



Summit County Public Health Influenza Surveillance Report 2018 – 2019 Season



Public Health
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Report #11 Flu Surveillance Week 12 (12/23/2018 to 12/29/2018) Centers for Disease Control and Prevention MMWR Week 52

Summit County Surveillance Data:

During **Week 12**, influenza-related activity increased to moderate levels, but remains far below activity in 2017-2018.

Table 1: Overall Influenza Activity Indicators in Summit County by Week				
	Week 11 MMWR 51 N (%) ¹	Week 12 MMWR 52 N (%) ¹	Percent change from previous week	Number of weeks increasing or decreasing
Lab Reports				
Test Performed	714	887	+ 24.2%	↑3
Positive Tests (Number and %)	68 (9.5)	97 (10.9)	+ 14.7%	↑3
Influenza A (Number and %)	68 (9.5)	94 (10.6)	+ 11.6%	↑3
Influenza B (Number and %)	0 (0.0)	3 (0.3)	+ 100%	↑2
Influenza hospitalizations:	17	19	+ 11.8%	↑3
Influenza ILI Community Report:				
Long-term Care Facilities	0	0	--	--
Correctional & Addiction Facilities	0	0	--	--
Physician Offices & Clinics	2	0	- 100%	↓1
Pharmacy Prescriptions				
Amantidine	3	1	- 66.7%	↓1
Rimantidine Flumadine	0	0	--	--
Relenza	0	0	--	--
Oseltamivir Tamiflu	6	12	+ 100%	↑2
<i>Total antiviral prescriptions</i>	9	13	+ 44.4%	↑2
Schools absenteeism daily rate²	6.7	--	--	--
Deaths				
Pneumonia associated	11 (8.7)	3 (3.9)	- 54.8%	↓1
Influenza associated	0	0	--	--
Emergency room visits (EpiCenter)³				
Constitutional Complaints	576 (9.6)	623 (10.3)	+ 7.3%	↑4
Fever and ILI	106 (1.8)	114 (1.9)	+ 5.6%	↑4
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 12, and there were 3 reported deaths associated with pneumonia. **Figure 1** displays weekly Summit County death counts associated with pneumonia and influenza.

Acute Care Hospitalizations: There were 19 flu-related hospitalizations reported during Week 12. (**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 were 0 cases of ILI reported.

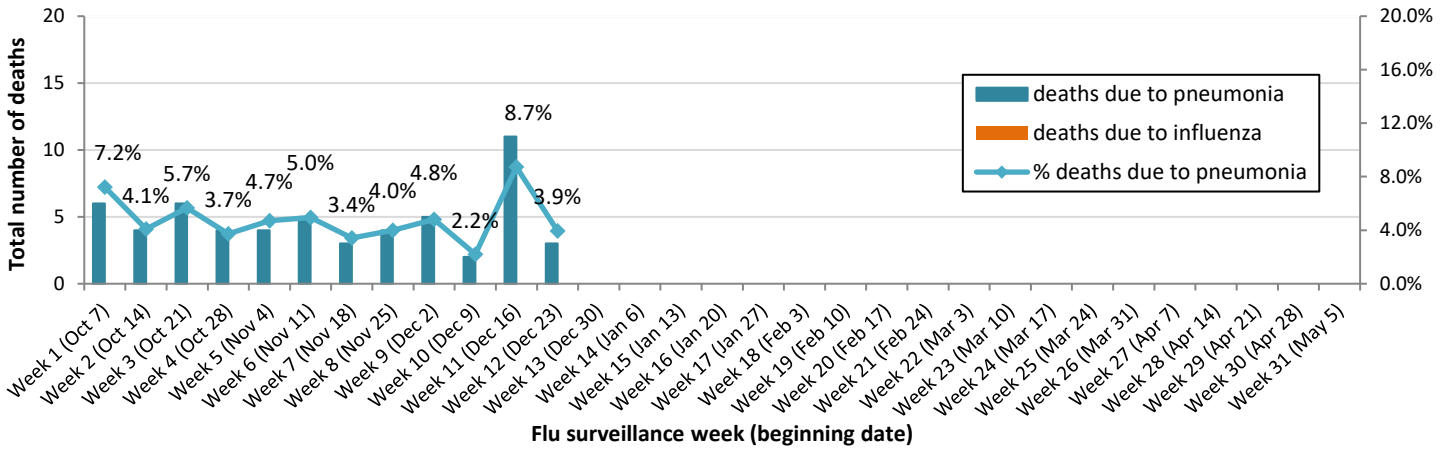
Physician offices and clinics: During Week 12, there were 0 cases of ILI reported.

