



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



Public Health
Prevent. Promote. Protect.

Report #13

Flu Surveillance Week 14 (1/6 to 1/12/2019)

Centers for Disease Control and Prevention MMWR Week 2

Summit County Surveillance Data:

During **Week 14**, influenza-related activity in Summit County decreased and is now at an elevated but low level.

Table 1: Overall Influenza Activity Indicators in Summit County by Week				
	Week 13 MMWR 1 N (%)¹	Week 14 MMWR 2 N (%)¹	Percent change from previous week	Number of weeks increasing or decreasing
Lab Reports				
Test Performed	1054	896	- 15.0%	↓1
Positive Tests (Number and %)	130 (12.3)	86 (9.6)	- 22.0%	↓1
Influenza A (Number and %)	126 (11.9)	81 (9.0)	- 24.4%	↓1
Influenza B (Number and %)	4 (0.4)	5 (0.6)	+ 50.0%	↑4
Influenza hospitalizations:	27	23	- 14.8%	↓1
Influenza ILI Community Report:				
Long-term Care Facilities	2	2	NC	NC
Correctional & Addiction Facilities	0	0	--	--
Physician Offices & Clinics	1	0	- 100%	↓1
Pharmacy Prescriptions				
Amantidine	2	1	- 50.0%	↓1
Rimantidine Flumadine	0	0	--	--
Relenza	0	0	--	--
Oseltamivir Tamiflu	24	10	- 58.3%	↓1
<i>Total antiviral prescriptions</i>	26	11	- 57.7%	↓1
Schools absenteeism daily rate²	3.9	6.2	+ 59.0%	↑1
Deaths				
Pneumonia associated	2 (1.9)	6 (5.3)	+ 176%	↑1
Influenza associated	0	1	+ 100%	↑1
Emergency room visits (EpiCenter)³				
Constitutional Complaints	601 (9.6)	556 (9.5)	- 1.0%	↓2
Fever and ILI	110 (1.7)	102 (1.7)	NC	NC
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				

One death related to influenza was reported during Week 14, and there were 6 reported deaths associated with pneumonia. **Figure 1** displays weekly Summit County death counts associated with pneumonia and influenza.

Acute Care Hospitalizations: There were 23 flu-related hospitalizations reported during Week 14. (**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 2 cases of ILI reported.

Correctional and Inpatient Addiction facilities: There were 0 cases of ILI reported.

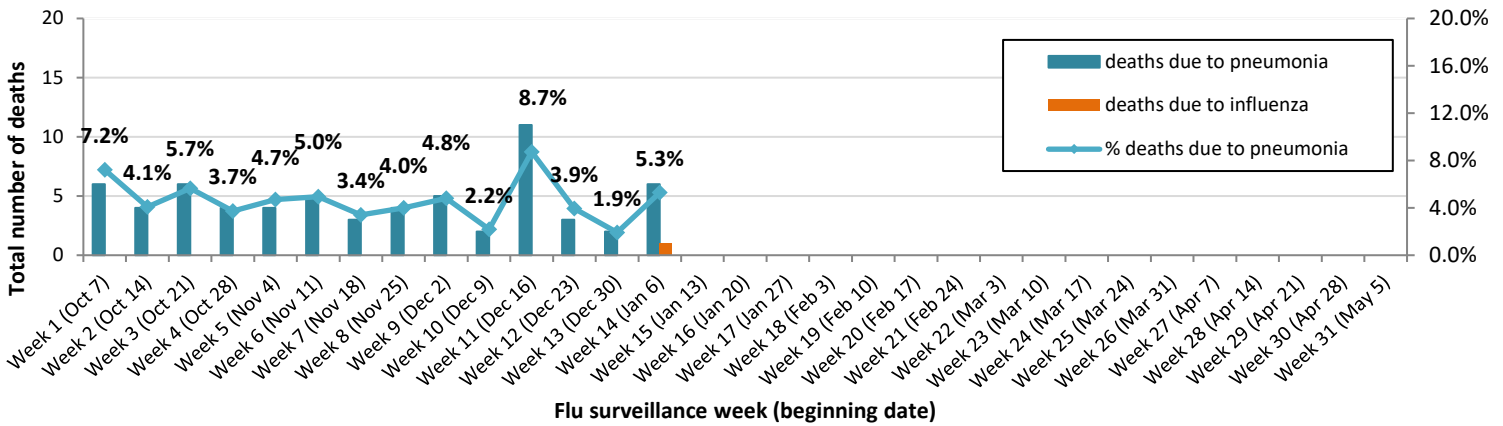
Physician offices and clinics: During Week 14, there were 0 cases of ILI reported.

