

Cincinnati Influenza Activity Report: Week 22-51 (12/25/22 to 12/31/22)

Background

The US influenza surveillance season runs from the 40th week of the year (using CDC's MMWR calendar) through the 20th week of the next year. For the 2022-2023 season, week 40 (21-40) began on 10/02/22 and reporting for week 20 will end on 05/21/23 (23-20).

Influenza, by itself, is not a reportable disease, meaning that it is not one of the diseases that Ohio law mandates be reported to public health authorities. This means that public health authorities do not have a single simple data source to measure the incidence (occurrence) and impact of influenza. For this reason, influenza surveillance is conducted by looking at different factors and data sources. In Ohio, pediatric deaths due to influenza and hospitalizations of persons of any age due to influenza are reportable.

Pediatric Deaths (2022-2023 season to date)

- Cincinnati: 0
- Ohio*: 3
- United States*: 74

**As of week 20-52,*

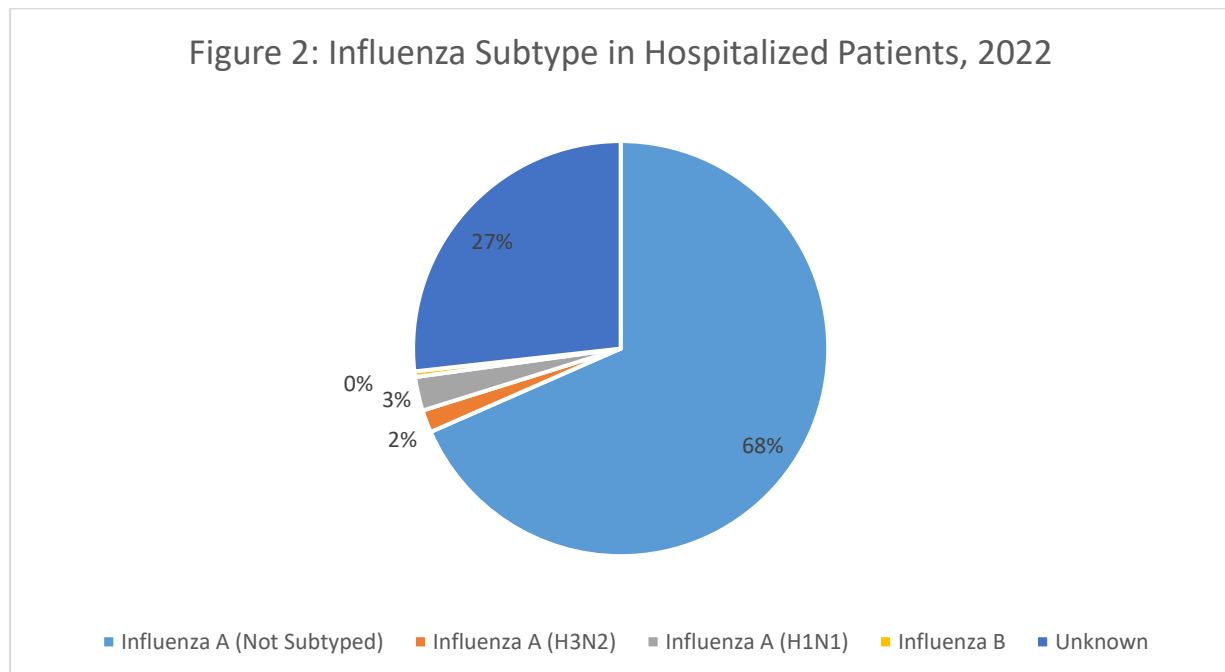
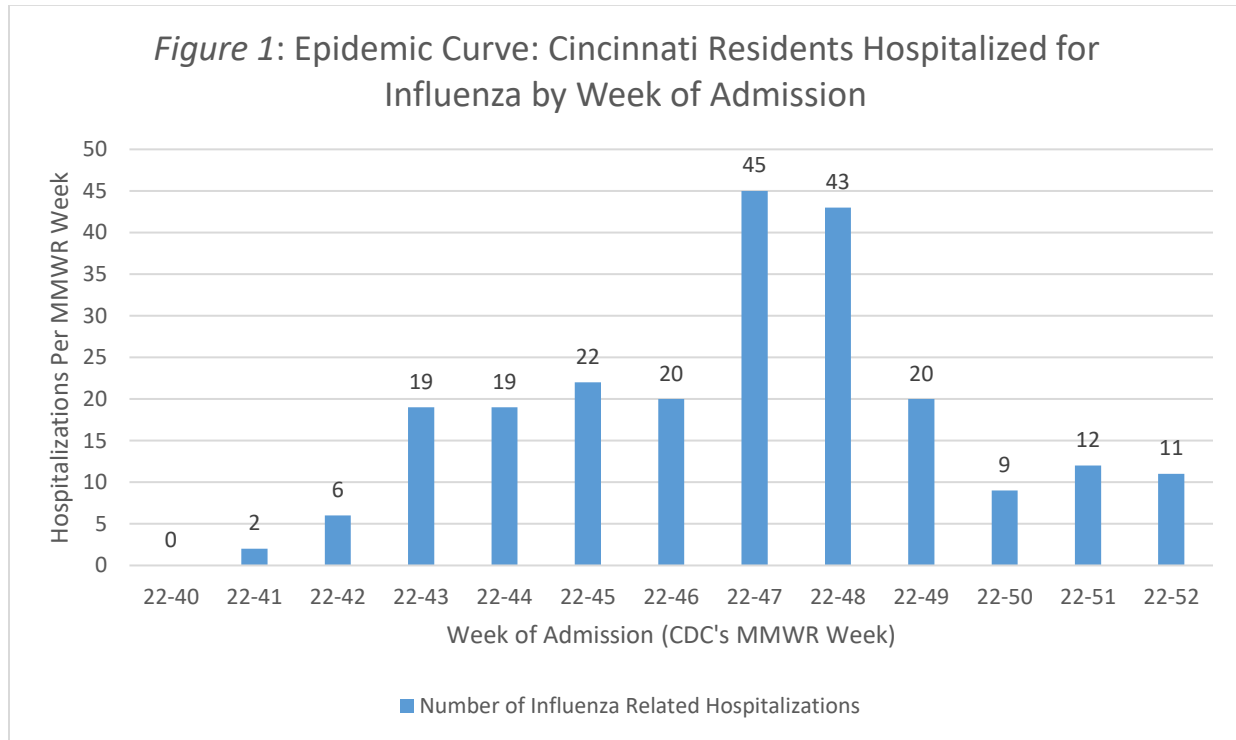
Hospital Admissions