Pharmacies: Thirteen prescriptions for antiviral medications were reported by partners during Week 12.

School absenteeism includes absences regardless of reason. During Week 12, all area schools were closed due to the holiday break.

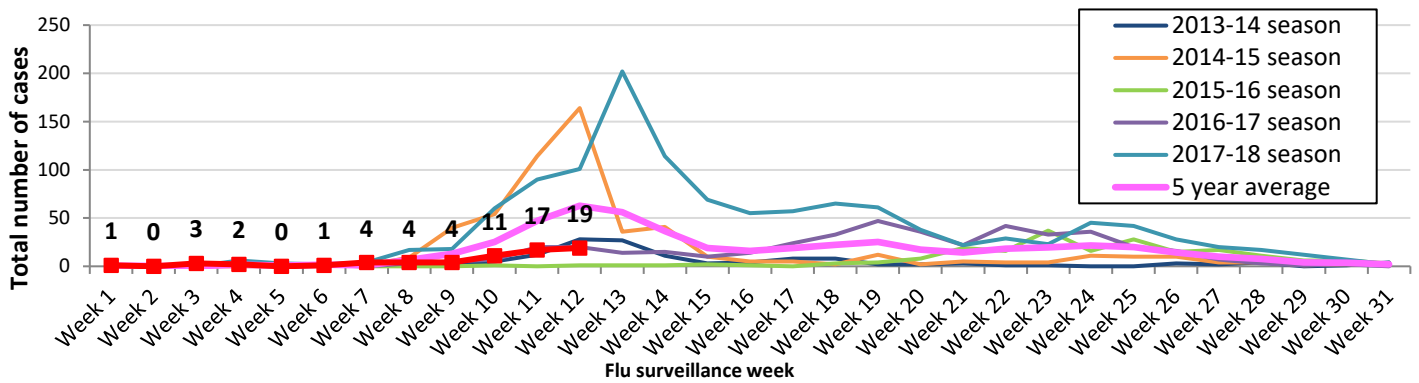
Lab reports: During Week 12, Summit County labs performed 887 tests, of which 97 tested positive (94 Type A, 3 Type B). (**Figure 4**) The flu tests ordered increased by 24% and positive test results increased by nearly 15%.

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



Influenza-associated hospitalizations: Summit County hospitals reported 19 influenza-associated hospitalizations in Week 12. **Figure 2** displays weekly confirmed hospitalization counts for Summit County (season count to date = 66).

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 114 ILI-related visits reported during Week 12, which was 1.9% of total ED visits (n = 6069). This percentage was a 5.6% increase from Week 11.

