

2024-2025 Respiratory Disease Season in Virginia

End of Season Report

Respiratory Activity During the 2024-2025 Season

Contents

Report Created: December 3, 2025

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For questions about this report, email Flu@vdh.virginia.gov.

Introduction

The Virginia Department of Health's (VDH) Respiratory Disease Program monitors the trends and intensity of respiratory disease activity year-round for public health surveillance, with a focus on surveillance of influenza, COVID-19, and respiratory syncytial virus (RSV). Respiratory disease surveillance involves monitoring a variety of data sources, including syndromic surveillance, outbreak surveillance, laboratory surveillance, hospital surveillance, wastewater surveillance, and sentinel surveillance. These data are evaluated together to form a more complete picture of respiratory disease activity in Virginia. The annual respiratory disease season starts during MMWR week 40, which is typically in early October.⁶

Respiratory disease activity during the 2024-2025 respiratory disease season was strongly driven by influenza, which was defined nationally as a high severity influenza season with reports of rare, severe neurologic complications, a record number of pediatric deaths, and the highest flu-associated hospitalization rate since 2010-2011.^{1,15, 16,18} In total, CDC estimates that influenza virus infections likely resulted in between 43-73 million symptomatic illnesses, 19-32 million flu-related medical visits, 560,000–1.1 million flu-related hospitalizations, and 38,000–99,000 deaths nationally during the 2024-2025 season. Older adults (≥ 65 years) accounted for 57% of influenza-associated hospitalizations.⁵

Disease activity for COVID-19 and RSV was routine and moderate compared to previous years. For the past few years, including during the 2024-2025 respiratory season, COVID-19 disease activity increased in both the winter and summer months, with a larger wave of activity during the summer of 2025. CDC estimates that COVID-19 infections likely resulted in 14.1-20.7 million illnesses, 3.4-4.8 million outpatient visits, 390,000-550,000 hospitalizations, and 45,000-64,000 deaths nationally during the 2024-2025 respiratory season.¹⁰ For RSV, activity increased in early winter but ultimately resulted in lower hospitalization rates among infants, due in part to the new widely available prevention products of maternal vaccines and monoclonal antibodies.¹⁷

⁶ (CDC, MMWR Week Log (2024-2025), 2025)

¹ (CDC, 2024-2025 United States Flu Season: Preliminary In-Season Severity Assessment, 2025)

¹⁵ (Fazal, Harker, & Neelam, 2024)

¹⁶ (O'Halloran, Whitmill Habeck, & Gilmer, 2025)

⁵ (CDC, Influenza Activity in the United States during the 2024-2025 Season and Composition of the 2025-26 Influenza Vaccine, 2025)

¹⁰ (CDC, Preliminary Estimates of COVID-19 Burden, 2025)

¹⁷ (Patton, Moline, & Whitaker, 2025)

Additionally, CDC estimates RSV infections likely resulted in 3.6-6.8 million outpatient visits, 190,000-370,000 hospitalizations, and 11,000-24,000 deaths nationally.¹²

This report is intended to summarize the 2024-2025 respiratory disease season in Virginia with a comparison to national respiratory disease activity.

Syndromic Surveillance

Syndromic surveillance is used by public health to detect emerging health issues and monitor community health in near-real time. VDH collects and analyzes health data from participating emergency departments (ED) and urgent care (UC) centers in Virginia to identify emerging trends of public health concern.²² In the context of respiratory disease surveillance, VDH uses syndromic surveillance to monitor indicators such as influenza-like illness (ILI), diagnosed influenza, diagnosed COVID-19, and diagnosed RSV to assess seasonal and emerging respiratory disease activity.

¹² (CDC, Preliminary Estimates of RSV Burden, 2026)

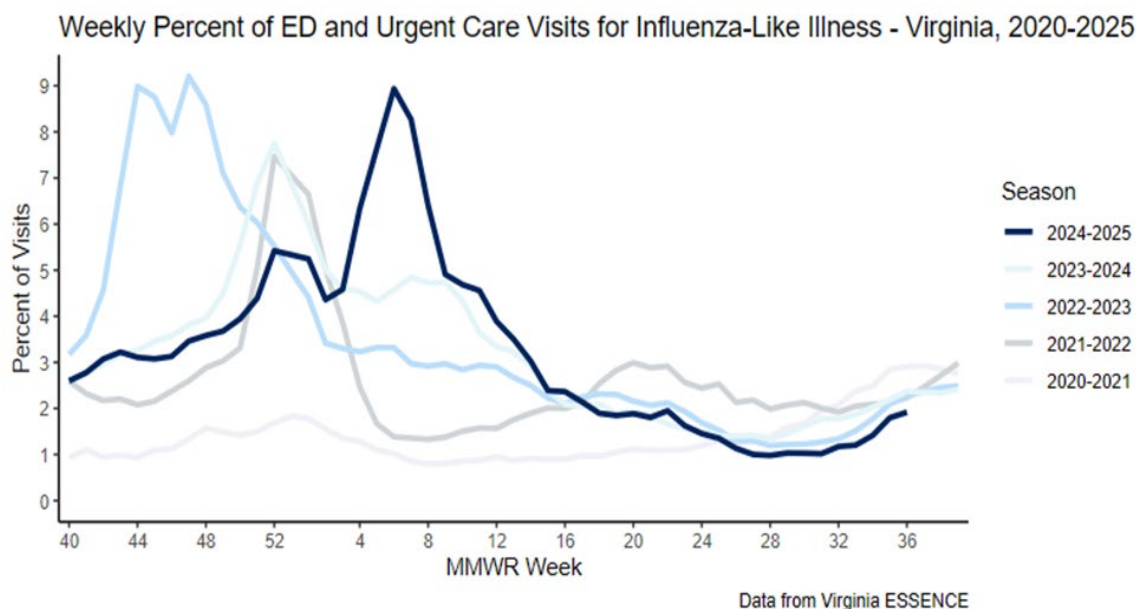
²² (VDH, Syndromic Surveillance, 2025)

Influenza-like Illness (ILI)

The percentage of ED and UC visits for influenza-like illness (ILI) are used with other surveillance data sources to approximate the burden of healthcare visits for influenza activity. ILI is defined as healthcare visits with a fever of 100°F or greater and a cough and/or sore throat. Visits for ILI are presented as a percentage of total ED/UC visits. Multiple respiratory viruses co-circulated throughout the 2024-25 season, and the contribution of influenza viruses to ILI activity likely varied by week. ILI trends should be evaluated in the context of other surveillance data due to their lack of specificity but can be a helpful indicator to signal changing trends for respiratory-type illnesses resulting in healthcare visits.

In Virginia (Figure 1), ILI began to increase the week ending November 23, 2024 (MMWR week 47) and was significantly elevated in Virginia's syndromic surveillance system. There was a sharp increase around the week ending December 28, 2024 (MMWR week 52) followed by a brief plateau at about 5% of all ED and UC visits. The ultimate peak for the season occurred at week ending February 15, 2025 (MMWR week 7). From there, the percentage of ED and UC visits for ILI rapidly declined over about three weeks to about 4.0% and continued to steadily decline until the end of the respiratory disease season. At peak activity, Virginia reported ILI for 8.9% of total ED and UC visits, representing a higher peak than the previous respiratory disease season.

Figure 1: Percentage of ED and UC Visits for ILI by Respiratory Disease Season, Virginia 2020-2025

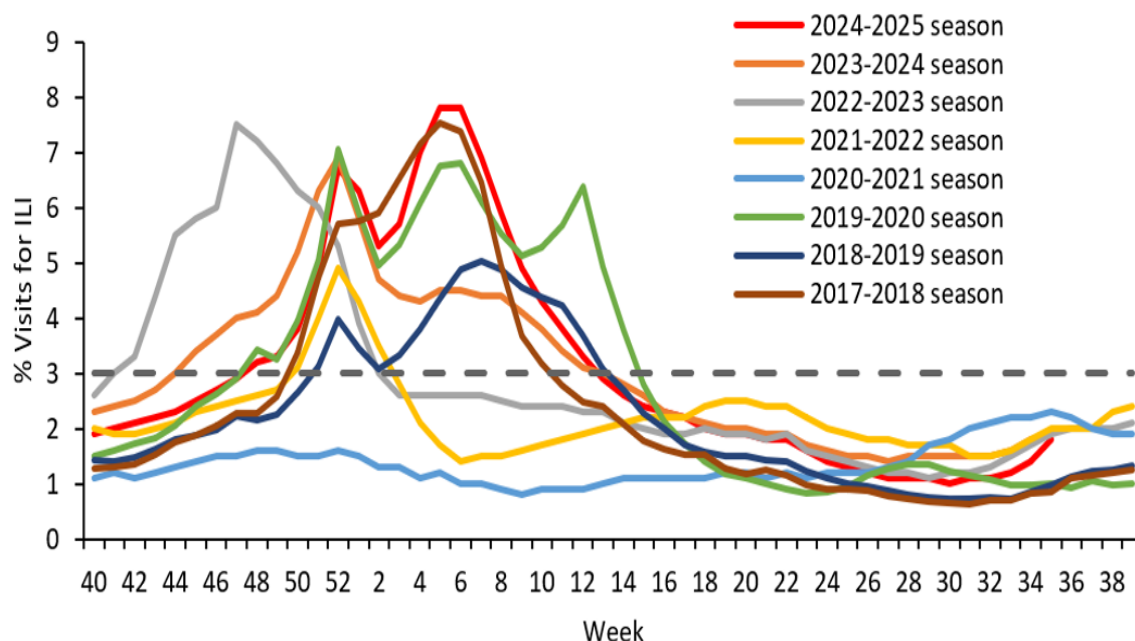


Source: VDH ESSENCE

Nationally (Figure 2), the weekly percentage of outpatient visits for ILI visits reported to CDC ILINet remained at or above the national baseline of 3.0% for 17 consecutive weeks, from November 2024 through March 2025. These visits peaked at 7.8% during the week ending February 8, 2025 (MMWR week 6). The 2024-2025 season had one of the highest peaks of

absolute percentage of visits for ILI since the 2009-2010 influenza pandemic season. The duration of elevated ILI activity was similar to that observed in pre-pandemic seasons. Throughout the 2024-2025 respiratory disease season, children aged 0-4 years and those aged 5-24 years each had a higher percentage of visits for ILI compared to other age groups.⁵

Figure 2: Percentage of Outpatient Visits for ILI Reported in ILINet by Respiratory Disease Season U.S., 2017-2018 to 2024-2025