- From 10/02/2022 through 12/31/2022, 228 Cincinnatians have been hospitalized for influenza (Table 1).
 - This total is equal to last year's influenza season. By this time last year, 14 Cincinnati residents had been hospitalized for influenza.
 - Statewide, there are 7,152 residents that have been hospitalized (through 12/31/22); influenza-associated hospitalizations for Ohio are below the seasonal threshold.

Hospitalizations Due to Influenza by Month in Cincinnati to Date	
<i>Month</i>	<i>Number of Hospitalized Influenza Cases</i>
October	31
November	128
December	69

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- Figure 1 below shows the number of cases of influenza associated hospitalization among Cincinnati residents reported to the Cincinnati Health department by week of admission. Which as of this report is **228**.



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Figure 3: Influenza Related Hospitalization By Sex, 2022

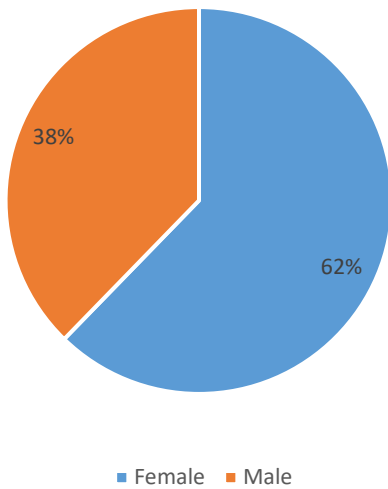


Figure 4: Influenza Related Hospitalization By Race

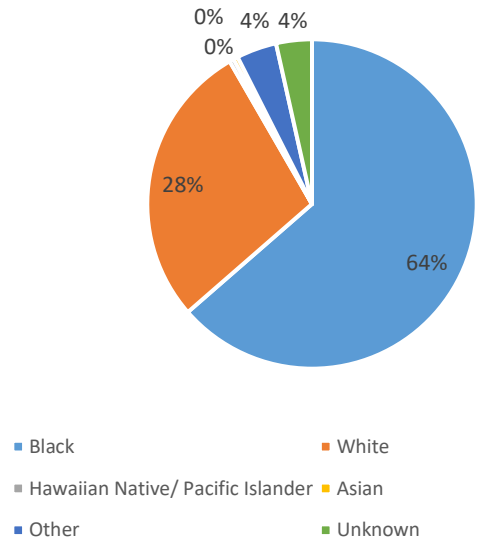


Figure 5: Influenza Related Hospitalization By Ethnicity, 2022

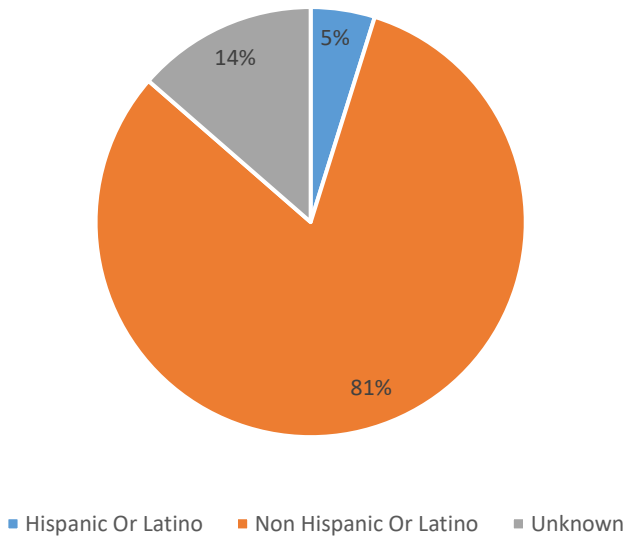
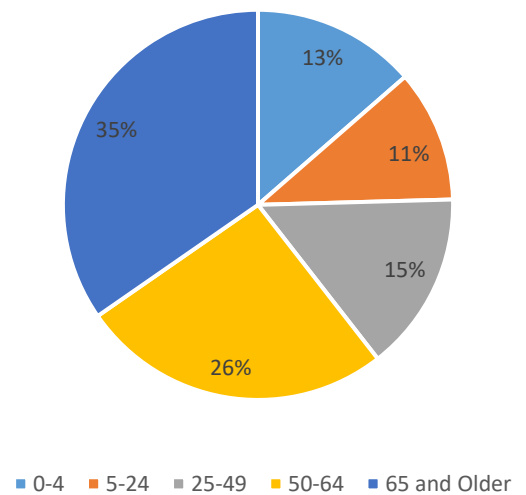
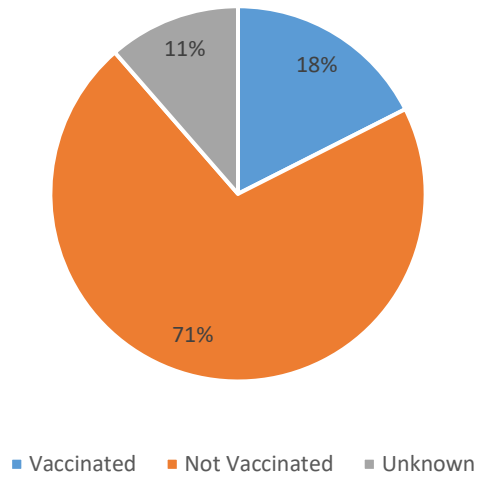


Figure 6: Influenza related Hospitalizations by Age Group, 2022



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Figure 7: Influenza Related Hospitalizations of Vaccinated Individuals

