Chicago Respiratory Virus Weekly Surveillance Report

Lori E. Lightfoot, Mayor **April 28, 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: *metrics are based on 7-day averages*

- Chicago's local COVID-19 Community Level is Low.
- The number of new cases per 100,000 population has decreased from 46 to 37.
- The number of new hospitalizations per 100,000 population has increased from 3.9 to 4.2.
- The proportion of staffed inpatient beds occupied by COVID-19 patients is 1.9%.

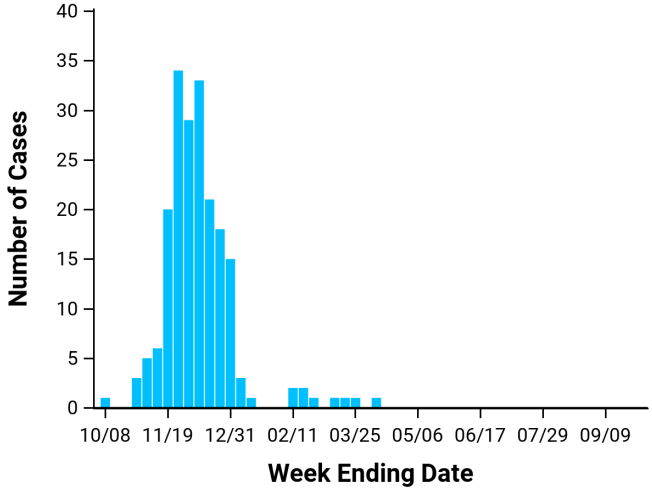
Influenza:

- Influenza activity is low.
- No influenza-associated ICU hospitalizations were reported for the current surveillance week. Since October 2, 2022, 198 influenza-associated ICU hospitalizations have been reported.
- 19 of 3,272 (<1%) reported specimens tested for influenza were positive. Since October 2, 2022, 12,394 of 147,609 (8.4%) 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.
- Vaccination is the best way to protect against influenza infection and all Chicagoans six months and older are encouraged to get vaccinated. Influenza and COVID-19 vaccines can be given at the same visit if the timing coincides.
- Chicagoans should ask their healthcare provider or pharmacist about vaccine availability. For those without a healthcare provider or whose healthcare providers do not have the influenza vaccine, a list of City of Chicago Standing Immunization Clinics is available on the city website and by calling 311.
- The Illinois Department of Public Health has issued Influenza Testing and Reporting Guidance for the 2022-2023 season. Visit the CDPH HAN website for more information on how to report.
- The CDC has issued interim guidance for prioritizing antiviral treatment of influenza in areas where oseltamivir is temporarily unavailable. Currently, the Chicago retail pharmacy system is reporting availability of oseltamivir (generic and Tamiflu).

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 5.2% to 4.3%.
- The test positivity for rhinovirus/enterovirus has decreased from 16.7% to 15.1%.
- The test positivity for adenovirus has decreased from 5.1% to 4.9%.
- The test positivity for human metapneumovirus has decreased from 8.1% to 5.5%.

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.*



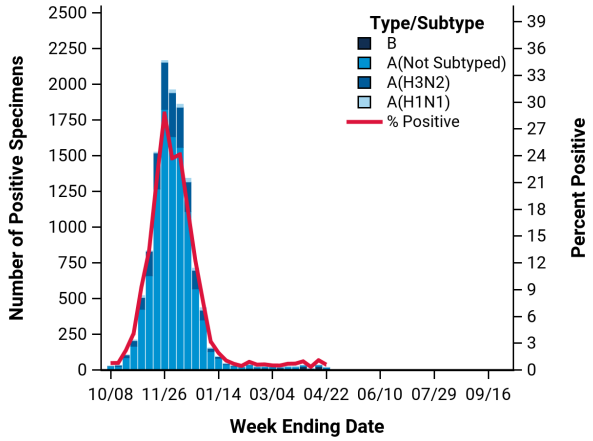
	Week Ending April 22, 2023		Since October 2, 2022	
Group	#	%	#	%
Citywide	0	0	198	100.0
Age				
0-4	0	0	25	12.6
5-17	0	0	29	14.6
18-24	0	0	5	2.5
25-49	0	0	24	12.1
50-64	0	0	46	23.2
65+	0	0	69	34.8
Gender				
Male	0	0	104	52.5
Female	0	0	94	47.5
Race-Ethnicity				
White Non-Latinx	0	0	30	15.2
Black Non-Latinx	0	0	108	54.5
Latinx	0	0	55	27.8
Asian Non-Latinx	0	0	1	0.5
Other Non-Latinx	0	0	0	0.0
Unknown-Race	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.*

