



Summit County Public Health Influenza Surveillance Report 2019 – 2020 Season



Public Health
Prevent. Promote. Protect.

Report #21 Flu Surveillance Weeks 21 & 22 (2/23/2020 to 3/7/2020) Centers for Disease Control and Prevention MMWR Weeks 9 & 10

Summit County Surveillance Data:

In **Week 22** of surveillance, influenza-related activity decreased to moderate in Summit County.

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

	Week 21 MMWR 9 N (%) ¹	Week 22 MMWR 10 N (%) ¹	Percent change from previous week	Number of weeks increasing or decreasing
Lab Reports				
Tests Performed	1714	1616	- 5.7%	↓3
Positive Tests (Number and %)	628 (36.6)	491 (30.4)	- 17.1%	↓2
Influenza A (Number and %)	438 (25.6)	340 (21.0)	- 17.7%	↓1
Influenza B (Number and %)	190 (11.1)	151 (9.3)	- 15.7%	↓6
Acute care hospitalizations for Influenza:	83	54	- 37.3%	↓1
Influenza ILI Community Report:				
Long-term Care ILI Cases	4	3	- 25.0%	↓1
Correctional & Addiction Facility	6	1	- 83.3%	↓1
Physician Offices & University Clinic	12	11	- 8.3%	↓2
Pharmacy Prescriptions				
Zanamivir (Relenza)	0	0	--	--
Oseltamivir (Tamiflu)	78	64	- 18.0%	↓2
Baloxavir marboxil (Xofluza)	1	0	- 100%	↓1
<i>Total</i>	79	64	- 19.0%	↓2
Schools absenteeism²	7.3%	6.8%	- 6.9%	↓1
Deaths				
Pneumonia associated	4 (3.5)	7 (6.4)	+ 83.0%	↑2
Influenza associated	1 (0.9)	0 (0.0)	- 100%	↓1
Emergency room visits (EpiCenter)³				
Constitutional Complaints	906 (14.8)	859 (14.2)	- 4.2%	↓4
Fever and ILI	160 (2.6)	165 (4.2)	+ 4.2%	↑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 22, and there were 7 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: 54 hospitalizations were reported during Week 22. **Figure 2** displays influenza associated hospitalizations in Summit County.

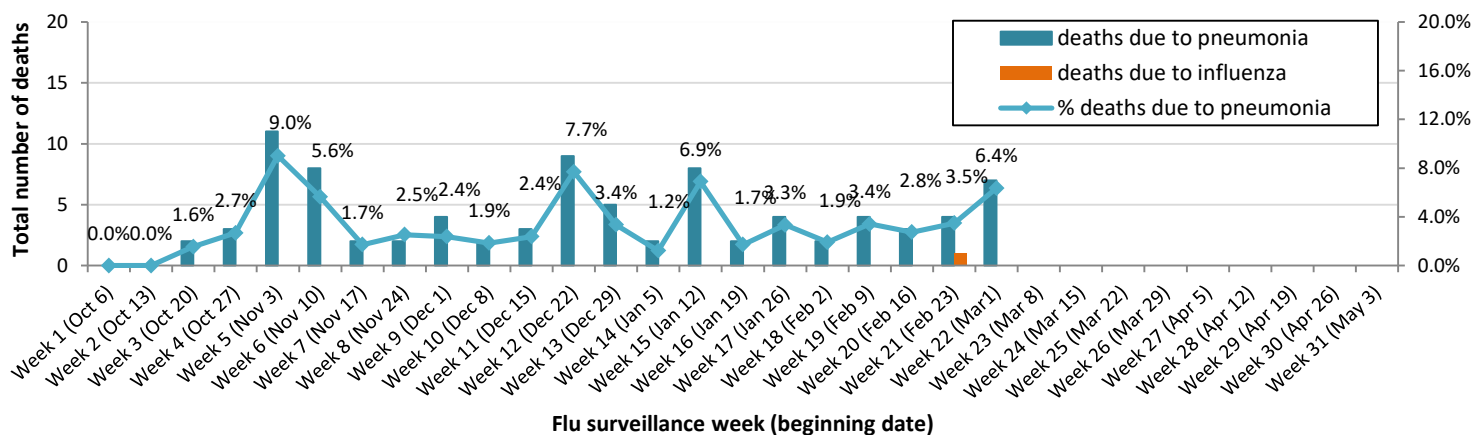
COMMUNITY ILI REPORTS: Influenza like Illness (ILI) as defined by the CDC is fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat without a known cause other than influenza. Community ILI reports:
Long Term Care Facilities: There were three cases of ILI reported. **Correctional and Inpatient Addiction facilities:** One case of ILI was reported. **Physician offices and clinics:** During Week 22, 11 cases of ILI were reported.