Source: CDC Influenza Activity in the US during the 2024-2025 Season

Diagnosed Influenza

A more specific syndromic surveillance indicator for influenza activity is diagnosed influenza, which tracks a set of discharge diagnosis codes for influenza, defined by CDC as “CDC Influenza DD v1” in ESSENCE.³

In Virginia, during the 2024-2025 respiratory disease season, there were a total of 155,770 ED and UC visits with a discharge diagnosis of influenza. The number of ED and UC visits with a discharge diagnosis of influenza started to increase in January (Figure 3). From the week ending January 12, 2025 (MMWR week 3) through the peak, week ending February 2, 2025 (MMWR week 6), the weekly number of influenza-related ED and UC visits increased from 7,286 to 19,146 visits. During the peak week, ED and UC visits for patients 0–4-years diagnosed with influenza reached 1,503 visits (23.2% of all visits for 0-4 years of age being for diagnosed influenza that week); 5-17 years at 2,451 visits (22.3% of all visits for 5-17 years of age); 18-64

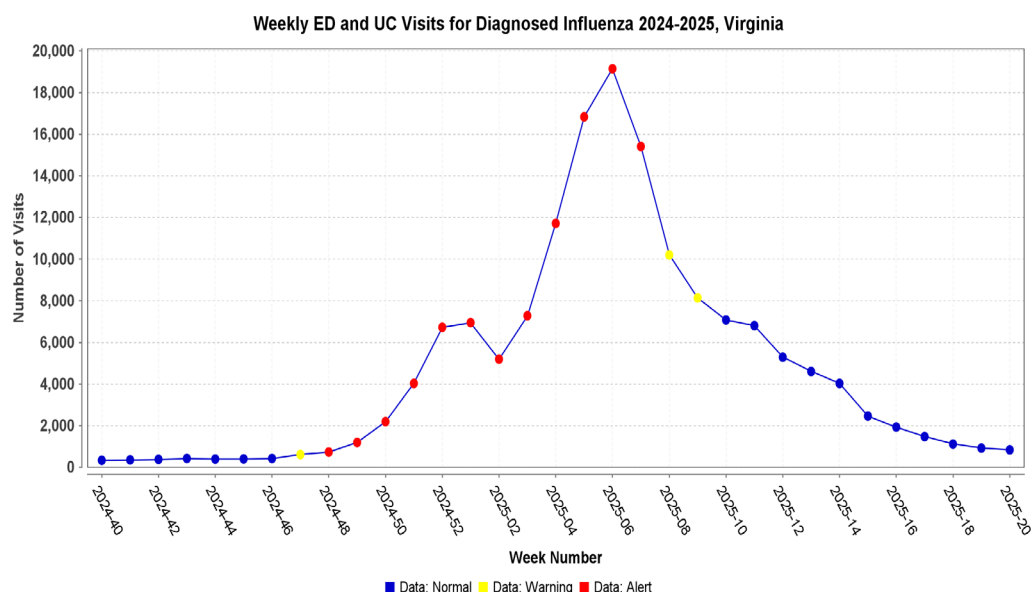
⁵ (CDC, Influenza Activity in the United States during the 2024-2025 Season and Composition of the 2025-26 Influenza Vaccine, 2025)

³ (CDC, Companion Guide: NSSP ED Data on Respiratory Illness, 2025)

years at 4,351 visits (8.45% of all visits for 18-64 years of age); ≥65 years at 1,698 visits (7.8% of all visits for 18-64 years of age).²⁰

Diagnosed influenza activity in Virginia began a steady decline the week ending March 1, 2025 (MMWR week 9) and continued to decline into the summer (Figure 3). Compared to the previous two seasons, diagnosed influenza peaked later in the season and the peak was higher than the previous two seasons.

Figure 3: Weekly ED and UC Visits for Diagnosed Influenza 2024-2025, Virginia



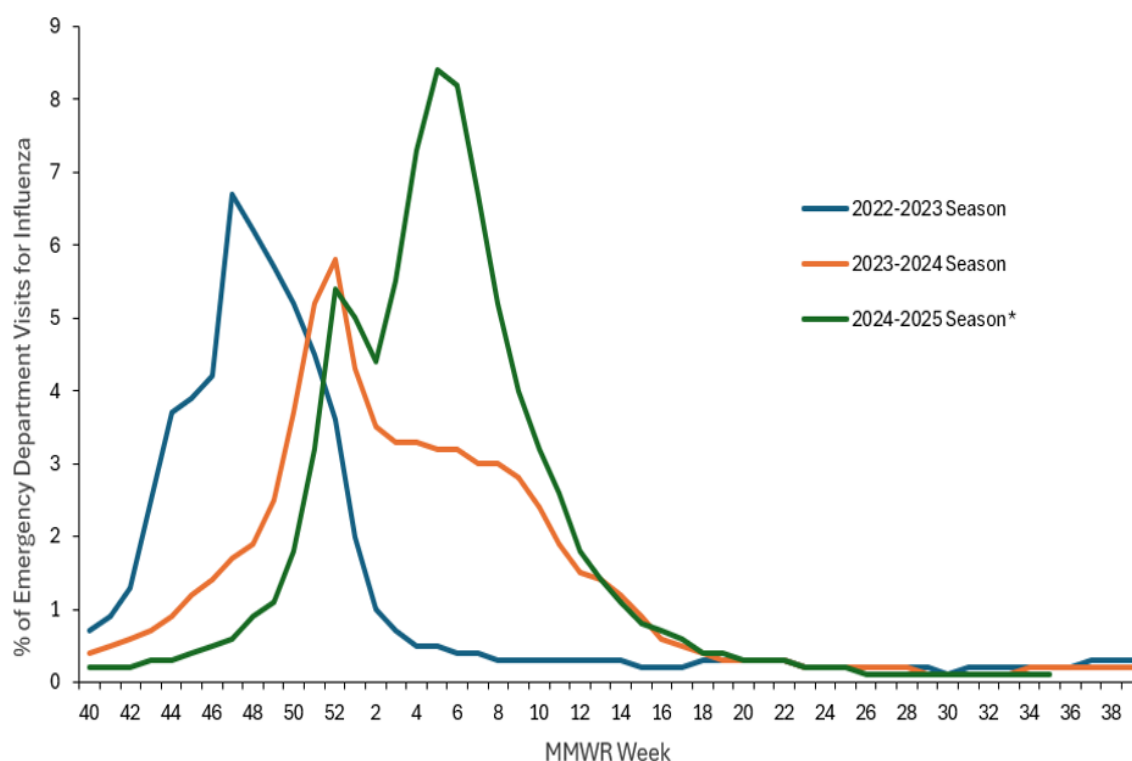
Source: VDH ESSENCE

Nationally (Figure 4), the percentage of ED visits with a discharge diagnosis of influenza peaked at a reported 8.4% during the week ending February 1, 2025 (MMWR week 5). After reaching the peak, influenza began a steady decline around the week ending February 8, 2025 (MMWR week 6), until the end of respiratory season. In the previous two seasons, peak visits to the ED for influenza occurred earlier and at lower levels. The decrease in activity for a few weeks during late December and early January was observed in both Virginia and national data. This is typically associated with changes in healthcare seeking behavior during holidays, scheduled school breaks, and potentially winter weather events.⁵

²⁰ (VDH, Respiratory Disease Data, 2025)

⁵ (CDC, Influenza Activity in the United States during the 2024-2025 Season and Composition of the 2025-26 Influenza Vaccine, 2025)

Figure 4: Percentage of ED Visits for Influenza reported by NSSP, U.S. 2022-2023 to 2024-2025



Source: CDC Influenza Activity in the US during the 2024-2025 Season

Diagnosed COVID-19

The weekly number of total ED and UC visits for diagnosed COVID-19 can provide insights about changing trends in activity for this respiratory disease. A group of discharge diagnosis codes and clinical terms are defined by CDC and used in Virginia to identify diagnosed COVID-19 and visits in the Virginia ESSENCE syndromic surveillance system.³

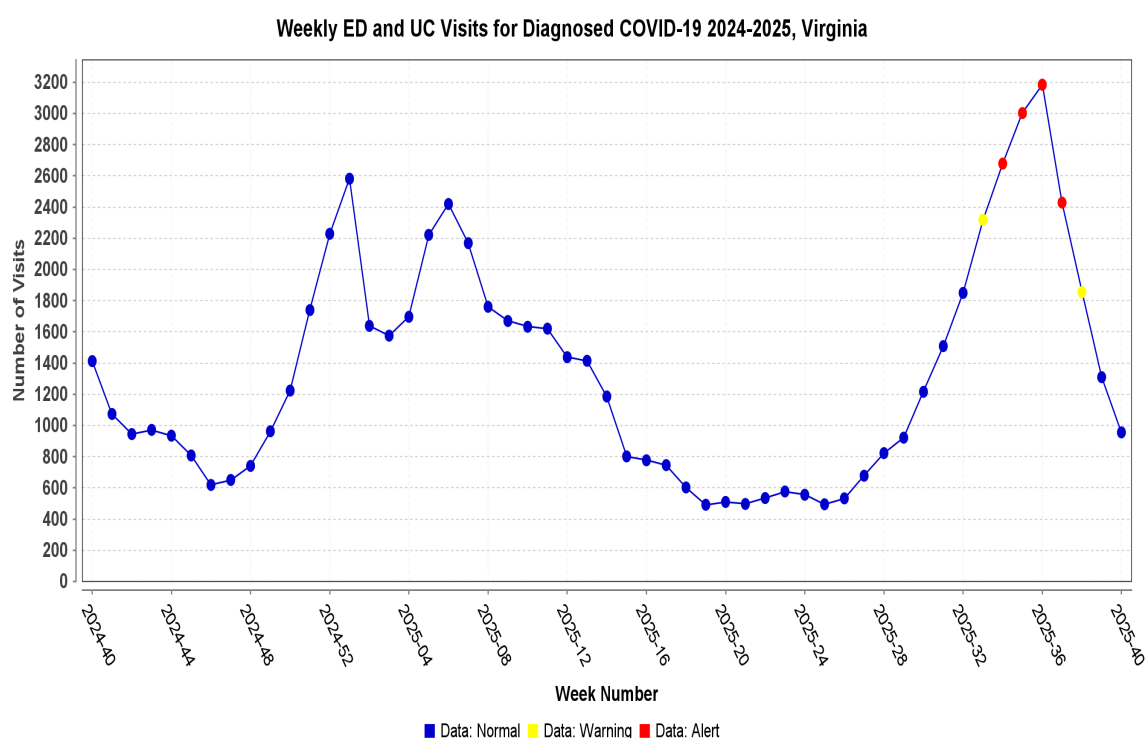
For COVID-19 in Virginia (Figure 5), activity started increasing in early November and remained high until early February. For the 2024-2025 respiratory disease season, there were a total of 87,429 ED and UC visits for diagnosed COVID-19, with visits peaking at 2,625 visits during the week ending January 4, 2025. There were decreases in activity between the week ending December 28, 2024 (MMWR week 52) and the week ending February 6, 2025 (MMWR week 6). These decreases are often associated with changes in healthcare seeking behavior during the holidays, school closures, and potentially winter weather events. Visits for diagnosed COVID-19 had a steady decrease from MMWR week 6 to MMWR week 27 (ending July 5, 2025), when they then had a sharp increase representing a late summer wave of activity. ED and UC visits for diagnosed COVID-19 peaked for this summer wave during the week ending September 6, 2025, at 3,128 visits.