Pharmacies: 11 prescriptions for antiviral medications were reported during Week 14.

School absenteeism includes absences regardless of reason. During Week 14, area schools that were open reported an average daily absence rate of 6.2%.

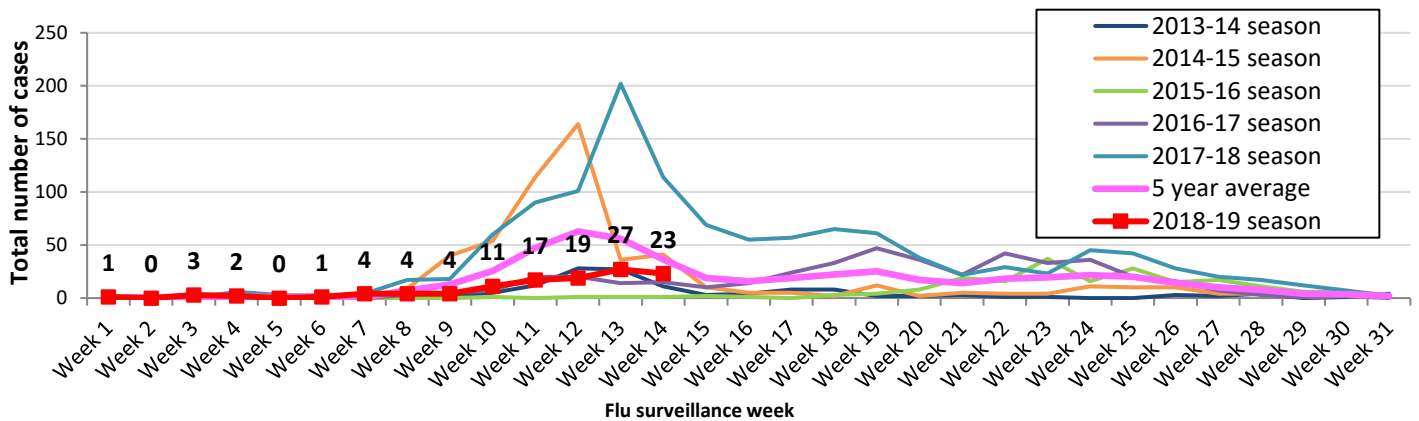
Lab reports: During Week 14, Summit County labs performed 896 influenza tests, of which 86 tested positive (81 Type A, 5 Type B). (**Figure 4**) The number of flu tests ordered decreased by 15%, and percentage of total positive test results decreased by 22%.

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



Influenza-associated hospitalizations: Summit County hospitals reported 23 influenza-associated hospitalizations in Week 14. **Figure 2** displays weekly confirmed hospitalization counts for Summit County (season count to date = 116).

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 102 ILI-related visits reported during Week 14, which was 1.7% of total ED visits (n = 5,874). This percentage the same as the rate during Week 13.

