

# Weekly U.S. Influenza Surveillance Report



**Note:** CDC is tracking the COVID-19 pandemic in a weekly publication called COVID Data Tracker Weekly Review. (https://www.cdc.gov/coronavirus/2019-ncov/covid-data/covidview/)

### Key Updates for Week 50, ending December 18, 2021

Seasonal influenza activity in the United States is increasing, including indicators that track hospitalizations. The amount of activity varies by region.

### Viruses

Clinical Lab	Public Health Lab	Virus Characterization
<b>5.6%</b> positive for influenza this week	The majority of viruses detected are influenza A(H3N2).	Genetic characterization data are now being reported. (/flu/weekly/#VirusCharacterization)

# Illness

Outpatient Respiratory Illness			
<b>3.1%</b> of visits to a health care provider are for respiratory illness this week			
(above baseline)			

### Outpatient Respiratory Illness: Activity Map

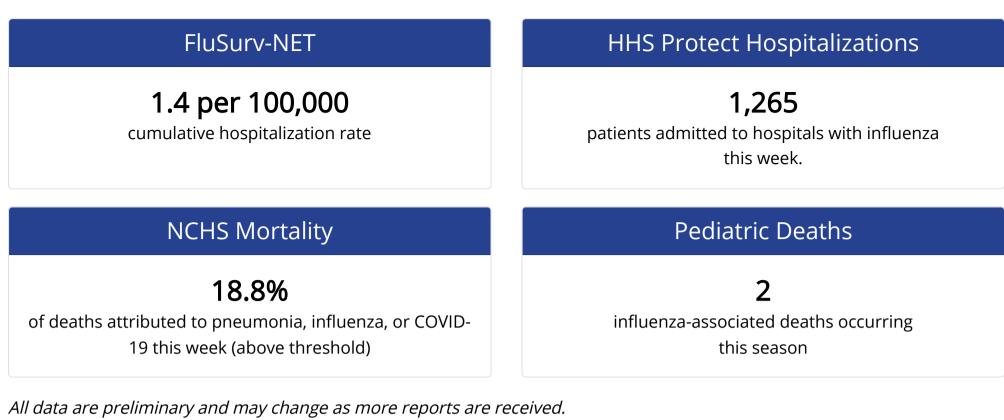
This week, 14 jurisdictions experienced moderate activity and 8 jurisdictions experienced high or very high activity.

### Long-term Care Facilities

### 0.6%

of facilities reported ≥ 1 influenza-positive test among residents this week.

### Severe Disease



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) page.

Additional information on the current and previous influenza seasons for each surveillance component are available on FluView Interactive (https://www.cdc.gov/flu/weekly/fluviewinteractive.htm).

#### **Key Points**

- Influenza activity is increasing, with the eastern and central parts of the country seeing the largest increases and the western part of the country reporting lower levels of influenza virus circulation.
- The majority of influenza viruses detected are A(H3N2). Most influenza A(H3N2) infections have occurred among children and young adults ages 5-24 years; however, the proportion of infections occurring among adults age 25 years and older has been increasing.
- While there are little data to date, most of the H3N2 viruses so far are genetically closely related to the vaccine virus, but there are some antigenic differences that have developed as H3N2 viruses have continued to evolve.
- The percentage of outpatient visits due to respiratory illness is trending upwards and is above the national baseline. Influenza is contributing to levels of respiratory illness, but other respiratory viruses are also circulating. The relative contribution of influenza varies by location.
- Hospitalizations for influenza are starting to increase.
- The first two influenza-associated pediatric deaths this season were reported this week. Both cases were associated with influenza A virus infections.
- The flu season is just getting started. There's still time to get vaccinated. An annual flu vaccine is the best way to protect against flu and its potentially serious complications. CDC recommends everyone 6 months and older get a flu vaccine.
- There are early signs that flu vaccination uptake is down this season compared to last.
- Flu vaccines are available at many different locations, including pharmacies and health departments. With flu activity just getting started, there is still time to benefit from flu vaccination this season. Visit www.vaccines.gov to find a flu vaccine near you.
- There are also flu antiviral drugs that can be used to treat flu illness.