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

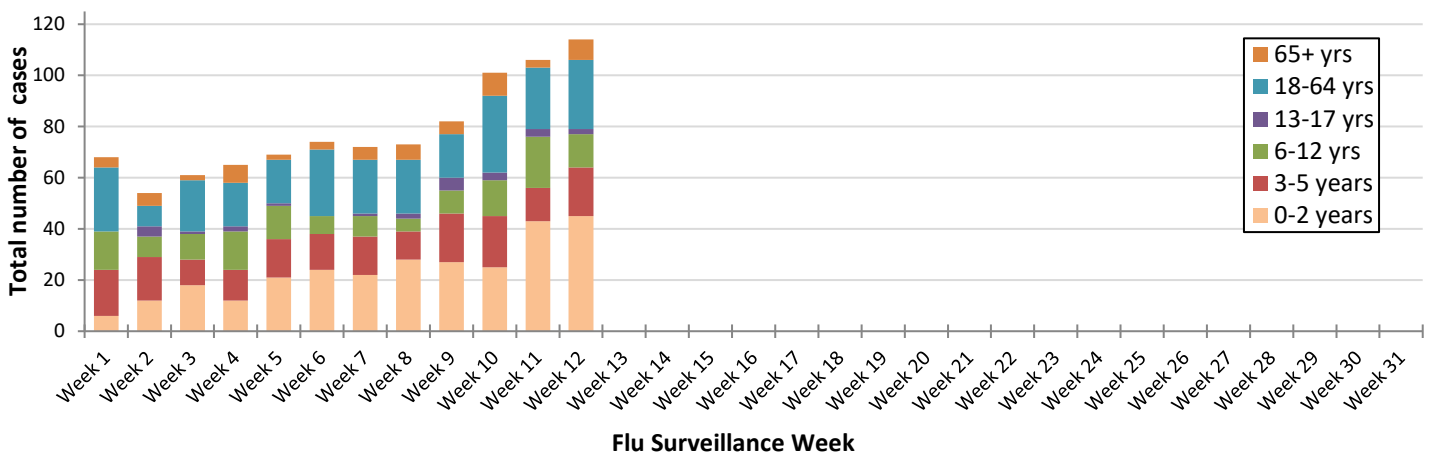
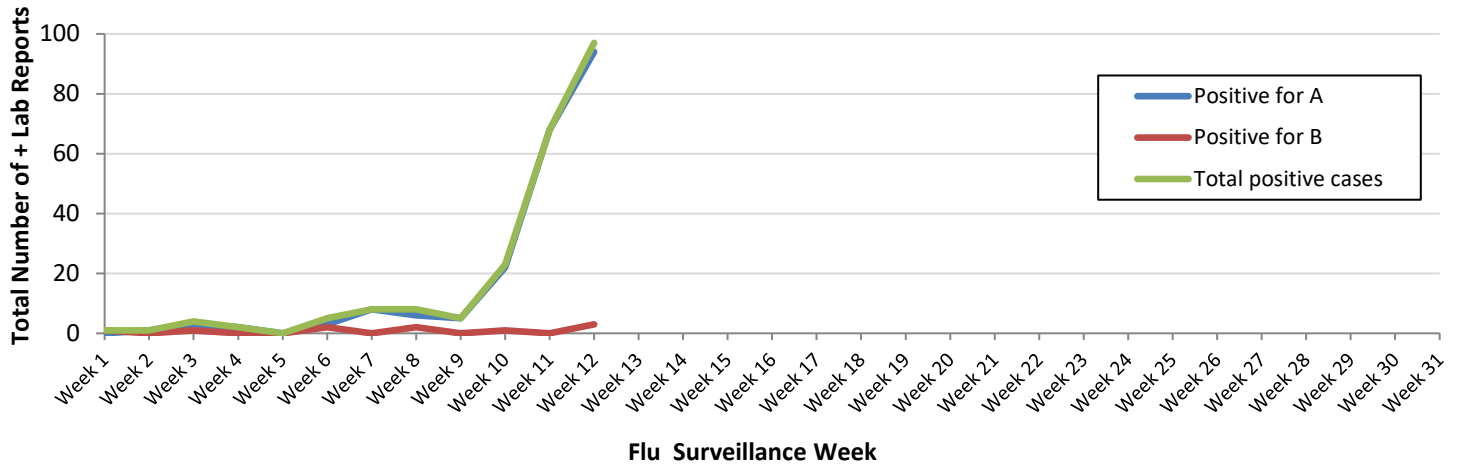


Figure 4. Influenza diagnostic tests with positive results completed by Summit County health facilities, 2018 - 2019 season



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 52, 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 (25 cases/week statewide). There were 166 influenza-associated hospitalizations reported during MMWR Week 52.

