



**Summit County Public Health
Influenza Surveillance Report
2019 – 2020 Season
Report #9**



Public Health
Prevent. Promote. Protect.

**Flu Surveillance Weeks 9 & 10 (12/1/2019 to 12/14/2019)
Centers for Disease Control and Prevention MMWR Weeks 49 & 50**

Summit County Surveillance Data:

In **Week 10** of surveillance, influenza-related activity is elevated in Summit County, and continues to increase.

Table 1: Overall Influenza Activity Indicators in Summit County by Week				
	Week 9 MMWR 49 N (%) ¹	Week 10 MMWR 50 N (%) ¹	Percent change from previous week	Number of weeks increasing or decreasing
Lab Reports				
Test Performed	721	780	+ 8.2%	↑3
Positive Tests (Number and %)	28 (3.9)	52 (6.7)	+ 71.7%	↑4
Influenza A (Number and %)	13 (1.8)	8 (1.0)	- 43.1%	↓1
Influenza B (Number and %)	15 (2.1)	44 (5.6)	+ 171%	↑4
Acute care hospitalization for Influenza:	3	1	- 66.7%	↓1
Influenza ILI Community Report:				
Long-term Care ILI Cases	0	1	+ 100%	↑1
Correctional & Addiction Facility	0	0	--	--
Physician Offices & University Clinic	2	3	+ 50.0%	↑3
Pharmacy Prescriptions				
Zanamivir (Relenza)	0	--	--	--
Oseltamivir (Tamiflu)	6	--	--	--
Baloxavir marboxil (Xofluza)	0	--	--	--
<i>Total</i>	6	--	--	--
Schools absenteeism²	6.9	6.6	- 4.4%	↓2
Deaths				
Pneumonia associated	4 (2.4)	2 (1.9)	- 22.2%	↓1
Influenza associated	0	0	--	--
Emergency room visits (EpiCenter)³				
Constitutional Complaints	576 (9.3)	580 (9.5)	1.9%	NC
Fever and ILI	115 (1.9)	95 (1.6)	- 16.4%	↓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				

Zero deaths related to influenza were reported during Week 10, and there were two deaths associated with pneumonia. **Figure 1** displays weekly Summit County death counts associated with pneumonia and influenza.

Acute Care Hospitalizations: One hospitalization was reported during Week 10. **Figure 2** displays influenza associated hospitalizations in Summit County.

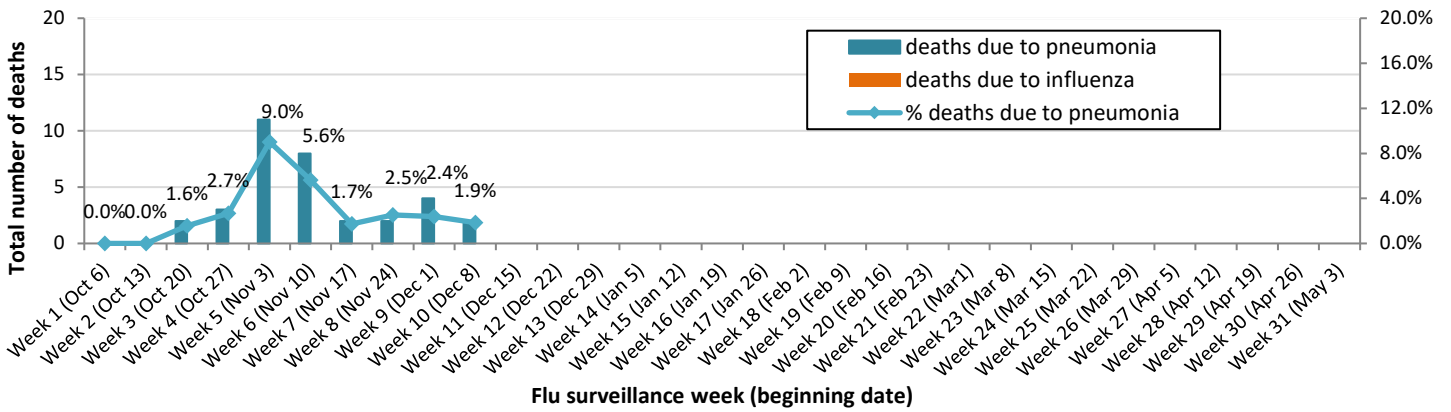
COMMUNITY ILI REPORTS: Influenza like Illness (ILI) as defined by the CDC is fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat without a known cause other than influenza. Community ILI reports: **Long Term Care Facilities:** There was one case of ILI reported. **Correctional and Inpatient Addiction facilities:** Zero cases ILI reported. **Physician offices and clinics:** During Week 10, one case of ILI was reported.

