



**Summit County Public Health
Influenza Surveillance Report
2017 – 2018 Season
Report # 8**



**Flu Surveillance Weeks 15 & 16 (Beginning 1/14/2017 through 1/27/2017)
Centers for Disease Control and Prevention MMWR Weeks 3 & 4**

Summit County Surveillance Data:

In **Weeks 15 & 16** of influenza surveillance, influenza-related activity has slightly increased in Summit County.

Table 1: Overall Influenza Activity Indicators in Summit County by Week				
	Week 3 N (%)*	Week 4 N (%)*	Percent change from previous week	Number of weeks increasing or decreasing
Lab Reports				
Total Test Performed	1485	1616	8.8	↑1
Positive Tests (Number and %)	376 (25.3)	479 (29.6)	27.4	↑1
Influenza A (Number and %)	323 (21.8)	382 (23.6)	18.3	↑1
Influenza B (Number and %)	53 (3.6)	97 (6.0)	83.0	↑4
Acute care hospitalization for Influenza:	86	70	-18.6	↓3
Influenza ILI Community Report:				
Long-term Care ILI	0	1	100.0	↑1
Correctional & Addiction Facility	0	1	100.0	↑1
Physician Offices & University Clinic	20	18	-10.0	↓2
Pharmacy Prescriptions				
Amantidine	1	2	100.0	↑1
Rimantidine Flumadine	0	0	--	--
Relenza	0	0	--	--
Oseltamivir Tamiflu	61	81	32.8	↑4
<i>Total</i>	62	83	27.4	↑4
Schools** 7 Schools reporting	7132 students	7132 students		
Number Absent	985 (13.8)	1412 (19.8)	43.4	↑3
Deaths (Total)				
Pneumonia associated	14 (7.6)	7 (4.7)	-50.0	↓1
Influenza associated	12 (6.5)	2 (1.4)	-83.3	↓1
Emergency room visits (Epi Center)***				
Constitutional Complaints	772 (12.9)	831 (13.1)	7.6	↑1
Fever and ILI	135 (2.3)	160 (2.5)	18.5	↑2
* N and % are reported when available				
**Percent is from total number of students enrolled at all schools reporting. WK 15 7132 and WK 16 7132 reporting				
***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.				
º 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 were 12 influenza associated deaths reported in week 15 and 2 in week 16 **Figure 1** displays weekly Summit County death counts associated with pneumonia and influenza.

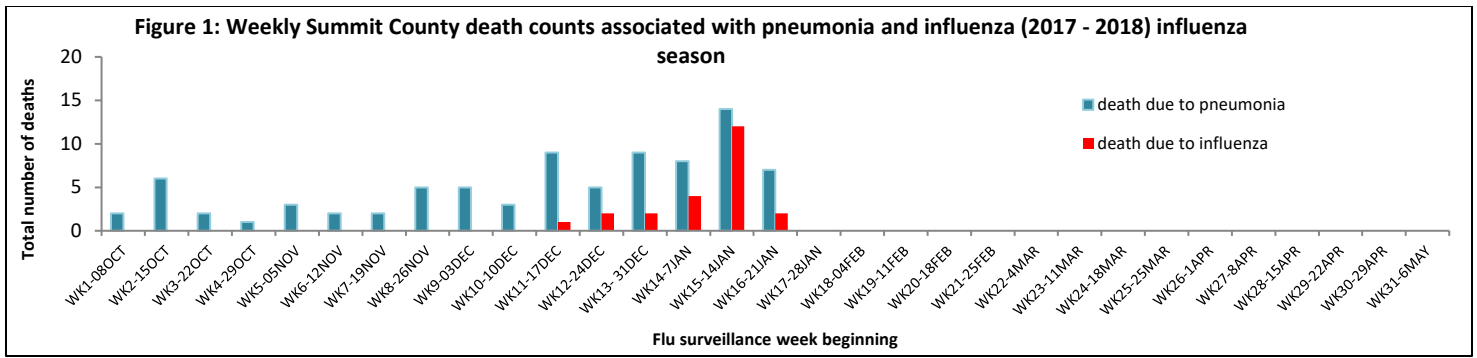
Acute Care Hospitalizations: 86 reported influenza associated hospitalizations during week 15, and **70** in week 16. **Figure 2** displays Influenza Associated Hospitalizations in Summit County.