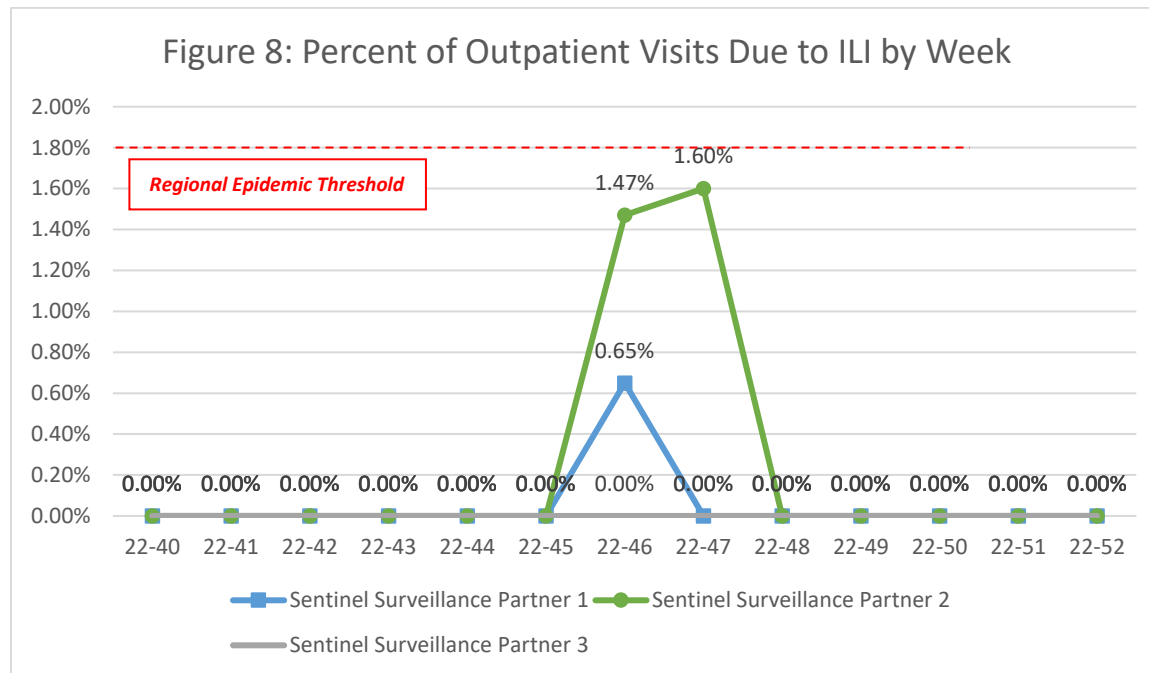


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Outpatient Visits: Sentinel Influenza Program

To get a broader picture of the impact of influenza on the community, the Centers for Disease Control and Prevention (CDC) partners with clinics and medical practices in a voluntary program called ILINet, through which the number of individuals with a fever over 100F, and a cough and/or sore throat, these certain symptoms ("Influenza-Like-Illness, or ILI")¹ are reported weekly, along with the total number of patients seen at the clinic or practice. This voluntary ("sentinel") reporting allows the calculation of the percentage of outpatient visits attributable to ILI. Within Cincinnati, three sites participate in this program, with the three coordinated through the Cincinnati Health Department (CHD). The three sites in Cincinnati are two full-scale primary care health centers, and one school-based health center at a high school.

As of **week 52**, our three sentinel surveillance partners have begun surveillance, they will send in at least **two** ILI specimen to the state of Ohio for testing.