³ (CDC, Companion Guide: NSSP ED Data on Respiratory Illness, 2025)

ED visits also demonstrate which age groups are the most affected by each respiratory disease. These visits represent the percent of ED visits in that age group as a fraction of all ED visits for that age group. During the week ending January 4, 2025, 1.3% (637 visits) were for diagnosed COVID-19 out of all ED visits for 18-64 years old. Additionally, 2.7% (615 visits) were for diagnosed COVID-19 out of all visits for patients >65 years during the week ending January 4, 2025.²²

As a result of a secondary summer wave of COVID-19 there was an increase in ED visits. ED visits for adult patients for diagnosed COVID-19 were the primary driver for the peak occurring during the week ending September 6, 2025; during this week out of all ED visits for adults 18-64 years 1.5% (726 visits) and adults >65 years 2% (424 visits) were for diagnosed COVID-19. ED visits for diagnosed COVID-19 peaked for children 0-4 years old during the week ending August 23, 2025, with 4.4% (189 visits) of all ED visits being for diagnosed COVID-19. Additionally, visits for school aged children 5-17 years peaked for the season at 2.4% (180 visits) for diagnosed COVID-19 during the week ending August 30, 2025.²⁰

Figure 5: Weekly ED and UC Visits for Diagnosed COVID-19 in Virginia, 2024-2025



Source: VDH ESSENCE

Nationally, the weekly percent of total ED visits associated with COVID-19 experienced its winter peak at 1.4% during the week ending January 4, 2025. This is compared to the Virginia winter peak for COVID-19 visits, being at 1.6% compared to all ED visits, which also occurred during the week ending January 4, 2025. The national summer peak occurred week ending

²⁰ (VDH, Respiratory Disease Data, 2025)

August 30, 2025, at 1.7% of all visits, which is identical to the Virginia summer peak's timing and impact.¹³

Diagnosed RSV

The weekly number of total ED and UC visits for diagnosed RSV can offer understanding about the changing trends in activity for this respiratory disease. A group of discharge diagnosis codes and clinical terms are defined by CDC and used in Virginia to identify diagnosed RSV and visits in the Virginia ESSENCE syndromic surveillance system.³

In Virginia, during the 2024-2025 respiratory disease season, diagnosed RSV at ED and UC totaled 16,610 visits (Figure 6). Diagnosed RSV visits began to increase significantly around the week ending November 16, 2024 (MMWR week 46) and peaked the week ending December 21, 2024 (MMWR week 51). The peak number of ED and UC visits for diagnosed RSV in a week was 924 visits. These visits remained elevated until a sharp decline in visits at the beginning of the week ending January 11, 2025 (MMWR week 2).

Nationally, the weekly percent of total ED visits associated with RSV peaked at 1.1% the week ending December 28, 2024. In Virginia, the weekly percent of total ED visits associated with RSV also peaked at 1.1% the week ending December 28, 2024.¹³

Children 0-4 years old experienced the peak number of visits for RSV during the week ending December 21, 2024, with 9.7% (654 visits) of all visits in this age group being for diagnosed RSV. School aged children 5-17 years had the peak visits among this age group during the week ending December 21, 2024, at 1.0% (86 visits) of visits being for diagnosed RSV. Visits peaked within the 18-64 age group during week ending January 4, 2025, at 0.2% (118 visits) and at 0.5% (107 visits) for 65 years and older out of all ED visits within specified age group.²⁰

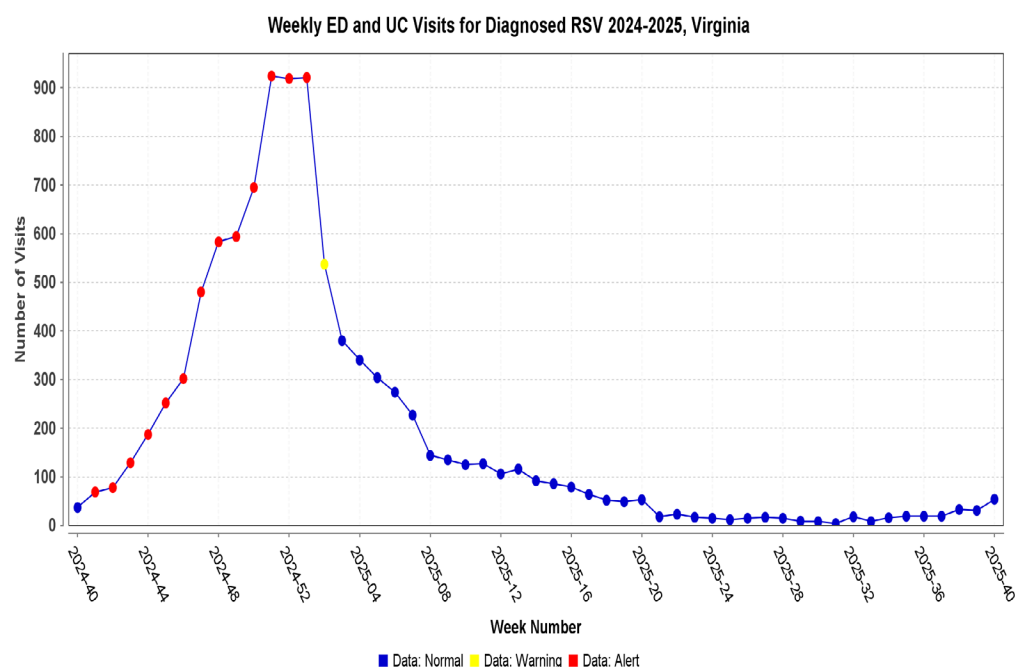
¹³ (CDC, Respiratory Virus Activity Levels, 2026)

³ (CDC, Companion Guide: NSSP ED Data on Respiratory Illness, 2025)

¹³ (CDC, Respiratory Virus Activity Levels, 2026)

²⁰ (VDH, Respiratory Disease Data, 2025)

Figure 6: Weekly ED and UC Visits for Diagnosed RSV in Virginia, 2024-2025



Source: VDH ESSENCE

Hospitalization Surveillance

The National Healthcare Safety Network (NHSN) compiles and reports data on hospitalization rates for respiratory diseases. Hospitalization rates are an important indicator when assessing season severity. Influenza, COVID-19, and RSV hospitalizations are defined as laboratory-confirmed infections through appropriate testing completed as an inpatient or outpatient, with a positive result in the 14 days prior to hospital admission.

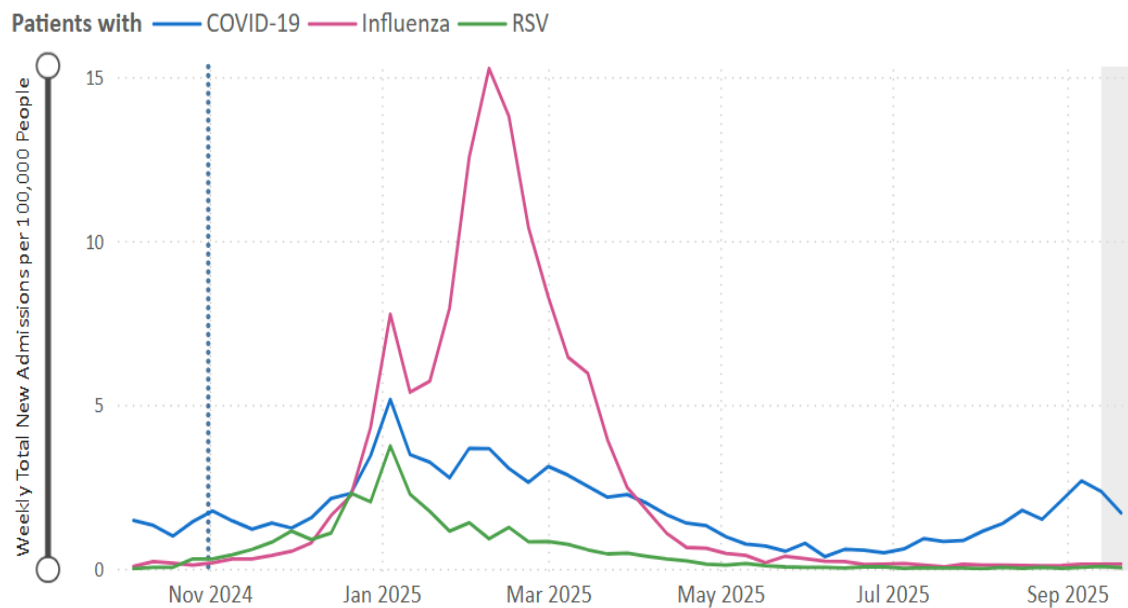
In Virginia, during the 2024-2025 respiratory season, there was a steady increase in influenza, COVID-19, and RSV- hospitalization rates from the week ending December 14, 2024, through the week ending January 4, 2025 (Figure 7). This increase was also seen nationally. After a one-week decrease of weekly new admissions, influenza hospitalization rates again began to sharply increase, with an ultimate peak at 15.3 admissions per 100,000 during the week ending February 8, 2025. COVID-19 and RSV-hospitalization rates showed a steady decline after they peaked during the week ending January 4, 2025, at 5.2 and 3.7 admissions per 100,000 respectively. New hospital admissions for COVID-19, influenza, and RSV were all ≤ 1 per 100,000 people after week ending May 3, 2025. Hospitalization rates for COVID-19 increased again during the late summer wave with a smaller peak of 2.8 admissions per 100,000 during the week ending September 9, 2025.⁴

The highest weekly total of patients hospitalized with COVID-19 was 445 patients per 100,000 people admitted during the week ending January 4, 2025. Of these hospitalized patients, 74.4%

⁴ (CDC, Hospital Respiratory Data Dashboard, 2025)

were patients 65 years and older. Out of 323 patients per 100,000 hospitalized for RSV at the peak of the season, 27.2% were for patients 0-4 years and 26% were for patients 75 years of age and older. Influenza hospitalization reached its highest weekly total the week ending February 15, 2025, with a total of 1,315 patients per 100,000 people. Of these hospitalized patients, 57% were adults over 65 years of age.