Ohio Influenza Activity Summary Dashboard (December 23 – December 29, 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)	2.41%	91.27%	↑ 3	
Thermometer Sales (National Retail Data Monitor)	1153	4.63%	↑ 2	
Fever and ILI Specified ED Visits (EpiCenter)	2.99%	19.12%	↑ 3	
Constitutional ED Visits (EpiCenter)	11.70%	10.48%	↑ 4	
Confirmed Influenza-associated Hospitalizations (Ohio Disease Reporting System)	166	32.80%	↑ 8	
Outpatient Medical Claims Data ⁴	1.24%	85.07%	↑ 4	

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/>

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 Dec. 29, 2018:

- **Viral Surveillance:** The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories is increasing. 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) increased to 4.1%, which is above the national baseline of 2.2%. All 10 regions reported ILI at or above their region-specific baseline level. The increase in the percentage of patient visits for ILI may be influenced in part by a reduction in routine healthcare visits during the winter holidays, as has occurred during previous seasons.
 - **ILI State Activity Indicator Map (Figure 6):** New York City and 19 states experienced high ILI activity; nine states experienced moderate ILI activity; the District of Columbia and 10 states experienced low ILI activity; and Puerto Rico and 12 states experienced minimal ILI activity.
- **Geographic Spread of Influenza (Figure 7):** The geographic spread of influenza in 24 states was reported as widespread; Puerto Rico and 18 states reported regional activity; six states reported local activity; the District of Columbia, the U.S. Virgin Islands and two states reported sporadic activity; and Guam did not report.
- **Influenza-associated Hospitalizations:** A cumulative rate of 5.4 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among children younger than 5 years (14.5 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:** Two influenza-associated pediatric deaths were reported to CDC during week 52.

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

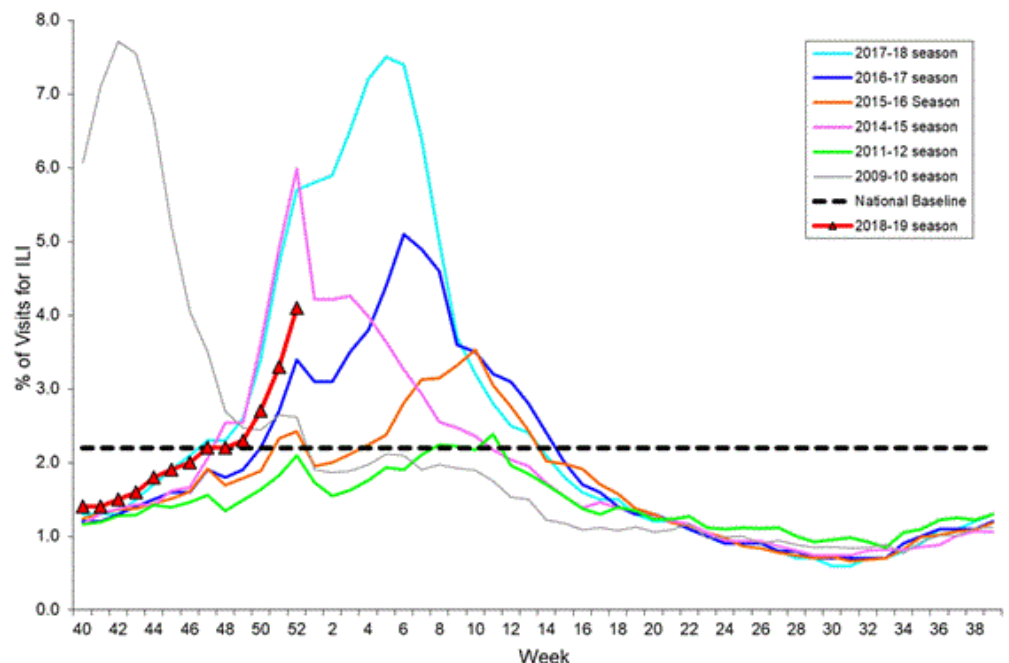


Figure 6. Influenza-like illness (ILI) activity level indicator determined by data reported to ILINet

