



**Summit County Public Health
Influenza Surveillance Report
2018 – 2019 Season
Report #4**



**Flu Surveillance Week 5 (11/4/2018 to 11/10/2018)
Centers for Disease Control and Prevention MMWR Week 45**

Summit County Surveillance Data:

In **Week 5** of influenza surveillance, influenza-related activity remained low in Summit County.

Table 1: Overall Influenza Activity Indicators in Summit County by Week				
	Week 4 MMWR 44 N (%)¹	Week 5 MMWR 45 N (%)¹	Percent change from previous week	Number of weeks increasing or decreasing
Lab Reports				
Test Performed	421	425	+1.0%	↑4
Positive Tests (Number and %)	2 (0.5)	0 (0.0)	-100%	↓2
Influenza A (Number and %)	2 (0.5)	0 (0.0)	-100%	↓2
Influenza B (Number and %)	0 (0.0)	0 (0.0)	--	--
Influenza hospitalizations:	2	0	-100%	↓2
Influenza ILI Community Report:				
Long-term Care Facilities	2	3	+50.0%	↑2
Correctional & Addiction Facilities	0	0	--	--
Physician Offices & Clinics	1	5	+400%	↑1
Pharmacy Prescriptions				
Amantidine	3	0	-100%	↓1
Rimantidine Flumadine	0	0	--	--
Relenza	0	0	--	--
Oseltamivir Tamiflu	2	1	-50.0%	↓1
<i>Total antiviral prescriptions</i>	5	1	-80.0%	↓1
Schools absenteeism daily rate²	6.2	6.5	+4.8%	↑2
Deaths				
Pneumonia associated	4 (3.7)	4 (4.7)	+25.9%	↑1
Influenza associated	0	0	--	--
Emergency room visits (EpiCenter)³				
Constitutional Complaints	452 (7.9)	468 (8.2)	+3.8%	↑2
Fever and ILI	65 (1.1)	69 (1.2)	+9.1%	↑1
1) N and % are reported when available				
2) Absence is for any reason. Percent is from total number of students enrolled. Data was collected from 7 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 5, and there were four total deaths associated with pneumonia. **Figure 1** displays weekly Summit County death counts associated with pneumonia and influenza.

Acute Care Hospitalizations: There were zero flu-related hospitalizations reported during Week 5. (**Figure 2**)

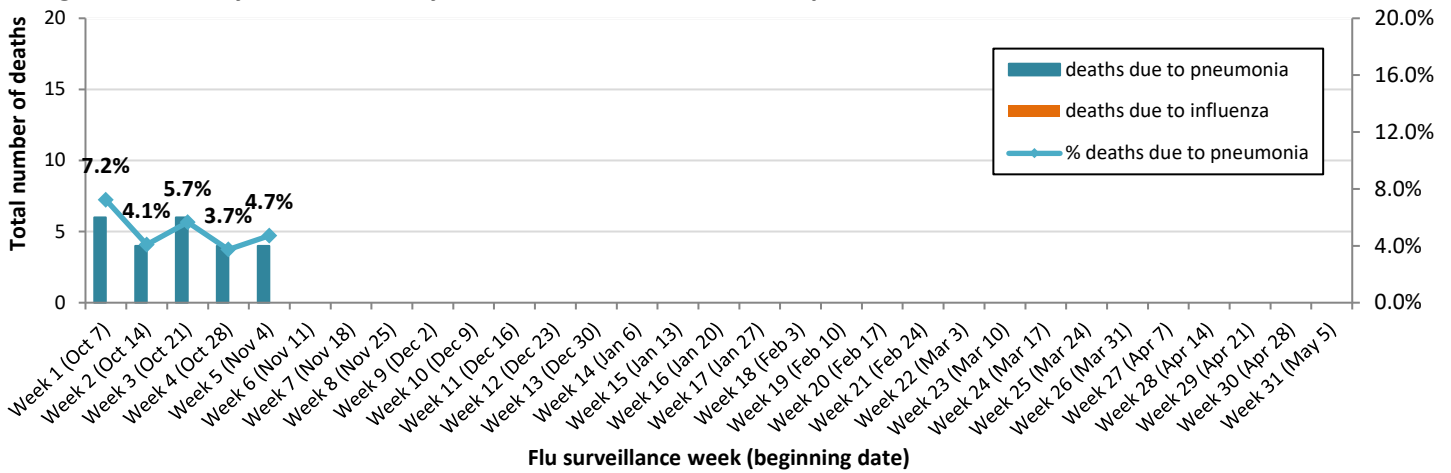
COMMUNITY ILI REPORTS: Influenza like illness (ILI) as defined by the CDC is fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat without a known cause other than influenza. Community ILI reports: **Long Term Care Facilities:** There were 3 cases of ILI reported. **Correctional and Inpatient Addiction facilities:** There were 0 cases of ILI reported. **Physician offices and clinics:** During Week 5, there were 5 cases of ILI reported.