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

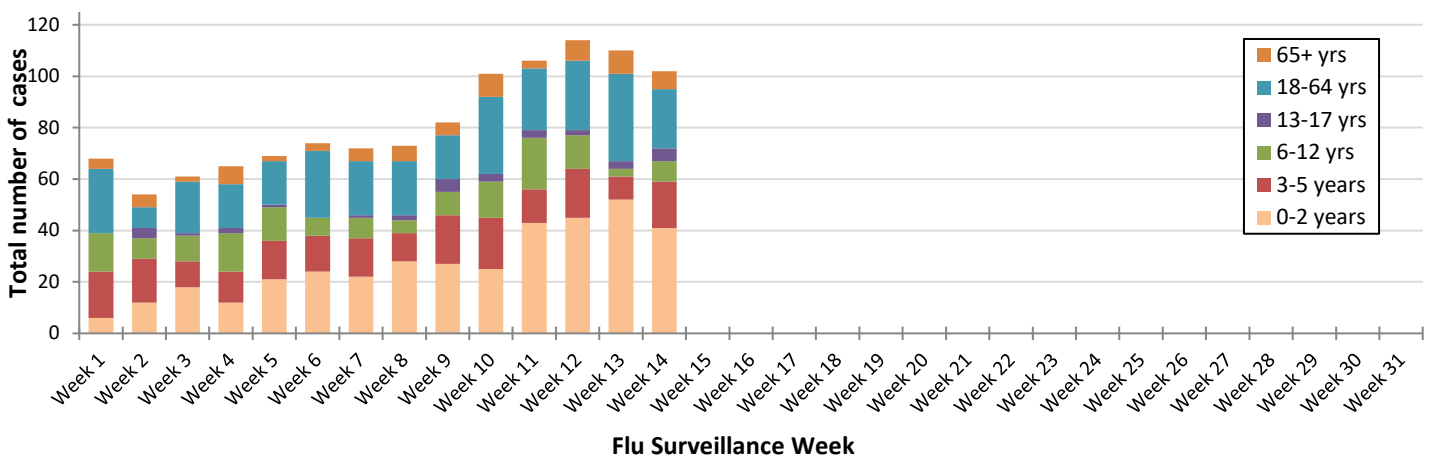
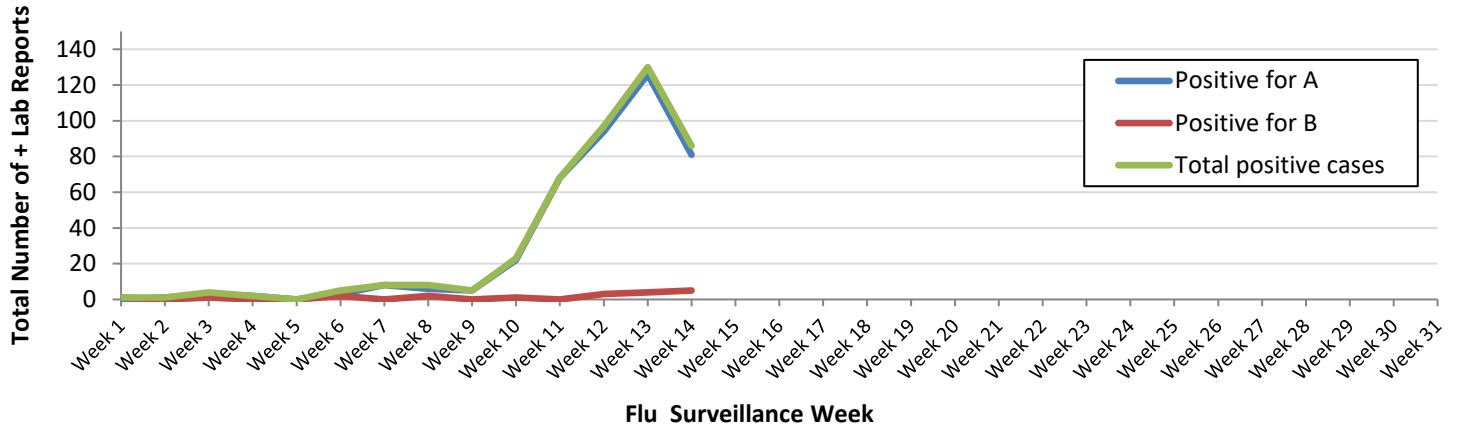


Figure 4. Influenza diagnostic tests with positive results completed by Summit County health facilities, 2018-19 season



Ohio Influenza Activity:

Current Ohio Activity Level (Geographic Spread) – Widespread Definition: Increased ILI in at least half of the regions AND recent (within the past 3 weeks) lab confirmed influenza in the state.

During MMWR Week 2, 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 365 influenza-associated hospitalizations reported during MMWR Week 2.

Ohio Influenza Activity Summary Dashboard (January 6 – January 12, 2019):

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)	1.01%	-24.06%	↓ 2	
Thermometer Sales (National Retail Data Monitor)	1353	6.37%	↑ 2	
Fever and ILI Specified ED Visits (EpiCenter)	2.02%	-19.20%	↓ 2	
Constitutional ED Visits (EpiCenter)	10.04%	-8.98%	↓ 2	
Confirmed Influenza-associated Hospitalizations (Ohio Disease Reporting System)	365	7.99%	↑ 10	
Outpatient Medical Claims Data ⁴	0.69%	-21.59%	↓ 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://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/seasonal-influenza/ohio-flu-activity/>

Ohio Surveillance Data:

- **ODH lab** has reported 161 **positive** influenza tests from specimens sent from various submitters. 2018-2019 influenza season positive results: **(119) A/pdmH1N1; (42) A/H3N2; (1) Influenza B;** (through 01/12/2019).
- The **National Respiratory and Enteric Virus Surveillance System (NREVSS)** has reported **30,152** influenza tests performed at participating facilities. 2018-2019 influenza season positive results: **(68) A/pdmH1N1, (36) A/H3N2, (1773) Flu A Not Subtyped, and (42) Flu B** (through 01/12/2019).
- **0 pediatric influenza-associated mortalities** have been reported during the 2018-2019 season (through 01/12/2019).
- No **novel influenza A virus infections** have been reported during the 2018-2019 season (through 01/12/2019).
- Incidence of confirmed **influenza-associated hospitalizations** in 2018-2019 season = **1258** (through 01/12/2019).

National Influenza Activity:

Influenza activity remains elevated in the United States. 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 January 12, 2019:

- **Viral Surveillance:** The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories decreased slightly. Influenza A viruses have predominated in the United States since the beginning of October. Influenza A(H1N1)pdm09 viruses have predominated in most areas of the country, however influenza A(H3) viruses have predominated in the southeastern United States (HHS Region 4).
 - **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:** None of the viruses tested were associated with highly reduced inhibition by any of the neuraminidase inhibitors (oseltamivir, zanamivir, and peramivir).
- **Influenza-like Illness Surveillance (Figure 5):** The proportion of outpatient visits for influenza-like illness (ILI) decreased from 3.5% to 3.1%, but remains above the national baseline of 2.2%. All 10 regions reported ILI at or above their region-specific baseline level.
 - **ILI State Activity Indicator Map (Figure 6):** Nine states experienced high ILI activity; New York City and 13 states experienced moderate ILI activity; 10 states experienced low ILI activity; and the District of Columbia, Puerto Rico and 18 states experienced minimal ILI activity.
- **Geographic Spread of Influenza (Figure 7):** The geographic spread of influenza in Guam and 30 states was reported as widespread; Puerto Rico and 16 states reported regional activity; three states reported local activity; and the District of Columbia, the U.S. Virgin Islands and one state reported sporadic activity.
- **Influenza-associated Hospitalizations:** A cumulative rate of 12.4 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (31.9 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:** Three influenza-associated pediatric deaths were reported to CDC during week 2.