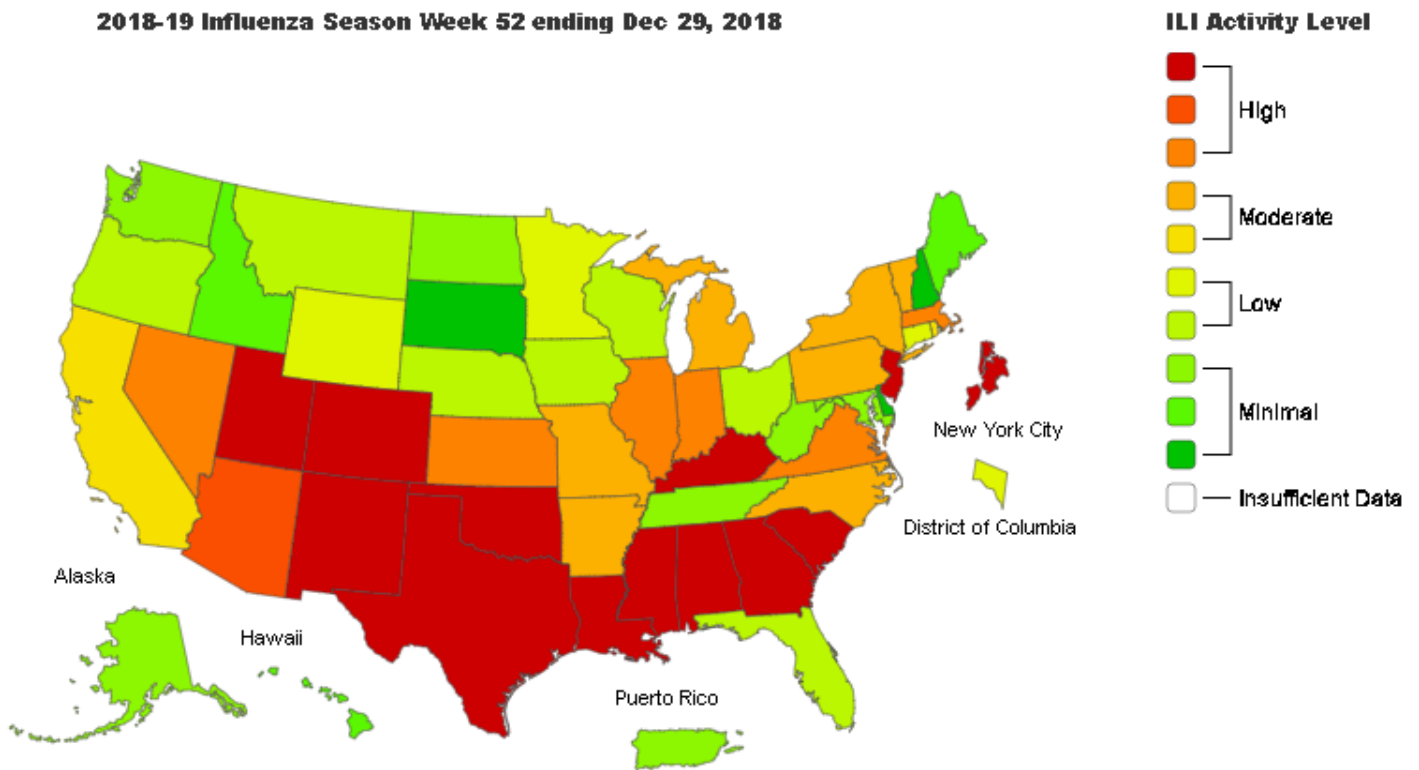
