

Influenza (Flu) (</flu/index.htm>)



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# Weekly U.S. Influenza Surveillance Report

Updated December 29, 2023



Key Updates for Week 51, ending December 23, 2023

Seasonal influenza activity is elevated and continues to increase in most parts of the country.

## Viruses

### Clinical Lab

**16.1%** (Trend ▲)  
positive for influenza  
this week

[\(/flu/weekly/index.htm#ClinicalLaboratories\)](/flu/weekly/index.htm#ClinicalLaboratories)

### Public Health Lab

The most frequently reported influenza viruses this week were influenza A(H1N1)pdm09.

[\(/flu/weekly/index.htm#PublicHealthLaboratories\)](/flu/weekly/index.htm#PublicHealthLaboratories)

### Virus Characterization

Genetic and antigenic characterization and antiviral susceptibility are summarized in this report.

[\(/flu/weekly/index.htm#VirusCharacterization\)](/flu/weekly/index.htm#VirusCharacterization)

# Illness

## Outpatient Respiratory Illness

**6.1%** (Trend )

of visits to a health care provider this week were for respiratory illness  
(*above baseline*).

[\(/flu/weekly/index.htm#ILINet\)](/flu/weekly/index.htm#ILINet)

## Outpatient Respiratory Illness: Activity Map

This week 6 jurisdictions experienced moderate activity and 33 jurisdictions experienced high or very high activity.

[\(/flu/weekly/index.htm#ORIAM\)](/flu/weekly/index.htm#ORIAM)


## FluSurv-NET

**15.4 per 100,000**

cumulative hospitalization rate.

[\(/flu/weekly/index.htm#FluSurvNet\)](/flu/weekly/index.htm#FluSurvNet)

## NHSN Hospitalizations

**14,732** (Trend )

patients admitted to hospitals with influenza this week.

[\(/flu/weekly/index.htm#NHSN\)](/flu/weekly/index.htm#NHSN)

## NCHS Mortality

**0.5%** (Trend )

of deaths attributed to influenza this week.

[\(/flu/weekly/index.htm#NCHSMortality\)](/flu/weekly/index.htm#NCHSMortality)

## Pediatric Deaths

**7**

influenza-associated deaths were reported

(1 occurred during 2022-2023 season and 6 occurred during 2023-2024 season)

[\(/flu/weekly/index.htm#PedMortality\)](/flu/weekly/index.htm#PedMortality)

*All data are preliminary and may change as more reports are received.*

*Directional arrows indicate changes between the current week and the previous week. [Additional information](/flu/weekly/index.htm#Trends) [\(/flu/weekly/index.htm#Trends\)](/flu/weekly/index.htm#Trends) on the arrows can be found at the bottom of this page.*

*A description of the CDC influenza surveillance system, including methodology and detailed descriptions of each data component is available on the [surveillance methods](/flu/weekly/overview.htm) [\(/flu/weekly/overview.htm\)](/flu/weekly/overview.htm) page.*

*Additional information on the current and previous influenza seasons for each surveillance component are available on [FluView Interactive](/flu/weekly/fluviewinteractive.htm) [\(/flu/weekly/fluviewinteractive.htm\)](/flu/weekly/fluviewinteractive.htm).*

### Key Points

- Seasonal influenza activity is elevated and continues to increase in most parts of the country.
- Outpatient respiratory illness is above baseline<sup>1</sup> nationally for the eighth consecutive week and is above baseline in all 10 HHS Regions.
- The number of weekly flu hospital admissions continues to increase.
- During Week 51, of the 875 viruses reported by public health laboratories, 748 (85.5%) were influenza A and 127 (14.5%) were influenza B. Of the 391 influenza A viruses subtyped during Week 51, 309 (79.0%) were influenza A(H1N1) and 82 (21.0%) were A(H3N2).
- Six influenza-associated pediatric deaths occurring during the 2023-2024 influenza season were reported during Week 51, bringing the 2023-2024 season total to 20 pediatric deaths.
- CDC estimates that there have been at least 7.1 million illnesses, 73,000 hospitalizations, and 4,500 deaths from flu so far this season.
- CDC recommends that everyone 6 months and older get an annual flu vaccine as long as influenza viruses are spreading.<sup>2</sup> Vaccination now can still provide benefit this season.
- There also are prescription flu antiviral drugs that can treat flu illness; those should be started as early as possible and are especially important for higher risk patients.<sup>3</sup>
- Flu viruses are among several viruses contributing to respiratory disease activity. CDC is providing updated, integrated information (<https://www.cdc.gov/respiratory-viruses/index.html>) about COVID-19, flu, and RSV activity on a weekly basis.

## U.S. Virologic Surveillance

(<https://www.cdc.gov/flu/weekly/overview.htm#LabSurveillance>)

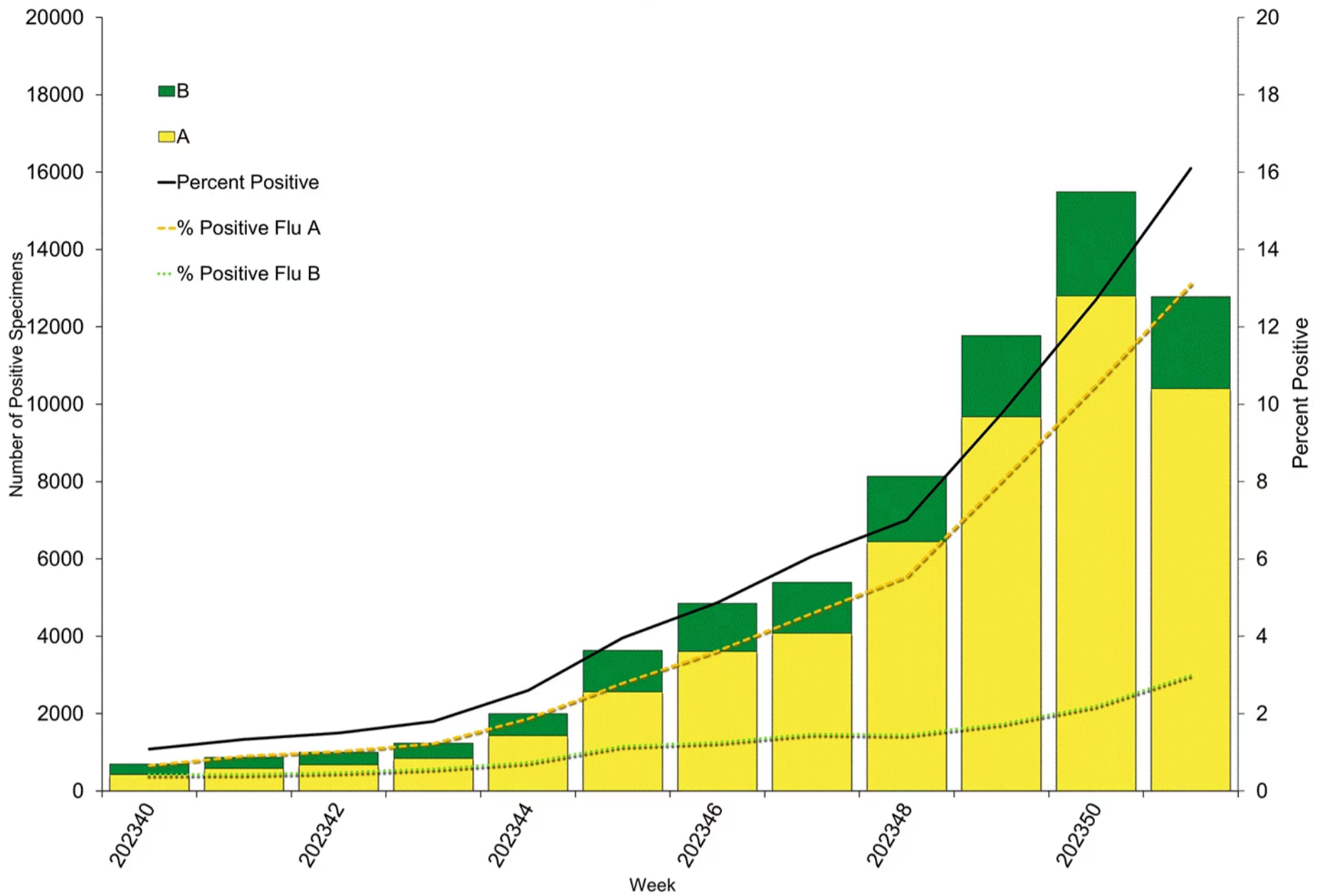
Nationally the percentage of respiratory specimens testing positive for influenza in clinical laboratories increased (change of  $\geq 0.5$  percentage points) compared to the previous week. The regions with the highest percent positivity were regions 8 (25.4%), 6 (25.0%), 4 (20.7%), and 3 (20.2%). Since Week 40, influenza A(H1N1)pdm09 has been the predominant virus circulating in all regions. However, the distribution of circulating viruses varies by region. For regional and state level data and age group distribution, please visit [FluView Interactive](https://gis.cdc.gov/grasp/fluview/fluportaldashboard.html) (<https://gis.cdc.gov/grasp/fluview/fluportaldashboard.html>). Viruses known to be associated with recent receipt of live attenuated influenza vaccine (LAIV) or found upon further testing to be a vaccine virus are not included, as they are not circulating influenza viruses.