Pharmacies: One prescription for antiviral medications was reported during Week 5.

School absenteeism includes absences regardless of reason. In Week 5, the absence rate was 6.5%, an increase of 4.8% over the Week 4 rate.

Lab reports: During the Week 5, Summit County labs performed 425 tests, of which none tested positive. (**Figure 4**) As more hospitals replace the rapid flu test with BIOFIRE respiratory panels, the number of tests performed will likely increase this year.

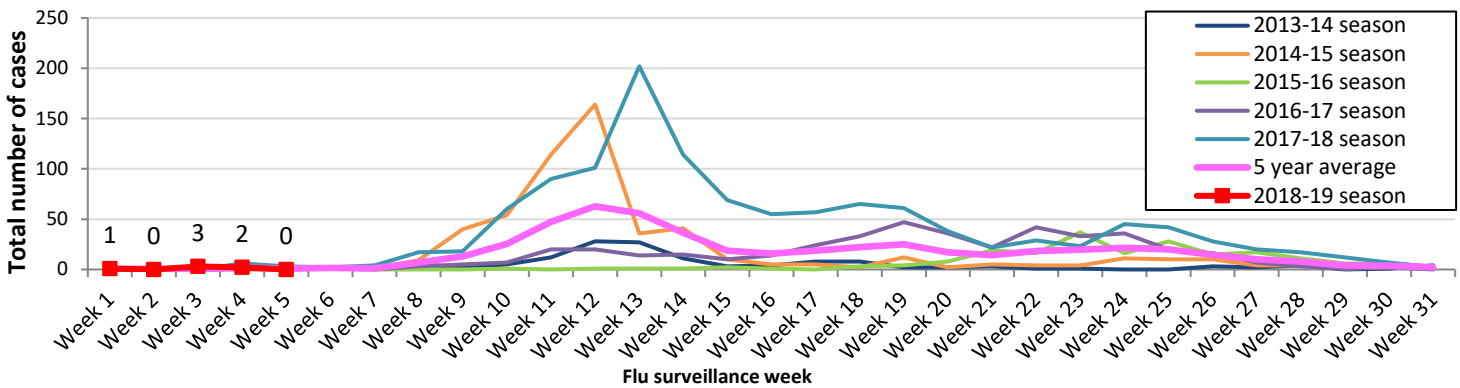
Figure 1. Weekly Summit County death counts associated with pneumonia and influenza, 2018-2019 season



Influenza-associated hospitalization: Summit County hospitals reported 0 influenza-associated hospitalizations in Week 5.

Figure 2 displays weekly confirmed hospitalization count for Summit County (cumulative count to date =6).

Figure 2. Summit County influenza-associated hospitalizations by week, 2018-2019 season, 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, and there were 69 ILI-related visits reported during Week 5. This was not a significant change from the previous week, but there has been an increasing trend in ILI-related visits since Week 2.