	Week Ending April 22, 2023		Since October 2, 2022	
Respiratory Pathogen	# Tested	% Positive	# Tested	% Positive
Influenza*	3,272	0.6	147,609	8.4
RSV*	1,877	0.3	108,816	6.0
SARS-CoV-2*	2,841	4.9	179,054	7.2
Parainfluenza	1,297	4.3	48,589	2.9
Rhinovirus/Enterovirus	730	15.1	33,368	15.9
Adenovirus	730	4.9	33,255	3.8
Human Metapneumovirus	730	5.5	33,642	3.9
Seasonal Coronaviruses†	1,327	0.8	49,016	3.0

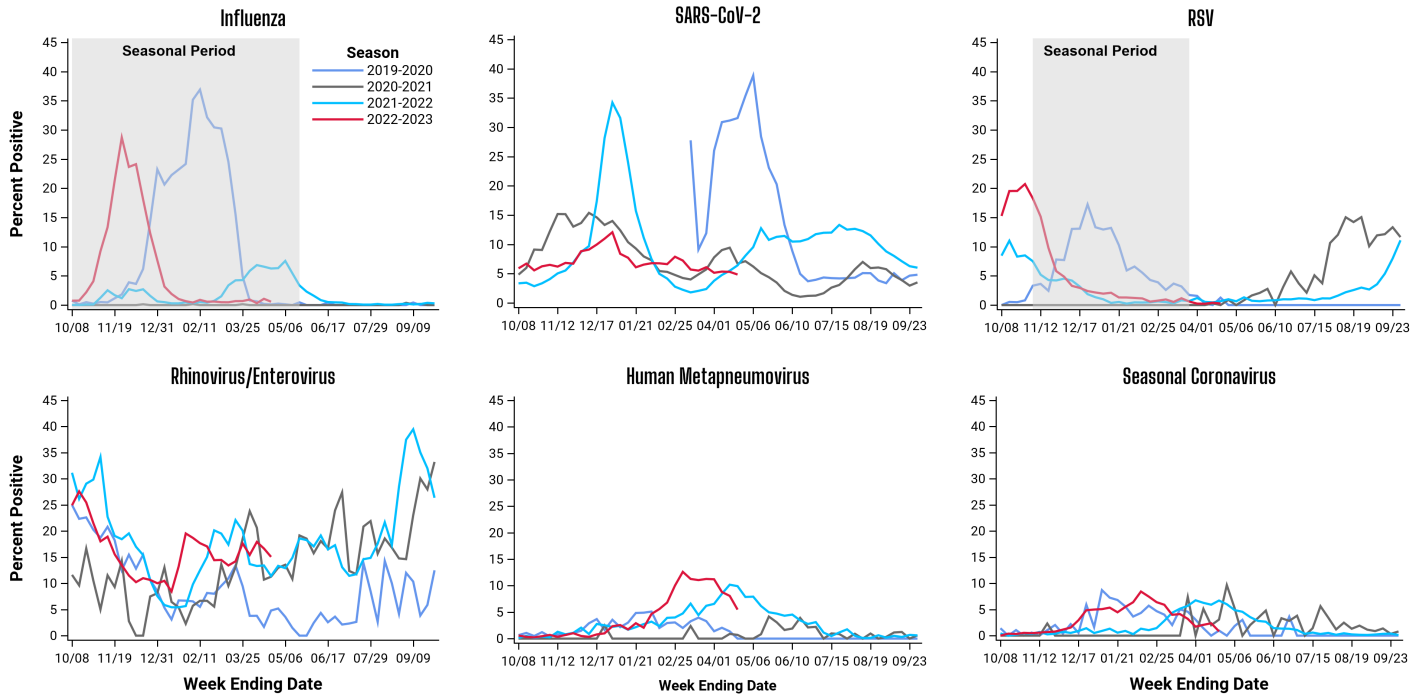
*Represents both dualplex and multiplex PCR data. All other data represents only multiplex panels that include the specified pathogens;† Four seasonal coronavirus strains include 229E, NL63, OC43, and HKU1.

