



Summit County Public Health Influenza Surveillance Report 2018 – 2019 Season



Public Health
Prevent. Promote. Protect.

Report #12 Flu Surveillance Week 13 (12/30/2018 to 1/5/2019) Centers for Disease Control and Prevention MMWR Week 1

Summit County Surveillance Data:

During **Week 13**, influenza-related activity in Summit County was at a moderate level.

Table 1: Overall Influenza Activity Indicators in Summit County by Week				
	Week 12 MMWR 52 N (%) ¹	Week 13 MMWR 1 N (%) ¹	Percent change from previous week	Number of weeks increasing or decreasing
Lab Reports				
Test Performed	887	1054	+ 18.8%	↑4
Positive Tests (Number and %)	97 (10.9)	130 (12.3)	+ 12.8%	↑4
Influenza A (Number and %)	94 (10.6)	126 (11.9)	+ 12.3%	↑4
Influenza B (Number and %)	3 (0.3)	4 (0.4)	+ 33.3%	↑3
Influenza hospitalizations:	19	27	+ 42.1%	↑4
Influenza ILI Community Report:				
Long-term Care Facilities	0	2	+ 100%	↑1
Correctional & Addiction Facilities	0	0	--	--
Physician Offices & Clinics	0	1	+ 100%	↑1
Pharmacy Prescriptions				
Amantidine	1	2	+ 100%	↑1
Rimantidine Flumadine	0	0	--	--
Relenza	0	0	--	--
Oseltamivir Tamiflu	12	24	+ 100%	↑3
<i>Total antiviral prescriptions</i>	13	26	+ 100%	↑3
Schools absenteeism daily rate²	Break	9.5	--	--
Deaths				
Pneumonia associated	3 (3.9)	2 (1.9)	- 51.3%	↓2
Influenza associated	0	0	--	--
Emergency room visits (EpiCenter)³				
Constitutional Complaints	623 (10.3)	601 (9.6)	- 6.8%	↓1
Fever and ILI	114 (1.9)	110 (1.7)	- 10.5%	↓1
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 13, and there were 2 reported deaths associated with pneumonia. **Figure 1** displays weekly Summit County death counts associated with pneumonia and influenza.

Acute Care Hospitalizations: There were 27 flu-related hospitalizations reported during Week 13. (**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.

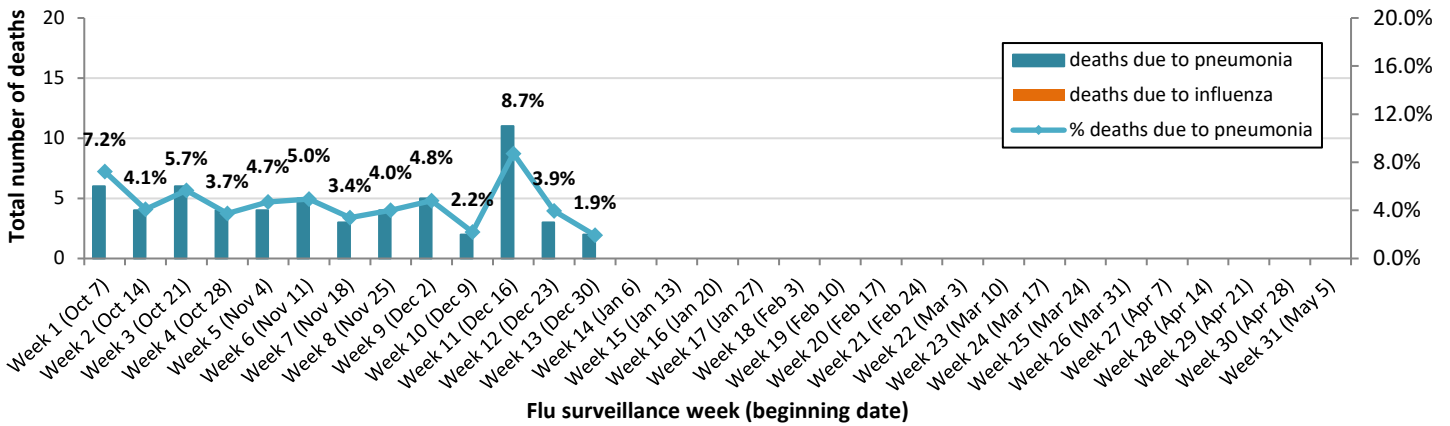
Physician offices and clinics: During Week 13, there was 1 case of ILI reported.

