



# Summit County Public Health Influenza Surveillance Report 2019 – 2020 Season



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

## Report #12

### Flu Surveillance Weeks 12 & 13 (12/22/2019 to 1/4/2020) Centers for Disease Control and Prevention MMWR Weeks 52 & 1

#### Summit County Surveillance Data:

In **Week 13** of surveillance, influenza-related activity is elevated in Summit County.

**Zero** deaths related to influenza were reported during Week 13, and there were five deaths associated with pneumonia. **Figure 1** displays weekly Summit County death counts associated with pneumonia and influenza.

**Acute Care Hospitalizations:** 40 hospitalization was reported during Week 13. **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. Community ILI reports: **Long Term Care Facilities:** There was one case of ILI reported. **Correctional and Inpatient Addiction facilities:** Zero cases ILI reported. **Physician offices and clinics:** During Week 13, zero cases of ILI were reported.

**Pharmacies:** 16 antiviral prescriptions were filled by reporting pharmacies during Week 13, 43% decrease from Week 12.

**School absenteeism** includes absences regardless of reason. During Week 13, reporting schools were closed for winter break.

**Lab reports:** During Week 13 of influenza surveillance, reporting Summit County laboratories performed 1389 flu tests, of which 271 were positive (Type A = 93, Type B = 178). **(Figure 4)**

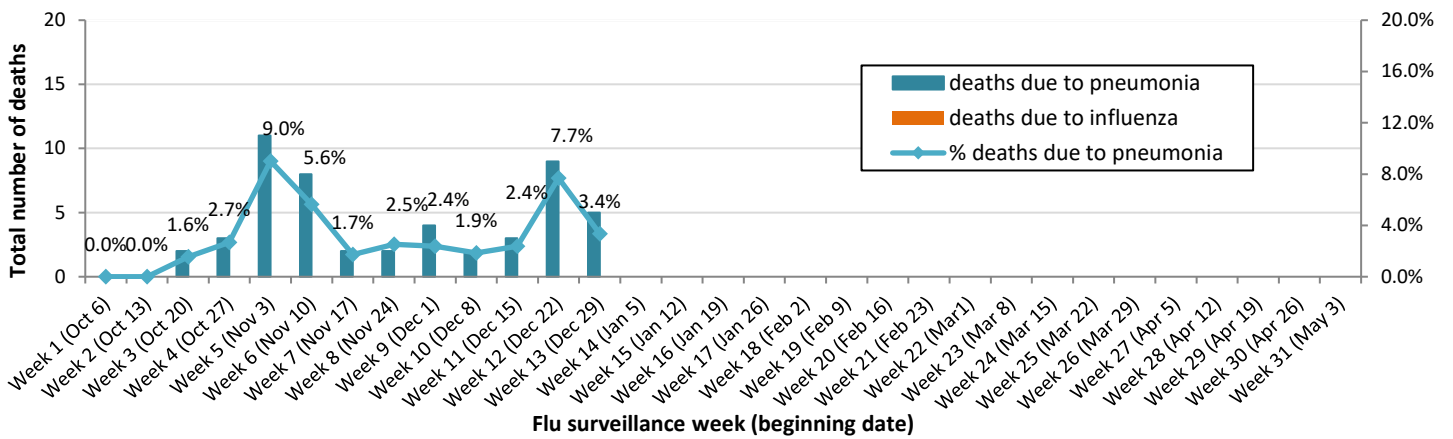
**Table 1: Overall Influenza Activity Indicators in Summit County by Week**

	Week 12 MMWR 52 N (%) <sup>1</sup>	Week 13 MMWR 1 N (%) <sup>1</sup>	Percent change from previous week	Number of weeks increasing or decreasing
<b>Lab Reports</b>				
Test Performed	1000	1389	+ 38.9%	↑6
Positive Tests (Number and %)	232 (23.2)	271 (19.5)	- 15.9%	↓1
Influenza A (Number and %)	92 (9.2)	93 (6.7)	- 27.2%	↓1
Influenza B (Number and %)	140 (14.0)	178 (14.0)	- 8.5%	↓1
<b>Acute care hospitalization for Influenza:</b>	38	40	+ 5.3%	↑3
<b>Influenza ILI Community Report:</b>				
Long-term Care ILI Cases	0	1	+ 100%	↑1
Correctional & Addiction Facility	0	0	--	--
Physician Offices & University Clinic	0	0	--	--
<b>Pharmacy Prescriptions</b>				
Zanamivir (Relenza)	0	0	--	--
Oseltamivir (Tamiflu)	28	16	- 42.9%	↓1
Baloxavir marboxil (Xofluza)	0	0	--	--
<i>Total</i>	28	16	- 42.9%	↓1
<b>Schools absenteeism<sup>2</sup></b>	closed	closed	--	--
<b>Deaths</b>				
Pneumonia associated	9 (7.7)	5 (3.4)	- 56.4%	↓1
Influenza associated	0	0	--	--
<b>Emergency room visits (EpiCenter)<sup>3</sup></b>				
Constitutional Complaints	728 (11.8)	866 (13.3)	12.3%	↑3
Fever and ILI	178 (2.9)	168 (2.6)	- 10.9%	↓1

