



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



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

## Report #14

**Flu Surveillance Weeks 14 & 15 (1/5/2020 to 1/18/2020)**

**Centers for Disease Control and Prevention MMWR Weeks 2 & 3**

### Summit County Surveillance Data:

In **Week 15** of surveillance, influenza-related activity is elevated in Summit County, and most indicators increased.

Table 1: Overall Influenza Activity Indicators in Summit County by Week				
	Week 14 MMWR 2 N (%) <sup>1</sup>	Week 15 MMWR 3 N (%) <sup>1</sup>	Percent change from previous week	Number of weeks increasing or decreasing
<b>Lab Reports</b>				
Test Performed	1236	1315	+ 6.4%	↑1
Positive Tests (Number and %)	269 (21.8)	362 (27.5)	+26.5%	↑2
Influenza A (Number and %)	100 (8.1)	128 (9.7)	+ 20.3%	↑2
Influenza B (Number and %)	169 (13.7)	234 (17.8)	+ 30.1%	↑2
<b>Acute care hospitalization for Influenza:</b>	36	34	- 5.6%	↓2
<b>Influenza ILI Community Report:</b>				
Long-term Care ILI Cases	0	2	+ 100%	↑1
Correctional & Addiction Facility	1	0	- 100%	↓1
Physician Offices & University Clinic	3	8	+ 167%	↑1
<b>Pharmacy Prescriptions</b>				
Zanamivir (Relenza)	0	0	--	--
Oseltamivir (Tamiflu)	17	52	+ 206%	↑2
Baloxavir marboxil (Xofluza)	0	0	--	--
<i>Total</i>	17	52	+ 206%	↑2
<b>Schools absenteeism<sup>2</sup></b>	6.4%	7.4%	+ 15.6%	↑1
<b>Deaths</b>				
Pneumonia associated	2 (1.2)	9 (6.6)	+ 439%	↑1
Influenza associated	0	0	--	--
<b>Emergency room visits (EpiCenter)<sup>3</sup></b>				
Constitutional Complaints	781 (12.6)	788 (13.1)	+ 3.6%	↑1
Fever and ILI	123 (2.0)	118 (2.0)	NC	NC
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				
<b>Note:</b> 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 15, and there were nine deaths associated with pneumonia. **Figure 1** displays weekly Summit County death counts associated with pneumonia and influenza. *The seasonal average for pneumonia and influenza (P&I) deaths is 3.3%.*

**Acute Care Hospitalizations:** 34 hospitalization was reported during Week 15. **Figure 2** displays influenza associated hospitalizations in Summit County.

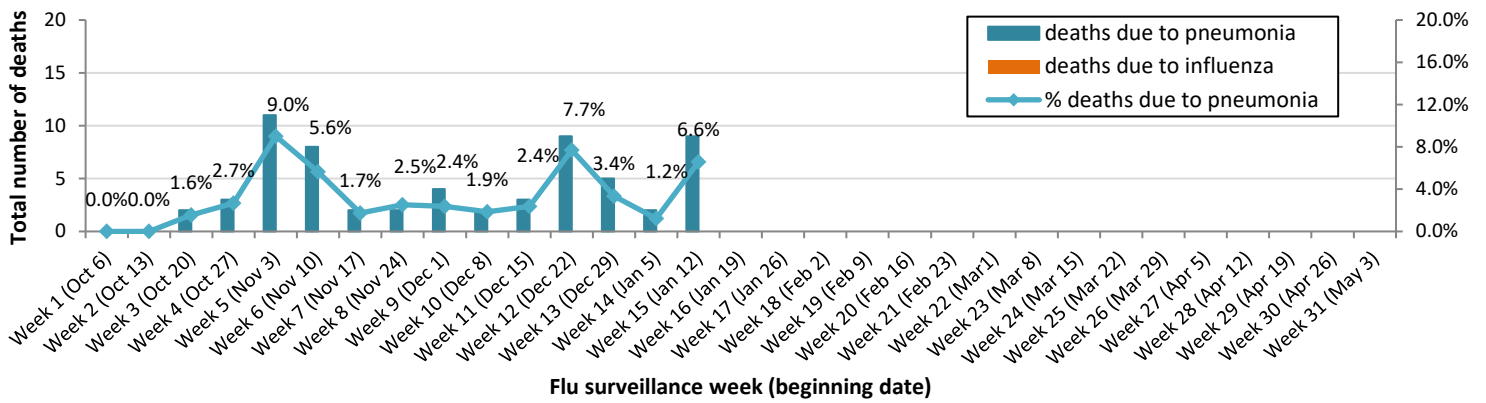
**COMMUNITY ILI REPORTS:** Influenza like Illness (ILI) as defined by the CDC is fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat without a known cause other than influenza. Community ILI reports: **Long Term Care Facilities:** There were two cases of ILI reported. **Correctional and Inpatient Addiction facilities:** Zero cases of ILI were reported. **Physician offices and clinics:** During Week 15, eight cases of ILI were reported.