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 1 case of ILI reported from Long Term Care facilities. **Correctional and Addiction facility:** There was one case of ILI reported in week 4. **Physician Office and University Clinic:** During week 15, 20 cases of ILI were reported and Week 16 reported 18 cases.

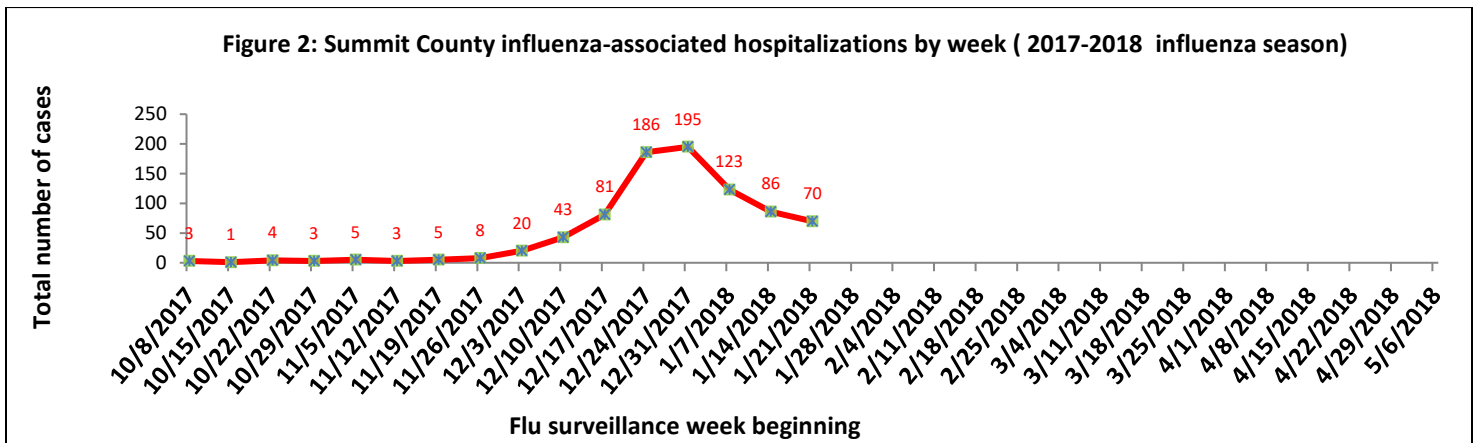
Pharmacy: 1 prescription for Amantidine were reported during week 15 and 61 prescriptions for Tamiflu. Week 16 had 2 prescriptions for Amantidine and 81 prescriptions for Tamiflu.

School absenteeism includes absences regardless of reason. In WK 15, there were 985 absences and in WK 16 there were 1412 absences.

