Summit County Public Health
Influenza Surveillance Report
2019 – 2020 Season
Report #11
Flu Surveillance Weeks 11 & 12 (12/15/2019 to 12/28/2019)
Centers for Disease Control and Prevention MMWR Weeks 51 & 52

Summit County Surveillance Data:

In **Week 12** 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 11 MMWR 51 N (%)[1]	Week 12 MMWR 52 N (%)[1]	Percent change from previous week	Number of weeks increasing or decreasing
Lab Reports				
Test Performed	**889**	**1000**	+ 12.5%	**↑5**
Positive Tests (Number and %)	**95 (10.7)**	**232 (23.2)**	+ 117%	**↑6**
Influenza A (Number and %)	**29 (3.3)**	**92 (9.2)**	+ 182%	**↑2**
Influenza B (Number and %)	**66 (7.4)**	**140 (14.0)**	+ 88.6%	**↑6**
Acute care hospitalization for Influenza:	**10**	**38**	+ 280%	**↑2**
Influenza ILI Community Report:				
Long-term Care ILI Cases	**0**	**0**	--	**--**
Correctional & Addiction Facility	**0**	**0**	--	**--**
Physician Offices & University Clinic	**2**	**0**	- 100%	**↓2**
Pharmacy Prescriptions				
Zanamivir (Relenza)	**0**	**0**	--	**--**
Oseltamivir (Tamiflu)	**13**	**28**	+ 115%	**↑3**
Baloxavir marboxil (Xofluza)	**0**	**0**	--	**--**
Total	**13**	**28**	+ 115%	**↑3**
Schools absenteeism[2]	**6.8**	**closed**	--	**--**
Deaths				
Pneumonia associated	**3 (2.4)**	**9 (7.7)**	+ 223%	**↑2**
Influenza associated	**0**	**0**	--	**--**
Emergency room visits (EpiCenter)[3]				
Constitutional Complaints	**622 (10.3)**	**728 (11.8)**	15.5%	**↑2**
Fever and ILI	**118 (1.9)**	**178 (2.9)**	48.9%	**↑2**

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 12, and there were nine deaths associated with pneumonia. **Figure 1** displays weekly Summit County death counts associated with pneumonia and influenza.

Acute Care Hospitalizations: 38 hospitalization was reported during Week 12. **Figure 2** displays influenza associated hospitalizations in Summit County.

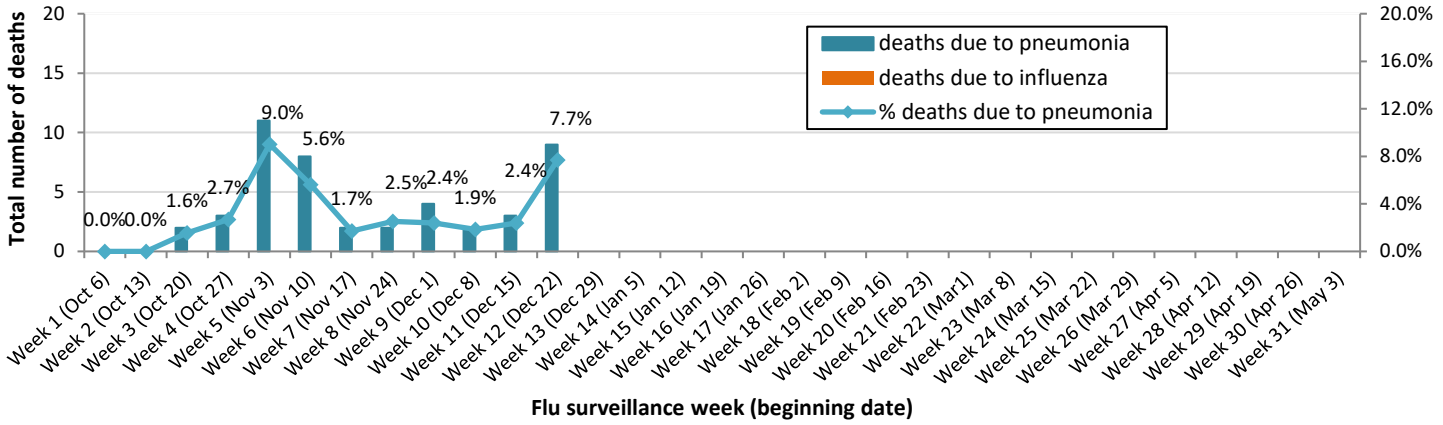
COMMUNITY ILI REPORTS:
Influenza like Illness (ILI) as defined by the CDC is fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat without a known cause other than influenza. Community ILI reports: **Long Term Care Facilities:** There were no cases of ILI reported. **Correctional and Inpatient Addiction facilities:** Zero cases ILI reported. **Physician offices and clinics:** During Week 12, zero cases of ILI were reported.