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

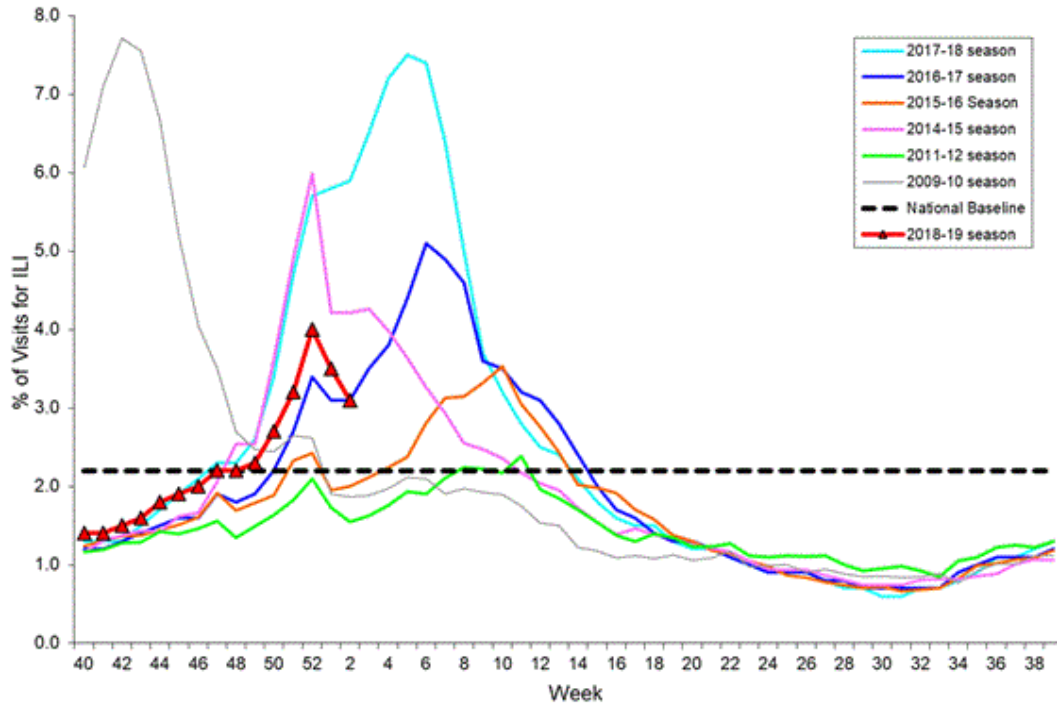


Figure 6. Influenza-like illness (ILI) activity