

# ANNUAL MARYLAND INFLUENZA SEASON SUMMARY

**2023-2024 Season**

Infectious Disease  
Epidemiology and  
Outbreak Response Bureau



# Table of Contents

## **Section 1: Introduction**.....

Table 1: Key Influenza-Related Indicators and Data, Maryland, 2023-2024

## **Section 2: Influenza Activity**.....

### **Outpatient Influenza-Like Illness (ILI)**.....

Figure 1: Percent Outpatient Visits to Sentinel Providers for ILI by Season

Figure 2: Number and Percent of ILI Visits to Sentinel Providers by Age, 2023-2024 Season

Figure 3: Percent Positivity of ILI Among Outpatient Visits to Sentinel Providers by Season

### **Emergency Department (ED) and Urgent Care Visits for ILI**.....

Figure 4: Percent of ED and Urgent Care Visits for ILI by Week and Season

Figure 5: Number and Percent of ED and Urgent Care Visits for ILI, by Age Group, 2023-2024 Season

Figure 6: Percent Positivity of ILI Among ED and Urgent Care Visits by Season

### **Community-Based Influenza Surveillance**.....

Figure 7: Percent of MRITS Respondents Reporting ILI by Week, 2023-2024 Season

Figure 8: Number and Percent of MRITS Respondents Reporting ILI by Age Group, 2023-2024 Season

### **Clinical Laboratory Influenza Testing**.....

Figure 9: Influenza Testing Reported by Maryland Clinical Laboratories by Week and Season

Figure 10: Count of Positive Influenza Tests Reported by Maryland Clinical Laboratories by Influenza Type by Week, 2023-2024 Season

Figure 11: Total Count and Percent of Positive Influenza Tests Reported by Maryland Clinical Laboratories by Influenza Type, 2023-2024 Season

Figure 12: Influenza Percent Positivity Reported by Maryland Clinical Laboratories by Season

### **MDH Laboratory Influenza Testing**.....

Figure 13: Breakdown of Subtypes of Positive Influenza PCR Testing Results Reported by MDH Laboratories Administration by Week, 2023-2024 Season

Figure 14: Influenza PCR Testing Reported by MDH Laboratories Administration by Subtype, 2023-2024 Season

## **Non-COVID Respiratory Outbreaks**

Figure 15: Non-COVID Respiratory Illness Outbreaks Reported in Maryland by Week and Season

Figure 16: Non-COVID Respiratory Illness Outbreaks Reported in Maryland by Type, 2023-2024 Season

## **Section 3: Influenza Severity**.....

### **Influenza-Associated Hospitalization**

Figure 17: Influenza-Associated Hospitalizations in Maryland by Week and Season

Figure 18: Influenza-Associated Hospitalizations per 100,000 Population in Maryland by Age Group, 2023-2024 Season

Figure 19: Influenza-Associated Hospitalizations per 100,000 Population in Maryland by Race and Ethnicity, 2023-2024 Season

Figure 20: Influenza-Associated Hospitalizations per 100,000 Population in Maryland by Gender, 2023-2024 Season

Figure 21: Total Influenza-Associated Hospitalizations in Maryland by Season

### **Influenza-Associated Adult Death**

### **Influenza-Associated Pediatric Death**

Figure 22: Influenza-Associated Adult and Pediatric Deaths, 2023-2024 Season

Figure 23: Influenza-Associated Adult and Pediatric Deaths by Race and Ethnicity, 2023-2024 Season

Figure 24: Influenza-Associated Adult and Pediatric Deaths by Age Group, 2023-2024 Season

Figure 25: Influenza-Associated Adult and Pediatric Deaths by Gender, 2023-2024 Season

Figure 26: Influenza-Associated Adult and Pediatric Deaths by Type and Season

## **Section 4: Influenza Vaccination**.....

### **Influenza Vaccination Data Reported to ImmuNet**

Figure 27: Proportion of Maryland Population Vaccinated for Influenza and Reported to ImmuNet, by County, 2023-2024 Season

Figure 28: Proportion of Maryland Population Vaccinated for Influenza and Reported to ImmuNet by Race and Ethnicity, 2023-2024 Season

Figure 29: Proportion of Maryland Population Vaccinated for Influenza and Reported to ImmuNet by Age Group, 2023-2024 Season

Figure 30: Proportion of Maryland Population Vaccinated for Influenza and Reported to ImmuNet by Gender, 2023-2024 Season

## **Section 5: Conclusion**.....

## **Resources**.....

## Section 1: Introduction

The Maryland Department of Health (MDH) Infectious Disease Epidemiology and Outbreak Response Bureau conducts continuous statewide influenza surveillance, in coordination with local and federal partners. This report summarizes key influenza-related indicators and data (Table 1) collected and analyzed as part of this program for the 2023-2024 influenza season (October 2023-May 2024).

**Table 1: Key Influenza-Related Indicators and Data, Maryland, 2023-2024**

### Influenza Activity

- Outpatient influenza-like illness (ILI) visits
- Emergency department (ED) and urgent care respiratory illness visits
- Community-based respiratory illness
- Clinical laboratories influenza tests
- MDH Laboratories Administration influenza tests
- Respiratory illness outbreaks

### Severity

- Influenza-associated hospitalizations
- Influenza-associated adult deaths
- Influenza-associated pediatric deaths

### Vaccination

- Influenza vaccination data

## Section 2: Influenza Activity

### Outpatient Influenza-Like Illness (ILI)

The **U.S. Influenza-Like Illness Surveillance Network (ILINet)** collects information from a network of healthcare providers (“sentinel providers”) on outpatient visits for respiratory illness. Sentinel providers include emergency departments (EDs), urgent care facilities, student health centers, family practice, internal medicine, OB/GYN and pediatricians. Sentinel providers report, on a weekly basis, the number of patient visits for ILI by age group and the total number of visits for any reason. For ILINet, ILI is defined as fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat. The Centers for Disease Control and Prevention (CDC) manage ILINet in collaboration with health departments.

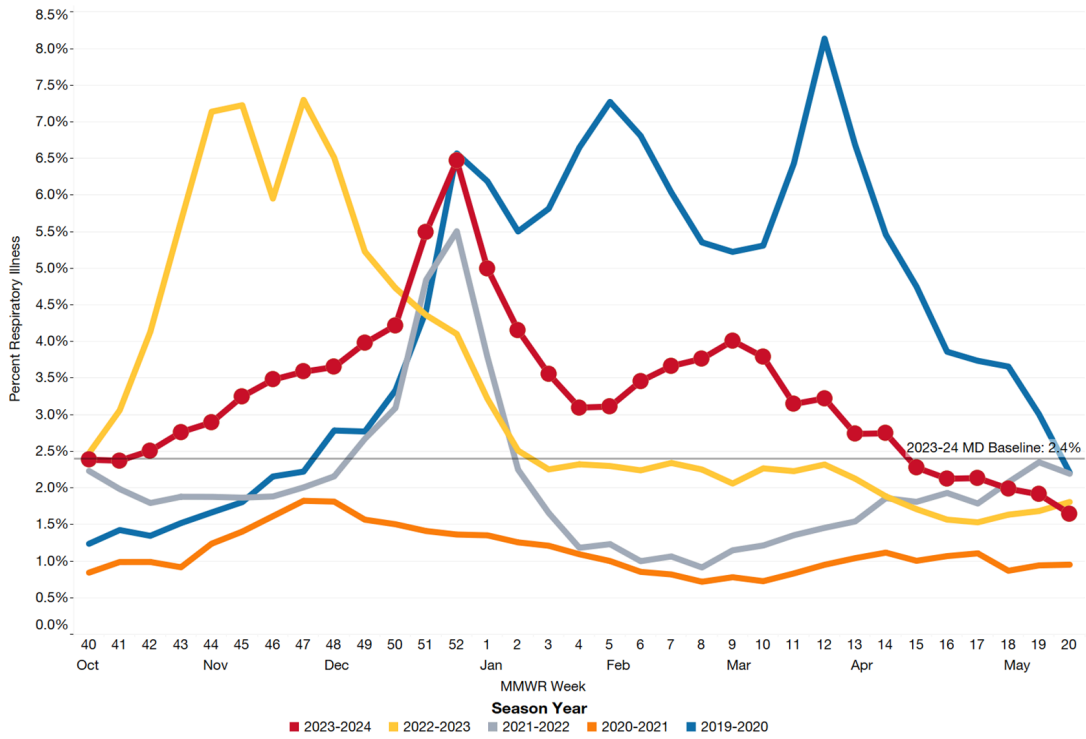
ILINet data is used to determine a weekly **ILI activity** level for each U.S. jurisdiction, which is based on the percent of outpatient visits due to ILI in a jurisdiction compared to the average percent of ILI visits that occur during weeks with little or no influenza virus circulation (non-influenza weeks) in that jurisdiction.

During the 2023-2024 influenza season, in Maryland:

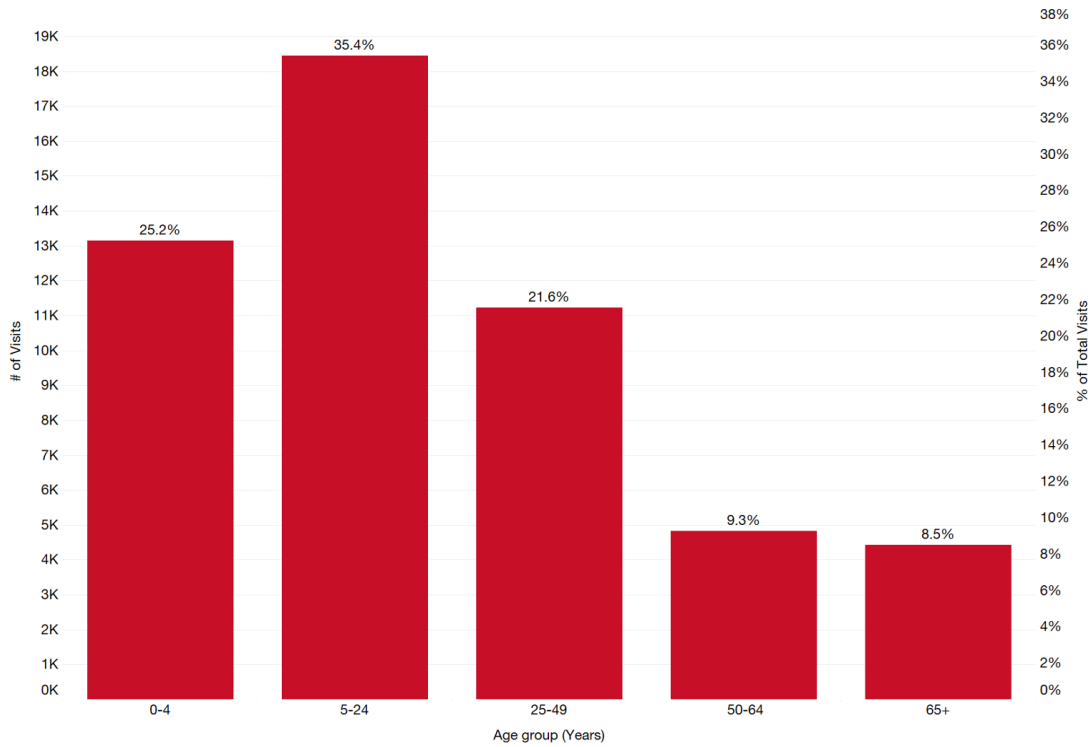
- A total of 71 Maryland sentinel providers reported data to ILINet, with an average of 69 providers (97%) reporting weekly.
- 1,289,005 individuals visited Maryland sentinel providers and 44,208 (3.4%) of those patients reported ILI.

See Figures 1-3 for additional data on trends over time in outpatient visits to Maryland sentinel providers for ILI by season, age group-specific data for this season, as well as percentage by season.