Pharmacies: 28 antiviral prescriptions were filled by reporting pharmacies during Week 12, a 115% increase from Week 11.

School absenteeism includes absences regardless of reason. During Week 12, reporting schools were closed for winter break.

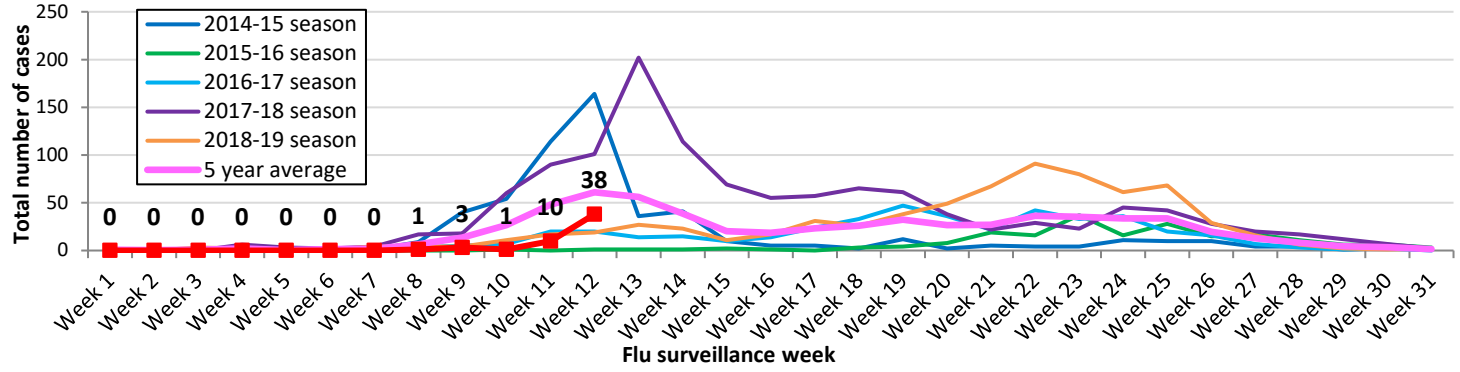
Lab reports: During Week 12 of influenza surveillance, reporting Summit County laboratories performed 1000 flu tests, of which 232 were positive (Type A = 92, Type B = 140). **(Figure 4)**

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



Influenza-associated hospitalization: Summit County hospitals reported 38 influenza-associated hospitalizations during Week 12. **Figure 2** displays weekly confirmed hospitalization count for Summit County **(cumulative count to date = 53).**

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 178 ILI-related visits reported during Week 12, which was 2.9% of total ED visits (n = 6145). This rate was nearly 50% higher than the ILI rate during Week 11.