**Pharmacies:** 52 antiviral prescriptions were filled by reporting pharmacies during Week 15.

**School absenteeism** includes absences regardless of reason. During Week 15, the reported absence rate was 7.4%, a 16% increase from Week 14.

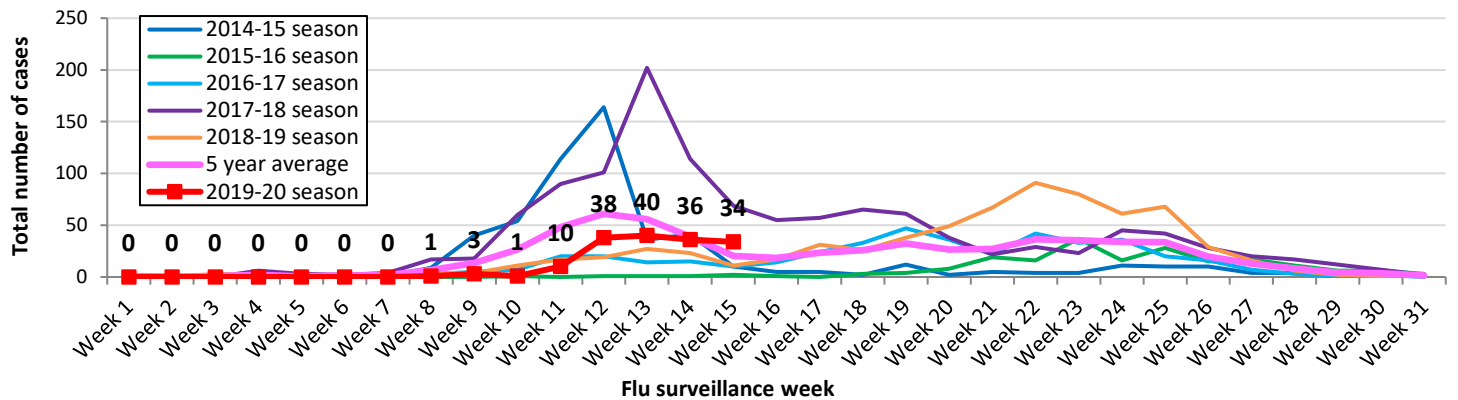
**Lab reports:** During Week 15 of influenza surveillance, reporting Summit County laboratories performed 1315 flu tests, of which 362 were positive (Type A = 128, Type B = 234). (**Figure 4**).

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



**Influenza-associated hospitalization:** Summit County hospitals reported 34 influenza-associated hospitalizations during Week 15. **Figure 2** displays weekly confirmed hospitalization count for Summit County (**cumulative count to date = 163**).

**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 118 ILI-related visits reported during Week 15, which was 2.0% of total ED visits (n = 6030). This rate was the same as the ILI rate during Week 14.