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

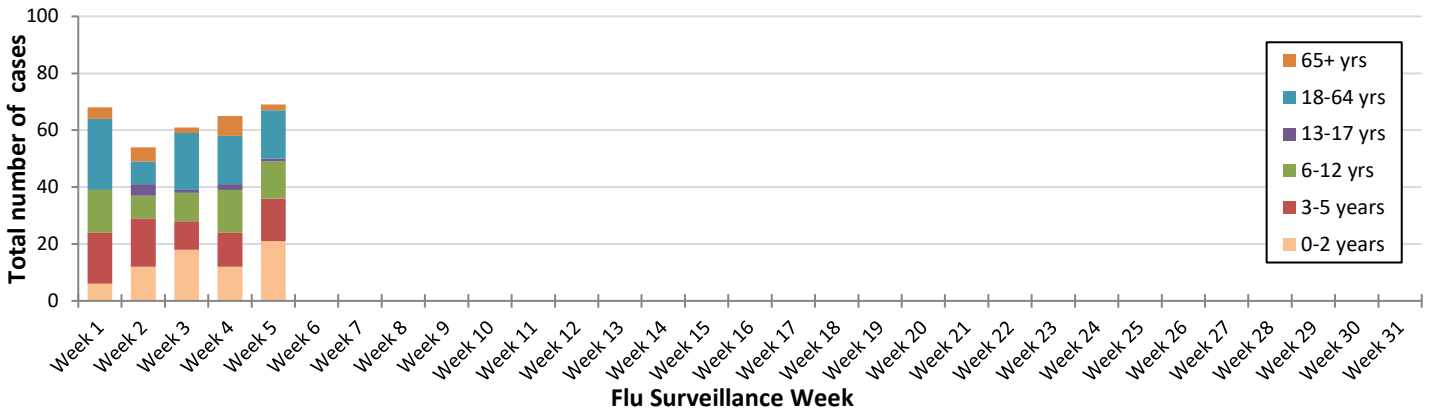
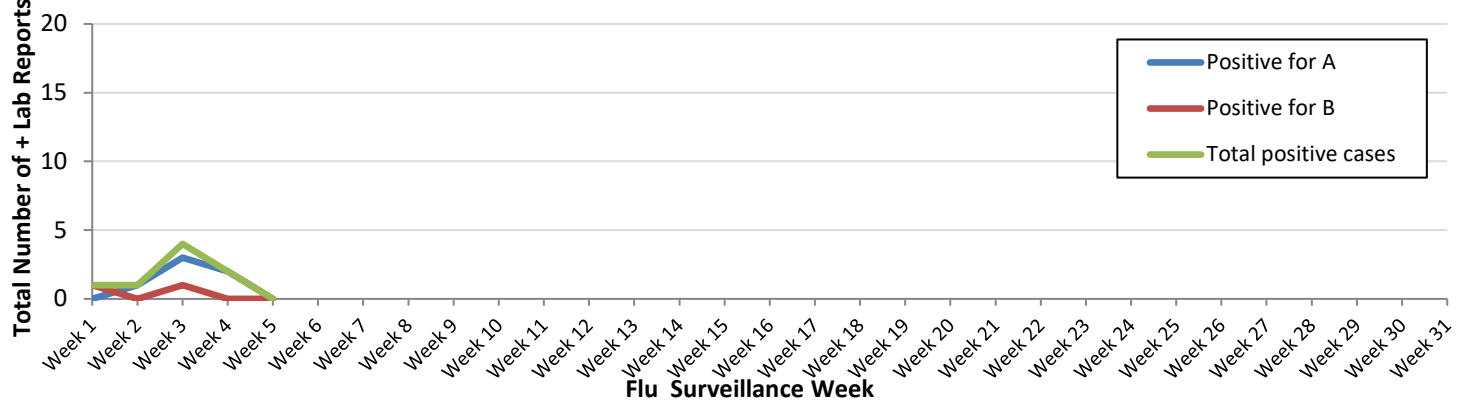


Figure 4. Influenza diagnostic tests with positive results completed by Summit Co. health facilities, 2018 - 2019 season



Ohio Influenza Activity:

Current Ohio Activity Level (Geographic Spread) – *Sporadic*

Definition: Small numbers of laboratory-confirmed influenza cases or a single laboratory-confirmed influenza outbreak has been reported, but there is no increase in cases of ILI.

During MMWR Week 45, 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 slightly above baseline levels statewide. Reported cases of influenza-associated hospitalizations are below the seasonal threshold*. There were 14 influenza-associated hospitalizations reported during MMWR Week 45.

Ohio Influenza Activity Summary Dashboard (November 4 – November 10, 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)	0.78%	-50.63%	↓ 1	
Thermometer Sales (National Retail Data Monitor)	915	23.93%	↑ 1	
Fever and ILI Specified ED Visits (EpiCenter)	1.78%	9.20%	↑ 1	
Constitutional ED Visits (EpiCenter)	8.59%	2.75%	↑ 1	
Confirmed Influenza-associated Hospitalizations (Ohio Disease Reporting System)	14	7.69%	↑ 1	
Outpatient Medical Claims Data ⁴	0.37%	19.35%	↑ 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 remains low, although small increases in activity were reported. Influenza A(H1N1)pdm09, influenza A(H3N2), and influenza B viruses continue to co-circulate, with influenza A(H1N1)pdm09 viruses reported most commonly by public health laboratories since September 30, 2018. Below is a summary of the key influenza indicators for the week ending November 10, 2018:

- **Viral Surveillance:** Influenza A viruses have predominated in the United States since the beginning of July. The percentage of respiratory specimens testing positive for influenza in clinical laboratories was low.
 - **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 since late May show susceptibility to the antiviral drugs oseltamivir, zanamivir, and peramivir.
- **Influenza-like Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) increased slightly to 1.9%, which is below the national baseline of 2.2%. One of 10 regions reported ILI at or above their region-specific baseline level (**Figure 5**).
 - **ILI State Activity Indicator Map:** One state experienced moderate ILI activity, New York City and five states experienced low ILI activity; and the District of Columbia, Puerto Rico and 44 states experienced minimal ILI activity (**Figure 6**).
- **Geographic Spread of Influenza:** The geographic spread of influenza in three states was reported as regional; Guam and 10 states reported local activity; the District of Columbia, Puerto Rico, the U.S. Virgin Islands and 35 states reported sporadic activity; and two states reported no activity (**Figure 7**).
- **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:** No influenza-associated pediatric deaths were reported to CDC for week 45.