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

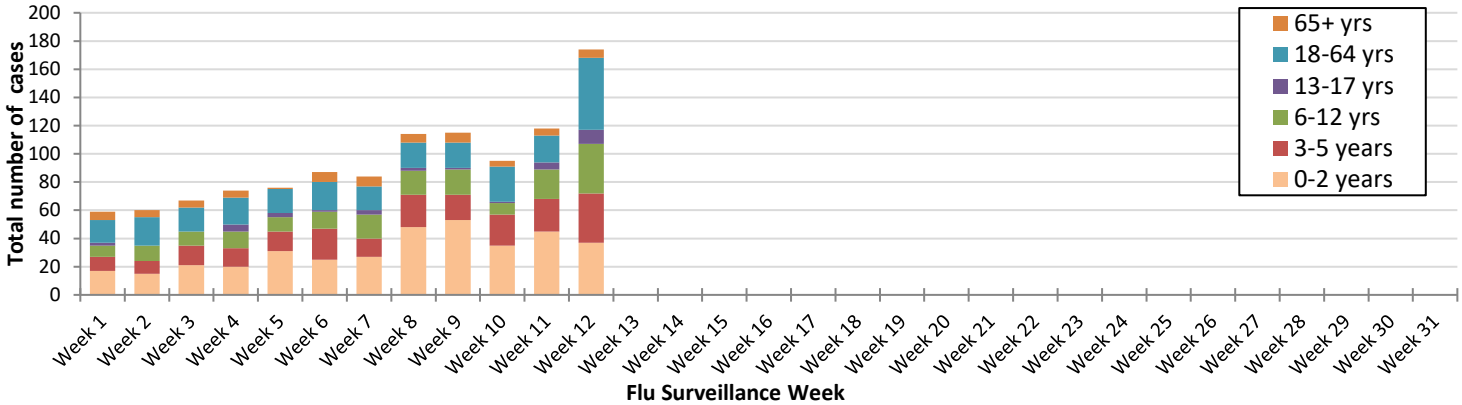
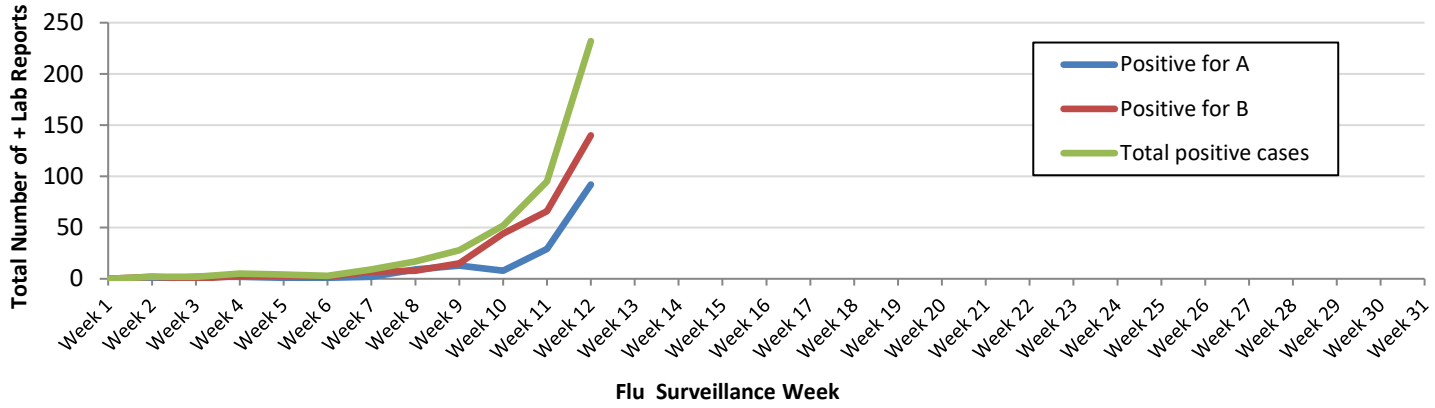


Figure 4. Influenza diagnostic tests with positive results completed by Summit County health facilities, 2019 - 2020 season



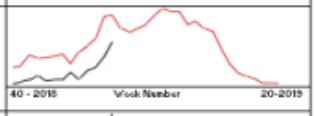
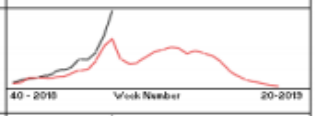
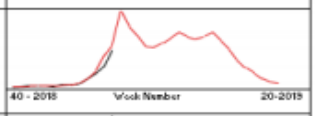
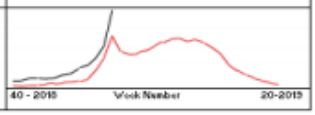
Ohio Influenza Activity: from the Ohio Department of Health:

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 52, public health surveillance data sources indicate moderate 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 387 influenza-associated hospitalizations reported during MMWR Week 52.

Ohio Influenza Activity Summary Dashboard (December 22 – 28, 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)	3.20%	72.97%	↑ 4	
Thermometer Sales (National Retail Data Monitor)	1602	20.18%	↑ 4	
Fever and ILI Specified ED Visits (EpiCenter)	4.44%	29.45%	↑ 3	
Constitutional ED Visits (EpiCenter)	16.49%	25.78%	↑ 11	
Confirmed Influenza-associated Hospitalizations (Ohio Disease Reporting System)	387	79.17%	↑ 7	
Outpatient Medical Claims Data[4]	3.18%	76.67%	↑ 9	

[1]Interpret percent changes with caution. Large variability may be exhibited in data sources with low weekly values.
[2]Number of weeks that the % change is increasing or decreasing.
[3]Black lines represent current week's data; red lines represent baseline averages
[4]Medical Claims Data provided by athenahealth®

