



Summit County Public Health
 Influenza Surveillance Report
 2017 – 2018 Season
 Report #16 (Final Report)



Public Health
 Prevent. Promote. Protect.

Flu Surveillance Weeks 30 & 31 (Beginning 4/29/2018 through 5/12/2018)
 Centers for Disease Control and Prevention MMWR Weeks 18 & 19

2017-2018 Influenza Season Summary: (October 8, 2017 to May 12, 2018)

Laboratory Testing:

Tests ordered: 23,301

Positive test results: 5,849

Type A: 4,186

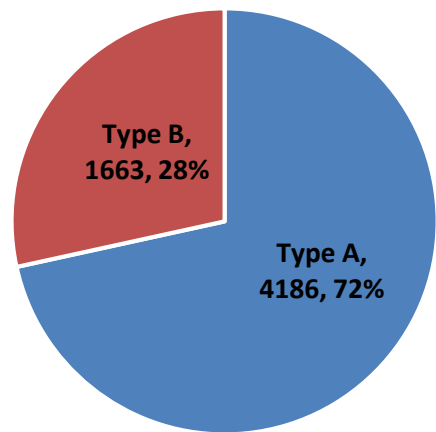
Type B: 1,663

Total acute care hospitalizations: 1,423

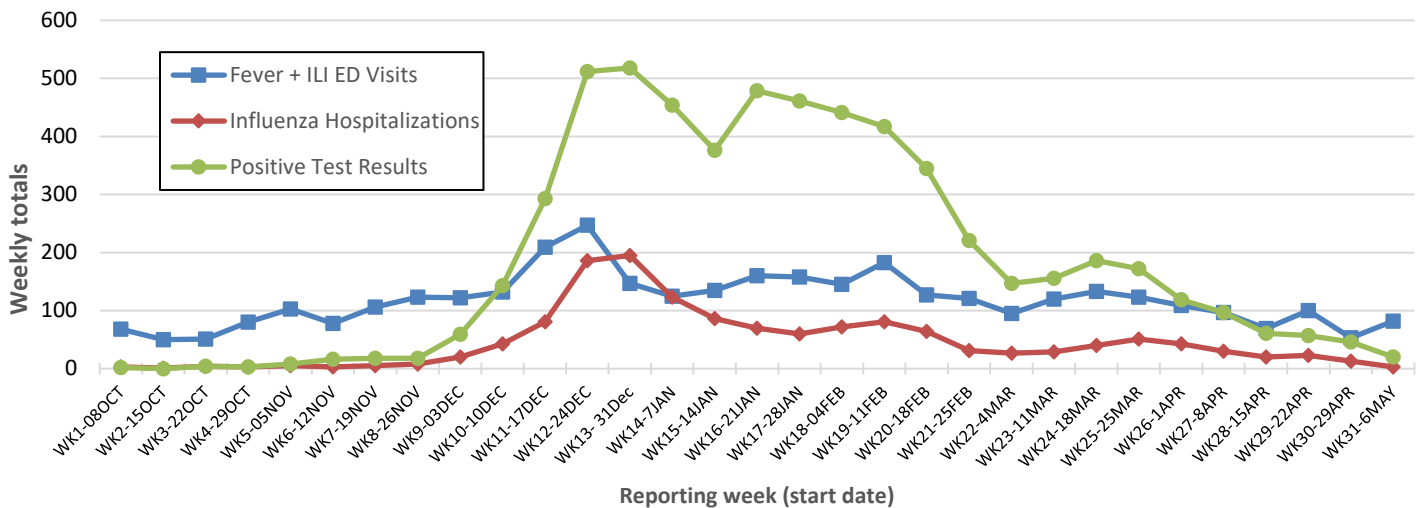
Influenza-related deaths: 35

Pneumonia-related deaths: 165

Distribution of influenza type for positive tests, 2017-2018 influenza season



Trends in emergency department (ED) visits, hospitalizations and lab results related to influenza, 2017 - 2018 influenza season



Summit County Surveillance Data:

In **Weeks 30 & 31** of influenza surveillance, influenza-related activity has decreased in Summit County.

