



**Summit County Public Health
Influenza Surveillance Report
2018 – 2019 Season
Report #9**



**Flu Surveillance Week 10 (12/9/2018 to 12/15/2018)
Centers for Disease Control and Prevention MMWR Week 50**

Summit County Surveillance Data:

During **Week 10**, influenza-related activity was low, but increasing.

Table 1: Overall Influenza Activity Indicators in Summit County by Week				
	Week 9 MMWR 49 N (%)¹	Week 10 MMWR 50 N (%)¹	Percent change from previous week	Number of weeks increasing or decreasing
Lab Reports				
Test Performed	495	610	+ 23.2%	↑1
Positive Tests (Number and %)	5 (1.0)	23 (3.8)	+ 280%	↑1
Influenza A (Number and %)	5 (1.0)	22 (3.6)	+ 260%	↑1
Influenza B (Number and %)	0 (0.0)	1 (0.2)	+ 100%	↑1
Influenza hospitalizations:	4	11	+ 175%	↑1
Influenza ILI Community Report:				
Long-term Care Facilities	1	0	- 100%	↓1
Correctional & Addiction Facilities	0	1	+ 100%	↑1
Physician Offices & Clinics	1	0	- 100%	↓1
Pharmacy Prescriptions				
Amantidine	1	1	NC	NC
Rimantidine Flumadine	0	0	--	--
Relenza	0	0	--	--
Oseltamivir Tamiflu	5	2	- 60.0%	↓1
<i>Total antiviral prescriptions</i>	6	3	- 50.0%	↓1
Schools absenteeism daily rate²	5.9	5.8	- 1.7%	↓3
Deaths				
Pneumonia associated	5 (4.8)	2 (2.2)	- 54.3%	↓1
Influenza associated	0	0	--	--
Emergency room visits (EpiCenter)³				
Constitutional Complaints	471 (8.2)	509 (8.6)	+ 4.9%	↑2
Fever and ILI	82 (1.4)	101 (1.7)	+ 21.4%	↑2
¹ N and % are reported when available; NC = no change ² Absence is for any reason. Percent is from total number of students enrolled. Data was collected from 8 schools or school districts throughout Summit County (n = ~37,000 students) ³ Percent is from total number of emergency room interactions Note: Data is provisional and may be updated as more information is received. Percentages should be interpreted with caution. Small changes in number can result in large changes in percent. When a percentage, or prevalence, is available in this table, the percent change will be calculated from those values				

Zero deaths related to influenza were reported during Week 10, and there were two reported deaths associated with pneumonia. **Figure 1** displays weekly Summit County death counts associated with pneumonia and influenza.

Acute Care Hospitalizations: There were 11 flu-related hospitalizations reported during Week 10. (**Figure 2**)

COMMUNITY ILI REPORTS: Influenza like illness (ILI) as defined by the CDC is fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat without a known cause other than influenza.

Long Term Care Facilities: There were 0 cases of ILI reported.

Correctional and Inpatient Addiction facilities: There was 1 case of ILI reported.

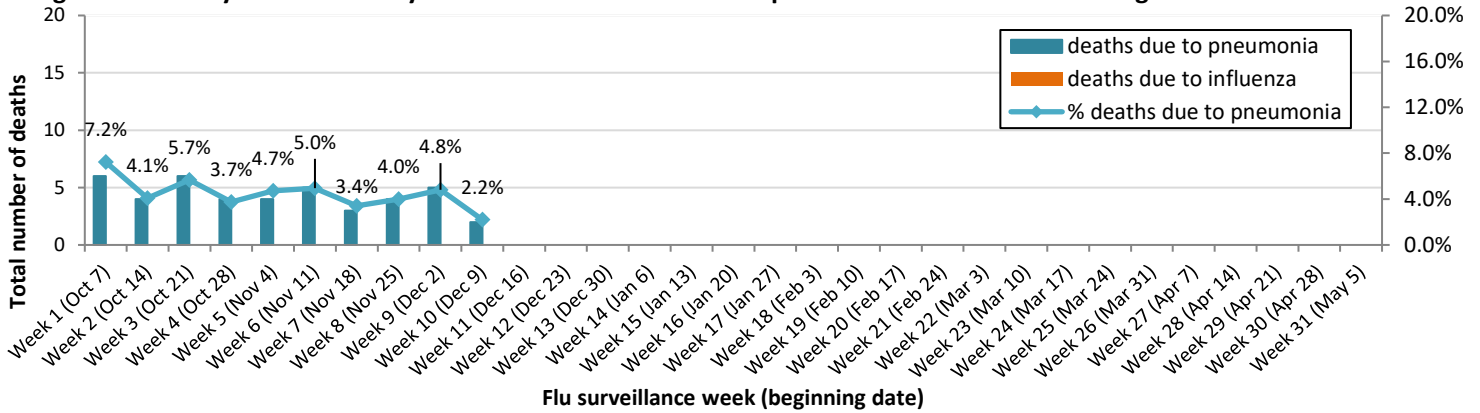
Physician offices and clinics: During Week 10, there were 0 cases of ILI reported.