## Clinical Laboratories

The results of tests performed by clinical laboratories nationwide are summarized below. Data from clinical laboratories (the percentage of specimens tested that are positive for influenza virus) are used to monitor whether influenza activity is increasing or decreasing.

	Week 51	Data Cumulative since October 1, 2023 (Week 40)
No. of specimens tested	79,353	1,060,095
No. of positive specimens (%)	12,775 (16.1%)	67,851 (6.4%)
<i>Positive specimens by type</i>		
Influenza A	10,401 (81.4%)	53,548 (78.9%)
Influenza B	2,374 (18.6%)	14,303 (21.1%)

## Influenza Positive Tests Reported to CDC by U.S. Clinical Laboratories, National Summary, 2023-2024 Season



<http://gis.cdc.gov/grasp/fluview/fluportaldashboard.html>

[View Chart Data \(/flu/weekly/weeklyarchives2023-2024/data/whoAllregt\\_cl51.html\)](/flu/weekly/weeklyarchives2023-2024/data/whoAllregt_cl51.html) | [View Full Screen \(/flu/weekly/WeeklyArchives2023-2024/WHONPHL51.html\)](/flu/weekly/WeeklyArchives2023-2024/WHONPHL51.html)

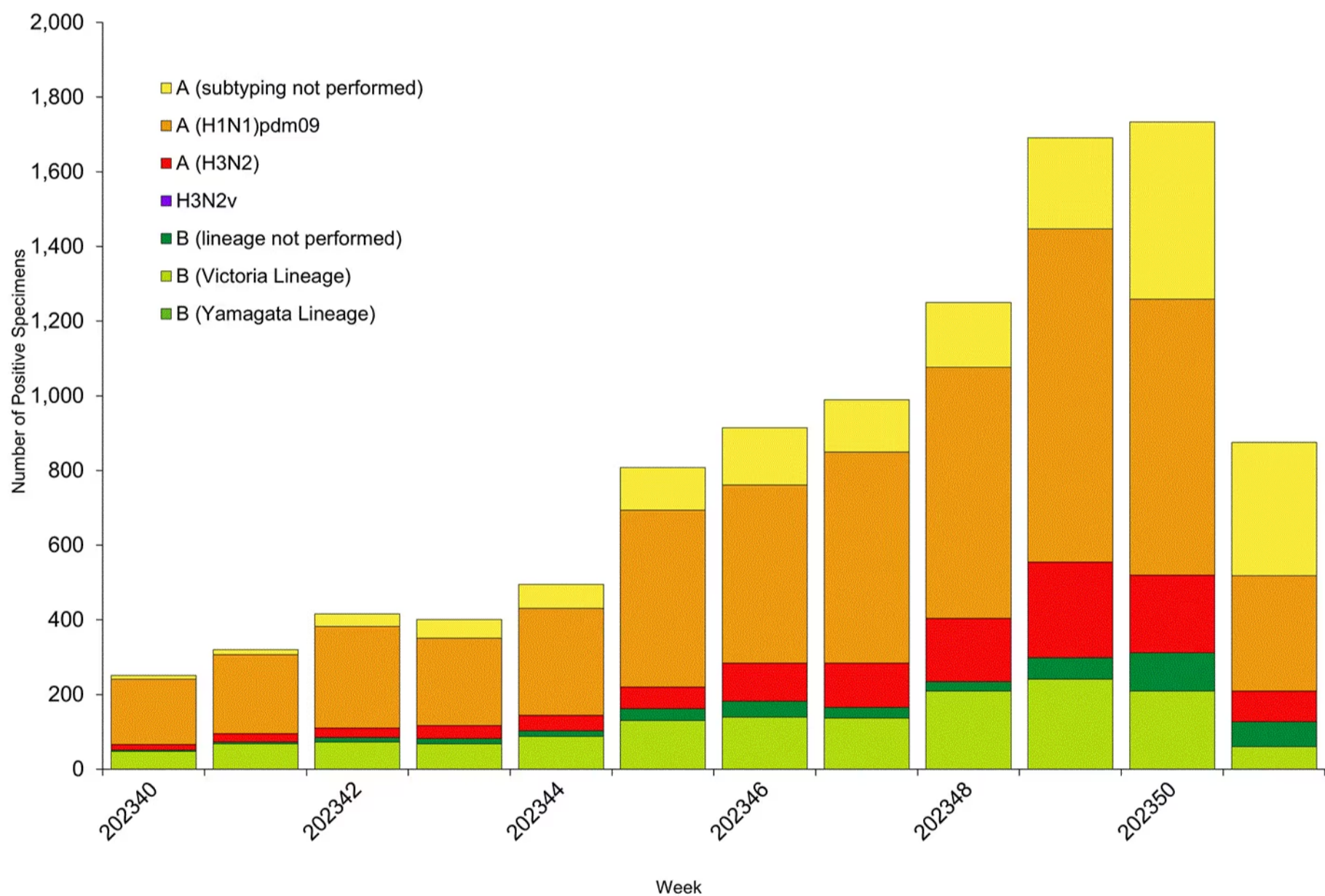
## Public Health Laboratories

The results of tests performed by public health laboratories nationwide are summarized below. Data from public health laboratories are used to monitor the proportion of circulating influenza viruses that belong to each influenza subtype/lineage.

	Week 51	Data Cumulative since October 1, 2023 (Week 40)
No. of specimens tested	2,795	40,596
No. of positive specimens	875	10,143
<i>Positive specimens by type/subtype</i>		
Influenza A	748 (85.5%)	8,270 (81.5%)
Subtyping Performed	391 (52.3%)	6,444 (77.9%)
(H1N1)pdm09	309 (79.0%)	5,309 (82.4%)
H3N2	82 (21.0%)	1,135 (17.6%)
H3N2v	0 (0.0%)	0 (0.0%)

	Week 51	Data Cumulative since October 1, 2023 (Week 40)
Subtyping not performed	357 (47.7%)	1,826 (22.1%)
Influenza B	127 (14.5%)	1,873 (18.5%)
Lineage testing performed	60 (47.2%)	1,470 (78.5%)
Yamagata lineage	0 (0.0%)	0 (0.0%)
Victoria lineage	60 (100%)	1,470 (100%)
Lineage not performed	67 (52.8%)	403 (21.5%)

### Influenza Positive Tests Reported to CDC by U.S. Public Health Laboratories, National Summary, 2023-2024 Season



<http://gis.cdc.gov/grasp/fluview/fluportaldashboard.html>

[View Chart Data \(/flu/weekly/weeklyarchives2023-2024/data/whoAllregt\\_phl51.html\)](/flu/weekly/weeklyarchives2023-2024/data/whoAllregt_phl51.html) | [View Full Screen \(/flu/weekly/weeklyarchives2023-2024/WhoPHL51.html\)](/flu/weekly/weeklyarchives2023-2024/WhoPHL51.html)

**Additional virologic surveillance information for current and past seasons:**

[Surveillance Methods \(/flu/weekly/overview.htm#LabSurveillance\)](/flu/weekly/overview.htm#LabSurveillance) | [FluView Interactive: National, Regional, and State Data \(http://gis.cdc.gov/grasp/fluview/fluportaldashboard.html\)](#) or [Age Data \(https://gis.cdc.gov/grasp/fluview/flu\\_by\\_age\\_virus.html\)](https://gis.cdc.gov/grasp/fluview/flu_by_age_virus.html)

## Influenza Virus Characterization

## [\(/flu/weekly/overview.htm#VirusCharacterization\)](/flu/weekly/overview.htm#VirusCharacterization)

CDC performs [genetic](https://www.cdc.gov/flu/about/professionals/genetic-characterization.htm) and [antigenic](https://www.cdc.gov/flu/about/professionals/antigenic.htm) characterization of U.S. viruses submitted from state and local public health laboratories according to the Right Size Roadmap submission guidance. These data are used to compare how similar the currently circulating influenza viruses are to the reference viruses representing viruses contained in the current influenza vaccines. The data are also used to monitor evolutionary changes that continually occur in influenza viruses circulating in humans. CDC also tests susceptibility of circulating influenza viruses to antiviral medications including the neuraminidase inhibitors (oseltamivir, zanamivir, and peramivir) and the PA endonuclease inhibitor baloxavir.

CDC has genetically characterized 687 influenza viruses collected since October 1, 2023.

Virus Subtype or Lineage	Genetic Characterization				
	Total No. of Subtype/Lineage Tested	HA Clade	Number (% of subtype/lineage tested)	HA Subclade	Number (% of subtype/lineage tested)
A/H1	361				
		6B.1A.5a	361 (100%)	2a	110 (30.5%)
				2a.1	251 (69.5%)
A/H3	121				
		3C.2a1b.2a	121 (100%)	2a.1b	1 (0.8%)
				2a.3a	1 (0.8%)
				2a.3a.1	118 (97.5%)
				2b	1 (0.8%)
B/Victoria	205				
		V1A	205 (100%)	3a.2	205 (100%)
B/Yamagata	0				
		Y3	0	Y3	0 (0%)

CDC [antigenically characterizes](https://www.cdc.gov/flu/about/professionals/antigenic.htm) influenza viruses by [hemagglutination inhibition \(HI\)](http://www.cdc.gov/flu/professionals/laboratory/antigenic.htm) (H1N1pdm09, H3N2, B/Victoria, and B/Yamagata viruses) or neutralization-based [HINT](https://www.cdc.gov/flu/spotlights/2018-2019/new-lab-method-test-flu.html) (H3N2 viruses) using antisera that ferrets make after being infected with reference viruses representing the 2023-2024 Northern Hemisphere recommended cell or recombinant-based vaccine viruses. Antigenic differences between viruses are determined by comparing how well the antibodies made against the vaccine reference viruses recognize the circulating viruses that have been grown in cell culture. Ferret antisera are useful because antibodies raised against a particular virus can often recognize small changes in the surface proteins of other viruses. In HI assays, viruses with similar antigenic properties have antibody titer differences of less than or equal to 4-fold when compared to the reference (vaccine) virus. In HINT, viruses with similar antigenic properties have antibody neutralization titer differences of less than or equal to 8-fold. Viruses selected for antigenic characterization are a subset representing the genetic changes in the surface proteins seen in genetically characterized viruses.