Table 1: Overall Influenza Activity Indicators in Summit County by Week				
	Week 30 MMWR Wk 18 N (%)*	Week 31 MMWR Wk 19 N (%)*	% change from previous week	Number of weeks increasing or decreasing
Lab Reports				
Total Test Performed	360	289	-19.7	↓5
Positive Tests (number and %)	46 (12.8)	20 (6.9)	-56.5	↓7
Influenza A (number and %)	29 (8.1)	11 (3.8)	-62.1	↓1
Influenza B (number and %)	17 (4.7)	9 (3.1)	-47.1	↓2
Acute care hospitalization for Influenza:	13	3	-76.9	↓2
Influenza ILI Community Report:				
Long-term Care ILI	0	0	--	--
Correctional & Addiction Facility	0	0	--	--
Physician Offices & University Clinic	3	1	-66.7	↓1
Pharmacy Prescriptions				
Amantidine	0	3	100.0	↑1
Rimantidine Flumadine	0	0	--	--
Relenza	0	0	--	--
Oseltamivir Tamiflu	0	4	100.0	↑1
<i>Total</i>	0	7	100.0	↑1
School Absenteeism (%)**	15.4	13.2	-14.3	↓3
Pneumonia and Influenza Deaths (Total for 2017-18 flu season)				
Pneumonia associated	1 (0.5)	4 (2.0)	300.0	↑1
Influenza associated	1 (0.5)	1 (0.5)	--	--
Emergency room visits (EpiCenter)***				
Constitutional Complaints	470 (7.7)	434 (6.9)	-10.4	↓2
Fever and ILI	53 (0.9)	82 (1.3)	44.4	↑1
* N and % are reported when available				
**Percent is from total number of students enrolled at all schools reporting, and also accounts for weeks less than 5 days. Seven schools located throughout Summit County, with a total enrollment of approximately 7100 students, report absences.				
***Percent is from total number of emergency room interactions				
^a Percentages should be interpreted with caution. Small changes in number can result in big changes in percent.				
^b This percent change is the difference in percent (i.e., the percent change in prevalence). It is not the percent change in the number of tests, number of school absences, number of deaths, etc.)				

There was one influenza-associated death reported in both Weeks 30 and 31. **Figure 1** displays weekly Summit County death counts associated with pneumonia and influenza. There were 35 influenza deaths this season, one of which was a pediatric death.

Lab reports: During Week 30, Summit County labs performed 360 tests, of which 29 tested positive for flu A and 17 for flu B. For Week 31, there were 289 tests: positive results were 11 flu A and 9 flu B. (**Figure 4**)

Acute Care Hospitalizations: There were 13 reported influenza associated hospitalizations during Week 30, and 3 in Week 31. **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.

Long Term Care Facilities: There were no cases of ILI reported from Long Term Care facilities in Weeks 30 and 31.

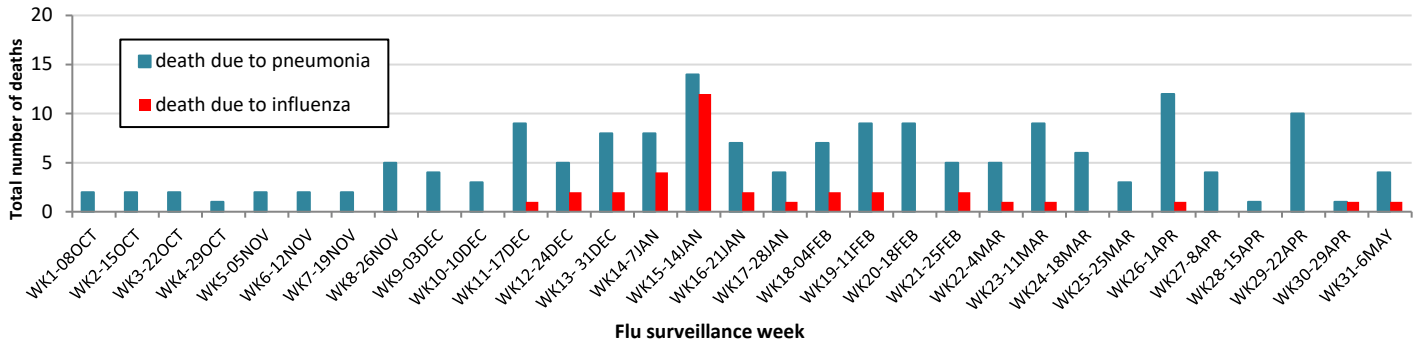
Correctional and Addiction facility: There were no cases of ILI reported in Weeks 30 and 31.

Physician Office and University Clinic: There were three reported ILI cases in Week 30 and one case in Week 31.

Pharmacy: Amantadine was prescribed 0 times in Week 30 and 3 times in Week 31. Tamiflu was prescribed 0 times in Week 30 and 4 times in Week 31.