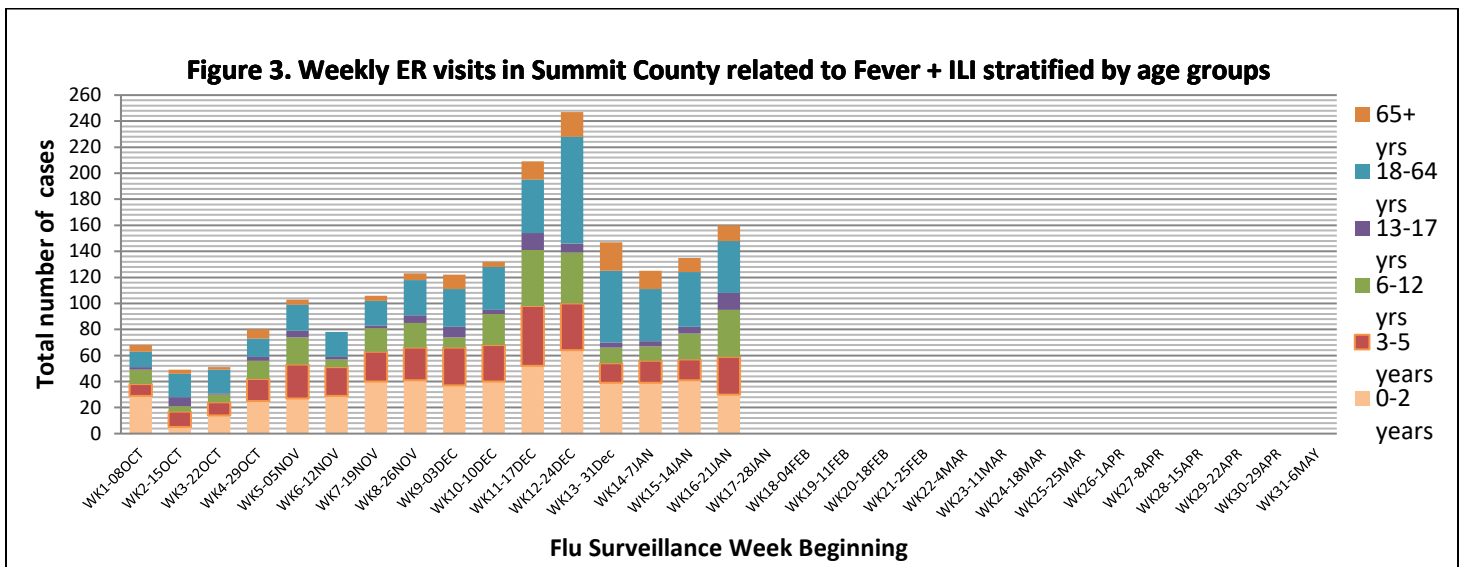
Lab reports: During week 15 Summit County labs performed 1485 tests, of which 323 tested positive for influenza A & 53 for Influenza B. Week 16 there were 1616 total tests - 382 A and 97 B. See **Figure 4**.

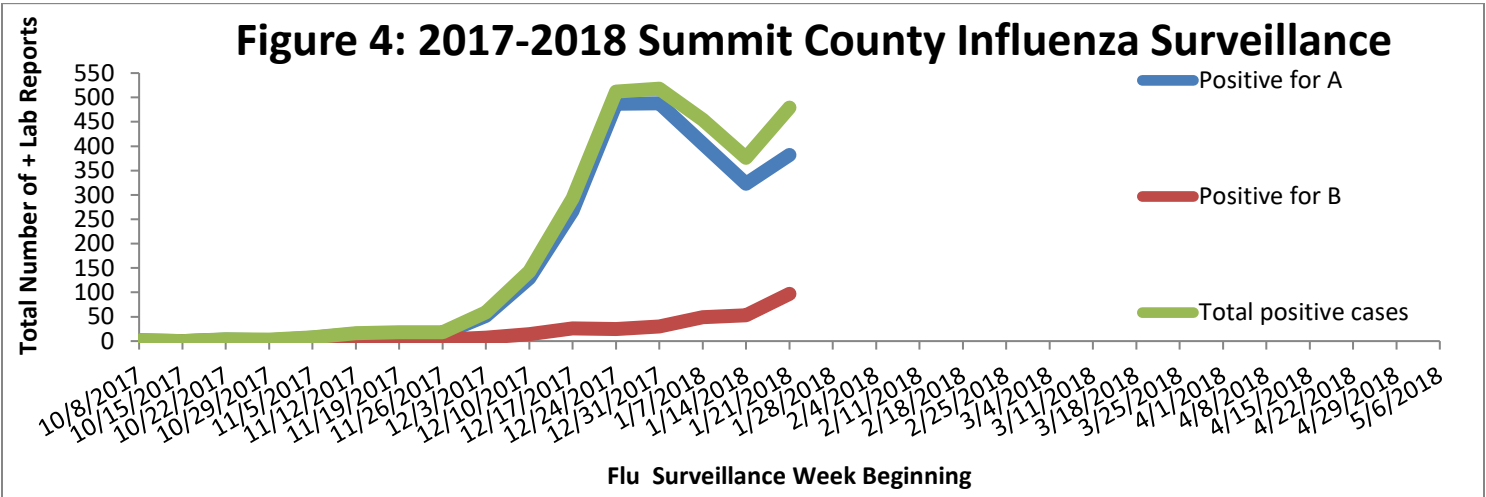


Influenza-associated hospitalization: Summit County hospitals reported 86 influenza-associated hospitalizations in WK 15 and 70 hospitalizations during week 16. **Figure 2** displays weekly confirmed hospitalization count for Summit County (cumulative count to date = 846).