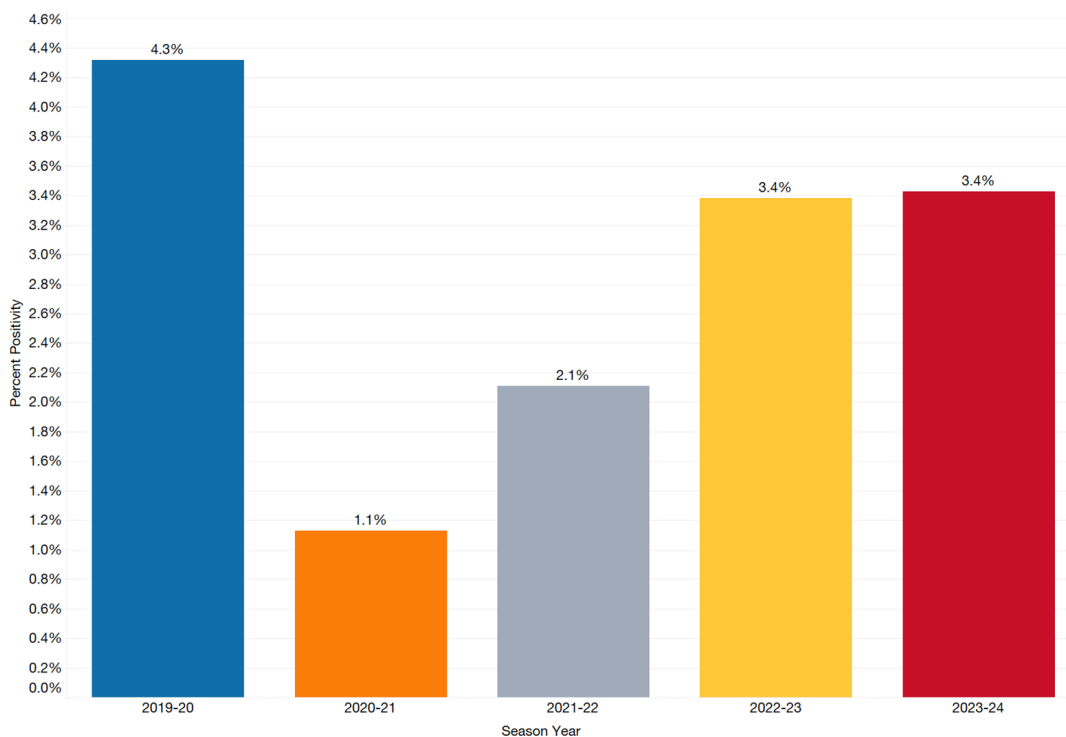
**Figure 1: Percent Outpatient Visits to Sentinel Providers for ILI by Week and Season**



**Figure 2: Number and Percent of ILI Visits to Sentinel Providers by Age, 2023-2024 Season**



**Figure 3: Percent Positivity of ILI Among Outpatient Visits to Sentinel Providers by Season**



### **ED and Urgent Care Visits for ILI**

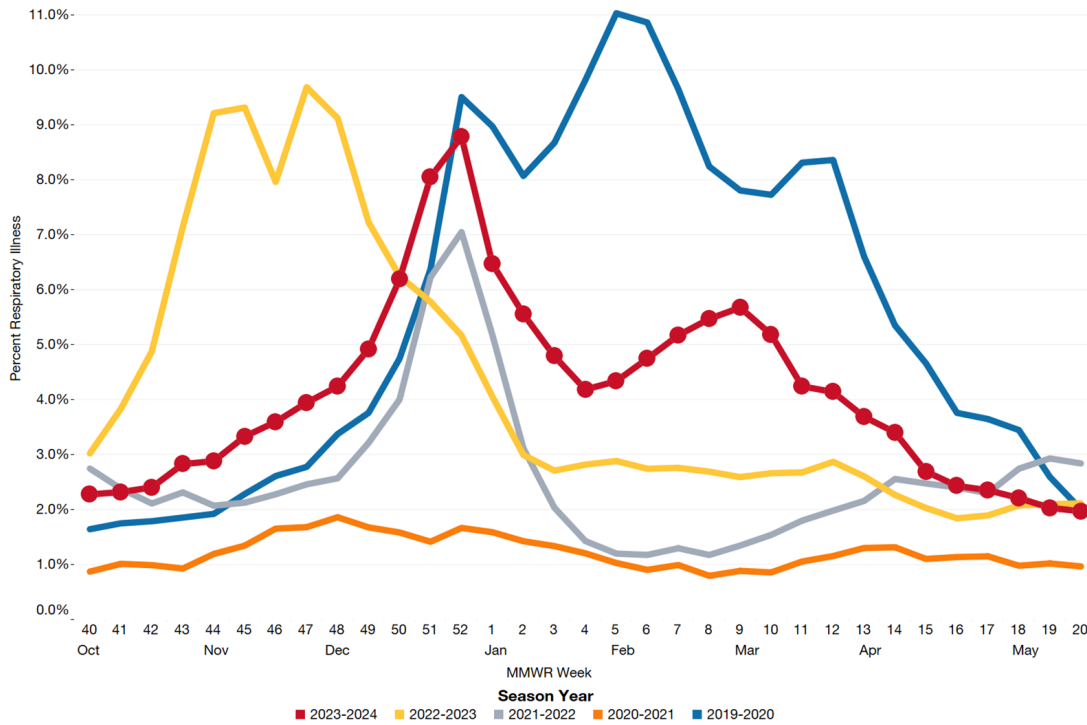
Maryland's **Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE)** is a syndromic surveillance system that uses multiple data sources, including ED and urgent care visits, to quickly identify possible disease outbreaks and other suspicious patterns of illness. For this system, a person with a chief complaint of fever and either a cough or a sore throat, or complaining of "influenza" is classified as an ILI case.

During the 2023-2024 influenza season, in Maryland:

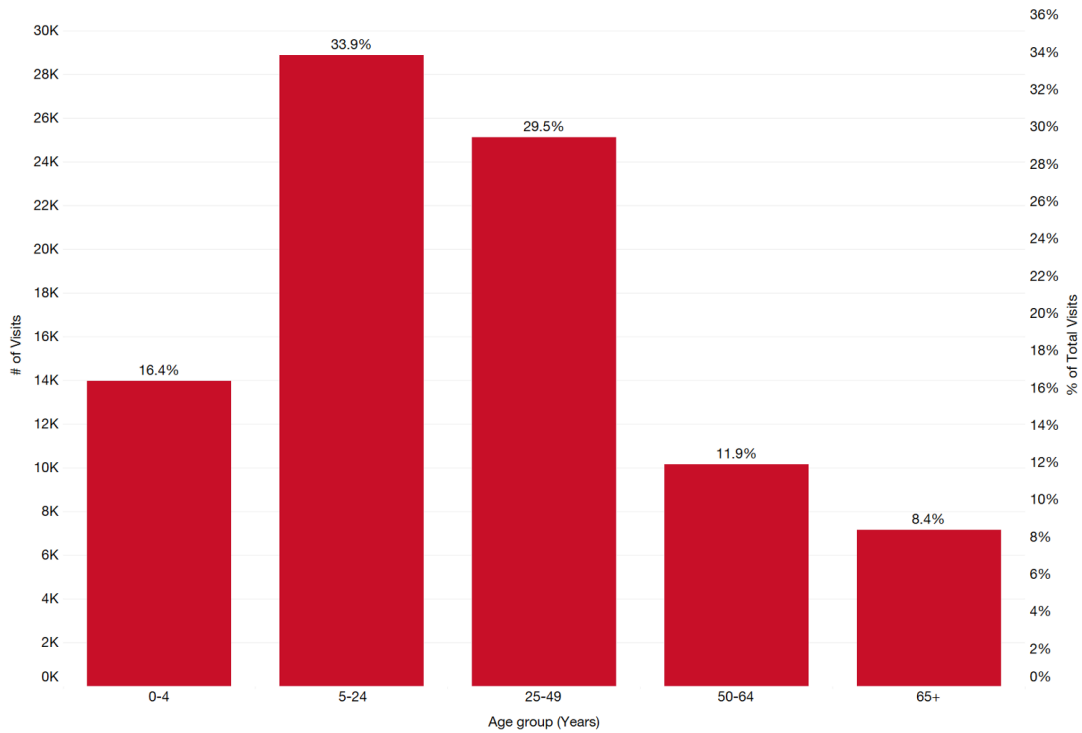
- MDH ESSENCE data sources include 44 EDs and 24 urgent care facilities.
- A total of 2,043,309 individuals visited these ED and/or urgent care facilities, with 85,341 (4.2%) of those individuals reporting ILI.

See Figures 4-6 for additional data on trends over time in Maryland ED and urgent care visits for ILI by season, age group-specific data for this season, as well as percentage by season.