### Influenza A Viruses

- **A (H1N1)pdm09:** Fifty A(H1N1)pdm09 viruses were antigenically characterized by HI, and all were well-recognized (reacting at titers that were within 4-fold of the homologous virus titer) by ferret antisera to cell-grown A/Wisconsin/67/2022-like reference viruses representing the A(H1N1)pdm09 component for the cell- and recombinant-based influenza vaccines.
- **A (H3N2):** Forty-nine A(H3N2) viruses were antigenically characterized by HI or HINT, and all were well-recognized (reacting at titers that were within 4-fold of the homologous virus titer in HI or reacting at titers that were less than or equal to 8-fold of the homologous virus in HINT) by ferret antisera to cell-grown A/Darwin/6/2021-like reference viruses representing the A(H3N2) component for the cell- and recombinant-based influenza vaccines.

### Influenza B Viruses

- **B/Victoria:** Nineteen influenza B/Victoria-lineage virus were antigenically characterized by HI, and all were well-recognized (reacting at titers that were within 4-fold of the homologous virus titer) by ferret antisera to cell-grown B/Austria/1359417/2021-like reference viruses representing the B/Victoria component for the cell- and recombinant-based influenza vaccines.
- **B/Yamagata:** No influenza B/Yamagata-lineage viruses were available for antigenic characterization.

### Assessment of Virus Susceptibility to Antiviral Medications

CDC assesses susceptibility of influenza viruses to the antiviral medications including the neuraminidase inhibitors (oseltamivir, zanamivir, and peramivir) and the PA endonuclease inhibitor baloxavir using next generation sequence analysis supplemented by laboratory assays. Information about antiviral susceptibility test methods can be found at [U.S. Influenza Surveillance: Purpose and \(https://www.cdc.gov/flu/weekly/overview.htm\) Methods | CDC \(https://www.cdc.gov/flu/weekly/overview.htm\)](https://www.cdc.gov/flu/weekly/overview.htm).

Viruses collected in the U.S. since October 01, 2023, were tested for antiviral susceptibility as follows:

Antiviral Medication	Total Viruses	A/H1	A/H3	B/Victoria
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Antiviral Medication			Total Viruses	A/H1	A/H3	B/Victoria
Neuraminidase Inhibitors	Oseltamivir	Viruses Tested	694	362	121	211
		Reduced Inhibition	1 (0.1%)	1 (0.3%)	0 (0.0%)	0 (0.0%)
		Highly Reduced Inhibition	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Peramivir	Viruses Tested	694	362	121	211
		Reduced Inhibition	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
		Highly Reduced Inhibition	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Zanamivir	Viruses Tested	694	362	121	211
		Reduced Inhibition	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
		Highly Reduced Inhibition	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
PA Cap-Dependent Endonuclease Inhibitor	Baloxavir	Viruses Tested	687	360	120	207
		Decreased Susceptibility	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)

One A(H1N1)pdm09 virus had NA-S247N and NA-I223V amino acid substitutions and showed reduced inhibition by oseltamivir.

High levels of resistance to the adamantanes (amantadine and rimantadine) persist among influenza A(H1N1)pdm09 and influenza A(H3N2) viruses (the adamantanes are not effective against influenza B viruses). Therefore, use of these antivirals for treatment and prevention of influenza A virus infection is not recommended and data from adamantane resistance testing are not presented.

## Outpatient Respiratory Illness Surveillance

(<https://www.cdc.gov/flu/weekly/overview.htm#ILINet>)

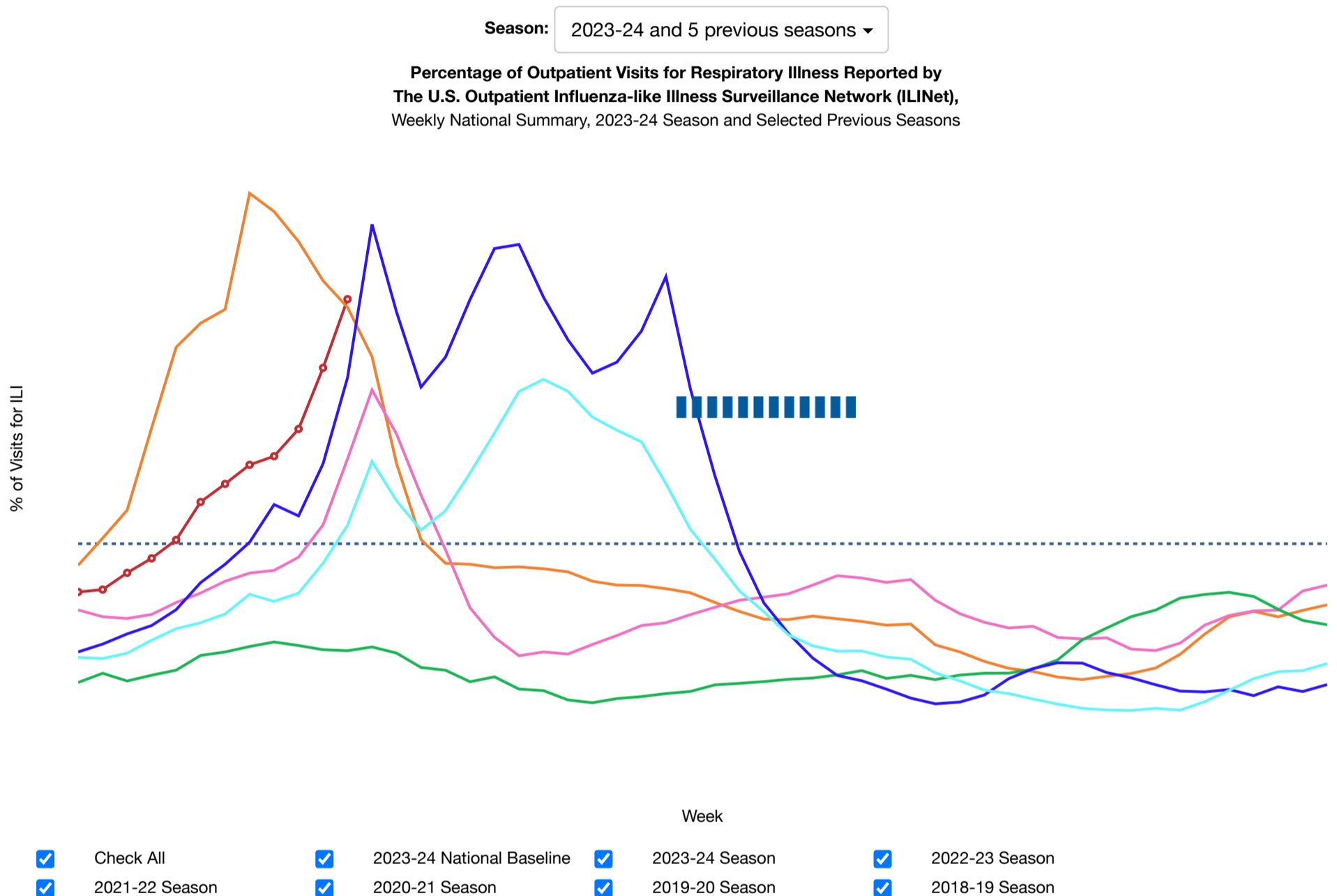
The U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) monitors outpatient visits for respiratory illness referred to as influenza-like illness [ILI (fever plus cough or sore throat)], not laboratory-confirmed influenza, and will therefore capture respiratory illness visits due to infection with pathogens that can present with similar symptoms, including influenza viruses, SARS-CoV-2, and RSV. It is important to evaluate syndromic surveillance data, including that from ILINet, in



the context of other sources of surveillance data to obtain a more complete and accurate picture of influenza, SARS-CoV-2, and other respiratory virus activity. CDC is providing integrated information about COVID-19, influenza, and RSV activity on a [website \(https://www.cdc.gov/respiratory-viruses/index.html\)](https://www.cdc.gov/respiratory-viruses/index.html) that is updated weekly. Information about other respiratory virus activity can be found on CDC's National Respiratory and Enteric Virus Surveillance System (NREVSS) website (<https://www.cdc.gov/surveillance/nrevss/index.html>).

## Outpatient Respiratory Illness Visits

Nationwide during Week 51, 6.1% of patient visits reported through ILINet were due to respiratory illness that included fever plus a cough or sore throat, also referred to as ILI. This has increased compared to Week 50 and has remained above the national baseline of 2.9% since Week 44. All regions are above their region-specific baselines this week. Multiple respiratory viruses are co-circulating, and the relative contribution of influenza virus infection to ILI varies by location.