Pharmacies: 26 prescriptions for antiviral medications were reported during Week 13.

School absenteeism includes absences regardless of reason. During Week 13, area schools that were open reported an average daily absence rate of 9.5%.

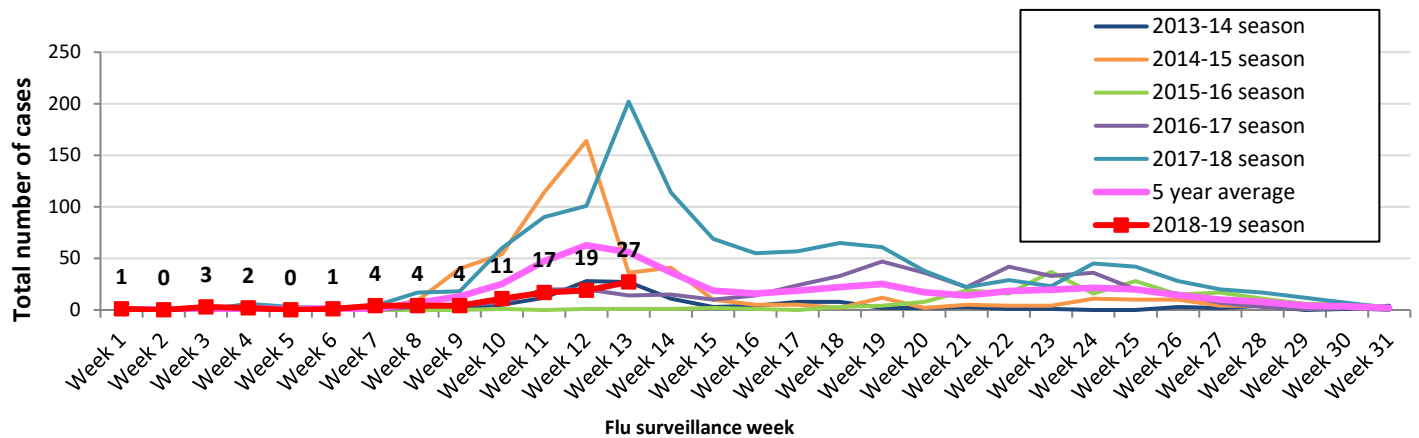
Lab reports: During Week 13, Summit County labs performed 1054 influenza tests, of which 130 tested positive (126 Type A, 4 Type B). (**Figure 4**) The number of flu tests ordered increased by 19%, and percentage of positive test results increased by nearly 13%.

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



Influenza-associated hospitalizations: Summit County hospitals reported 27 influenza-associated hospitalizations in Week 13. **Figure 2** displays weekly confirmed hospitalization counts for Summit County (season count to date = 93).

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 110 ILI-related visits reported during Week 13, which was 1.7% of total ED visits (n = 6,286). This percentage was a 10.5% decrease from Week 12.