Pharmacies: Three prescriptions for antiviral medications were reported during Week 10.

School absenteeism includes absences regardless of reason. In Week 10, the absence rate was 5.8%, which was a minor decrease from the rate in Week 9.

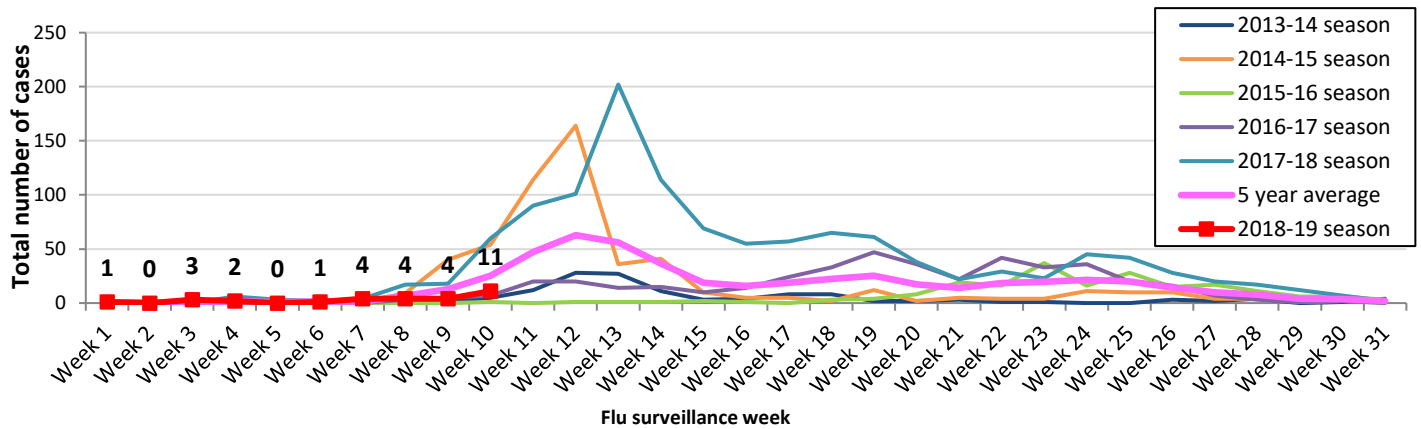
Lab reports: During the Week 10, Summit County labs performed 610 tests, of which 23 tested positive (22 flu A, 1 flu B). (**Figure 4**) The flu tests ordered increased by 23% and positive test results increased by 280%.

Figure 1. Weekly Summit County death counts associated with pneumonia and influenza during 2018-2019 season



Influenza-associated hospitalizations: Summit County hospitals reported 11 influenza-associated hospitalizations in Week 10. **Figure 2** displays weekly confirmed hospitalization counts for Summit County (season count to date = 30).

Figure 2. Summit County influenza-associated hospitalizations by week, 2018-2019 and previous five seasons



EpiCenter collects and analyzes health related data in real time to provide information about the health of the community. This system tracks ER visits related to constitutional complaints and fever and ILI. **Figure 3** displays the weekly number of ER visits related to ILI and flu symptoms in Summit County. There were 101 ILI-related visits reported during Week 10, which was 1.7% of total ED visits (n = 5936). This percentage was a 21% increase from Week 9.