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

Ohio Surveillance Data:

- **ODH lab** has reported **150 positive** influenza tests from specimens sent from sentinel ILINet providers and hospital clinical labs. 2019-2020 influenza season results: **(44 A/pdmH1N1; (15) A/H3N2; (91) Influenza B;** (through 12/28/2019).
- The **National Respiratory and Enteric Virus Surveillance System (NREVSS)** has **29,860** influenza specimens tested by RTPCR at participating facilities. 2019-2020 influenza season positive results: **(41) A/pdmH1N1; (2) A/H3N2; (606) Flu A Not Subtyped; and (2237) Flu B**; (through 12/28/2019)
- 0 **pediatric influenza-associated mortalities** have been reported during the 2019-2020 season (through 12/28/2019).
- No **novel influenza A virus infections** have been reported during the 2019-2020 season (through 12/28/2019).
- Incidence of confirmed **influenza-associated hospitalizations** in 2019-2020 season = **1003** (through 12/28/2019).

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 seven weeks and continues to increase.

- **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 52, 6.9% 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%.* The increase in the percentage of patient visits for ILI during week 52 compared to week 51 may be influenced in part by a reduction in routine healthcare visits surrounding the holidays occurring during week 52 as has occurred during previous seasons. On a regional level, the percentage of outpatient visits for ILI ranged from 3.8% to 13.9% during week 52. All regions reported a percentage of outpatient visits for ILI which is equal to or above their region-specific baselines.
    - **ILI State Activity Indictor Map (Figure 6):** District of Columbia, Puerto Rico, New York City, and 34 states reported high ILI activity; 9 states reported moderate activity; 5 states experienced low ILI activity; and 2 states reported minimal activity. Data was insufficient for US Virgin Islands.
- **Geographic Spread of Influenza (Figure 7):** The geographic spread of influenza was reported widespread in Puerto Rico and 45 states; regional in 4 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 2, 2020, 5.5% of the deaths occurring during the week ending December 21, 2019 (week 51) were due to P&I. This percentage is below the epidemic threshold of 6.8% for week 51.
- **Influenza-associated Pediatric Deaths:** A total of 27 influenza-associated pediatric deaths occurring during the 2019-2020 season have been reported to CDC.
    - Eighteen deaths were associated with influenza B viruses. Five of these had the lineage determined and all were B/Victoria viruses.
    - Nine deaths were associated with influenza A viruses. Four 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