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

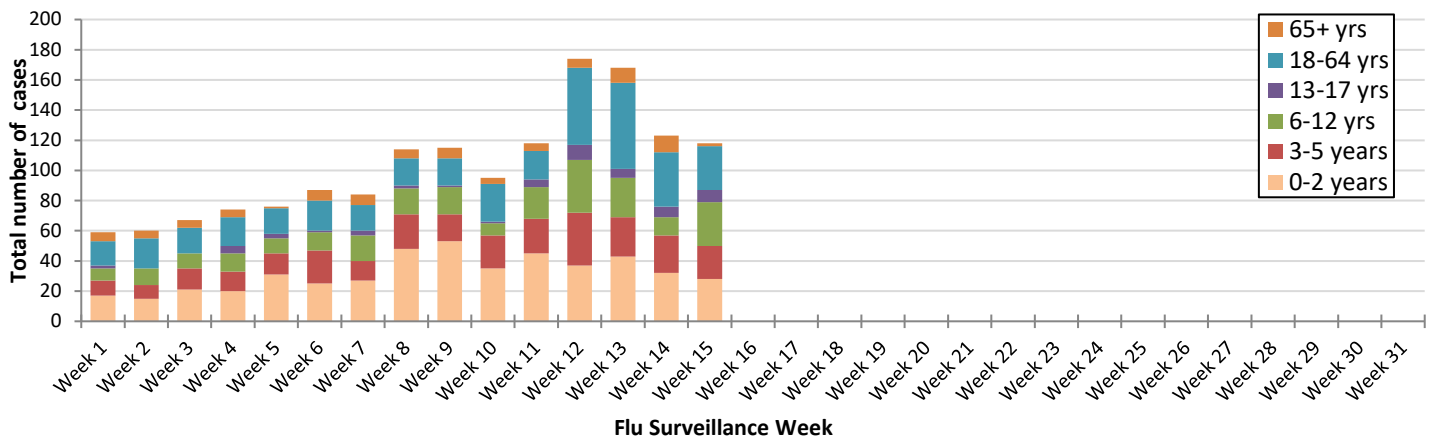
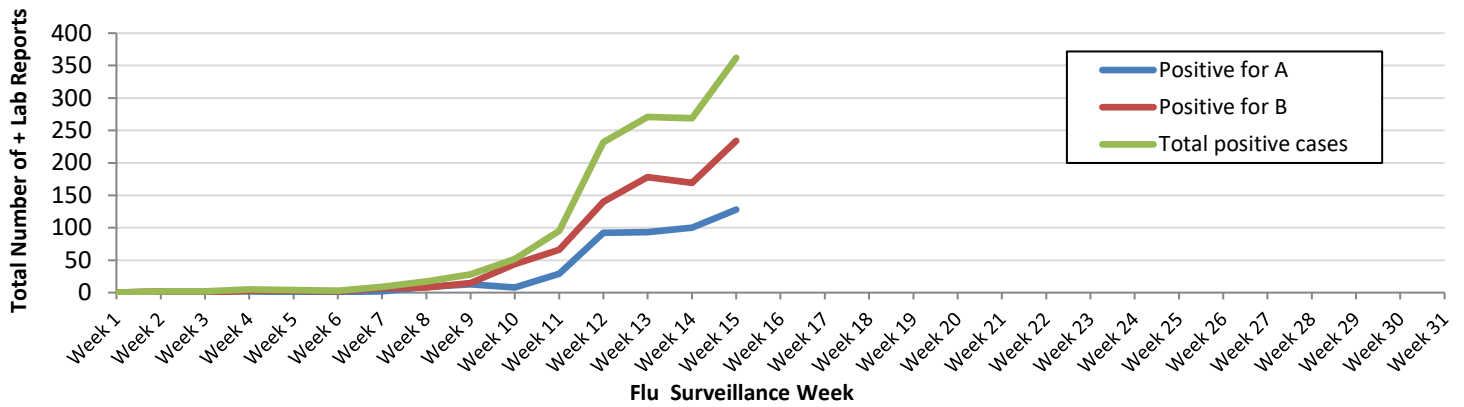


Figure 4. Influenza diagnostic tests with positive results completed by Summit County health facilities, 2019 - 2020 season



## 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 3, 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 (25 hospitalization per week). There were 566 influenza-associated hospitalizations reported during MMWR Week 3.