level indicator determined by data reported to ILINet

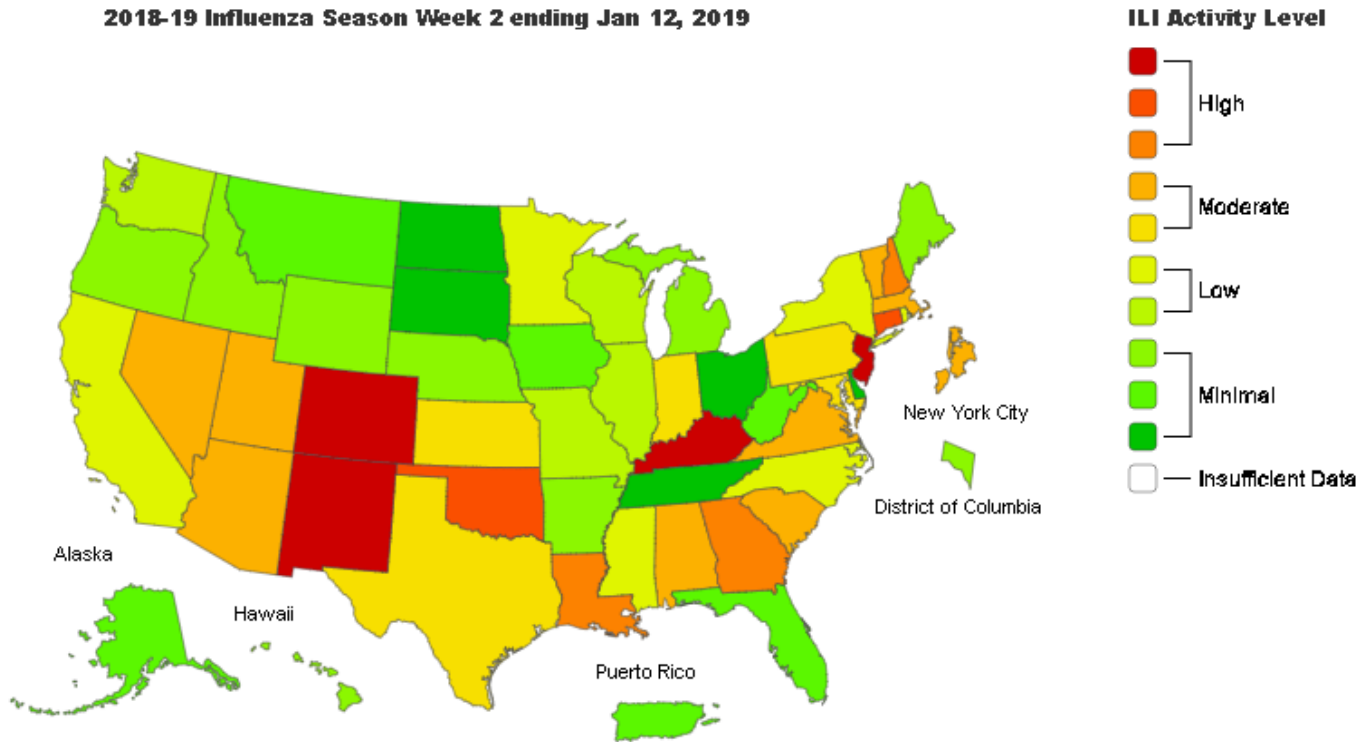
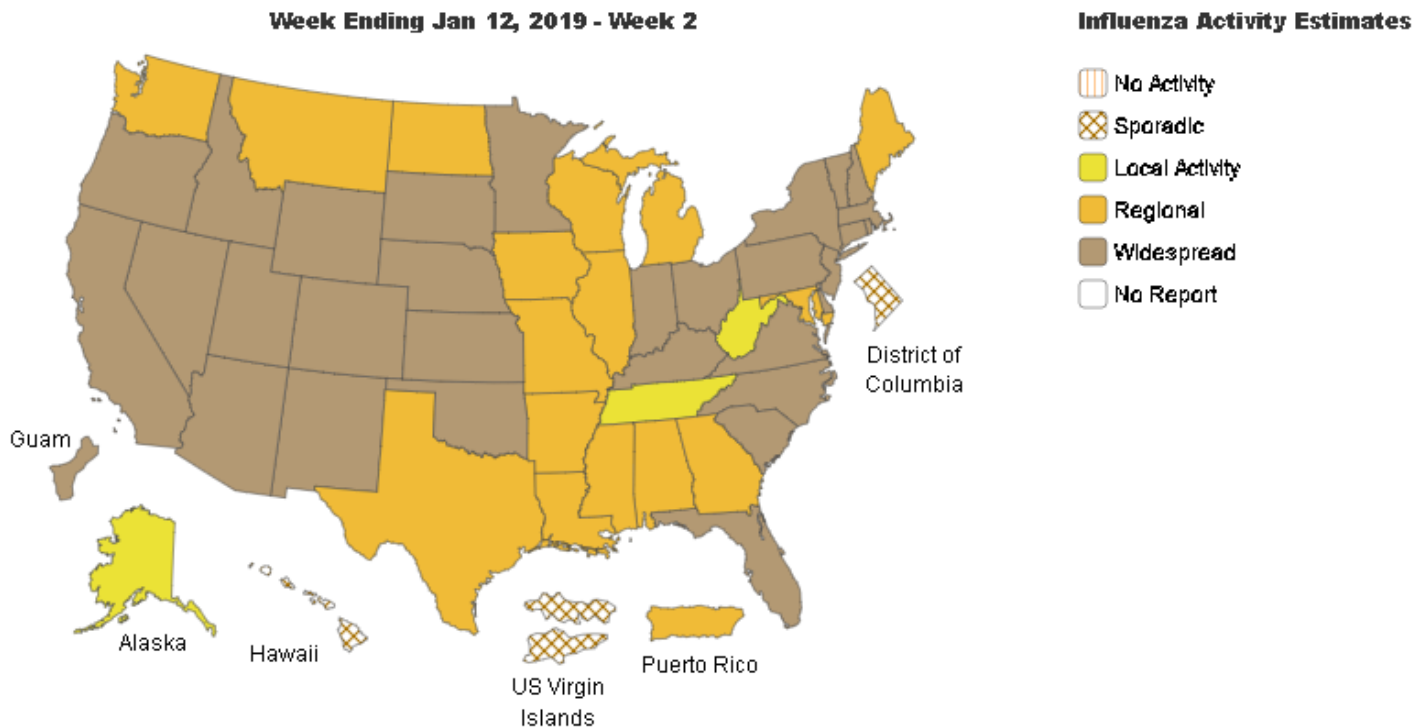