**Figure 4: Percent of ED and Urgent Care Visits for ILI by Week and Season**

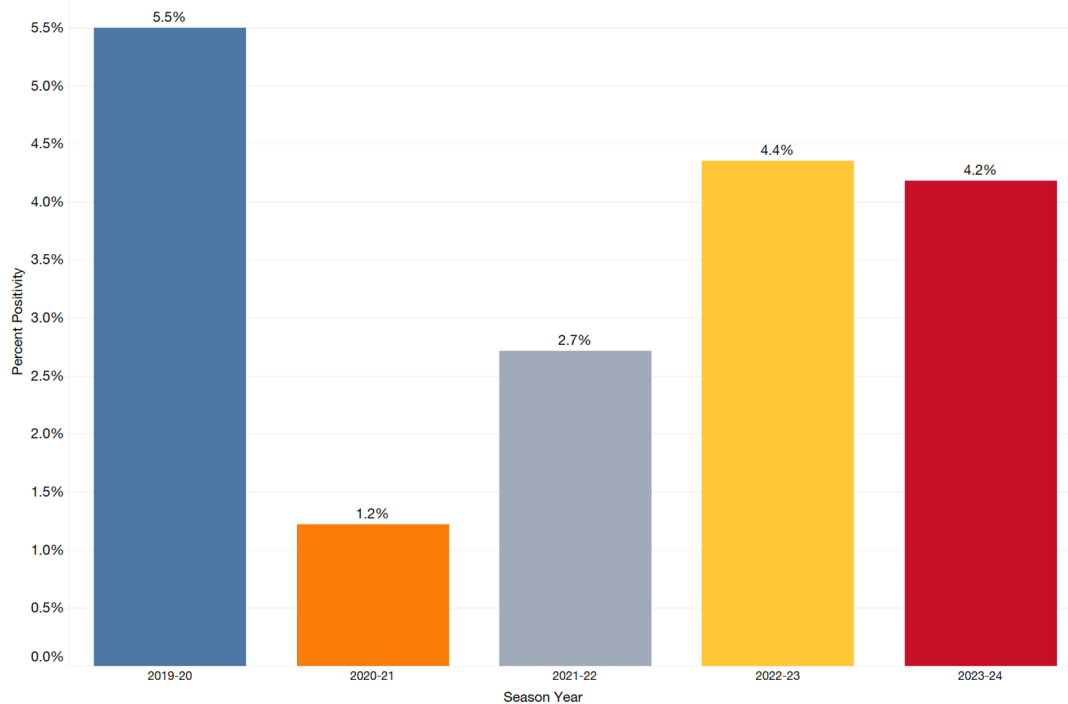


**Figure 5: Number and Percent of ED and Urgent Care Visits for ILI, by Age Group, 2023-2024 Season**





**Figure 6: Percent Positivity of ILI Among ED and Urgent Care Visits by Season**



### **Community-Based Influenza Surveillance**

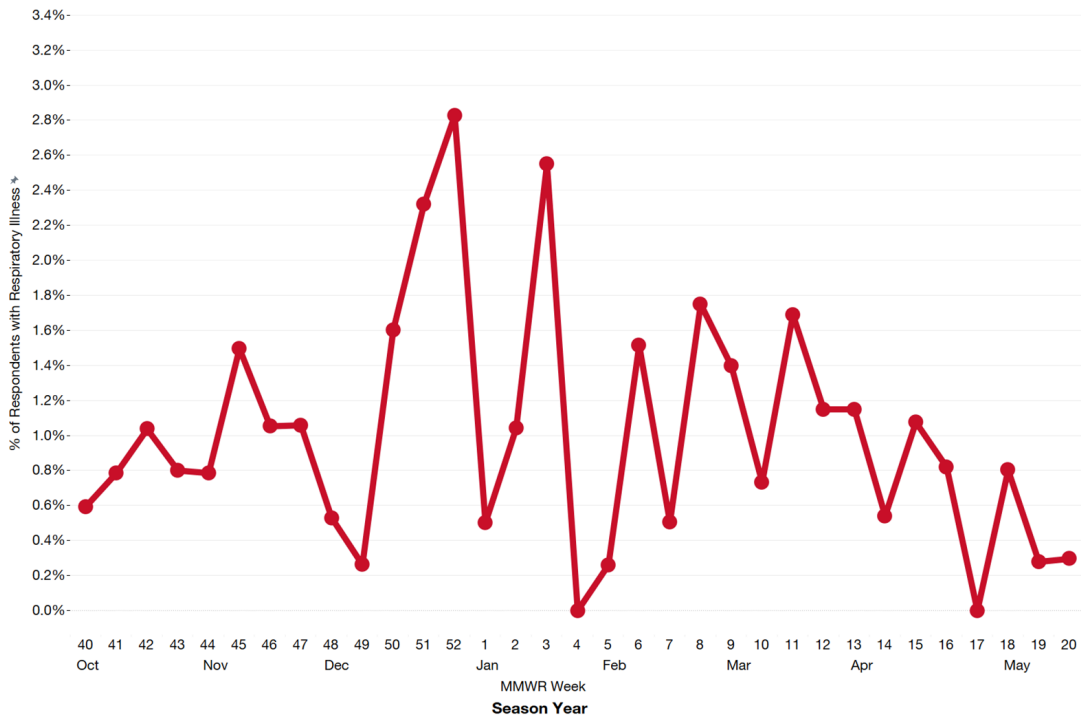
The **Maryland Resident Influenza Tracking Survey (MRITS)** is an email-based surveillance system where participants are asked weekly if they experience any symptoms of respiratory illness. If they respond in the affirmative, they are asked follow-up questions, including if they missed any regular activities. MRITS captures a subset of the population with respiratory illness symptoms who might not be interacting with the healthcare system through outpatient provider visits, EDs, or urgent care facilities.

For the 2023-2024 influenza season, in Maryland:

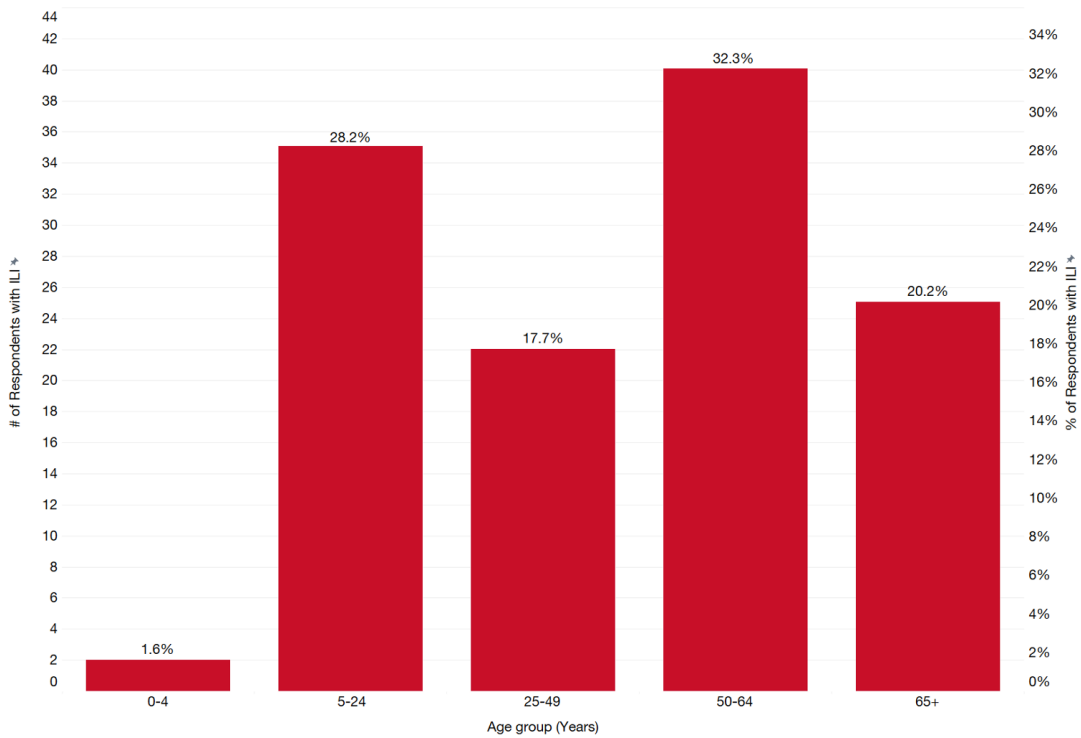
- 2,702 participants were surveyed about respiratory symptoms and, on average, 375 (14%) participants reported weekly.
- 124 individuals reported having ILI symptoms and, collectively, missing 256 days of regular activity.

See Figures 7 and 8 for additional data on trends over time in community-based respiratory illness reported through MRITS by season, as well as age group-specific data for this season.

**Figure 7: Percent of MRITS Respondents Reporting ILI by Week, 2023-2024 Season**



**Figure 8: Number and Percent of MRITS Respondents Reporting ILI by Age Group, 2023-2024 Season**



## Clinical Laboratory Influenza Testing

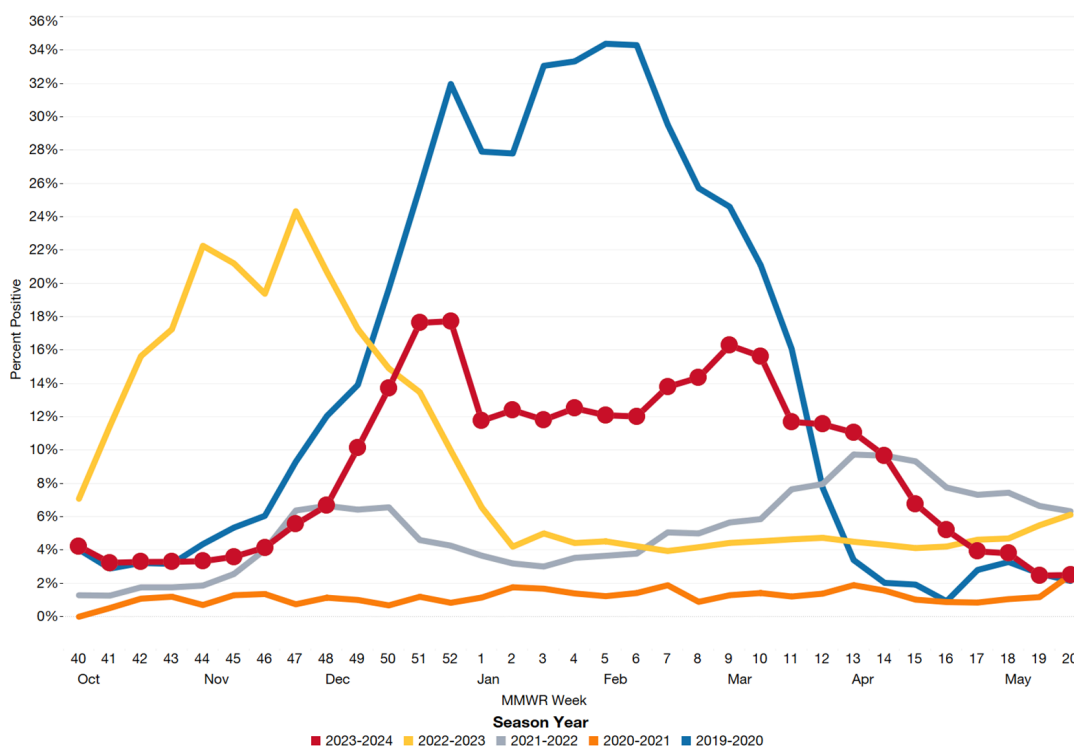
Many clinical laboratories in Maryland voluntarily report to MDH the total number of influenza tests performed each week and the test results. The majority of these labs perform rapid influenza diagnostic tests (RIDTs). These tests identify influenza cases, but they cannot characterize the different types of influenza lineage and subtypes. Additionally, these tests are less sensitive during low influenza activity.

For the 2023-2024 influenza season, in Maryland:

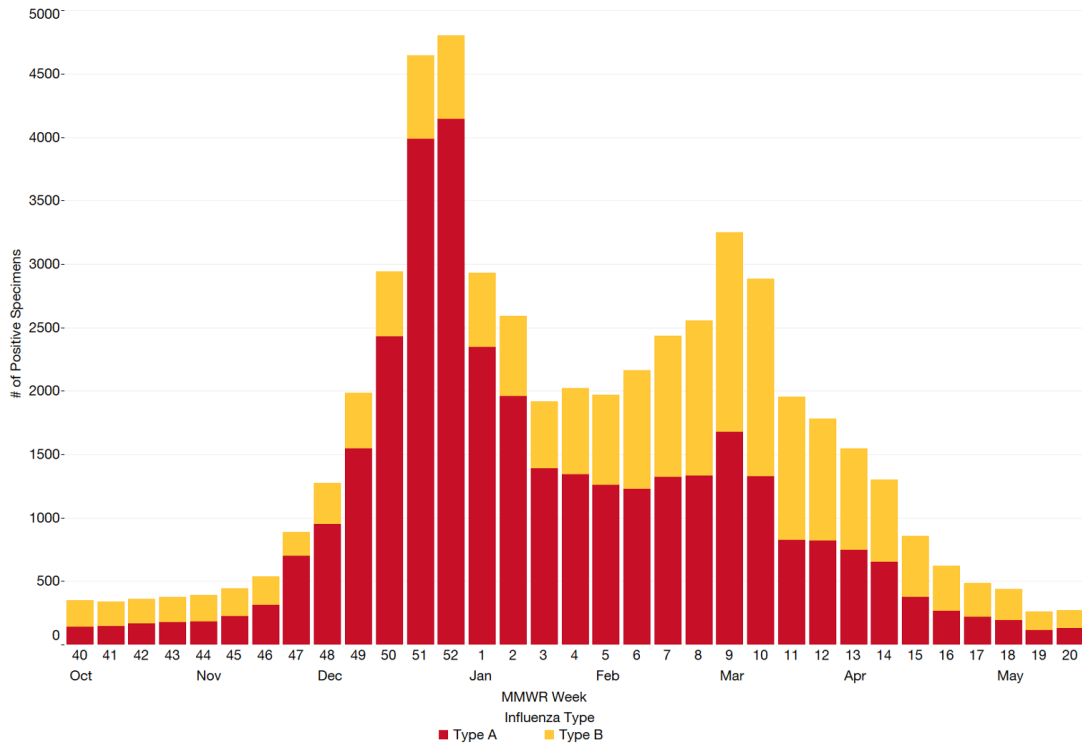
- 83 clinical laboratories reported data during the season, and, on average, 80 clinical laboratories (96%) reported weekly.
- These laboratories reported 523,919 tests completed during the season, of which 53,577 (10.2%) were positive for influenza. Of the positive tests, 34,638 (64.7%) were Type A and 18,939 (35.3%) were Type B.

See Figures 9-12 for additional data on trends over time in percent positive influenza testing reported by clinical laboratories in Maryland, influenza type for this season, and total percent by season.