### Ohio Influenza Activity Summary Dashboard (January 12 – January 18, 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)	2.13%	26.04%	↑ 1	
Thermometer Sales (National Retail Data Monitor)	1790	3.11%	↑ 2	
Fever and ILI Specified ED Visits (EpiCenter)	3.10%	8.39%	↑ 1	
Constitutional ED Visits (EpiCenter)	14.09%	0.57%	↑ 1	
Confirmed Influenza-associated Hospitalizations (Ohio Disease Reporting System)	566	-15.77%	↓ 2	
Outpatient Medical Claims Data <sup>4</sup>	2.99%	11.15%	↑ 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 **285 positive** influenza tests from specimens sent from sentinel ILINet providers and hospital clinical labs. 2019-2020 influenza season results: **(116) A/pdmH1N1; (14) A/H3N2; (155) Influenza B**; (through 01/18/2020).
- The **National Respiratory and Enteric Virus Surveillance System (NREVSS)** has tested **42,760** influenza specimens by RTPCR at participating facilities. 2019-2020 influenza season positive results: **(130) A/pdmH1N1; (2) A/H3N2; (1821) Flu A Not Subtyped; and (4733) Flu B**; (through 01/18/2020)
- **1 influenza-associated pediatric mortality** has been reported during the 2019-2020 season (through 01/18/2020).
- No **novel influenza A virus infections** have been reported during the 2019-2020 season (through 01/18/2020).
- Incidence of confirmed **influenza-associated hospitalizations** in 2019-2020 season = **3,034** (through 01/18/2020).

## 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 and, after falling during the first two weeks of the year, increased slightly this week. 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 than other influenza viruses this season. However, during recent weeks, approximately equal numbers of B/Victoria and influenza A(H1N1)pdm09 viruses have been reported nationally. 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%** (74 of 74 samples); **A (H3N2): 41.5%** (22 of 53 samples); **B/Victoria: 60.2%** (53 of 88 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 3, 5.0% 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%.* On a regional level, the percentage of outpatient visits for ILI ranged from 3.2% to 7.3% during week 3. All regions reported a percentage of outpatient visits for ILI which is above their region-specific baselines.
  - **ILI State Activity Indicator Map (Figure 6):** Puerto Rico, New York City, and 35 states reported high ILI activity; the District of Columbia and 6 states reported moderate activity; 8 states experienced low ILI activity; and Idaho reported minimal activity. Data was insufficient for US Virgin Islands to report.
- **Geographic Spread of Influenza (Figure 7):** During Week 3, the geographic spread of influenza was reported widespread in Puerto Rico and 48 states; regional in Oregon, 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 23, 2020, 6.7% of the deaths occurring during the week ending January 11, 2020 (week 2) were due to P&I. This percentage is below the epidemic threshold of 7.1% for week 2.
- **Influenza-associated Pediatric Deaths:** A total of 54 influenza-associated pediatric deaths occurring during the 2019-2020 season have been reported to CDC.
  - 37 deaths were associated with influenza B viruses. Five of these had the lineage determined and all were B/Victoria viruses.
  - 17 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

