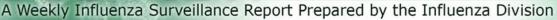


Influenza (Flu)

Weekly U.S. Influenza Surveillance Report







Key Updates for Week 45, ending November 9, 2019

According to this week's FluView report, seasonal influenza activity in the United States is increasing.

Viruses

Clinical Lab

Due to technical issues, data from clinical laboratories are not available this week.

Public Health Lab

Nationally, B/Victoria viruses are predominant; however, A(H3N2) and A(H1N1)pdm09 viruses are also circulating widely. The predominant virus varies by region and age.

Virus Characterization

Data for this season will be reported when a sufficient number of viruses have been characterized. Virus characterization data through September 28 is available.

Illness

Outpatient Illness: ILINet

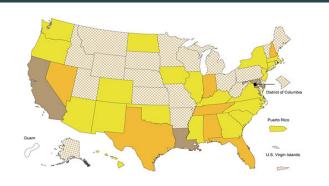
2.3% of visits to a health care provider were for influenza-like illness (ILI). Nationally, ILI was below the baseline (2.4%); however, 4 of 10 regions were at or above their baselines.

Outpatient Illness: ILI Activity Map



The majority of jurisdictions experienced minimal ILI activity; however, Louisiana experienced high ILI activity and 14 jurisdictions experienced moderate or low ILI activity.

Geographic Spread



The majority of jurisdictions reported sporadic or local activity. Ten states reported regional or widespread activity, and one state reported no activity.

Severe Disease

Hospitalizations

Data for this season will be provided when a sufficient number of hospitalizations have been reported.

P&I Mortality

4.9% of deaths were attributed to pneumonia and influenza (P&I). This is below the epidemic threshold of 6.0%.

Pediatric Deaths

One new influenza-associated pediatric death occurring during the 2019-2020 season was reported to CDC this week. The total for the season is 3.

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

An overview of the CDC influenza surveillance system, including methodology and detailed descriptions of each data component, is available at http://www.cdc.gov/flu/weekly/overview.htm.

Additional information on the current and previous influenza seasons for each surveillance component are available on FluView Interactive

Key Messages from CDC

- Nationally, ILI activity remains below baseline but parts of the country are seeing early increases in activity.
- There is significant cocirculation of influenza A(H3N2), A(H1N1)pdm09 and B/Victoria viruses with the predominant virus varying by region and age group.
- Flu vaccination is always the best way to prevent flu and its potentially serious complications. Most flu vaccines protect against 4 different flu viruses. Get vaccinated now.

U.S. Virologic Surveillance

Clinical Laboratories

Due to technical issues with the National Respiratory and Enteric Virus Surveillance System (NREVSS) reporting platform, the clinical laboratory data are not available for week 45. An update to previous weeks is included in the table below and is available on FluView Interactive. Reporting of this data will resume once the technical issues have been resolved. We apologize for the inconvenience.

| | Week 45 | Cumulative Data September 29, 2019 through November 2, 2019 (Weeks 40 - 44) |
|-------------------------------|---------|--|
| No. of specimens tested | | 104,888 |
| No. of positive specimens (%) | | 2,091 (2.0%) |
| Positive specimens by type | | |
| Influenza A | | 793 (37.9%) |
| Influenza B | | 1,298 (62.1%) |

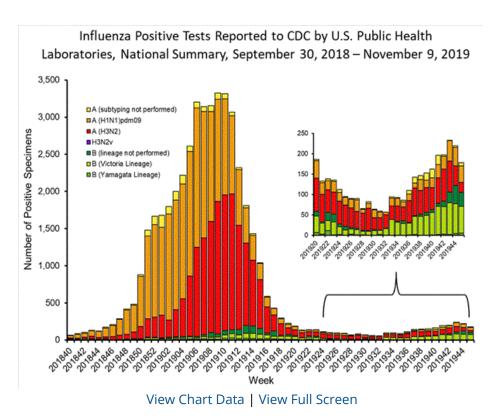
Public Health Laboratories

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 45 | Data Cumulative since September 29, 2019 (week 40) |
|---------------------------|---------|--|
| No. of specimens tested | 844 | 6,473 |
| No. of positive specimens | 178 | 1,185 |

| Positive specimens by type/subtype | | |
|------------------------------------|-------------|-------------|
| Influenza A | 73 (41.0%) | 627 (52.9%) |
| (H1N1)pdm09 | 40 (61.5%) | 223 (39.3%) |
| H3N2 | 25 (38.5%) | 344 (60.7%) |
| Subtyping not performed | 8 | 60 |
| Influenza B | 105 (59.0%) | 558 (47.1%) |
| Yamagata lineage | 5 (7.0%) | 17 (4.0%) |
| Victoria lineage | 66 (93.0%) | 408 (96.0%) |
| Lineage not performed | 34 | 133 |