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).



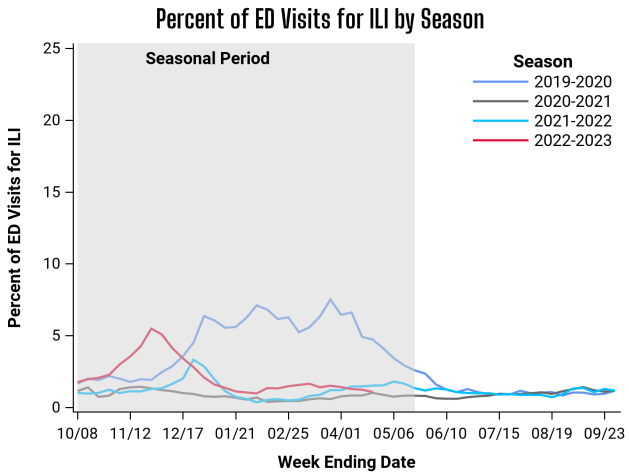
	Week Ending April 22, 2023		Since October 2, 2022	
Type / Subtype	# Positive	%	# Positive	%
Influenza A	9	47.4	12,207	98.5
(H1N1)pdm09	1	11.1	207	1.7
H3N2	2	22.2	1,969	16.1
Subtyping not performed	6	66.7	10,031	82.2
Influenza B	10	52.6	187	1.5
Total Positive	19	100.0	12,394	100.0

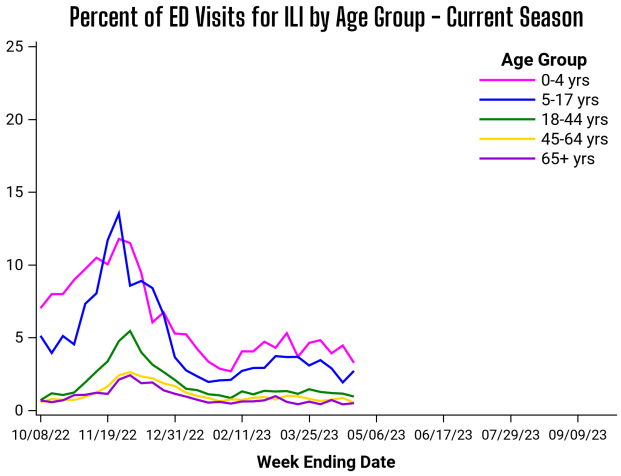
Respiratory Virus Laboratory Surveillance - Seasonal Trends *These graphs show seasonal trends of selected respiratory virus testing data presented in the previous table. Typical seasonal periods when activity tends to increase for influenza and RSV are indicated by shaded areas. Elevated test positivity 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.*



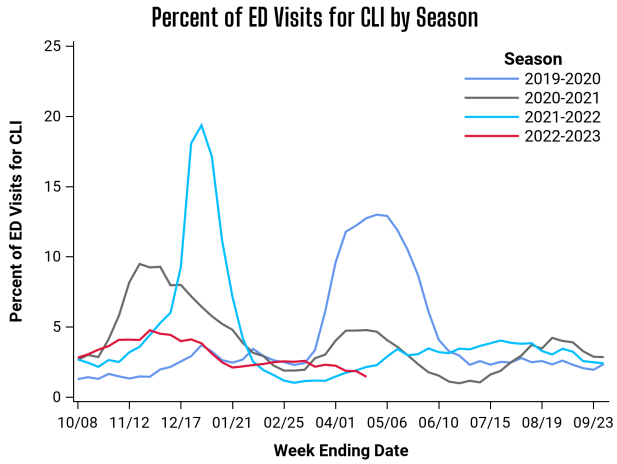
Emergency Department Illness Surveillance *In Illinois, all 185 acute-care hospitals report emergency department visit data in near-real time to the Illinois Department of Public Health (IDPH). By tracking symptoms (or chief complaints) of patients in emergency departments, public health can promptly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