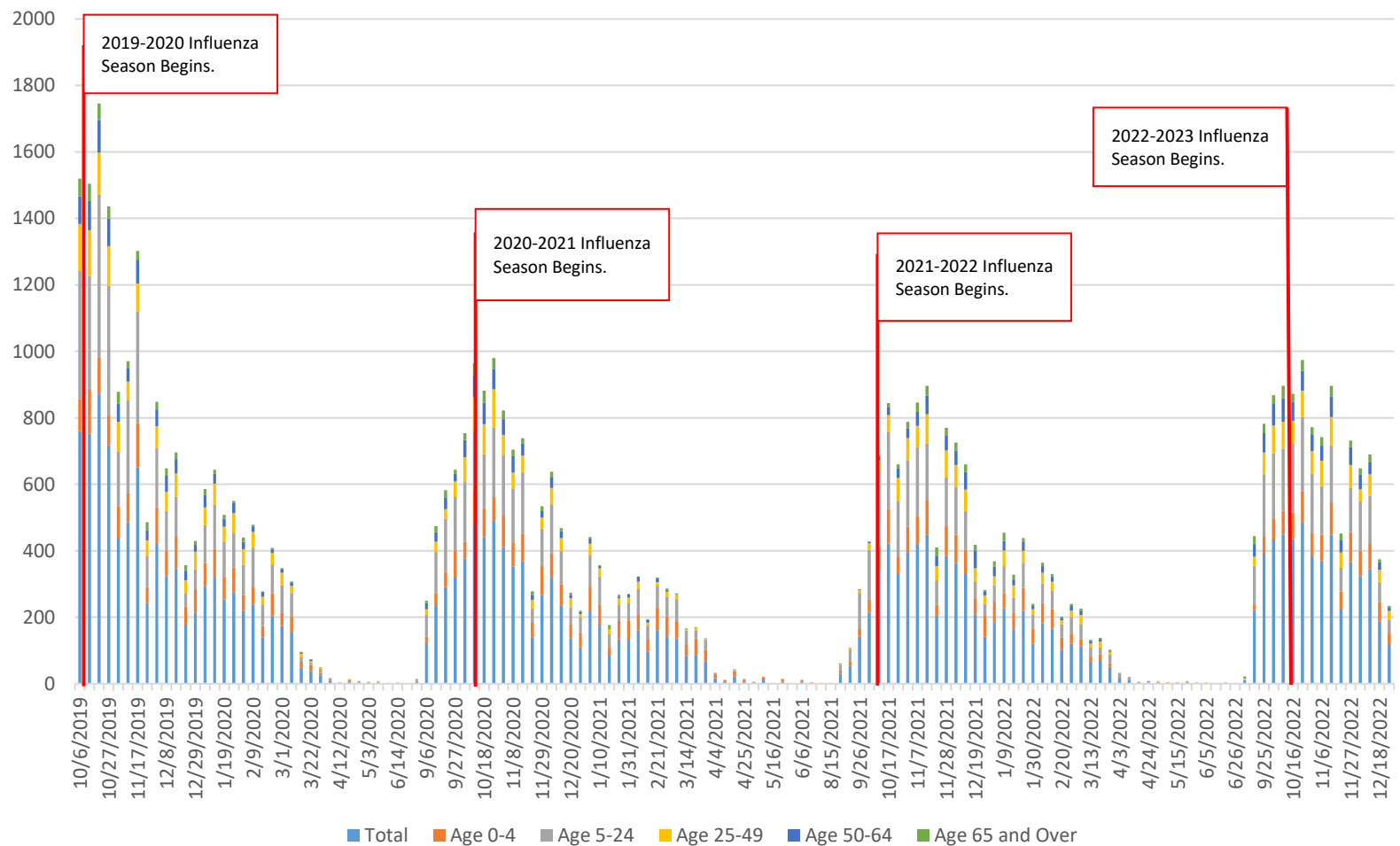


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Influenza Immunizations

The graph below (figure 9), shows the number of influenza vaccinations given by age group per week to patients through CHD's Cincinnati Community Primary Care (CCPC) Health centers. A red line has indicated the beginning of each Influenza season. As of 12/25/22 a total of 5,893 influenza vaccines have been given since the beginning of the 2022 influenza season (MMWR week 40). This total is higher than the previous year 2021, during that time, CHD had given 