Figure 7: Weekly Total New Hospital Admissions (per 100,000) for Influenza, COVID-19, and RSV — Virginia, 2024-2025

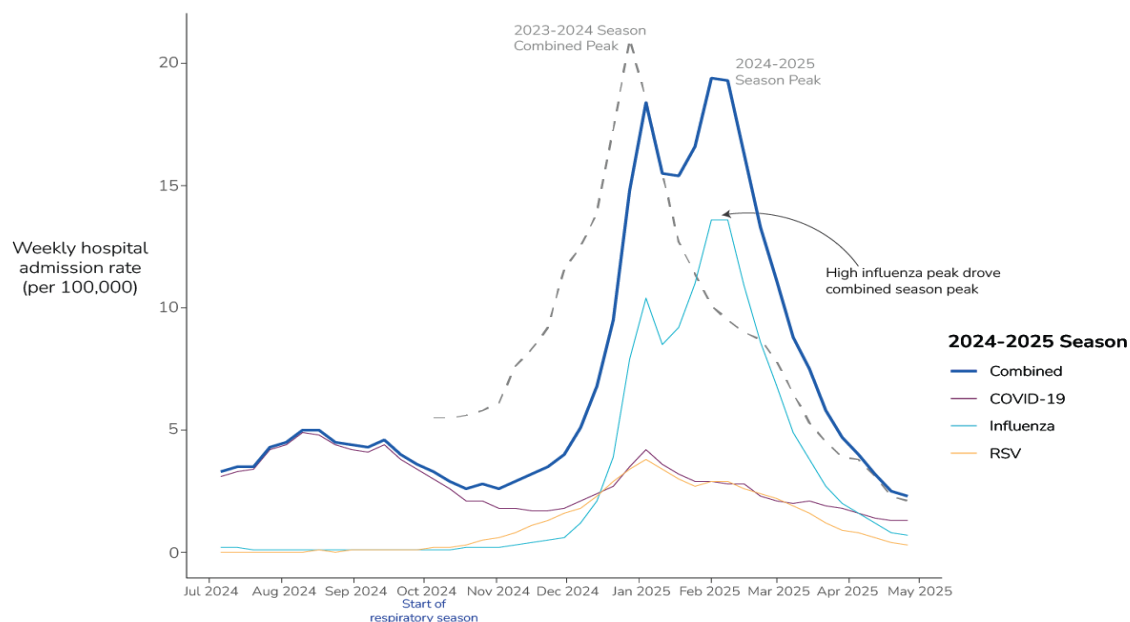


Source: NHSN Hospital Respiratory Data Dashboard

Nationally, the combined peak hospitalization rate for influenza, COVID-19, and RSV occurred the week ending February 8, 2025, with 19.3 hospitalizations per 100,000 (Figure 8). CDC [reports](#) that the combined peak hospitalization was mainly driven by influenza, which peaked the same week. This is due in part to the influenza season being classified as a high severity season overall. The combined peak hospitalization rate was similar to that seen last season (21 hospitalizations per 100,000 during week ending December 28, 2023).¹

¹ (CDC, 2024-2025 Respiratory Disease Season Outlook Evaluation, 2025)

Figure 8: National Weekly Hospitalization Rates (per 100,000) for Influenza, COVID-19, and RSV — 2024-2025



Source: 2024-2025 Respiratory Disease Season Outlook Evaluation

Virologic Surveillance

Laboratory data can be useful to analyze testing practices; identify circulating viruses, including identifying new or novel strains or variants of viruses; understand the effectiveness of seasonal vaccines; and when selecting components for the next respiratory disease season's vaccines.

Influenza Virologic Surveillance

In Virginia, influenza laboratory results are reportable when they have been confirmed by reverse transcriptase polymerase chain reaction (RT-PCR), viral culture, and antigen detection by direct fluorescent antibody (DFA) testing. Rapid antigen tests are not reportable. As a result, influenza laboratory surveillance is an underestimate of the true incidence of influenza in Virginia.

In Virginia during the 2024-25 influenza season, 47,568 influenza-positive specimens were reported (Table 1); 88.6% of which were identified as influenza A virus. Of those that were subtyped, 2.5% were A(H1N1) and 3.0% were A(H3N2). There were fewer influenza B laboratory reports during the 2024-25 influenza season (5,411; 11.4%) of all reported influenza laboratory results compared to the previous season. During the 2023-2024 influenza season, a total of 9,532 (30%) Influenza B positives were reported. Additional characterization of this

season’s Influenza B lineage information was available for 40 influenza B viruses, and all belonged to the Victoria lineage.²⁰

Table 1: Influenza Positive Laboratory Reports in the 2024-2025 Influenza Season, Virginia

	Confirmed Lab Reports	% of Total Labs Reported
Influenza A (without subtyping)	39,503	83.0%
Influenza A(H1N1)	1,211	2.5%
Influenza A(H3N2)	1,443	3.0%
Influenza B (Unk)	5,371	11.0%
Influenza B/Victoria	40	<0.1%
Total Influenza labs	47,568	-

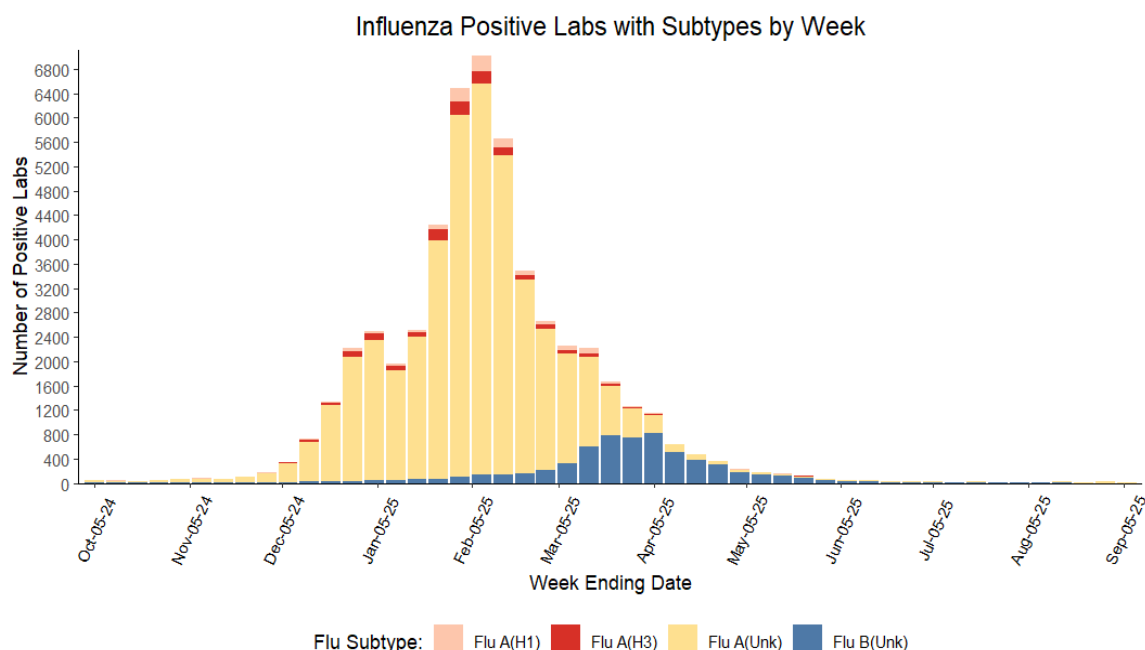
Source: Virginia Electronic Disease Surveillance System (VEDSS); Unk = unknown; not all results are subtyped

Influenza A was the dominant virus for most of the season until April 2025 (Figure 9). A smaller, second influenza wave was dominated by influenza B virus. Influenza B viruses continued to be dominant throughout the remainder of the season, as overall influenza activity decreased.²⁰

²⁰ (VDH, Respiratory Disease Data, 2025)

²⁰ (VDH, Respiratory Disease Data, 2025)

Figure 9: Influenza Positive Tests in the 2024-2025 Influenza Season by MMWR Week and Subtype, Virginia



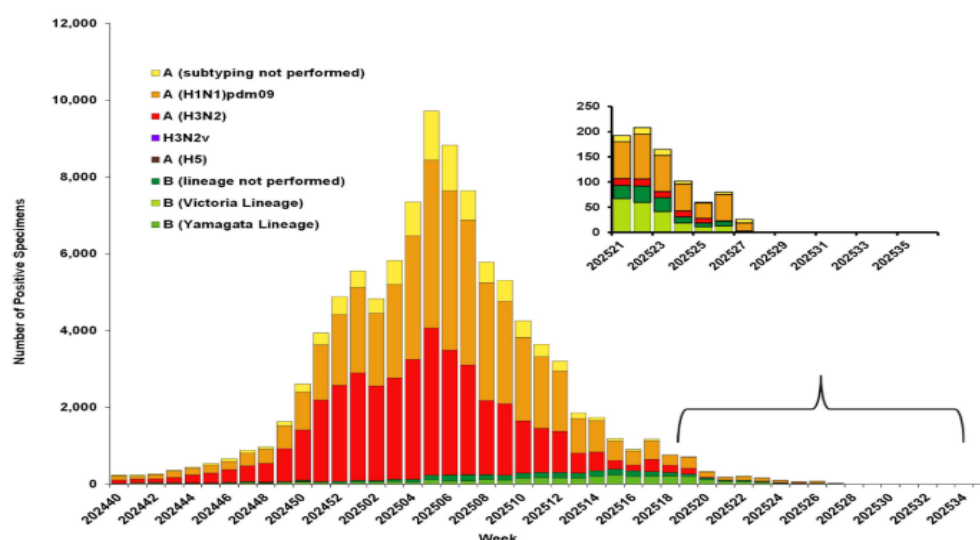
Data Source: VEDSS Lab Datamart

Source: VDH [Respiratory Disease Data Dashboard](#)

Nationally, during the 2024–2025 respiratory disease season, public health laboratories (Figure 10) tested 155,297 specimens and reported 100,015 influenza-positive specimens, with 94.1% positive for influenza A viruses and 5.9% positive for influenza B viruses. Among 84,260 seasonal influenza A viruses that were subtyped, 44,733 (53.1%) were influenza A(H1N1) pdm09 viruses, and 39,527 (46.9%) were influenza A(H3N2) viruses. Additionally, information was available for 3,297 (55.5% of all influenza B viruses) influenza B viruses that were subtyped and all belonged to the Victoria lineage. Globally, influenza B/Yamagata lineage viruses have not been identified since March 2020.⁵

⁵ (CDC, Influenza Activity in the United States during the 2024-2025 Season and Composition of the 2025-26 Influenza Vaccine, 2025)

Figure 10: Influenza Positive Tests in the 2024–2025 Influenza Season by Subtype and MMWR Week, United States



Source: [CDC Influenza Activity in the US during the 2024-2025 Season](#)

COVID-19 Virologic Surveillance

In Virginia, positive PCR and antigen test results for SARS-CoV-2, the virus that causes COVID-19, are reported to VDH by laboratories and healthcare providers. At home test results are not reported to VDH. As a result, SARS-CoV-2 laboratory surveillance is an underestimate of the true incidence of SARS-CoV-2 infections in Virginia.

