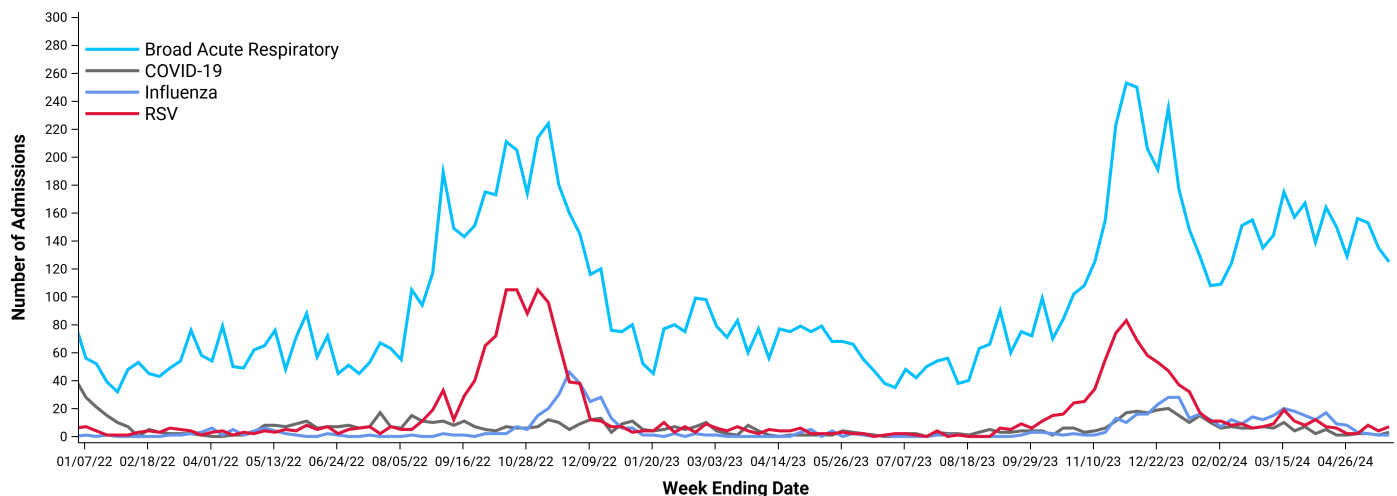
Percent of emergency department visits attributed to **COVID-19** diagnoses for residents of Chicago zip codes based on chief complaint data.



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.



**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 do 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 2023-2024 Influenza Season Surveillance Summary