# U.S. Virologic Surveillance

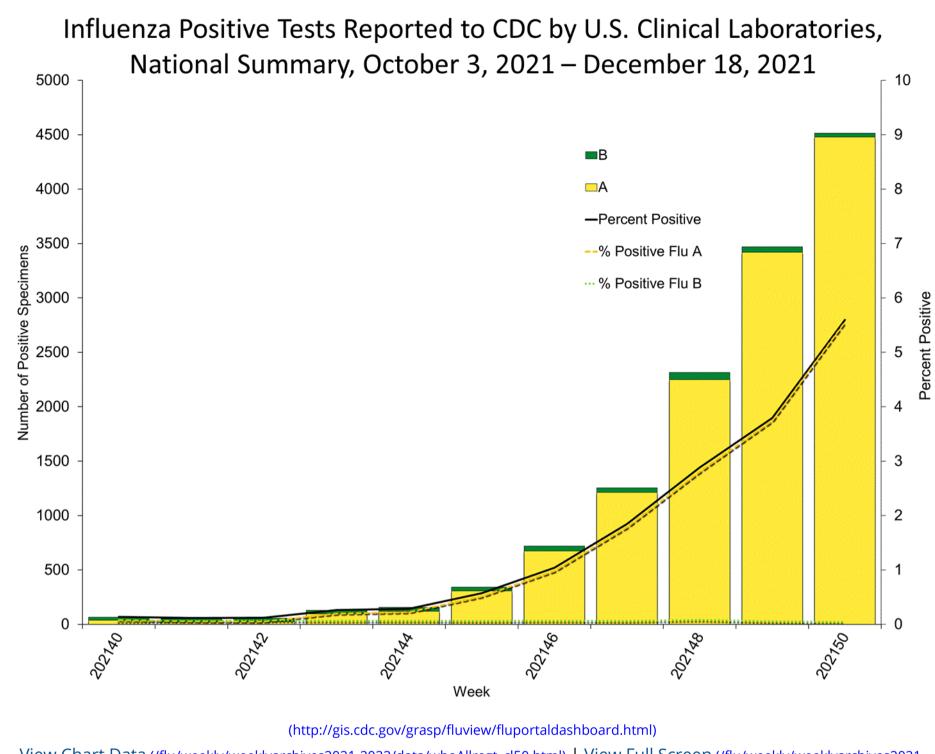
(https://www.cdc.gov/flu/weekly/overview.htm#anchor\_1633697372803)

An increasing number of influenza positive tests have been reported by clinical and public health laboratories during recent weeks. Influenza A(H3N2) viruses have been the most frequently detected. The majority of influenza A(H3N2) viruses were detected in persons aged 5-24 years old, but the proportion of influenza A(H3N2) virus detections occurring among adults aged 25 years and older has increased in recent weeks. Influenza A(H3N2) viruses were reported by public health laboratories in all HHS regions except for Region 10 this week. For regional and state level data about circulating influenza viruses, please visit FluView Interactive (https://gis.cdc.gov/grasp/fluview/fluportaldashboard.html). Viruses known to be associated with recent live attenuated influenza vaccine (LAIV) receipt 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) are used to monitor whether influenza activity is increasing or decreasing.

	Week 50	Data Cumulative since October 3, 2021 (Week 40)
No. of specimens tested	80,658	690,539
No. of positive specimens (%)	4,514 (5.6%)	13,070 (1.9%)
Positive specimens by type		
Influenza A	4,479 (99.2%)	12,641 (96.7%)
Influenza B	35 (0.8%)	429 (3.3%)



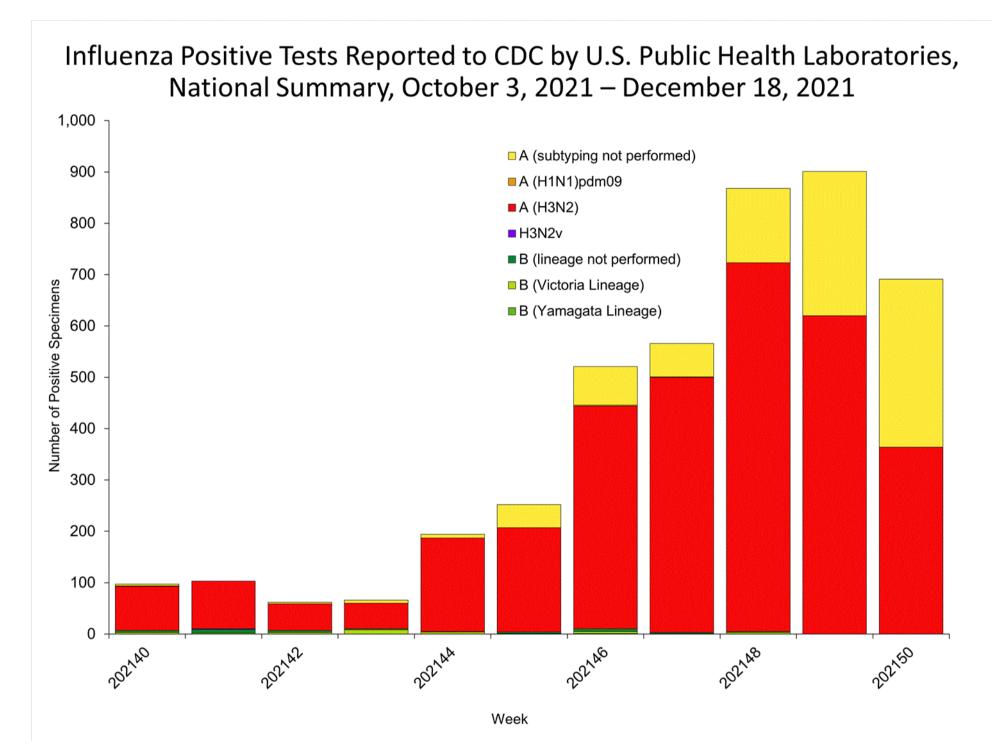
View Chart Data (/flu/weekly/weeklyarchives2021-2022/data/whoAllregt\_cl50.html) | View Full Screen (/flu/weekly/weeklyarchives2021-2022/WhoNPHL50.html) 2022/WhoNPHL50.html)