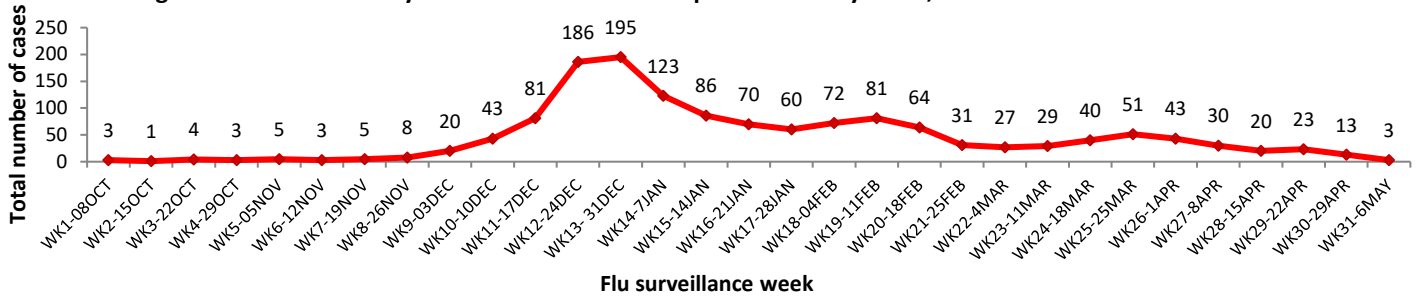
School absenteeism includes absences regardless of reason. In Week 30, there was an absence rate of 15.4% and in Week 31 the absence rate was 13.2%.

Figure 1. Weekly Summit County death counts associated with pneumonia and influenza during 2017-2018 flu season



Influenza-associated hospitalization: Summit County hospitals reported 13 influenza-associated hospitalizations in Week 30 and 3 hospitalizations during Week 31. **Figure 2** displays weekly confirmed hospitalization count for Summit County (**cumulative count to date = 1423**).

Figure 2. Summit County influenza-associated hospitalizations by week, 2017-2018 influenza season



EpiCenter collects and analyzes health related data in real time to provide information about the health of the community. For influenza surveillance, constitutional complaints, influenza-like illness (ILI), and fever are monitored. **Figure 3** displays the weekly number of ER visits related to ILI and fever symptoms in Summit County, stratified by age group. ILI-related ER visits decreased in Week 30 but then increased by over 50% in Week 31. Children aged less than 18 years accounted for about 60% of ILI-related ER visits during both Weeks 30 and 31.

Figure 3. Weekly ER visits in Summit County related to Fever + ILI stratified by age