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

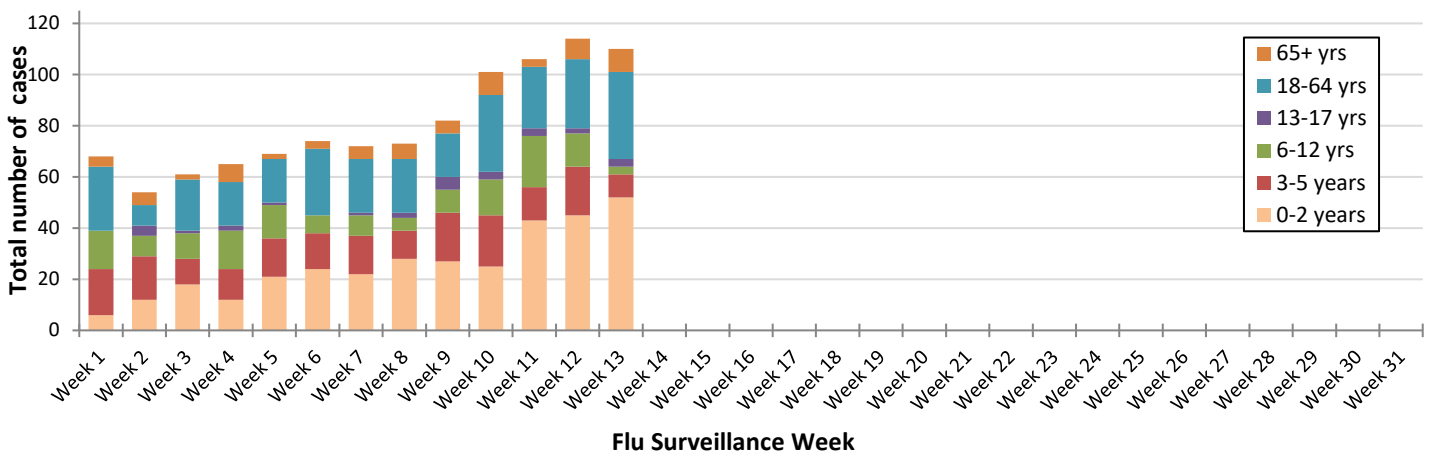
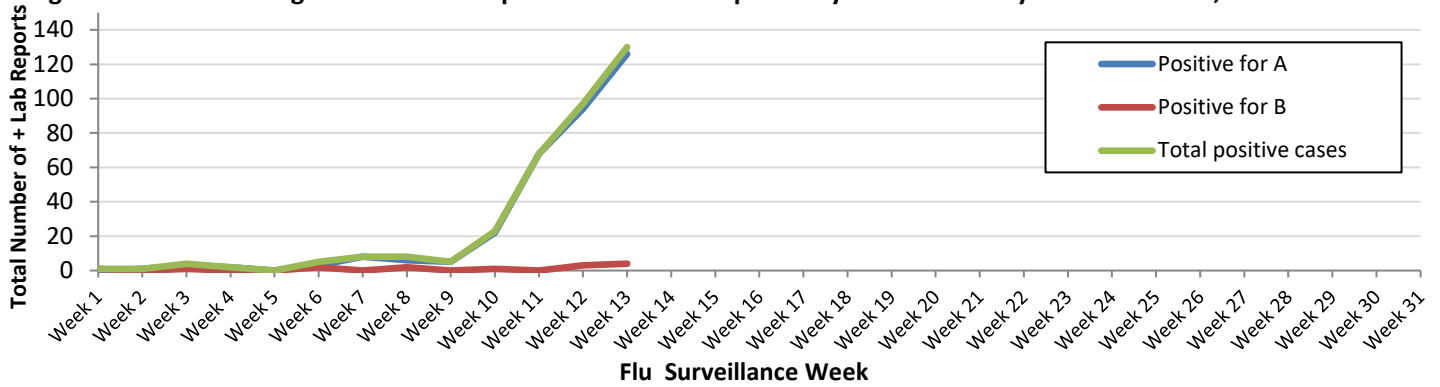


Figure 4. Influenza diagnostic tests with positive results completed by Summit County health facilities, 2018 - 2019 season



Ohio Influenza Activity:

Current Ohio Activity Level (Geographic Spread) – *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 1, public health surveillance data sources indicate low 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 (more than 25 cases). There were 338 influenza-associated hospitalizations reported during MMWR Week 1.