# 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 viruses that belong to each influenza subtype/lineage.

	Week 50	Data Cumulative since October 3, 2021 (Week 40)
No. of specimens tested	27,560	250,251
No. of positive specimens	691	4,321
Positive specimens by type/subtype		
Influenza A	691 (100%)	4,261 (98.6%)
(H1N1)pdm09	0	4 (0.1%)
H3N2	364 (100%)	3,299 (99.8%)
H3N2v	0	1 (<0.1%)
Subtyping not performed	327	957

	Week 50	Data Cumulative since October 3, 2021 (Week 40)
Influenza B	0 (0%)	60 (1.4%)
Yamagata lineage	0	1 (3.3%)
Victoria lineage	0	29 (96.7%)
Lineage not performed	0	30



(http://gis.cdc.gov/grasp/fluview/fluportaldashboard.html)

View Chart Data (/flu/weekly/weeklyarchives2021-2022/data/whoAllregt\_phl50.html) | View Full Screen (/flu/weeklyarchives2021-2022/data/whoAllregt\_phl50.html) | View Full

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

Surveillance Methods (https://wcms-wp.cdc.gov/flu/weekly/overview.htm#anchor\_1633697372803) | 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)

# Influenza Virus Characterization

(/flu/weekly/overview.htm#anchor\_1633697390939)

#### CDC performs genetic (https://www.cdc.gov/flu/professionals/laboratory/genetic-characterization.htm) and antigenic

(https://www.cdc.gov/flu/professionals/laboratory/antigenic.htm) characterization of U.S. viruses submitted from state and local public health laboratories using 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 genetically characterized 108 influenza viruses collected since October 3, 2021. While there are little data to date, most of the H3N2 viruses so far are genetically closely related to the vaccine virus, but there are some antigenic differences that have developed as H3N2 viruses have continued to evolve. Virus antigenic and antiviral susceptibility data will be reported later this season when a sufficient number of specimens have been tested.

CDC genetically characterized 108 influenza viruses collected October 3, 2021 to present:

	Genetic Characterization					
Virus Subtype or Lineage	Total No. of Subtype/Lineage Tested	HA Clade	Number (% of subtype/lineage tested)	HA Subclade	Number (% of subtype/lineage tested)	
A/H1	1					
		6B.1A	1 (100%)	5a.1	1 (100%)	
				5a.2	0	
A/H3	93					
		3C.2a1b	93 (100%)	1a	0	
				1b	1 (1%)	
				2a	0	
				2a.1	0	
				2a.2	92 (99%)	
		3C.3a	0	3a	0	
B/Victoria	14					
		V1A	14 (100%)	V1A	0	
				V1A.1	0	
				V1A.3	9 (64%)	
				V1A.3a	0	
				V1A.3a.1	0	
				V1A.3a.2	5 (36%)	
B/Yamagata	0					

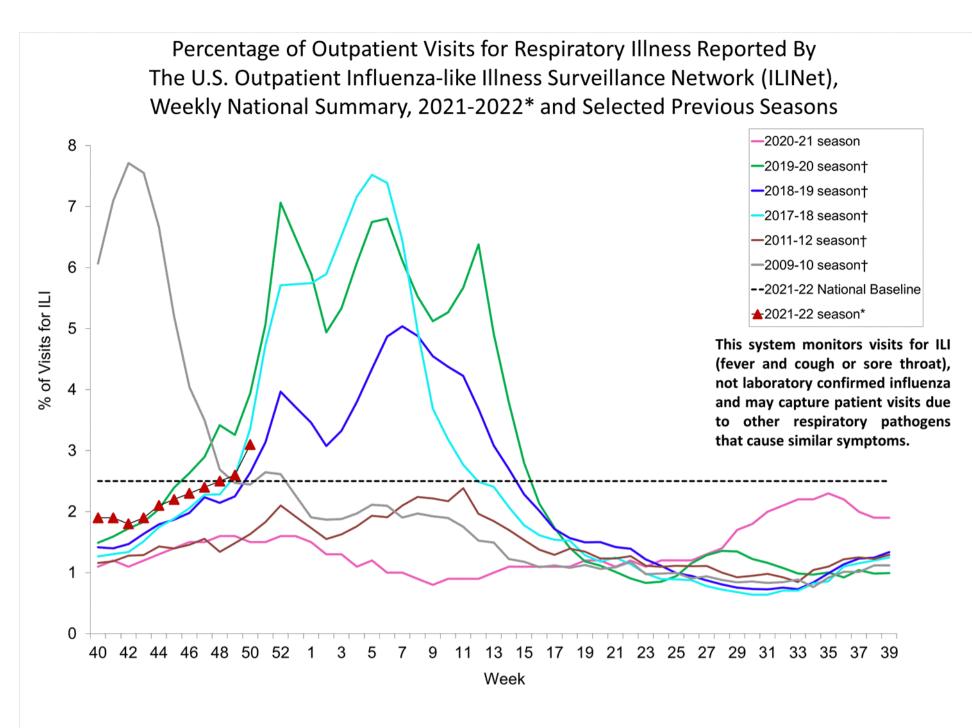
	Genetic Characterization				
Virus Subtype or Lineage	Total No. of Subtype/Lineage Tested	HA Clade	Number (% of subtype/lineage tested)	HA Subclade	Number (% of subtype/lineage tested)
		Y3	0		