1) N and % are reported when available, NC = no change, or change that is not significant  
 2) Absence is for any reason. Percent is from total number of students enrolled. Data was collected from 6 schools or school districts throughout Summit County (n = 32,000 students)  
 3) Percent is from total number of emergency room interactions

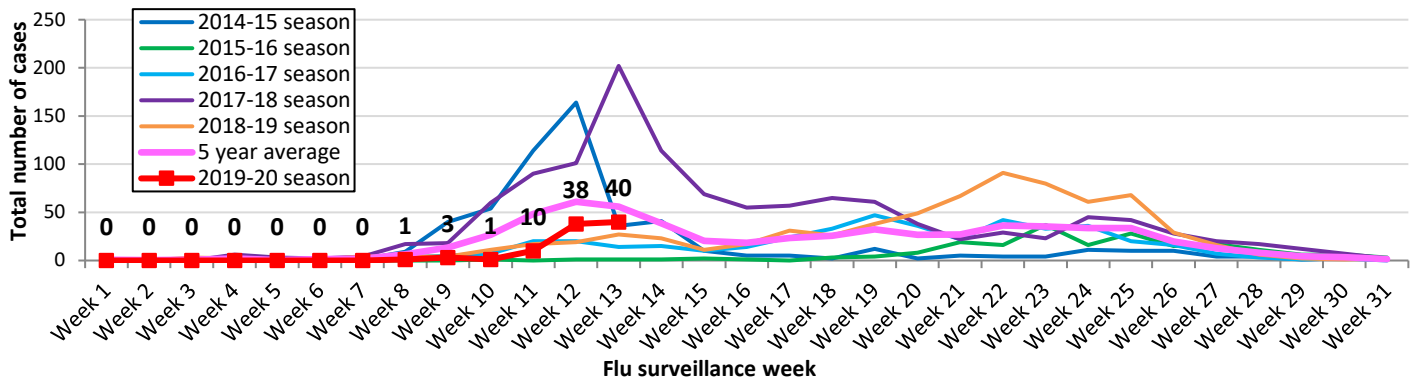
**Note:** Data is provisional and may be updated as more information is received. Percentages should be interpreted with caution. Small changes in number can result in large changes in percent. When a percentage, or prevalence, is available in this table, the percent change will be calculated from those values

**Figure 1. Weekly Summit County death counts associated with pneumonia and influenza during 2019-2020 season**



**Influenza-associated hospitalization:** Summit County hospitals reported 40 influenza-associated hospitalizations during Week 13. **Figure 2** displays weekly confirmed hospitalization count for Summit County (**cumulative count to date = 93**).

**Figure 2. Summit County influenza-associated hospitalizations by week, 2019-2020 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. **Figures 3** displays the weekly number of ER visits related to ILI and flu symptoms in Summit County. There were 168 ILI-related visits reported during Week 13, which was 2.6% of total ED visits (n = 6512). This rate was nearly 11% lower than the ILI rate during Week 12.