Nationally influenza B/Victoria viruses have been reported more frequently than other influenza viruses this season; however, influenza A(H3N2) and A(H1N1)pdm09 viruses are also circulating widely. The predominant virus varies by region. Regional and state level data about circulating influenza viruses can be found on FluView Interactive. The predominant virus also varies by age group. Nationally, influenza B/Victoria viruses are the most commonly reported influenza viruses among children age 0-4 years (45% of reported viruses) and 5-24 years (53% of reported viruses), while A(H3N2) viruses are the most commonly reported influenza viruses among persons 65 years of age and older (72% of reported viruses). Among adults aged 25-64 years, approximately equal proportions of influenza A(H1N1)pdm09, A(H3N2) and B/Victoria viruses (31%, 30% and 26%, respectively) have been reported. Additional age data can be found on FluView Interactive.



Surveillance Methods | FluView Interactive: National, Regional, and State Data or Age Data

Influenza Virus Characterization

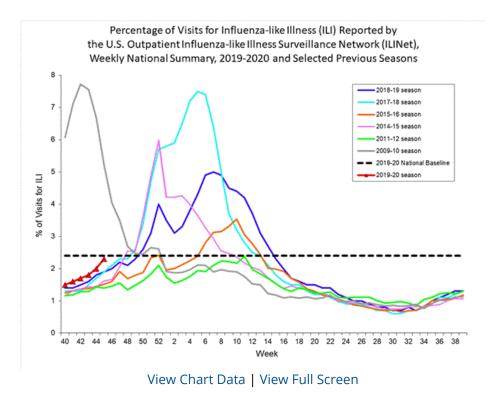
CDC performs genetic and antigenic characterization of U.S. viruses submitted from state and local health laboratories using Right Size Roadmap submission guidance. These data are used to compare how similar the currently circulating influenza viruses are to the reference viruses used for developing new influenza vaccines and to monitor evolutionary changes that continually occur in influenza viruses circulating in humans. CDC also tests susceptibility of influenza viruses to antiviral medications including the neuraminidase inhibitors (oseltamivir, zanamivir, and peramivir) and the PA endonuclease inhibitor baloxavir.

Virus characterization data will be updated starting later this season when sufficient numbers of specimens have been tested.

Outpatient Illness Surveillance

ILINet

Nationwide during week 45, 2.3% of patient visits reported through the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) were due to influenza-like illness (ILI). This percentage is below the national baseline of 2.4%.



On a regional level, the percentage of outpatient visits for ILI ranged from 1.2% to 4.2% during week 45. Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee), Region 6 (Arkansas, Louisiana, New Mexico, Oklahoma, and Texas), Region 7 (Iowa, Kansas, Missouri, and Nebraska), and Region 9 (Arizona, California, Hawaii, and Nevada) reported a percentage of outpatient visits for ILI which is equal to or above their region-specific baselines. Regions 1, 2, 3, 5, 8, and 10 remained below their region-specific baselines.

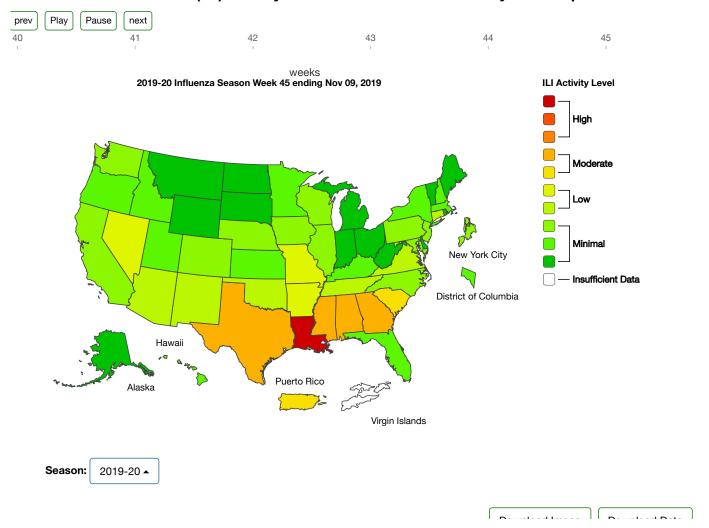
ILI Activity Map

Data collected in ILINet are used to produce a measure of ILI activity* by state.

