



**Summit County Public Health  
Influenza Surveillance Report  
2017 – 2018 Season  
Report #11**



**Public Health**  
Prevent. Promote. Protect.

**Flu Surveillance Weeks 21 & 22 (Beginning 2/25/2018 through 3/10/2018)  
Centers for Disease Control and Prevention MMWR Weeks 9 & 10**

**Summit County Surveillance Data:**

In **Weeks 21 & 22** of influenza surveillance, influenza-related activity continued to decrease in Summit County.

<b>Table 1: Overall Influenza Activity Indicators in Summit County by Week</b>				
	<b>Week 21 MMWR Wk 9 N (%)*</b>	<b>Week 22 MMWR Wk 10 N (%)*</b>	<b>% change from previous week</b>	<b>Number of weeks increasing or decreasing</b>
<b>Lab Reports</b>				
Total Test Performed	977	624	-36.1	↓3
Positive Tests (Number and %)	221 (22.6)	147 (23.6)	-33.5	↓6
Influenza A (Number and %)	93 (9.5)	73(11.7)	-31.2	↓6
Influenza B (Number and %)	128 (13.1)	74 (11.8)	-42.2	↓2
<b>Acute care hospitalization for Influenza: Influenza ILI Community Report:</b>	31	27	-12.9	↓3
Long-term Care ILI	3	2	-33.3	↓2
Correctional & Addiction Facility	0	0	--	--
Physician Offices & University Clinic	12	6	-50.0	↓3
<b>Pharmacy Prescriptions</b>				
Amantidine	1	6	500.0	↑2
Rimantidine Flumadine	0	0	--	--
Relenza	0	0	--	--
Oseltamivir Tamiflu	25	22	-12.0	↓5
<i>Total</i>	<b>26</b>	<b>28</b>	7.7	↑1
<b>School Absenteeism (%)**</b>	19.3	18.6	-3.6	↓3
<b>Deaths (Total for 2017-18 flu season)</b>	140	146		
Pneumonia associated	5 (3.6)	5 (3.4)	NC	--
Influenza associated	2 (1.4)	1 (0.7)	-50.0	↓1
<b>Emergency room visits (Epi Center)***</b>	6019	<b>5882</b>		
Constitutional Complaints	654 (10.9)	602 (10.2)	-6.4	↓3
Fever and ILI	121 (2.0)	95 (1.6)	-20.0	↓3
* N and % are reported when available				
**Percent is from total number of students enrolled at all schools reporting, and also accounts for weeks less than 5 days. Seven schools located throughout Summit County, with a total enrollment of approximately 7100 students, report absences.				
***Percent is from total number of emergency room interactions				
<sup>a</sup> Percentages should be interpreted with caution. Small changes in number can result in big changes in percent.				
<sup>b</sup> This percent change is the difference in percent (i.e., the percent change in prevalence). It is not the percent change in the number of tests, number of school absences, number of deaths, etc.)				

There were two influenza-associated deaths reported in Week 21 and one in Week 22. **Figure 1** displays weekly Summit County death counts associated with pneumonia and influenza. There have been 31 influenza deaths this season, one of which was a pediatric death.

**Lab reports:** During Week 21, Summit County labs performed 977 tests, of which 93 tested positive for flu A and 128 for flu B. For Week 22, there were 624 total tests: 73 flu A and 74 flu B. (**Figure 4**)

**Acute Care Hospitalizations:** 31 reported influenza associated hospitalizations during Week 21, and 27 in Week 22. **Figure 2** displays influenza-associated hospitalizations in Summit County.

**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 was a total of 5 cases of ILI reported from Long Term Care facilities in Weeks 21 & 22.