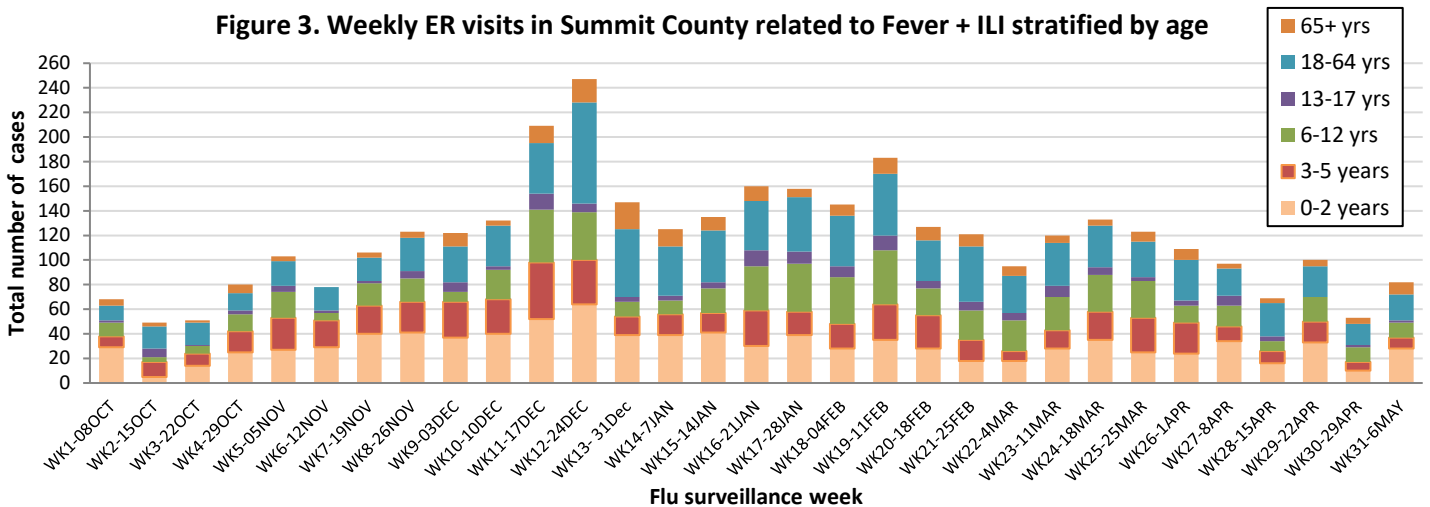
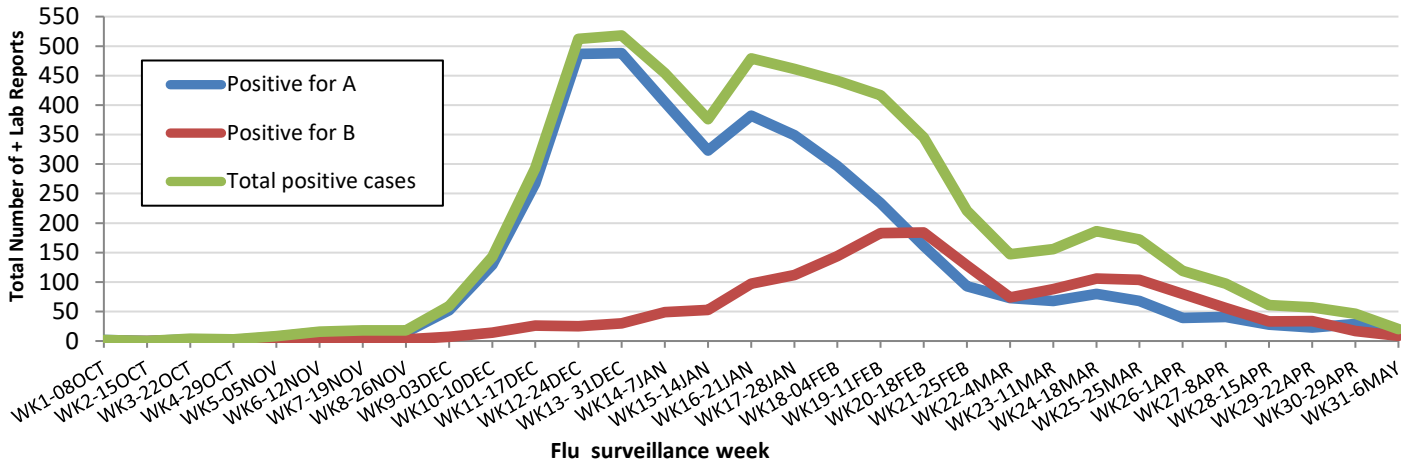


Figure 4: Influenza lab tests with positive results, 2017-2018 Summit County Influenza Surveillance



Ohio Influenza Activity: from the Ohio Department of Health:

Current Statewide Influenza Activity (for MMWR Week 19, May 6 – May 12, 2018):

Current Ohio Activity Level (Geographic Spread) – Local

Definition: Increased ILI in 1 region; ILI activity in other regions is not increased AND recent (within the past 3 weeks) lab evidence of influenza in region with increased ILI, OR 2 or more institutional outbreaks (ILI or lab confirmed) in 1 region; ILI activity in other regions is not increased AND recent (within the past 3 weeks) lab evidence of influenza in region with the outbreaks; virus activity is no greater than sporadic in other regions.

Ohio Influenza Activity Summary Dashboard: (May 6 – May 12, 2018)

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)	0.57%	-34.48%	↓ 2	
Thermometer Sales (National Retail Data Monitor)	872	-10.44%	↓ 14	
Fever and ILI Specified ED Visits (EpiCenter)	1.42%	-11.25%	↓ 2	
Constitutional ED Visits (EpiCenter)	7.93%	-8.00%	↓ 2	
Confirmed Influenza-associated Hospitalizations (Ohio Disease Reporting System)	94	-44.71%	↓ 7	
Outpatient Medical Claims Data ⁴	0.29%	-32.56%	↓ 6	

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®

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

During week 19 (May 6-12, 2018), influenza activity continued to decrease in the United States.

