



Summit County Public Health
Influenza Surveillance Report
2018 – 2019 Season



Public Health
Prevent. Promote. Protect.

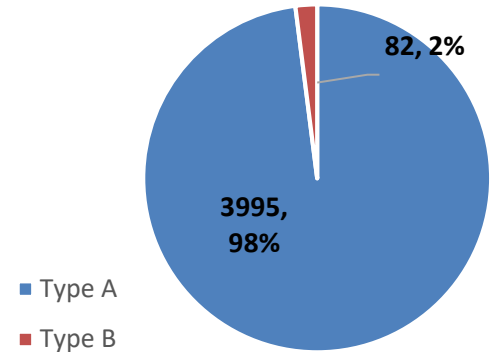
Final Report
Flu Surveillance Week 31 (5/5 to 5/11/2019)
Centers for Disease Control and Prevention MMWR Week 19

2018-2019 Influenza Season Summary (October 7, 2018 to May 11, 2019)

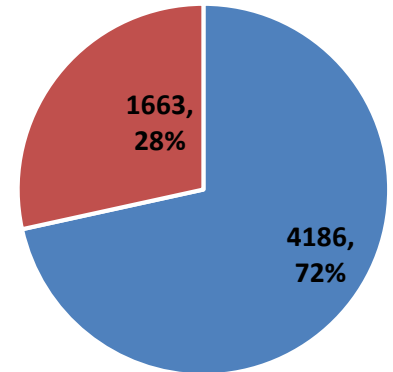
Laboratory Testing:

	<u>2018 - 2019</u>	<u>2017 - 2018</u>
Tests ordered:	23,789	23,301
Positive test results:	4,077	5,849
Type A:	3,995	4,186
Type B:	82	1,663
Total hospitalizations:	711	1,423
Influenza – related deaths:	13	35
Pneumonia – related deaths:	193	165

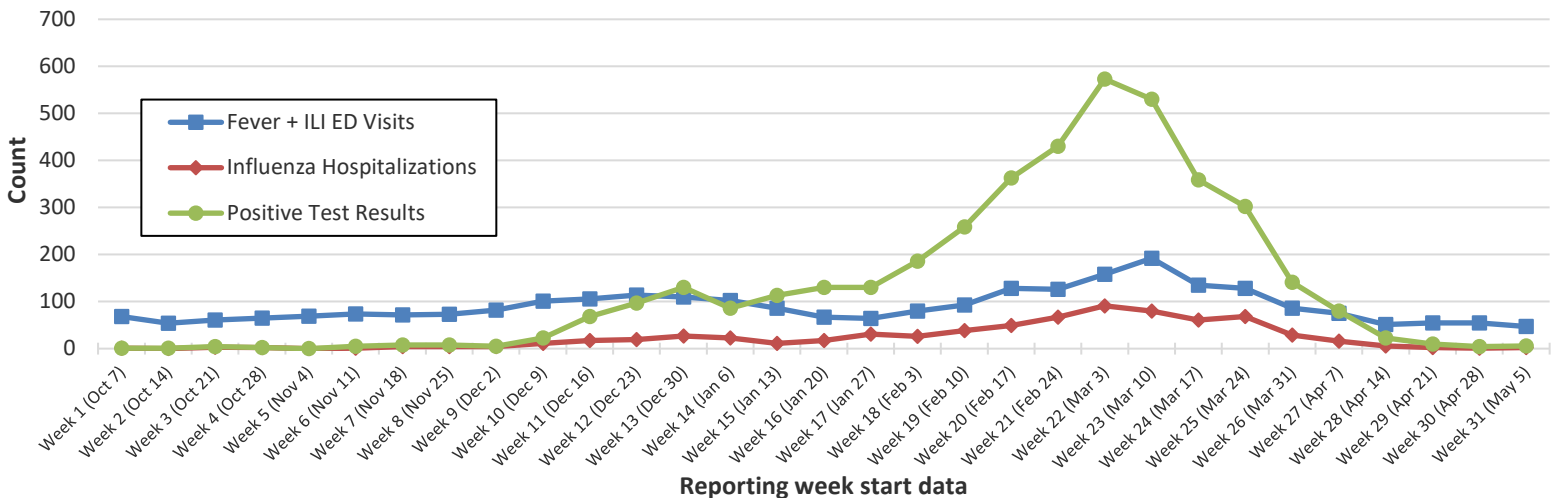
Distribution of influenza type for positive tests, 2018-2019 season



2017-2018 season



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



Summit County Surveillance Data:

During **Week 31**, influenza-related activity in Summit County *remained at minimal levels*.