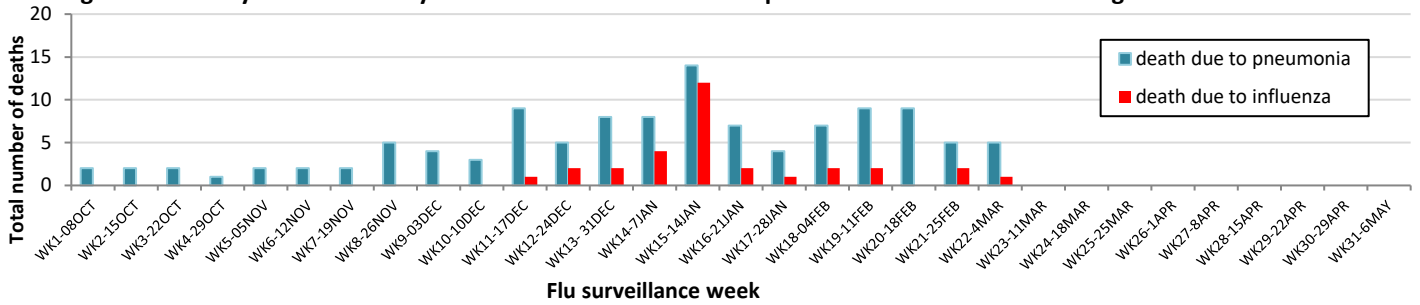
**Correctional and Addiction facility:** There were no cases of ILI reported in Weeks 21 and 22.

**Physician Office and University Clinic:** During Week 21, 12 cases of ILI were reported and Week 22 reported 6 cases.

**Pharmacy:** Amantidine was prescribed 1 time in Week 21 and 6 times in Week 22. Tamiflu was prescribed 25 times in Week 21 and 22 times in Week 22.

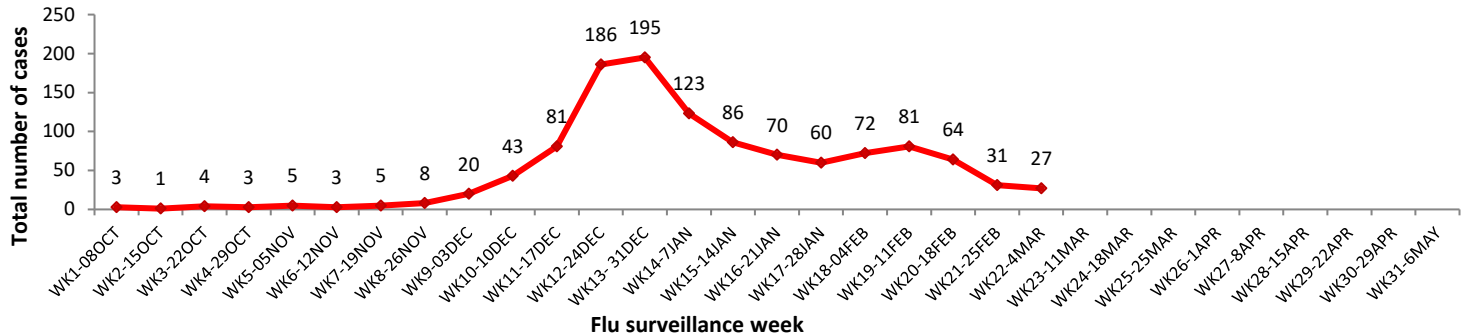
**School absenteeism** includes absences regardless of reason. In Week 21, there was an absence rate of 19.3% and in Week 22 the absence rate was 18.6%.