Pharmacies: Insufficient data was reported, antiviral prescriptions will be updated in the next report.

School absenteeism includes absences regardless of reason. During Week 10 the rate was 6.6%, a 4.4% decrease from the rate reported in Week 9.

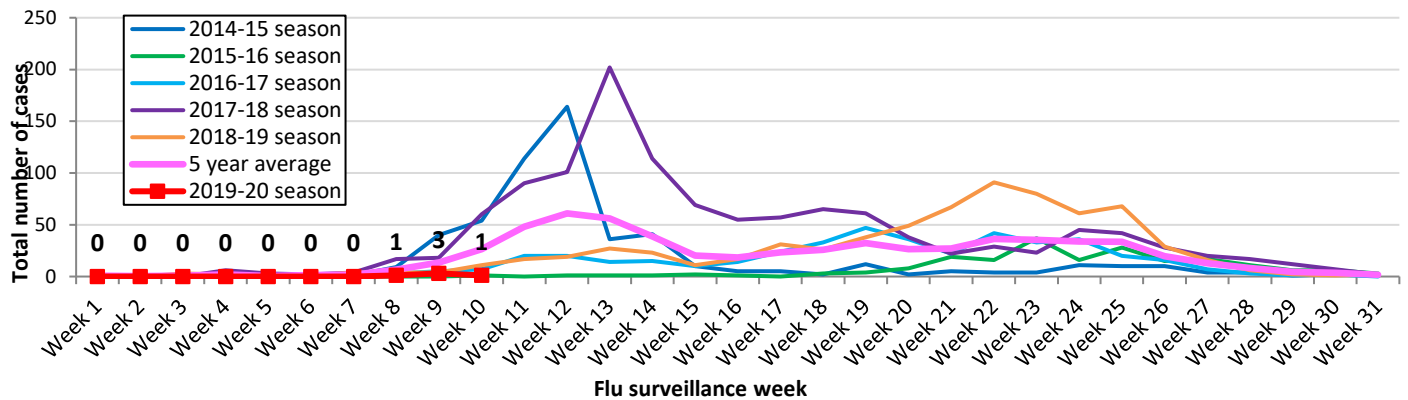
Lab reports: During Week 10 of influenza surveillance, reporting Summit County laboratories performed 780 flu tests, of which 52 were positive (Type A = 8, Type B = 44). (**Figure 4**)

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



Influenza-associated hospitalization: Summit County hospitals reported one influenza-associated hospitalization during Week 10. **Figure 2** displays weekly confirmed hospitalization count for Summit County (**cumulative count to date = 5**).

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 95 ILI-related visits reported during Week 10, which was 1.6% of total ED visits (n = 6118). This rate was lower (16.4% decrease) than the ILI rate during Week 9.