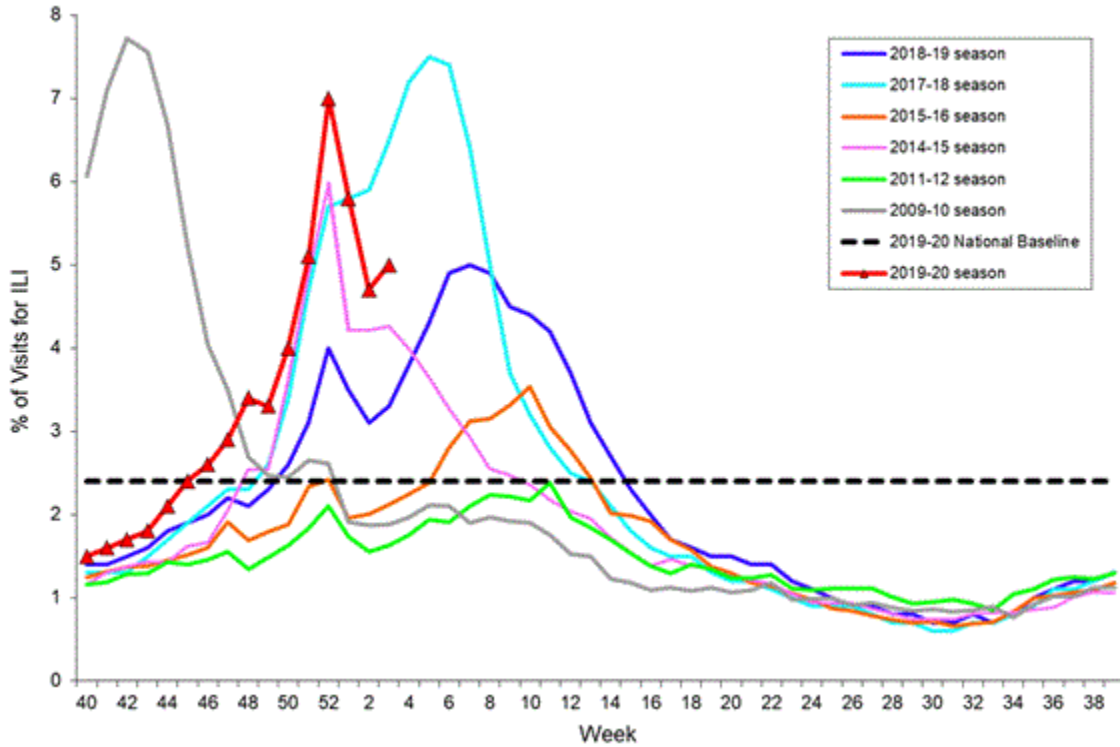


Figure 6. Influenza-like illness (ILI) activity level indicator determined by data reported to ILINet