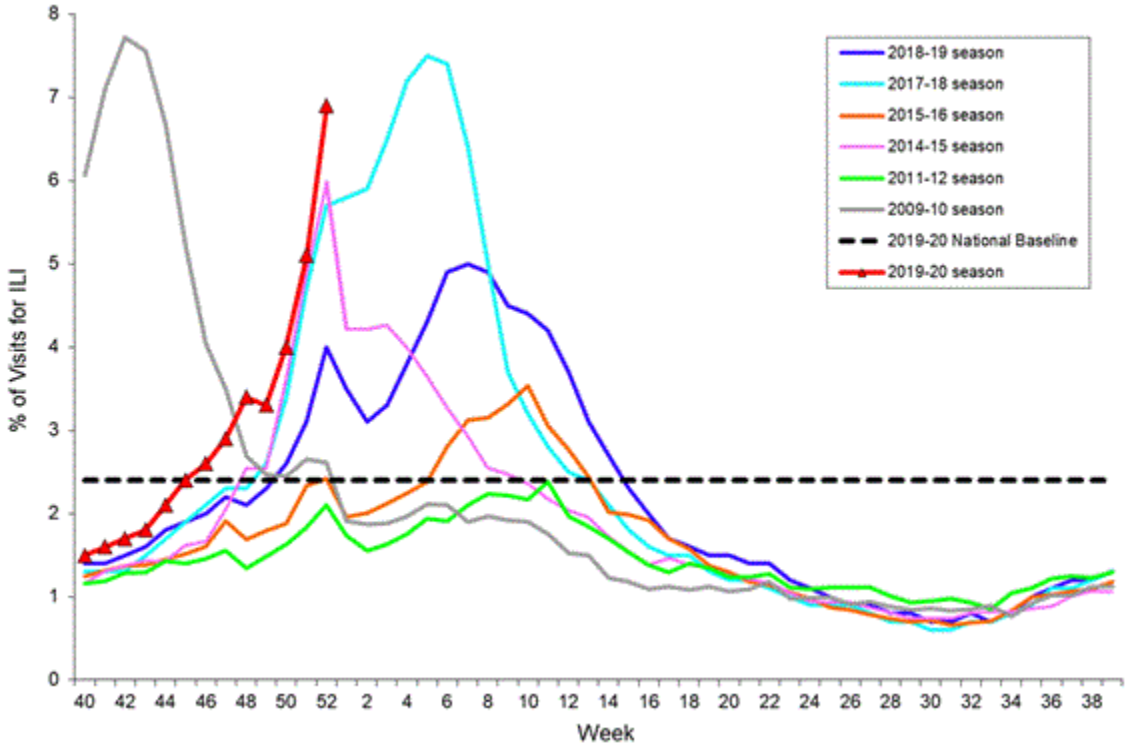


Figure 6. Influenza-like illness (ILI) activity level indicator determined