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

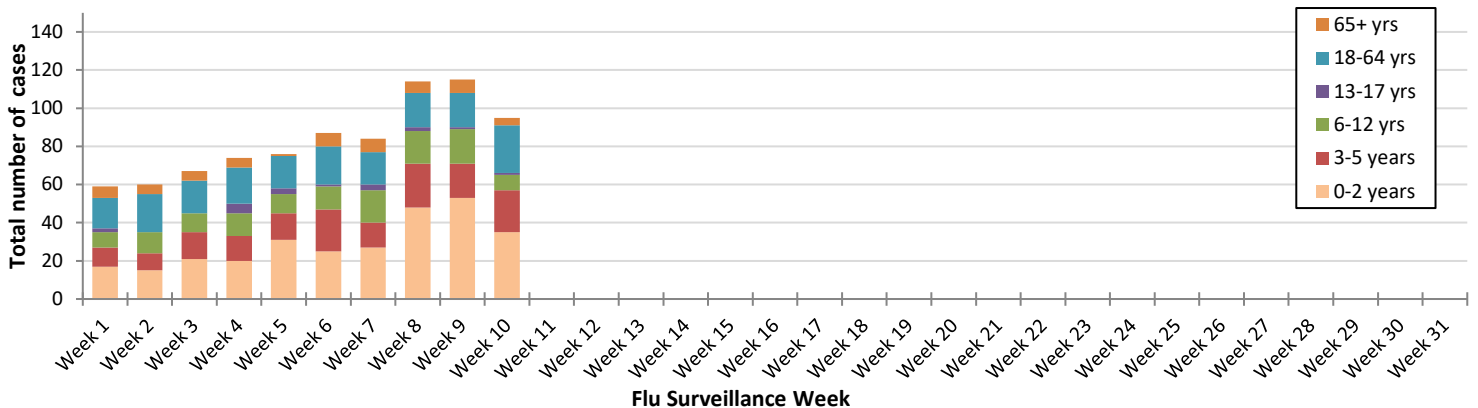
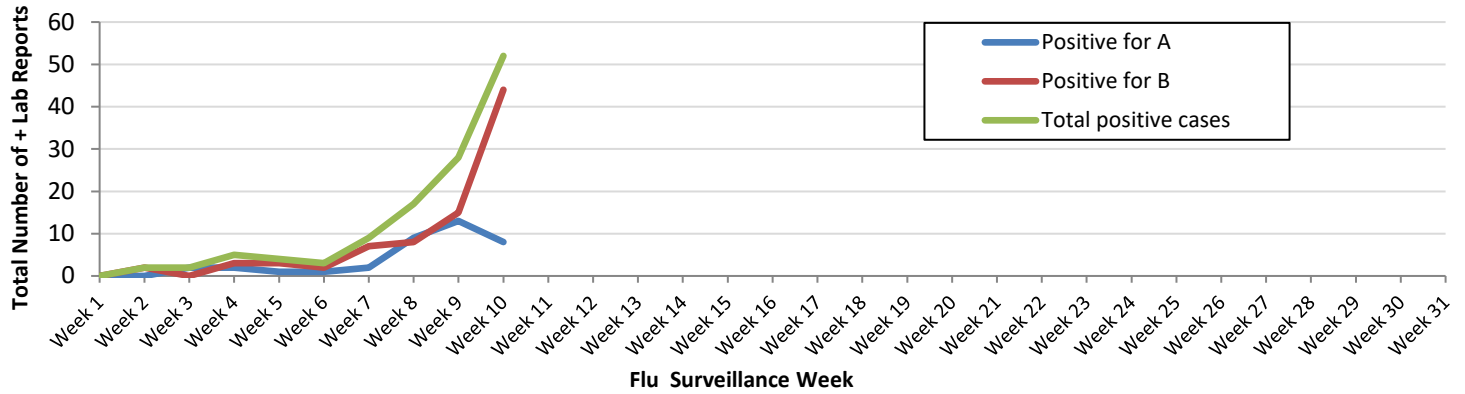


Figure 4. Influenza diagnostic tests with positive results completed by Summit County health facilities, 2019 - 2020 season



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 50, 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 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 (threshold is greater than 25 hospitalizations). There were 142 influenza-associated hospitalizations reported during MMWR Week 50.

Ohio Influenza Activity Summary Dashboard (December 8 – 14, 2019):

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)	1.20%	6.19%	↑ 2	
Thermometer Sales (National Retail Data Monitor)	1078	-0.09%	↓ 1	
Fever and ILI Specified ED Visits (EpiCenter)	2.76%	11.74%	↑ 1	
Constitutional ED Visits (EpiCenter)	11.16%	7.62%	↑ 9	
Confirmed Influenza-associated Hospitalizations (Ohio Disease Reporting System)	142	57.78%	↑ 5	
Outpatient Medical Claims Data ⁴	0.78%	-12.36%	↓ 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/seasflu/Ohio%20Flu%20Activity.aspx>

Ohio Surveillance Data:

- **ODH lab** has reported **67 positive** influenza tests from specimens sent from sentinel ILINet providers and hospital clinical labs. 2019-2020 influenza season results: **(21) A/pdmH1N1; (9) A/H3N2; (37) Influenza B;** (through 12/14/2019).
- The **National Respiratory and Enteric Virus Surveillance System (NREVSS)** has **18,805** influenza specimens tested by RTPCR at participating facilities. 2019-2020 influenza season positive results: **(21) A/pdmH1N1; (2) A/H3N2; (155) Flu A Not Subtyped; and (376) Flu B;** (through 12/14/2019)
- **0 pediatric influenza-associated mortalities** have been reported during the 2019-2020 season (through 12/14/2019).
- No **novel influenza A virus infections** have been reported during the 2019-2020 season (through 12/14/2019).
- Incidence of confirmed **influenza-associated hospitalizations** in 2019-2020 season = **404** (through 12/14/2019).