2019-20 Influenza Season Week 3 ending Jan 18, 2020

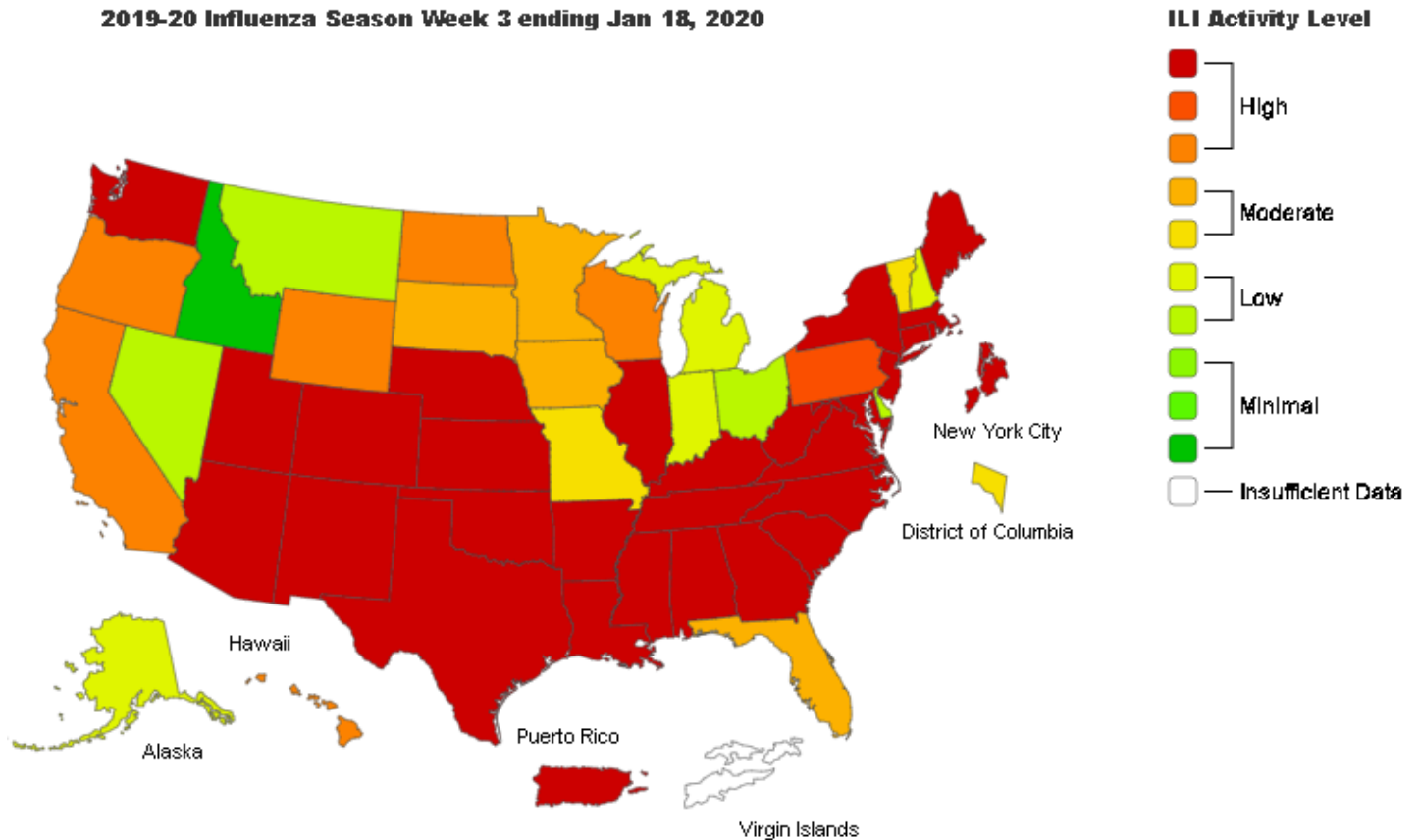
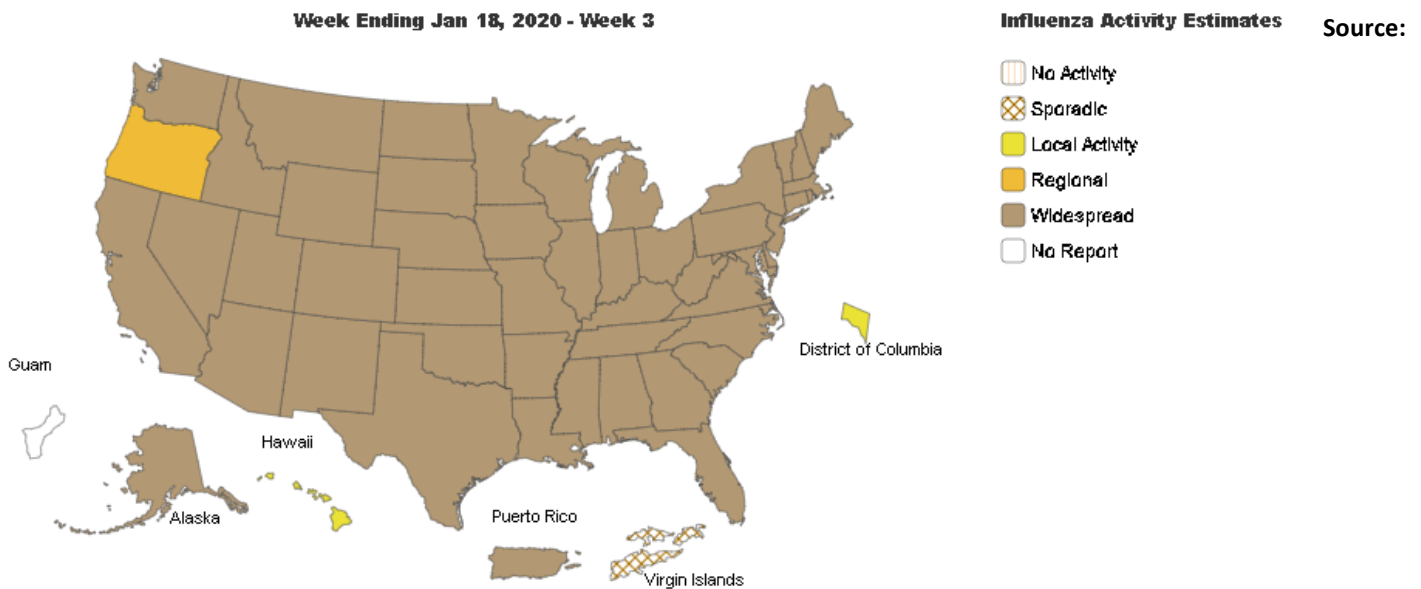


Figure 7. Weekly influenza activity (geographic spread) estimates reported by state and territorial epidemiologists