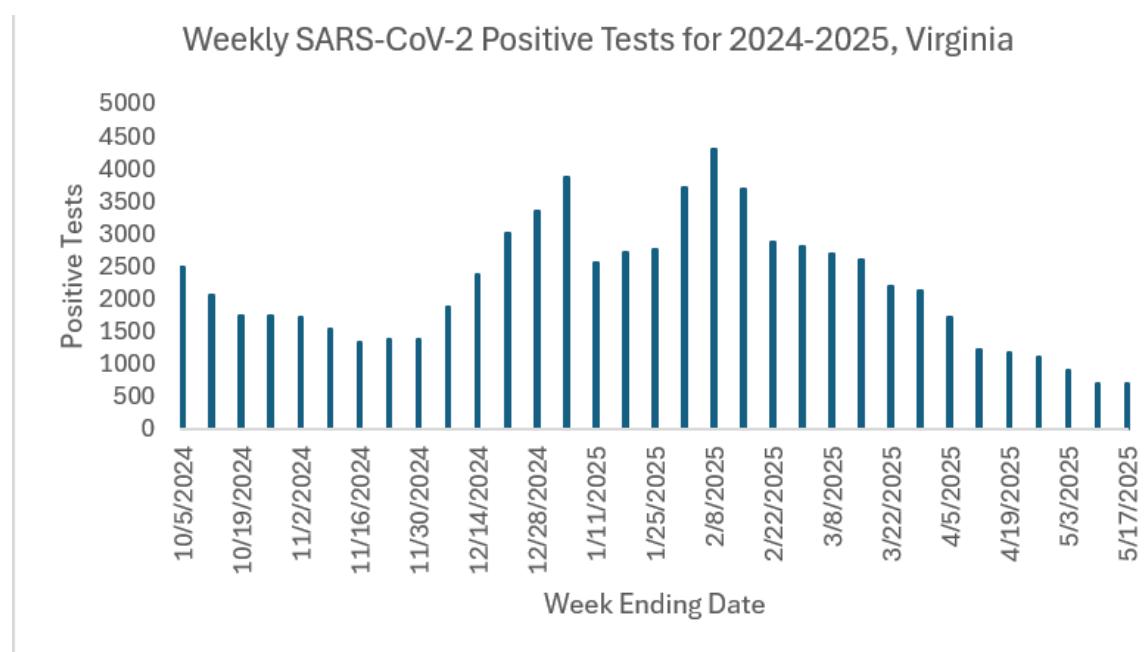
In Virginia, during the 2024-2025 respiratory disease season, 75,750 SARS-CoV-2-positive specimens were reported. The week ending February 8, 2025, had the greatest number of positive specimens received in one week (4,289 specimens) (Figure 11). There was a decline in positive specimens during subsequent weeks, however, the most noticeable decline occurred the week ending May 3, 2025.²⁰

SARS-CoV-2 viruses constantly change over time. These changes result in new variants. It is important to track variants as they emerge to monitor their spread and potential for evasion of immunity. During the 2024-2025 respiratory disease season, there were a few dominant SARS-CoV-2 variants circulating, all of which were within the Omicron variant family. At the beginning of the season, in October 2024, the predominant variant was XEC. While XEC was still circulating during the fall and winter, LP.8.1 began to emerge and became the dominant variant of the spring and early summer.¹⁴

²⁰ (VDH, Respiratory Disease Data, 2025)

¹⁴ (CDC, Variant and Genomic Surveillance, 2026)

Figure 11: Weekly SARS-CoV-2 Positive Tests for 2024-2025 Respiratory Disease Season, Virginia



Source: VDH [Respiratory Disease Data Dashboard](#)

Sentinel Surveillance

The [Influenza Sentinel Surveillance Program](#) relies on a network of providers that voluntarily submit weekly specimens for respiratory testing from patients presenting with ILI symptoms at participating outpatient facilities. This program depends on collaboration between providers, local health departments (LHDs), the Division of Consolidated Laboratory Services (DCLS), and VDH Central Office for success.¹⁹

The DCLS testing workflow for the 2024-25 respiratory disease season included multiple types of molecular tests that detect influenza virus, SARS-CoV-2, and other respiratory pathogens. If a specimen tested positive for influenza virus or SARS-CoV-2, the specimen would then be further characterized. Some specimens are reflexed for Respiratory Viral Panel (RVP) testing. The RVP identifies and detects more than 20 of the most common respiratory viruses and bacteria that cause respiratory illness, including adenovirus, human metapneumovirus, human rhinovirus/enterovirus, parainfluenza viruses, and RSV. Laboratory data results are received electronically by VDH via the Virginia Electronic Disease Surveillance System (VEDSS).

For the 2024-2025 season, all five health planning regions were represented by participating sentinel surveillance providers. Nine provider locations were onboarded to submit specimens for testing at DCLS. Of the 516 sentinel surveillance respiratory specimens that were received at

¹⁹ (VDH, Influenza Sentinel Surveillance, 2025)

DCLS, 375 were positive for influenza (Table 2), 21 were positive for SARS-CoV-2 (Table 3), and 76 were positive for other respiratory pathogens.

The findings from 2024-25 sentinel surveillance efforts reflect similar trends as seen with other surveillance systems. There were SARS-CoV-2 detections earlier in the season beginning the week ending October 19, 2024 (MMWR week 42). The most sentinel detections for SARS-CoV-2 were seen during the week ending December 28, 2024 (MMWR week 52) before decreasing for the remainder of the season. Influenza positive specimens began to increase the week ending December 28, 2024 (MMWR week 52). The most sentinel detections for influenza virus were seen the week ending March 15, 2025 (MMWR week 11). Fewer specimens were received towards the end of the respiratory disease season, but there were still positive sentinel influenza detections through the week ending May 17, 2025 (MMWR week 20).

Table 2: Sentinel Surveillance Influenza Positive Tests and Subtypes in the 2024-2025 Respiratory Disease Season, Virginia

Influenza Type and Subtype	Number of Specimens
Influenza A	375
Influenza A (without subtyping)	10
Influenza A (H3)	188
Influenza A (H1)	177
Influenza B	44
Influenza B/Victoria	44
Total Influenza Labs	419

Source: VDH Sentinel Surveillance Program

Table 3: Sentinel Surveillance SARS-CoV-2 Positive Tests and Sequence Type in the 2024-2025 Respiratory Disease Season, Virginia

SARS-CoV-2 Type	Number of Specimens
SARS-CoV-2 (not sequenced)	7
SARS-CoV-2 KP.3.1.1	4
SARS-CoV-2 XEC	2
SARS-CoV-2 LP.8.1.1	2
SARS-CoV-2 LP.8.1	3
SARS-CoV-2 LB.1.3.1	1
SARS-CoV-2 MC.10.1	1
SARS-CoV-2 LP.8.1.2	1
Total	21

Source: VDH Sentinel Surveillance Program

Outbreak Surveillance

In Virginia, certain facilities and programs, such as residential or day programs, services or facilities licensed or operated by any agency of the Commonwealth, schools, childcare centers, and summer camps are [required to report](#) the presence or suspected presence of an outbreak to their local health department per Virginia regulations [12VAC5-90-90D](#). Other entities and businesses can voluntarily report outbreaks.

Outbreak data is captured in the Virginia Outbreak Surveillance System (VOSS). VOSS is the surveillance system used to report, track, and manage outbreak investigations of reportable diseases or other health conditions in Virginia.

A total of 702 influenza, COVID-19, and RSV outbreaks were reported to VDH during the 2024-25 season (Figure 12). These outbreaks primarily occurred in the K-12 setting and in long-term care facilities. During the 2024-25 respiratory disease season, there was an increase in the number of reported outbreaks starting in late January through March, followed by a decrease until the end of the season.