Table 1: Overall Influenza Activity Indicators in Summit County by Week				
	Week 30 MMWR 18 N (%) ¹	Week 31 MMWR 19 N (%) ¹	Percent change from previous week	Number of weeks increasing or decreasing
Lab Reports				
Test Performed	314	320	+ 1.9%	↑1
Positive Tests (Number and %)	4 (1.3)	6 (1.9)	+ 46.2%	↑1
Influenza A (Number and %)	4 (1.3)	4 (1.3)	NC	NC
Influenza B (Number and %)	0 (0.0)	2 (0.6)	+ 100.0%	↑1
Influenza hospitalizations:	1	2	+ 100.0%	↑1
Influenza ILI Community Report:				
Long-term Care Facilities	0	0	--	--
Correctional & Addiction Facilities	0	0	--	--
Physician Offices & Clinics	1	0	- 100%	↓1
Pharmacy Prescriptions				
Amantidine	5	0	- 100%	↓1
Rimantidine Flumadine	0	0	--	--
Relenza	0	0	--	--
Oseltamivir Tamiflu	2	2	NC	NC
<i>Total antiviral prescriptions</i>	7	2	- 71.4%	↓9
Schools absenteeism daily rate²	5.5	6.7	+ 21.8%	↑2
Deaths				
Pneumonia associated	8 (6.6)	5 (5.2)	- 21.8%	↓1
Influenza associated	0	0	--	--
Emergency room visits (EpiCenter)³				
Constitutional Complaints	447 (7.6)	437 (7.0)	-7.9%	↓1
Fever and ILI	55 (0.9)	47 (0.8)	- 11.1%	↓2
1) N and % are reported when available; NC = no change				
2) Absence is for any reason. Percent is from total number of students enrolled. Data was collected from 8 schools or school districts throughout Summit County (n = ~37,000 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 influenza-related deaths were reported during Week 31, the season total remains at 13. There were 6 deaths associated with pneumonia reported in Week 31. **Figure 1** displays weekly Summit County death counts associated with pneumonia and flu.

Acute Care Hospitalizations: There were 2 flu-related hospitalizations, an increase of one since Week 30. (**Fig. 2**)

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 0 cases of ILI reported.

Correctional and inpatient addiction facilities: There were 0 cases of ILI reported.

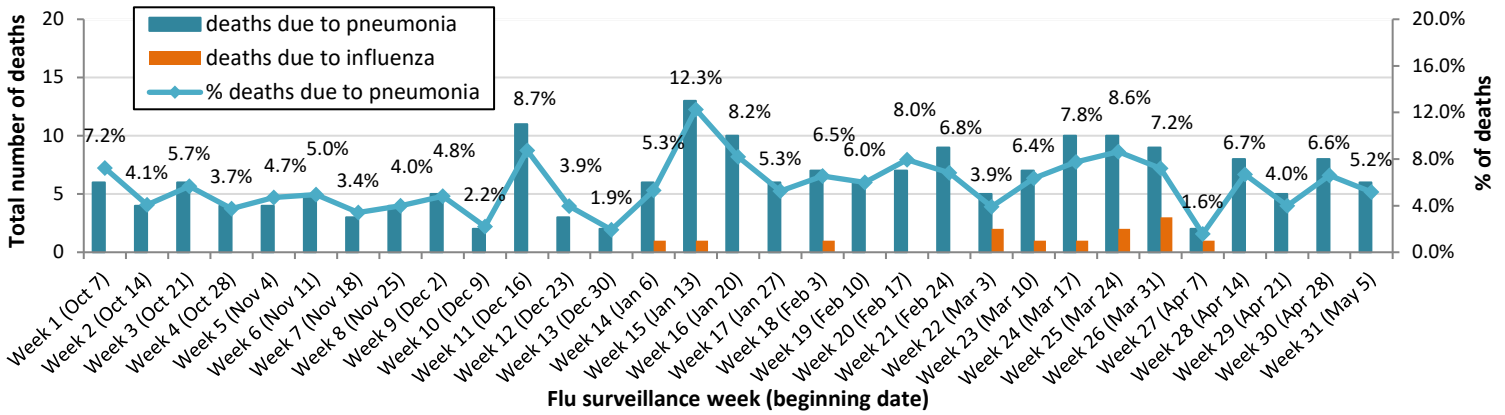
Physician offices and clinics: During Week 31, there were 0 cases of ILI reported.