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

## Global Surveillance:

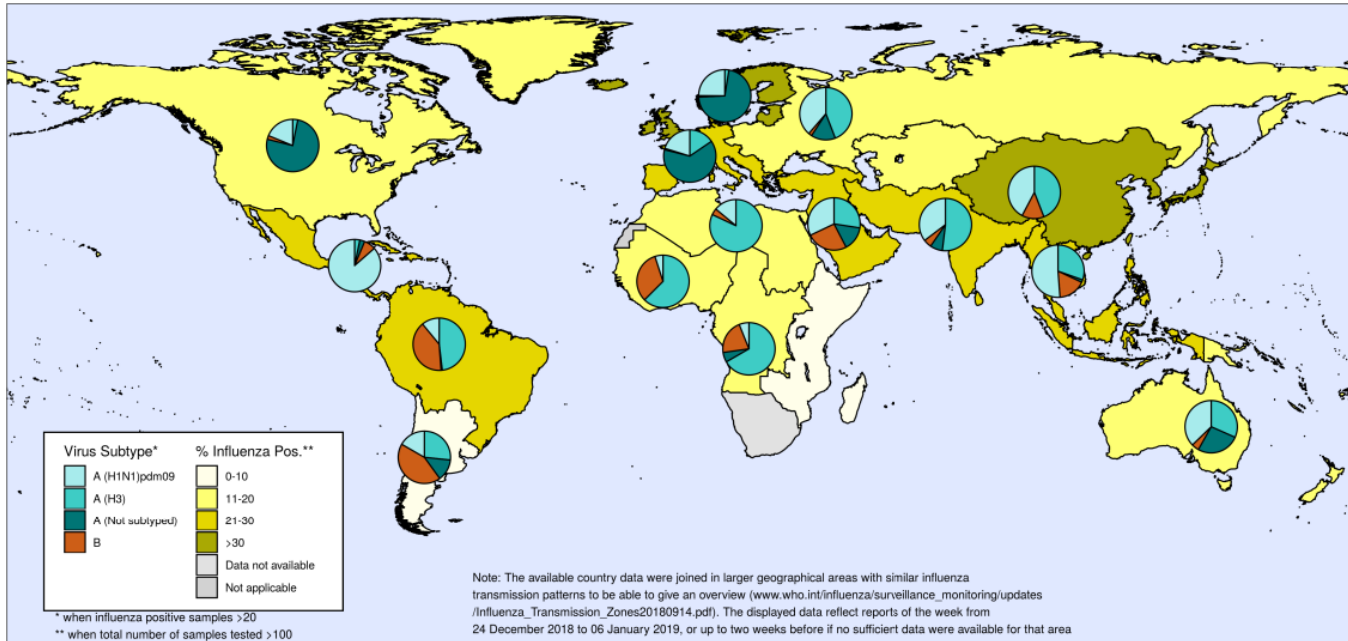
Influenza Update N° 359, World Health Organization (WHO), published 20 January 2020, based on data up to 05 January 2020. The Update is published every two weeks.

### 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 with all seasonal influenza subtypes circulating.
  - 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 B viruses predominant.
  - 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**, influenza-like illness (ILI) and influenza activity continued to increase overall.
- In **the Caribbean and Central American countries**, influenza activity was low overall, except for Mexico where increased detections of influenza A 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 low across reporting countries of Eastern and Western Africa.
- In **Southern Asia**, influenza activity was low in most reporting countries, but increased in Afghanistan.
- In **South East Asia**, influenza activity continued to be reported in Lao People’s Democratic Republic and Malaysia and increased in Singapore.
- In **the temperate zones of the southern hemisphere**, influenza activity remained at inter-seasonal levels.
- **Worldwide**, seasonal influenza 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 23 December 2019 to 05 January 2020 (data as of 2020-01-17 04:29:43 UTC). The WHO GISRS laboratories tested more than 174 604 specimens during that time period. A total of 44 847 were positive for influenza viruses, of which 27 946 (62.3%) were typed as influenza A and 16 901 (37.7%) as influenza B. Of the sub-typed influenza A viruses, 5081 (31.6%) were influenza A(H1N1)pdm09 and 11 005 (68.4%) were influenza A(H3N2). Of the characterized B viruses, 23 (0.6%) belonged to the B-Yamagata lineage and 3753 (99.4%) 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 17 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 CIDRAP:

### Early-season influenza B dominance—why it's hard on kids

**Written by:** Stephanie Soucheray | News Reporter | CIDRAP News  
 Jan 13, 2020

Most areas of North America are in the throes of a flu season marked by an unusual early dominance of influenza B, a strain not typically seen in large numbers until the later months of the flu season.