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

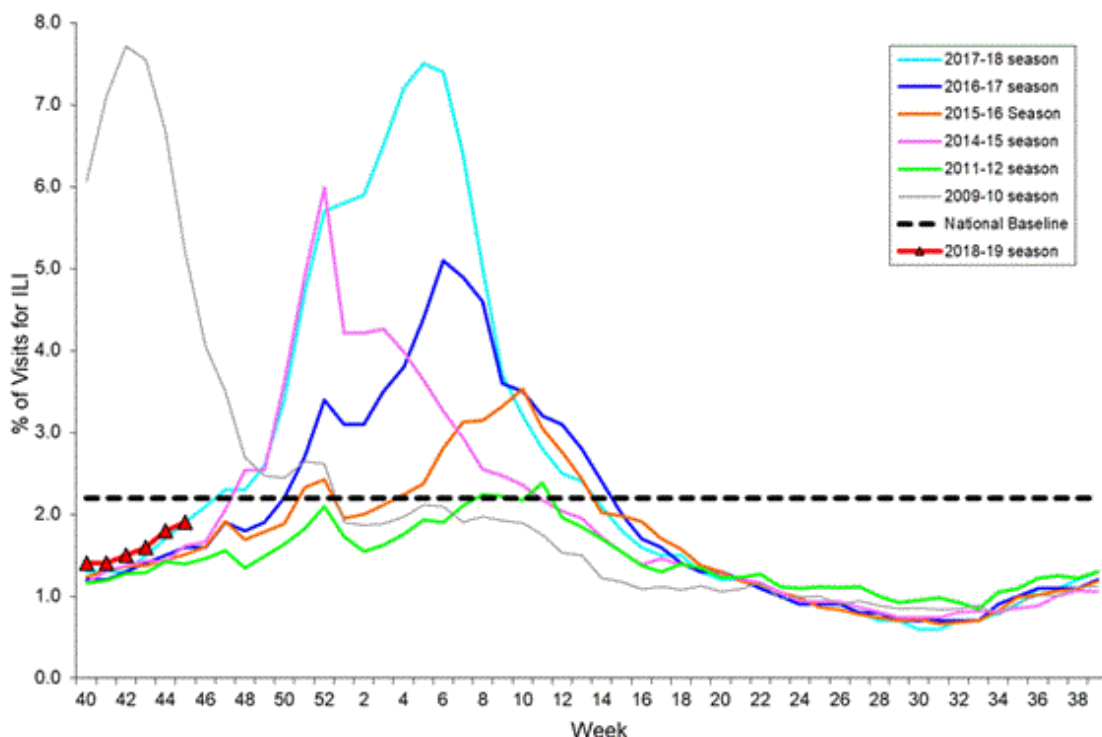


Figure 6. Influenza-like illness (ILI) activity level indicator determined by data reported to ILINet