Ohio Influenza Activity Summary Dashboard (December 30, 2018 – January 5, 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)	1.21%	-48.95%	↓ 1	
Thermometer Sales (National Retail Data Monitor)	1139	3.08%	↑ 1	
Fever and ILI Specified ED Visits (EpiCenter)	2.43%	-19.00%	↓ 1	
Constitutional ED Visits (EpiCenter)	10.94%	-6.66%	↓ 1	
Confirmed Influenza-associated Hospitalizations (Ohio Disease Reporting System)	338	103.61%	↑ 9	
Outpatient Medical Claims Data ⁴	0.89%	-28.80%	↓ 1	

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 101 **positive** influenza tests from specimens sent from various submitters. 2018-2019 influenza season positive results: **(78) A/pdmH1N1; (22) A/H3N2; (1) Influenza B** (through 01/05/2019).
- The **National Respiratory and Enteric Virus Surveillance System (NREVSS)** has reported **26,973** influenza tests performed at participating Ohio facilities. 2018-2019 influenza season positive results: **(54) A/pdmH1N1, (31) A/H3N2, (1437) Flu A Not Subtyped, and (33) Flu B** (through 01/05/2019).
- 0 **pediatric influenza-associated mortalities** have been reported during the 2018-2019 season (through 01/05/2019).
- No **novel influenza A virus infections** have been reported during the 2018-2019 season (through 01/05/2019).
- Incidence of confirmed **influenza-associated hospitalizations** in 2018-2019 season = **893** (through 01/05/2019).

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 5, 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:** 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) decreased from 4.0% to 3.5%, 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):** New York City and 15 states experienced high ILI activity; 12 states experienced moderate ILI activity; the District of Columbia, Puerto Rico and eight states experienced low ILI activity; and 15 states experienced minimal ILI activity.
- **Geographic Spread of Influenza (Figure 7):** The geographic spread of influenza in 30 states was reported as widespread; Puerto Rico and 17 states reported regional activity; two states reported local activity; the District of Columbia, the U.S. Virgin Islands and one state reported sporadic activity; and Guam did not report.
- **Influenza-associated Hospitalizations:** A cumulative rate of 9.1 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (22.9 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 1.