5,188 Influenza vaccines from the start of the influenza season to 12/26/21. For further comparison, in 2019, (before the COVID-19 pandemic) the number of vaccines provided by CHD from beginning of influenza season to 12/29/19 was 8,795, significantly higher than both 2021 and 2022. Communications continue to urge residents that it is still just as important to receive their influenza vaccine this year as in previous years before the COVID-19 pandemic.

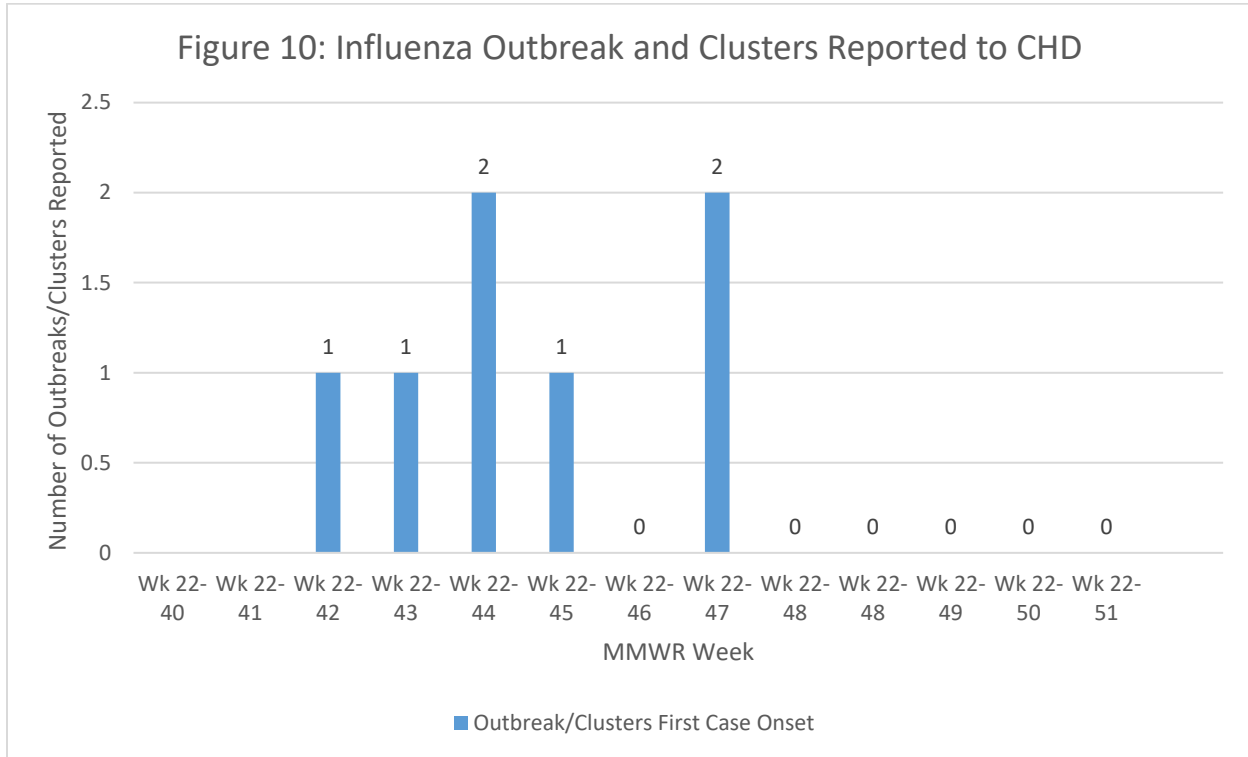
Figure 8: Number Of Influenza Vaccines Given at CCPCs By Week
(10/06/2019 - 12/25/22)