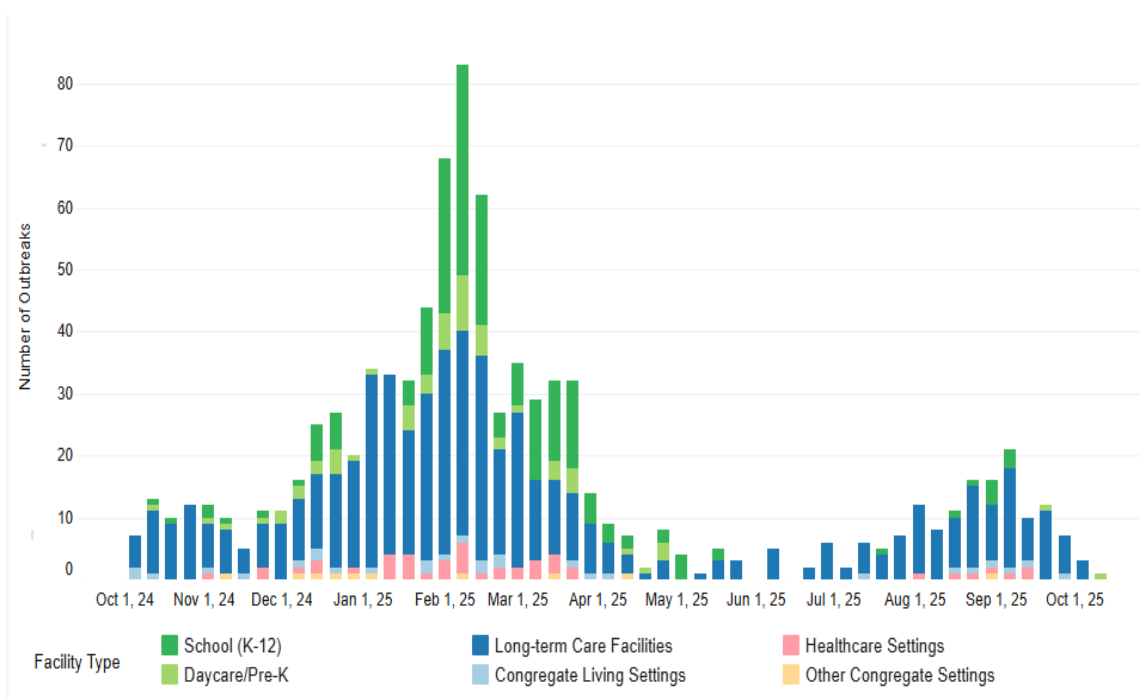
In Virginia, there were 365 influenza outbreaks reported to VDH during the 2024–2025 respiratory disease season. The majority of the outbreaks were observed in K-12 school settings (121 outbreaks, 33.2%), followed by nursing homes (45 outbreaks, 12.3%), assisted living facilities (37 outbreaks, 10.1%), multi-care facility (31 outbreaks, 8.5%), and daycare or pre-

kindergarten facilities (25 outbreaks, 6.8%). Most of these outbreaks were reported in February.

During the 2024-2025 respiratory disease season, 315 COVID-19 outbreaks were reported to VDH. The majority of the outbreaks were observed in multi-care settings (95, 30.2%), followed by nursing homes (92, 29.2%), and assisted living facilities (76, 24.1%). Many of these outbreaks were reported in January.

A total of 22 RSV outbreaks were reported to VDH during the 2024-2025 season. Most of the outbreaks were observed in nursing homes (7 outbreaks, 31.8%), and daycares or pre-kindergarten facilities (7 outbreaks, 31.8%). Outbreaks were also observed in multi-care facilities (4 outbreaks, 18.2%), assisted living facilities (2 outbreaks, 9.1%), and K-12 school settings (2, 9.1%). Many of these outbreaks were reported in January.²⁰

Figure 12: Outbreaks of Respiratory Diseases (COVID-19, Flu, RSV) during the 2024-2025 Respiratory Disease Season by Facility Type, Virginia



Source: [VDH Respiratory Dashboard](#)

Mortality Surveillance

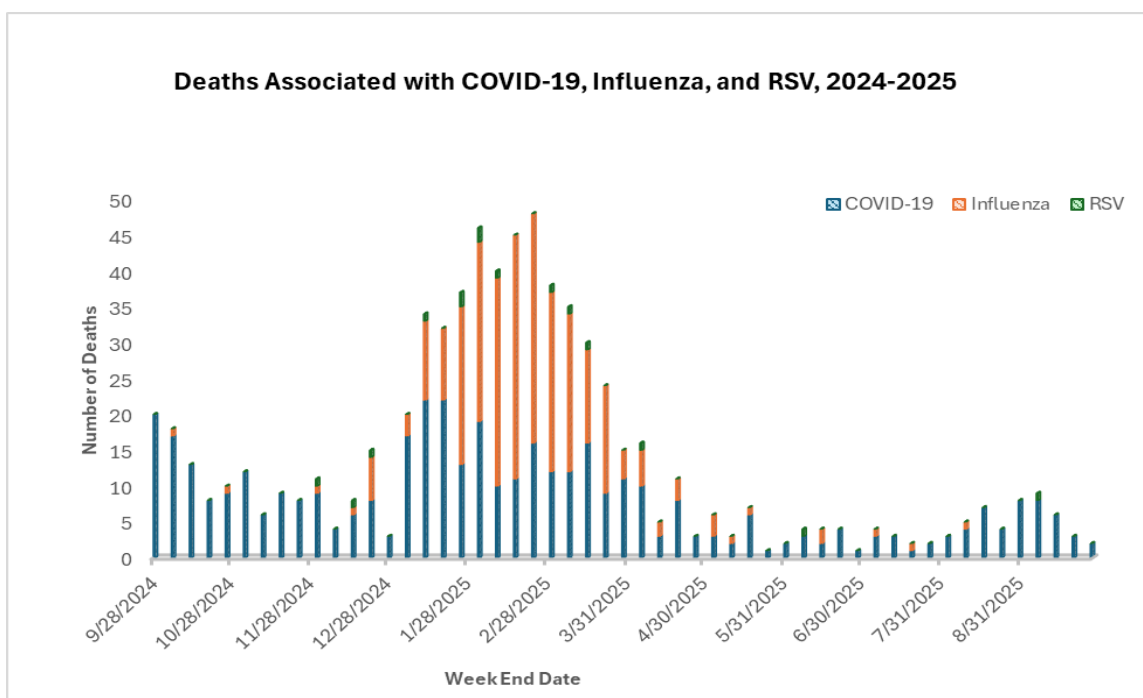
Monitoring the number of deaths with COVID-19, flu, or RSV listed on the death certificate helps monitor the impact of severe illness and outcomes from respiratory viruses. Virginia reviews death certificates for the cause-of-death coding. There is a delay between a rise in cases and corresponding rise in deaths, as well as an additional delay in receiving death

²⁰ (VDH, Respiratory Disease Data, 2025)

certificate coding. Influenza-associated pediatric mortality is a reportable condition. Only the child's age group and geographic region are publicly reported to maintain privacy and sensitivity.

During the 2024-2025 respiratory disease season, there were 404 COVID-19-associated deaths, 275 influenza-associated deaths, and 15 RSV-associated deaths identified through the Virginia death certificate review process (Figure 13). In Virginia, COVID-19-associated deaths peaked the week ending January 11, 2025, with 22 deaths reported in a single week. Influenza-associated deaths peaked the week ending February 15, 2025, with 34 deaths. RSV-associated deaths peaked the week ending January 25, 2025, with two deaths identified.²⁰

Figure 13: Deaths Associated with COVID-19, Influenza, and RSV, 2024-2025 Respiratory Disease Season, Virginia



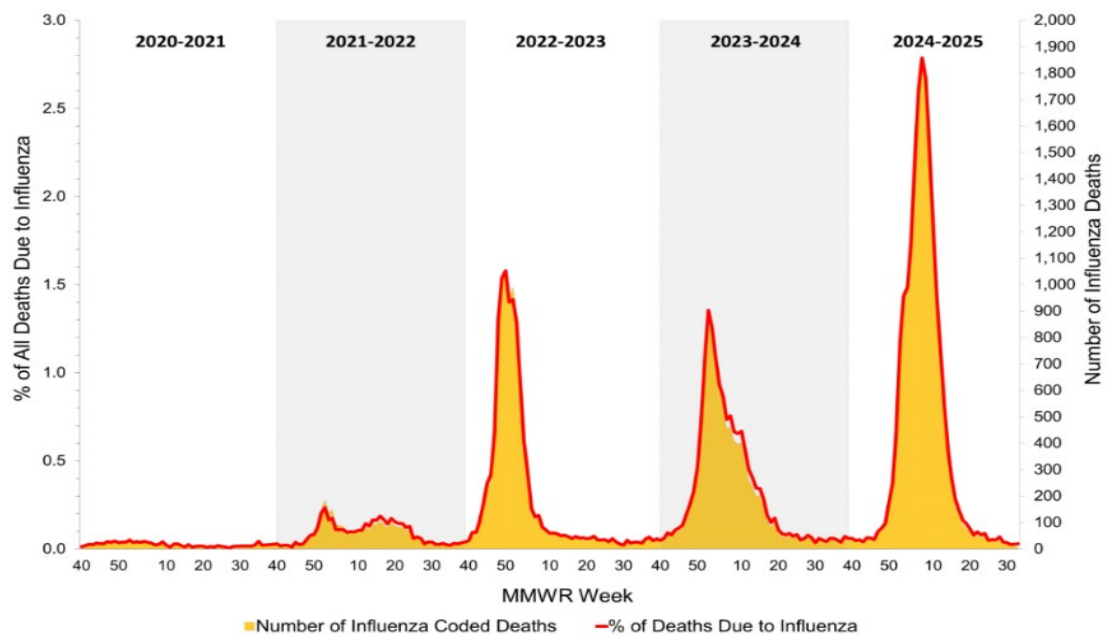
Source: VDH Respiratory Disease Data

Nationally (Figure 14), the National Center for Health Statistics (NCHS) reports 0.7% (18,399 deaths) of deaths from all causes had influenza listed as an underlying or contributing cause of death. This is the highest cumulative percentage of deaths due to influenza since the 2015-16 season. The weekly percentage of deaths due to influenza ranged from 0.02% to 2.8% and peaked during the week ending February 15, 2025 (week 7).⁵

²⁰ (VDH, Respiratory Disease Data, 2025)

⁵ (CDC, Influenza Activity in the United States during the 2024-2025 Season and Composition of the 2025-26 Influenza Vaccine, 2025)

Figure 14: Influenza Mortality from the National Center for Health Statistics Mortality Surveillance System, 2019–20 to 2024–2025 Seasons, United States



Source: CDC Influenza Activity in the US during the 2024–2025 Season

Influenza-Associated Pediatric Deaths

Influenza-associated deaths in children less than 18 years of age are reportable in Virginia and investigated by local health departments (LHDs). Influenza-associated deaths in adults are recorded in the vital records data. All death certificates (pediatric and adult) are sent to the National Center for Health Statistics (NCHS) to be coded with a cause of death.