[View National and Regional Level Graphs and Data \(https://gis.cdc.gov/grasp/fluview/fluportaldashboard.html\)](https://gis.cdc.gov/grasp/fluview/fluportaldashboard.html) | [Download Chart Data](#) | [Download PowerPoint Presentation](#)

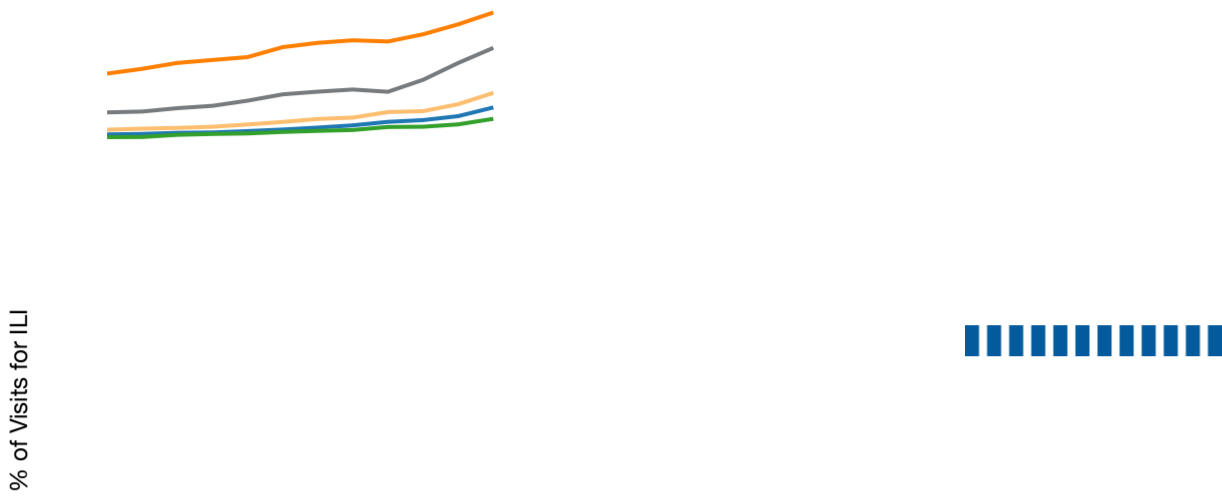
## Outpatient Respiratory Illness Visits by Age Group

About 70% of ILINet participants provide both the number of patient visits for respiratory illness and the total number of patient visits for the week broken out by age group. Data from this subset of providers are used to calculate the percentages of patient visits for respiratory illness by age group.

The percentage of visits for respiratory illness reported in ILINet has increased (change of > 0.1 percentage points) in all age groups in Week 51 compared to Week 50.

Season: 2023-24

Percent of Outpatient Visits for Respiratory Illness by Age Group  
 Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet)  
 Weekly National Summary, 2023-24 Influenza Season through the Week Ending December 23, 2023



View FluView Interactive ([https://gis.cdc.gov/grasp/fluview/flu\\_by\\_age\\_virus.html](https://gis.cdc.gov/grasp/fluview/flu_by_age_virus.html)) | Download Chart Data | Download PowerPoint Presentation

## Outpatient Respiratory Illness Activity Map

Data collected in ILINet are used to produce a measure of ILI activity\* (</flu/weekly/overview.htm#ILINet>) by state/jurisdiction and Core Based Statistical Areas (CBSA).

Activity Level	Number of Jurisdictions		Number of CBSAs	
	Week 51 (Week ending Dec. 23, 2023)	Week 50 (Week ending Dec. 16, 2023)	Week 51 (Week ending Dec. 23, 2023)	Week 50 (Week ending Dec. 16, 2023)
Very High	14	10	75	41
High	19	14	163	135
Moderate	6	12	89	107
Low	5	8	145	159
Minimal	9	11	205	258
Insufficient Data	2	0	252	229

# A Weekly Influenza Surveillance Report Prepared by the Influenza Division

## Outpatient Respiratory Illness Activity Map Determined by Data Reported to ILINet

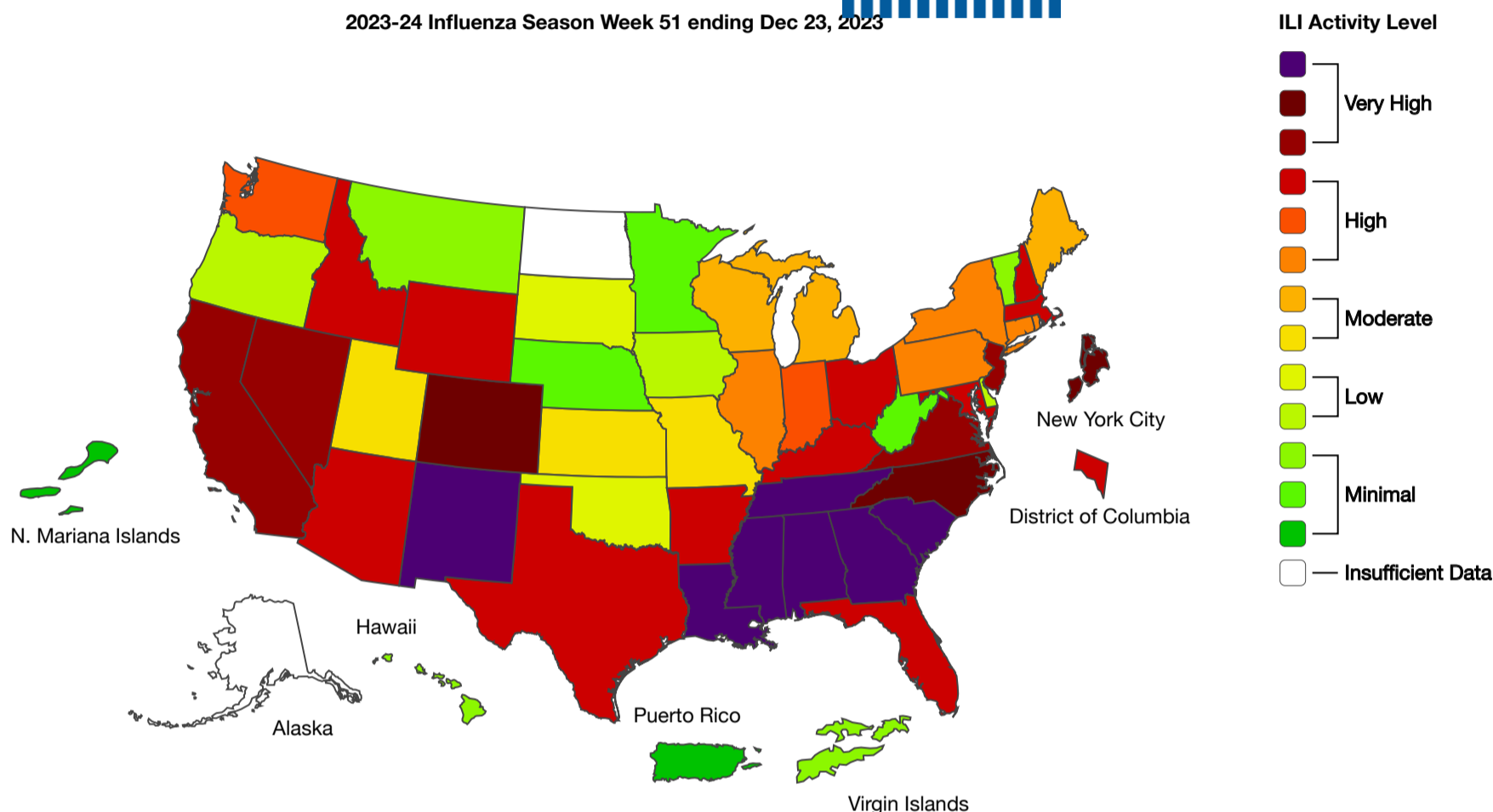
This system monitors visits for respiratory illness that includes fever plus a cough or sore throat, also referred to as ILI, not laboratory confirmed influenza and may capture patient visits due to other respiratory pathogens that cause similar symptoms.

prev Play Pause next

40

State CBSA

2023-24 Influenza Season Week 51 ending Dec 23, 2023



Season: 2023-24

Download Image

Download Data

(<https://www.cdc.gov/flu/weekly/fluereport.xml>)View Full Screen (<http://gis.cdc.gov/grasp/fluview/main.html>)

\*Data collected in ILINet may disproportionately represent certain populations within a jurisdiction or CBSA, and therefore, may not accurately depict the full picture of influenza activity for the entire jurisdiction or CBSA. Differences in the data presented here by CDC and independently by some health departments likely represent differing levels of data completeness with data presented by the health department likely being the more complete.