- **Viral Surveillance:** Overall, influenza A(H3) viruses have predominated this season. Since early March, influenza B viruses have been more frequently reported than influenza A viruses. The percentage of respiratory specimens testing positive for influenza in clinical laboratories decreased.
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was below the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** Three influenza-associated pediatric deaths were reported.
- **Influenza-associated Hospitalizations:** A cumulative rate of 106.6 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported.
- **Outpatient Illness Surveillance:** The proportion of outpatient visits for influenza-like illness (ILI) was 1.2%, which is below the national baseline of 2.2%. All 10 regions reported ILI below region-specific baseline levels. New York City, the District of Columbia, Puerto Rico and all 50 states experienced minimal ILI activity.
- **Geographic Spread of Influenza:** The geographic spread of influenza in two states was reported as widespread; Guam, Puerto Rico and three states reported regional activity; nine states reported local activity; the District of Columbia, the U.S. Virgin Islands and 33 states reported sporadic activity; and three states reported no influenza activity.

Figure 5. Percentage of visits for influenza-like illness (ILI) reported by the U.S. Outpatient Influenza-like Surveillance Network (ILINet), weekly national summary, 2017-2018 and selected previous seasons

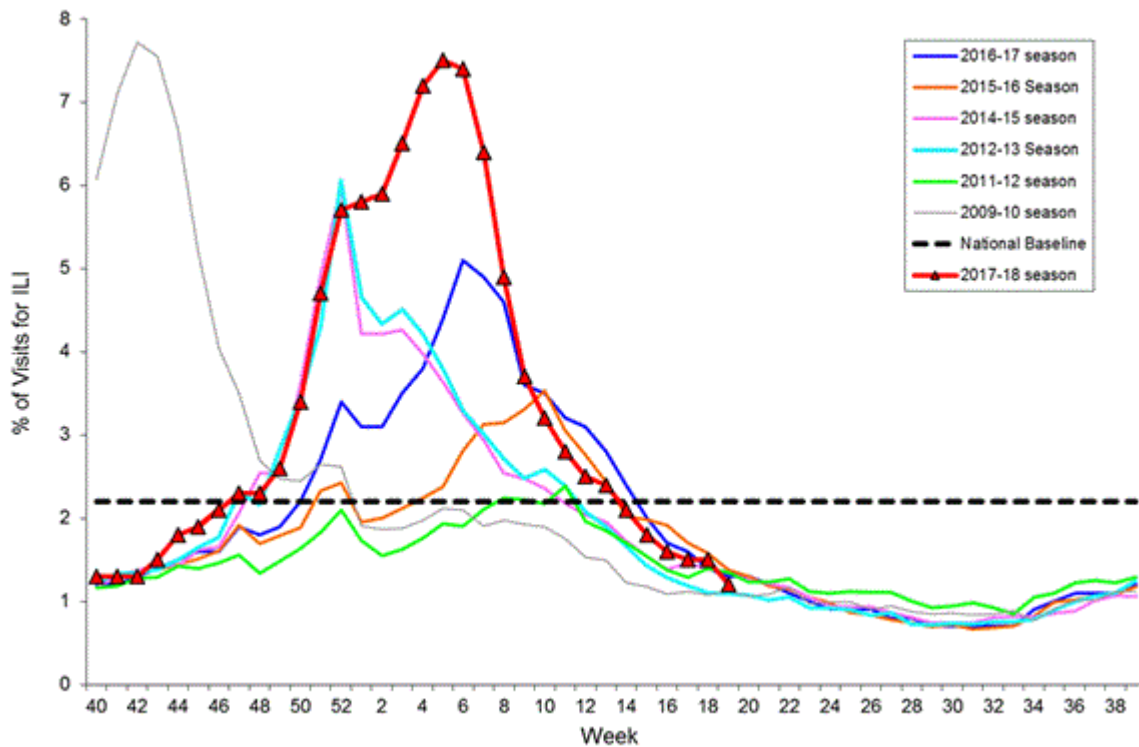


Figure 6. Influenza-like illness (ILI) activity level indicator determined by data reported to ILINet