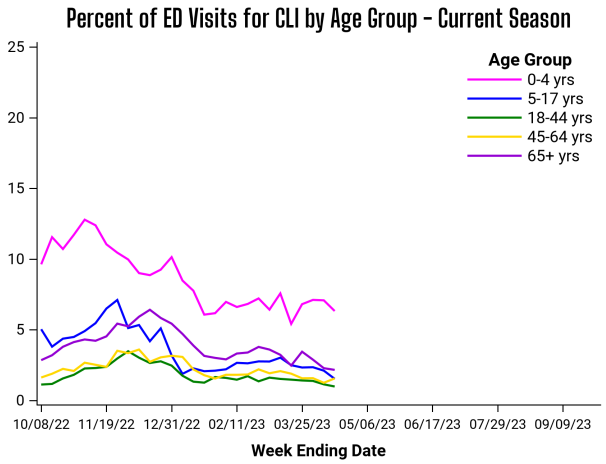
Percent of emergency department visits attributed to **influenza-like illness (ILI)** for residents of Chicago zip codes based on chief complaint data.



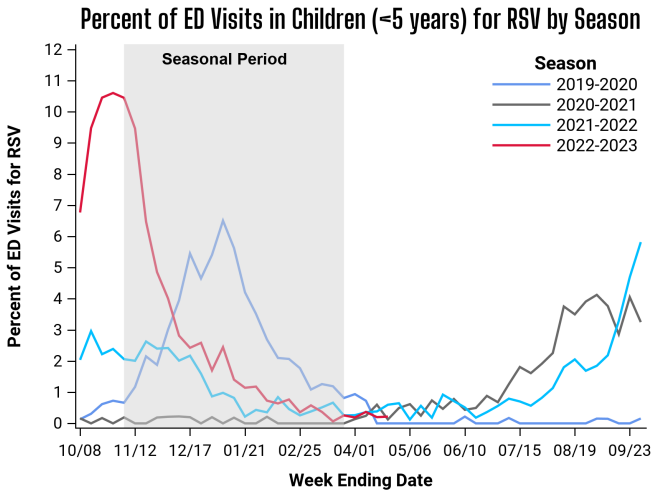


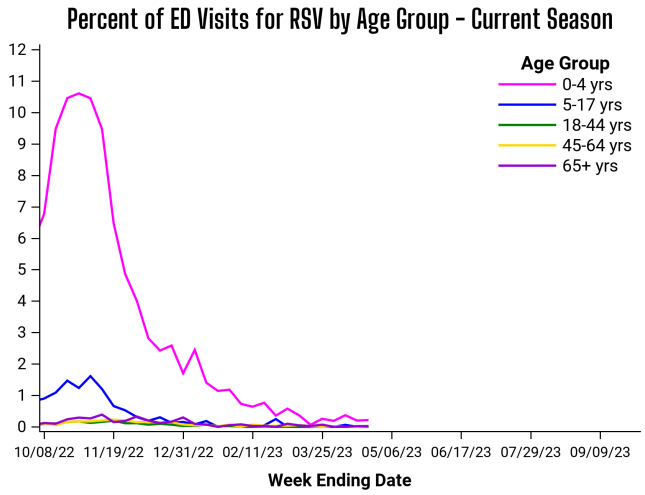
Percent of emergency department visits attributed to **COVID-like illness (CLI)** for residents of Chicago zip codes based on chief complaint data.