Figure 7. Weekly influenza activity (geographic spread) estimates reported by state and territorial epidemiologists



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

Global Surveillance:

Influenza Update N° 332, World Health Organization (WHO), published 7 January 2019, based on data up to 23 December 2018. The Update is published every two weeks.

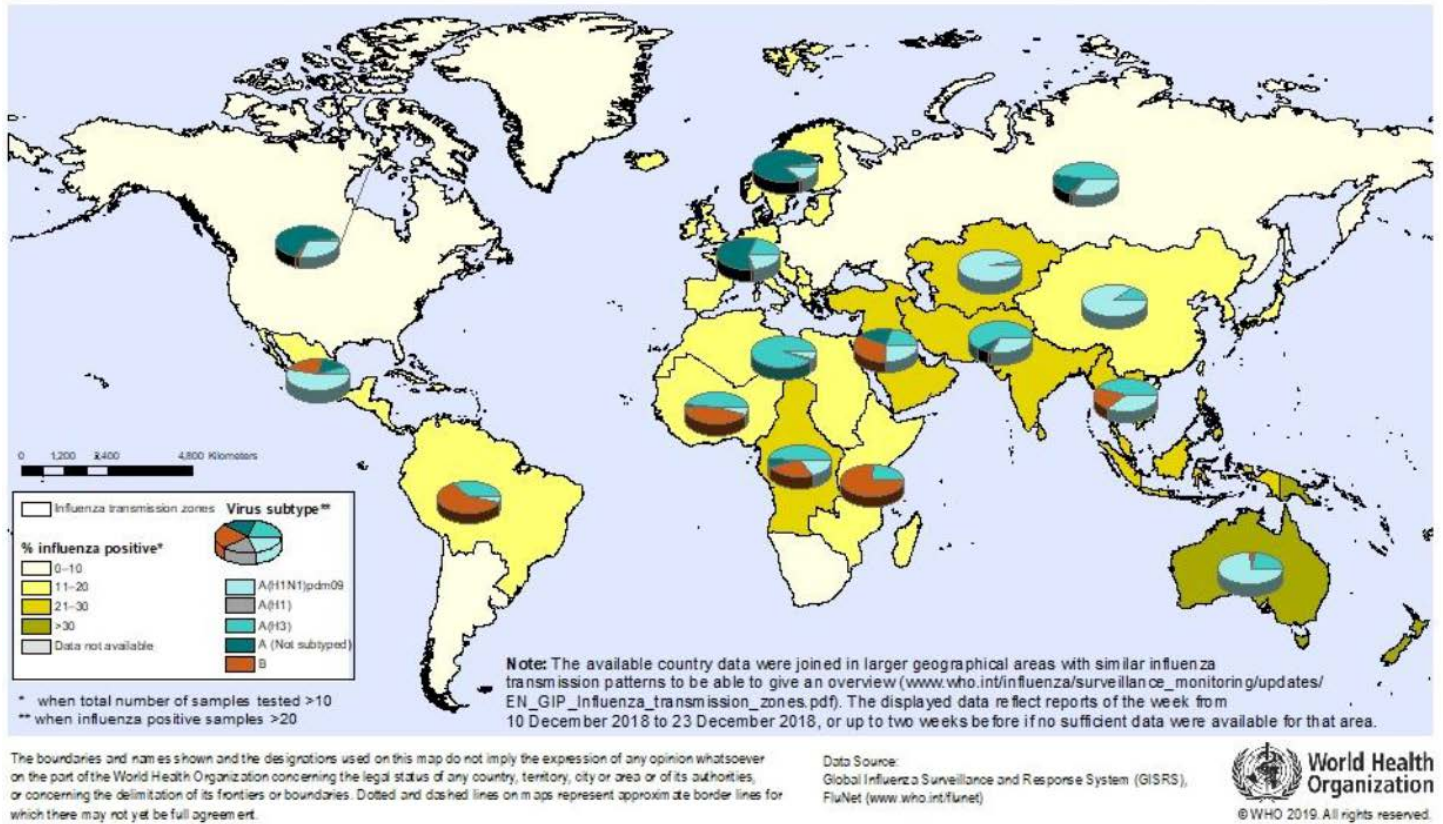
Summary

In the temperate zone of the northern hemisphere influenza activity continued to increase slowly.

- In North America, influenza activity continued to increase overall with influenza A(H1N1)pdm09 predominating.
- In Europe, influenza activity increased, with both A viruses circulating.
- In North Africa, increased influenza A(H3N2) detections were reported from mainly Egypt.
- In Western Asia, some countries reached medium levels of influenza intensity. Elevated but decreasing influenza activity continued to be reported across countries of the Arabian Peninsula.
- In East Asia, influenza season appeared to have started, with predominantly influenza A(H1N1)pdm09 detected.
- In Southern Asia, influenza detections rose sharply in recent weeks mainly due to increased influenza A(H3N2) detections in Iran and continued influenza A(H1N1)pdm09 detections in India.
- In the temperate zones of the southern hemisphere, influenza activity returned to inter-seasonal levels with exception of some parts in Australia. Worldwide, seasonal influenza A viruses accounted for the majority of detections.

National Influenza Centres (NICs) and other national influenza laboratories from 102 countries, areas or territories reported data to FluNet for the time period from 10 December 2018 to 23 December 2018 (data as of 2019-01-04 03:38:46 UTC). The WHO GISRS laboratories tested more than 97188 specimens during that time period. 12945 were positive for influenza viruses, of which 12148 (93.8%) were typed as influenza A and 797 (6.2%) as influenza B. Of the sub-typed influenza A viruses, 5823 (77%) were influenza A(H1N1)pdm09 and 1739 (23%) were influenza A(H3N2). Of the characterized B viruses, 40 (40.4%) belonged to the B-Yamagata lineage and 59 (59.6%) to the B-Victoria lineage.