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Outbreaks and Clusters

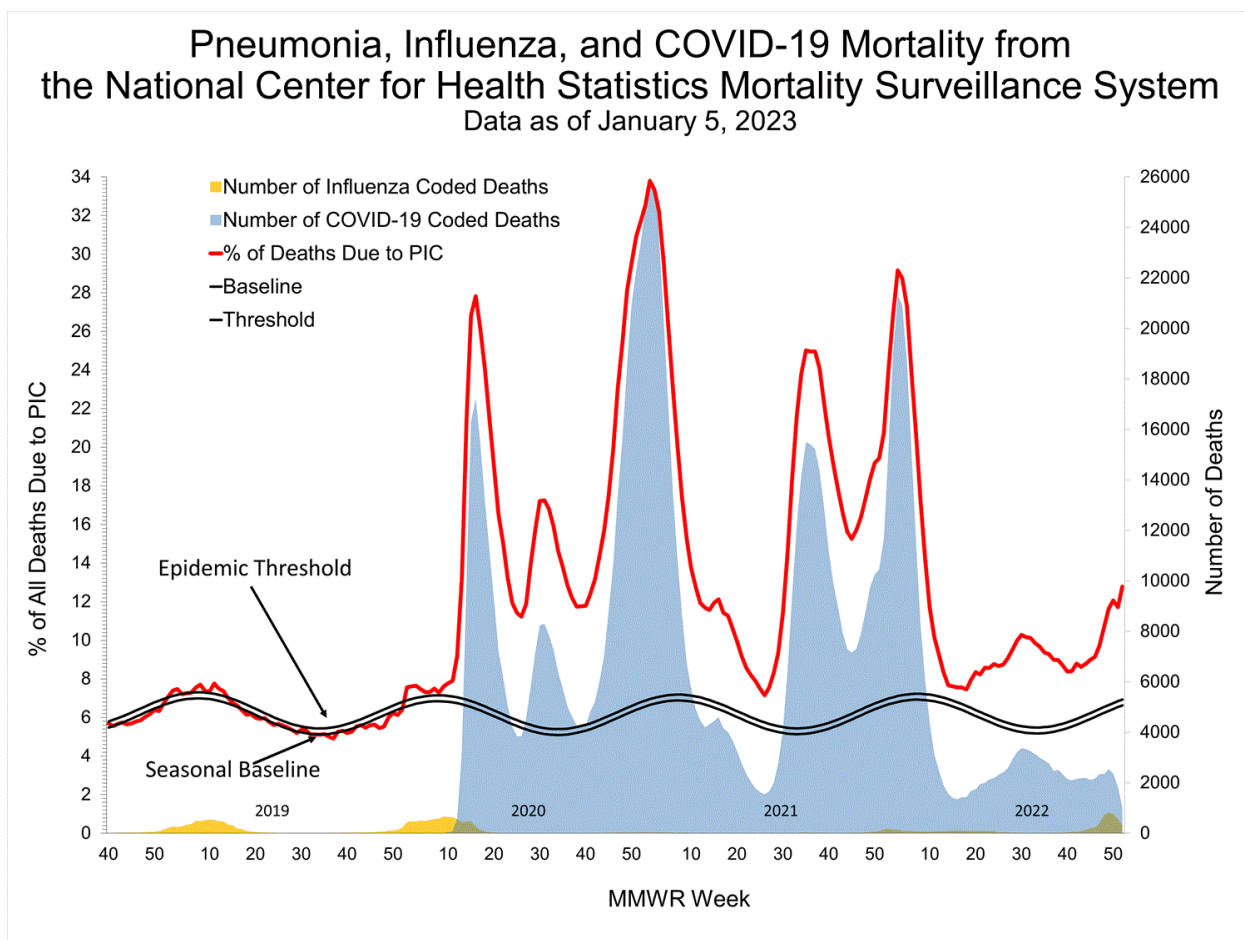
As of week 50, of influenza season, there have been 7 confirmed/suspected influenza institutional outbreaks/clusters. These initial clusters outbreaks were amongst academic institutions. For the 2022-2023 School year, all Cincinnati School Based Health Centers are offering the Influenza Vaccine, for students with insurance there is not out of pocket cost for this vaccine, and those who are uninsured this vaccine costs about \$20.