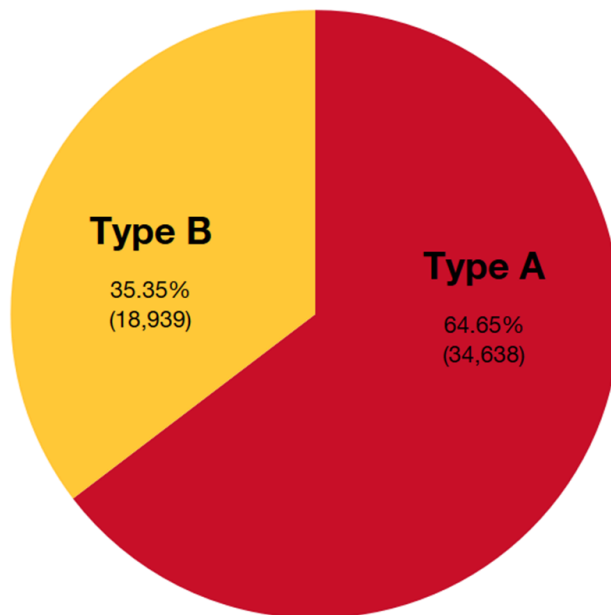
**Figure 9: Influenza Testing Reported by Maryland Clinical Laboratories by Week and Season**



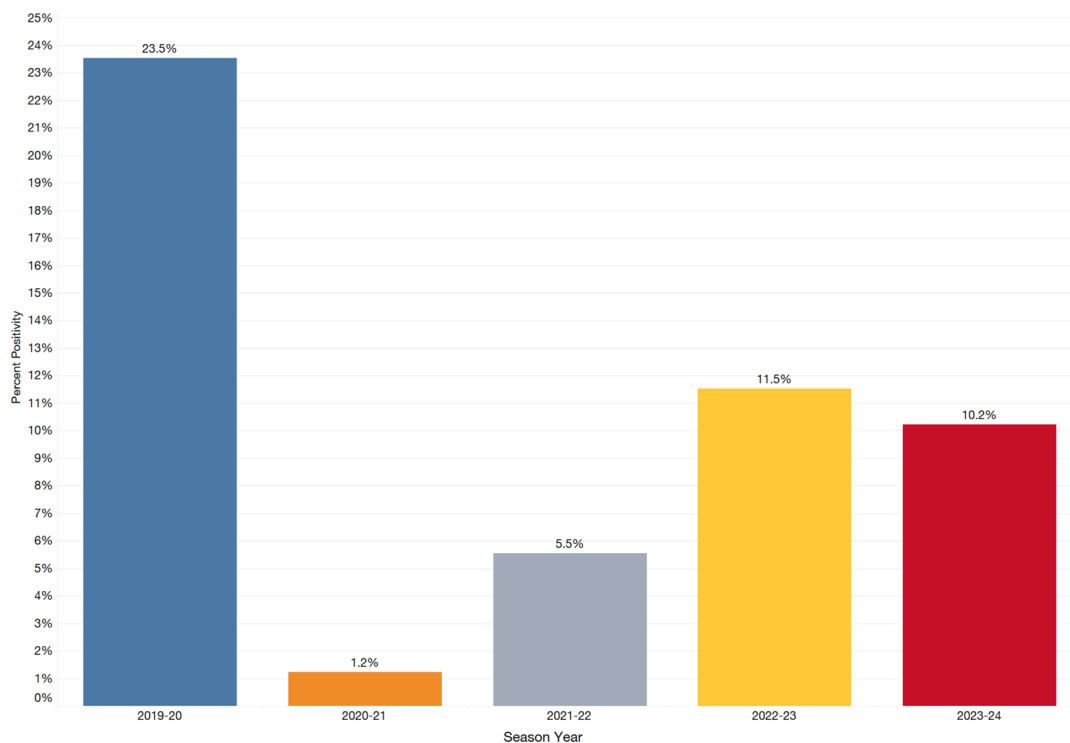
**Figure 10: Count of Positive Influenza Tests Reported by Maryland Clinical Laboratories by Influenza Type by Week, 2023-2024 Season**



**Figure 11: Total Count and Percent of Positive Influenza Tests Reported by Maryland Clinical Laboratories by Influenza Type, 2023-2024 Season**



**Figure 12: Influenza Percent Positivity Reported by Maryland Clinical Laboratories by Season**



### **MDH Laboratories Administration Influenza Testing**

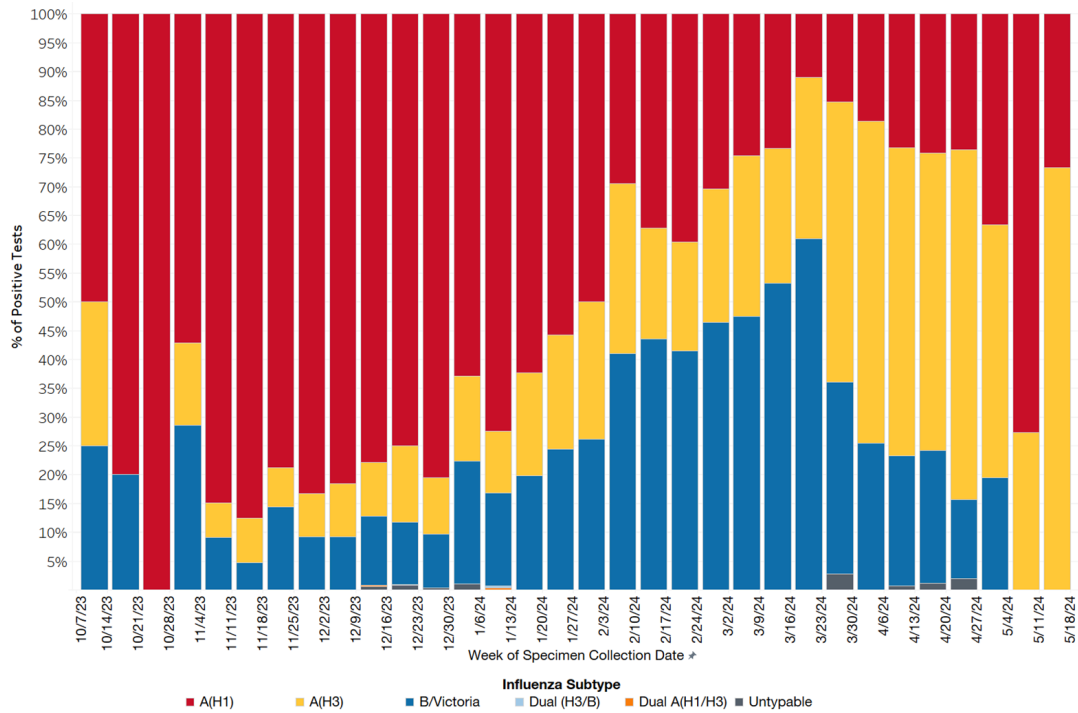
The MDH Laboratories Administration performs influenza Polymerase Chain Reaction (PCR) tests. These tests are more reliable than RIDTs and can also identify the different types and subtypes of the influenza virus that are known to circulate during the influenza season (e.g. A(H1N1), B/Victoria).

For the 2023-2024 influenza season, in Maryland:

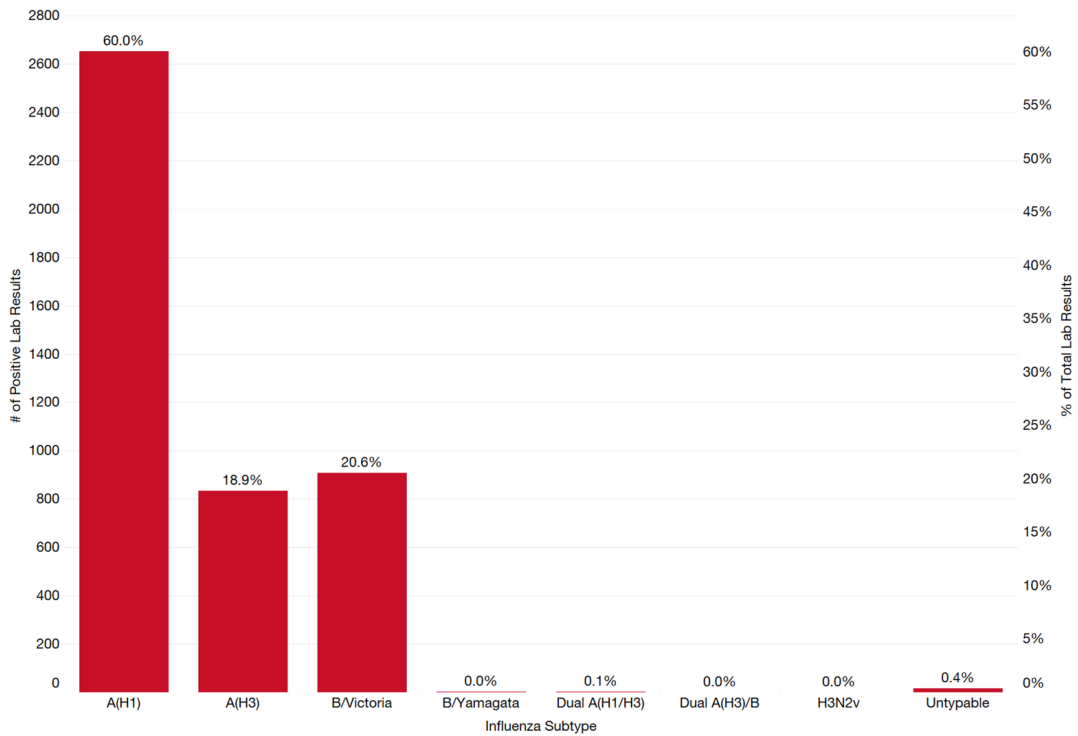
- The MDH Laboratories Administration tested a total of 5,603 specimens with 4,417 (78.8%) testing positive.
- The most common type was Type A H1 with 2,651 (60.0%), followed by Type B Victoria with 908 (20.6%) and Type A H3 with 835 (18.9%).

See Figures 13-15 for additional data on trends over time in positive influenza PCR results at MDH Laboratory by season, influenza type and lineage data for this season, as well as breakdown of subtypes by week.

**Figure 13: Breakdown of Subtypes of Positive Influenza PCR Testing Results Reported by MDH Laboratories Administration by Week, 2023-2024 Season**



**Figure 14: Positive Influenza PCR Testing Reported by MDH Laboratories Administration by Subtype, 2023-2024 Season**



## **Non-COVID Respiratory Outbreaks**

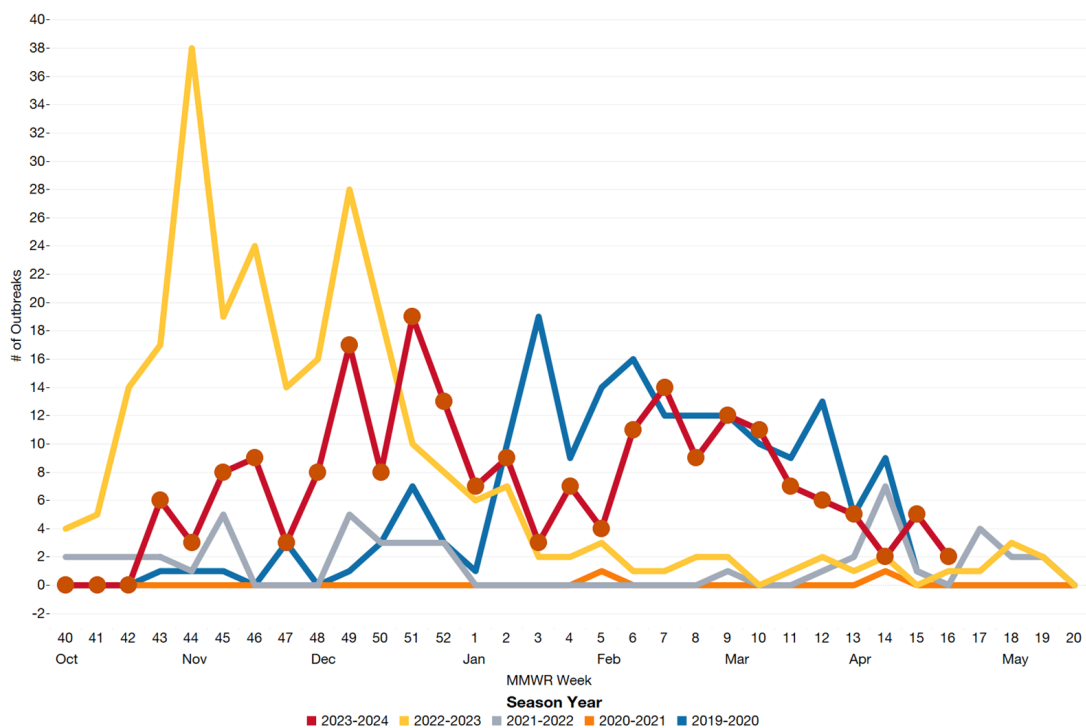
In Maryland, respiratory illness outbreaks are routinely reported to local health departments and MDH, and then investigated and responded to by public health authorities. Such outbreaks can occur in many different settings, including nursing homes, hospitals, schools and child care facilities. Respiratory illness outbreaks have been divided into COVID-19 outbreaks and non-COVID respiratory outbreaks. During the 2023-2024 influenza season, there were 1,368 COVID-19 outbreaks reported.