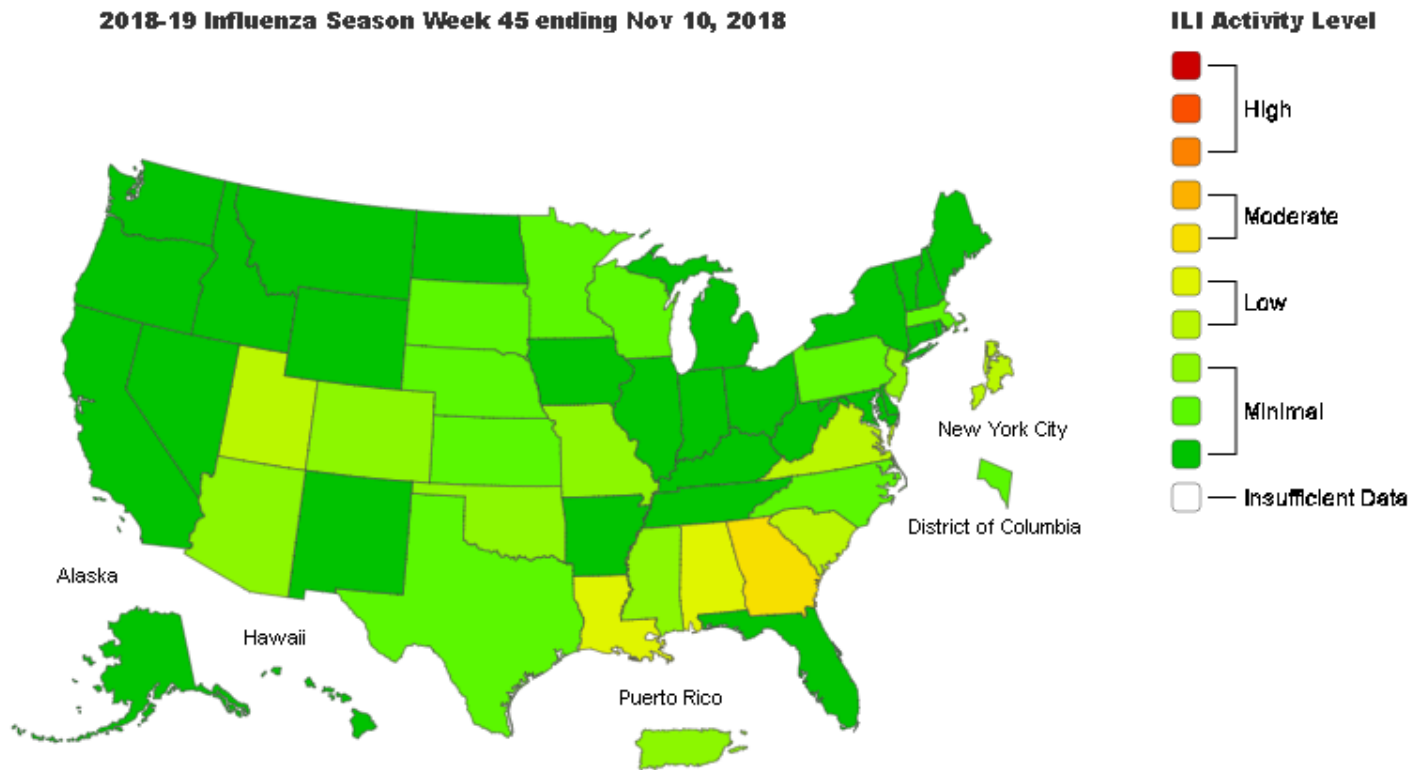
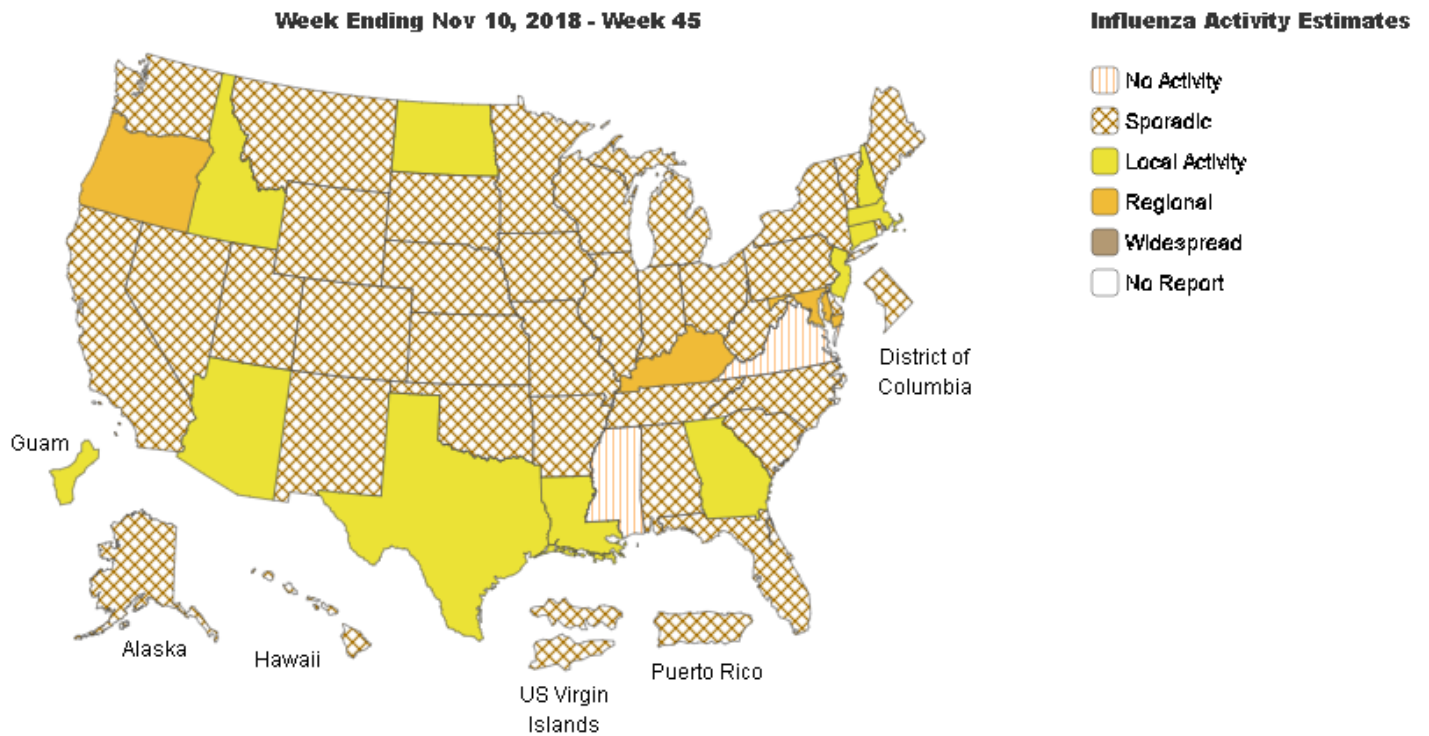