Pharmacies: 2 Prescriptions for antiviral medications were dispensed by reporting pharmacies during Week 31.

School absenteeism includes absences regardless of reason. During Week 31, area schools reported an average daily absence rate of 6.7%, which was 22% higher than the Week 30 rate.

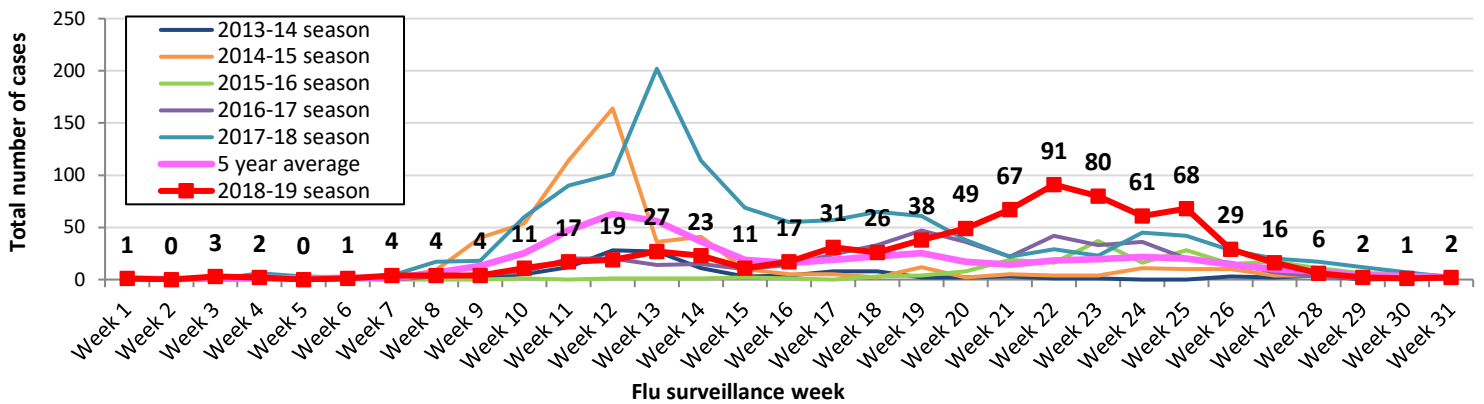
Lab reports: During Week 31, Summit County labs performed 320 influenza tests, of which 6 tested positive (4 Type A, 2 Type B). (**Figure 4**) The percentage of positive test results increased by 46% compared to Week 30.

Figure 1. Weekly Summit County death counts associated with pneumonia and influenza during 2018-2019 season



Influenza-associated hospitalizations: Summit County hospitals reported 2 influenza-associated hospitalizations in Week 31. **Figure 2** displays weekly confirmed hospitalization counts for Summit County (season count to date = 711).

Figure 2. Summit County influenza-associated hospitalizations by week, 2018-2019 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 47 ILI-related visits reported during Week 31, which was 0.8% of total ED visits (n = 6,212). This rate was 11% lower than the Week 30 rate.