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

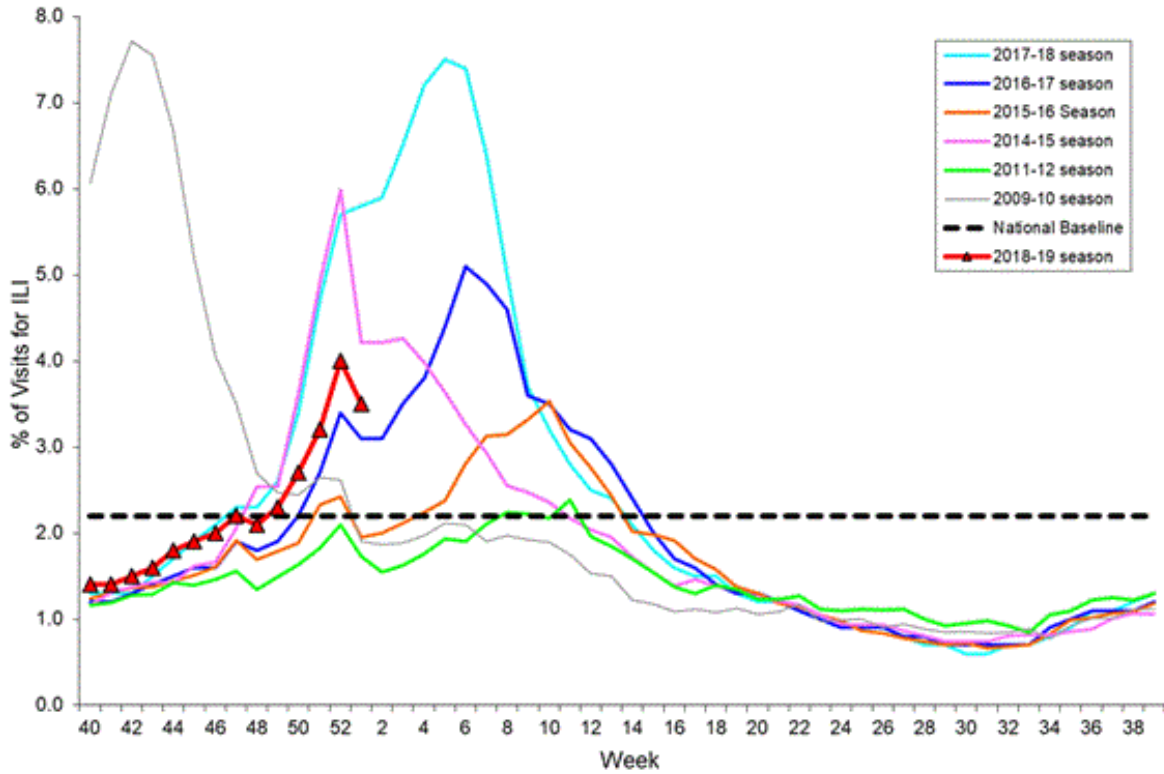


Figure 6. Influenza-like illness (ILI) activity level indicator determined by data reported to ILINet