**Figure 3. Weekly ED visits in Summit County related to Fever + ILI stratified by age groups, 2019 to 2020 season**

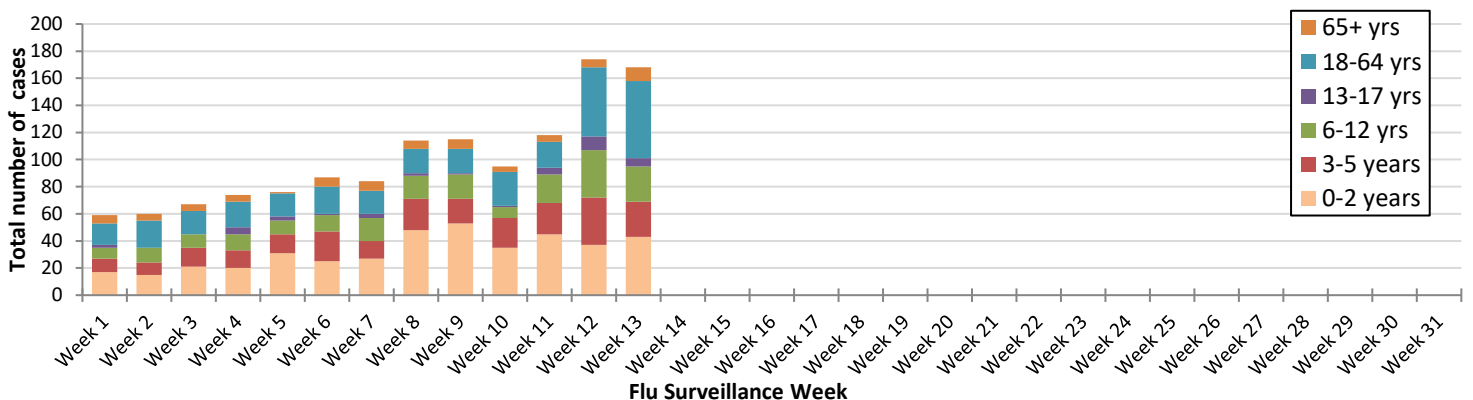
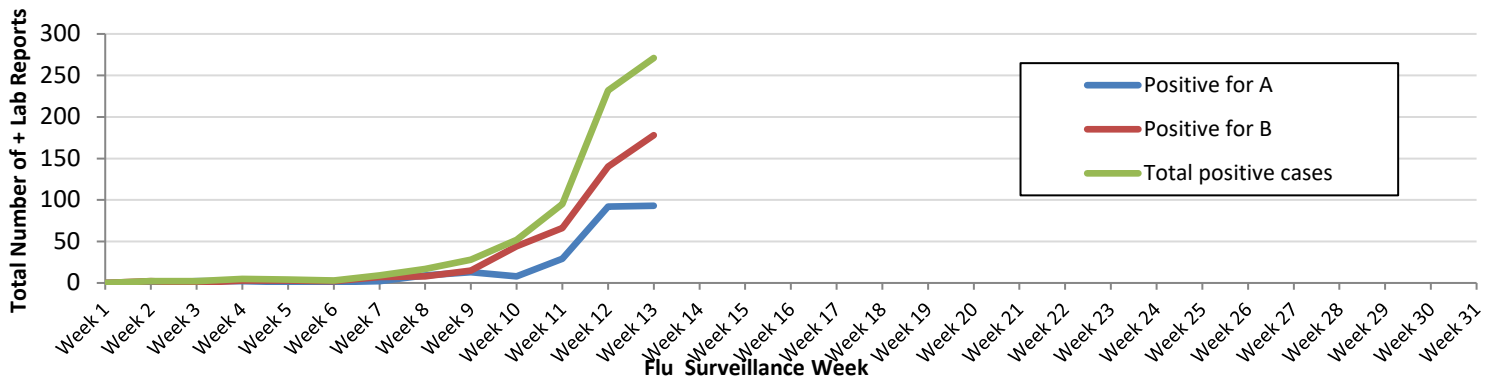


Figure 4. Influenza diagnostic tests with positive results completed by Summit County health facilities, 2019 - 2020 season



## Ohio Influenza Activity: from the Ohio Department of Health:

### 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 are above baseline levels statewide; fever and ILI specified ED visits are also above baseline levels. Reported cases of influenza-associated hospitalizations are above the seasonal threshold\*. There were 806 influenza-associated hospitalizations reported during MMWR Week 1

### Ohio Influenza Activity Summary Dashboard (December 29, 2019 – January 4, 2020):

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)	2.26%	-18.71%	↓ 1	
Thermometer Sales (National Retail Data Monitor)	1603	-7.02%	↓ 1	
Fever and ILI Specified ED Visits (EpiCenter)	3.60%	-19.10%	↓ 1	
Constitutional ED Visits (EpiCenter)	15.32%	-7.15%	↓ 1	
Confirmed Influenza-associated Hospitalizations (Ohio Disease Reporting System)	806	108.27%	↑ 8	
Outpatient Medical Claims Data <sup>4</sup>	2.41%	-37.89%	↓ 1	

<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®

Source: <https://www.odh.ohio.gov/seasflu/Ohio%20Flu%20Activity.aspx>

## Ohio Surveillance Data:

- **ODH lab** has reported **223 positive** influenza tests from specimens sent from sentinel ILINet providers and hospital clinical labs. 2019-2020 influenza season results: **(76 A/pdmH1N1; (17) A/H3N2; (130) Influenza B;** (through 01/04/2020).
- The **National Respiratory and Enteric Virus Surveillance System (NREVSS)** has **34,538** influenza specimens tested by RTPCR at participating facilities. 2019-2020 influenza season positive results: **(71) A/pdmH1N1; (2) A/H3N2; (931) Flu A Not Subtyped; and (3199) Flu B;** (through 01/04/2020)
- **1 influenza-associated pediatric mortality** has been reported during the 2019-2020 season (through 01/04/2020).
- No **novel influenza A virus infections** have been reported during the 2019-2020 season (through 01/04/2020).
- Incidence of confirmed **influenza-associated hospitalizations** in 2019-2020 season = **1806**(through 01/04/2020).

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

According to this week's FluView report, key indicators that track flu activity remain high, but indicators that track severity (hospitalizations and deaths) are not high at this point in the season.