**Figure 1. Weekly Summit County death counts associated with pneumonia and influenza during 2017-2018 flu season**



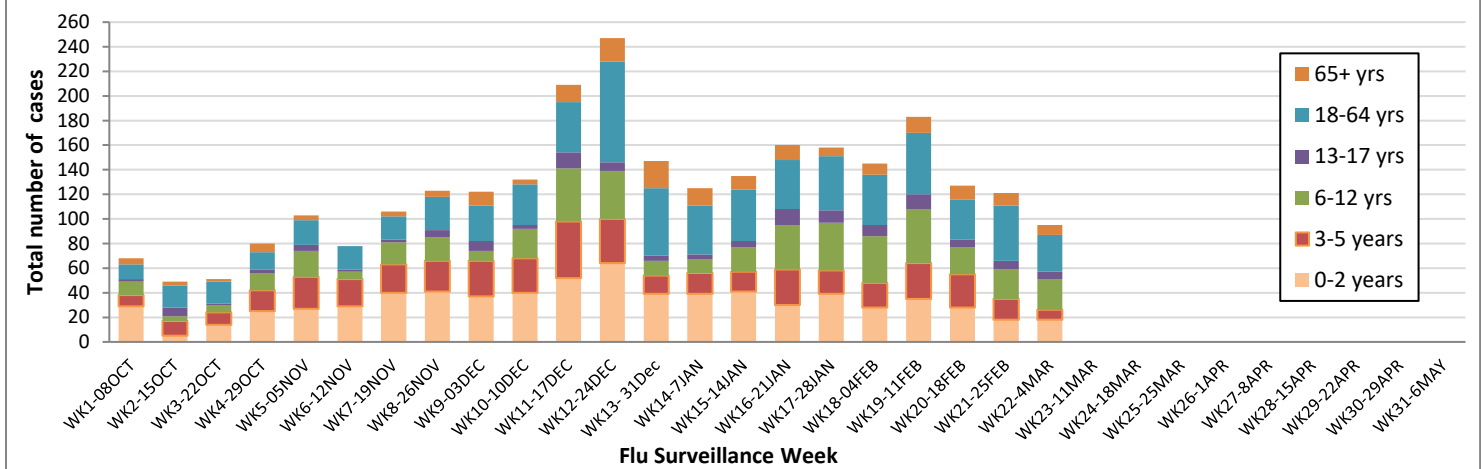
**Influenza-associated hospitalization:** Summit County hospitals reported 31 influenza-associated hospitalizations in Week 21 and 27 hospitalizations during Week 22. **Figure 2** displays weekly confirmed hospitalization count for Summit County (**cumulative count to date = 1171**).

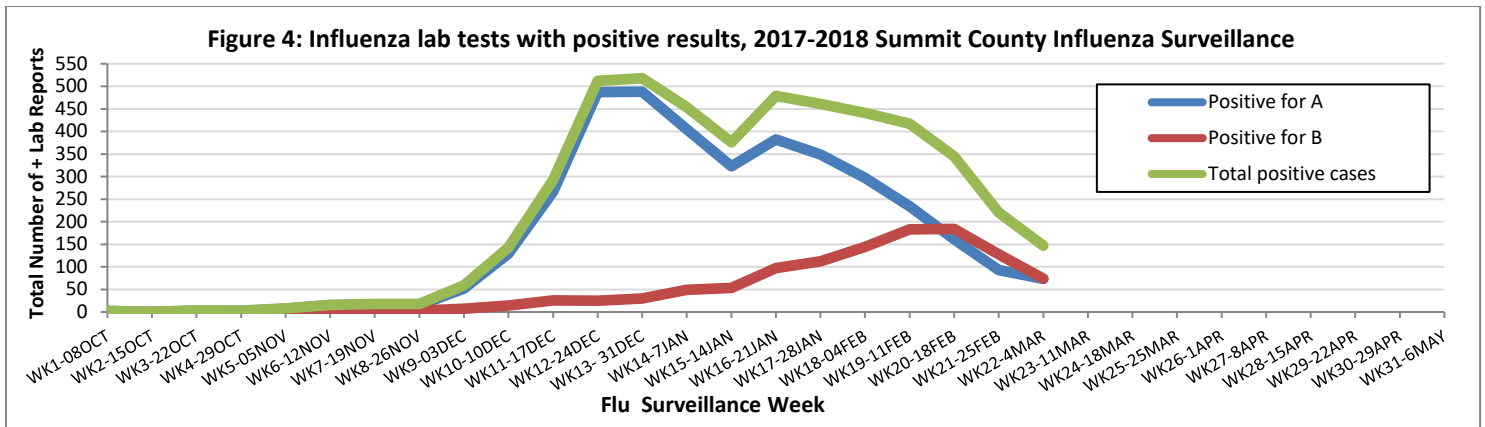
**Figure 2. Summit County influenza-associated hospitalizations by week, 2017-2018 influenza season**



**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, stratified by age group. During Weeks 21 and 22, adults ages 18 to 64 and children ages 6 to 12 had the most ER visits related to ILI.