Additional information about medically attended visits for ILI for current and past seasons:

[Surveillance Methods \(/flu/weekly/overview.htm#ILINet\)](#) | [FluView Interactive: National, Regional, and State Data](#)

(<http://gis.cdc.gov/grasp/fluview/fluportaldashboard.html>) or [ILI Activity Map \(https://gis.cdc.gov/grasp/fluview/main.html\)](https://gis.cdc.gov/grasp/fluview/main.html)

## Hospitalization Surveillance

(<http://www.cdc.gov/flu/weekly/overview.htm#HospitalizationSurv>)

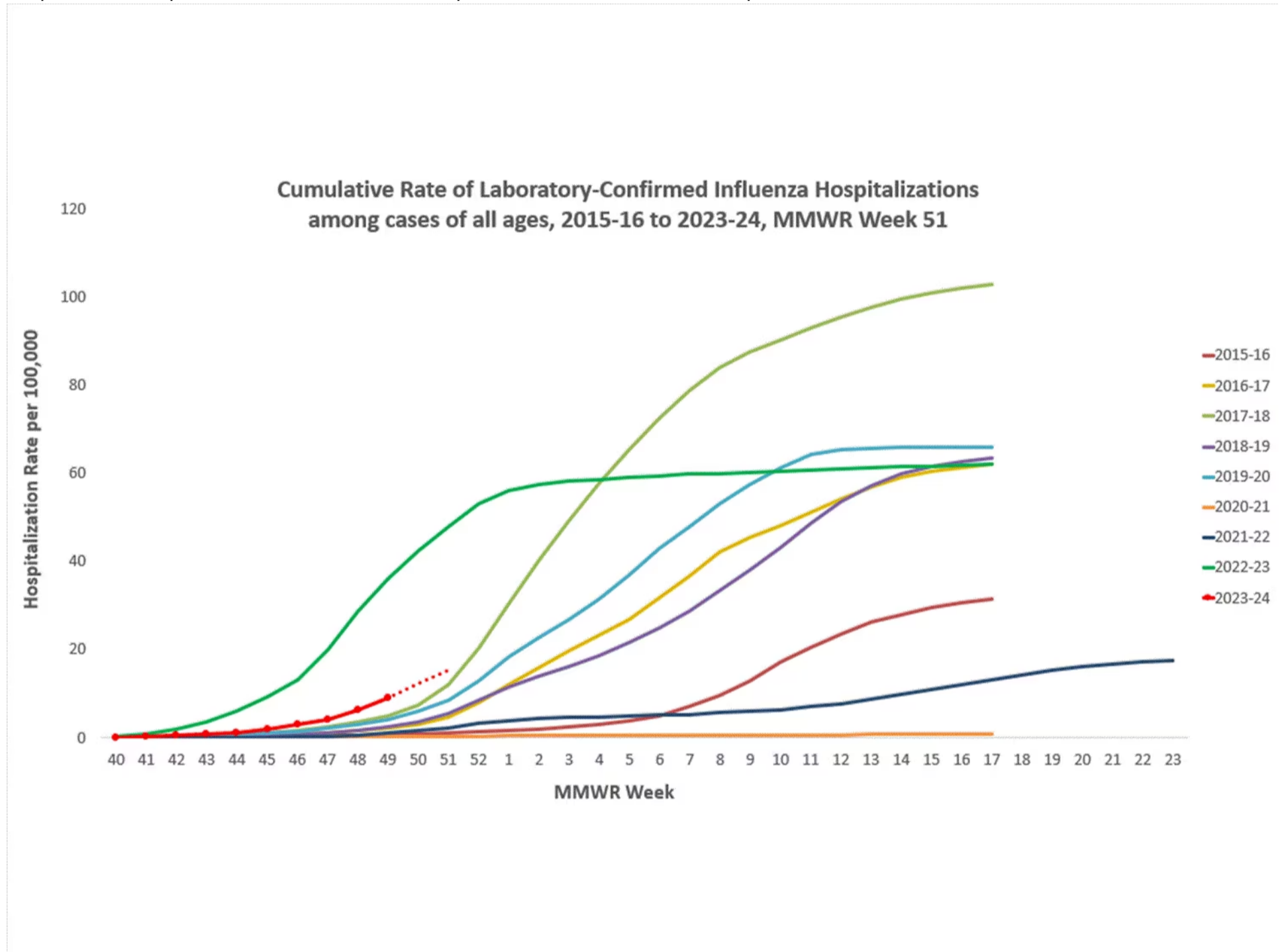
### FluSurv-NET

The Influenza Hospitalization Surveillance Network (FluSurv-NET) conducts population-based surveillance for laboratory-confirmed influenza-related hospitalizations in select counties in 14 states and represents approximately 9% of the U.S. population. FluSurv-NET hospitalization data are preliminary. As data are received each week, prior case counts and rates are updated accordingly.

A total of 4,697 laboratory-confirmed influenza-associated hospitalizations were reported by FluSurv-NET sites between October 1, 2023, and December 23, 2023; 4,105 (87.4%) were associated with influenza A virus, 529 (11.3%) with influenza B virus, 12 (0.3%) with influenza A virus and influenza B virus co-infection, and 51 (1.1%) with influenza virus for which the type was not determined. Among those with influenza A subtype information, 706 (79.8%) were A(H1N1)pdm09 and 179 (20.2%) were A(H3N2).

The weekly hospitalization rate observed during Week 51 was 2.8 per 100,000 population. The overall cumulative hospitalization rate was 15.4 per 100,000 population. This cumulative hospitalization rate is the second highest cumulative in-season hospitalization rate observed during Week 51, following the 2022-2023 season (44.3). Cumulative in-season hospitalization rates observed during Week 51 from 2010-2011 through 2021-2022 ranged from 0.3 to 9.7.

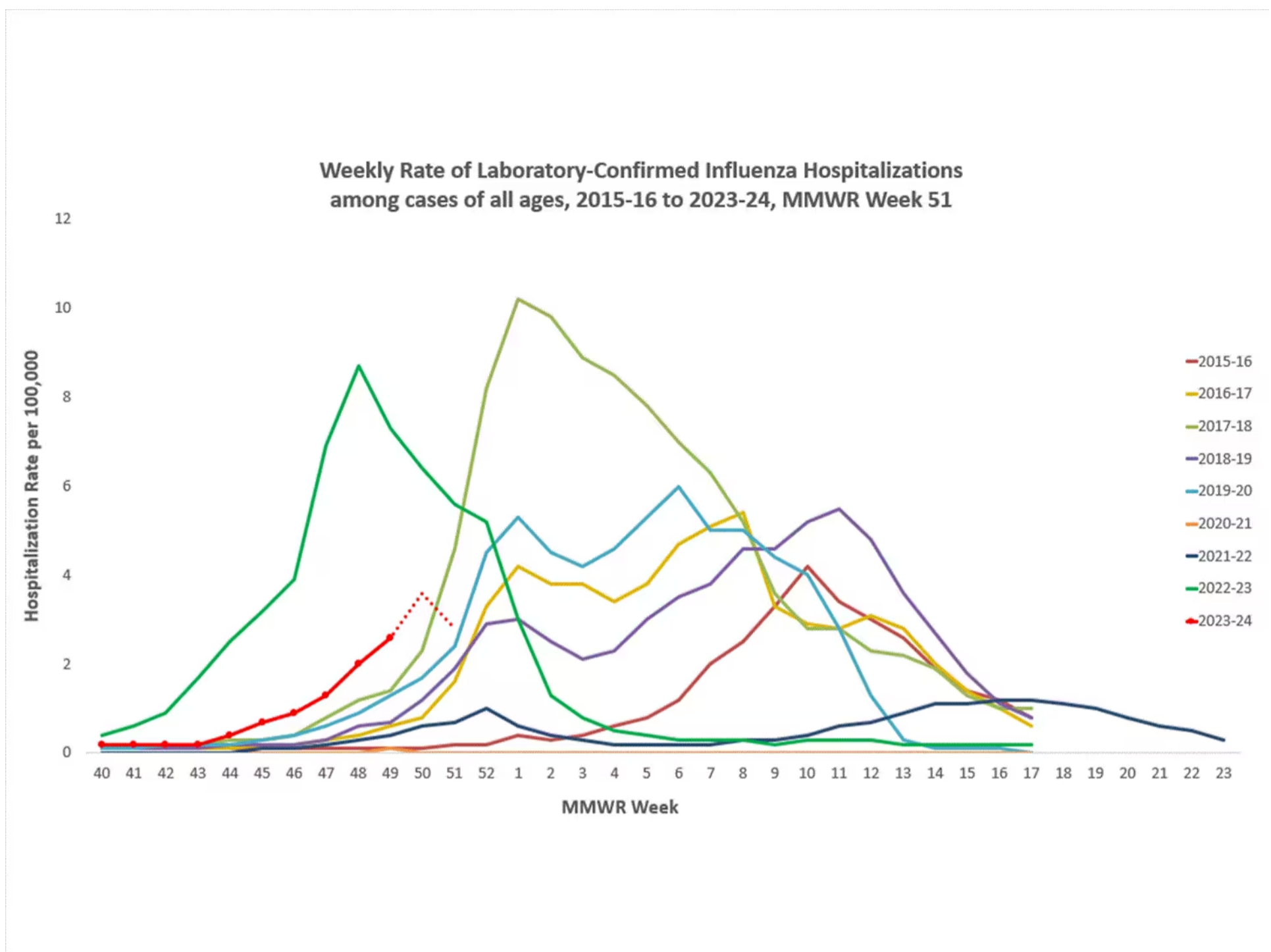
When examining rates by age, the highest cumulative hospitalization rate per 100,000 population was among adults aged 65 years and older (38.8), followed by adults aged 50-64 years (18.9) and children aged 0-4 years (16.6). When examining unadjusted rates by race and ethnicity, the highest rate of hospitalization per 100,000 population was among non-Hispanic Black persons (29.0), followed by non-Hispanic American Indian or Alaska Native persons (17.6), Hispanic persons (12.8), non-Hispanic White persons (11.2), and non-Hispanic Asian/Pacific Islander persons (9.9).