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, stratified by age group. During weeks 15, adults (18-64) and infants (0-2) and during week 16 adults (18-64) and children (6-12) had the most visits related to ILI.





Ohio Influenza Activity: From the Ohio Department of Health:

Current Influenza Activity:

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 stat.

Ohio Influenza Activity Summary Dashboard:

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)	3.65%	-2.67%	↓ 3	
Thermometer Sales (National Retail Data Monitor)	2870	1.31%	↑ 6	
Fever and ILI Specified ED Visits (EpiCenter)	3.19%	-2.45%	↓ 3	
Constitutional ED Visits (EpiCenter)	14.94%	-1.39%	↓ 1	
Confirmed Influenza-associated Hospitalizations (Ohio Disease Reporting System)	1681	-6.87%	↓ 1	
Outpatient Medical Claims Data ⁴	2.87%	-7.12%	↓ 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.

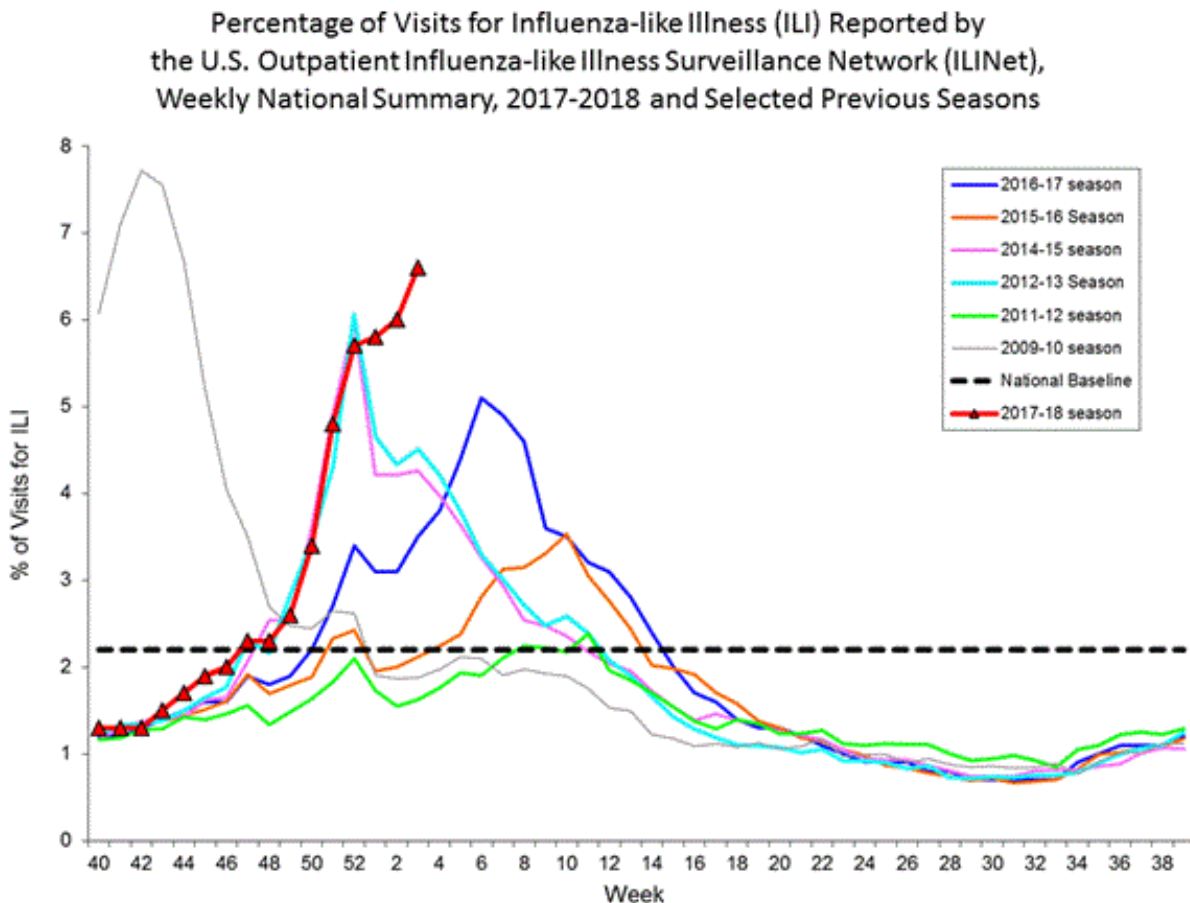
³Black lines represent current week's data; red lines represent baseline averages