During week 45, the following ILI activity levels were experienced:

- High one state (Louisiana)
- Moderate Puerto Rico and five states (Alabama, Georgia, Mississippi, South Carolina and Texas)
- Low nine states (Arizona, Arkansas, Connecticut, Missouri, Nevada, New Mexico, Oklahoma, Tennessee and Virginia)
- Minimal the District of Columbia, New York City, and 35 states (Alaska, California, Colorado, Delaware, Florida, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Maine, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, South Dakota, Utah, Vermont, Washington, West Virginia, Wisconsin and Wyoming)
- Data were Insufficient to calculate an ILI activity level from the U.S. Virgin Islands.

A Weekly Influenza Surveillance Report Prepared by the Influenza Division Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet



^{*}Data collected in ILINet may disproportionally represent certain populations within a state, and therefore, may not accurately depict the full picture of influenza activity for the whole state. Differences in the data presented here by CDC and independently by some state health departments likely represent differing levels of data completeness with data presented by the state likely being the more complete.

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

Surveillance Methods | FluView Interactive: National, Regional, and State Data or ILI Activity Map

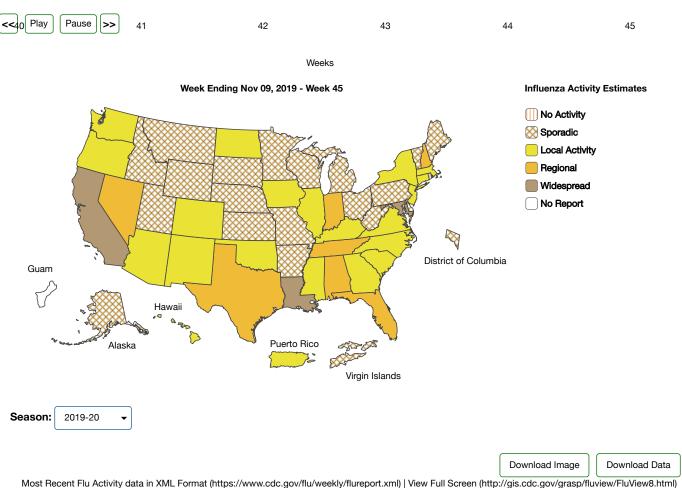
Geographic Spread of Influenza as Assessed by State and Territorial Epidemiologists

The influenza activity reported by state and territorial epidemiologists indicates geographic spread of influenza viruses but does not measure the severity of influenza activity.

During week 45 the following influenza activity was reported:

- Widespread three states (California, Louisiana and Maryland)
- Regional seven states (Alabama, Florida, Indiana, Nevada, New Hampshire, Tennessee and Texas)
- Local Puerto Rico and 20 states (Arizona, Colorado, Connecticut, Georgia, Hawaii, Illinois, Iowa, Kentucky, Massachusetts, Mississippi, New Jersey, New Mexico, New York, North Carolina, North Dakota, Oklahoma, Oregon, South Carolina, Virginia and Washington)
- Sporadic the District of Columbia, the U.S. Virgin Islands and 19 states (Alaska, Arkansas, Delaware, Idaho, Kansas, Maine, Michigan, Minnesota, Missouri, Montana, Nebraska, Ohio, Pennsylvania, South Dakota, Utah, Vermont, West Virginia, Wisconsin and Wyoming)
- No Activity one state (Rhode Island)
- Guam did not report.

A Weekly Influenza Surveillance Report Prepared by the Influenza Division Weekly Influenza Activity Estimates Reported by State and Territorial Epidemiologists*



*This map indicates geographic spread and does not measure the severity of influenza activity.

Additional information about the geographic spread of influenza this season and past seasons:

Surveillance Methods | FluView Interactive

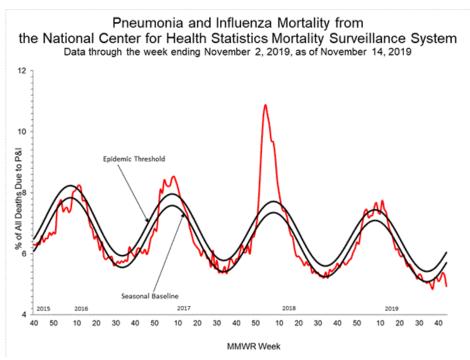
Influenza-Associated Hospitalizations

The Influenza Hospitalization Surveillance Network (FluSurv-NET) conducts population-based surveillance for laboratory-confirmed influenza-related hospitalizations in select counties in the Emerging Infections Program (EIP) states and Influenza Hospitalization Surveillance Project (IHSP) states. FluSurv-NET estimated hospitalization rates will be updated weekly starting later this season when a sufficient number of hospitalizations have been reported.