Influenza, Pneumonia, and COVID-19 Mortality

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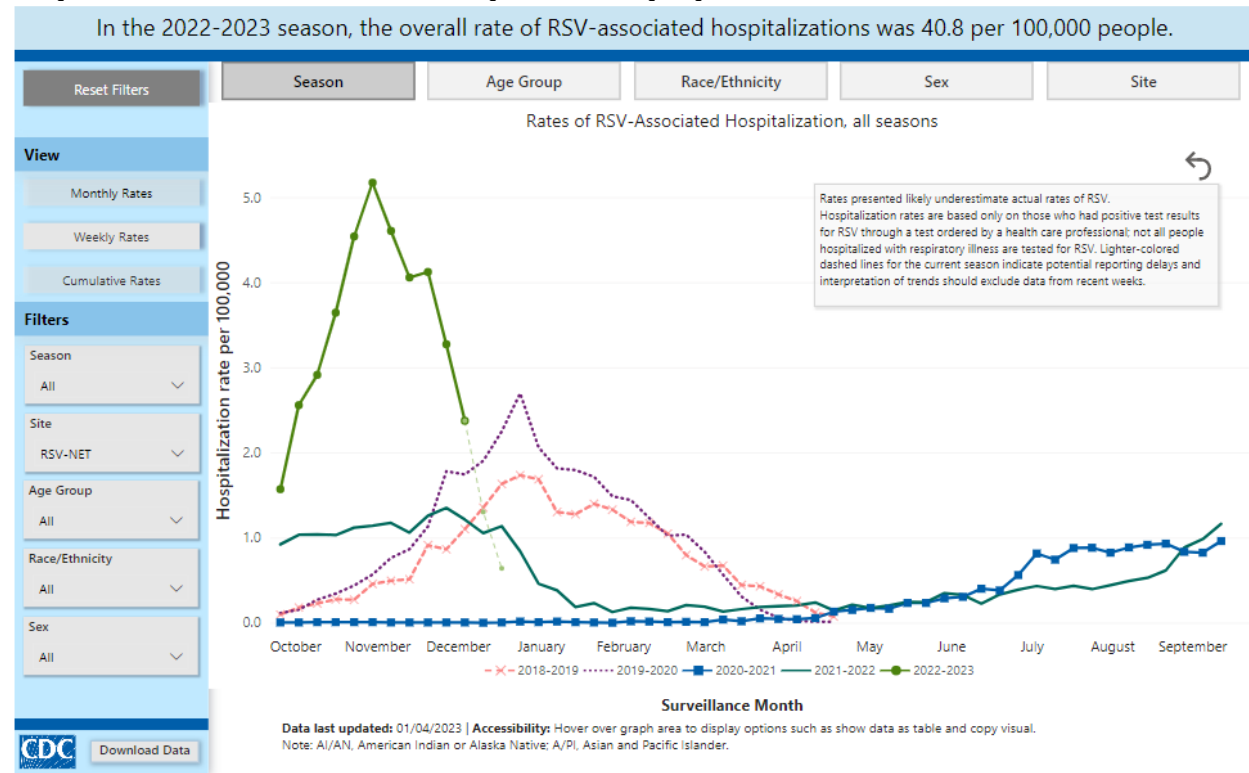
Based on NCHS mortality surveillance data as of January 5, 2023, 12.8% of the deaths that occurred during the week ending December 31, 2022 (week 52), were due to pneumonia, influenza, and/or COVID-19 (PIC). This percentage is above the epidemic threshold of 6.9% for this week. Among with the 2,380 PIC deaths reported for this week, 1,023 had COVID-19 listed as an underlying or contributing cause of death on the death certificate, and 303 listed influenzas, indicating that current PIC mortality is due primarily to COVID-19 and not influenza. The data presented are preliminary and may change as more data are received and processed. This figure was provided by and can be found at <https://www.cdc.gov/flu/weekly/index.htm#Clinical>



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RSV is a common virus that usually causes mild, cold-like symptoms. Most people recover in a week or two, however for infants and older adults it can be serious. RSV is the most common cause of bronchiolitis (inflammation of the small airways in the lung) and pneumonia (infection of the lungs) in children younger than 1 year old in the United States. RSV season normally runs from September through May, RSV usually hits its peak around December and lasts through February. However, due to the COVID-19 pandemic this season has been disrupted, in 2021 RSV hit its peak in July.