<https://gis.cdc.gov/grasp/fluview/FluHospRates.html>

[View Full Screen \(/flu/weekly/weeklyarchives2023-2024/EIPRates51.html\)](/flu/weekly/weeklyarchives2023-2024/EIPRates51.html)

In this figure, cumulative rates for all seasons prior to the 2023-2024 season reflect end-of-season rates. For the 2023-2024 season, rates for recent hospital admissions are subject to reporting delays. As hospitalization data are reviewed each week, prior case counts and rates are updated accordingly.



(<https://gis.cdc.gov/grasp/fluview/FluHospChars.html>)

[View Full Screen \(/flu/weekly/weeklyarchives2023-2024/EIPConditions51.html\)](/flu/weekly/weeklyarchives2023-2024/EIPConditions51.html)

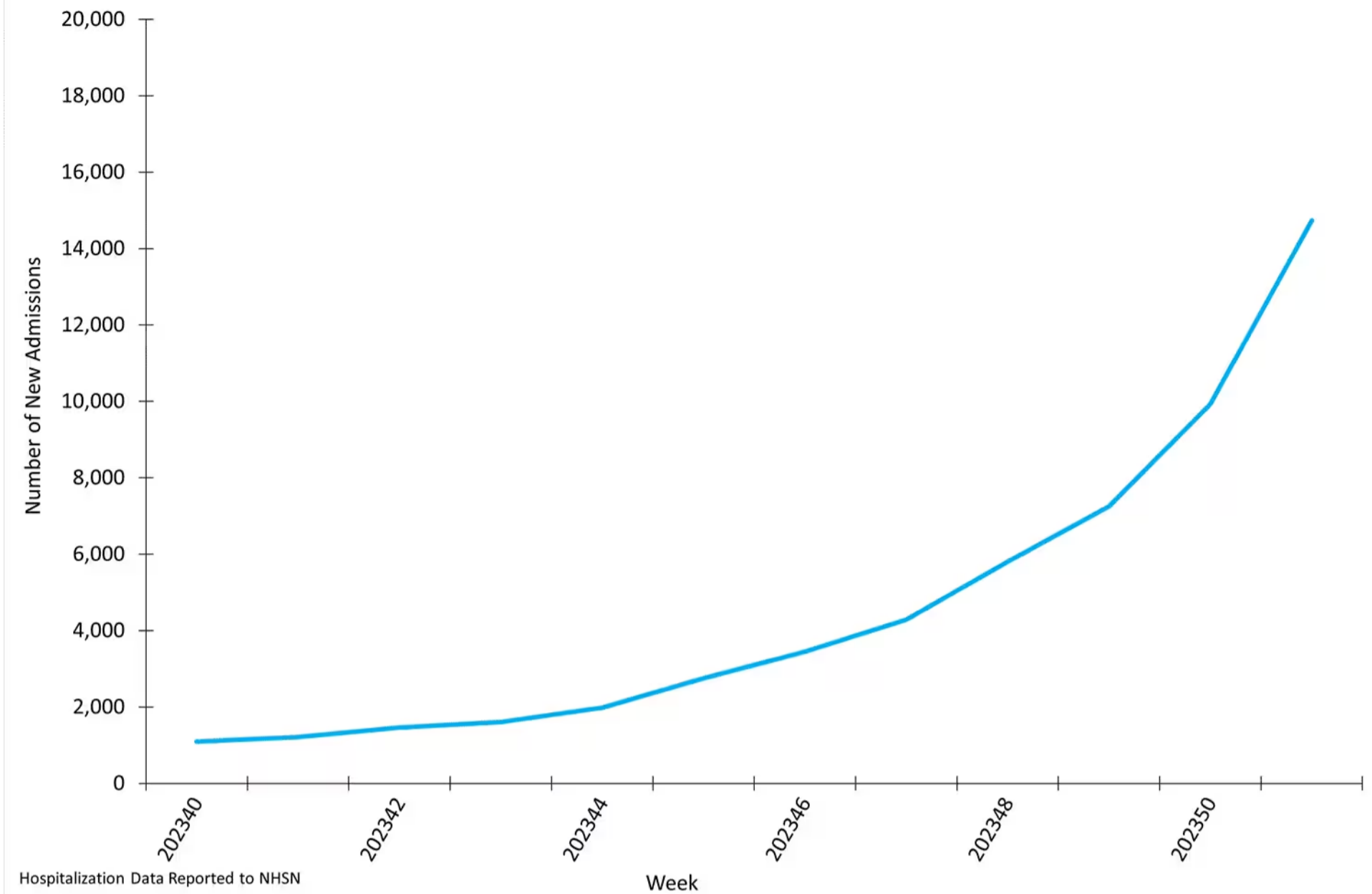
In this figure, weekly rates for all seasons prior to the 2023-24 season reflect end-of-season rates. For the 2023-24 season, rates for recent hospital admissions are subject to reporting delays and are shown as a dashed line for the current season. As hospitalization data are received each week, prior case counts and rates are updated accordingly.

**Additional FluSurv-NET hospitalization surveillance information for current and past seasons and additional age groups: Surveillance Methods** (<https://www.cdc.gov/flu/weekly/overview.htm#FluSurvNet>) | **FluView Interactive: Rates by Age, Sex, and Race/Ethnicity** (<http://gis.cdc.gov/GRASP/Fluview/FluHospRates.html>) or **Data on Patient Characteristics** (<http://gis.cdc.gov/grasp/fluview/FluHospChars.html>) | **RESP-NET Interactive** (<https://www.cdc.gov/surveillance/resp-net/dashboard.html>)

## National Healthcare Safety Network (NHSN) Hospitalization Surveillance

Hospitals report to NHSN the weekly number of patients admitted with laboratory-confirmed influenza. During Week 51, 14,732 patients with laboratory-confirmed influenza were admitted to a hospital. The number of patients admitted to a hospital with laboratory-confirmed influenza for Week 51 increased compared to Week 50 (change of >5%) nationally and in all the 10 HHS Regions.

## New Influenza Hospital Admissions Reported to NHSN, National Summary, 2023-2024 Season



Hospitalization Data Reported to NHSN

Week

</flu/weekly/weeklyarchives2023-2024/Protect51.html> View Chart Data  </flu/weekly/weeklyarchives2023-2024/data/NHSNData51.csv> | View Full Screen </flu/weekly/weeklyarchives2023-2024/Protect51.html>

### Additional NHSN Hospitalization Surveillance information:

[Surveillance Methods \(https://www.cdc.gov/flu/weekly/overview.htm#NHSN\)](https://www.cdc.gov/flu/weekly/overview.htm#NHSN) | [Additional Data \(https://data.cdc.gov/Public-Health-Surveillance/Respiratory-Virus-Response-RVR-United-States-Hospi/9t9r-e5a3\)](https://data.cdc.gov/Public-Health-Surveillance/Respiratory-Virus-Response-RVR-United-States-Hospi/9t9r-e5a3) | [FluView Interactive \(http://gis.cdc.gov/grasp/fluview/FluView12.html\)](http://gis.cdc.gov/grasp/fluview/FluView12.html)

## Mortality Surveillance

<https://www.cdc.gov/flu/weekly/overview.htm#MortalitySurveillance>

### National Center for Health Statistics (NCHS) Mortality Surveillance

Based on NCHS mortality surveillance data available on December 28, 2023, 0.5% of the deaths that occurred during the week ending December 23, 2023 (Week 51), were due to influenza. This percentage increased ( $\geq 0.1$  percentage point change) compared to Week 50. The data presented are preliminary and may change as more data are received and processed.