For the 2023-2024 influenza season, in Maryland:

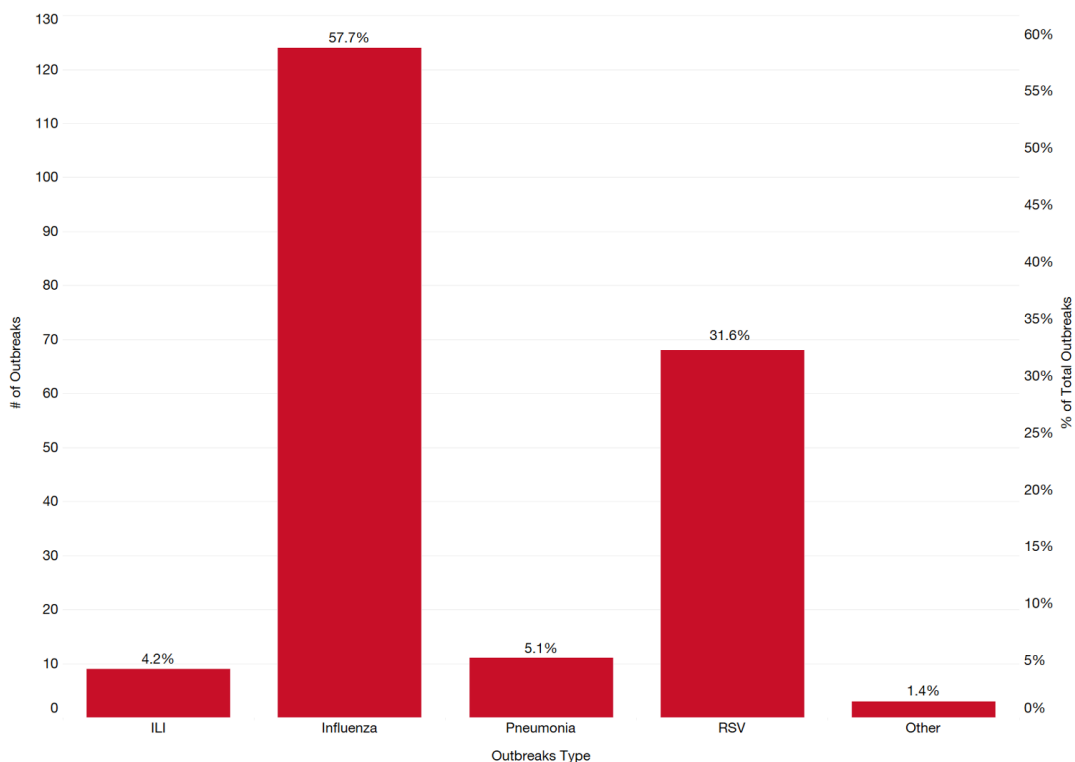
- 215 non-COVID-19 respiratory outbreaks were reported.
- The most commonly reported outbreak was influenza with 124 (57.7%), followed by RSV with 68 (31.6%), influenza-like illness with 9 (4.2%), and pneumonia with 11 (5.1%) outbreaks. There were 3 (1.4%) outbreaks that did not fall into the three categories.

See Figures 16 and 17 for additional data on trends over time for non-COVID respiratory outbreaks in Maryland by season, as well as type of outbreaks.

**Figure 15: Non-COVID Respiratory Illness Outbreaks Reported in Maryland by Week and Season**



**Figure 16: Non-COVID Respiratory Illness Outbreaks Reported in Maryland by Type, 2023-2024 Season**



### Section 3: Influenza Severity

#### Influenza-Associated Hospitalization

The Maryland Emerging Infectious Program (EIP) conducts active surveillance for laboratory-confirmed influenza-associated hospitalizations in Maryland. A person with an overnight hospital stay along with a positive influenza test of any kind (e.g. RIDT or PCR) is considered an “influenza-associated hospitalization” for purposes of influenza surveillance in Maryland.

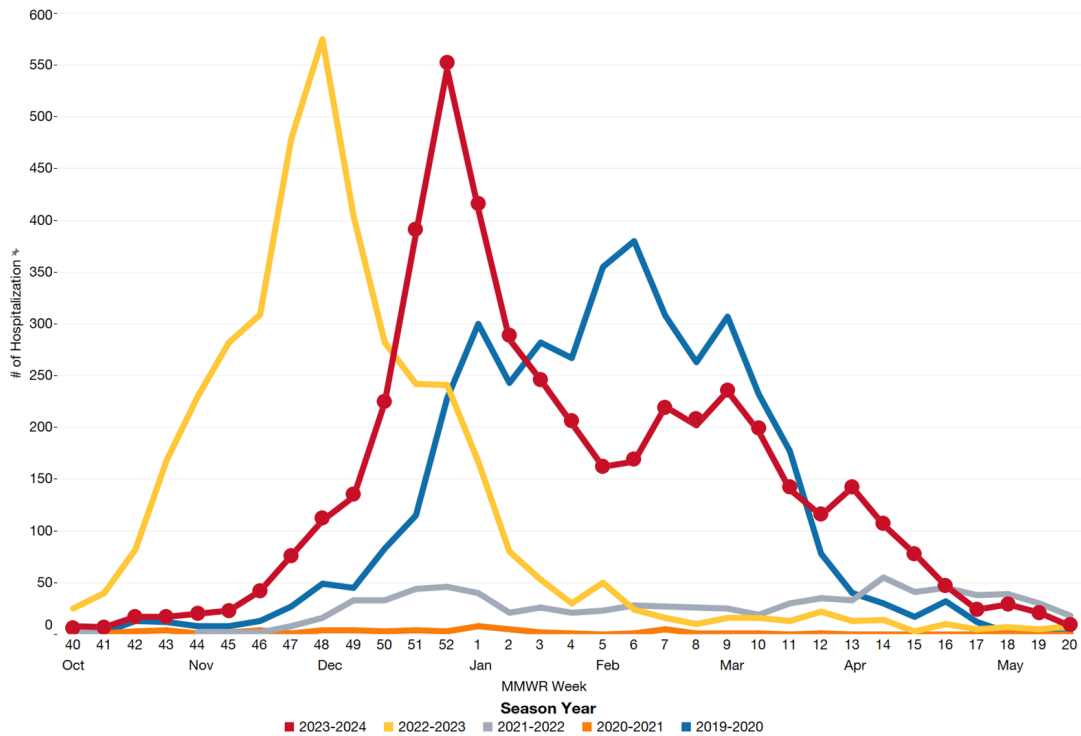
For the 2023-2024 influenza season, in Maryland:

- A total of 4,646 individuals were hospitalized due to influenza-associated illness, or 76.9 hospitalizations per 100,000 population\*.

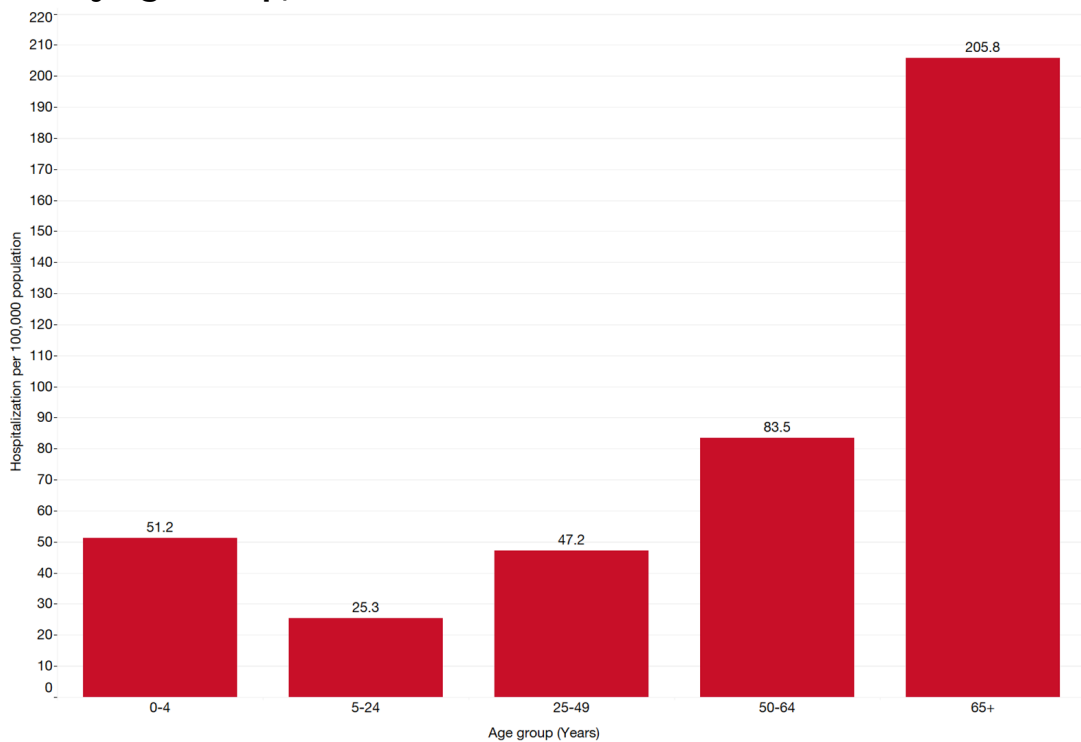
See Figures 18-22 for additional data on trends over time in influenza-associated hospitalizations in Maryland by season, per 100,000 population\* by age, race, ethnicity, and gender for this season, as well as total number of hospitalizations by season.