Pharmacies: 64 antiviral prescriptions were filled by reporting pharmacies during Week 22.

School absenteeism includes absences regardless of reason. During Week 22, the reported absence rate was 6.8%, a 6.9% decrease from Week 21.

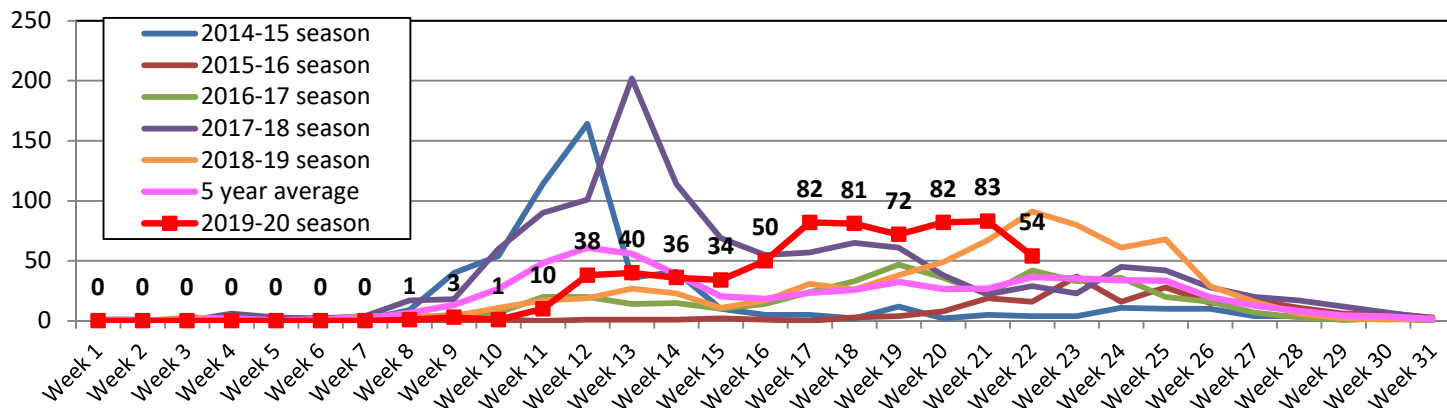
Lab reports: During Week 22 of influenza surveillance, reporting Summit County laboratories performed 1616 flu tests, of which 491 were positive (Type A = 340, Type B = 151). (**Figure 4**).

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



Influenza-associated hospitalization: Summit County hospitals reported 54 influenza-associated hospitalizations during Week 22. **Figure 2** displays weekly confirmed hospitalization count for Summit County (**cumulative count to date = 667**).

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. **Figure 3** displays the weekly number of ER visits related to ILI and flu symptoms in Summit County. There were 160 ILI-related visits reported during Week 21, which was 2.6% of total ED visits (n = 6111). This rate was 8.1% lower than the ILI rate during Week 20.