# Outpatient Respiratory Illness Surveillance (https://www.cdc.gov/flu/weekly/overview.htm#anchor\_1539281266932)

The U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) monitors outpatient visits for 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 any pathogen that can present with similar symptoms such as influenza, SARS-CoV-2, and RSV. Due to the COVID-19 pandemic, health care-seeking behaviors have changed, and people may be accessing the health care system in alternative settings not captured as a part of ILINet or at a different point in their illness than they might have before the pandemic. Therefore, it is important to evaluate syndromic surveillance data, including that from ILINet, in the context of other sources of surveillance data to obtain a complete and accurate picture of influenza, SARS-CoV-2, and other respiratory virus activity. CDC is tracking the COVID-19 pandemic in a weekly publication called COVID Data Tracker Weekly Review (https://www.cdc.gov/coronavirus/2019-ncov/covid-data/covidview/index.html). 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 50, 3.1% 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 percentage is above the national baseline. Regions 1, 2, 3, 4, 5, and 7 are above their region-specific baselines, Region 10 is at baseline, and Regions 6, 8, and 9 are below their baselines. Multiple respiratory viruses are co-circulating, and the relative contribution of influenza virus infection to ILI varies by location.



<sup>+</sup>These seasons did not have a week 53, so the week 53 value is an average of week 52 and week 1.

#### (http://gis.cdc.gov/grasp/fluview/fluportaldashboard.html)

\* Effective October 3, 2021 (week 40), the ILI definition (fever plus cough or sore throat) no longer includes "without a known cause other than influenza."

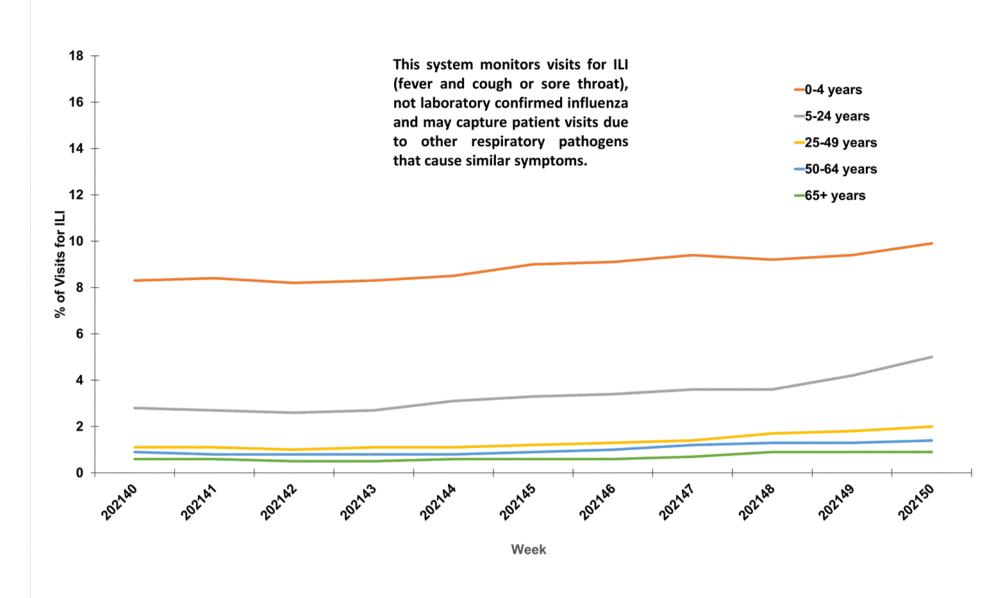
View Chart Data (current season only) (/flu/weekly/weeklyarchives2021-2022/data/senAllregt50.html) | View Full Screen (/flu/weekly/weeklyarchives2021-2022/ILI50.html)

# Outpatient Respiratory Illness Visits by Age Group

More than 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 are trending upward for all age groups (0–4 years, 5–24 years, 25-49 years, 50–64 years, and 65+).

#### Percentage of Outpatient Visits for Respiratory Illness by Age Group Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, October 3, 2021-December 18, 2021\*



(http://gis.cdc.gov/grasp/fluview/fluportaldashboard.html)

\* Effective October 3, 2021 (week 40), the ILI definition (fever plus cough or sore throat) no longer includes "without a known cause other than influenza."