Figure 7. Weekly influenza activity (geographic spread) estimates reported by state and territorial epidemiologists



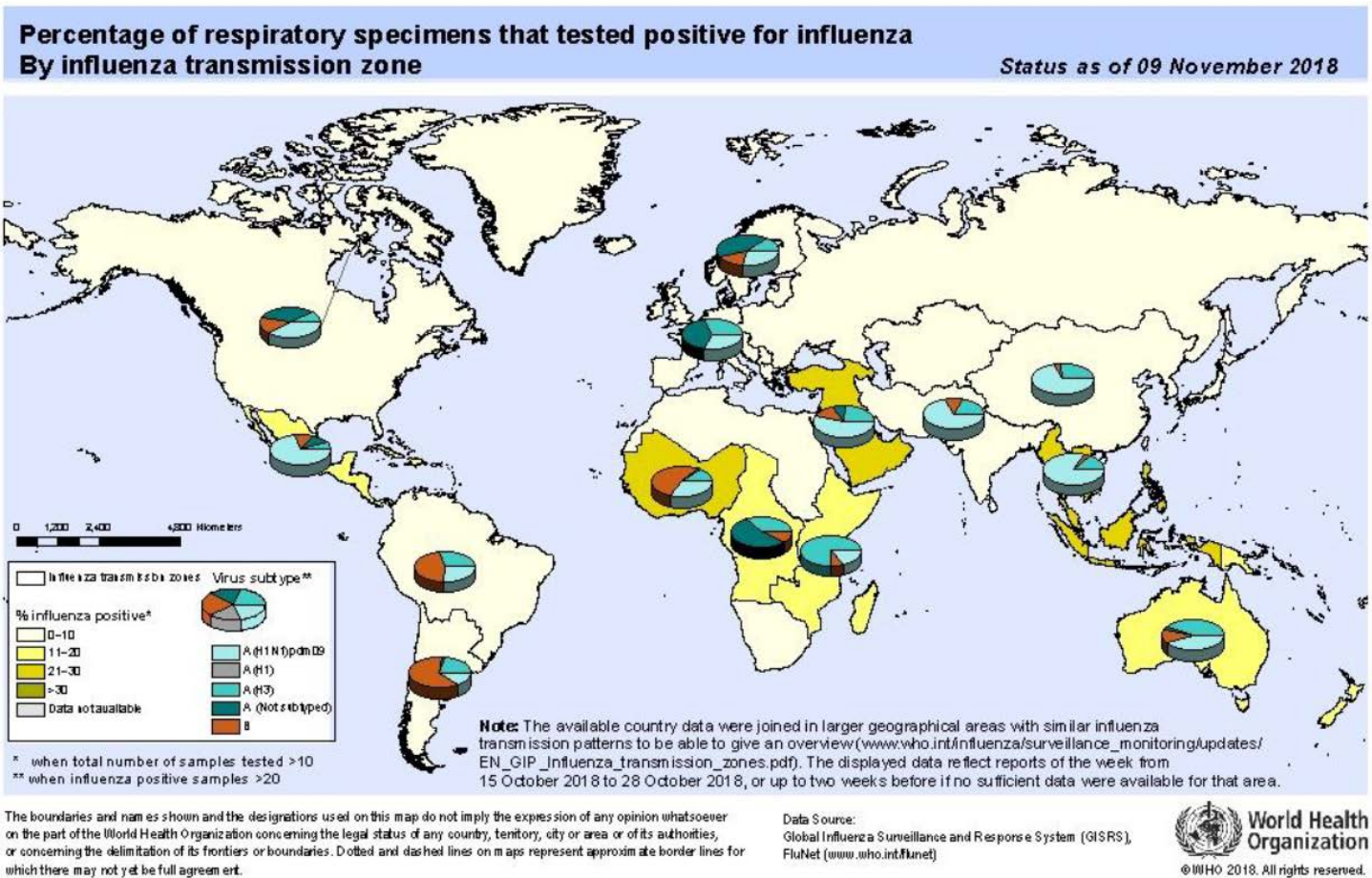
Source: <https://www.cdc.gov/flu/weekly/>

Global Surveillance:

Influenza Update N° 328, World Health Organization (WHO), published 11/12/2018, based on data up to 10/28/2018. The Update is published every two weeks.