⁴Medical Claims Data provided by: athenahealth®

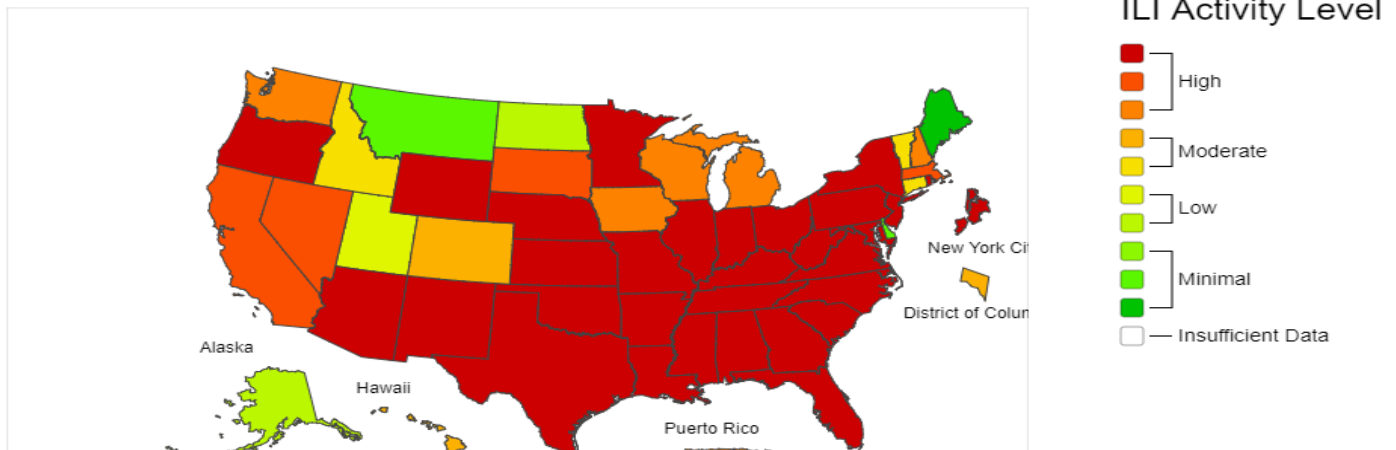
National Surveillance: from the Centers for Disease Control and Prevention (CDC):

During week 3 (January 14-20, 2018), influenza activity increased in the United States.

- **Viral Surveillance:** The most frequently identified influenza virus subtype reported by public health laboratories during week 3 was influenza A(H3). The percentage of respiratory specimens testing positive for influenza in clinical laboratories slightly increased.
- **Pneumonia and Influenza Mortality:** The proportion of deaths attributed to pneumonia and influenza (P&I) was above the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** Seven influenza-associated pediatric deaths were reported.
- **Influenza-associated Hospitalizations:** A cumulative rate of 41.9 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 6.6%, which is above the national baseline of 2.2%. All 10 regions reported ILI at or above region-specific baseline levels. New York City, Puerto Rico, and 39 states experienced high ILI activity; the District of Columbia and five states experienced moderate ILI activity; three states experienced low ILI activity; and three states experienced minimal ILI activity.