**Figure 3. Weekly ER visits in Summit County related to Fever + ILI stratified by age groups**





**Ohio Influenza Activity: From the Ohio Department of Health:**

**Current Statewide Influenza Activity (for MMWR Week 10, March 4 – March 10, 2018):**

**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.

**Ohio Influenza Activity Summary Dashboard:**

Data Source	Current week value	Percent Change from last week <sup>1</sup>	# of weeks <sup>2</sup>	Trend Chart <sup>3</sup>
Influenza-like Illness (ILI) Outpatient Data (ILINet Sentinel Provider Visits)	1.43%	-17.34%	↓ 4	
Thermometer Sales (National Retail Data Monitor)	2004	-2.00%	↓ 5	
Fever and ILI Specified ED Visits (EpiCenter)	2.23%	-9.35%	↓ 5	
Constitutional ED Visits (EpiCenter)	10.95%	-7.05%	↓ 5	
Confirmed Influenza-associated Hospitalizations (Ohio Disease Reporting System)	751	-29.08%	↓ 3	
Outpatient Medical Claims Data <sup>4</sup>	1.29%	-17.83%	↓ 4	

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

<sup>2</sup>Number of weeks that the % change is increasing or decreasing.

<sup>3</sup>Black lines represent current week's data; red lines represent baseline averages

<sup>4</sup>Medical Claims Data provided by athenahealth®

\*The seasonal threshold is 25 cases of influenza-associated hospitalizations; historical data demonstrate that once the weekly count exceeds 25 cases, the number of weekly cases thereafter will likely not decrease until after the peak of influenza activity for the season

## National Surveillance: from the Centers for Disease Control and Prevention (CDC):

During MMWR Week 10 (March 4-10, 2018), influenza activity decreased in the United States.

- **Viral Surveillance:** Overall, influenza A(H3) viruses have predominated this season. However, in recent weeks the proportion of influenza A viruses has declined, and during week 10, the numbers of influenza A and influenza B viruses reported were similar. The percentage of respiratory specimens testing positive for influenza in clinical laboratories decreased.
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was above the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** Nine influenza-associated pediatric deaths were reported.
- **Influenza-associated Hospitalizations:** A cumulative rate of 89.9 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported.
- **Outpatient Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) was 3.3%, which is above the national baseline of 2.2%. All 10 regions reported ILI at or above region-specific baseline levels. Twelve states experienced high ILI activity; 13 states experienced moderate ILI activity; New York City and 14 states experienced low ILI activity; 11 states experienced minimal ILI activity; and Puerto Rico and the District of Columbia had insufficient data.
- **Geographic Spread of Influenza:** The geographic spread of influenza in Puerto Rico and 26 states was reported as widespread; Guam and 18 states reported regional activity; the District of Columbia and five states reported local activity; one state reported sporadic activity; and the U.S. Virgin Islands reported no activity.

**Figure 5. Percentage of visits for influenza-like illness (ILI) reported by the U.S. Outpatient Influenza-like Surveillance Network (ILINet), weekly national summary, 2017-2018 and selected previous seasons**