Figure 3. Weekly ER visits in Summit County related to Fever + ILI stratified by age groups, 2018 to 2019 season

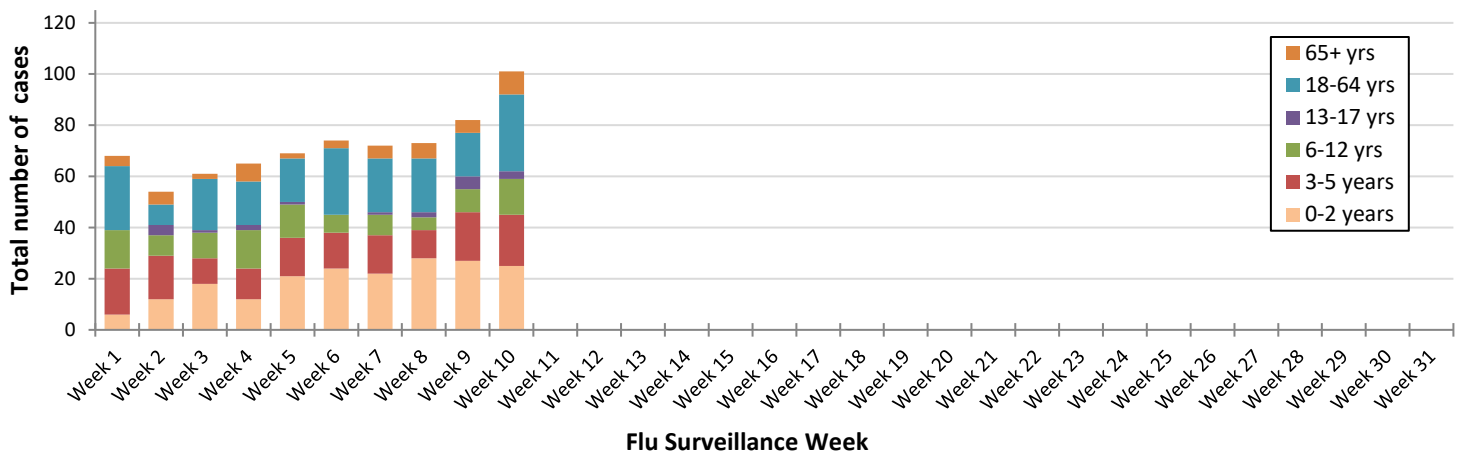
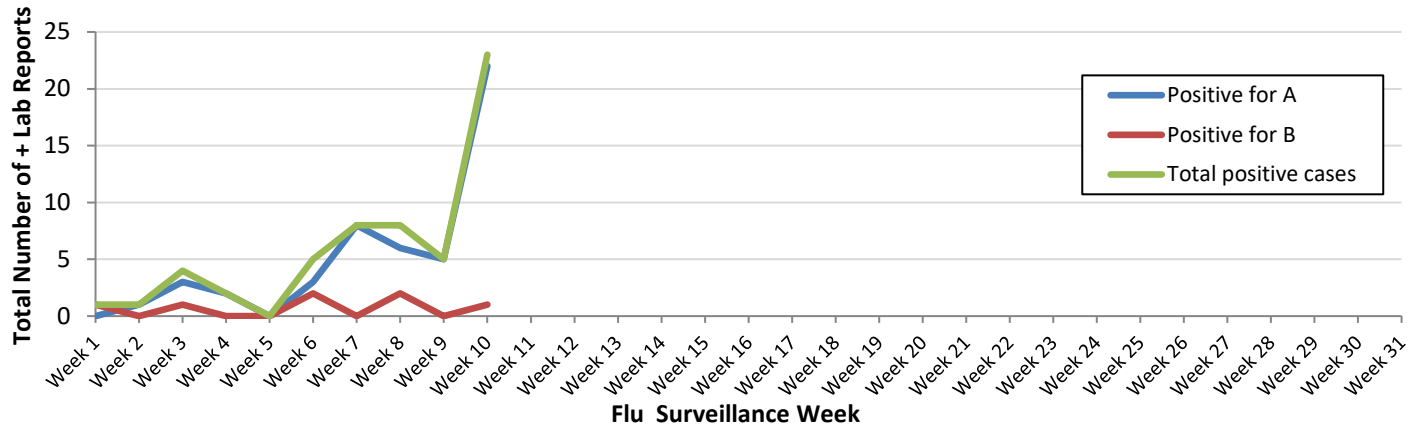


Figure 4. Influenza diagnostic tests with positive results completed by Summit County health facilities, 2018 - 2019 season



Ohio Influenza Activity:

Current Ohio Activity Level (Geographic Spread) – Regional

Definition: Increased ILI in > 2 but less than half of the regions AND recent (within the past 3 weeks) lab confirmed influenza in the affected regions, OR institutional outbreaks (ILI or lab confirmed) in > 2 but less than half of the regions AND recent (within the past 3 weeks) lab confirmed influenza in the affected regions.

During MMWR Week 50, public health surveillance data sources indicate minimal intensity for influenza-like illness (ILI) in outpatient settings reported by Ohio’s sentinel providers. The percentage of emergency department visits with patients exhibiting constitutional symptoms and fever and ILI specified ED visits are below baseline levels. Reported cases of influenza-associated hospitalizations are **above** the seasonal threshold*. There were 67 influenza-associated hospitalizations reported during MMWR Week 50.