**Figure 17: Influenza-Associated Hospitalizations in Maryland by Week and Season**

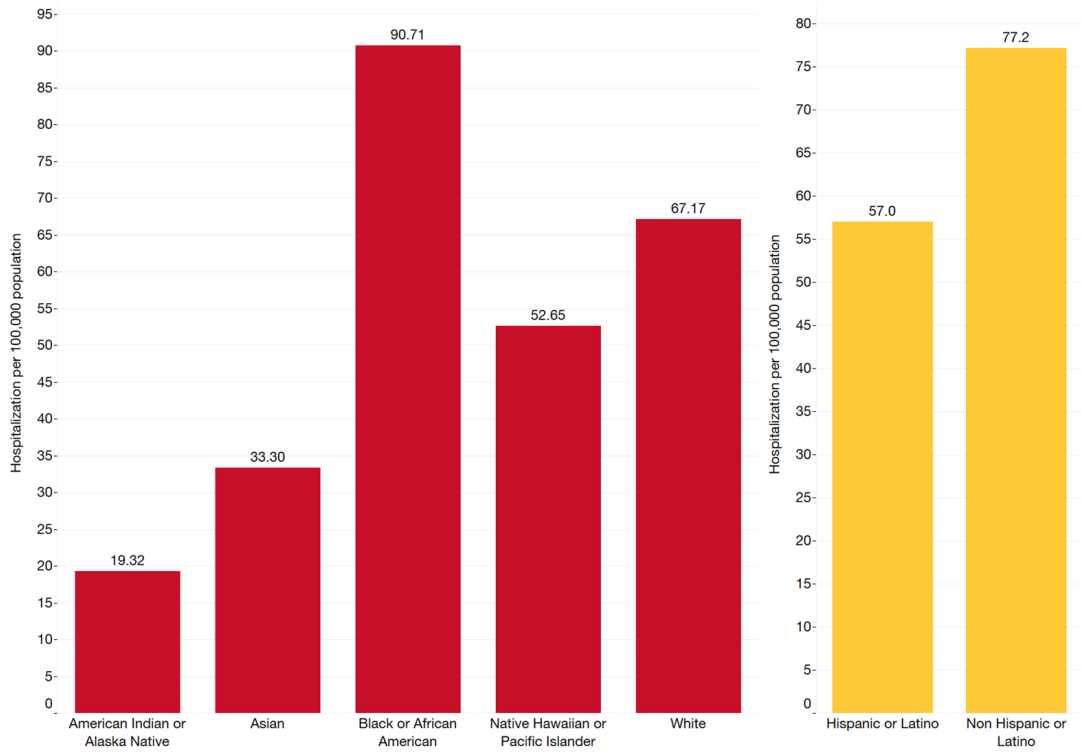


**Figure 18: Influenza-Associated Hospitalizations per 100,000 Population\* in Maryland by Age Group, 2023-2024 Season**

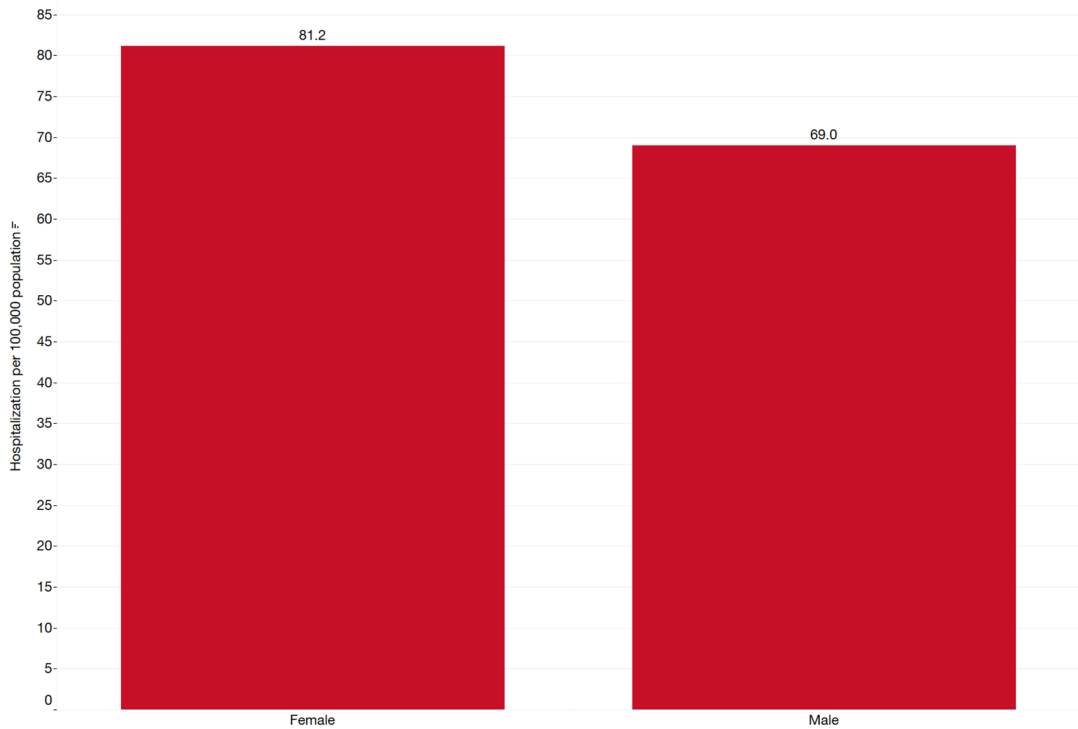


\*Population data was obtained from the Maryland Department of Planning.

**Figure 19: Influenza-Associated Hospitalizations per 100,000 Population\* in Maryland by Race and Ethnicity, 2023-2024 Season**

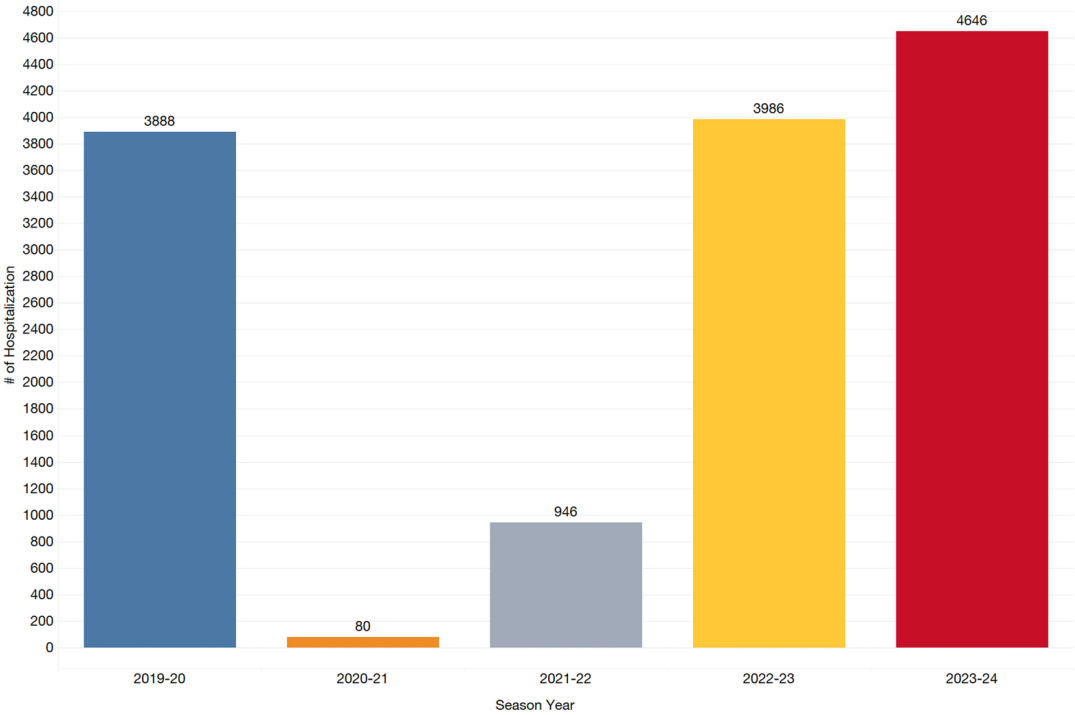


**Figure 20: Influenza-Associated Hospitalizations per 100,000 Population\* in Maryland by Gender, 2023-2024 Season**



\*Population data was obtained from the Maryland Department of Planning.

**Figure 21: Total Influenza-Associated Hospitalizations in Maryland by Season**



### **Influenza-Associated Adult Death**

MDH's influenza-associated death data is obtained through the Maryland Electronic Death Registration System (MD-EDRS), a web-based application that medical certifiers and funeral directors use to report deaths electronically to the MDH. An influenza-associated adult death is an individual whose death certificate includes influenza in the underlying cause. Additionally, surveillance for mortality in hospitalized patients is conducted as a component of Maryland EIP.

For the 2023-2024 influenza season, in Maryland:

- 85 influenza-associated adult deaths were reported.

**85**

Influenza-associated  
adult deaths  
(2023-2024 influenza season)

### **Influenza-Associated Pediatric Death**

Maryland participates in national tracking of deaths of persons under 18 years of age who had a positive influenza test during their course of illness leading to death. An influenza-associated pediatric death is one with a clinically compatible illness and a positive influenza test of any kind.

For the 2023-2024 influenza season, in Maryland:

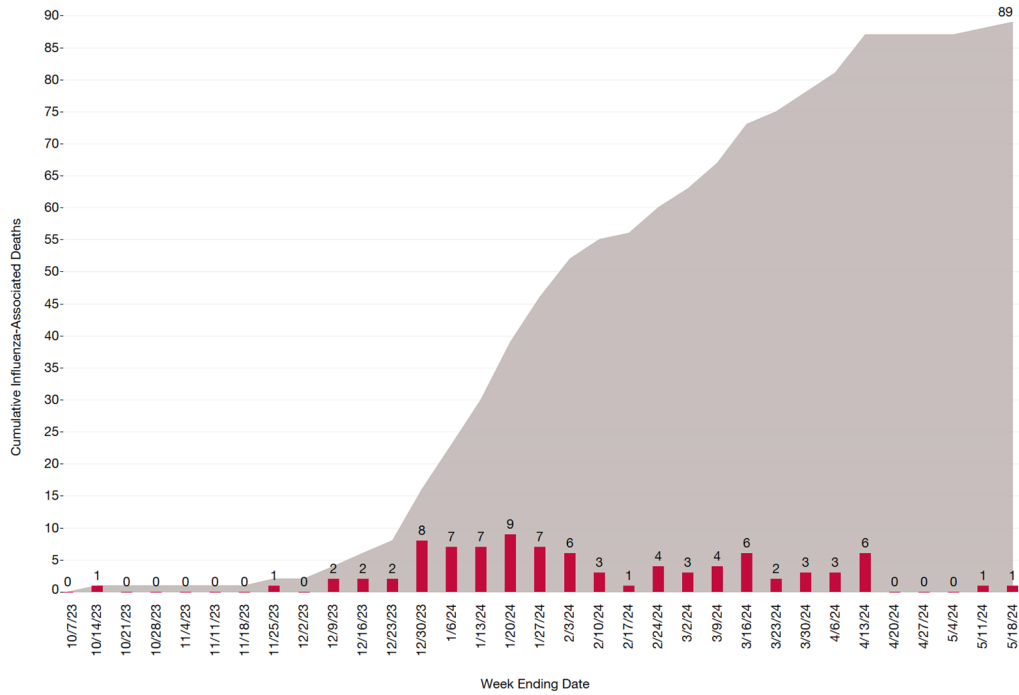
- 4 influenza-associated pediatric deaths were reported.