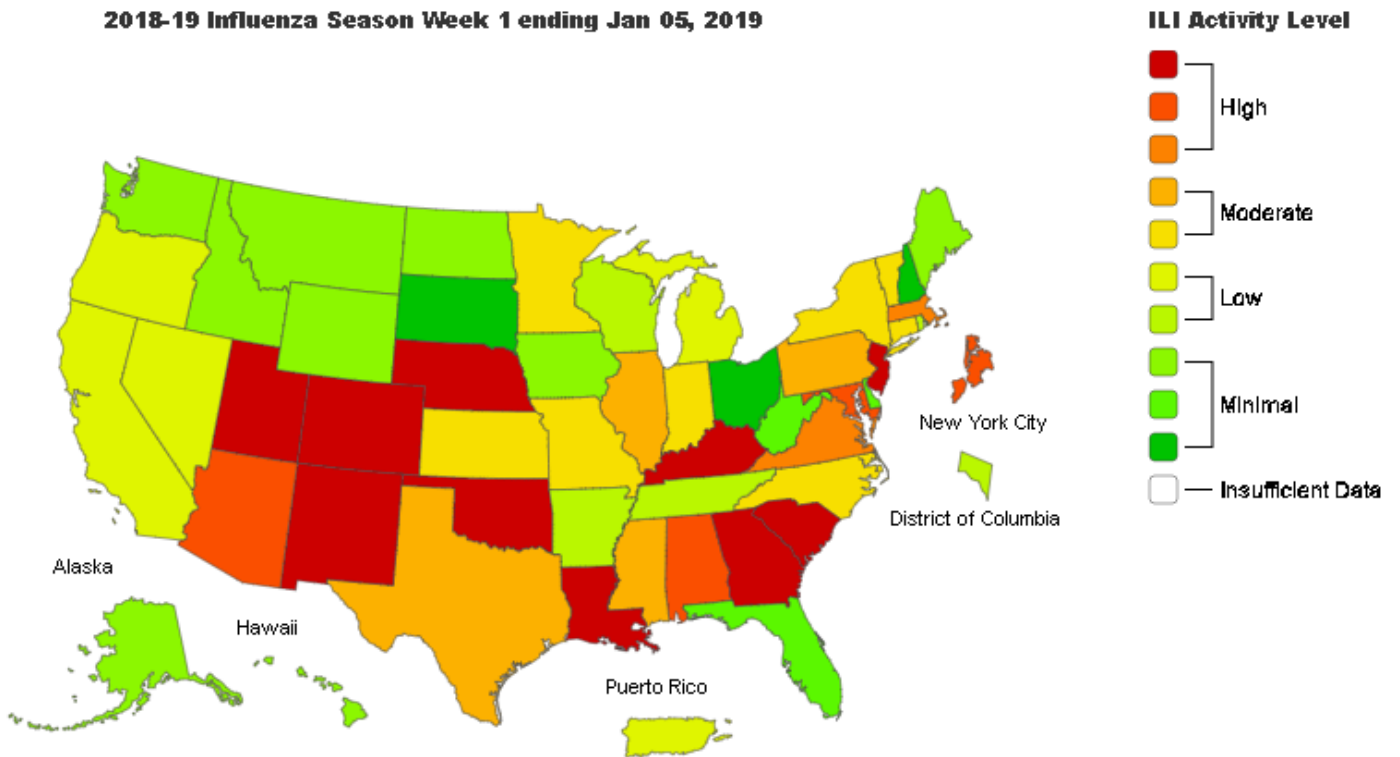
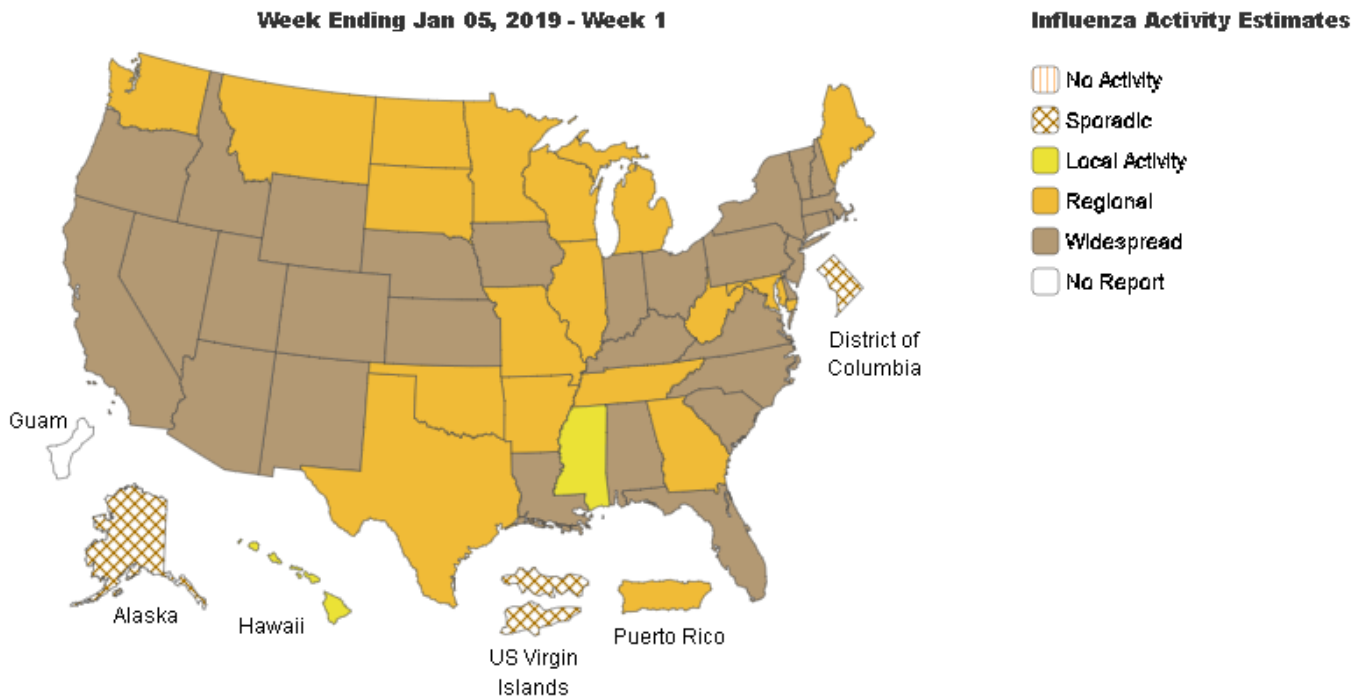


Figure 7. Weekly influenza activity (geographic spread) estimates reported by state and territorial epidemiologists



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.