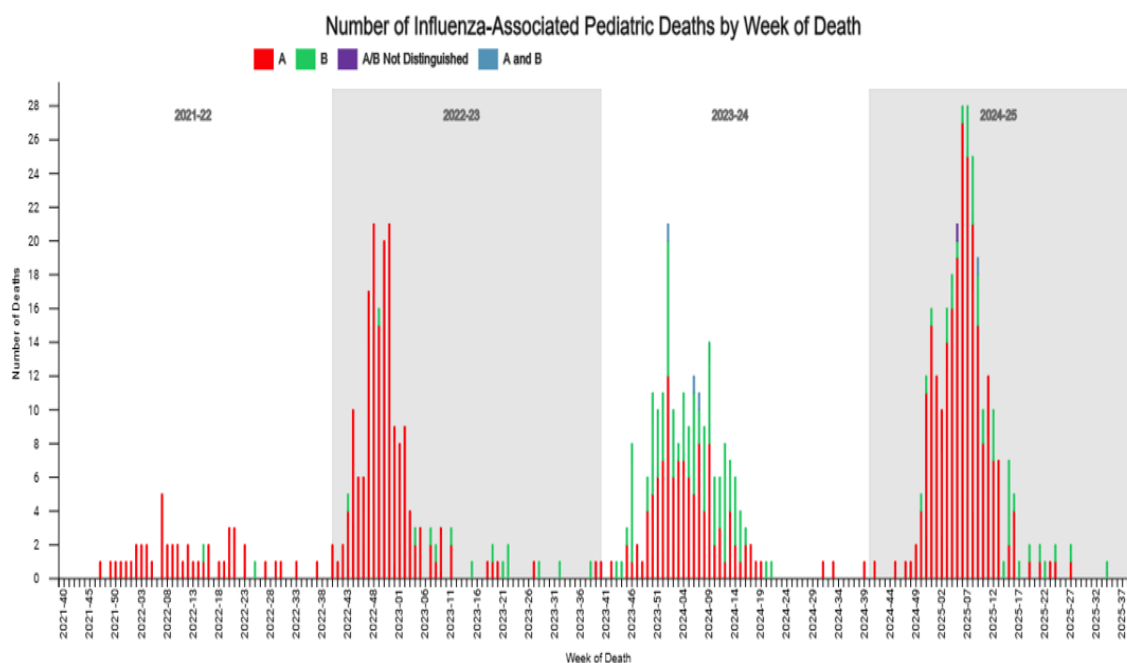
In Virginia, nine influenza-associated pediatric deaths were reported during the 2024–2025 respiratory disease season. Five were reported in the 0–4 years age group, two were reported in the 5–12 years age group, and two were reported in the 13–17 years age group.²⁰

Nationally, a total of 279 laboratory-confirmed influenza-associated pediatric deaths were reported to CDC during the 2024–2025 respiratory disease season. This exceeds the previous highest number of deaths reported during a seasonal influenza (i.e., non-pandemic) season. A total of 239 of the reported deaths were associated with influenza A viruses, 38 were associated with influenza B viruses, and one was associated with influenza A and B virus co-infections (Figure 15). Among the children and adolescents with a known medical history, 148 (56.5%) had at least one underlying medical condition associated with higher risk for developing serious influenza-related complications. Among the 207 children and adolescents who were eligible for influenza vaccination (age ≥ 6 months at date of illness onset) and for whom

²⁰ (VDH, Respiratory Disease Data, 2025)

vaccination status was known, 185 (89%) of these reported pediatric deaths occurred in children who were not fully vaccinated. This unusual increase in pediatric mortality was a factor for CDC when assigning this season as a high severity season.⁵

Figure 15: Influenza-Associated Pediatric Deaths by Virus Type and Week of Death, United States



Source: CDC Influenza Activity in the US during the 2024-2025 Season

Wastewater Surveillance

Wastewater from participating wastewater treatment plants in Virginia is tested to detect traces of infectious disease pathogens that may be circulating in a community, even if people do not have symptoms or seek healthcare. This data can be used as an early indicator that levels of infections might be increasing or decreasing in a community.

[CDC's National Wastewater Surveillance System \(NWSS\)](#) program collects and displays wastewater data from communities across the United States. Data is collected from over 1,300 sites and covers approximately 44% of the U.S. population. Infectious diseases that are monitored include influenza, COVID-19, RSV, and MPOX.¹¹

⁵ (CDC, Influenza Activity in the United States during the 2024-2025 Season and Composition of the 2025-26 Influenza Vaccine, 2025)

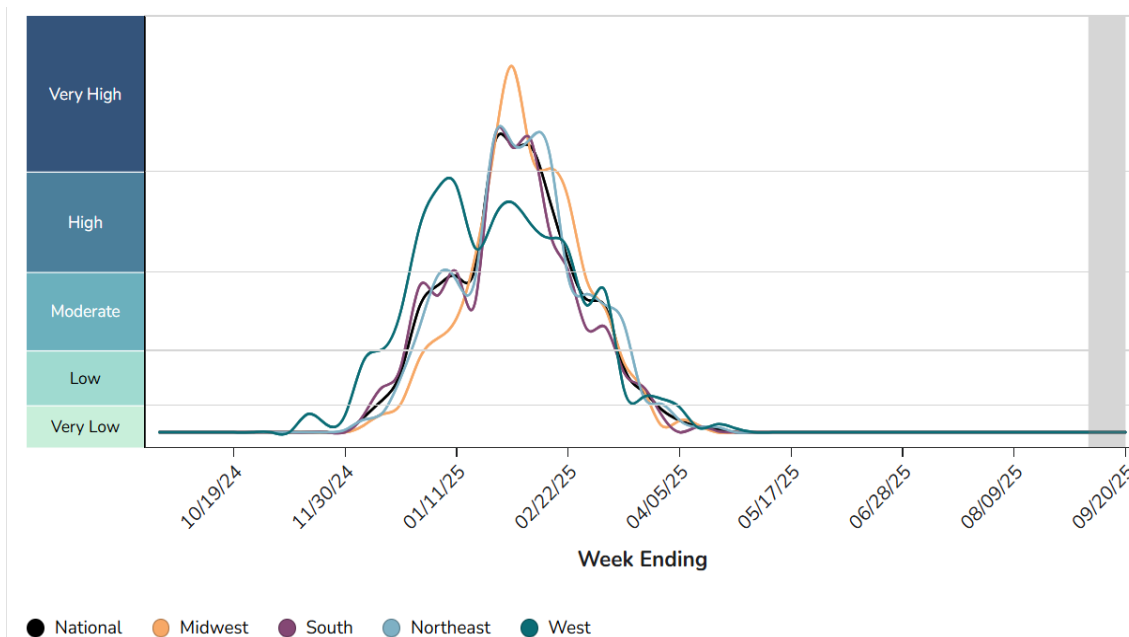
¹¹ (CDC, Wastewater Monitoring Program, 2025)

Influenza

The VDH Wastewater Surveillance (WWS) Sentinel Monitoring Program began weekly wastewater influenza virus testing on March 13, 2023, and continues to date. During the 2024–2025 respiratory season, between 24–36 sites sent weekly wastewater samples to the Hampton Roads Sanitation District for influenza A and B testing.

In Virginia, 1,911 samples were tested for influenza A virus, with 546 (28.6%) showing some level of influenza A virus detection and, of these, 141 (7.4%) were positive above the limit of detection (LOD). For influenza B virus, 1,912 samples were tested, with 224 (11.7%) showing some level of influenza B virus detection, of which 21 (1.1%) were positive above the LOD. Due to such low percentages of virus detections occurring above the LOD, all performed analyses in this report were qualitative only. The abundant low viral concentrations represent a limitation of the dataset. Nationally (Figure 16), influenza A viral activity was categorized as high from the week ending January 12, 2025, through the week ending February 8, 2025. Activity declined and was categorized as moderate for several months until reaching low levels during the week ending March 15, 2025.⁹

Figure 16: Wastewater Viral Activity Levels of Influenza A for 2024–2025 Respiratory Disease Season, United States



Source: Influenza A Wastewater Data – National Trends | NWSS | CDC

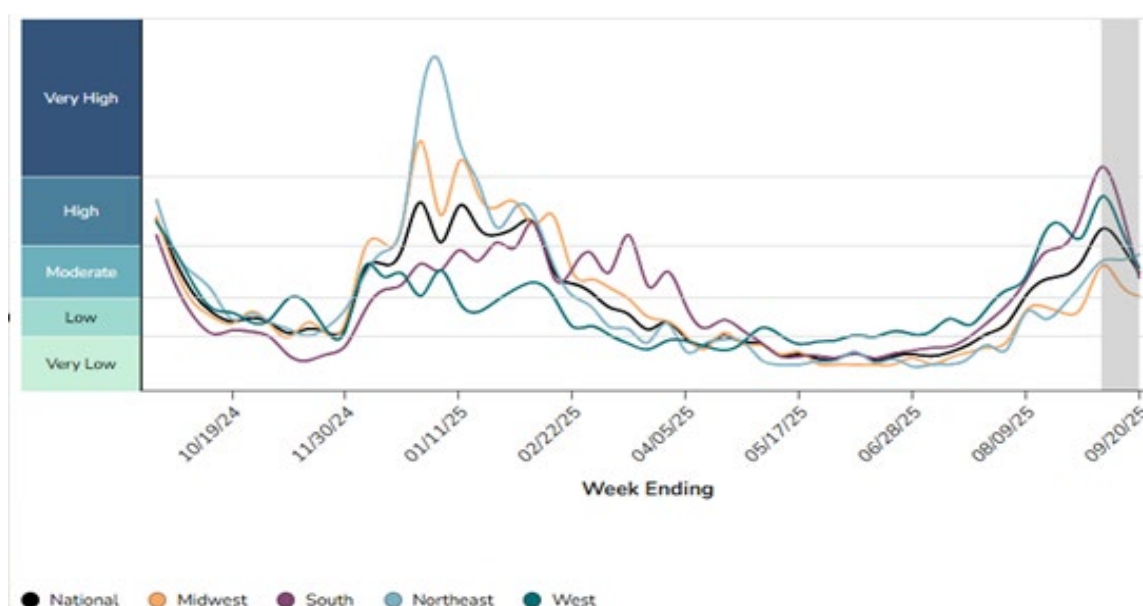
SARS-CoV-2 In Virginia, wastewater is collected each week from multiple water treatment plants. These samples assist in tracking the amount of SARS-CoV-2 in wastewater, allowing VDH to

⁹ (CDC, National Wastewater Surveillance System: Wastewater Influenza A National Trends, 2025)

analyze and calculate viral load. Additionally, VDH can utilize wastewater as a surveillance tool to monitor COVID-19 trends. In Virginia, SARS-CoV-2 wastewater viral activity levels peaked in the very high category the week ending March 15, 2025. After this peak, activity decreased until the end of the respiratory disease season.⁹

Nationally (Figure 17), SARS-CoV-2 wastewater viral activity had multiple peaks in the high category during the 2024-2025 season. The first peak occurred the week ending December 28, 2024. There was a decrease followed by a second peak the week ending January 11, 2025. Activity remained stable at the beginning of February and began to decline the week ending February 15, 2025, until peaking again the week ending September 5, 2025.⁷