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

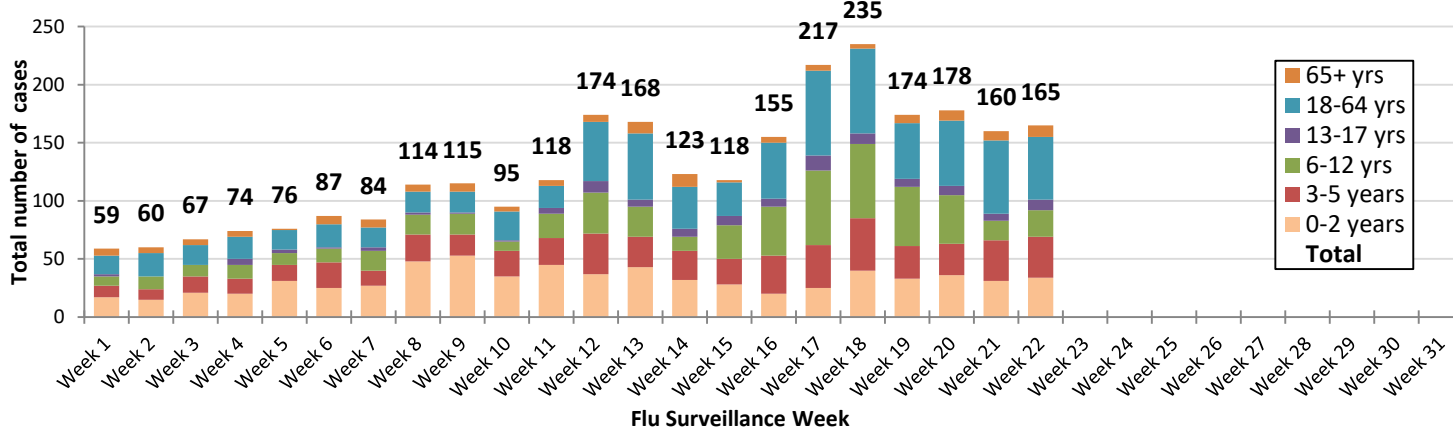
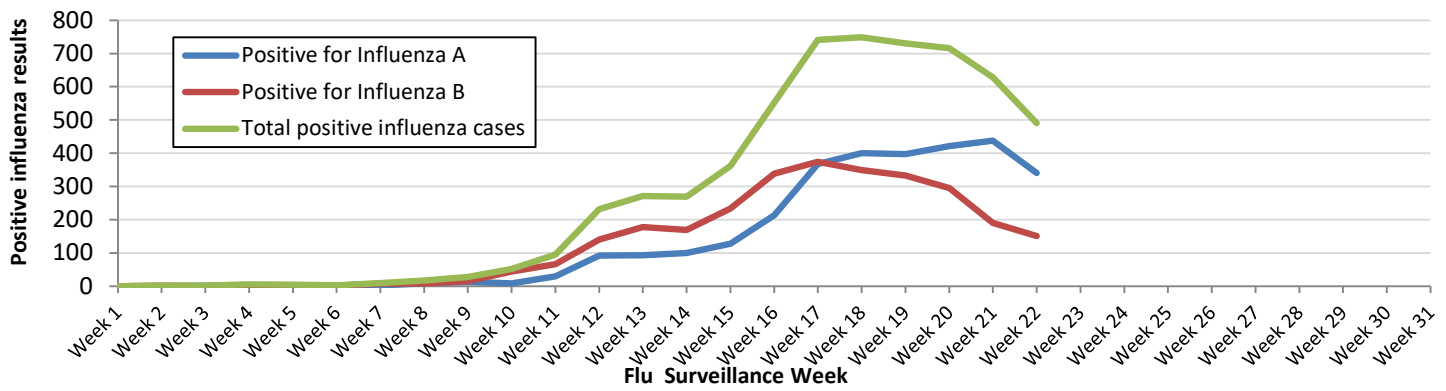


Figure 4. Influenza diagnostic tests with positive results completed by Summit County health facilities, 2019 - 2020 season



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 10, 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 decreased but are still above baseline levels statewide; fever and ILI specified ED visits increased slightly and are also still above baseline levels. Reported cases of influenza-associated hospitalizations are above the seasonal threshold*. There were 914 influenza-associated hospitalizations reported during MMWR Week 10.

Ohio Influenza Activity Summary Dashboard (March 1 - 7, 2020):

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)	3.93%	22.05%	↑ 1	
Thermometer Sales (National Retail Data Monitor)	2536	13.77%	↑ 1	
Fever and ILI Specified ED Visits (EpiCenter)	3.29%	-6.27%	↓ 3	
Constitutional ED Visits (EpiCenter)	14.79%	-4.40%	↓ 3	
Confirmed Influenza-associated Hospitalizations (Ohio Disease Reporting System)	959	-2.24%	↓ 2	
Outpatient Medical Claims Data ⁴	3.62%	-21.13%	↓ 3	