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

According to this week's FluView report, seasonal influenza activity in the United States has been elevated for six weeks and continues to increase.

- **Viral Surveillance:** Nationally influenza B/Victoria viruses have been reported more frequently than other influenza viruses 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%** (42 of 42 samples); **A (H3N2): 70.6%** (12 of 17 samples); **B/Victoria: 76%** (19 of 25 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 50, 3.9% 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 1.9% to 7.8% during week 50. 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):** Puerto Rico, New York City, and 19 states reported high ILI activity; the District of Columbia and 6 states reported moderate activity; and the District of Columbia, and 10 states experienced low ILI activity; and 14 states reported minimal activity. Data was insufficient for Louisiana and US Virgin Islands.
- **Geographic Spread of Influenza (Figure 7):** The geographic spread of influenza was reported widespread in Puerto Rico and 23 states; regional in 17 states, local in the District of Columbia and 2 states; the U.S. Virgin Islands and Hawaii reported sporadic activity; and Guam did not report.
- **Pneumonia and Influenza Mortality:** Based on National Center for Health Statistics (NCHS) mortality surveillance data available on December 19, 2019, 5.5% of the deaths occurring during the week ending December 7, 2019 (week 49) were due to P&I. This percentage is below the epidemic threshold of 6.6% for week 49.
- **Influenza-associated Pediatric Deaths:** Nine influenza-associated pediatric deaths occurring between week 44 (the week ending November 2, 2019) and week 50 (the week ending December 14, 2019) were reported to CDC during week 50. Two deaths were associated with influenza A(H1N1)pdm09 virus infection and seven were associated with influenza B viruses. Two of the influenza B viruses had lineage determined and both were B/Victoria 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

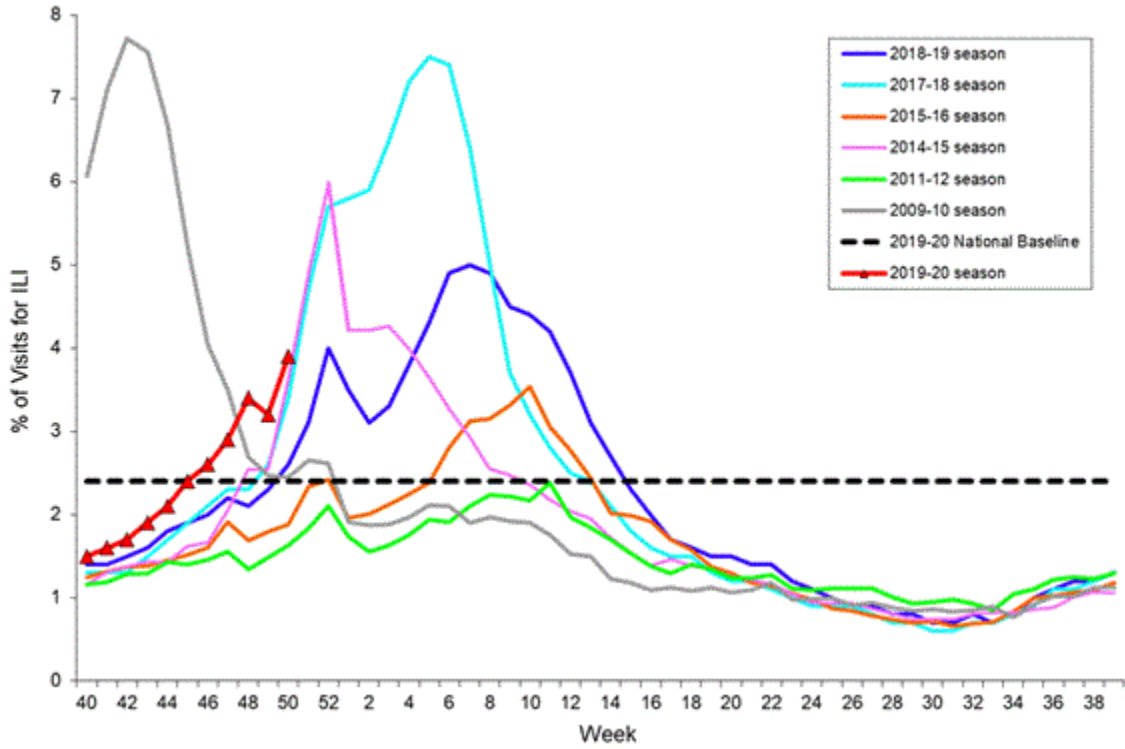


Figure 6. Influenza-like illness (ILI) activity level indicator determined by data reported to ILINet