by data reported to ILINet

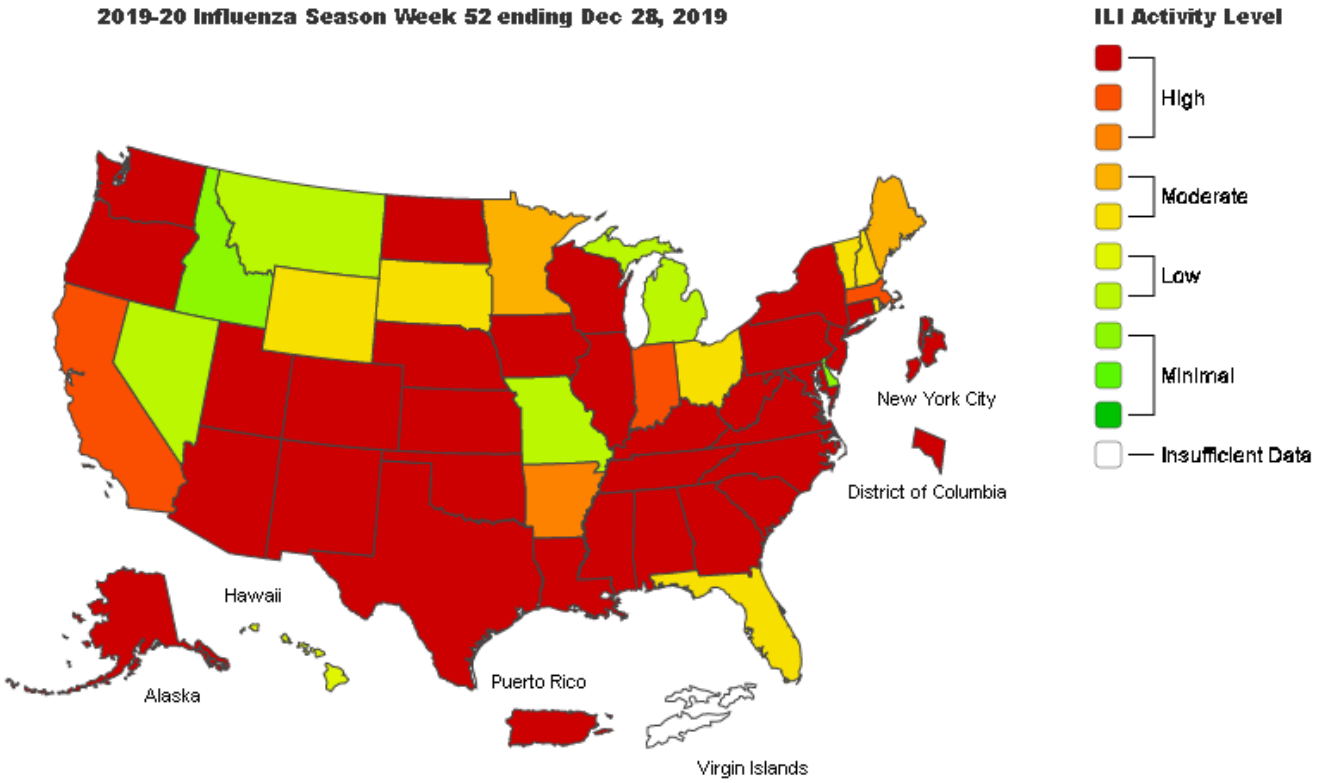
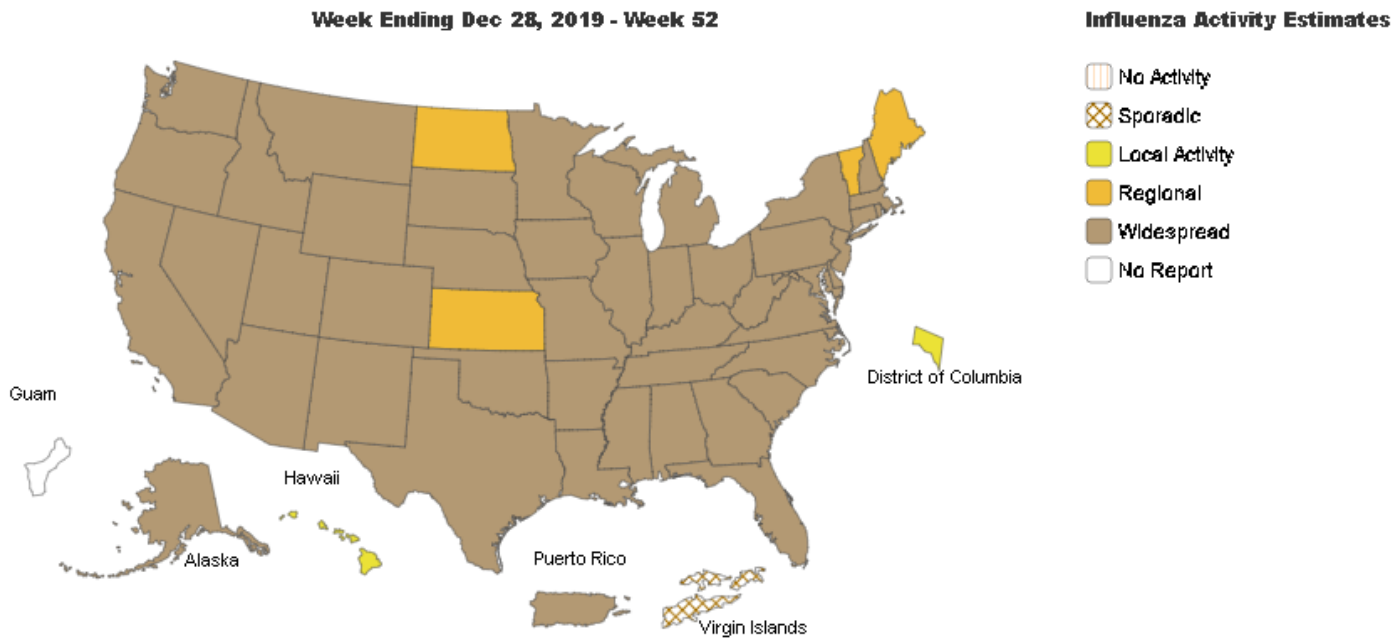