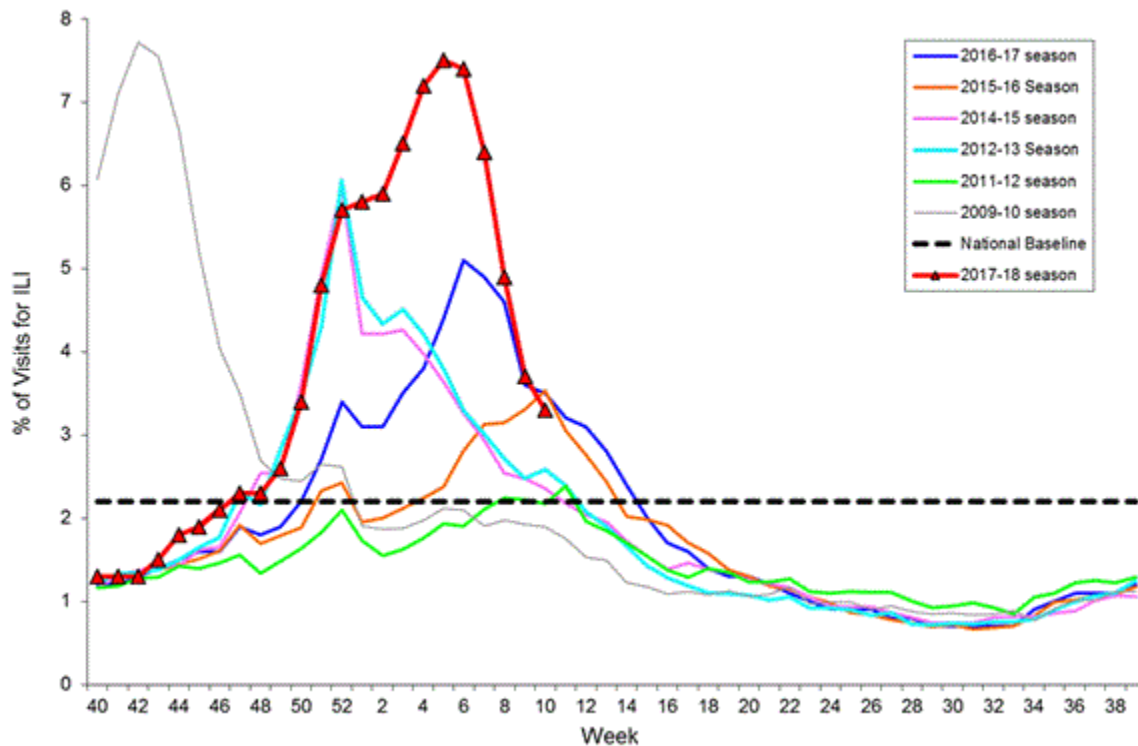


Figure 6. Influenza-like illness (ILI) activity level indicator determined by data reported to ILINet