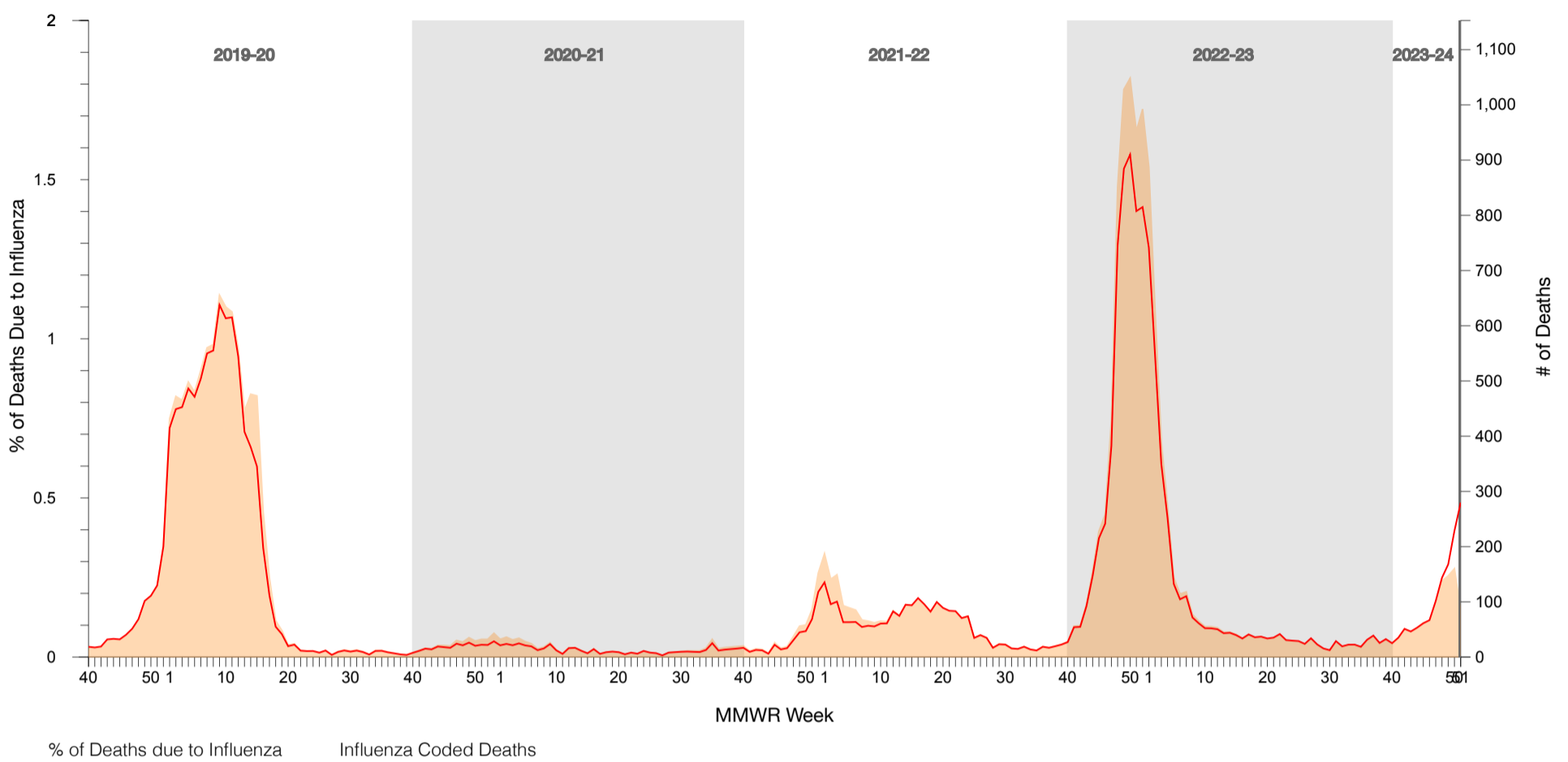
The percentages of deaths due to pneumonia and influenza (P&I) and due to pneumonia, influenza, or COVID-19 (PIC) will no longer be displayed in FluView but are available in [FluView Interactive \(https://gis.cdc.gov/grasp/fluview/mortality.html\)](https://gis.cdc.gov/grasp/fluview/mortality.html).

Season: 2023-24 Surveillance Area: National Age: All

### Pneumonia and Influenza Mortality from the National Center for Health Statistics Mortality Surveillance System

National Summary data through the week ending December 23, 2023

2019-24  Show Number of Influenza Deaths



View Regional and State Level Data (<https://gis.cdc.gov/grasp/fluview/Mortality.html>) | Download Chart Data | Download PowerPoint Presentation

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#### Additional pneumonia, influenza and COVID-19 mortality surveillance information for current and past seasons:

[Surveillance Methods \(https://www.cdc.gov/flu/weekly/overview.htm#NCHSMortality\)](https://www.cdc.gov/flu/weekly/overview.htm#NCHSMortality) | [FluView Interactive \(https://gis.cdc.gov/grasp/fluview/mortality.html\)](https://gis.cdc.gov/grasp/fluview/mortality.html)

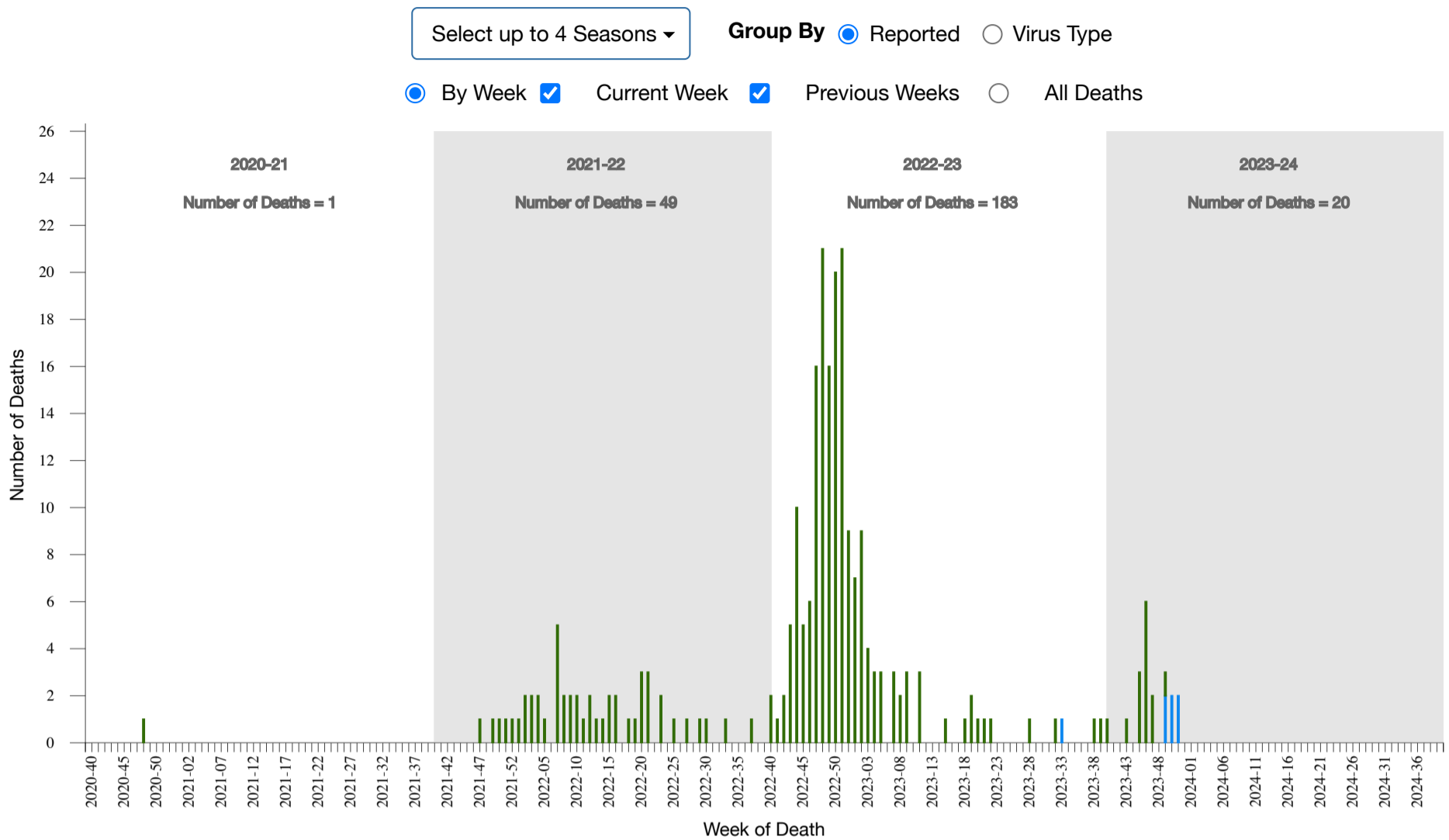
## Influenza-Associated Pediatric Mortality

Seven influenza-associated pediatric deaths were reported to CDC during week 51.

Six deaths occurred during Weeks 49, 50, and 51 (the weeks ending December 9, December 16, and December 23 of 2023, respectively). Four of the deaths were associated with influenza A viruses. Two of the influenza A viruses had subtyping performed; both were A(H1N1) viruses. Two deaths were associated with influenza B viruses with no lineage determined.

One death occurring during the 2022-2023 season was also reported, which brings the total number of pediatric deaths for last season to 183. The death was associated with an influenza B virus with no lineage determined and occurred during Week 33 (the week ending August 19, 2023).

## Influenza-Associated Pediatric Deaths by Week of Death, 2020-21 season to 2023-24 season



View FluView Interactive (<https://gis.cdc.gov/grasp/fluview/PedFluDeath.html>) | Download Chart Data | Download PowerPoint Presentation

### Additional pediatric mortality surveillance information for current and past seasons:

Surveillance Methods (<https://www.cdc.gov/flu/weekly/overview.htm#PediatricMortality>) | FluView Interactive (<https://gis.cdc.gov/GRASP/Fluview/PedFluDeath.html>)

## Trend Indicators

Increasing: ↑  
 Decreasing: ↓  
 Stable: →

### Indicators Status by System

**Clinical Labs:** Up or down arrows indicate a change of greater than or equal to 0.5 percentage points in the percent of specimens positive for influenza compared to the previous week.

**Outpatient Respiratory Illness (ILINet):** Up or down arrows indicate a change of greater than 0.1 percentage points in the percent of visits due to respiratory illness (ILI) compared to the previous week.


**NHSN Hospitalizations:** Up or down arrows indicate change of greater than or equal to 5% of the number of patients admitted with laboratory-confirmed influenza compared to the previous week.

**NCHS Mortality:** Up or down arrows indicate change of greater than 0.1 percentage points of the percent of deaths due to influenza compared to the previous week.

## Reference Footnotes

<sup>1</sup>U.S. Influenza Surveillance: Purpose and Methods (2023 Oct). Centers for Disease Control and Prevention. <https://www.cdc.gov/flu/weekly/overview.htm#ILINet> (<https://www.cdc.gov/flu/weekly/overview.htm#ILINet>).