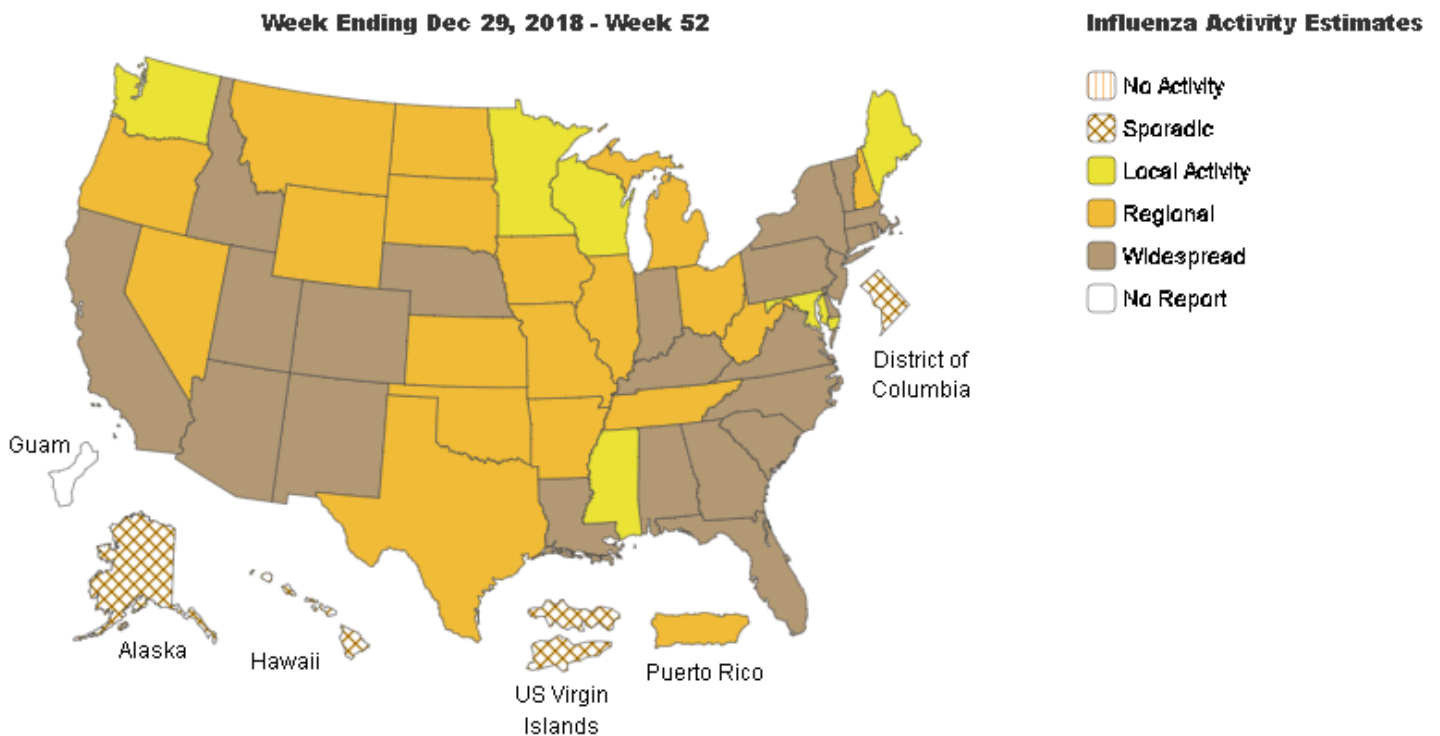