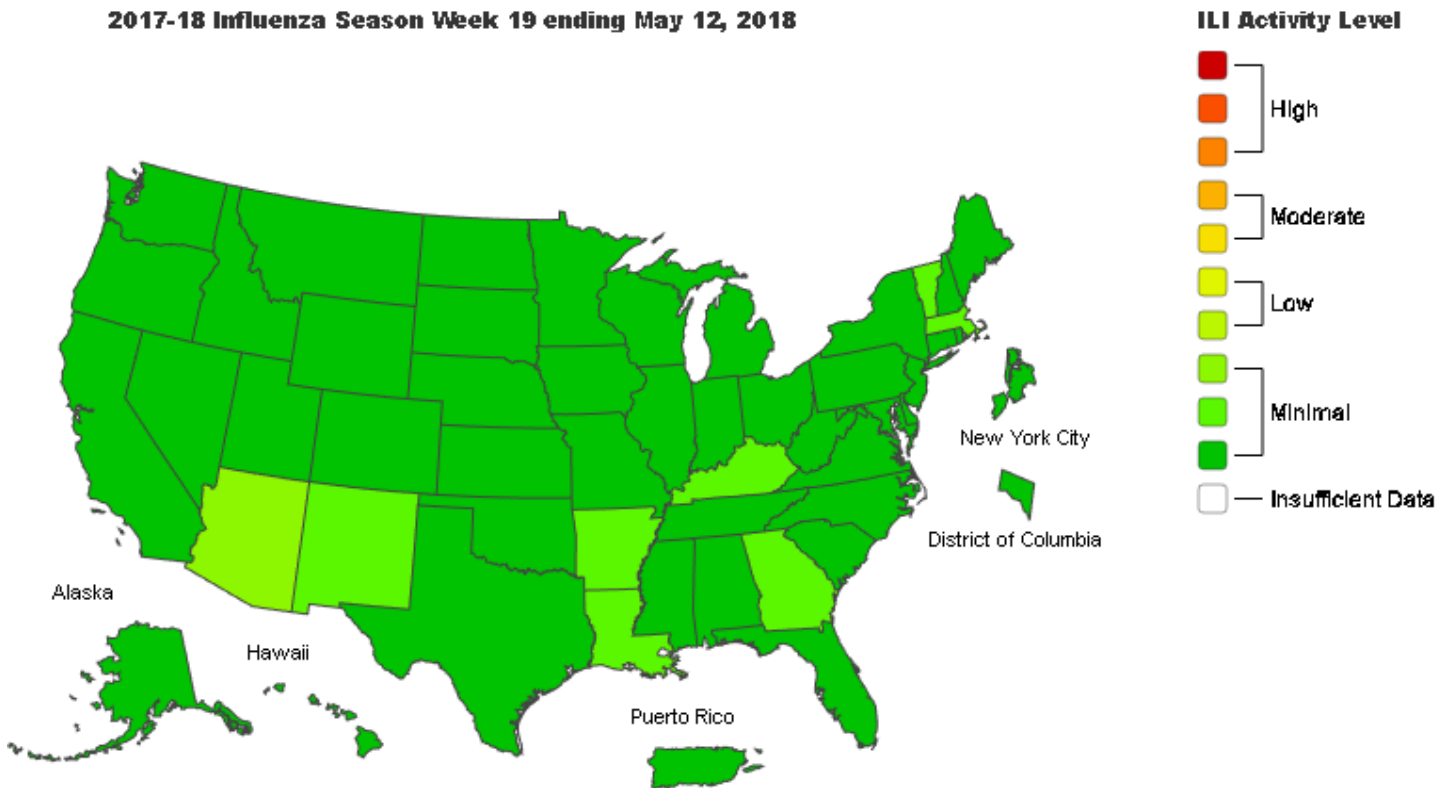
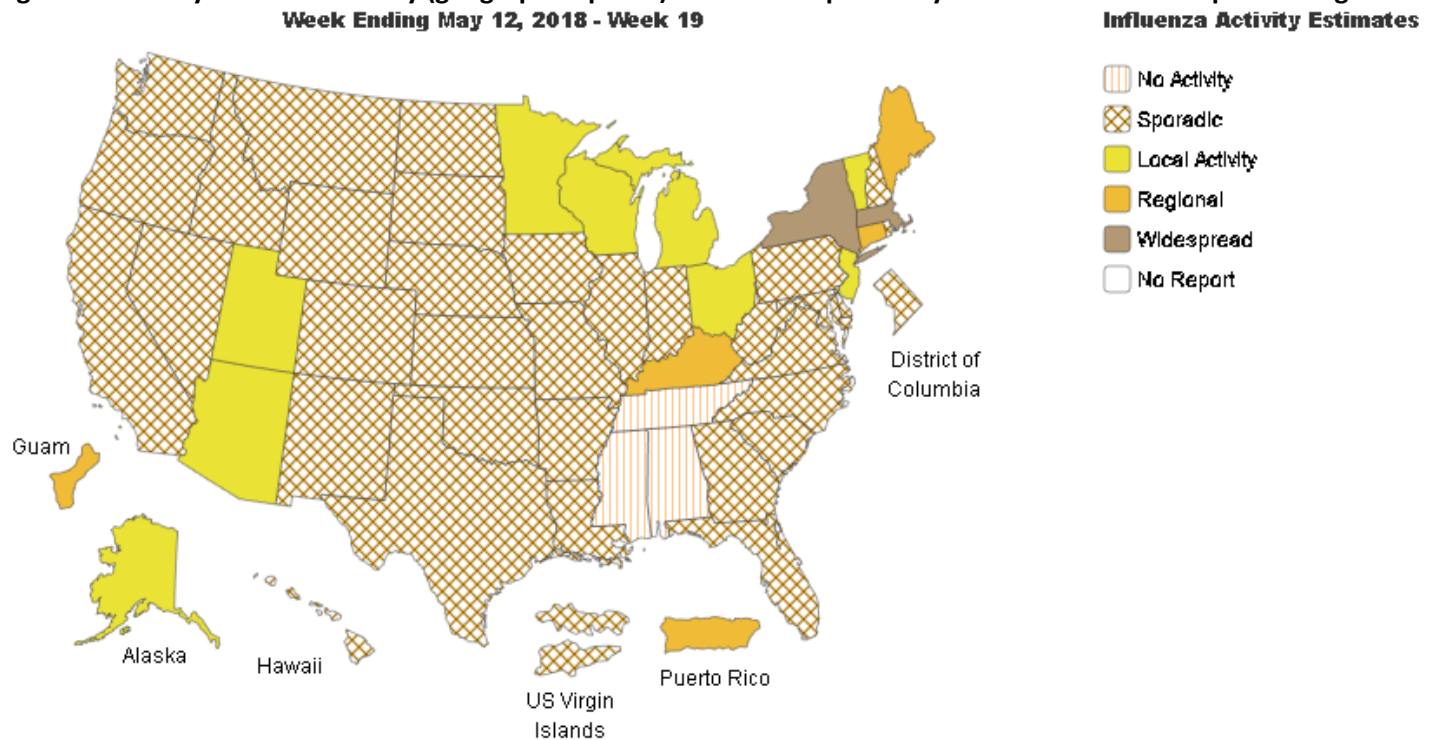