Ohio Influenza Activity Summary Dashboard (December 9 – December 15, 2018):

Data Source	Current week value	Percent Change from last week ¹	# of weeks ²	Trend Chart ³
Influenza-like Illness (ILI) Outpatient Data (ILINet Sentinel Provider Visits)	0.97%	-14.91%	↓ 2	
Thermometer Sales (National Retail Data Monitor)	1050	-4.46%	↓ 2	
Fever and ILI Specified ED Visits (EpiCenter)	2.14%	17.58%	↑ 1	
Constitutional ED Visits (EpiCenter)	9.67%	6.97%	↑ 2	
Confirmed Influenza-associated Hospitalizations (Ohio Disease Reporting System)	67	48.89%	↑ 6	
Outpatient Medical Claims Data ⁴	0.50%	31.58%	↑ 2	

¹Interpret percent changes with caution. Large variability may be exhibited in data sources with low weekly values.

²Number of weeks that the % change is increasing or decreasing.

³Black lines represent current week's data; red lines represent baseline averages

⁴Medical Claims Data provided by athenahealth®

Source: <https://www.odh.ohio.gov/en/seasflu/Ohio-Flu-Activity>

National Influenza Activity:

Influenza activity in the United States is increasing. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate. Below is a summary of the key influenza indicators for the week ending December 15, 2018:

- **Viral Surveillance:** Influenza A viruses have predominated in the United States since the beginning of October. Influenza A(H1N1)pdm09 viruses are predominating in most areas of the country. However, in the most recent three weeks, influenza A(H3) viruses were most commonly reported in the southeastern United States (HHS Region 4). The percentage of respiratory specimens testing positive for influenza in clinical laboratories is increasing.
 - **Virus Characterization:** The majority of influenza viruses characterized antigenically and genetically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses.
 - **Antiviral Resistance:** All viruses tested show susceptibility to the neuraminidase inhibitors (oseltamivir, zanamivir, and peramivir).
- **Influenza-like Illness Surveillance (Figure 5):** The proportion of outpatient visits for influenza-like illness (ILI) increased to 2.7%, which is above the national baseline of 2.2%. Eight of 10 regions reported ILI at or above their region-specific baseline level.
 - **ILI State Activity Indicator Map (Figure 6):** Two states experienced high ILI activity; New York City and nine states experienced moderate ILI activity; Puerto Rico and 11 states experienced low ILI activity; the District of Columbia and 28 states experienced minimal ILI activity.
- **Geographic Spread of Influenza (Figure 7):** The geographic spread of influenza in Guam and six states was reported as widespread; 18 states reported regional activity; 19 states reported local activity; and the District of Columbia, Puerto Rico, the U.S. Virgin Islands and seven states reported sporadic activity.
- **Influenza-associated Hospitalizations:** A cumulative rate of 2.9 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among children younger than 5 years (7.7 hospitalizations per 100,000 population).
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** One flu-associated pediatric death was reported to CDC during week 50.

Figure 5. Percentage of visits for influenza-like illness (ILI) reported by the U.S. Outpatient Influenza-like Surveillance Network (ILINet), weekly national summary, 2018-2019 and selected previous seasons