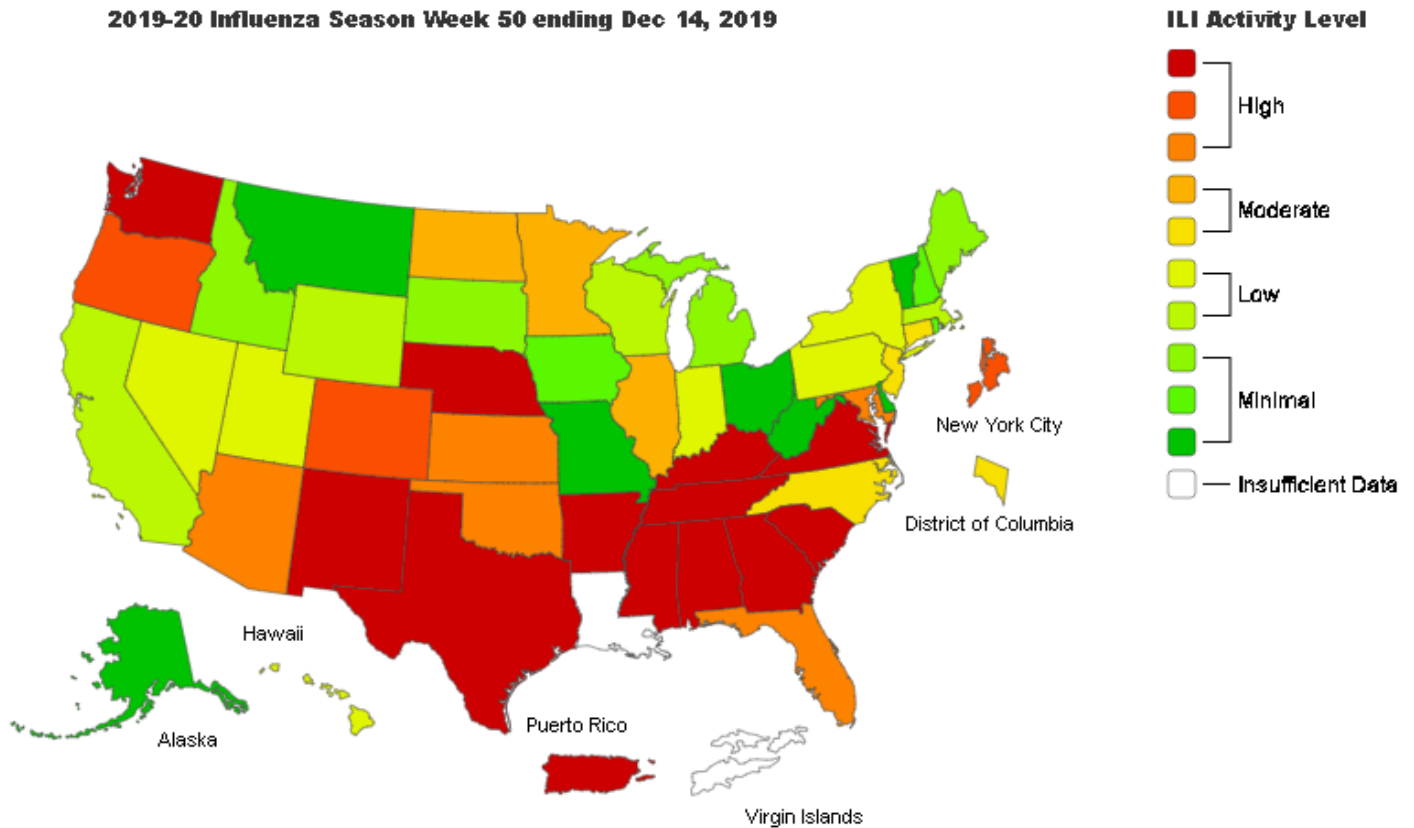