2017-18 Influenza Season Week 3 ending Jan 20, 2018

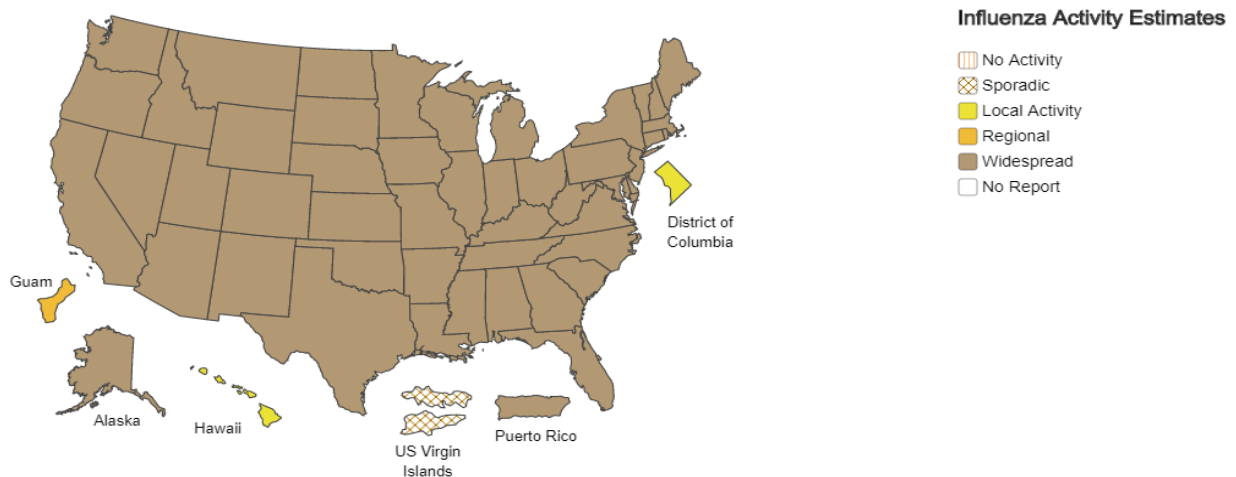


*This map uses the proportion of outpatient visits to healthcare providers for influenza-like illness to measure the ILI activity level within a state. It does not, however, measure the extent of geographic spread of flu within a state. Therefore, outbreaks occurring in a single city could cause the state to display high activity levels.
 *Data collected in ILINet may disproportionately represent certain populations within a state, and therefore may not accurately depict the full picture of influenza activity for the whole state.
 *Data displayed in this map are based on data collected in ILINet, whereas the State and Territorial flu activity map are based on reports from state and territorial epidemiologists. The data presented in this map is preliminary and may change as more data is received.
 *Differences in the data presented by CDC and state health departments likely represent differing levels of data completeness with data presented by the state likely being the more complete.
 *For the data download you can use Activity Level for the number and Activity Level Label for the text description.

A Weekly Influenza Surveillance Report Prepared by the Influenza Division

Weekly Influenza Activity Estimates Reported by State and Territorial Epidemiologists*

Week Ending Jan 20, 2018 - Week 3



*This map indicates geographic spread and does not measure the severity of influenza activity.

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

Global Surveillance: from the World Health Organization:

Influenza activity continued to increase in the temperate zone of the northern hemisphere while in the temperate zone of the southern hemisphere activity was at inter-seasonal levels. Worldwide, influenza A accounted still for the majority of influenza detections (62%) but influenza B (mostly from the Yamagata lineage) has increased proportionally.