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 **886 positive** influenza tests from specimens sent from sentinel ILINet providers and hospital clinical labs. 2019-2020 influenza season results: **(516) A/H1N1pdm09; (17) A/H3N2; (370) Influenza B;** (through 03/7/2020).
- The **National Respiratory and Enteric Virus Surveillance System (NREVSS)** has reported **71,110** influenza specimens tested by RT-PCR at participating facilities. 2019-2020 influenza season positive results: (536) A/pdmH1N1; (3) A/H3N2; (8,068) Flu A Not Subtyped; and (8,168) Flu B; (through 03/7/2020)
- **3 influenza-associated pediatric mortalities** have been reported during the 2019-2020 season (through 03/7/2020).
- **No novel influenza A virus infections** have been reported during the 2019-2020 season (through 03/7/2020).
- Incidence of confirmed **influenza-associated hospitalizations** in 2019-2020 season = **9,438** (through 03/7/2020).
-

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

Flu activity as reported by clinical laboratories remains high but decreased for the fourth week in a row; however, influenza-like illness activity increased slightly. Severity indicators remain moderate to low overall, but hospitalization rates differ by age group, with high rates among children and young adults.

- **Viral Surveillance:** While influenza B/Victoria viruses predominated earlier in the season, during recent weeks, influenza A(H1N1)pdm09 viruses have been reported more frequently than B/Victoria viruses. For the season, A(H1N1)pdm09 viruses are the predominant virus nationally. However, the predominant virus continues to vary 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: 80.4%** (123 of 153 samples); **A (H3N2): 40.8%** (31 of 76 samples); **B/Victoria: 65.1%** (95 of 146 samples); **B/Yamagata: 100%** (28 of 28 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 10, 5.2% 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 3.9% to 8.4% during week 10. 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 41 states reported high ILI activity; 2 states reported moderate activity; the District of Columbia and 4 states reported low activity, 3 states reported minimal ILI activity, and the US Virgin Islands had insufficient data.
- **Geographic Spread of Influenza (Figure 7):** During Week 10, 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; sporadic in the U.S. Virgin Islands and Guam did not report.
- **Pneumonia and Influenza (P&I) Mortality:** Based on National Center for Health Statistics (NCHS) mortality surveillance data available on March 12, 2020, 7.1% of the deaths occurring during the week ending February 29, 2020 (Week 9) were due to P&I. This percentage is below the epidemic threshold of 7.3% for week 9.
- **Influenza-associated Pediatric Deaths:** A total of 144 influenza-associated pediatric deaths occurring during the 2019-2020 season have been reported to CDC.
 - 96 deaths were associated with influenza B viruses. 20 of these had the lineage determined and all were B/Victoria viruses.
 - 48 deaths were associated with influenza A viruses. 27 of these had subtyping performed and 26 were A(H1N1)pdm09 viruses, one was A(H3) virus.