Summary

- In the temperate zone of the northern hemisphere influenza activity remained at inter-seasonal levels. 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 nearly inter-seasonal levels. Worldwide, seasonal influenza subtype A viruses accounted for the majority of detections.
- National Influenza Centres (NICs) and other national influenza laboratories from 104 countries, areas or territories reported data to FluNet for the time period from 15 October 2018 to 28 October 2018 (data as of 2018-11-09 03:38:30 UTC). The WHO GISRS laboratories tested more than 84313 specimens during that time period. 2145 were positive for influenza viruses, of which 1845 (86%) were typed as influenza A and 300 (14%) as influenza B. Of the sub-typed influenza A viruses, 905 (64.5%) were influenza A(H1N1)pdm09 and 499 (35.5%) were influenza A(H3N2). Of the characterized B viruses, 54 (52.4%) belonged to the B-Yamagata lineage and 49 (47.6%) to the B-Victoria lineage.

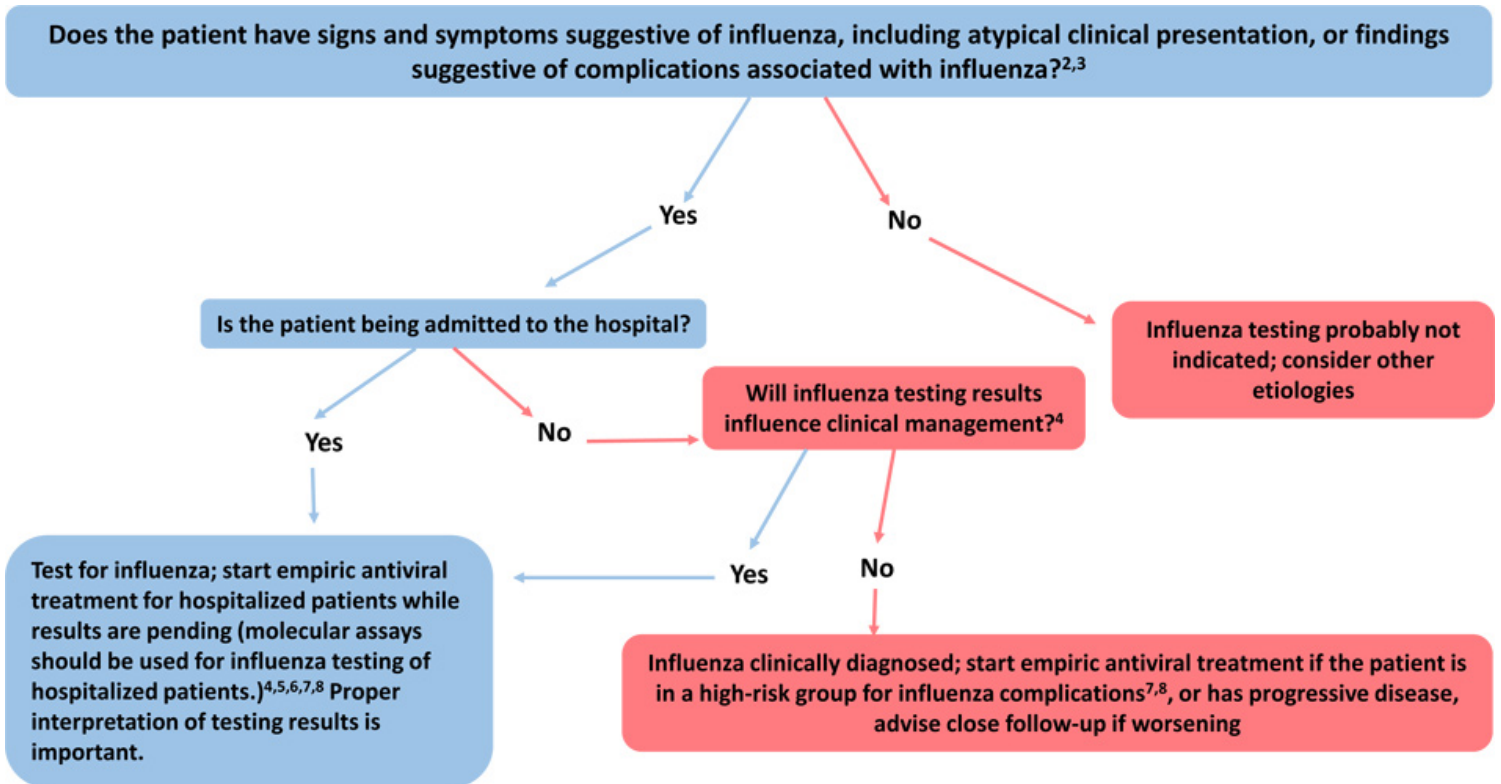


Source: https://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/

Information from the Centers for Disease Control and Prevention (CDC):

Note: At the SCPH Communicable Disease Unit, we occasionally receive questions about guidelines for influenza testing. Below is an excellent resource from the CDC, with additional information:

Guide for considering influenza testing when influenza viruses are circulating in the community (regardless of influenza vaccination history)¹



1. Confirmation of influenza virus infection by diagnostic testing is not required for decisions to prescribe antiviral medication. Decision-making should be based upon signs and symptoms consistent with influenza illness and epidemiologic factors. Initiation of empiric antiviral treatment should not be delayed while influenza testing results are pending. Antiviral treatment is clinically most beneficial when started as close to illness onset as possible. Influenza vaccine effectiveness is moderate and so a history of current season influenza vaccination does not exclude a diagnosis of influenza.