Brandon Johnson, Mayor

May 31, 2024

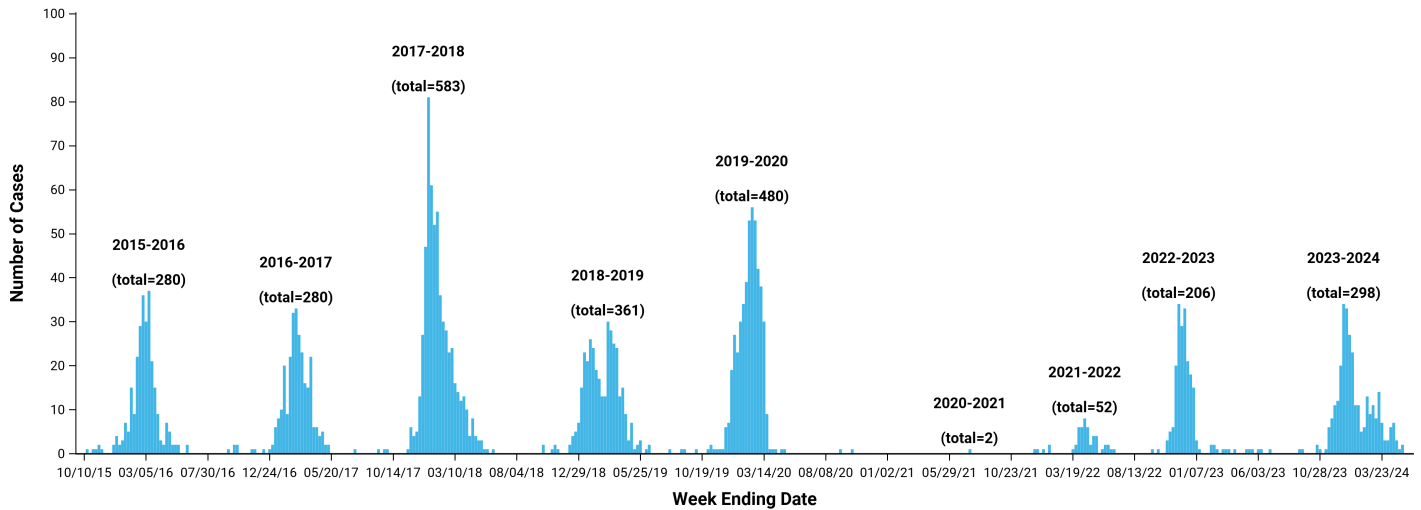
Olusimbo Ige, MD, MS, MPH, Commissioner

This report summarizes key influenza surveillance indicators for the 2023-2024 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.

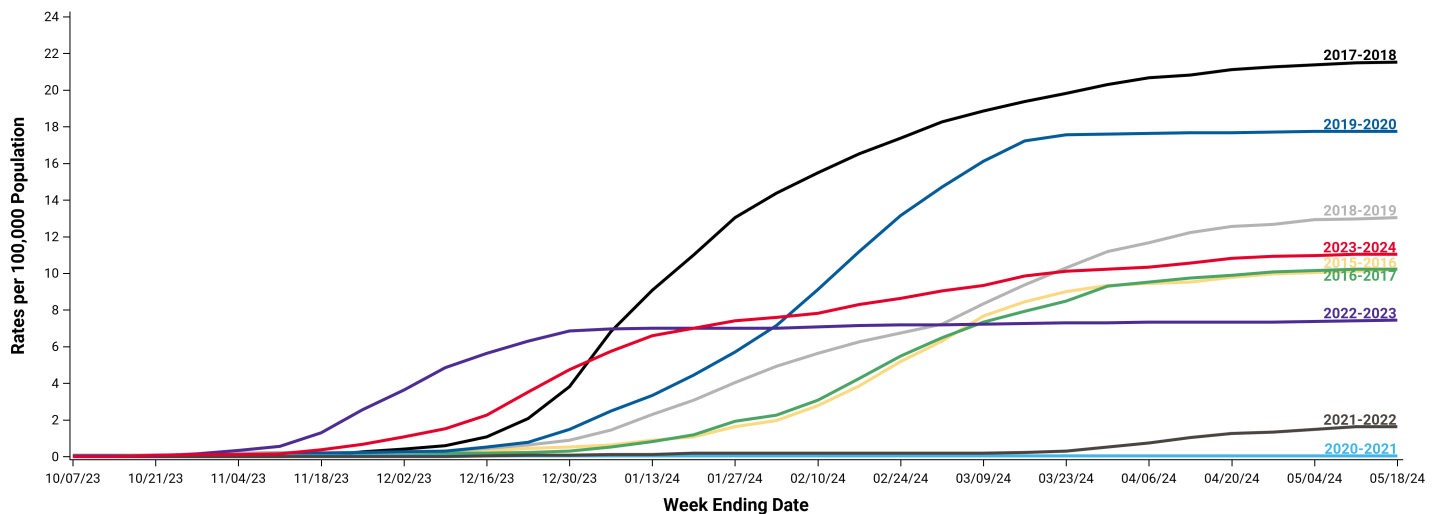
**Overall, the 2023-2024 season had moderate influenza activity similar to other pre-pandemic seasons and no influenza-associated pediatric deaths were reported. This season saw two distinct peaks of activity with the second peak associated mainly with influenza B.**