Figure 17: Wastewater Viral Activity Levels of SARS-CoV-2 for 2024–2025 Respiratory Disease Season, United States



Source: COVID-19 National Wastewater Data

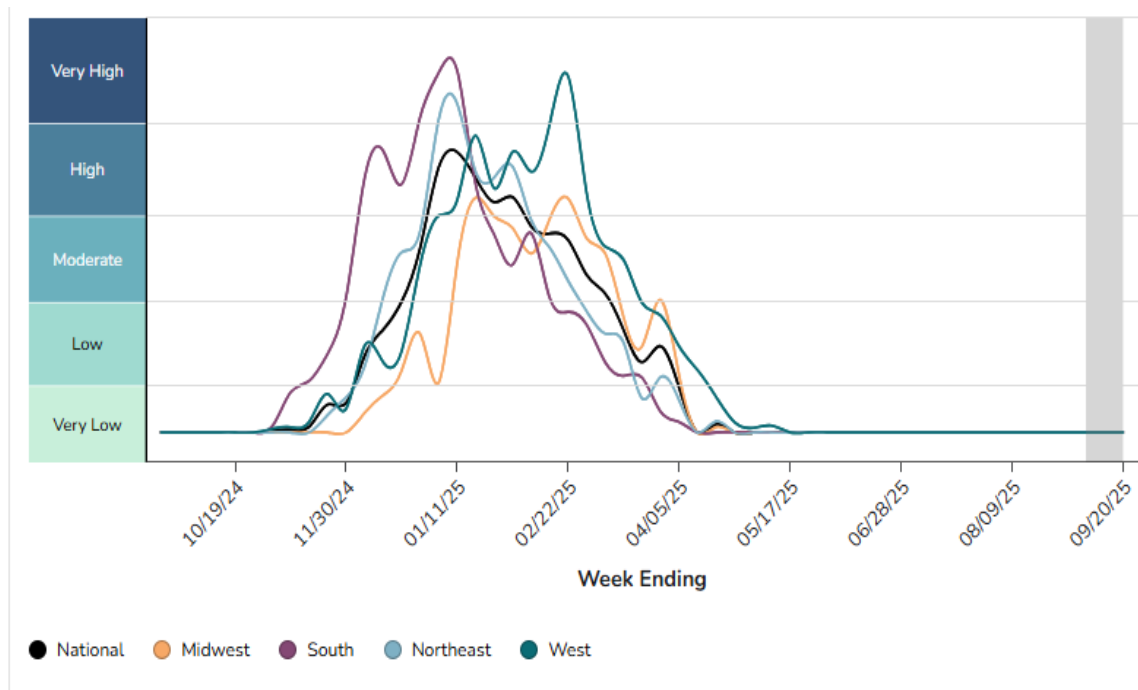
⁹ (CDC, National Wastewater Surveillance System: Wastewater Influenza A National Trends, 2025)

⁷ (CDC, National Wastewater Surveillance System: COVID-19 National Data, 2025)

RSV

In Virginia, 1,911 RSV samples were tested, with 575 (30.1%) showing some level of RSV detection and, of these, 177 (9.3%) were positive above the LOD. Nationally (Figure 18), RSV wastewater viral activity began to increase the week ending December 7, 2024. The activity remained elevated until reaching its peak the week ending January 11, 2025. Activity declined in late February and remained low until the end of the respiratory disease season.⁸

Figure 18: Wastewater Viral Activity Levels of RSV for 2024–2025 Respiratory Disease Season, United States



Source: RSV National Wastewater Data

⁸ (CDC, National Wastewater Surveillance System: RSV National Data, 2025)

Vaccination Trends

Staying up to date with recommended immunizations lowers your risk of hospitalization and death from respiratory illnesses. There are immunizations available to prevent flu, COVID-19, and RSV. Monitoring trends in vaccination coverage can help identify gaps in vaccine access and uptake.

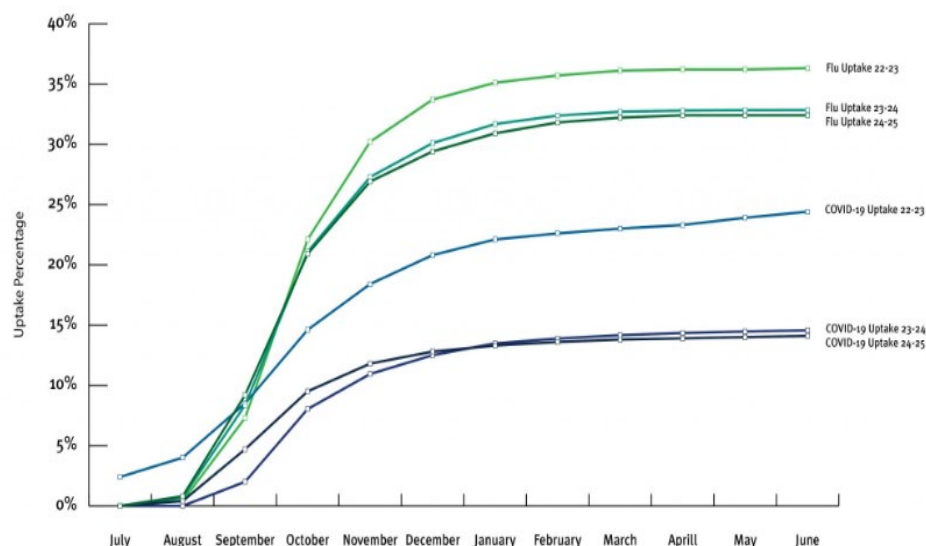
The Virginia Immunization Information System (VIIS) is reviewed each season to assess influenza vaccination coverage in Virginia. VIIS is Virginia's statewide registry where healthcare providers are required to report vaccines administered in Virginia. Coverage rates are determined using population estimates from the 2022 American Community Survey (ACS). No population estimates are available for out-of-state individuals or those without a reported locality.

Vaccination Coverage

In Virginia, over the 2024-2025 respiratory disease season, influenza vaccination coverage reached 32.4% of the total population by June 2025 (Figure 19). Adults 65 years and older had the highest influenza vaccination coverage of any age group at 60.7%. Coverage of the 2024-2025 COVID-19 vaccine reached 14.1% of the total population by June 2025. Adults 65 years and older had the highest COVID-19 vaccination coverage of any age group at 36.6%. Coverage for both the influenza and COVID-19 vaccines were similar in comparison to previous respiratory disease seasons. The coverage rate of the RSV vaccine for Virginians was 32.2% for those aged 75 and older, and 48.8% for children under one years of age.²¹

Figure 19: Influenza and COVID-19 Vaccination Coverage Rates for the 2022-2023, 2023-2024, and 2024-2025 Respiratory Disease Seasons, Virginia

2022-2023, 2023-2024 and 2024-2025 Seasons: COVID-19 and Flu Vaccine Cumulative Uptake Percentage by Total Virginia Population and Month



Source: VDH Respiratory Immunization Dashboard

Vaccine Effectiveness

CDC conducts vaccine effectiveness studies each respiratory disease season to evaluate how well available vaccines are performed at protecting people from illness. These studies routinely assess the value of vaccination as a public health intervention. Vaccine effectiveness measures how well vaccines perform to protect the population against health outcomes that include symptomatic illness, hospitalization, and death.

During the 2024-2025 respiratory disease season, the estimates of vaccine effectiveness indicate that the influenza vaccine was effective in preventing medically attended illness in children, adolescents, and adults. This was calculated among patients with acute respiratory illness outpatient visits and hospitalizations.

Among children and adolescents (<18 years), vaccine effectiveness for the influenza vaccine ranged from 32% to 60% against outpatient settings and from 63% to 78% against hospitalizations. Among adults, vaccine effectiveness was 36% to 54% against outpatient settings and from 41% to 55% against hospitalizations. These findings show that vaccination with the 2024-2025 influenza vaccine reduced hospitalizations and more severe influenza-associated outcomes.

The 2024-2025 COVID-19 vaccination was evaluated to assess the protection provided against COVID-19 outpatient encounters in adults (<65 years) without immunocompromising conditions compared to those that did not receive the vaccination. Vaccine effectiveness ranged from 30% to 36% against outpatient settings and 45 to 46% against hospitalization. In older adults (>65 years) without immunocompromising conditions, vaccine effectiveness ranged from 45 to 46% against hospitalization. Vaccine effectiveness against hospitalization could not be estimated for children and adolescents (aged 5-17 years) and adults (18-64 years) due to low hospitalization and vaccination rates.

RSV differs from influenza and COVID-19 vaccinations, as the RSV immunization is not updated annually. As such, the first studies of effectiveness were conducted during the 2023-2024 respiratory disease season. Vaccine effectiveness against hospitalization for older adults (>60 years) was 80% to 91%, and for infants (<1 year) was 90% effective against hospitalization in their first RSV season.¹

Overall, these vaccine effectiveness findings support the Center for Disease Control and Prevention's recommendations for vaccination during the respiratory disease season.

Conclusion

Virginia experienced high levels of respiratory disease during the 2024-2025 respiratory season. Both RSV and COVID-19 peaked at the end of December and beginning of January, while

²¹ (VDH, Respiratory Immunization Dashboards, 2025)

¹ (CDC, 2024-2025 Respiratory Disease Season Outlook Evaluation, 2025)

influenza peaked later, around mid-February. This season, influenza peaked later than in the last two seasons and was defined nationally as a high severity influenza season. There were reports of rare, severe neurologic complications, a record number of pediatric deaths, and higher influenza-associated hospitalizations. In Virginia, there were nine pediatric influenza-associated deaths, which was higher than the number for each of the two previous seasons. Influenza accounted for the majority of outbreaks reported to VDH during the 2024-2025 season. These outbreaks were mostly observed in K-12 schools and nursing home settings.

Findings for vaccine effectiveness for influenza, COVID-19, and RSV illustrated a decreased need for medical intervention and hospitalization in vaccinated people, supporting the recommendation for vaccination during the respiratory disease season.

VDH's mission is to protect the health and promote the well-being of all people in Virginia. A combination of many data sources allows public health officials to describe and understand the impact of respiratory viruses in Virginia. Ongoing data collection through syndromic surveillance, laboratory reports, outbreak surveillance, vital records, wastewater surveillance, vaccination records, and the sentinel surveillance program will continue to inform public health, lead to more effective prevention and control measures, and ultimately contribute to a healthier future for our Commonwealth.

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