Figure 3. Weekly ER visits in Summit County related to Fever + ILI stratified by age groups, 2018 to 2019 season

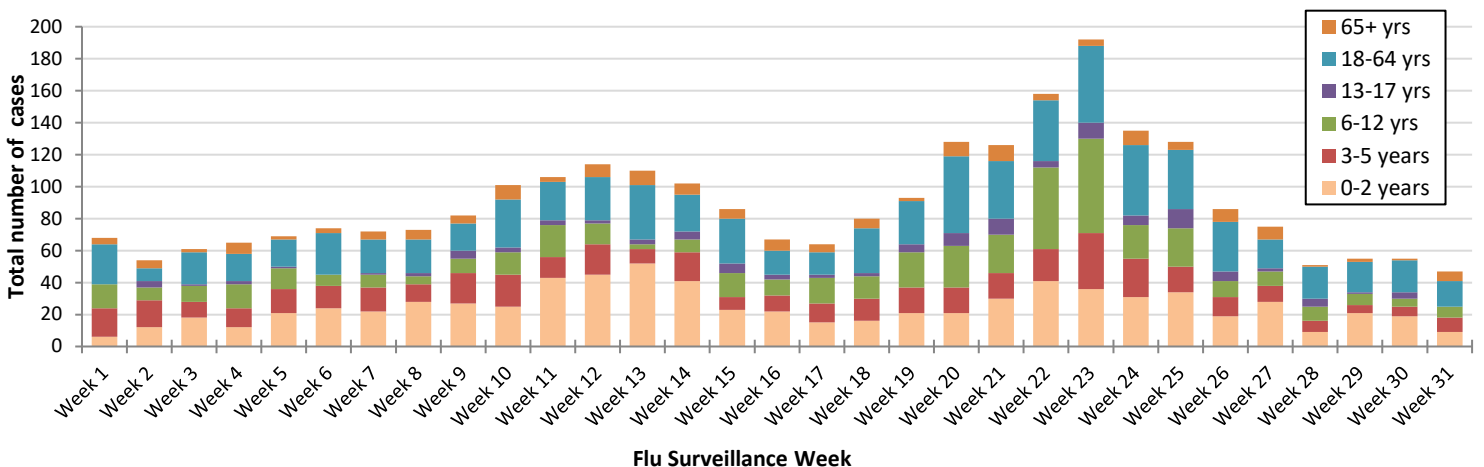
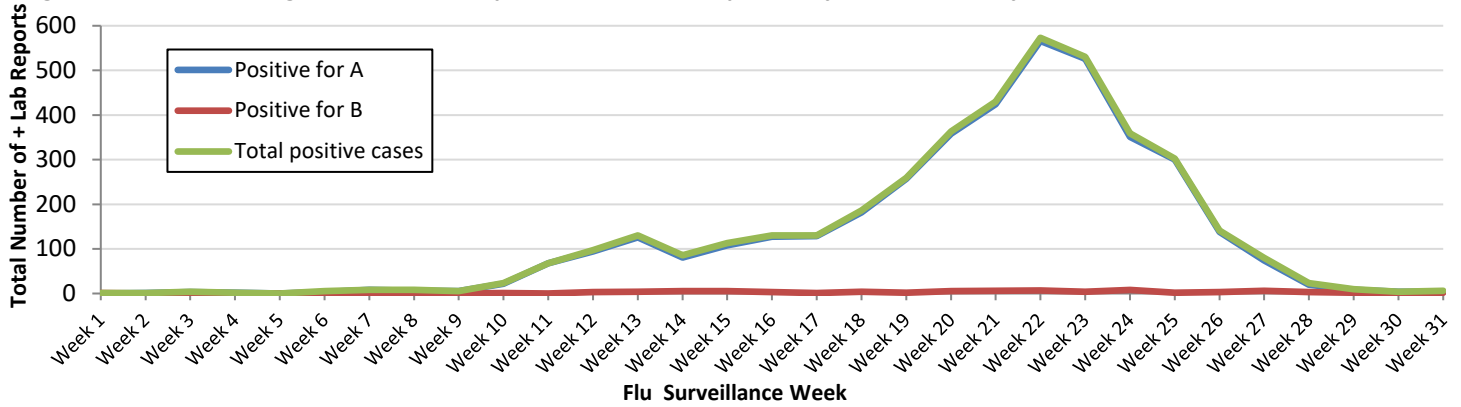


Figure 4. Influenza diagnostic tests with positive results completed by Summit County health facilities, 2018 - 2019 season



Ohio Influenza Activity:

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.