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

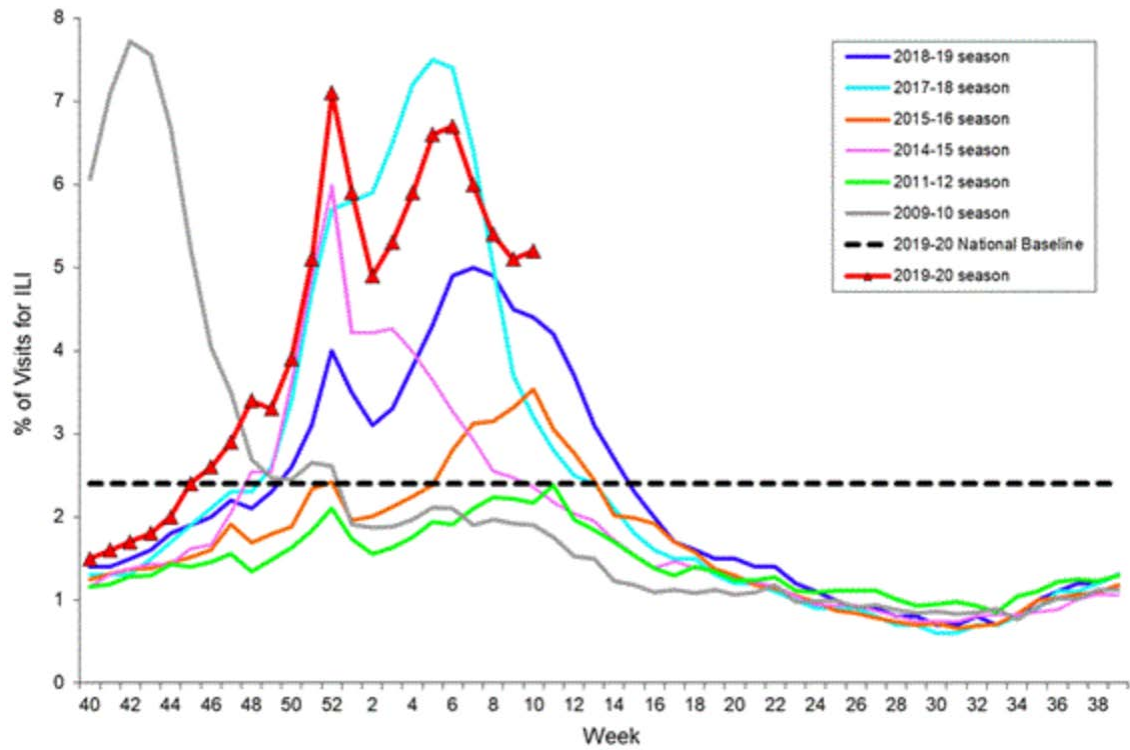


Figure 6. Influenza-like illness (ILI) activity level indicator determined by data reported to ILINet

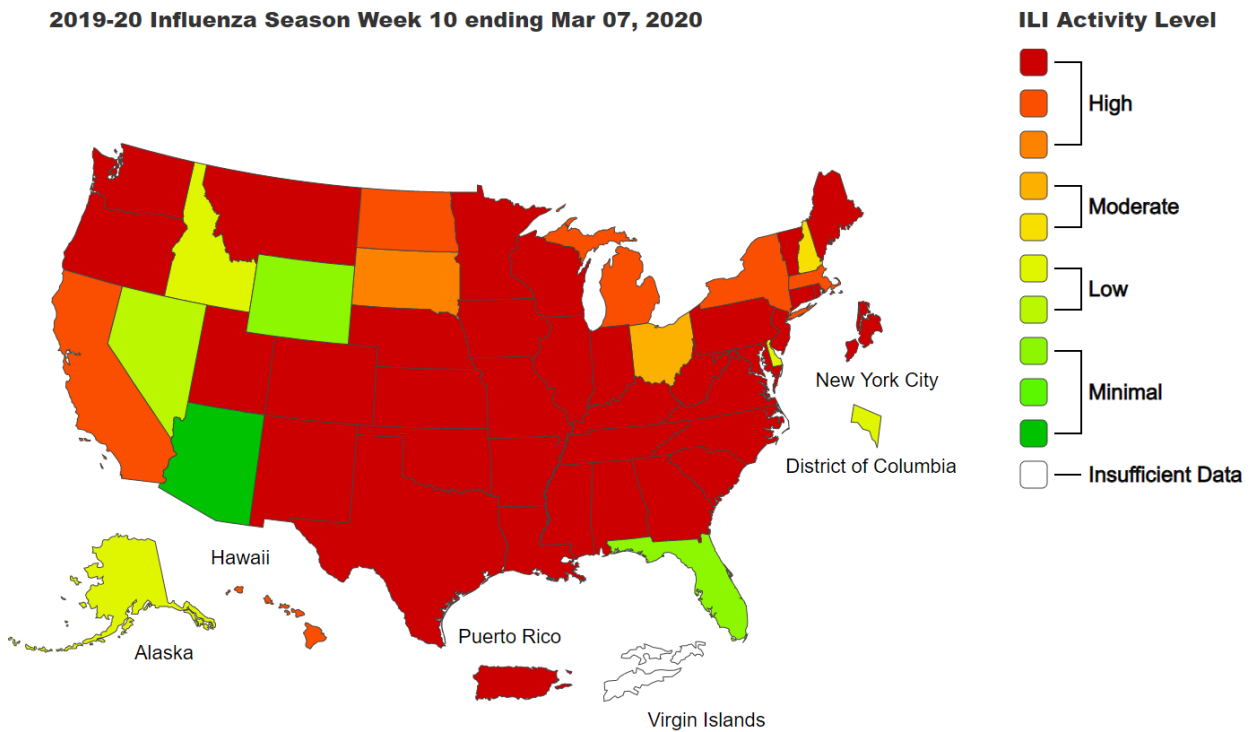


Figure 7. Weekly influenza activity (geographic spread) estimates reported by state and territorial epidemiologists