View Chart Data (/flu/weekly/weeklyarchives2021-2022/data/iliage50.html) | View Full Screen (/flu/weekly/weeklyarchives2021-2022/ILIAge50.html)

# **Outpatient Respiratory Illness Activity Map**

Data collected in ILINet are used to produce a measure of ILI activity\*

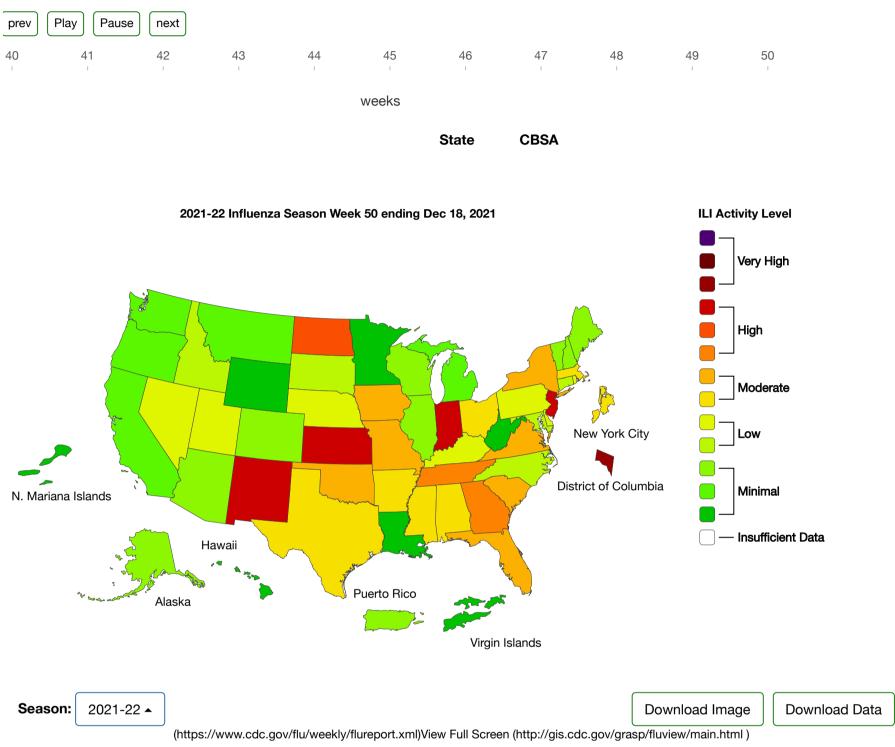
(https://www.cdc.gov/flu/weekly/overview.htm#anchor\_1633697504110) by state/jurisdiction and Core Based Statistical Areas (CBSA).

Number of Jurisdictions		urisdictions	Number of CBSAs		
Activity Level	Week 50Week 49(Week ending(Week endingDec. 18, 2021)Dec. 11, 2021)		Week 50 (Week ending Dec. 18, 2021)	Week 49 (Week ending Dec. 11, 2021)	
Very High	1	1	3	2	
High	7	3	45	27	
Moderate	14	7	75	69	
Low	12	21	160	165	
Minimal	21	23	347	412	
Insufficient Data	0	0	299	254	

# 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.



\*Data collected in ILINet may disproportionally 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.

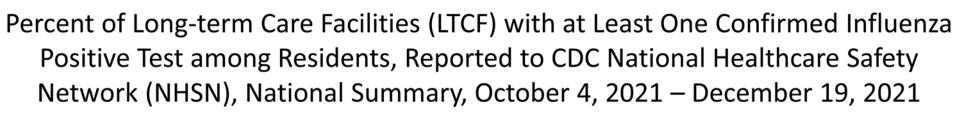
#### Additional information about medically attended visits for ILI for current and past seasons:

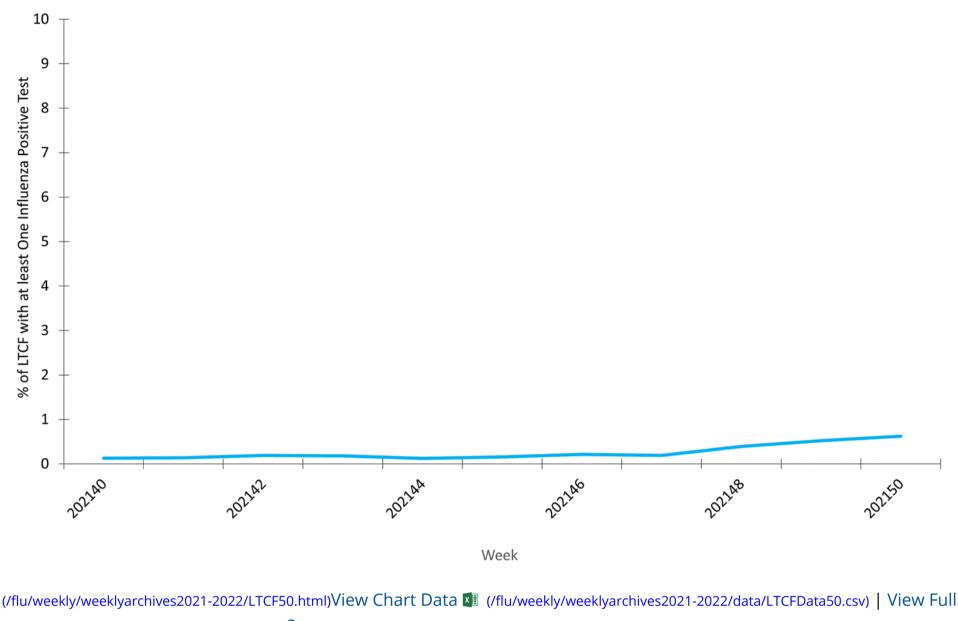
Surveillance Methods (https://wcms-wp.cdc.gov/flu/weekly/overview.htm#anchor\_1539281266932) | FluView Interactive: National, Regional,