Figure 8. Percentage of respiratory specimens that tested positive for influenza, by influenza transmission zone (status as of 04 January 2019)



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

Influenza News from the CDC:

CDC: Flu Season Ongoing with Tens of Thousands Hospitalized So Far

CDC continues to recommend flu vaccination and prompt antiviral treatment of severely ill and high-risk persons

January 11, 2019 – With the 2018-2019 flu season well underway, CDC today estimated that so far this season, between about 6 million and 7 million people have been sick with flu, up to half of those people have sought medical care for their illness, and between 69,000 and 84,000 people have been hospitalized from flu. CDC expects flu activity to continue for weeks and continues to recommend flu vaccination and appropriate use of antiviral medications.

Flu vaccination is the first line of defense to prevent flu and its potentially serious complications, including death in children. Flu vaccines have been shown to be life-saving in children, in addition to having other [benefits](#). Flu vaccination has been shown in several studies to reduce severity of illness in people who get vaccinated but still get sick. Antiviral drugs are a second line of defense that can be used to treat flu illness. CDC recommends that people who are very sick or people who are at high risk of serious flu complications who develop flu symptoms should see a health care provider early in their illness for possible treatment with a flu antiviral drug.

So far this season, H1N1 viruses have predominated nationally, however in the southeast, H3N2 viruses have been most commonly reported. The number of states reporting widespread activity increased this week to 30 from 24 states last week. While levels of influenza-like-illness (ILI) declined slightly over the previous week in this week’s report, ILI remains elevated and 15 states and New York City continue to experience high flu activity. There also was a decline in the

percent of respiratory specimens testing positive for flu at clinical laboratories however this number remains elevated also. During some previous seasons, drops in ILI and the percent of specimens testing positive for flu have been observed following the holidays.

Current Severity Lower Than Last Season

Flu severity is assessed by looking at levels of influenza-like-illness (ILI), flu hospitalization rates and the percentage of deaths resulting from pneumonia or influenza that occurred during each season. It's not possible to say definitively at this time how severe the 2018-2019 season will be since there are still weeks of flu activity to come, but at this time, severity indicators are lower than they were during a similar time-frame last season.

- ILI this week is 3.5%. Last season ILI peaked at 7.5%. [Over the past 5 seasons, peak of ILI has ranged from 3.6% (2015-2016) to 7.5% (2017-2018).]
- The highest percentage of respiratory specimens testing positive for flu at clinical laboratories this season was almost 17% during the week ending December 29, 2018. Since laboratory data from clinical and public health laboratories was disaggregated three seasons ago, the peak percent of respiratory specimens testing positive for flu at clinical laboratories has ranged from 23.6% to 27.4%.
- This week, the overall hospitalization rate is 9.1 per 100,000. For the same week last season, the overall hospitalization rate was 30.5 per 100,000. [Over the past 5 seasons, cumulative end-of-season hospitalization rates have ranged from 31.4 per 100,000 (2015-2016) to 102.8 per 100,000 (2017-2018).]
- So far this season, pneumonia and influenza (P & I) deaths have not yet exceeded the epidemic threshold. Last season, P&I was at or above the epidemic threshold for 16 consecutive weeks. [Over the last five seasons, P&I has been at or above epidemic threshold for a range of four weeks (2015-2016) to 16 weeks (2017-2018).]

Despite these lower severity indicators, flu is still taking a serious toll this season. On January 11, CDC reported an additional 3 flu pediatric deaths. To date there have been 16 flu pediatric deaths. Given that significant influenza activity is likely to continue to occur, severity indicators are expected to rise.

All preliminary flu burden estimates are cumulative and will be updated weekly on the CDC website. A preliminary in-season estimate of flu deaths in the United States will be provided, pending availability of data.

More information is available on the [CDC Seasonal Influenza \(Flu\) website](#).

Note: Delays in reporting may mean that data changes over time. The most up to date data for all weeks during the 2018-2019 season can be found on the current [FluView](#) and [FluView Interactive](#).

Source web page: <https://www.cdc.gov/flu/spotlights/flu-season-updates-2018.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). This report was issued on January 18, 2019.