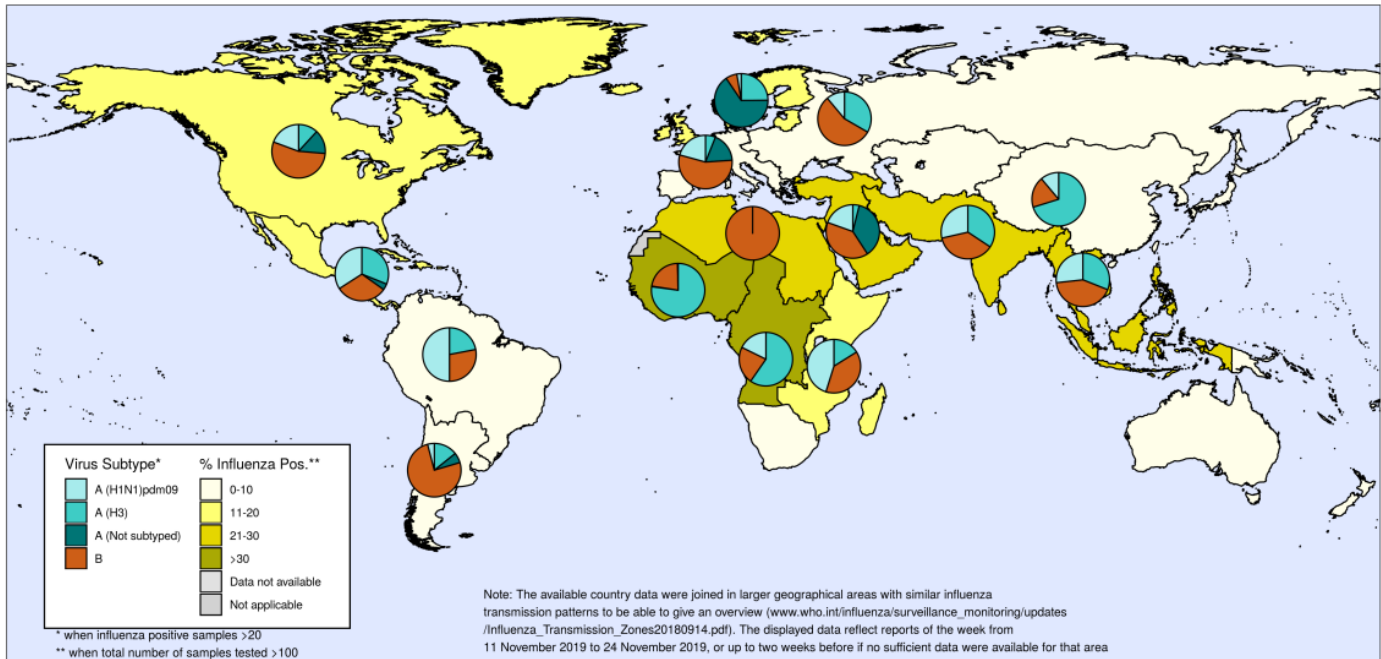