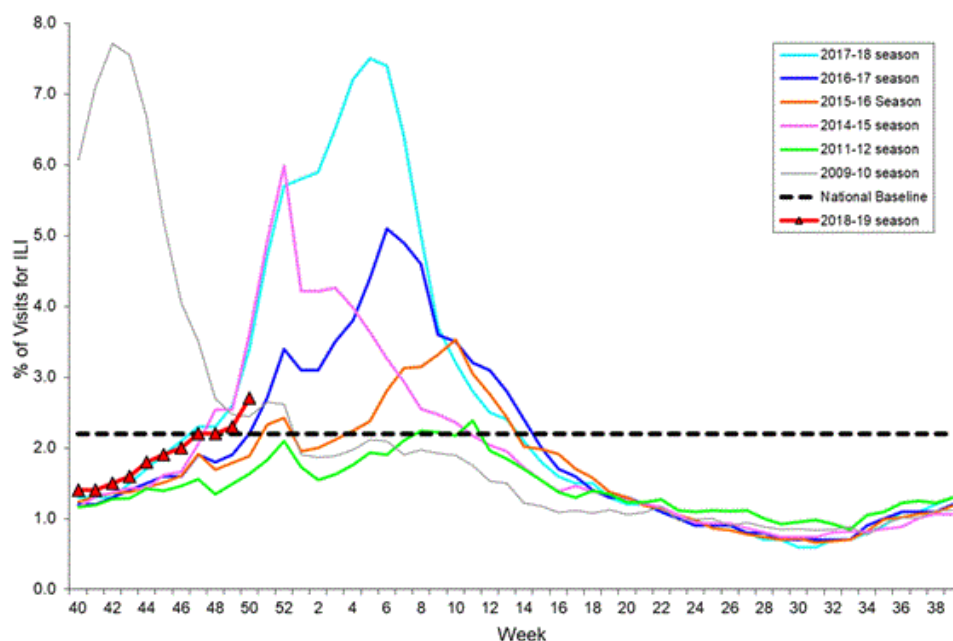


Figure 6. Influenza-like illness (ILI) activity level indicator determined by data reported to ILINet