Figure 7. Weekly influenza activity (geographic spread) estimates reported by state and territorial epidemiologists
Week Ending May 12, 2018 - Week 19



Reference: <https://www.cdc.gov/flu/weekly/fluactivitysurv.htm>

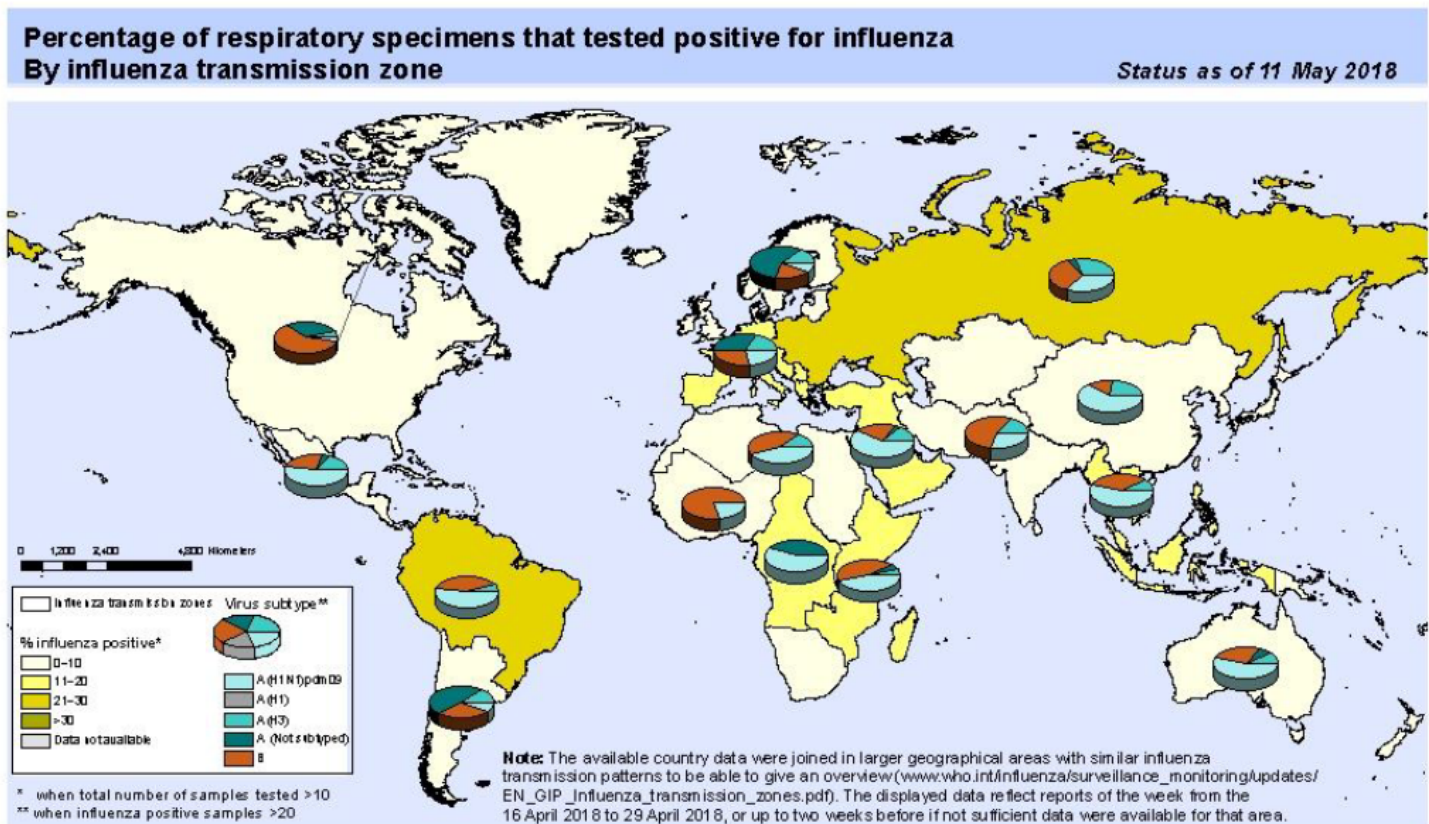
Global Surveillance:

Influenza Update N° 315, World Health Organization (WHO), released 05/14/2018:

Influenza activity returned to inter-seasonal levels in most of the countries in the temperate zone of the northern hemisphere except for some countries in Eastern Europe. Activity increased in some countries in tropical America. In the temperate zone of the southern hemisphere, influenza activity increased but remained below the seasonal thresholds. Worldwide, seasonal influenza subtypes A and B accounted for approximately the same proportion of influenza detections.

National Influenza Centres (NICs) and other national influenza laboratories from 107 countries, areas or territories reported data to FluNet for the period from 16 April 2018 to 29 April 2018 (data as of 2018-05-11 03:42:35 UTC). The WHO GISRS laboratories tested more than 97697 specimens during that period of which 9993 were positive for influenza viruses. Among positive viruses, 5605 (56.1%) were typed as influenza A and 4388 (43.9%) as influenza B. Of the sub-typed influenza A viruses, 1503 (54.6%) were influenza A (H1N1)pdm09 and 1252 (45.4%) were influenza A (H3N2). Of the characterized B viruses, 428 (84.9%) belonged to the B-Yamagata lineage and 76 (15.1%) to the B-Victoria lineage.

- In North America, influenza activity decreased overall, with types A and B co-circulating throughout the region. Influenza-like illness activity (ILI) and respiratory illness indicators increased slightly in Canada.
- In Europe, influenza activity generally decreased to inter-seasonal levels in reporting countries, except for some countries in Eastern Europe, including western regions in the Russian Federation, where activity remained above threshold levels.
- In the Caribbean region, influenza activity was elevated in the Dominican Republic, and Suriname, and severe acute respiratory infection (SARI) hospitalizations increased in Haiti in recent weeks. Influenza activity remained high in Guatemala and Honduras.
- In South America, influenza activity varied by country, with increased influenza activity and SARI levels were reported in Bolivia.



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).



Reference: http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/

About this report: Reporting agencies include labs, hospitals, long-term care and community-based care providers, physician offices, university clinic, correctional facility, 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 were obtained by syndromic surveillance system (Epicenter).

Many thanks to all agencies who report Influenza-related data weekly.

For additional information, please visit the 2017-2018 Influenza dashboard at: <https://www.scph.org/dashboards>

Reporting from participants may not be complete each week. Numbers may change as updated reports are received. For questions, please contact Joan Hall (jhall@sched.org) or Tracy Rodriguez (trodriguez@sched.org), Summit County Public Health Communicable Disease Unit (330-375-2662). This report was issued on May 25, 2018.