- **Viral Surveillance:** Nationally, influenza B/Victoria viruses have been reported more frequently this season followed by A(H1N1)pdm09. The predominant virus varies by region and by age group.
  - **Virus Characterization:** the percentage of viruses that were characterized antigenically are similar to the cell grown reference viruses representing the 2019-20 Northern Hemisphere influenza vaccines are listed by subtype. **A (H1N1)pdm09: 100%** (66 of 66 samples); **A (H3N2): 34.1%** (14 of 41 samples); **B/Victoria: 58%** (29 of 50 samples); **B/Yamagata: 100%** (10 of 10 samples).
  - **Antiviral Resistance:** the vast majority of influenza viruses tested (> 99%) show susceptibility to oseltamivir, peramivir, and zanamivir. All influenza viruses tested showed susceptibility to baloxavir.
- **Influenza-like Illness Surveillance (Figure 5):** Nationwide during week 1, 5.8% of patient visits reported through the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet) were due to influenza-like illness (ILI). *This percentage is above the national baseline of 2.4%.* The decrease in the percentage of patient visits for ILI may be influenced in part by changes in healthcare seeking behavior and influenza virus transmission that can occur during the holidays. On a regional level, the percentage of outpatient visits for ILI ranged from 3.6% to 8.6% during week 1. All regions reported a percentage of outpatient visits for ILI which is equal to or above their region-specific baselines.
  - **ILI State Activity Indicator Map (Figure 6):** District of Columbia, Puerto Rico, New York City, and 33 states reported high ILI activity; 6 states reported moderate activity; 8 states experienced low ILI activity; and 1 states reported minimal activity. Data was insufficient for US Virgin Islands, Delaware, and Idaho.
- **Geographic Spread of Influenza (Figure 7):** The geographic spread of influenza was reported widespread in Puerto Rico and 46 states; regional in 3 states, local in the District of Columbia and Hawaii; the U.S. Virgin Islands reported sporadic activity and Guam did not report.
- **Pneumonia and Influenza (P&I) Mortality:** Based on National Center for Health Statistics (NCHS) mortality surveillance data available on January 9, 2020, 5.8% of the deaths occurring during the week ending December 28, 2019 (week 52) were due to P&I. This percentage is below the epidemic threshold of 6.9% for week 52.
- **Influenza-associated Pediatric Deaths:** A total of 32 influenza-associated pediatric deaths occurring during the 2019-2020 season have been reported to CDC.
  - 21 deaths were associated with influenza B viruses. Five of these had the lineage determined and all were B/Victoria viruses.
  - 11 deaths were associated with influenza A viruses. Six of these had subtyping performed and all were A(H1N1)pdm09 viruses.

Figure 5. Percentage of visits for influenza-like illness (ILI) reported by the U.S. Outpatient Influenza-like Surveillance Network (ILINet), weekly national summary, 2019-2020 and selected previous seasons