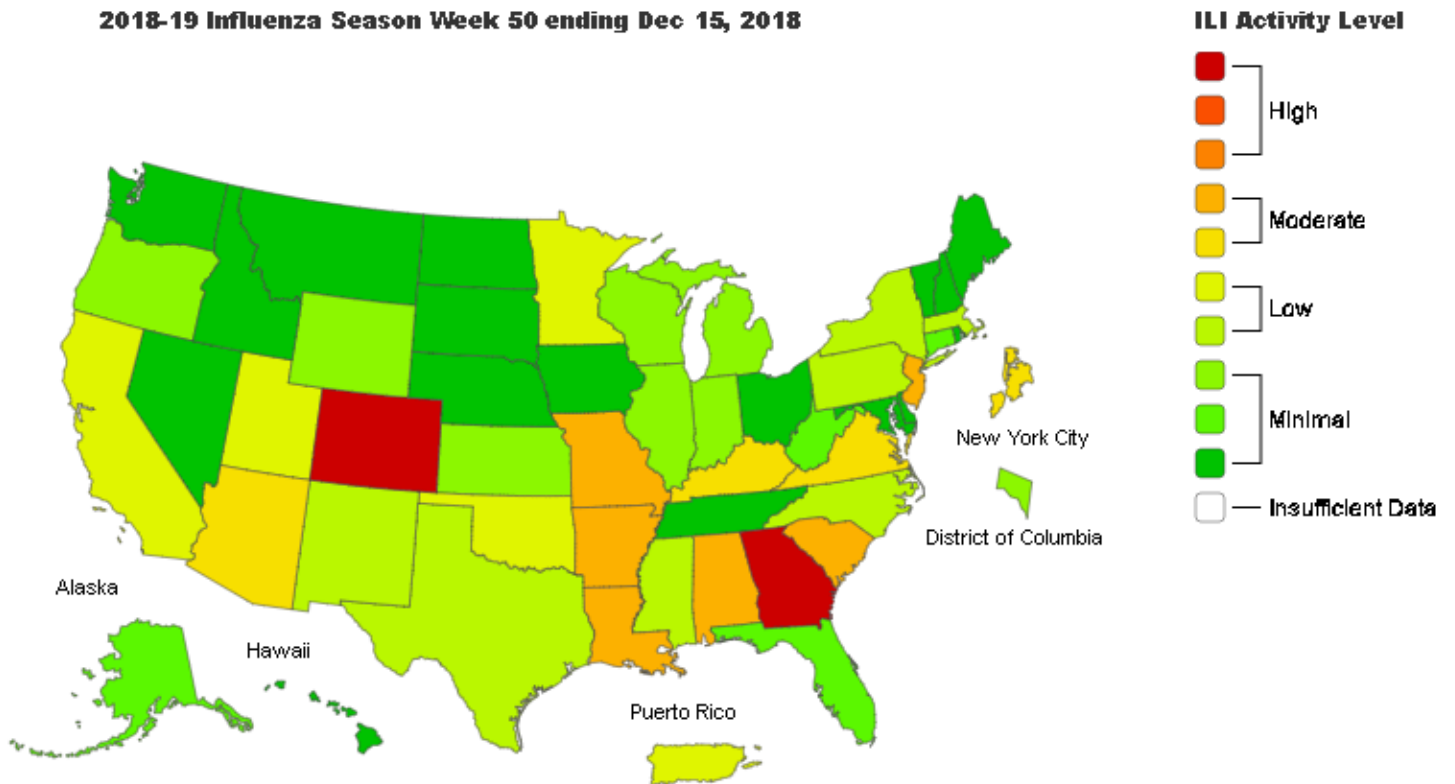
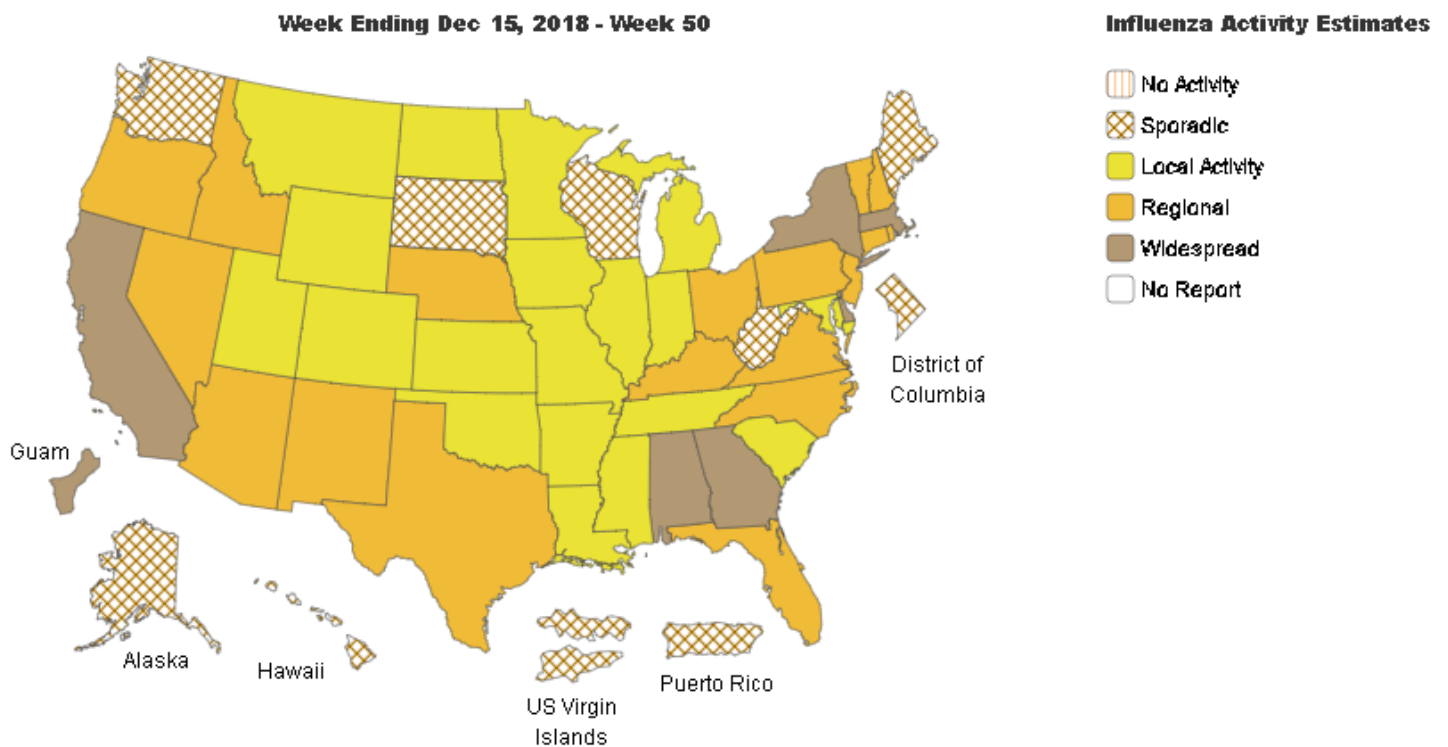


Figure 7. Weekly influenza activity (geographic spread) estimates reported by state and territorial epidemiologists