During MMWR Week 18, 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 (ED) visits with patients exhibiting constitutional symptoms and fever and ILI specified ED visits **decreased** and are now below baseline levels. Reported cases of influenza-associated hospitalizations remain **above** the seasonal threshold*. There were 49 influenza-associated hospitalizations reported during MMWR Week 18.

Ohio Influenza Activity Summary Dashboard (May 5 – May 11, 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)	0.30%	-61.04%	↓ 7	
Thermometer Sales (National Retail Data Monitor)	774	-0.64%	↓ 2	
Fever and ILI Specified ED Visits (EpiCenter)	1.28%	-1.54%	↓ 9	
Constitutional ED Visits (EpiCenter)	7.74%	-2.15%	↓ 10	
Confirmed Influenza-associated Hospitalizations (Ohio Disease Reporting System)	20	-59.18%	↓ 7	
Outpatient Medical Claims Data ⁴	0.40%	-32.20%	↓ 9	

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®

Ohio Surveillance Data:

- **ODH lab** has reported 1325 **positive** influenza tests from specimens sent from various submitters. 2018-2019 influenza season positive results: **(618) A/pdmH1N1; (695) A/H3N2; (12) Influenza B;** (through 05/11/2019).
- The **National Respiratory and Enteric Virus Surveillance System (NREVSS)** has reported **78,965** influenza tests performed at participating facilities. 2018-2019 influenza season positive results: **(447) A/pdmH1N1, (568) A/H3N2, (12,737) Flu A Not Subtyped, and (308) Flu B** (through 05/11/2019).
- 4 **pediatric influenza-associated mortalities** have been reported during the 2018-2019 season (through 05/11/2019).
- No **novel influenza A virus infections** have been reported during the 2018-2019 season (through 05/11/2019).
- Incidence of confirmed **influenza-associated hospitalizations** in 2018-2019 season = 9828 (through 05/11/2019).

Source: <https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/seasonal-influenza/ohio-flu-activity/>

National Influenza Activity:

Influenza activity continues to decrease in the United States. While influenza A(H1N1)pdm09 viruses predominated from October to mid-February, influenza A(H3N2) viruses have been more commonly identified since late February. Small numbers of influenza B viruses also have been reported. Below is a summary of the key influenza indicators for the week ending May 11, 2019:

- **Viral Surveillance:** The percentage of respiratory specimens testing positive for influenza viruses in clinical laboratories decreased. During the most recent three weeks, influenza A(H3) viruses were reported more frequently than influenza A(H1N1)pdm09 viruses nationally.
 - **Virus Characterization:** The majority of influenza A(H1N1)pdm09 and influenza B viruses characterized antigenically are similar to the cell-grown reference viruses representing the 2018–2019 Northern Hemisphere influenza vaccine viruses. However, the majority of influenza A(H3N2) viruses are antigenically distinguishable from A/Singapore/INFIMH-16-0019/2016 (3C.2a1), a cell-propagated reference virus representing the A(H3N2) component of 2018-19 Northern Hemisphere influenza vaccines.
 - **Antiviral Resistance:** The vast majority of influenza viruses tested (>99%) show susceptibility to oseltamivir and peramivir. All influenza viruses tested showed susceptibility to zanamivir.
- **Influenza-like Illness Surveillance (Figure 5):** The proportion of outpatient visits for influenza-like illness (ILI) decreased to 1.5%, which is below the national baseline of 2.2%. All regions reported ILI below their region-specific baseline level.
 - **ILI State Activity Indicator Map (Figure 6):** Puerto Rico and one state experienced low ILI activity; and New York City and 49 states experienced minimal ILI activity; and the District of Columbia and the U.S. Virgin Islands had insufficient data.
- **Geographic Spread of Influenza (Figure 7):** The geographic spread of influenza in Puerto Rico and four states was reported as regional; 16 states reported local activity; the District of Columbia, the U.S. Virgin Islands and 28 states reported sporadic activity; two states reported no activity; and Guam did not report.
- **Influenza-associated Hospitalizations:** A cumulative rate of 65.7 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported. The highest hospitalization rate is among adults 65 years and older (221.8 hospitalizations per 100,000 population).
- **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 to CDC during week 19.