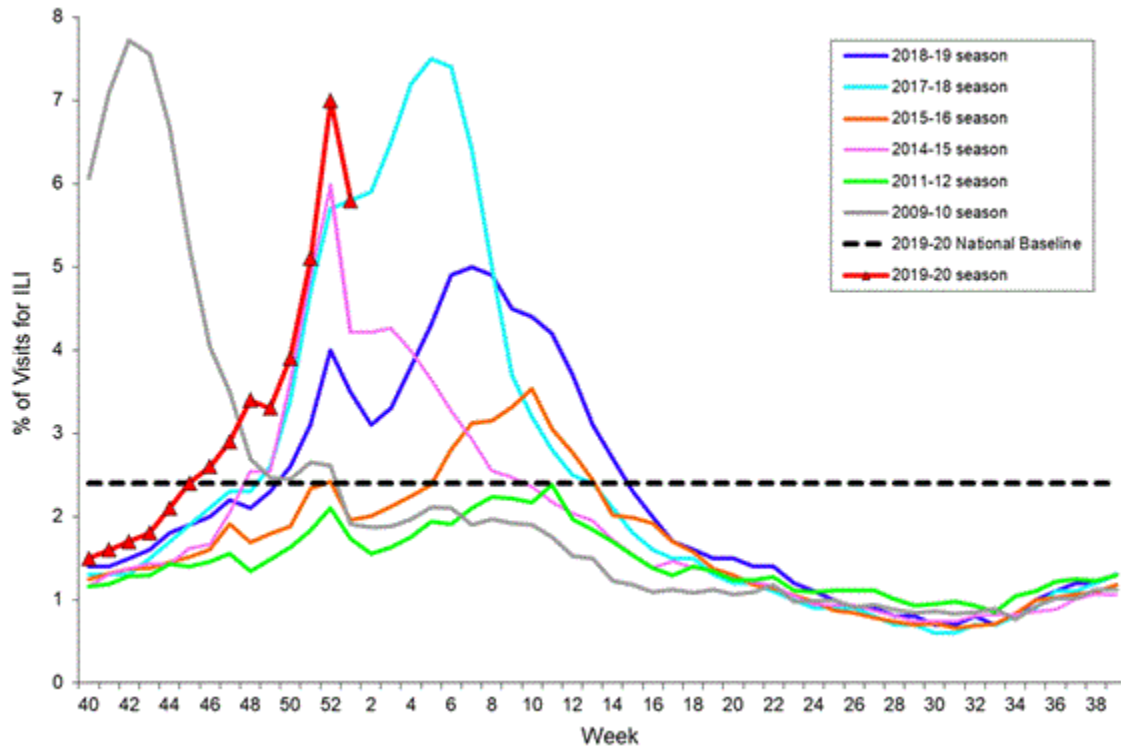


Figure 6. Influenza-like illness (ILI) activity level indicator determined