2. Signs and symptoms of uncomplicated influenza vary by age, underlying health conditions, and immune function. Common signs and symptoms include fever with nonproductive cough or other suggestive respiratory symptoms, often with myalgias or headache. Fever is not always present, including in premature and young infants, immunocompromised and immunosuppressed persons, and especially in elderly persons. Note that some persons may have atypical presentations -especially infants (e.g. sepsis-like syndrome) and elderly (e.g. confusion).

3. Complications associated with influenza can vary by age, immune status, and underlying medical conditions. Some examples include worsening of underlying chronic medical conditions (e.g. worsening of congestive cardiac failure; asthma exacerbation; exacerbation of chronic obstructive pulmonary disease); lower respiratory tract disease (pneumonia, bronchiolitis, croup, respiratory failure); invasive bacterial co-infection; cardiac (e.g. myocarditis); musculoskeletal (e.g. myositis, rhabdomyolysis); neurologic (e.g. encephalopathy, encephalitis); multi-organ failure (septic shock, renal failure, respiratory failure).

4. Influenza testing may be used to inform decisions on use of antiviral treatment, antibiotic treatment, need for further diagnostic tests, consideration for home care, or on recommendations for ill persons living with others who are at high-risk for influenza complications. Proper interpretation of influenza testing results must consider a number of factors, including: the predictive values of the test, test sensitivity and specificity compared to a “gold standard” test, prevalence of influenza in the patient population, time from illness onset to specimen collection and whether the person may still have detectable influenza viral shedding, and source of the respiratory specimen (upper or lower respiratory tract). To maximize detection of influenza viruses, respiratory specimens should be collected as close to illness onset as possible (ideally <3-4 days after onset; molecular assays may detect influenza viral RNA in respiratory tract specimens for longer periods after illness onset than antigen detection assays). See this [algorithm](#) for more information. Consult guidance on antibiotic use from the IDSA, ATS, and the AAP. Antiviral treatment is recommended as soon as possible for hospitalized patients with suspected influenza without waiting for influenza testing results of molecular assays. See [Antiviral Drugs: Information for Health Care Professionals](#) for more information.

5. All hospitalized patients with suspected influenza should be tested with molecular assays with high sensitivity and specificity (e.g. RT-PCR) since detection of influenza virus infection and prompt initiation of antiviral therapy is most clinically beneficial, and prompt implementation of infection prevention and control measures is essential for prevention of nosocomial influenza outbreaks. Molecular assays can detect influenza viral nucleic acids in respiratory specimens for longer periods and with much higher accuracy than antigen detection assays. For hospitalized patients with lower respiratory tract disease and suspected influenza, lower respiratory tract specimens should be collected and tested for influenza viruses by RT-PCR because influenza viral shedding in the lower respiratory tract may be detectable for longer periods than in the upper respiratory tract, if influenza testing of upper respiratory tract specimens yields a negative result. If the patient is critically ill on invasive mechanical ventilation, and has tested negative for influenza viruses on an upper respiratory tract specimen, including by a molecular assay, a lower respiratory tract specimen (endotracheal aspirate or bronchioalveolar lavage fluid) should be collected for influenza testing by RT-PCR or other molecular assays. See [Prevention Strategies for Seasonal Influenza in Health Care Settings](#) for more information.

6. Influenza testing may help inform decisions on infection prevention and control practices. See [Prevention Strategies for Seasonal Influenza in Health Care Settings](#) for more information.

7. Persons who are at [Higher Risk of Complications from Influenza](#) include those aged ≥65 years or <2 years; pregnant women; persons with chronic lung disease (including asthma), heart disease, renal, metabolic, hematologic and neurologic disease; immunosuppression; and morbid obesity; American Indians or Alaska Natives, and residents of chronic care facilities.

8. Antiviral treatment is recommended as soon as possible for outpatients with suspected or confirmed influenza who are at high-risk for complications from influenza, or those with progressive disease not requiring hospital admission. Outpatients who are not at higher risk of complications from influenza can be considered based upon clinical judgement if presenting within 2 days of illness onset.

Source: <https://www.cdc.gov/flu/professionals/diagnosis/consider-influenza-testing.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 November 16, 2018.