Source for Figures 5 - 7: <https://www.cdc.gov/flu/weekly/>

Global Surveillance:

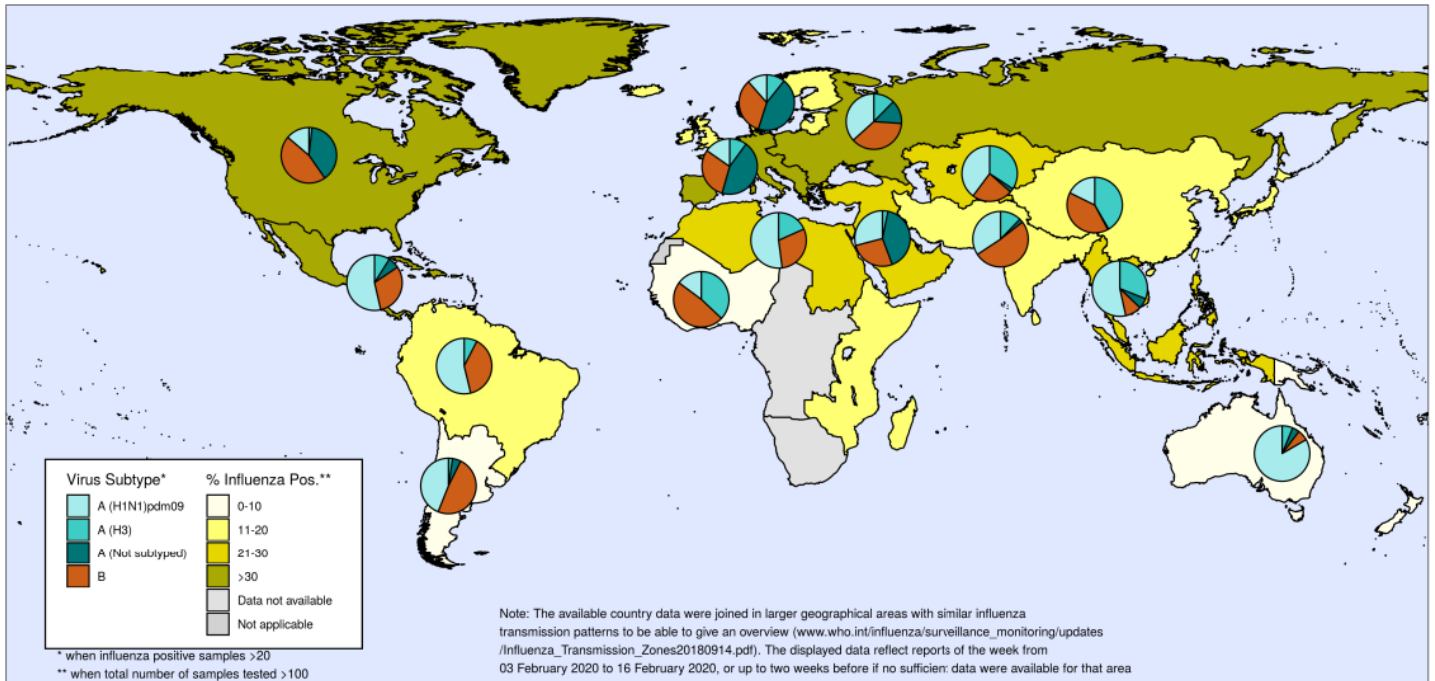
Influenza Update N° 362, World Health Organization (WHO), published 02 March 2020, based on data up to 16 February 2020. The Update is published every two weeks.