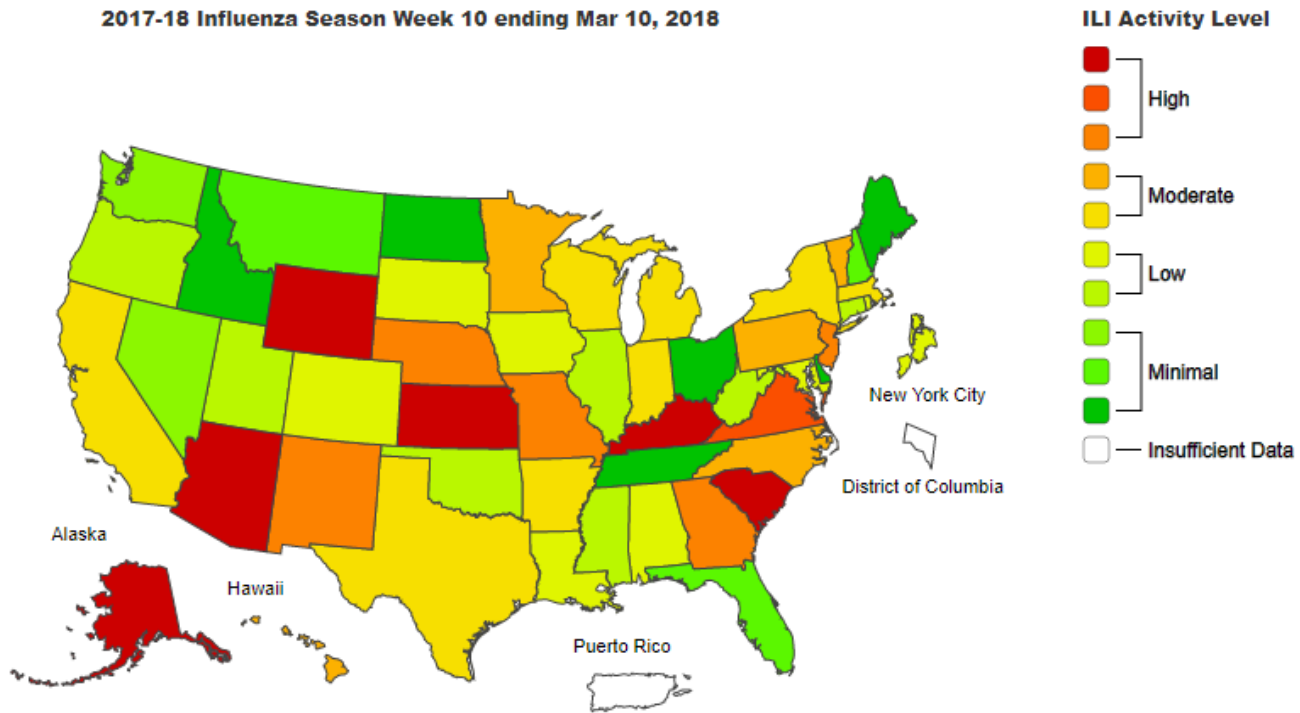
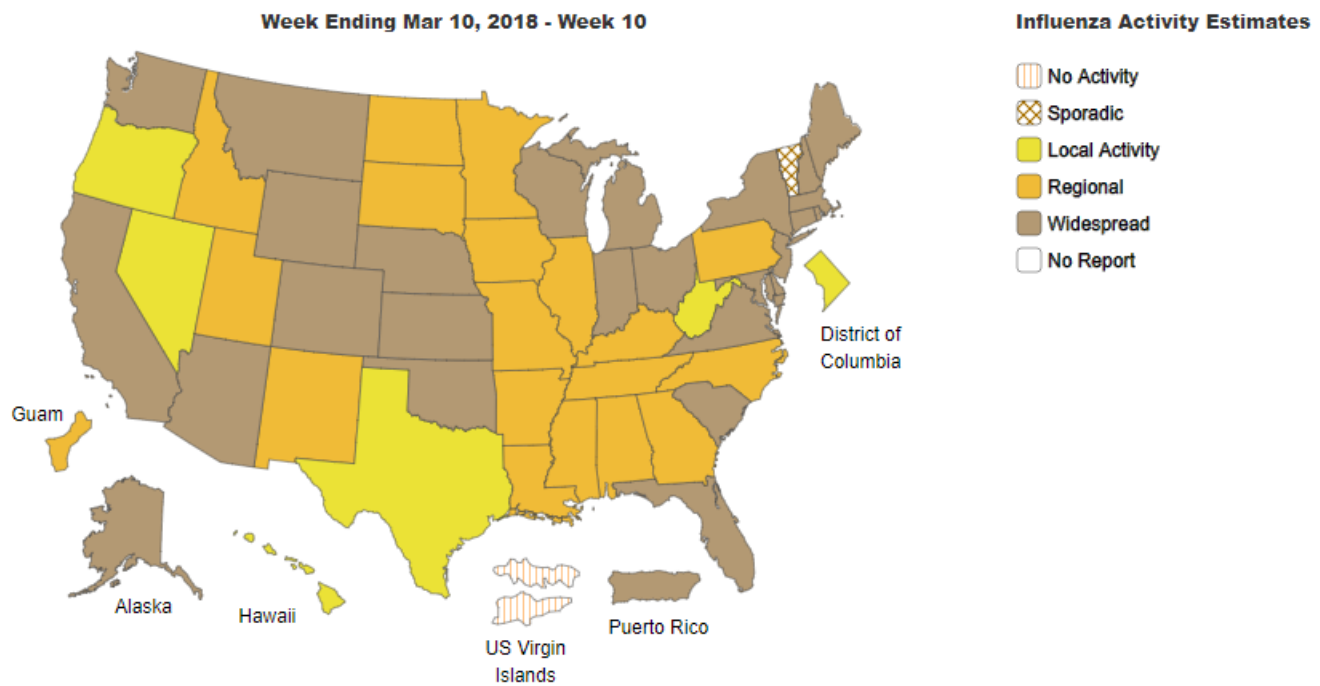


Figure 7. Weekly influenza activity (geographic spread) estimates reported by state and territorial epidemiologists