**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.

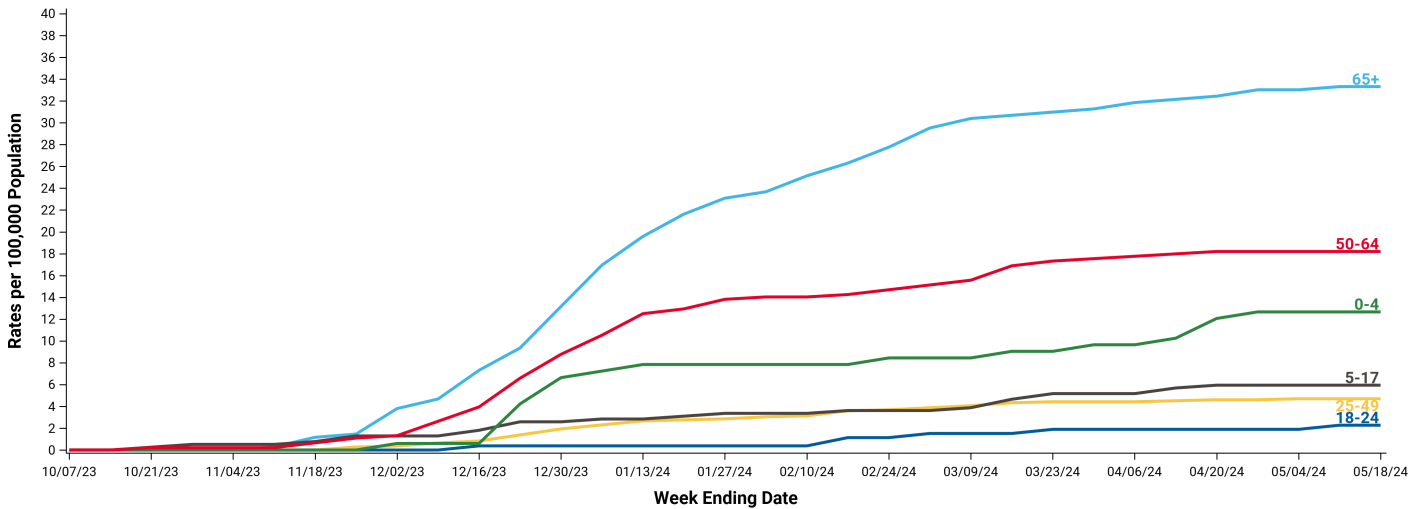
There were 298 influenza-associated ICU hospitalizations reported during the 2023-2024 season. Excluding the two pandemic seasons (2020-21 and 2021-22), this is higher than last season and the fourth highest number of ICU hospitalizations reported in the last nine seasons. The peak number of reported hospitalizations (34) occurred in December with less than half (43%) of cases reported by December 30, 2023 compared to last season where over 90% were reported by the end of December.



Excluding the two pandemic seasons, the overall cumulative rate of influenza-associated ICU hospitalizations landed in the middle of the previous nine influenza seasons; the cumulative rate was lower than three seasons (2017-18 to 2019-20) and higher than three seasons (2015-16, 2016-17, 2022-23). Rates began to increase in late December and continued to increase until mid-March and leveling off by April 2024.