Figure 7. Weekly influenza activity (geographic spread) estimates reported by state and territorial epidemiologists



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

Global Surveillance:

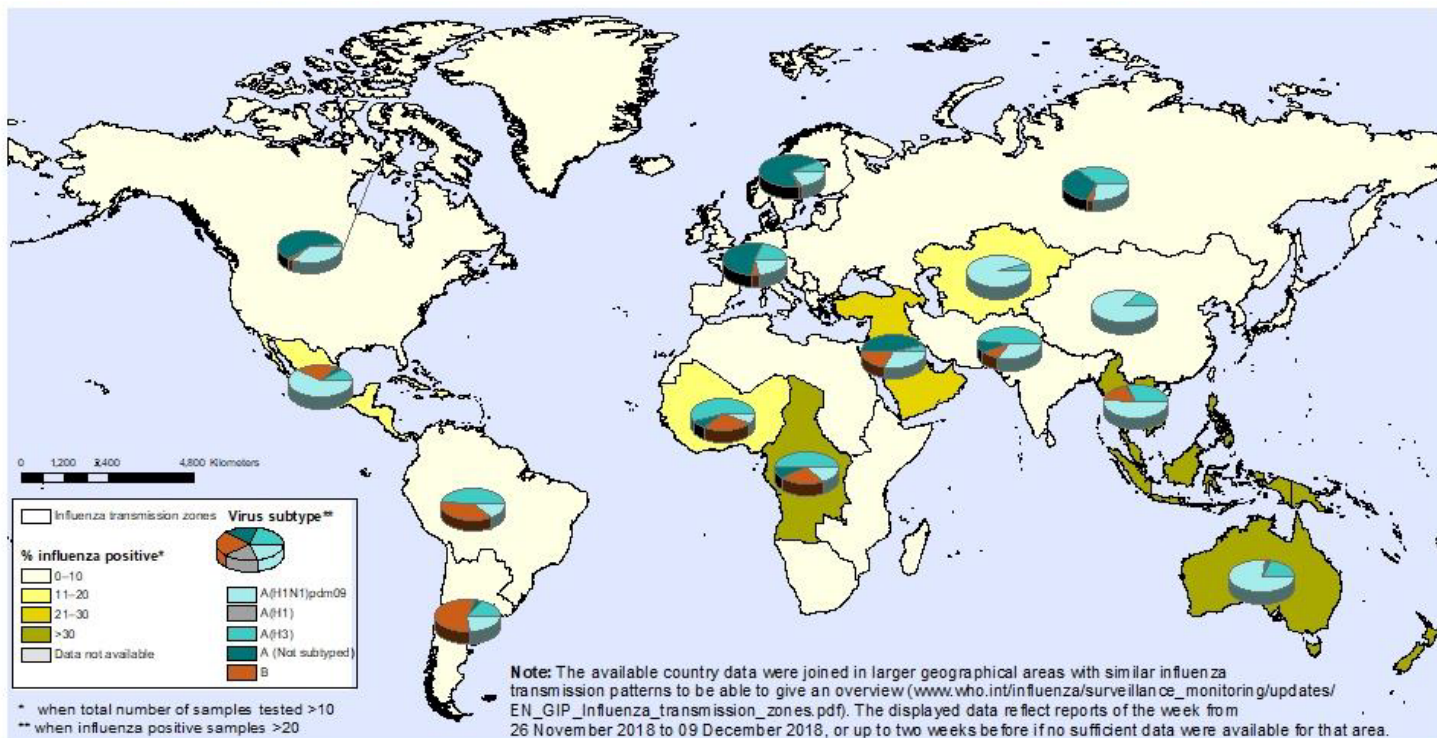
Influenza Update N° 331, World Health Organization (WHO), published 24 December 2018, based on data up to 09 December 2018. The Update is published every two weeks.

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 115 countries, areas or territories reported data to FluNet for the time period from 26 November 2018 to 09 December 2018 (data as of 2018-12-20 14:17:33 UTC). The WHO GISRS laboratories tested more than 139511 specimens during that time period. 10520 were positive for influenza viruses, of which 9970 (94.8%) were typed as influenza A and 550 (5.2%) as influenza B. Of the sub-typed influenza A viruses, 4961 (84.1%) were influenza A(H1N1)pdm09 and 936 (15.9%) were influenza A(H3N2). Of the characterized B viruses, 85 (63%) belonged to the B-Yamagata lineage and 50 (37%) to the B-Victoria lineage.

Figure 8. Percentage of respiratory specimens that tested positive for influenza, by influenza transmission zone (status as of 20 December 2018)



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

Data Source:
Global Influenza Surveillance and Response System (GISRS),
FluNet (www.who.int/flu-net)

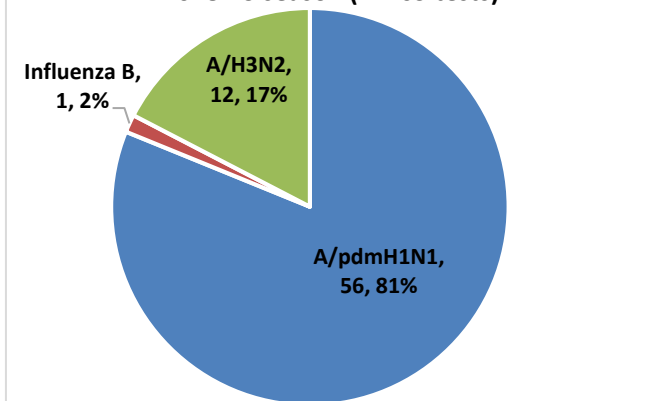
 **World Health Organization**
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Source: https://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/