and State Data (http://gis.cdc.gov/grasp/fluview/fluportaldashboard.html) or ILI Activity Map (https://gis.cdc.gov/grasp/fluview/main.html)

# Long-term Care Facility (LTCF) Surveillance (https://www.cdc.gov/flu/weekly/overview.htm#anchor\_1633698386507)

LTCFs (e.g., nursing homes/skilled nursing, long-term care for the developmentally disabled, and assisted living facilities) from all 50 states and U.S. territories report data on influenza infections among residents through the National Healthcare Safety Network (NHSN) Long-term Care Facility Component (https://www.cdc.gov/nhsn/ltc/index.html). During week 50, 89 (0.6%) of 14,280 reporting LTCFs reported at least one influenza positive test among their residents.





Screen (/flu/weekly/weeklyarchives2021-2022/LTCF50.html)

#### Additional information about long-term care facility surveillance:

Surveillance Methods (https://www.cdc.gov/flu/weekly/overview.htm#anchor\_1633698386507) | Additional Data 🗹 (https://data.cms.gov/covid-19/covid-19-nursing-home-data)

# Hospitalization Surveillance (http://www.cdc.gov/flu/weekly/overview.htm#anchor\_1634240269291)

### FluSurv-NET

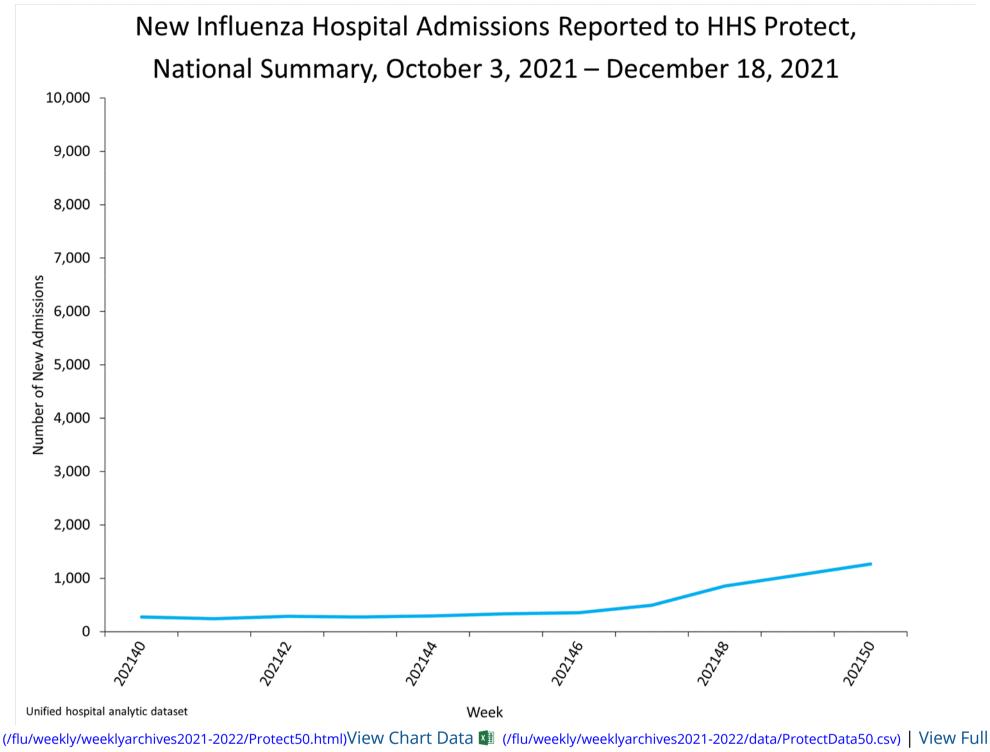
The Influenza Hospitalization Surveillance Network (FluSurv-NET) conducts population-based surveillance for laboratoryconfirmed influenza-related hospitalizations in select counties in the Emerging Infections Program (EIP) states and Influenza Hospitalization Surveillance Project (IHSP) states.

A total of 405 laboratory-confirmed influenza-associated hospitalizations were reported by FluSurv-NET sites between October 1, 2021, and December 18, 2021. The cumulative hospitalization rate was 1.4 per 100,000 population, which is nearly double the overall cumulative hospitalization rate reported during the 2020-2021 season.