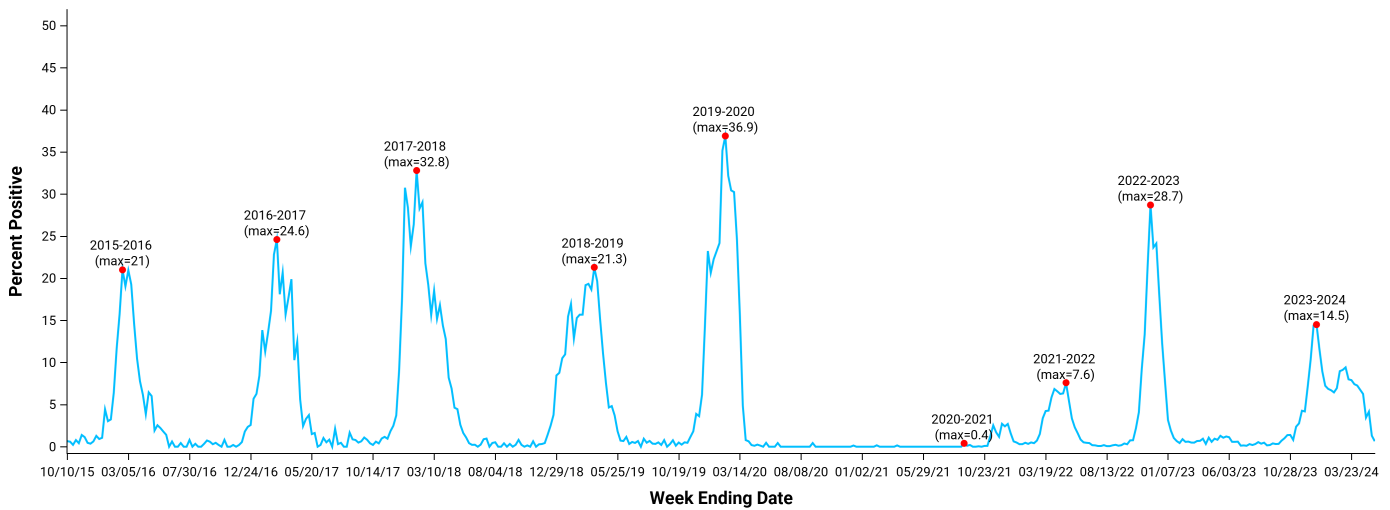


For the 2023-2024 season, the highest cumulative ICU hospitalization rates were among those 50-64 and 65+ years of age. Among pediatric cases, those 0-4 years had higher rates than school-aged children 5-17 years. The lowest rates were among those 18-49 years. This is consistent with national trends of [cumulative rates of influenza hospitalization](#).

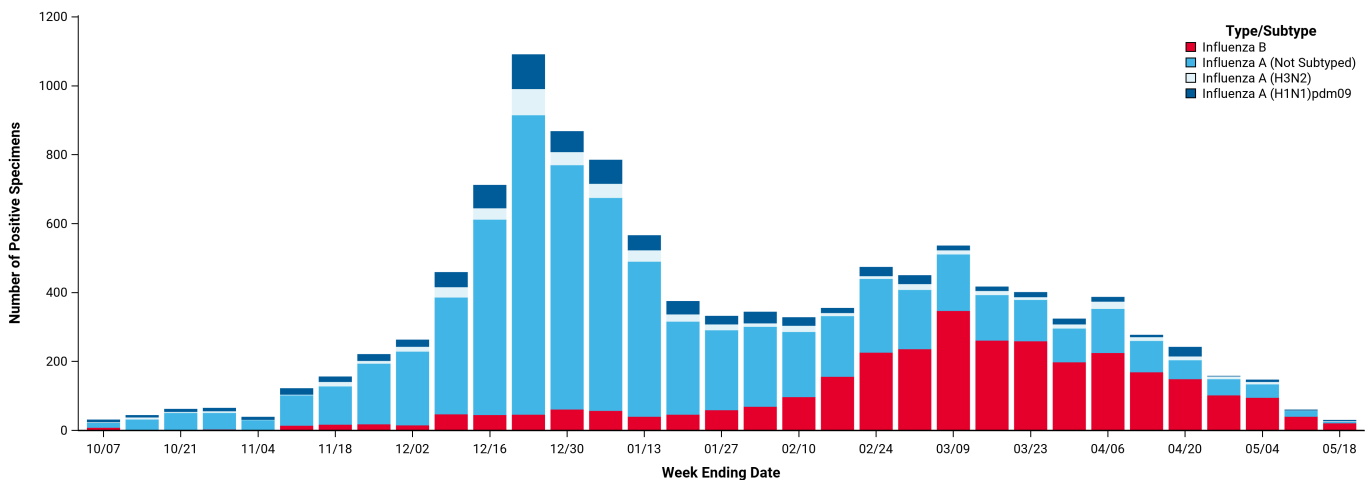


**Influenza Virus Laboratory Surveillance** The chart below includes data on influenza viral PCR tests performed by several hospital laboratories in Chicago as well as two commercial laboratories serving Chicago facilities. Reporting facilities represent nearly half of all acute care hospitals in the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