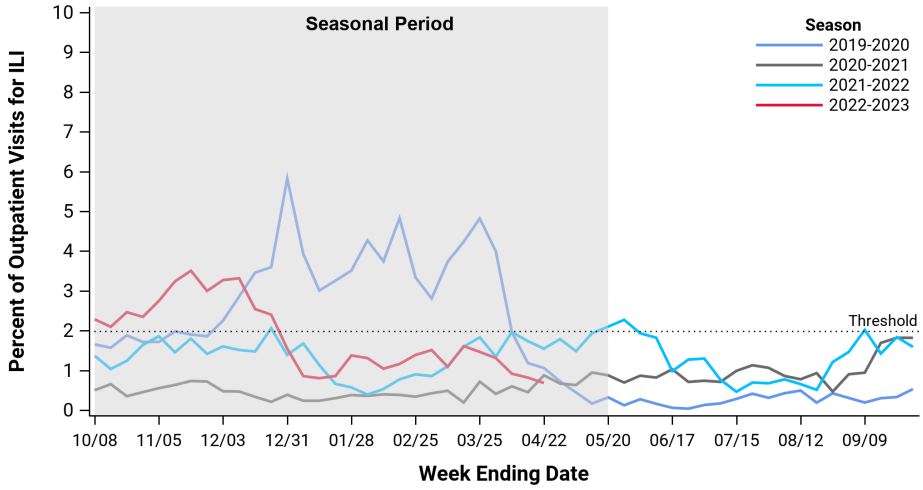


Percent of emergency department visits attributed to **respiratory syncytial virus (RSV)** diagnoses for residents of Chicago zip codes based on chief complaint data. Seasonal trends are displayed for children younger than 5 years old who are most impacted by RSV.

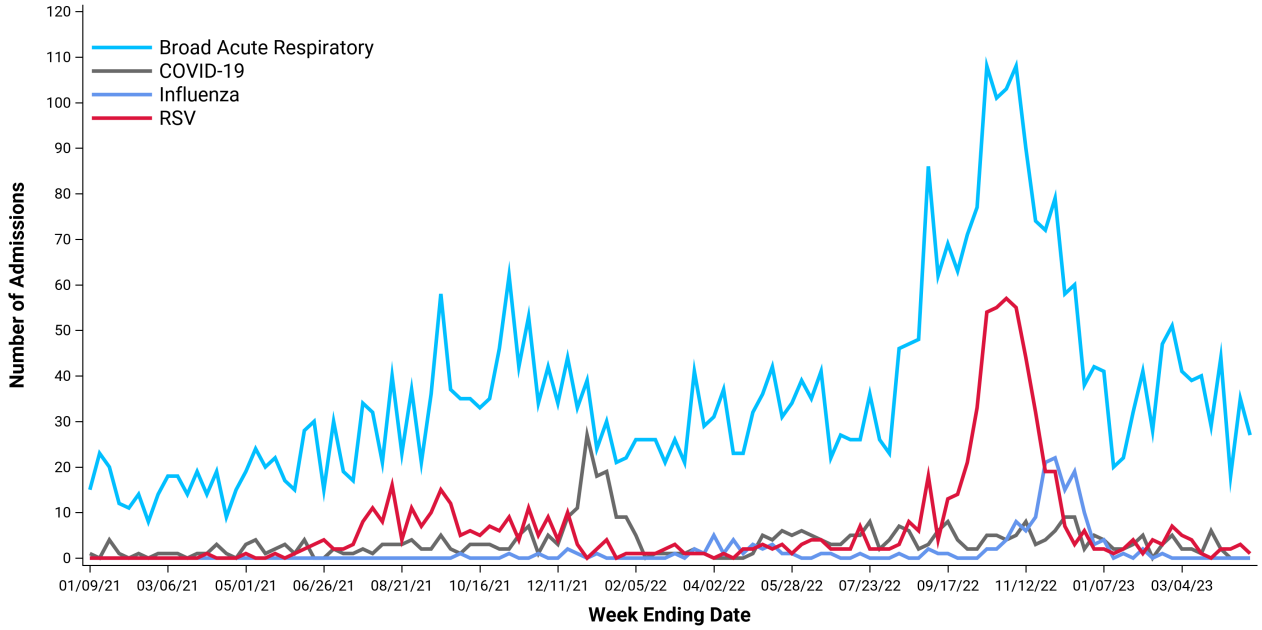




Outpatient Visit Illness Surveillance *Several outpatient clinics throughout Chicago participate in CDC's Influenza-like Illness Surveillance Network (ILINet) by reporting on a weekly basis the total number of outpatient clinic visits, and of those visits, the number with influenza-like illness (ILI). 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.