by data reported to ILINet

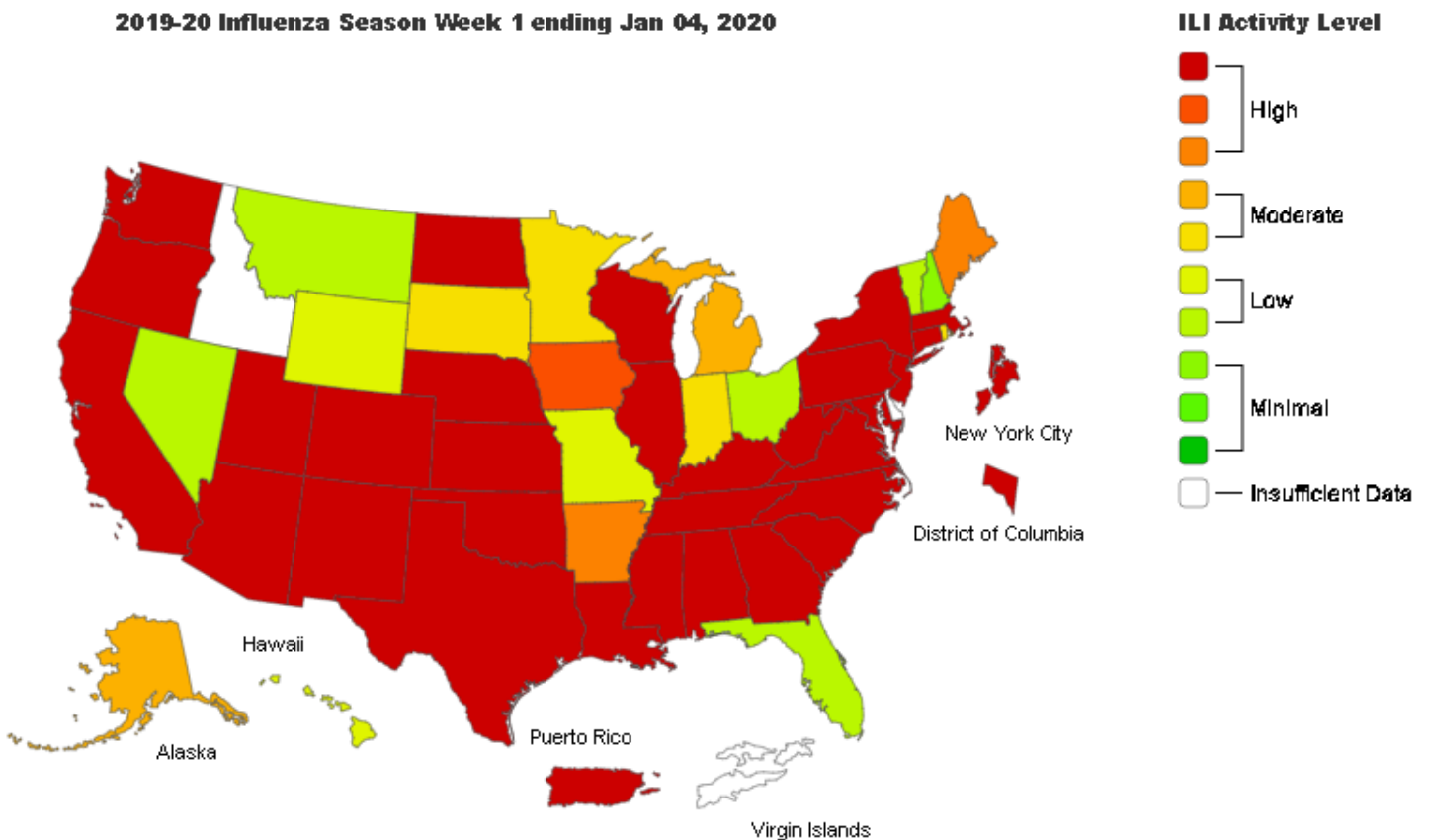
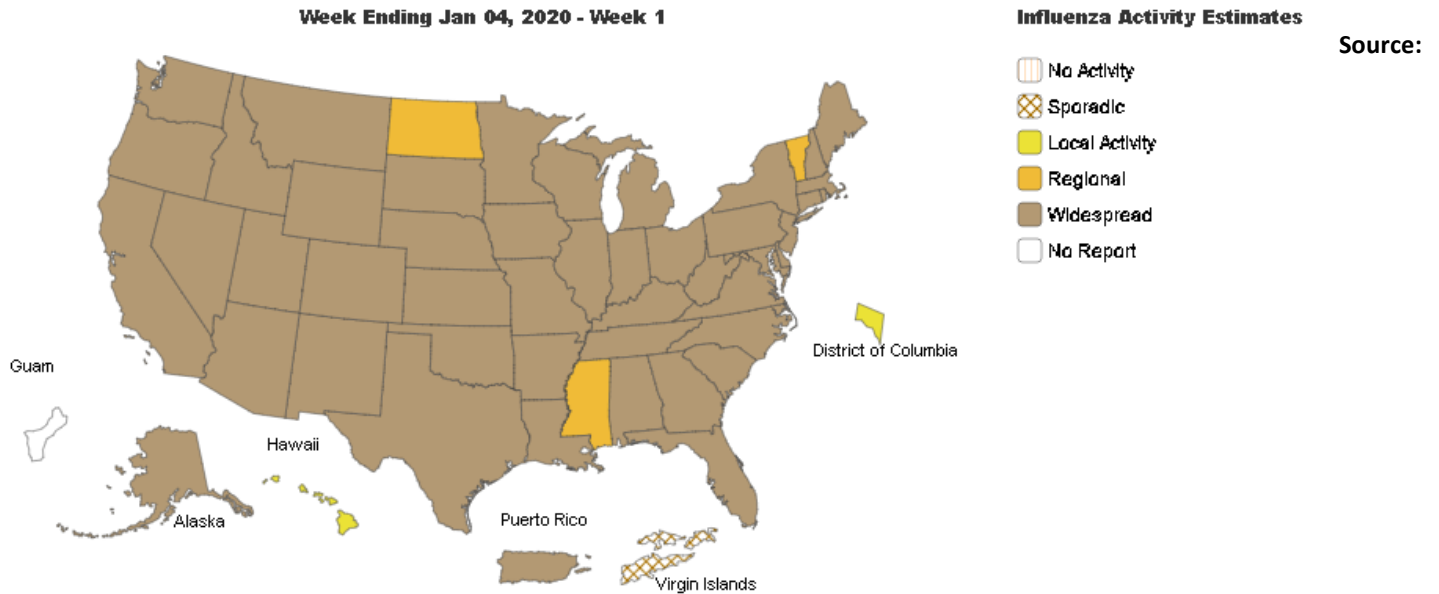