Overall influenza laboratory percent positivity was 6.5% for the season peaking at 14.5% at the end of December 2023. Excluding the two pandemic seasons, this is the lowest overall percent positivity during the past nine seasons; however the number of influenza tests performed and reported was higher than any prior season.

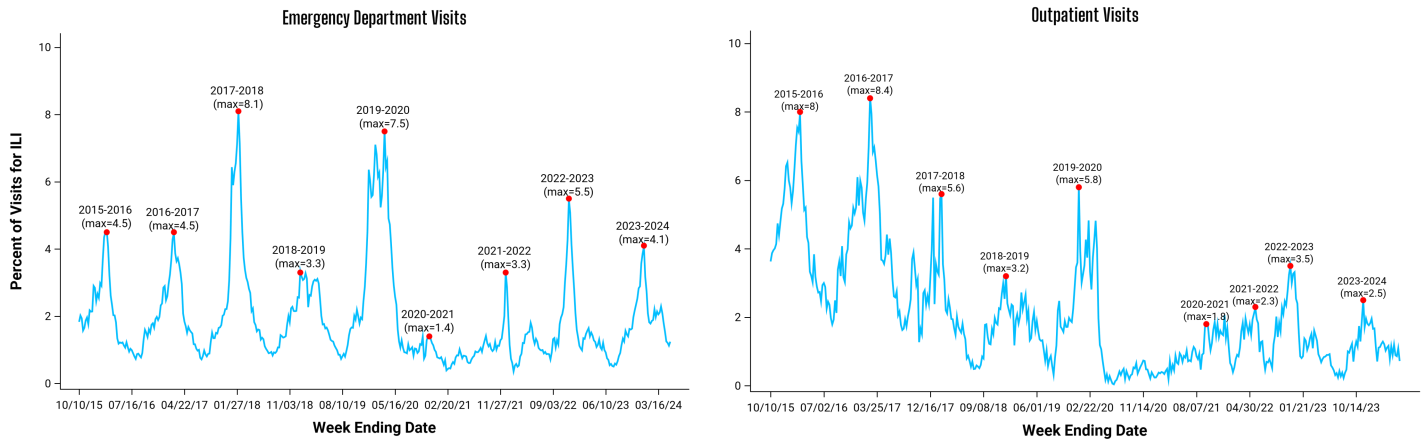


For the 2023-2024 season, 72% of positive specimens were influenza A with the majority not subtyped. Among those subtyped, 61% were A(H1N1)pdm09. Since early March, influenza B accounted for the majority of positive specimens.



**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 - 2023-2024 seasons.

- The proportion of emergency department visits for influenza-like illness (ILI) was 2.2% for the season. This is consistent with the previous eight-season average of 2.4%. The peak (4.1%) occurred in December with 47% of visits due to ILI reported by December 30, 2023; 95% were reported by early May.
- The proportion of outpatient visits for ILI was 1.3% for the season. This is lower than the previous eight-season average of 2.7%. The peak (2.5%) occurred in November with 49% of visits due to ILI reported by December 30, 2023; 95% were reported by early May.



**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 2023-2024 seasons.

- There were 15 influenza outbreaks in congregate settings reported this season with a total of 45 laboratory-confirmed influenza cases; this is almost double the number of reported outbreaks from last season. The highest number of reported outbreaks occurred in 2017-2018 with 22 outbreaks reported.