"We had a paucity of influenza B last year, so we may have anticipated community immunity would be low," said Danuta Skowronski, MD, MHSc, an epidemiologist with the British Columbia Centre for Disease Control in Vancouver. In fact, a few months ago, Skowronski said she gave a Grand Rounds talk about the upcoming flu season and the risk of influenza B. My concern was we had not seen influenza B/Victoria make a strong showing since the 2015-2016 season," Skowronski told CIDRAP News. "So immunity to that virus would be low."

And that low immunity may be behind the season's more severe illness in children.

Influenza B comes in two primary strains—Victoria and Yamagata. So far this year 98% of flu B viruses subtyped have been from the Victoria lineage. And B strains have outpaced A strains 58% to 42%. Quadrivalent (four-strain) vaccines contain both B strains, whereas trivalent (three-strain) versions this year have only the Victoria strain.

## Severity in children

In a special *Morbidity and Mortality Weekly Reports (MMWR)* report last week, researchers from the Centers for Disease Control and Prevention (CDC) and Louisiana detailed early flu activity at a large pediatric hospital in New Orleans. The facility reported 1,268 laboratory-confirmed influenza B virus infections, including 23 hospitalizations from Jul 31 to Nov 21, 2019, a time when influenza activity is typically low. And clinic visits for influenza-like illnesses started even earlier, in mid-August, before most patients had the chance to get a flu vaccine.

"B/Victoria viruses did not circulate widely during the past three influenza seasons, accounting for <10% of influenza virus isolates reported during the 2016–17 to 2018–19 seasons," the authors of the *MMWR* report said. "Even though influenza B viruses are less common than influenza A viruses in most seasons, influenza B virus infection can be severe in children." Last week the CDC also released a Health Alert Network (HAN) advisory, warning clinicians that in previous seasons influenza B has been associated with a higher proportion of influenza-related pediatric deaths. So far in the 2019-20 flu season, 32 children have died, with 21 of those deaths linked to influenza B.

## Imprinting flu B

Richard Webby, PhD, from St. Jude Children's Research Hospital in Memphis, Tennessee, said the pediatric vulnerability to influenza B may have to do with immunologic imprinting, a complex field of study that suggests patients will be able to defend themselves against viruses they were exposed to early in life.

In the case of B/Victoria, which has not been the dominant strain in a United States flu season since 1992-93, children may have no immunologic memory of the virus. Skowronski said some data show B viruses tend to skew toward younger patients, and the average B/Victoria patients may be up to 20 years younger than a patient infected by another strain. "With B/Yamagata, we see older people getting sick, but with B/Victoria, we see more flu activity in schools, less in long-term care facilities," Skowronski said.

Both Webby and Skowronski explained that, unlike A viruses, which can change via introductions from the animal kingdom, B viruses infect only humans and change through deletions and changes in amino acid structures. In the past 3 years, B/Victoria has seen a double- and now triple-deletion, which could be another reason for this notable flu season. "It's almost like this virus is searching around for a way to take off in a population," said Webby. "We've seen the virus take different pathways to evolve, as though each virus deletion version is testing the waters."

## Vaccination may be especially useful

Webby emphasized that the current quadrivalent flu shot offered in the United States covers both B/Victoria and B/Yamagata, strains that demonstrate cross-reactivity and cross-protection. He said he is still encouraging flu vaccines. "Even if we have seen the peak of the season, flu will last several more weeks," Webby said. And the flu vaccine is typically more protective against B viruses than certain A strains, he said. "B tends to do better even when there is a bit of mismatch between the vaccine and circulating strain," he said.

**See also:** Jan 10 *MMWR* [report](#) Jan 10 CDC [HAN advisory](#)  
Jan 10 CIDRAP News story "[Five more kids' deaths in season dominated by influenza B](#)"

**Source:** <http://www.cidrap.umn.edu/news-perspective/2020/01/early-season-influenza-b-dominance-why-its-hard-kids>

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**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.*

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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 24, 2020.