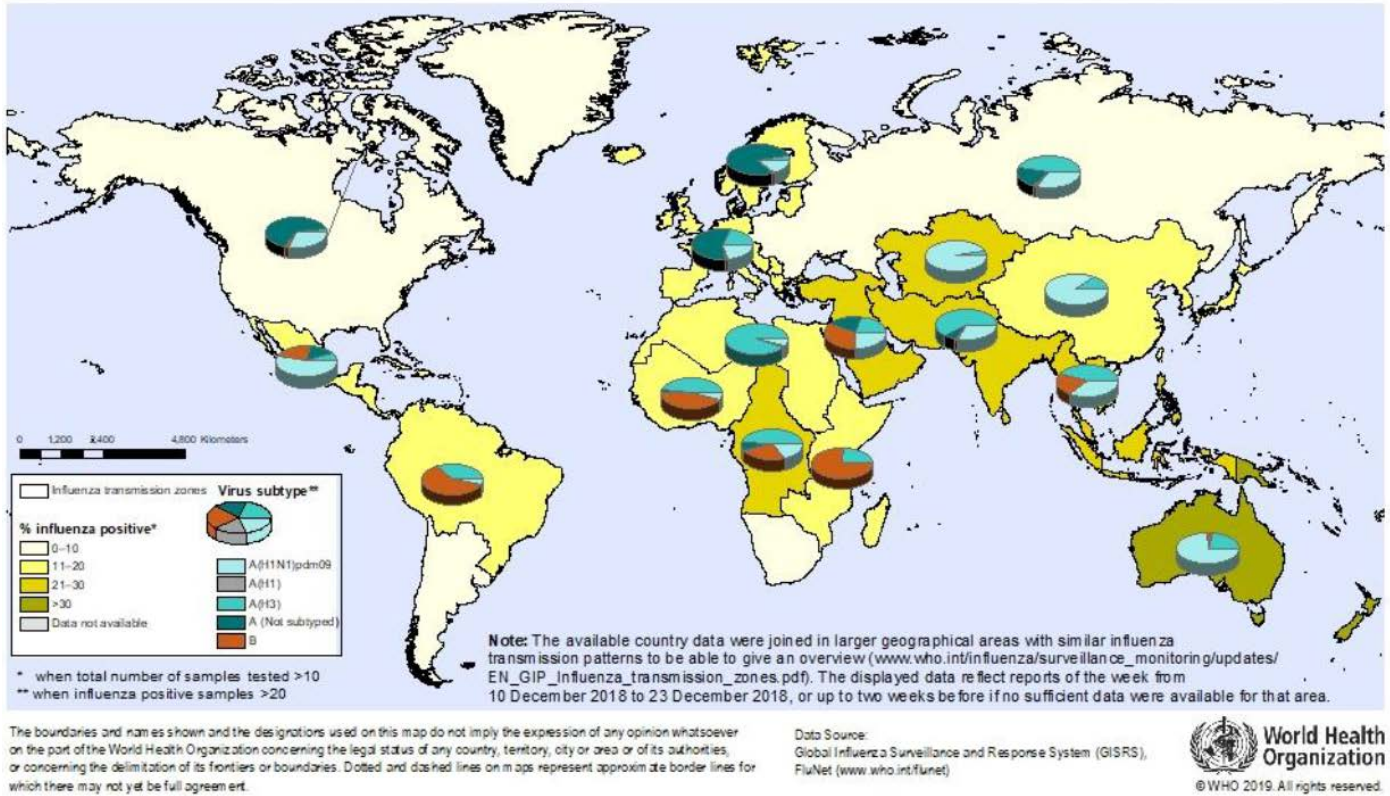
Summary

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 Center for Infectious Disease Research and Policy (CIDRAP):

Study: Pregnant women with H1N1 have more adverse birth outcomes

Pregnant women who suffered from severe H1N1 influenza during the 2009 pandemic were more likely to experience adverse birth outcomes, including preterm infants, low-birth-weight infants, and infants with low Apgar scores than women who did not have influenza during pregnancy, according to a study today in *Birth Defects Research*.