Reference: <https://www.cdc.gov/flu/weekly/fluactivitysurv.htm>



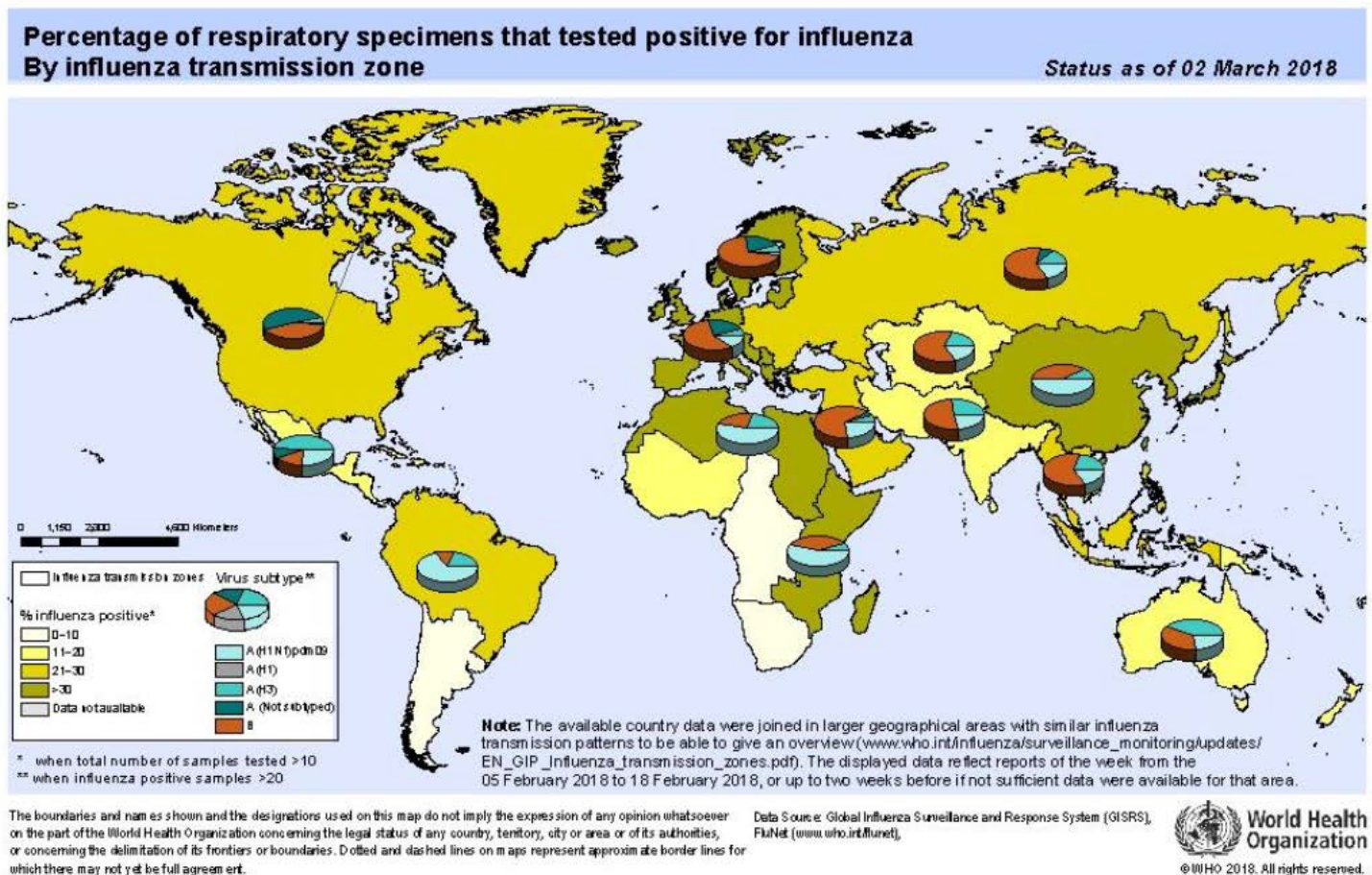
## Global Surveillance:

Influenza Update N° 310, World Health Organization (WHO), released 03/05/2018:

Influenza activity remained high in the temperate zone of the northern hemisphere while in the temperate zone of the southern hemisphere activity was at inter-seasonal levels. Worldwide, influenza A and influenza B accounted for a similar proportion of influenza detections.

The majority of countries experiencing influenza season, reported influenza- like illness reaching moderate levels in comparison with previous years, with a few reaching levels exceeding those of previous years. Some countries, however, have reported levels of hospitalizations and ICU admissions reaching or exceeding peak levels of previous influenza seasons. WHO recommends countries with current influenza activity or entering their season to adopt necessary measures for ensuring appropriate case management, compliance with infection control measures and seasonal influenza vaccination for high-risk groups.