#### 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#anchor\_1633698456778) | FluView Interactive (http://gis.cdc.gov/GRASP/Fluview/FluHospRates.html)

### **HHS-Protect Hospitalization Surveillance**

Hospitals report to HHS-Protect the number of patients admitted with laboratory-confirmed influenza. During week 50, 1,265 patients with laboratory-confirmed influenza were admitted to the hospital.



Screen (/flu/weekly/weeklyarchives2021-2022/Protect50.html)

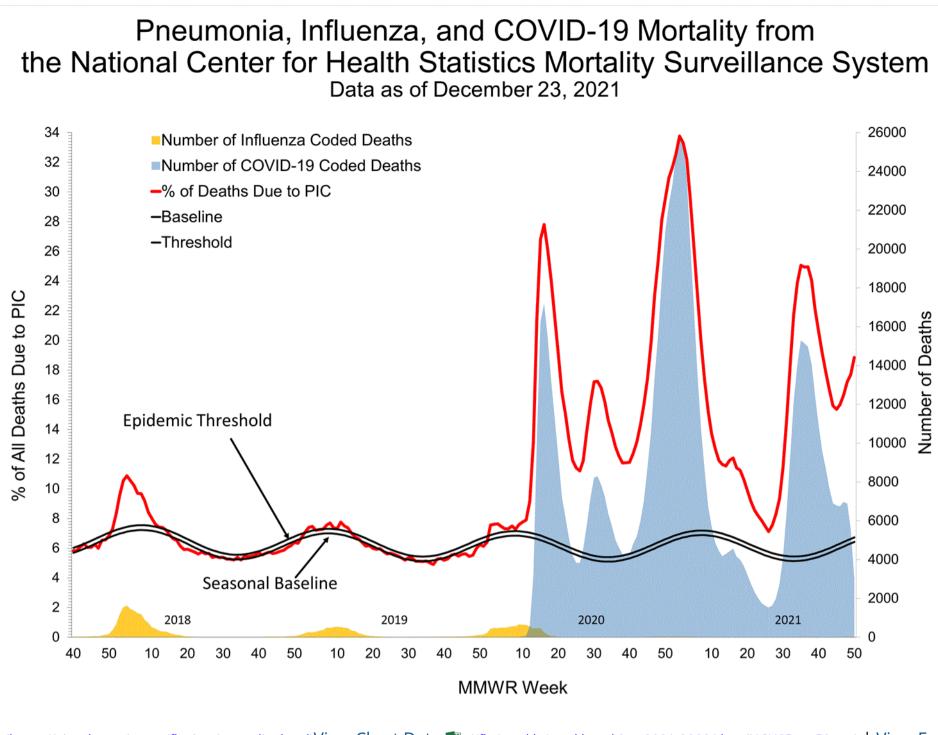
#### Additional HHS Protect hospitalization surveillance information:

Surveillance Methods (https://www.cdc.gov/flu/weekly/overview.htm#anchor\_1633698474047) | Additional Data C (https://healthdata.gov/Hospital/COVID-19-Reported-Patient-Impact-and-Hospital-Capa/anag-cw7u)

# Mortality Surveillance (https://www.cdc.gov/flu/weekly/overview.htm#anchor\_1634311686144)

# National Center for Health Statistics (NCHS) Mortality Surveillance

Based on NCHS mortality surveillance data available on December 23, 2021, 18.8% of the deaths that occurred during the week ending December 18, 2021 (week 50), were due to pneumonia, influenza, and/or COVID-19 (PIC). This percentage is above the epidemic threshold of 6.7% for this week. Among the 3,913 PIC deaths reported for this week, 3,009 had COVID-19 listed as an underlying or contributing cause of death on the death certificate, and 21 listed influenza, indicating that current PIC mortality is due primarily to COVID-19 and not influenza. The data presented are preliminary and may change as more data are received and processed.