Additional FluSurv-NET data can be found at: http://gis.cdc.gov/GRASP/Fluview/FluHospRates.html and http://gis.cdc.gov/grasp/fluview/FluHospChars.html.

Pneumonia and Influenza (P&I) Mortality Surveillance

Based on National Center for Health Statistics (NCHS) mortality surveillance data available on November 14, 2019, 4.9% of the deaths occurring during the week ending October 19, 2019 (week 44) were due to P&I. This percentage is below the epidemic threshold of 6.0% for week 44.



View Chart Data | View Full Screen

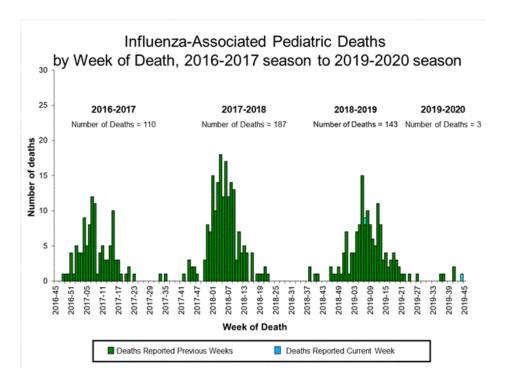
Additional pneumonia and influenza mortality surveillance information for current and past seasons: Surveillance Methods | FluView Interactive

Influenza-Associated Pediatric Mortality

Two influenza-associated pediatric deaths were reported to CDC during week 45.

One death was associated with an influenza A virus for which no subtyping was performed and occurred during week 7 (the week ending February 16, 2019) in the 2018-2019 season. This brings the total number of deaths during that season to 143

One death was associated with an influenza B/Victoria virus and occurred during week 44 (the week ending November 2, 2019). A total of three influenza-associated pediatric deaths occurring during the 2019-2020 season have been reported to CDC.



View Full Screen

Additional Influenza-associated pediatric mortality surveillance information for current and past seasons: Surveillance Methods | FluView Interactive

<u>Additional National and International Influenza Surveillance</u> 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 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. To access these tools, visit http://www.cdc.gov/flu/weekly/fluviewinteractive.htm

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 at https://www.cdc.gov/niosh/topics/absences/default.html

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

| Alabama | Alaska | Arizona | Arkansas | California |
|----------------|---------------|-------------|-------------------------|---------------|
| Colorado | Connecticut | Delaware | District of Columbia | Florida |
| Georgia | Hawaii | Idaho | Illinois | Indiana |
| Iowa | Kansas | Kentucky | Louisiana | Maine |
| Maryland | Massachusetts | Michigan | Minnesota | Mississippi |
| Missouri | Montana | Nebraska | Nevada | New Hampshire |
| New Jersey | New Mexico | New York | North Carolina | North Dakota |
| Ohio | Oklahoma | Oregon | Pennsylvania | Rhode Island |
| South Carolina | South Dakota | Tennessee | Texas | Utah |
| Vermont | Virginia | Washington | West Virginia | Wisconsin |
| Wyoming | New York City | Puerto Rico | Virgin Islands | |

World Health Organization: Additional influenza surveillance information from participating WHO member nations is available through FluNet and the Global Epidemiology Reports.

WHO Collaborating Centers for Influenza located in Australia, China, Japan, the United Kingdom, and the United States (CDC in Atlanta, Georgia).

Europe: For the most recent influenza surveillance information from Europe, please see WHO/Europe and the European Centre for Disease Prevention and Control at http://www.flunewseurope.org/.

Public Health Agency of Canada: The most up-to-date influenza information from Canada is available at http://www.phac-aspc.gc.ca/fluwatch/

Public Health England: The most up-to-date influenza information from the United Kingdom is available at https://www.gov.uk/government/statistics/weekly-national-flu-reports

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.

An overview of the CDC influenza surveillance system, including methodology and detailed descriptions of each data component, is available at: http://www.cdc.gov/flu/weekly/overview.htm.