Figure 5. Percentage of visits for influenza-like illness (ILI) reported by the U.S. Outpatient Influenza-like Surveillance Network (ILINet), weekly national summary, 2018-2019 and selected previous seasons

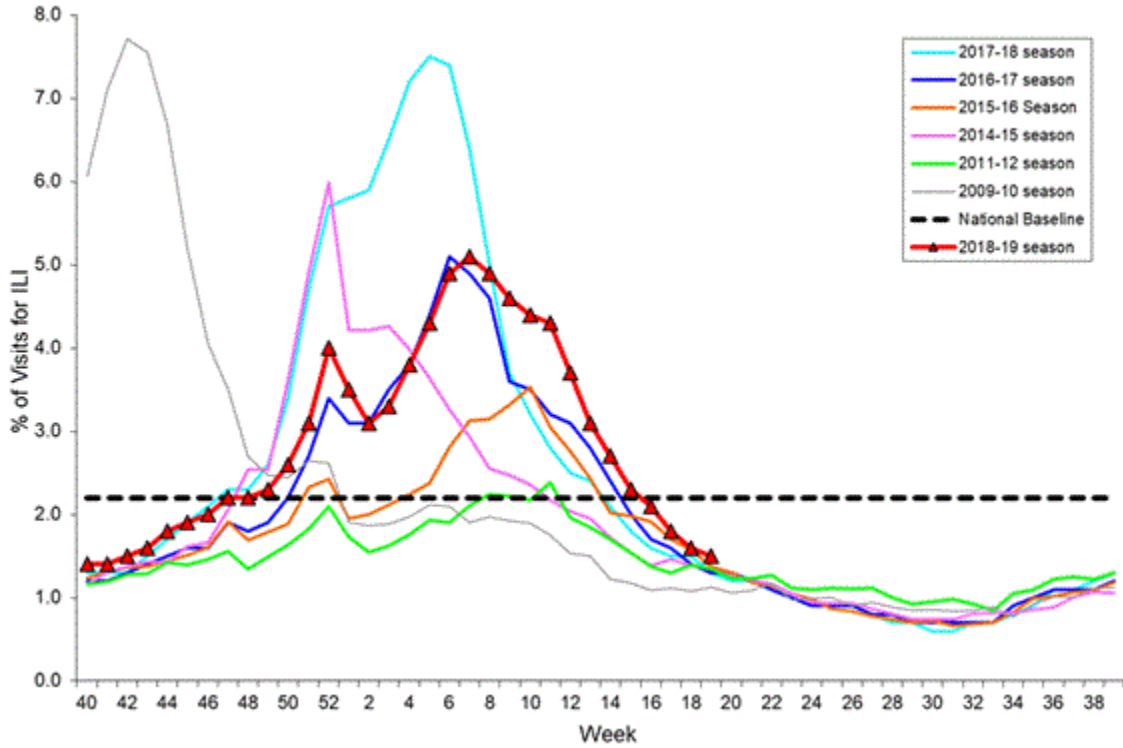


Figure 6. Influenza-like illness (ILI) activity level indicator determined by data reported to ILINet