Influenza News from the Ohio Department of Health:

Predominate influenza subtypes in Ohio, 2018-2019 influenza season

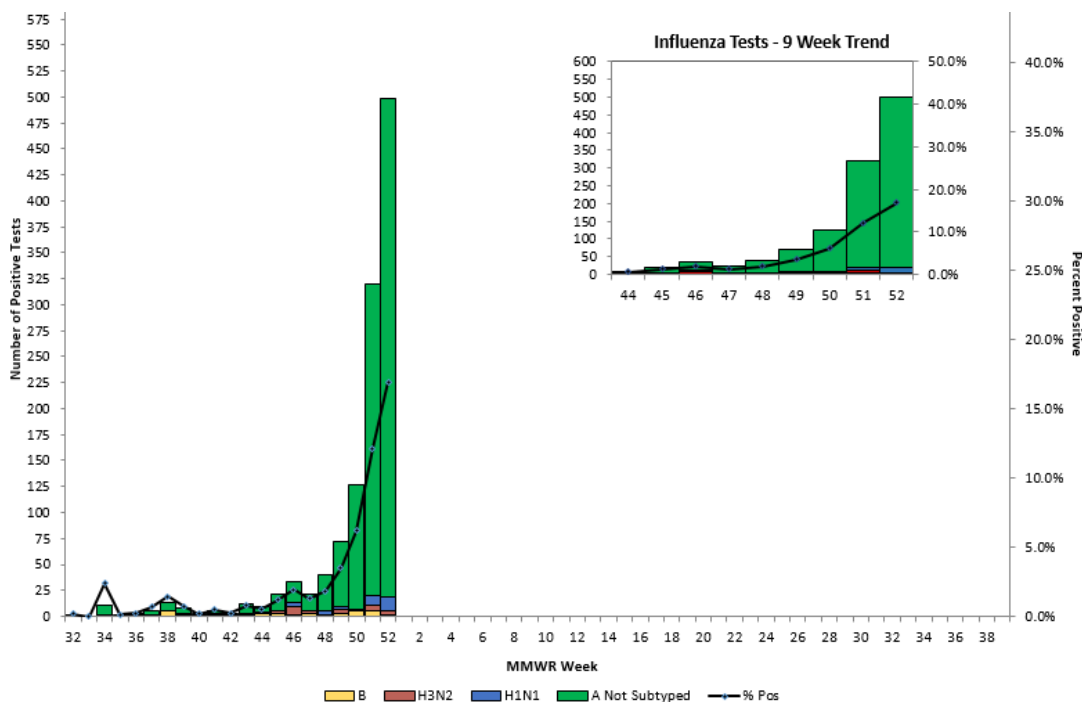
Figure 8. ODH Lab positive flu test results, 2018-19 season (n = 69 tests)



National influenza testing surveillance indicates that Type A has been dominate in the first half of the 2018-2019 season in most of the United States. This trend continues for the Ohio: as of 12/29/2018, **ODH lab** has reported 69 **positive** influenza tests from specimens sent from various submitters. 2018-2019 influenza season positive results: **(56) A/pdmH1N1; (12) A/H3N2; (1) Influenza B;** (Figure 8).

Ohio lab results submitted to National Respiratory and Enteric Virus Surveillance System (NREVSS) indicate that the majority of flu cases have been type A this season. Although most of the lab results reported to the NREVSS are not subtyped, for the results with subtyping completed, A/pdmH1N1 was the most common subtype in MMWR Weeks 51 and 52 (12/16- 12/29/2018). The graph in Figure 9 illustrates the NREVSS flu test results for the state of Ohio.

Figure 9. Positive influenza tests (PCR), National Respiratory and Enteric Virus Surveillance System (NREVSS), 2018-2019 influenza season, Ohio



Source web page: <https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/seasonal-influenza/media/seasonal-influenza-week-52>

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 4, 2019.