**4**

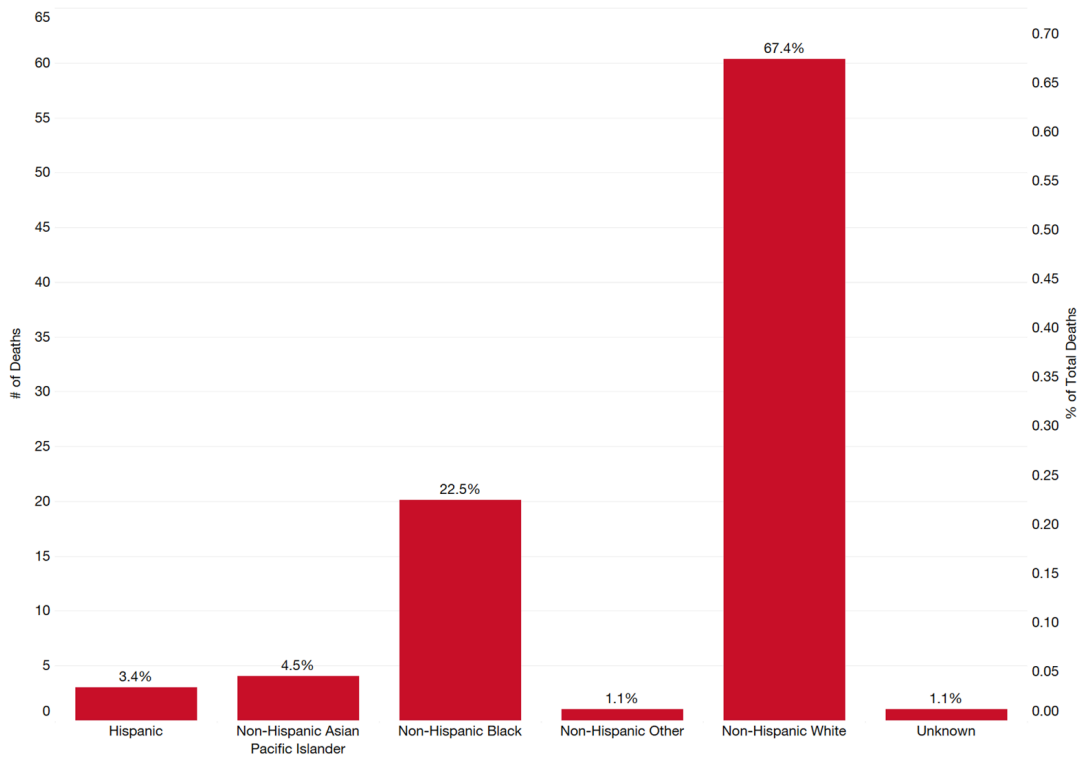
Influenza-associated  
pediatric deaths  
(2023-2024 influenza season)

See Figures 23-27 for additional data on trends over time in influenza-associated deaths in Maryland, by race, ethnicity, and gender, as well as season.

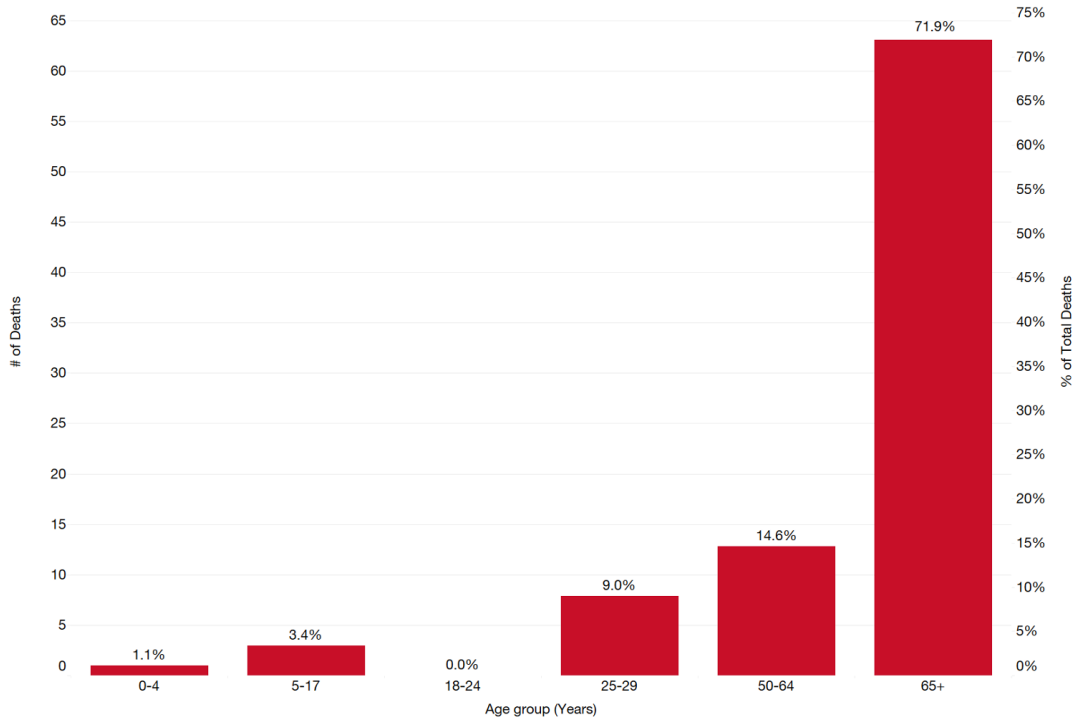
**Figure 22: Influenza-Associated Adult and Pediatric Deaths, 2023-2024 Season**



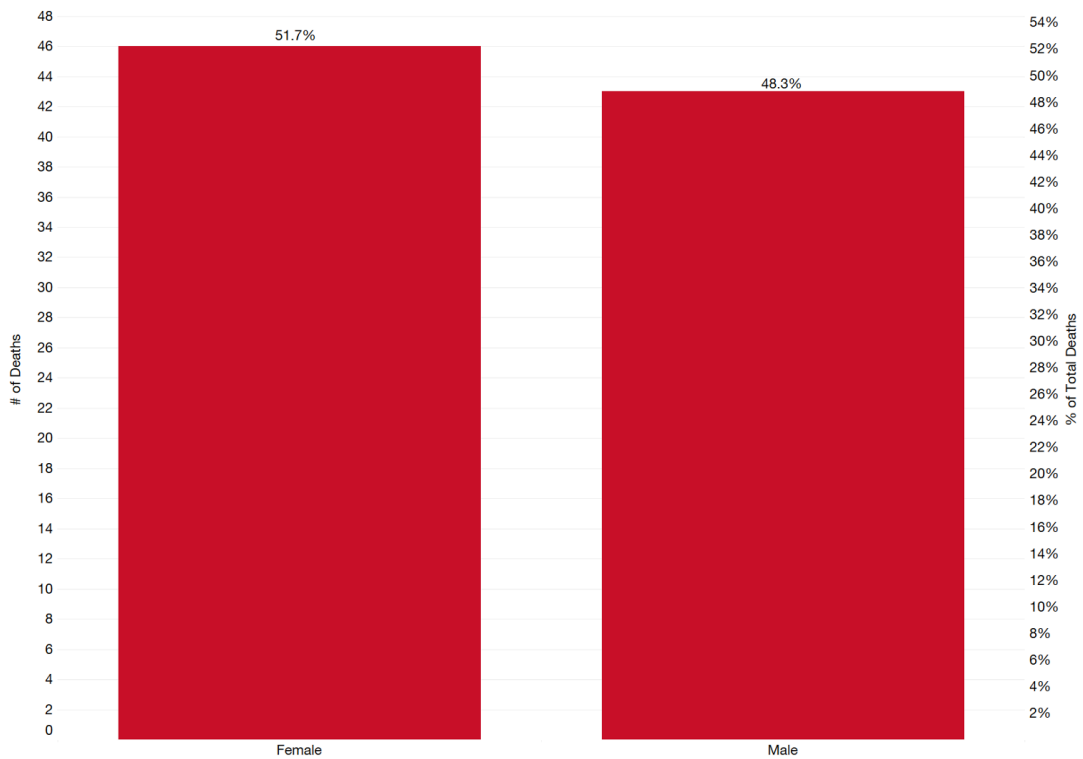
**Figure 23: Influenza-Associated Adult and Pediatric Deaths by Race and Ethnicity, 2023-2024 Season**



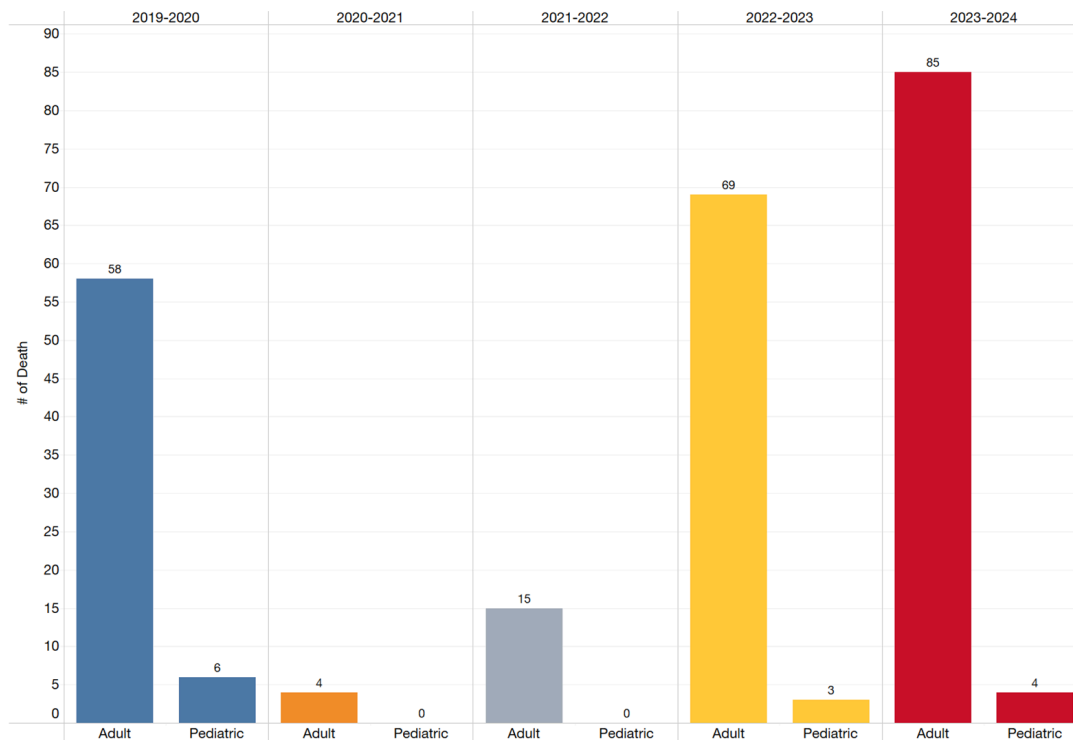
**Figure 24: Influenza-Associated Adult and Pediatric Deaths by Age Group, 2023-2024 Season**



**Figure 25: Influenza-Associated Adult and Pediatric Deaths by Gender, 2023-2024 Season**



**Figure 26: Influenza-Associated Adult and Pediatric Deaths by Type and Season**



## Section 4: Influenza Vaccination

### **Influenza Vaccination Data Reported to ImmuNet and Vaccine Coverage Survey Data**

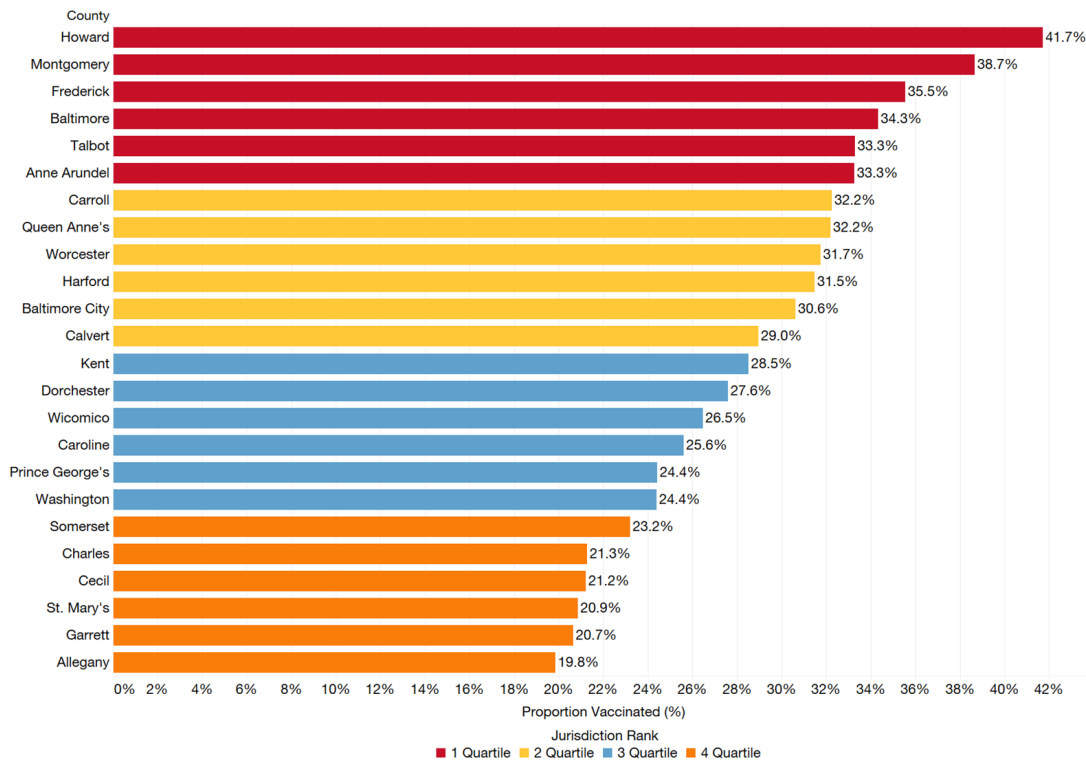
ImmuNet is the data source for influenza vaccination in Maryland. ImmuNet is Maryland's Immunization Information System, a confidential and secure database that stores an individual's vaccination records. Maryland statute requires that all vaccinations be recorded in ImmuNet; however, it is possible that not all influenza vaccinations were reported. In addition, survey data are also used to determine vaccine coverage rates. The surveys cannot be used to determine county-level coverage.