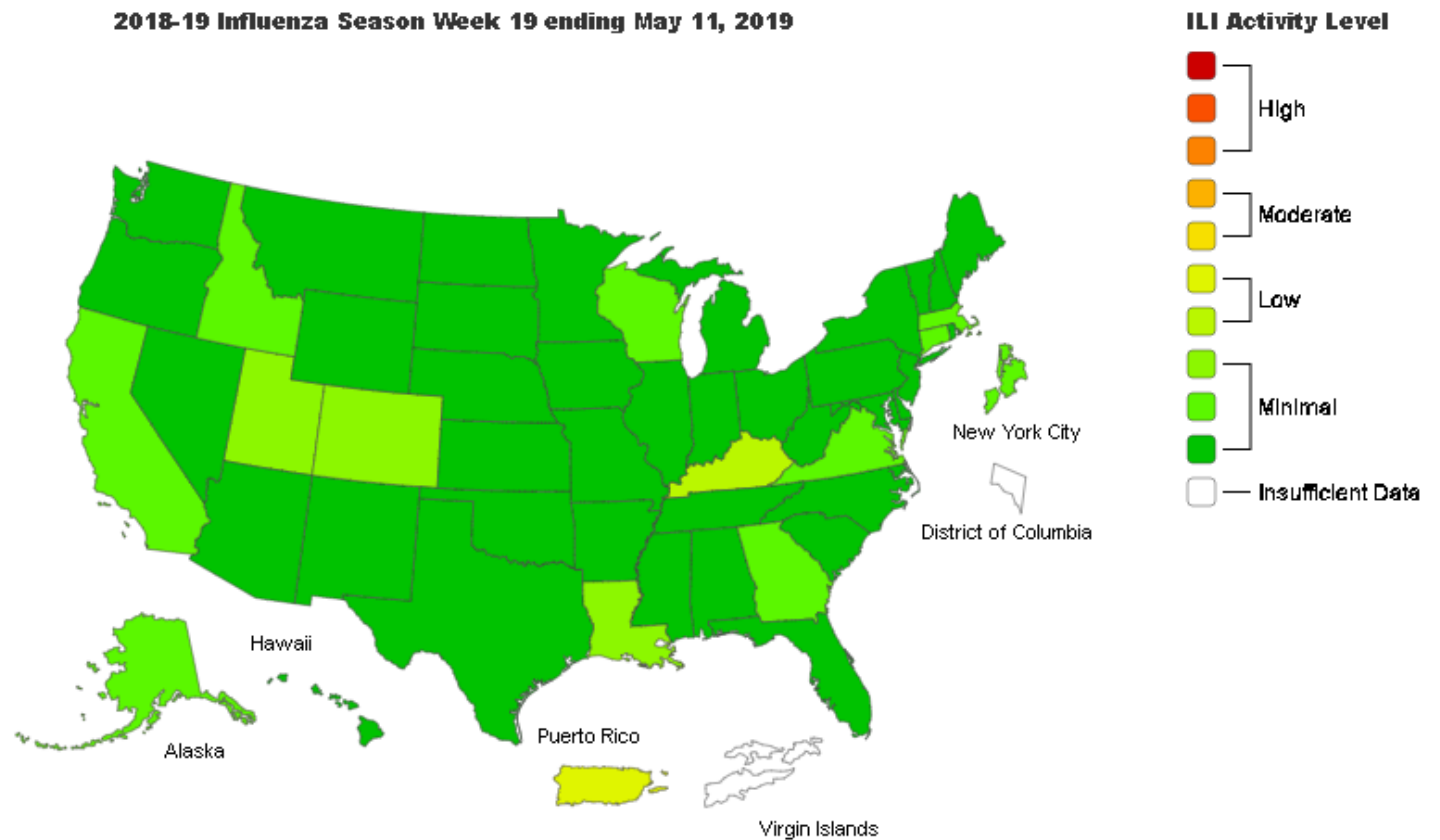
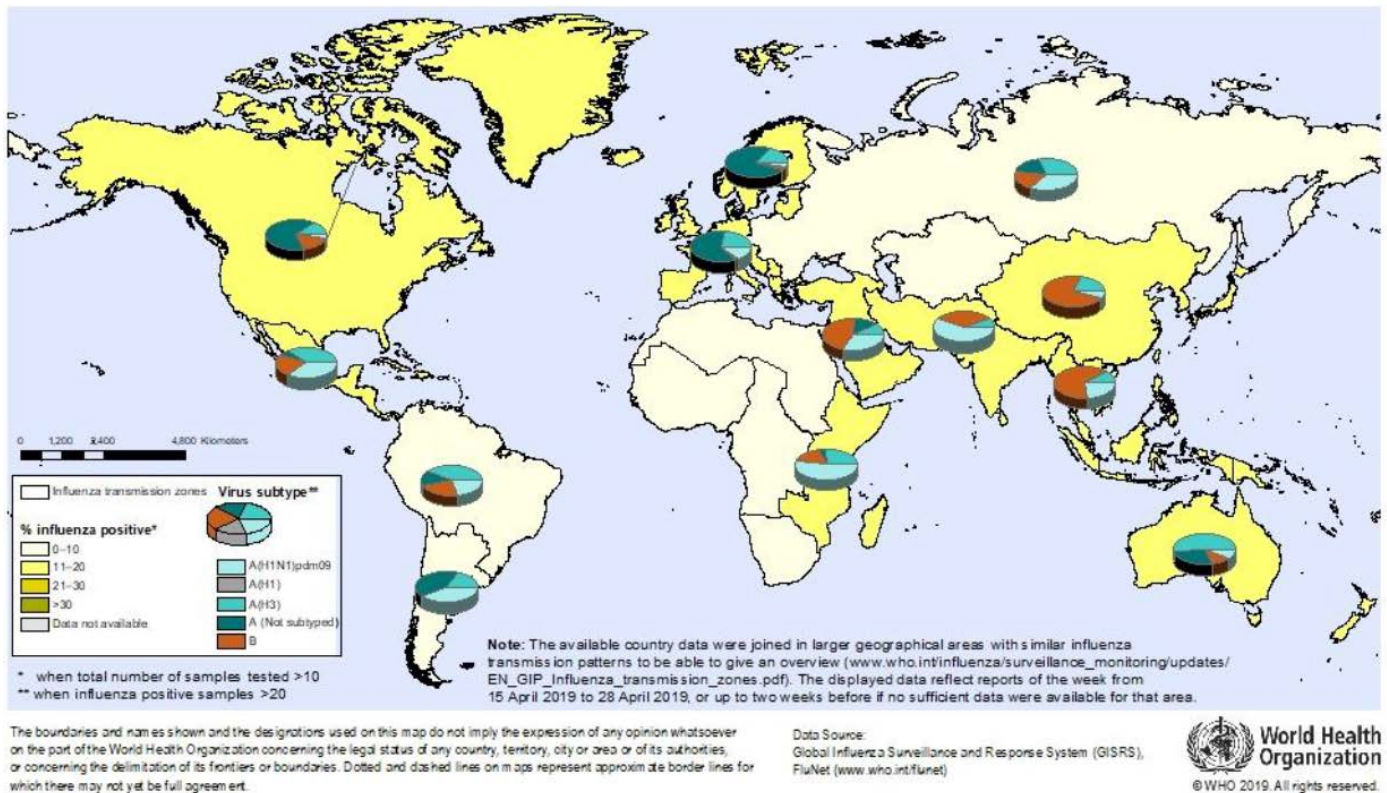
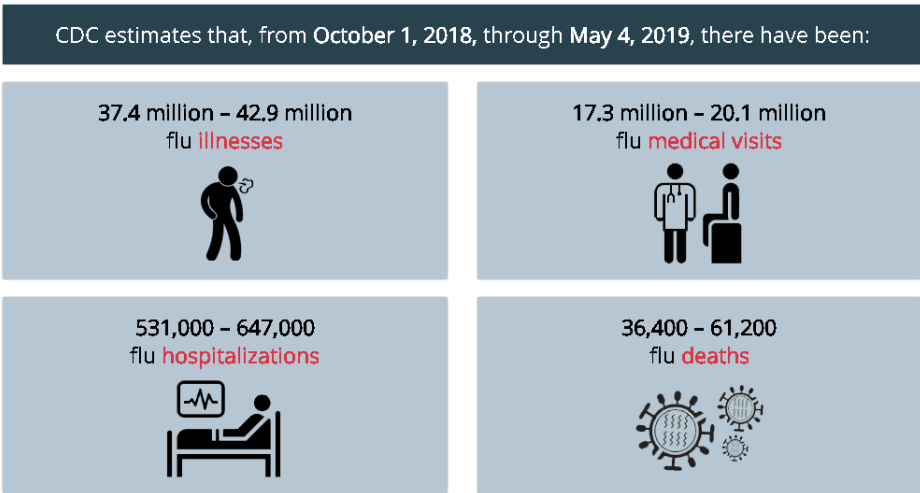


Figure 8. Percentage of respiratory specimens that tested positive for influenza, by influenza transmission zone (status as of 10 May 2019)



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



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 May 17, 2019.