The study followed pregnancies from April to December of 2009 recorded by five state health departments across the United States. Researchers compared birth outcomes from 490 pregnant women with influenza, 1,451 women without reported influenza with pregnancies in the same year, and 1,446 pregnant women without reported influenza with prior-year pregnancies.

Sixty-four women with H1N1 influenza were admitted to the intensive care unit and had an increased adjusted relative risk of 3.9 for having preterm births (before 37 weeks gestation). The adjusted relative risk for low-weight infants and infants with Apgar scores under 6 was 4.6 and 8.7, respectively.

"The message of this work is particularly timely in the midst of the current influenza season. Our study found that severely ill women with 2009 H1N1 influenza during pregnancy were more likely to have adverse birth outcomes—such as their baby being born preterm or of low birth weight—than women without influenza," said senior author Sonja

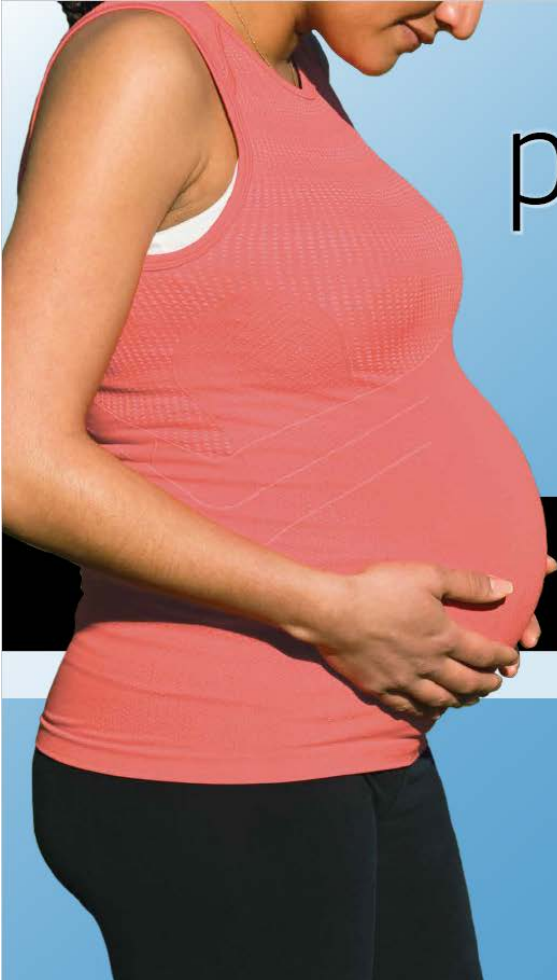
Rasmussen, MD of the University of Florida in a press release from Wiley, the journal's publisher. "These findings support the importance of pregnant women receiving the influenza vaccine and of prompt treatment with antiviral medications for pregnant women suspected of having influenza."

The current flu season has been dominated by the 2009 H1N1 strain of influenza A.

[Jan 9 Birth Defects Res study](#)

[Jan 9 Wiley press release](#)

Source web page: <http://www.cidrap.umn.edu/news-perspective/2019/01/news-scan-jan-09-2019>




pregnant women
are at **risk** for serious complications from flu

- Severe illness
- Hospitalization
- Pneumonia

Vaccination can protect both pregnant mothers and their babies from flu and flu-related complications.

Ask your doctor about the flu vaccine today!

LEARN MORE AT www.cdc.gov/flu or 1-800-CDC-INFO



U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

Image source webpage: <https://www.cdc.gov/flu/resource-center/freeresources/print/print-pregnant.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 11, 2019.