Figure 7. Weekly influenza activity (geographic spread) estimates reported by state and territorial epidemiologists



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

Global Surveillance:

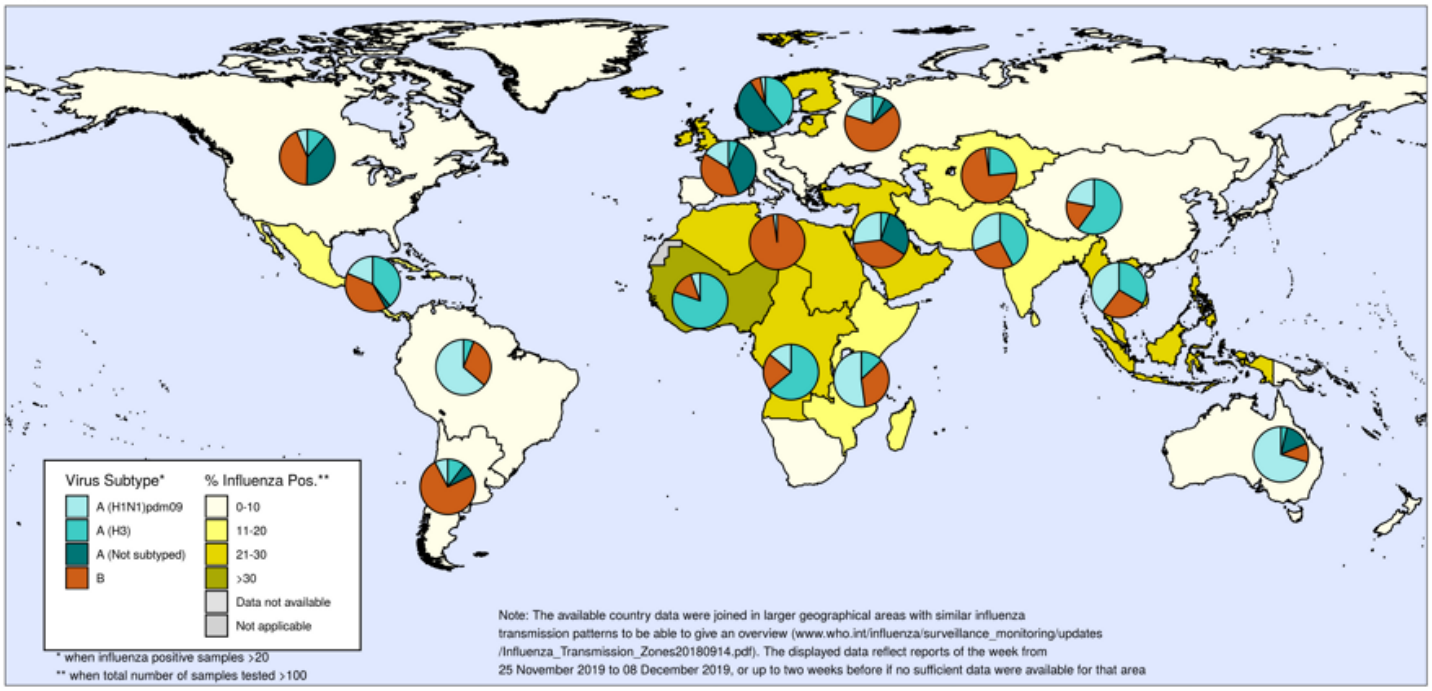
Influenza Update Nº 357, World Health Organization (WHO), published 20 December 2019, based on data up to 9 December 2019. The Update is published every two weeks.

Summary

- In **the temperate zone of the northern hemisphere**, respiratory illness indicators and influenza activity continued to increase in most countries.
- In **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, influenza activity remained low.
- In **tropical Africa**, influenza activity remained elevated in some countries of Middle and Western Africa.
- In **Southern Asia**, influenza activity was low across reporting countries, but was reported at high levels in the Islamic Republic of Iran in recent weeks.
- In **South East Asia**, influenza activity continued to be reported in Lao People's Democratic Republic and the Philippines.
- 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 112 countries, areas or territories reported data to FluNet for the time period from 25 November 2019 to 08 December 2019 (data as of 2019-12-19 11:04:16 UTC). The WHO GISRS laboratories tested more than 86 210 specimens during that time period. 9438 were positive for influenza viruses, of which 7067 (74.9%) were typed as influenza A and 2371 (25.1%) as influenza B. Of the sub-typed influenza A viruses, 1216 (30.2%) were influenza A(H1N1)pdm09 and 2809 (69.8%) were influenza A(H3N2). Of the characterized B viruses, 25 (5.2%) belonged to the B-Yamagata lineage and 458 (94.8%) 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 19 December 2019



World Health Organization

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

Influenza News from CIDRAP and CDC

Survey: Most Americans think flu vaccines safe, effective

An internet survey conducted during the 2017-18 flu season showed that 86.3% of US adults thought the vaccine was safe and 73.0% thought it was effective, with slightly less confidence among younger adults, according to a new study in *Vaccine.*

2020 will mark a decade since the Advisory Committee on Immunization Practices recommended every America 6 months and older receive an annual flu shot. But despite the recommendation and the favorable attitudes found in this study, less than 45% of American adults report getting vaccinated each year.

In 2016-17, flu vaccine coverage estimates for adults over 65 were 65.3%, higher than adults ages 18 to 49 (33.6%), and those aged 50 to 64 (45.4%). To understand attitudes toward vaccination, the authors of the study analyzed 4,597 survey results from 2017 and 2018, with 54.0% of respondents aged 19 to 49, 25.9% aged 50 to 64, and 20.0% 65 years and older. Older participants had more favorable attitudes toward the flu vaccine.