For the 2023-2024 influenza season, in Maryland:

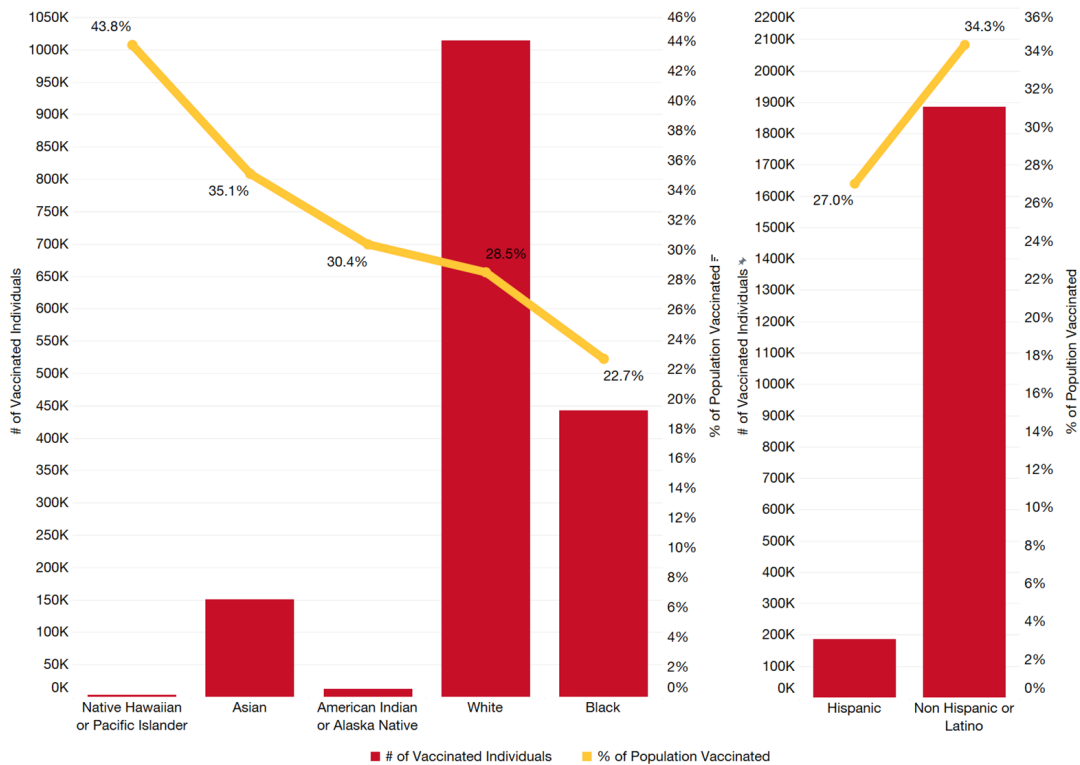
- A total of 1,937,582 (32%) individuals had influenza vaccinations recorded in ImmuNet.
- Based on CDC [National Immunization Survey](#) and the [Behavioral Risk Factor Surveillance System](#) telephone surveys involving Maryland residents, CDC estimates [55.5%](#) of Maryland adults >18 years and [61.8%](#) of children 6 months to 17 years received an influenza vaccination during the 2023-2024 influenza season.

See Figures 28-31 for data on Maryland influenza vaccination by county, race, ethnicity, age, and gender.

**Figure 27: Proportion of Maryland Population\* Vaccinated for Influenza and Reported to ImmuNet, by County, 2023-2024 Season**



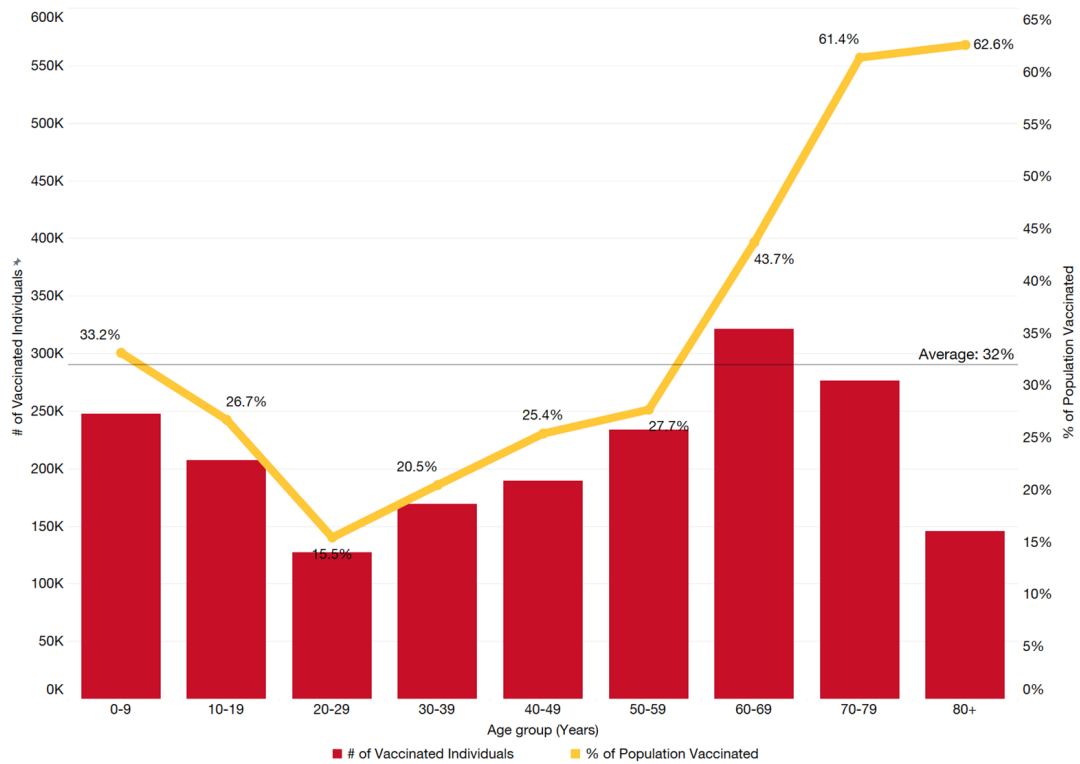
**Figure 28: Proportion of Maryland Population\* Vaccinated for Influenza and Reported to ImmuNet by Race and Ethnicity, 2023-2024 Season**



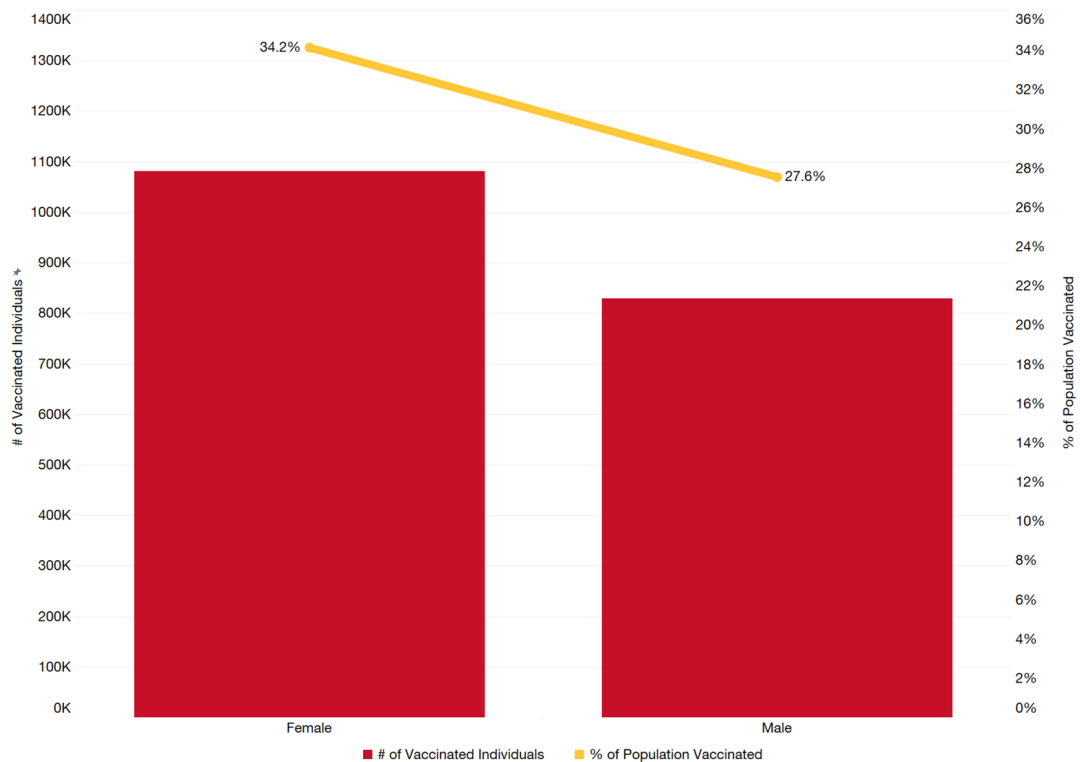
\*Population data was obtained from the Maryland Department of Planning.



**Figure 29: Proportion of Maryland Population\* Vaccinated for Influenza and Reported to ImmuNet by Age Group, 2023-2024 Season**



**Figure 30: Proportion of Maryland Population\* Vaccinated for Influenza and Reported to ImmuNet by Gender, 2023-2024 Season**



\*Population data was obtained from the Maryland Department of Planning.

## Section 5: Summary

This report summarizes key Maryland influenza-related indicators and data during the 2023-2024 influenza season, including indicators of ILI activity and influenza severity, as well influenza vaccination. The overall percent positivity of influenza was similar to the previous season, despite 2023-2024's activity peak in late-December being comparatively later than the activity peak of the 2022-2023 season. In 2023-2024, hospitalizations and deaths increased compared to the 2022-2023 season.

### Resources

CDC Influenza

<https://www.cdc.gov/flu/index.htm>

MDH Influenza

<https://health.maryland.gov/phpa/INFLUENZA/FLUWATCH/PAGES/INDEX.ASPX>

MDH Emerging Infections Program

<https://health.maryland.gov/phpa/OIDEOR/EIP/pages/Home.aspx>

MDH Influenza Dashboard

<https://health.maryland.gov/phpa/influenza/Pages/flu-dashboard.aspx>

MDH ImmuNet

<https://health.maryland.gov/phpa/oideor/immun/pages/immunet.aspx>