Figure 8. Percentage of respiratory specimens that tested positive for influenza, by influenza transmission zone
Map generated on 06 December 2019



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/

Influenza News from CIDRAP and CDC:

Study finds 1-day benefit of oseltamivir for influenza-like illness

A study yesterday in *The Lancet* involving more than 3,000 patients with influenza-like illness (ILI) in 15 European countries found that those treated with oseltamivir (Tamiflu) recovered a day sooner on average than those managed by usual care alone, and older patients with more severe ILI demonstrated an even greater benefit. The open-label trial involved 3,019 patients seeking care in primary care clinics, 52% of whom had lab-confirmed influenza. Of those, 1,533 received usual care plus oseltamivir, a commonly prescribed neuraminidase inhibitor antiviral drug, and 1,526 received usual care alone.

The researchers determined that time to recovery was shorter in the oseltamivir group (hazard ratio, 1.29; 95% Bayesian credible interval [BCrI], 1.20 to 1.39). They estimated an absolute mean benefit of 1.02 days (95% BCRI, 0.74 to 1.31). The benefit ranged from 0.70 days in patients younger than 12 years with milder ILI and shorter illness duration to 3.20 days in patients 65 years and older who had more severe and longer illnesses and comorbidities.

In a related commentary in the same journal, two University of Alberta experts who were not involved in the study wrote, "In an open-label trial, a placebo effect cannot be excluded; nevertheless, the differential benefits in patients with mild and severe symptoms are unlikely explainable by this alone." They add, "As such, the results must be interpreted in the context of assessing the effect of adding neuraminidase inhibitor treatment to symptomatic treatment.... These findings should not be interpreted as efficacy of neuraminidase inhibitors for noninfluenza viruses, such as respiratory syncytial virus and parainfluenza, that cause influenza-like illness."

Dec 12 *Lancet* study

Dec 12 *Lancet* commentary

Source: <http://www.cidrap.umn.edu/news-perspective/2019/12/news-scan-dec-13-2019>

Study finds combination of antivirals may aid in recovery from severe flu

Patients with severe flu treated with a combination of the antiviral drugs favipiravir and oseltamivir compared with oseltamivir (Tamiflu) alone had faster recoveries, according to findings published today in *The Journal of Infectious Diseases*.

The retrospective study offers the first data on combination therapy for severe flu, and was conducted by Chinese and British researchers, who compared 40 patients given combination therapy and 128 patients treated with oseltamivir alone. All patients had severe lab-confirmed influenza, were hospitalized, and were symptomatic for less than 10 days.

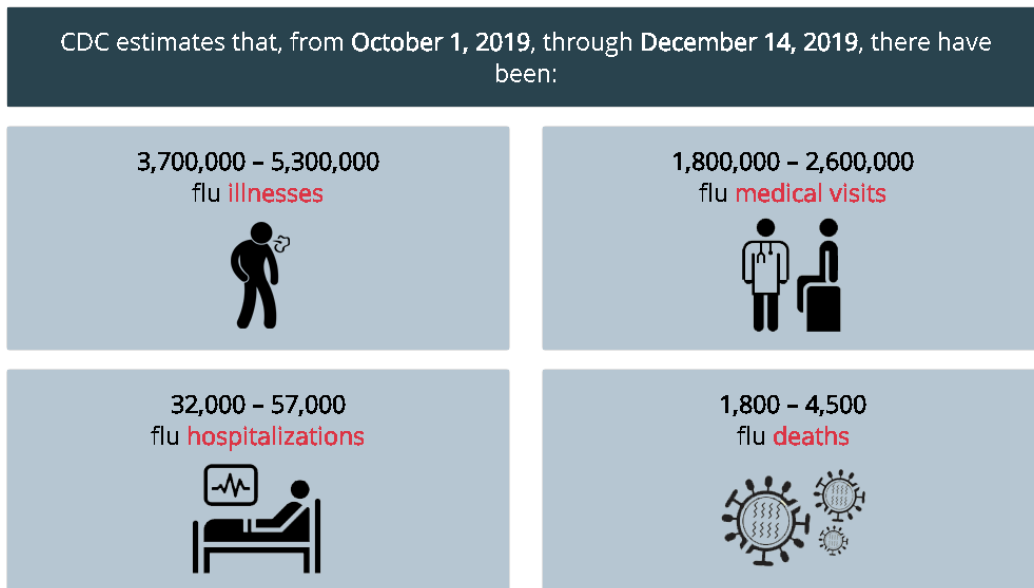
The combination therapy group exhibited higher rates of clinical improvement by day 14 than the monotherapy group (62.5% vs 42.2%, $P = 0.0247$). The proportion of undetectable viral RNA at day 10 was higher in the combination group than in the oseltamivir group (67.5% vs 21.9%, $P < 0.01$), the authors said, and there were no significant differences in mortality rates in the two groups.

Oseltamivir is the most widely used neuraminidase inhibitor in flu patients, while favipiravir is a novel inhibitor of influenza RNA. "To date, no antiviral randomized controlled trials (RCTs) have established a treatment regimen superior to oseltamivir monotherapy in hospitalized patients with influenza due to susceptible strains," the authors concluded. "Of concern is the relatively high frequency of emergence of oseltamivir-resistant variants in critically ill patients and their association with poor outcomes." The authors said their findings should prompt an RCT of favipiravir-oseltamivir treatment for severe flu.

Dec 11 J of Infect Dis [study](#)

Source: <http://www.cidrap.umn.edu/news-perspective/2019/12/news-scan-dec-11-2019>

2019-2020 U.S. Flu Season: Preliminary Burden Estimates



Source: https://www.cdc.gov/flu/about/burden/preliminary-in-season-estimates.htm?deliveryName=USCDC_7_3-DM15286

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 December 20, 2019.