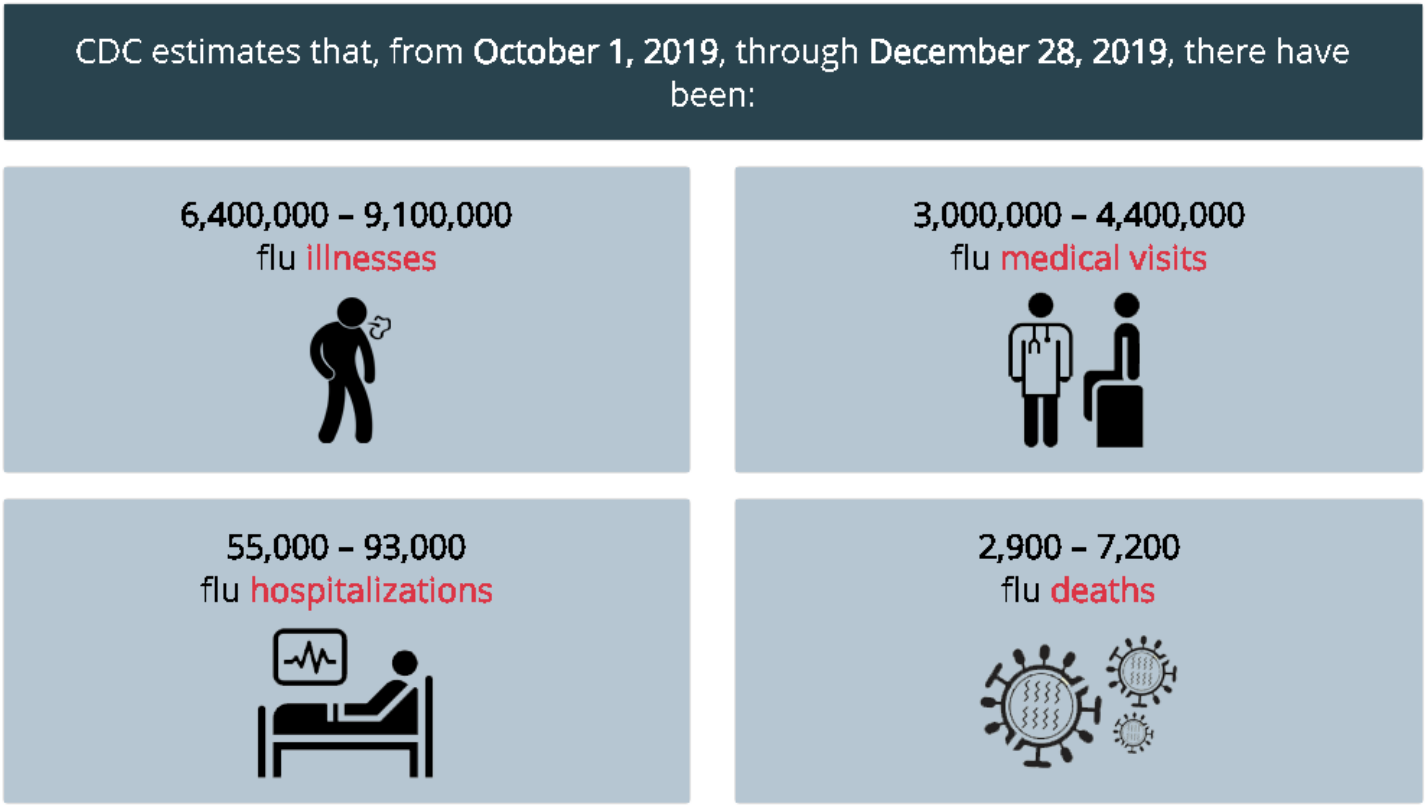
"Adults aged 19–49 years (82.7%) reported significantly lower confidence in its safety compared with those aged 50–64 years (89.5%) or ≥65 years (91.3%)," the authors wrote. "Likewise, although adults overall still reported believing the

influenza vaccine is effective (73.0%), markedly fewer adults aged 19–49 years (68.3%) did so compared with those aged 50–64 years (74.1%) or ≥65 years (83.4%)."

Further study is needed to understand why flu vaccine uptake is low, the authors concluded.
Dec 27 *Vaccine* study

Source: **http://www.cidrap.umn.edu/news-perspective/2019/12/news-scan-dec-30-2019**

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



*These estimates are preliminary and based on data from CDC's weekly influenza surveillance reports summarizing key influenza activity indicators.

Source: **https://www.cdc.gov/flu/about/burden/preliminary-in-season-estimates.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). This report was issued on January 3, 2020.