Figure 7. Weekly influenza activity (geographic spread) estimates reported by state and territorial epidemiologists



## Global Surveillance:

Influenza Update N° 358, World Health Organization (WHO), published 6 January 2020, based on data up to 22 December 2019. The Update is published every two weeks.

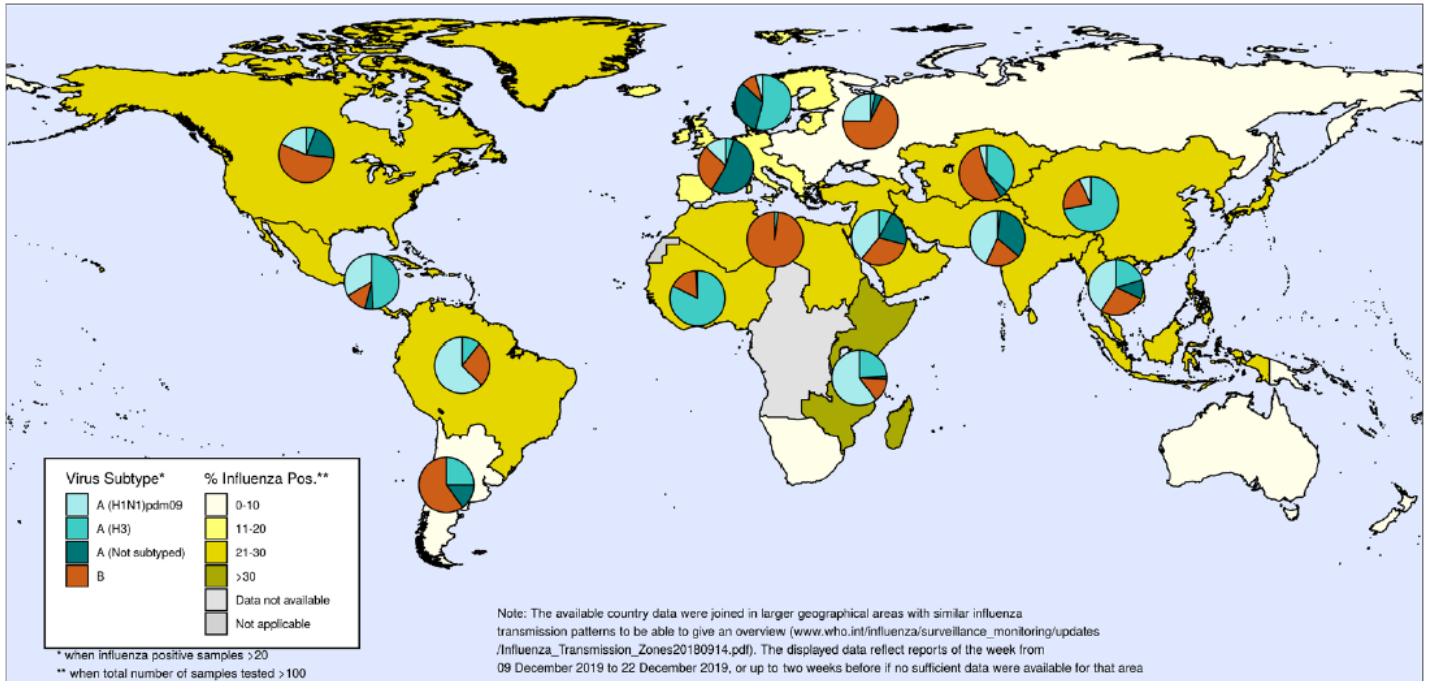
### Summary

- In the **temperate zone of the northern hemisphere**, respiratory illness indicators and influenza activity continued to increase in most countries. In **North America**, influenza activity further increased and although all seasonal influenza subtypes were co-circulating there was a high proportion of influenza B viruses. In **Europe**, influenza activity continued to increase across the region and was reported at moderate levels in some countries of Northern Europe. In **Central Asia**, influenza activity increased with influenza A and B viruses co-circulating. In **Northern Africa**, influenza activity was low overall. In **Western Asia**, influenza activity remained elevated overall and continued to increase in Iraq, Israel, Jordan, Turkey and Yemen. In **East Asia**, ILL and influenza activity continued to increase overall.
- In the **Caribbean and Central American countries**, influenza activity was low overall, except for Cuba where increased detections of influenza B/Victoria lineage viruses were reported. In **tropical South American countries**, increased influenza activity was reported from Ecuador and Colombia in recent weeks.
- In **tropical Africa**, influenza activity was elevated in some countries of Eastern and Middle Africa.
- In **Southern Asia**, influenza activity was low in most reporting countries, but remained elevated in the Islamic Republic of Iran, though decreased.
- In **South East Asia**, influenza activity was reported in the Lao People’s Democratic Republic and Malaysia.
- In the **temperate zones of the southern hemisphere**, influenza activity remained at inter-seasonal levels.
- **Worldwide**, seasonal influenza A(H3N2) viruses accounted for the majority of detections.

National Influenza Centres (NICs) and other national influenza laboratories from 110 countries, areas or territories reported data to FluNet for the time period from 9 December 2019 to 22 December 2019 (*data as of 2020-01-03 08:00:07 UTC*). The WHO GISRS laboratories tested more than 96 024 specimens during that time period. A total of 20 706 specimens were positive for influenza viruses, of which 14 225 (68.7%) were typed as influenza A and 6481 (31.3%) as influenza B. Of the sub-typed influenza A viruses, 3210 (28.9%) were influenza A(H1N1)pdm09 and 7890 (71.1%) were influenza A(H3N2). Of the characterized B viruses, 45 (1.5%) belonged to the B-Yamagata lineage and 2962 (98.5%) to the B-Victoria lineage.



**Figure 8. Percentage of respiratory specimens that tested positive for influenza, by influenza transmission zone**  
**Map generated by the WHO on 3 January 2020**



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

## Influenza News from CDC and Summit County Public Health:

### Clinicians Should Prescribe Antivirals to Very Sick and High Risk Patients

With ongoing elevated influenza activity expected to continue for weeks, CDC continues to recommend vaccination and rapid antiviral treatment of very sick and high-risk patients with suspected flu illness. CDC issued a [health advisory](#) to remind clinicians about this guidance and that early treatment with antivirals improves outcomes.

Source: [https://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm?deliveryName=USCDC\\_7\\_3-DM16978](https://www.cdc.gov/flu/professionals/antivirals/summary-clinicians.htm?deliveryName=USCDC_7_3-DM16978)

### MMWR: Outbreak of Influenza B/Victoria Virus Infections in Louisiana, 2019

This flu season, Louisiana saw unusually early flu activity caused mostly by influenza B viruses, which now predominate nationally. CDC and Louisiana health officials investigated and summarized their findings in the latest [MMWR](#) report.