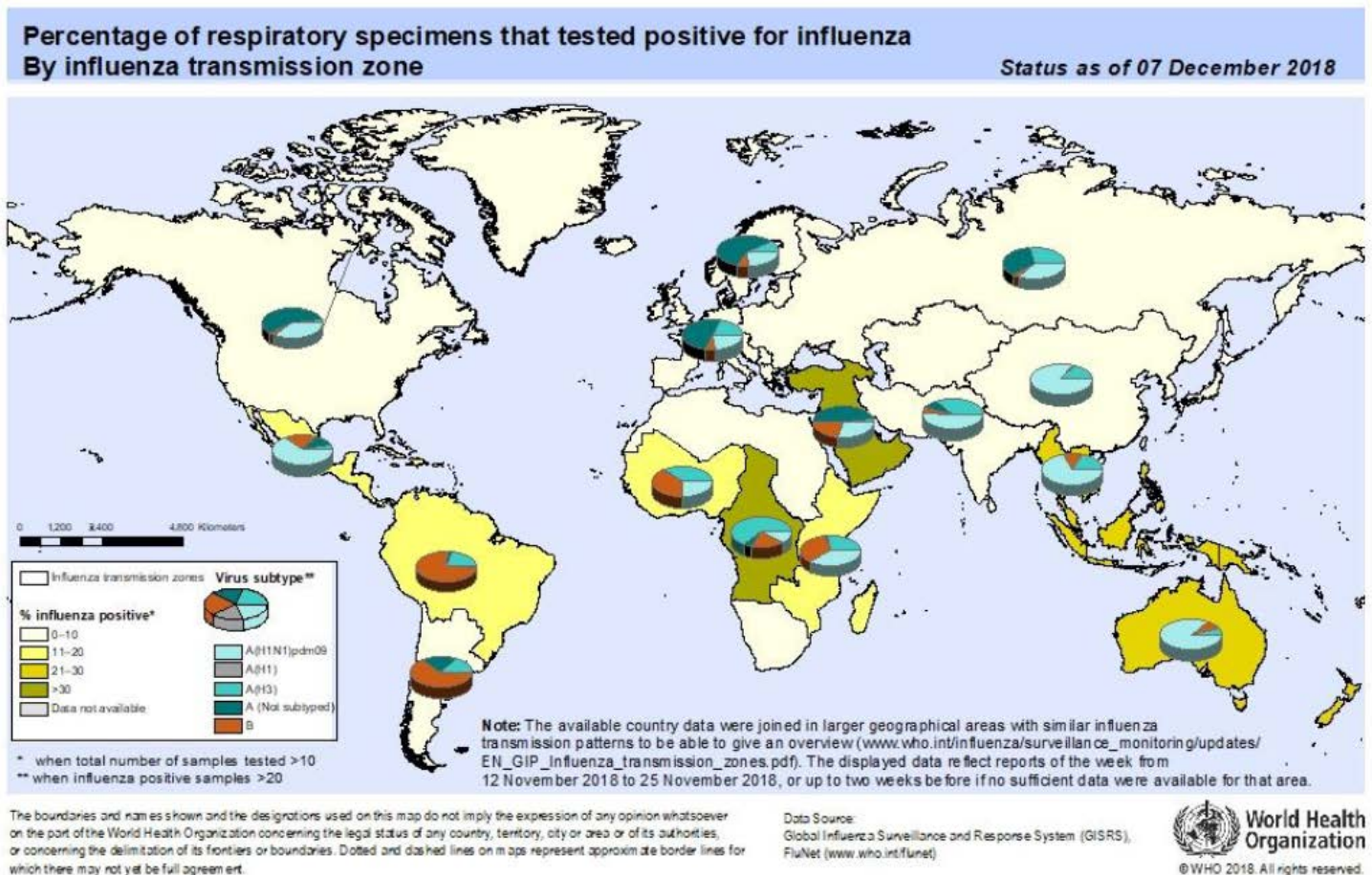
Source: <https://www.cdc.gov/flu/weekly/>

Global Surveillance:

Influenza Update N° 330, World Health Organization (WHO), published 10 December 2018, based on data up to 25 November 2018. The Update is published every two weeks.

Summary

- **In the temperate zone of the northern hemisphere influenza activity continued to increase although overall influenza activity remained low.** Increased influenza detections were reported in some countries of Southern and South-East Asia. In the temperate zones of the southern hemisphere, influenza activity returned to inter-seasonal levels. Worldwide, seasonal influenza A viruses accounted for the majority of detections.
- National Influenza Centres (NICs) and other national influenza laboratories from 110 countries, areas or territories reported data to FluNet for the time period from 12 November 2018 to 25 November 2018 (data as of 2018-12-07 03:38:18 UTC). The WHO Global Influenza Surveillance and Response System (GISRS) laboratories tested more than 118399 specimens during that time period. 6596 were positive for influenza viruses, **of which 5995 (90.9%) were typed as influenza A and 601 (9.1%) as influenza B.** Of the sub-typed influenza A viruses, 3019 (85.5%) were influenza A(H1N1)pdm09 and 511 (14.5%) were influenza A(H3N2). Of the characterized B viruses, 39 (38.6%) belonged to the B-Yamagata lineage and 62 (61.4%) to the B-Victoria lineage.