<sup>2</sup>Grohskopf LA, Blanton LH, Ferdinands JM, Chung JR, Broder KR, Talbot HK. Prevention and Control of Seasonal Influenza with Vaccines: Recommendations of the Advisory Committee on Immunization Practices — United States, 2023–24 Influenza Season. *MMWR Recomm Rep* 2023;72(No. RR-2):1–25. DOI: <http://dx.doi.org/10.15585/mmwr.rr7202a1>   
(<http://dx.doi.org/10.15585/mmwr.rr7202a1>)

<sup>3</sup>Influenza Antiviral Medications: Summary for Clinicians (2023 Sept). Centers for Disease Control and Prevention. <https://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm> (<https://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm>).

## Additional National and International Influenza Surveillance Information

**FluView Interactive:** FluView includes enhanced web-based interactive applications that can provide dynamic visuals of the influenza data collected and analyzed by CDC. These [FluView Interactive applications](http://www.cdc.gov/flu/weekly/fluviewinteractive.htm) (<http://www.cdc.gov/flu/weekly/fluviewinteractive.htm>) allow people to create customized, visual interpretations of influenza data, as well as make comparisons across flu seasons, regions, age groups and a variety of other demographics.

**National Institute for Occupational Safety and Health:** Monthly surveillance data on the prevalence of health-related workplace absenteeism among full-time workers in the United States are [available from NIOSH](https://www.cdc.gov/niosh/topics/absences/default.html) (<https://www.cdc.gov/niosh/topics/absences/default.html>).

**U.S. State and local influenza surveillance:** Select a jurisdiction below to access the latest local influenza information.

<a href="http://adph.org/influenza/">Alabama</a> ( <a href="http://adph.org/influenza/">http://adph.org/influenza/</a> )	<a href="http://dhss.alaska.gov/dph/Epi/id/Pages/influenza/fluinfo.aspx">Alaska</a> ( <a href="http://dhss.alaska.gov/dph/Epi/id/Pages/influenza/fluinfo.aspx">http://dhss.alaska.gov/dph/Epi/id/Pages/influenza/fluinfo.aspx</a> )
<a href="https://www.mass.gov/info-details/influenza-reporting">Colorado</a> ( <a href="https://www.mass.gov/info-details/influenza-reporting">https://www.mass.gov/info-details/influenza-reporting</a> )	<a href="https://portal.ct.gov/DPH/Epidemiology-and-Emerging-Infections/Influenza-Surveillance-and-Statistics">Connecticut</a> ( <a href="https://portal.ct.gov/DPH/Epidemiology-and-Emerging-Infections/Influenza-Surveillance-and-Statistics">https://portal.ct.gov/DPH/Epidemiology-and-Emerging-Infections/Influenza-Surveillance-and-Statistics</a> )
<a href="https://dph.georgia.gov/flu-activity-georgia">Georgia</a> ( <a href="https://dph.georgia.gov/flu-activity-georgia">https://dph.georgia.gov/flu-activity-georgia</a> )	<a href="http://health.hawaii.gov/docd/resources/reports/influenza-reports/">Hawaii</a> ( <a href="http://health.hawaii.gov/docd/resources/reports/influenza-reports/">http://health.hawaii.gov/docd/resources/reports/influenza-reports/</a> )
<a href="https://idph.iowa.gov/influenza/reports">Iowa</a> ( <a href="https://idph.iowa.gov/influenza/reports">https://idph.iowa.gov/influenza/reports</a> )	<a href="http://www.kdheks.gov/flu/surveillance.htm">Kansas</a> ( <a href="http://www.kdheks.gov/flu/surveillance.htm">http://www.kdheks.gov/flu/surveillance.htm</a> )
<a href="https://phpa.health.maryland.gov/influenza/fluwatch/">Maryland</a> ( <a href="https://phpa.health.maryland.gov/influenza/fluwatch/">https://phpa.health.maryland.gov/influenza/fluwatch/</a> )	<a href="https://www.mass.gov/info-details/influenza-reporting">Massachusetts</a> ( <a href="https://www.mass.gov/info-details/influenza-reporting">https://www.mass.gov/info-details/influenza-reporting</a> )
<a href="http://health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php">Missouri</a> ( <a href="http://health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php">http://health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php</a> )	<a href="https://dphhs.mt.gov/publichealth/cdepi/diseases/influenza/in">Montana</a> ( <a href="https://dphhs.mt.gov/publichealth/cdepi/diseases/influenza/in">https://dphhs.mt.gov/publichealth/cdepi/diseases/influenza/in</a> )
<a href="http://www.nj.gov/health/cd/topics/flu.shtml">New Jersey</a> ( <a href="http://www.nj.gov/health/cd/topics/flu.shtml">http://www.nj.gov/health/cd/topics/flu.shtml</a> )	<a href="https://nmhealth.org/about/erd/ideb/isp/">New Mexico</a> ( <a href="https://nmhealth.org/about/erd/ideb/isp/">https://nmhealth.org/about/erd/ideb/isp/</a> )
<a href="http://www.flu.ohio.gov">Ohio</a> ( <a href="http://www.flu.ohio.gov">http://www.flu.ohio.gov</a> )	<a href="https://oklahoma.gov/health/health-education/acute-disease-service/disease-information/influenza-home-page.html">Oklahoma</a> ( <a href="https://oklahoma.gov/health/health-education/acute-disease-service/disease-information/influenza-home-page.html">https://oklahoma.gov/health/health-education/acute-disease-service/disease-information/influenza-home-page.html</a> )
<a href="http://www.scdhec.gov/Health/DiseasesandConditions/InfectiousDiseases/Flu/FluData/">South Carolina</a> ( <a href="http://www.scdhec.gov/Health/DiseasesandConditions/InfectiousDiseases/Flu/FluData/">http://www.scdhec.gov/Health/DiseasesandConditions/InfectiousDiseases/Flu/FluData/</a> )	<a href="https://doh.sd.gov/diseases/infectious/flu/surveillance.aspx">South Dakota</a> ( <a href="https://doh.sd.gov/diseases/infectious/flu/surveillance.aspx">https://doh.sd.gov/diseases/infectious/flu/surveillance.aspx</a> )
<a href="http://www.healthvermont.gov/immunizations-infectious-disease/influenza/flu-activity-and-surveillance">Vermont</a> ( <a href="http://www.healthvermont.gov/immunizations-infectious-disease/influenza/flu-activity-and-surveillance">http://www.healthvermont.gov/immunizations-infectious-disease/influenza/flu-activity-and-surveillance</a> )	<a href="http://www.vdh.virginia.gov/epidemiology/influenza-in-virginia/influenza-surveillance/">Virginia</a> ( <a href="http://www.vdh.virginia.gov/epidemiology/influenza-in-virginia/influenza-surveillance/">http://www.vdh.virginia.gov/epidemiology/influenza-in-virginia/influenza-surveillance/</a> )

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Wyoming (<https://health.wyo.gov/publichealth/infectious-disease-epidemiology-unit/disease/influenza/>)

New York City (<http://www1.nyc.gov/site/doh/providers/health-topics/flu-alerts.page>)

### World Health Organization:

Additional influenza surveillance information from participating WHO member nations is available through FluNet [↗](https://www.who.int/tools/flunet) (<https://www.who.int/tools/flunet>) and the Global Epidemiology Reports. [↗](https://www.who.int/teams/global-influenza-programme/surveillance-and-monitoring/influenza-surveillance-outputs) (<https://www.who.int/teams/global-influenza-programme/surveillance-and-monitoring/influenza-surveillance-outputs>)

### WHO Collaborating Centers for Influenza:

Australia [↗](http://www.influenzacentre.org/Surveillance_Samples_Received.html) ([http://www.influenzacentre.org/Surveillance\\_Samples\\_Received.html](http://www.influenzacentre.org/Surveillance_Samples_Received.html)), China [↗](http://www.chinaivdc.cn/cnic/) (<http://www.chinaivdc.cn/cnic/>), Japan [↗](http://idsc.nih.go.jp/index.html) (<http://idsc.nih.go.jp/index.html>), the United Kingdom [↗](https://www.crick.ac.uk/research/worldwide-influenza-centre) (<https://www.crick.ac.uk/research/worldwide-influenza-centre>), and the United States (<http://www.cdc.gov/flu/>) (CDC in Atlanta, Georgia)

### Europe:

The most up-to-date influenza information from Europe is available from WHO/Europe and the European Centre for Disease Prevention and Control [↗](http://www.flunewseurope.org/) (<http://www.flunewseurope.org/>).

### Public Health Agency of Canada:

The most up-to-date influenza information from Canada is available in Canada's weekly FluWatch report [↗](http://www.phac-aspc.gc.ca/fluwatch/) (<http://www.phac-aspc.gc.ca/fluwatch/>).

### Public Health England:

The most up-to-date influenza information from the United Kingdom is available from Public Health England [↗](http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/SeasonalInfluenza/) (<http://www.hpa.org.uk/Topics/InfectiousDiseases/InfectionsAZ/SeasonalInfluenza/>).

**Any links provided to non-Federal organizations are provided solely as a service to our users. These links do not constitute an endorsement of these organizations or their programs by CDC or the Federal Government, and none should be inferred. CDC is not responsible for the content of the individual organization web pages found at these links.**

A description of the CDC influenza surveillance system, including methodology and detailed descriptions of each data component is available on the [surveillance methods](http://www.cdc.gov/flu/weekly/overview.htm) (<http://www.cdc.gov/flu/weekly/overview.htm>) page.

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