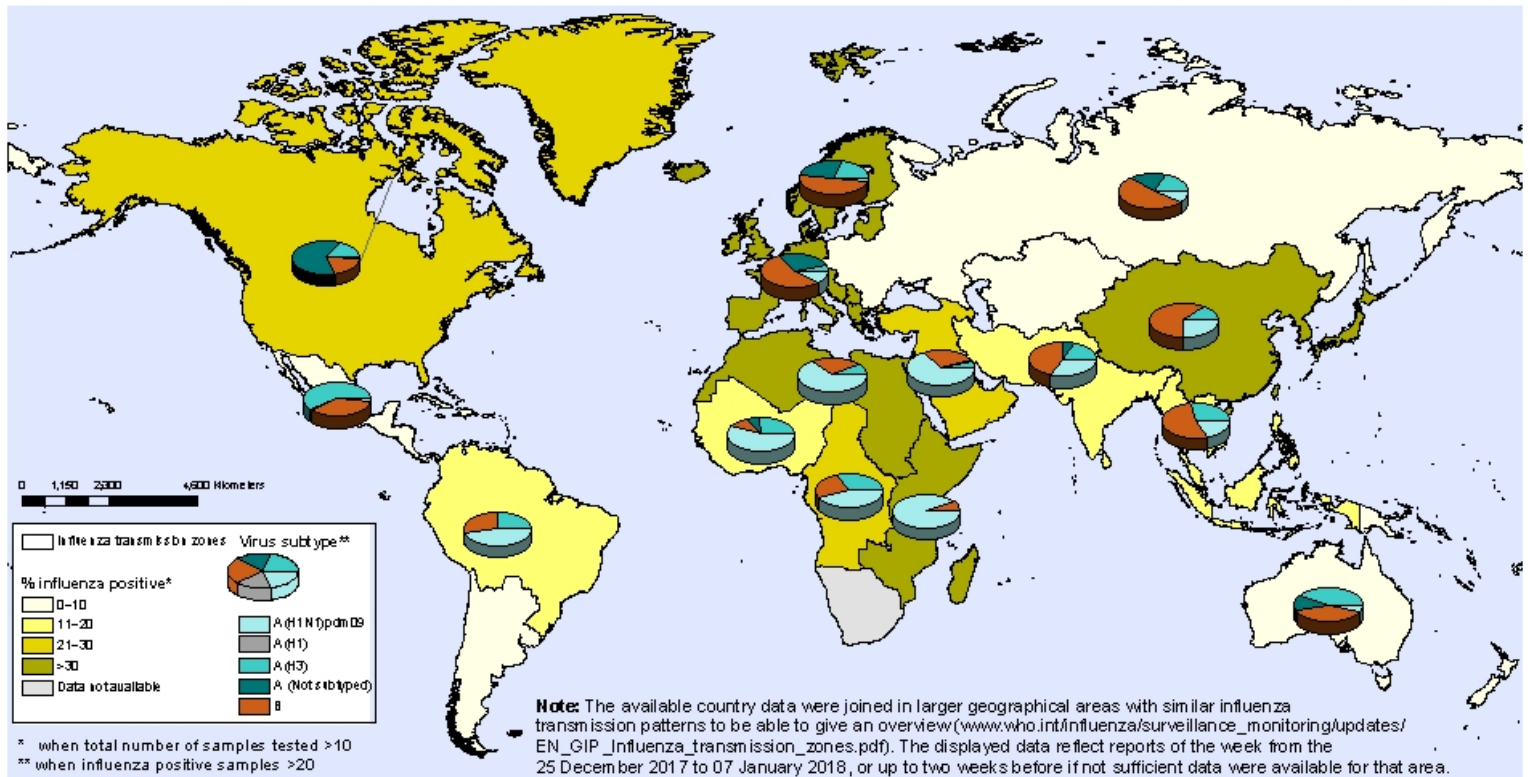
Up to now, the majority of countries which started the season, reported influenza like illness reaching moderate levels in comparison with previous years, with few reaching already high levels.

Some countries have reported levels of hospitalization and ICU admissions at levels reaching or exceeding peak levels of previous influenza seasons.

WHO recommends countries with current influenza activity or entering their season to adopt necessary measures for ensuring appropriate case management, compliance with infection control measures and seasonal influenza vaccination for high risk groups.

Percentage of respiratory specimens that tested positive for influenza By influenza transmission zone

Status as of 19 January 2018



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).

 **World Health Organization**
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Reference: http://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/

Estimating Seasonal Influenza-Associated Deaths in the United States

Questions and Answers

What are seasonal influenza-related deaths?

Seasonal influenza-related deaths are deaths that occur in people for whom seasonal influenza infection was likely a contributor to the cause of death, but not necessarily the primary cause of death.

Does CDC know the exact number of people who die from seasonal flu each year?