Summary

- In the **temperate zone of the northern hemisphere**, respiratory illness indicators and influenza activity remained elevated overall.
 - In **North America**, influenza activity remained elevated influenza A(H1N1)pdm09 and B viruses co-circulating.
 - In **Europe**, influenza activity continued to increase across the region but appeared to have peaked in some countries. In **Central Asia**, influenza activity decreased with detections of all seasonal influenza subtypes. In **Northern Africa**, influenza activity continued to increase in Algeria and Tunisia, with detections of influenza A(H1N1)pdm09 and B viruses. In **Western Asia**, influenza activity remained elevated overall, though in some countries activity returned to low levels. In **East Asia**, influenza-like illness (ILI) and influenza activity appeared to decrease overall.
- In **the Caribbean and Central American countries**, influenza activity was low across reporting countries with some exceptions. In Mexico, influenza activity appeared to decrease, with influenza A(H1N1)pdm09 viruses most frequently detected. In tropical South American countries, influenza activity remained low.
- In **tropical Africa**, influenza detections were low across reporting countries.
- In **Southern Asia**, influenza activity was low overall, though remained elevated in Afghanistan.
- In **South East Asia**, influenza activity continued to be reported in some countries.
- 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 122 countries, areas or territories reported data to FluNet for the time period from 03 February 2020 to 16 February 2020 (data as of 2020-02-28 03:57:53 UTC). The WHO GISRS laboratories tested more than 201954 specimens during that time period. A total of 58268 were positive for influenza viruses, of which 36 580 (62.8%) were typed as influenza A and 21 688 (37.2%) as influenza B. Of the sub-typed influenza A viruses, 7897 (66.5%) were influenza A(H1N1)pdm09 and 3978 (33.5%) were influenza A(H3N2). Of the characterized B viruses, 21 (1%) belonged to the B-Yamagata lineage and 2177 (99%) to the B-Victoria lineage.

Figure 8. Percentage of respiratory specimens that tested positive for influenza, by influenza transmission zone



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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Map generated by the WHO on 28 February 2020

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

Influenza News from CIDRAP and CDC:

Study: Flu case definitions often invalid in seniors

Flu surveillance case definitions miss many hospitalized patients 65 years and older who have laboratory-confirmed infection—especially those who are frail, according to a prospective cohort study in today's *Infection Control & Hospital Epidemiology*.

Researchers from the Canadian Immunization Research Network and Serious Outcomes Surveillance (SOS) Network determined that standard influenza-like illness (ILI) and severe acute respiratory illness (SARI) case definitions are biased toward detecting infection in people younger than 65 and thus do not characterize the true burden of the flu.

The validity of flu case definitions is important because older people, who are particularly susceptible to the flu and its complications, often have atypical signs and symptoms of infection.

The researchers used pooled data from the 2011-12, 2012-13, and 2013-14 flu seasons and measured frailty using a validated frailty index. Of 11,379 adult inpatients (7,254 older than 65), 4,942 (2,948 older than 65) had laboratory-confirmed flu. The patients' median age was 72 years (interquartile range [IQR], 58 to 82), and 52.6% were women.

The sensitivity of ILI criteria was 51.1% (95% confidence interval [CI], 49.6% to 52.6%) for adults younger than 65 versus 44.6% (95% CI, 43.6% to 45.8%) for older adults. SARI criteria were met by 64.1% (95% CI, 62.7% to 65.6%) of the younger adults versus 57.1% (95% CI, 55.9% to 58.2%) of older patients with laboratory-confirmed flu. Frail or prefrail patients were less likely than their peers to fit ILI and SARI case definitions.

"Because of the substantial fraction of cases missed, surveillance definitions should not be used to guide diagnosis and clinical management of influenza," the authors wrote.

The SOS Network conducts active surveillance for flu in hospitalized adults.

Mar 9 *Infect Control Hosp Epidemiol* abstract

Source: <http://www.cidrap.umn.edu/news-perspective/2020/03/news-scan-mar-09-2020>

Prevention of Respiratory Illnesses: The situation has changed since this information was included in the influenza report: the first case of COVID-19 was reported in Summit County on March 13, 2020, and influenza continues to circulate at reduced but elevated levels. The Centers for Disease Control and Prevention (CDC) always recommends **everyday preventive actions to help prevent the spread of respiratory viruses**, including:

- ✓ **Wash your hands often with soap and water** for at least 20 seconds. Use an alcohol-based hand sanitizer that contains at least 60% alcohol if soap and water are not available.
- ✓ **Avoid touching your eyes, nose, and mouth** with unwashed hands.
- ✓ **Avoid close contact** with people who are sick.
- ✓ **Stay home** when you are sick.
- ✓ **Cover your cough or sneeze** with a tissue, then throw the tissue in the trash.
- ✓ **Clean and disinfect** frequently touched objects and surfaces.



An **influenza vaccine** is still available if you have not had it yet. **It is not too late to get the vaccine**, especially since influenza activity remains elevated during the 2019-20 season.

Source: <https://www.cdc.gov/coronavirus/2019-ncov/about/prevention-treatment.html>

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 March 13, 2020.