Source: https://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/

Influenza News from the CDC:

Estimated Influenza Illnesses, Medical visits, Hospitalizations, and Deaths in the United States — 2017–2018 influenza season

Influenza activity in the United States during the 2017–2018 season began to increase in November and remained at high levels for several weeks during January–February. While influenza A(H3N2) viruses predominated through February, and were predominant overall for the season, influenza B viruses were more commonly reported starting in March, 2018. The season had high severity with unusually high levels of outpatient influenza-like illness, hospitalizations rates, and proportions of pneumonia and influenza-associated deaths.

CDC estimates that the burden of illness during the 2017–2018 season was also high with an estimated 48.8 million people getting sick with influenza, 22.7 million people going to a health care provider, 959,000 hospitalizations, and 79,400 deaths from influenza. The number of cases of influenza-associated illness that occurred last season was the highest since the 2009 H1N1 pandemic, when an estimated 60 million people were sick with influenza.

The 2017–2018 influenza season was additionally atypical in that it was severe for all ages of the population⁵. The burden of influenza and the rates of influenza-associated hospitalization are generally higher for the very young and the very old, and while this was also true during the 2017–2018 season, rates of hospitalization in all age groups were the highest seasonal rates seen since hospital-based surveillance was expanded in 2005 to include all ages. This translated into an estimated 11.5 million cases of influenza in children, 30 million cases of influenza in working age adults (aged 18–64 years), and more than 7.3 million cases in adults aged 65 years and older.

Our estimates of hospitalizations and mortality associated with the 2017–2018 influenza season continue to demonstrate how severe influenza virus infection can be. We estimate overall, there were 959,000 hospitalizations and 79,400 deaths during the 2017–2018 season. More than 48,000 hospitalizations occurred in children (aged < 18 years); however, 70% of hospitalizations occurred in older adults aged ≥65 years. Older adults also accounted for 90% of deaths, highlighting that older adults are particularly vulnerable to severe disease with influenza virus infection. An estimated 10,300 deaths occurred among working age adults (aged 18–64 years), an age group that often has low influenza vaccination.

Deaths in children with laboratory-confirmed influenza virus infection are reportable in the United States and 183 deaths were reported for the [2017–2018 season](#). However, influenza-associated pediatric deaths are likely under-reported as not all children whose death was related to an influenza virus infection may have been tested for influenza. Therefore, we used a mathematical model to estimate the total number of pediatric deaths based on hospitalization rates and the frequency of death in and out of the hospital from death certificates, estimating that there were more than 600 deaths associated with influenza in children.

Conclusion

CDC estimates that influenza was associated with more than 48.8 million illnesses, more than 22.7 million medical visits, 959,000 hospitalizations, and 79,400 deaths during the 2017–2018 influenza season. This burden was higher than any season since the 2009 pandemic and serves as a reminder of how severe seasonal influenza can be.

the burden of flu disease 2017 - 2018

The estimated number of flu **illnesses** during the 2017-2018 season:

49 million

More than the combined populations of Texas and Florida



The estimated number of flu **hospitalizations** during the 2017-2018 season:

960,000

More than the number of staffed hospital beds in the U.S.



The estimated number of flu **deaths** during the 2017-2018 season:

79,000

More than the average number of people who attend the Super Bowl each year



DATA: Influenza Division program impact report 2017-2018, <https://www.cdc.gov/flu/about/burden/index.html>



get vaccinated
www.cdc.gov/flu

Source web page: <https://www.cdc.gov/flu/about/burden/estimates.htm>

Image source: <https://www.cdc.gov/flu/resource-center/freeresources/graphics/flu-burden.htm>

About this report: Reporting agencies include labs, hospitals, long-term care and community-based care providers, physician offices, university clinic, pharmacies, and schools. Agencies are distributed throughout Summit County and report different indicators of flu activity including total lab tests, numbers of positive tests and type, antiviral prescriptions filled, school absences, and influenza like illness (ILI). Hospitalizations are lab confirmed for influenza and are obtained from the Ohio Disease Reporting System. Number of deaths associated with influenza and pneumonia are gathered from the Summit County Office of Vital Records death listings. Emergency room visits for complaints related to influenza are obtained by syndromic surveillance system (Epicenter). Special thanks to all agencies who report Influenza related data weekly.

Reporting from participants may not be complete each week. Numbers may change as updated reports are received. For questions, please contact Joan Hall or Tracy Rodriguez at the Summit County Public Health Communicable Disease Unit (330-375-2662 or cdu@schd.org). Report was issued on December 21, 2018.