CDC does not know exactly how many people die from seasonal flu each year. There are several reasons for this. First, states are not required to report individual seasonal flu cases or deaths of people older than 18 years of age to CDC. Second, seasonal influenza is infrequently listed on death certificates of people who die from flu-related complications. Third, many seasonal flu-related deaths occur one or two weeks after a person's initial infection, either because the person may develop a secondary bacterial co-infection (such as bacterial pneumonia) or because seasonal influenza can aggravate an existing chronic illness (such as congestive heart failure or chronic obstructive pulmonary disease). Also, most people who die from seasonal flu-related complications are not tested for flu, or they seek medical care later in their illness when seasonal influenza can no longer be detected from respiratory samples. Sensitive influenza tests are only likely to detect influenza if performed within a week after onset of illness. In addition, some commonly used tests to diagnose influenza in clinical settings are not highly sensitive and can provide false negative results (i.e. they misdiagnose flu illness as not being flu.) For these reasons, many flu-related deaths may not be recorded on death certificates. These are some of the reasons that CDC and other public health agencies in the United States and other countries use statistical models to estimate the annual number of seasonal flu-related deaths.

Flu deaths in children are different though because these are nationally notifiable, which means that individual flu deaths must be reported to the Centers for Disease Control and Prevention. States report flu-related child deaths in the United States through the Influenza Associated Pediatric Mortality Surveillance System.

How many flu-associated deaths occur in people who have been vaccinated?

As previously explained, flu-associated deaths in adults are not a nationally notifiable condition, and so states are not required to report flu-associated deaths in adults to CDC. In contrast, flu-associated deaths in children are a nationally notifiable condition, and so jurisdictions (inclusive of state, city or local public health departments) do provide data to CDC on flu-associated deaths in children. These data generally include demographic information, flu laboratory test results, clinical information, and information on the child's vaccination history, when it is available. During past seasons, approximately 80% of flu-associated deaths in children have occurred in children who were

not vaccinated. Based on available data, this remains true for the 2017-2018 season, as well. For the latest surveillance data on flu deaths in children, see <https://gis.cdc.gov/GRASP/Fluview/PedFluDeath.html>.

What categories does CDC use to estimate flu-associated deaths?

CDC uses two categories of underlying cause of death information listed on death certificates: pneumonia and influenza (P&I) causes and respiratory and circulatory (R&C) causes. CDC uses statistical models with records from these two categories to make estimates of influenza-associated mortality. CDC uses underlying R&C deaths (which include P&I deaths) as the primary outcome in its mortality modeling because R&C deaths provide an estimate of deaths that include secondary respiratory or cardiac complications that can follow influenza. R&C causes of death are more sensitive to describe flu-related deaths than underlying P&I deaths and more specific than deaths from all causes.

How many people die from seasonal flu each year in the United States?

The number of seasonal influenza-associated (i.e., seasonal flu-related) deaths varies from year to year because flu seasons often fluctuate in length and severity. Therefore, a single estimate cannot be used to summarize influenza-associated deaths. Instead, a range of estimated deaths is a better way to represent the variability and unpredictability of flu.

An August 27, 2010 *MMWR* report entitled "[Thompson MG et al. Updated Estimates of Mortality Associated with Seasonal Influenza through the 2006-2007 Influenza Season. MMWR 2010; 59\(33\): 1057-1062.](#)," provided estimates of the range of flu-associated deaths that occurred in the United States during the three decades prior to 2007. CDC estimated that from the 1976-1977 season to the 2006-2007 flu season, flu-associated deaths ranged from a low of about 3,000 to a high of about 49,000 people.

On December 9, 2016, CDC posted [estimates of seasonal flu deaths from more recent seasons](#) in the United States. CDC estimates that from 2010-2011 to 2013-2014, influenza-associated deaths in the United States ranged from a low of 12,000 (during 2011-2012) to a high of 56,000 (during 2012-2013). Death certificate data and weekly influenza virus surveillance information was used to estimate how many flu-related deaths occurred among people whose underlying cause of death on their death certificate included respiratory or circulatory causes.

Reference: https://www.cdc.gov/flu/about/disease/us_flu-related_deaths.htm#flu-deaths

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 are 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 McKenzie McConaha, Joan Hall or Tracy Rodriguez, Summit County Public Health Communicable Disease Unit. Report was issued on February 2, 2018.