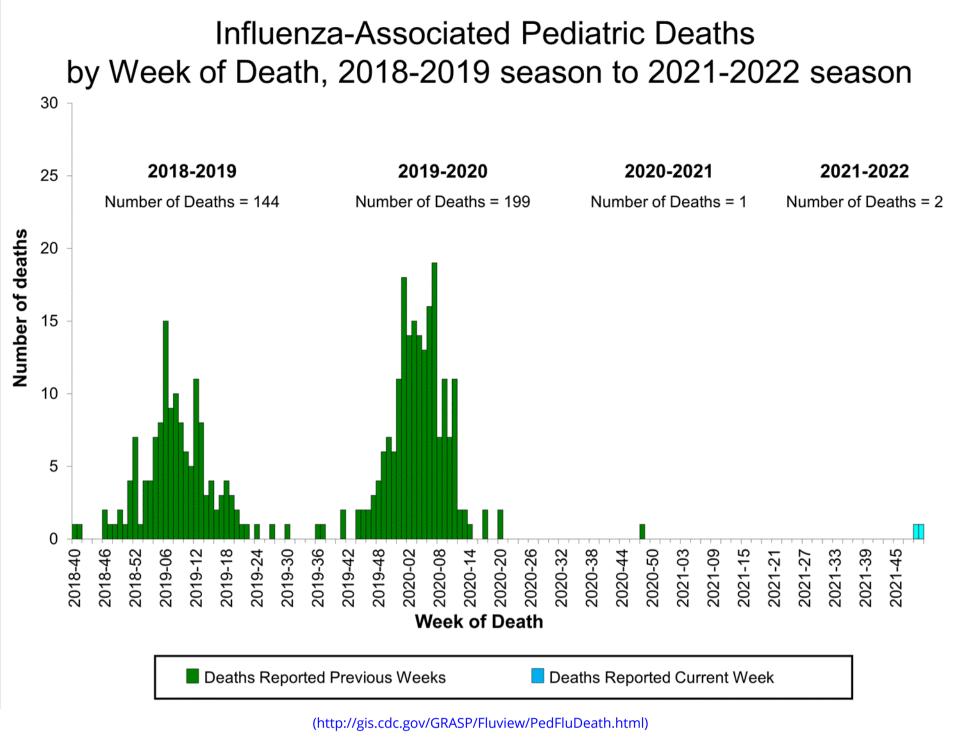
(https://gis.cdc.gov/grasp/fluview/mortality.html)View Chart Data 🖾 (/flu/weekly/weeklyarchives2021-2022/data/NCHSData50.csv) | View Full Screen (/flu/weekly/weeklyarchives2021-2022/NCHS50.html)

Additional pneumonia, influenza and COVID-19 mortality surveillance information for current and past seasons: Surveillance Methods (https://www.cdc.gov/flu/weekly/overview.htm#anchor\_1633698570680) | FluView Interactive (https://gis.cdc.gov/grasp/fluview/mortality.html)

# Influenza-Associated Pediatric Mortality

Two influenza-associated pediatric deaths occurring during the 2021-2022 season were reported to CDC during week 50. One death was associated with an influenza A (H3) virus and occurred during week 49 (the week ending December 11, 2021). The other death was associated with an influenza A virus for which no subtyping was performed and occurred during week 50 (the week ending December 18, 2021).

A total of two influenza-associated pediatric deaths occurring during the 2021-2022 season have been reported to CDC.



View Full Screen (/flu/weekly/weeklyarchives2021-2022/PedFlu50.html)

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

Surveillance Methods (https://www.cdc.gov/flu/weekly/overview.htm#anchor\_1633698596803) | FluView Interactive (https://gis.cdc.gov/GRASP/Fluview/PedFluDeath.html)

well as make comparisons across flu seasons, regions, age groups and a variety of other demographics.

# 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) allow people to create customized, visual interpretations of influenza data, as

**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).

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

Alabama (http://adph.org/influenza/)

Alaska (http://dhss.alaska.gov/dph/Epi/id/Pages/influenza/flui

Colorado (https://www.colorado.gov/pacific/cdphe/influenza)

Connecticut (https://portal.ct.gov/DPH/Epidemiology-and-Err

Georgia (https://dph.georgia.gov/epidemiology/influenza/flu-activity-georgia)	Hawaii (http://health.hawaii.gov/docd/resources/reports/influ
lowa (http://idph.iowa.gov/influenza/surveillance)	Kansas (http://www.kdheks.gov/flu/surveillance.htm)
Maryland (https://phpa.health.maryland.gov/influenza/fluwatch/)	Massachusetts (https://www.mass.gov/influenza)
Missouri (http://health.mo.gov/living/healthcondiseases/communicable/influenza/reports.php)	Montana (https://dphhs.mt.gov/publichealth/cdepi/diseases/
New Jersey (http://www.nj.gov/health/cd/topics/flu.shtml)	New Mexico (https://nmhealth.org/about/erd/ideb/isp/)
Ohio (http://www.flu.ohio.gov)	Oklahoma (https://www.ok.gov/health/Prevention_and_Preparedness/Acur
South Carolina (http://www.scdhec.gov/Health/DiseasesandConditions/InfectiousDiseases/Flu/FluData/)	South Dakota (https://doh.sd.gov/diseases/infectious/flu/su
Vermont (http://www.healthvermont.gov/immunizations-infectious- disease/influenza/flu-activity-and-surveillance)	Virginia (http://www.vdh.virginia.gov/epidemiology/influenza-
Wyoming (https://health.wyo.gov/publichealth/infectious-disease-epidemiology- unit/disease/influenza/)	New York City (http://www1.nyc.gov/site/doh/providers/hea

#### World Health Organization:

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

#### WHO Collaborating Centers for Influenza:

Australia (http://www.influenzacentre.org/Surveillance\_Samples\_Received.html), China (http://www.chinaivdc.cn/cnic/), Japan (http://idsc.nih.go.jp/index.html), the United Kingdom (http://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 C (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/).

#### Public Health England:

The most up-to-date influenza information from the United Kingdom is available from Public Health England C (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) page.

Page last reviewed: December 27, 2021, 11:00 AM