Source: [https://www.cdc.gov/mmwr/volumes/69/wr/mm6902e1.htm?s\\_cid=mm6902e1\\_w&deliveryName=USCDC\\_7\\_3-DM16978](https://www.cdc.gov/mmwr/volumes/69/wr/mm6902e1.htm?s_cid=mm6902e1_w&deliveryName=USCDC_7_3-DM16978)

# Three very different influenza seasons in Summit County:

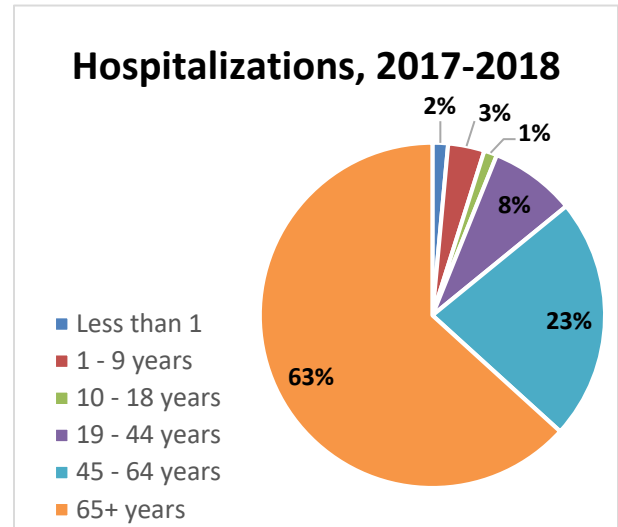
## Week 13 status report

As stated by CDC, this is the first influenza season since 1992-1993 where Influenza B is the predominate virus. The past three flu seasons have exhibited three distinctly different patterns of circulation for Influenza A (pdmH1N1 and H3N2) and Influenza B. Comparison of ODH laboratory influenza subtyping results and Summit County hospitalizations from the past three flu seasons (up through Week 13) indicate that which types of flu circulating influence which age groups are at risk for complications and hospitalizations. (Figure 9 and Table 2).

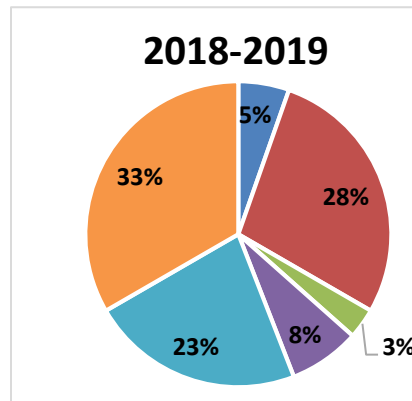
**Figure 9. Influenza-associated hospitalizations in Summit County through Week 13 (early January), stratified by age group.**

	2017-2018	2018-2019	2019-2020
<b>A/pdmH1N1</b>	9.0%	77.2%	34.1%
<b>A/H3N2</b>	86.1%	21.8%	7.6%
<b>Influenza B</b>	4.9%	1.0%	58.3%

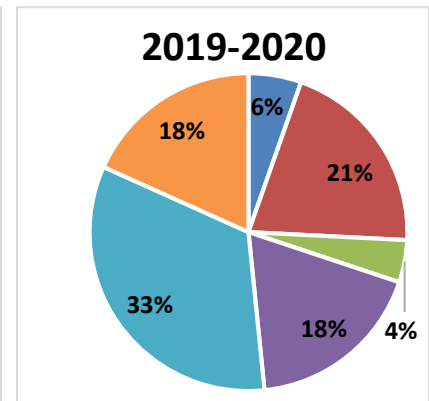
Source: ODH Influenza Activity Reports, Week 13 (2018, 2019, 2020)



**2017-2018 Influenza Season:** In early January, the 2017-18 flu season was dominated by Influenza A/H3N2 (86% of ODH subtyping). Middle aged and older adults were the most vulnerable. 63% of the 411 hospitalizations were aged 65 and over, and 23% were aged 45 to 64. Pediatric cases (18 years and younger) accounted for only 6% of hospitalizations at this point in the 2017-18 season.



**2018-2019 Influenza Season:** In early January, the 2018-19 flu season was dominated by Influenza A/pdmH1N1 (77%), followed by Influenza A/H3N2 (22%). Only 33% of the 93 hospitalizations were for adults aged 65 and over, a decrease of nearly 50% from the previous season. Children aged 18 and under were 36% of flu hospitalizations, with children aged 1-9 the most affected (28% of admissions)



**2019-2020 Influenza Season:** So far, the 2019-20 flu season has been dominated by Influenza B (58%), followed by Influenza A/ pdmH1N1 (34%). A relatively even distribution among age groups has been observed so far this season, with 51% of the 93 hospitalizations occurring among adults aged 19 to 64. In the previous two seasons, this age group accounted for only 31% of flu related hospitalizations.

**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](mailto:cdu@schd.org)). This report was issued on January 10, 2020.