- In North America, overall influenza activity remained high but appeared to have peaked. Influenza B was the more predominant type detected in Canada, while influenza A (H3N2) virus was predominately detected in the United States and Mexico.
- In Europe, influenza activity remained high in most countries. Influenza B remained the virus most frequently detected, but all types were co-circulating in the region. ILI activity is still increasing in Eastern and Northern European countries (including the Russian Federation), but appears to have peaked in Southwestern Europe, the United Kingdom and Ireland.
- In the Caribbean region, respiratory illness indicators and influenza activity has increased, but remains moderate in Central America. Influenza types A (H3N2 and H1N1) and B are co-circulating throughout these regions.
- In the tropical countries of South America, influenza activity and respiratory illness indicators were reported to be elevated but stable in Colombia and Peru. Influenza activity has trended downward in Brazil and nations in the Southern Cone.



Reference: [http://www.who.int/influenza/surveillance\\_monitoring/updates/latest\\_update\\_GIP\\_surveillance/en/](http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/)

## **Information from the Centers for Disease Control and Prevention regarding the 2017-2018 Flu Season:**

In a typical flu season, influenza A (commonly H1N1 and H3N2) activity is highest in the first half of the season, followed by an increase in influenza B activity in late winter or early spring. A common misconception is the belief that flu B is a less severe type of influenza than flu A, and this was investigated in a study published in 2014. Below is a summary of the study's findings, along with a link to the original publication.

### ***Influenza B virus infections can be just as severe as influenza A virus infections***

As late-season influenza B viruses currently predominate in the United States, a new study published by CDC and partners highlights the comparative severity of illness associated with influenza A versus influenza B virus infections. The results of the study showed that among hospitalized adults, flu B viruses caused equally severe disease outcomes and clinical characteristics as flu A viruses. This contradicts a common misconception that flu B viruses are associated with milder disease than flu A viruses.

The study looked at the disease characteristics – including the severity of illness – associated with flu A and flu B viruses among hospitalized adults over eight flu seasons (2005-06 through 2012-13). The study identified 21,186 flu A and 3,579 flu B-associated hospitalizations during the study period. Flu A viruses were the predominant flu virus in circulation during all of the seasons studied, particularly during the 2009 H1N1 pandemic.

The study found no significant difference in the overall proportion of hospitalizations with an ICU admission by virus type for each season. Among hospitalized adults with flu A or B infection, length of hospital stay and the proportion of patients admitted into an Intensive Care Unit (ICU) were comparable. Results also showed that flu B virus infections caused a similar proportion of deaths as flu A virus infections among hospitalized adults during the study period.

Study findings prompted the authors to conclude that clinicians should not regard flu B infections as less severe than flu A when considering treatment options. These findings support CDC's existing [antiviral treatment recommendations](#) for the treatment of all hospitalized and high risk patients with suspected or confirmed flu infection. The type of flu virus infection (A or B) should not influence treatment decisions.

For most of the 2013-14 flu season, the 2009 H1N1 virus has been the predominant virus. However, over the past month and a half there has been a late season wave of flu B virus activity. At this time, flu B viruses are the predominant virus, with the highest levels of activity primarily focused in the Northeastern United States. Second waves of influenza B virus activity are not uncommon. About 70% of recent B viruses have been like the B virus component of the trivalent flu vaccine. The remaining flu B viruses have been like the second B vaccine component in the quadrivalent flu vaccine.

**Source:** <https://www.cdc.gov/flu/news/flu-study-viruses.htm>

**Link to research article:** <https://academic.oup.com/cid/article/59/2/252/2895657>

**About this report:** Reporting agencies include labs, hospitals, long-term care and community-based care providers, physician offices, university clinic, correctional facility, 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 were obtained by syndromic surveillance system (Epicenter).

*Many thanks to all agencies who report Influenza-related data weekly.*

For additional information, please visit the 2017-2018 Influenza dashboard at: <https://www.scpd.org/dashboards>

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, Summit County Public Health Communicable Disease Unit. Report was issued on March 16, 2018.