So far in the 2022-2023 the U.S has experienced an increased rate of RSV than has been experienced this time of year in the past. This increased rate can be seen in the below graph (green line with dots) provided by the CDC's RSV-Net surveillance system. The overall rate of RSV associated hospitalizations for the season is 40.8 per 100,000 people.



Footnotes

Interpretation

- The Respiratory Syncytial Virus (RSV) Hospitalization Surveillance Network (RSV-NET) hospitalization data are preliminary and subject to change as more data become available. In particular, case counts and rates for recent hospitalizations are subject to lag. Lag for RSV-NET case identification and reporting might increase around holidays or during periods of increased hospital utilization. As data are received each week, prior case counts and rates are updated accordingly.
- Data is incomplete for May and June 2022.
- Data presented in the RSV Interactive Dashboard might differ from RSV-NET publications since different datasets or methods might have been used. Small numbers for some topics or filters might make year-to-year changes difficult to interpret.
- Surveillance for the 2022-2023 season began October 2nd and additional data points will be added as data are available.

Data Overview

- Incidence rates (per 100,000) are calculated using the National Center for Health statistics (NCHS) vintage 2020 bridged-race postcensal population estimates for the counties included in the surveillance area. These rates are likely to be underestimated as some RSV-associated hospitalizations might be missed because of underreporting, differing provider or facility testing practices, and diagnostic test sensitivity. Rates presented do not adjust for testing practices which may differ by age and race.
- The NCHS bridged-race population estimates used as denominators for race provide data for children ages 0-1 year. To calculate rates of hospitalization among children ages <6 months and 6 months to <12 months, the population estimate for children ages 0-1 year is halved.
- The area of the surveillance network has changed over time. Details by season can be found on the RSV-NET Overview and Methods page.
- Prior to the 2018-2019 season, RSV-NET surveillance was only conducted among adults (18 years and older).
- Black, White, American Indian/Alaska Native, and Asian/Pacific Islander people were categorized as non-Hispanic; Hispanic people could be of any race. If Hispanic ethnicity was unknown, non-Hispanic ethnicity was assumed. Rates presented by race and ethnicity are calculated using records with known race. Those with missing or unknown race are excluded from specific estimates but are included in overall estimates.

Summary

To date the influenza activity for both Cincinnati City and the State of Ohio is higher than the 2021 influenza season. As of 12/31/22, one pediatric death has been reported in Ohio by the Ohio Department of Health (ODH). In total ODH, has reported 7,152 hospitalized cases of influenza so far this season. According to weekly CDC influenza reporting, the percent of outpatient illness is 5.4%, which is above the United States baseline of 2.5%. The Ohio Department of Health (ODH) has reported high percentages of ILI in outpatient settings from sentinel ILINet providers, the percentage of emergency room visits exhibiting fever/ILI are decreasing, and below the seasonal baseline for Ohio.

According to **Figure 7** above, 82% of those hospitalized for Influenza so far this season have either not been vaccinated or status is unknown for this year's influenza virus. Shown in **figure 9**, CHD's vaccination rates increase to its peak through the end of November. This season of influenza arrived earlier than what is expected, and CHD has not yet hit the peak of vaccination, this could be contributing to our higher rates of influenza associated hospitalizations early in this 2022-2023 season. Week 22-52 has only reported 11 hospitalized influenza cases, this week and last week (Wk 22-51) only 11 were reported. This has been a sharp decrease in reported cases from the 88 reported between weeks 22-48 and 22-49 (11/27/22- 12/10/22). RSV cases in the United States continue to decrease, along with cases of Influenza in Cincinnati and Ohio.

References and Links

- US Influenza Activity: <https://www.cdc.gov/flu/weekly/index.htm#Clinical>
- Ohio Flu Activity Reports: <https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/seasonal-influenza/influenza-dashboard/influenza-dashboard>
- Past Cincinnati Influenza Reports: <https://www.cincinnati-oh.gov/health/community-health-data/seasonal-influenza-activity-reports/>
- WHO Flu Factsheet: [https://www.who.int/en/news-room/fact-sheets/detail/influenza-\(seasonal\)](https://www.who.int/en/news-room/fact-sheets/detail/influenza-(seasonal))
- CDC's RSV-Net Surveillance: <https://www.cdc.gov/rsv/research/rsv-net/dashboard.html>