



**Summit County Public Health  
Influenza Surveillance Report  
2019 – 2020 Season  
Report #2**



**Public Health**  
Prevent. Promote. Protect.

**Flu Surveillance Weeks 2 & 3 (10/13/2019 to 10/26/2019)  
Centers for Disease Control and Prevention MMWR Weeks 42 & 43**

**Summit County Surveillance Data:**

In **Week 3** of influenza surveillance, influenza-related activity was minimal in Summit County.

**Zero** deaths related to influenza were reported during Week 3, and there were two deaths associated with pneumonia. **Figure 1** displays weekly Summit County death counts associated with pneumonia and influenza.

**Acute Care Hospitalizations:** There were no reported hospitalizations during Week 3. **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 0 cases of ILI reported. **Correctional and Inpatient Addiction facilities:** Zero cases ILI reported. **Physician offices and clinics:** During Week 3, zero cases of ILI were reported.

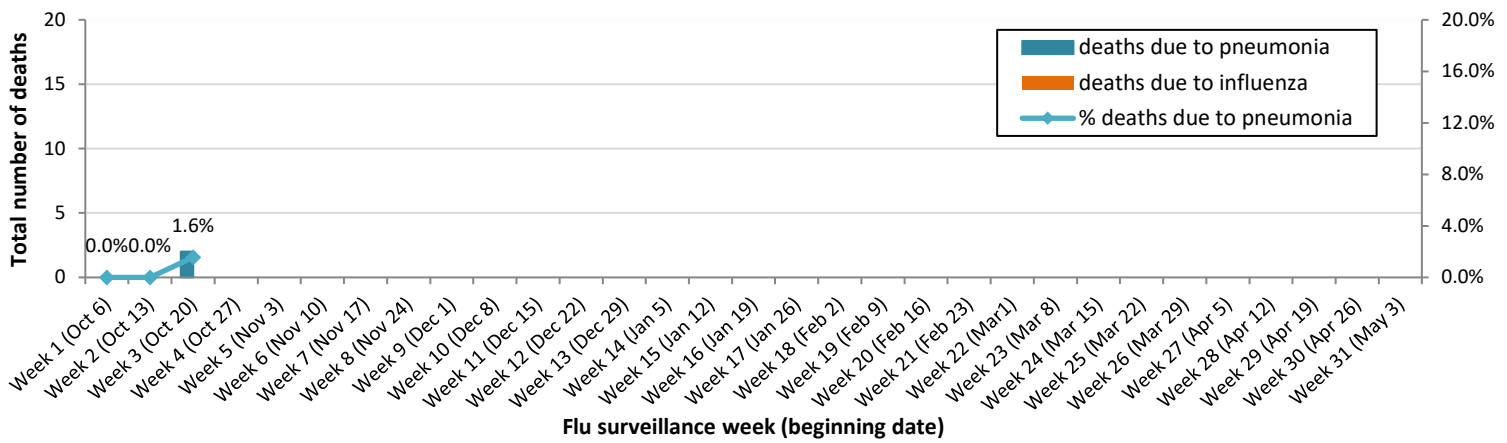
**Pharmacies:** Two prescriptions for CDC-approved antiviral medications were reported during Week 3.

**School absenteeism** includes absences regardless of reason. During Week 3 the rate decreased by nearly 16%.

**Lab reports:** During Week 3 of influenza surveillance, Summit County facilities performed flu 403 tests, of which 2 tested positive (both were type A). **(Figure 4)**

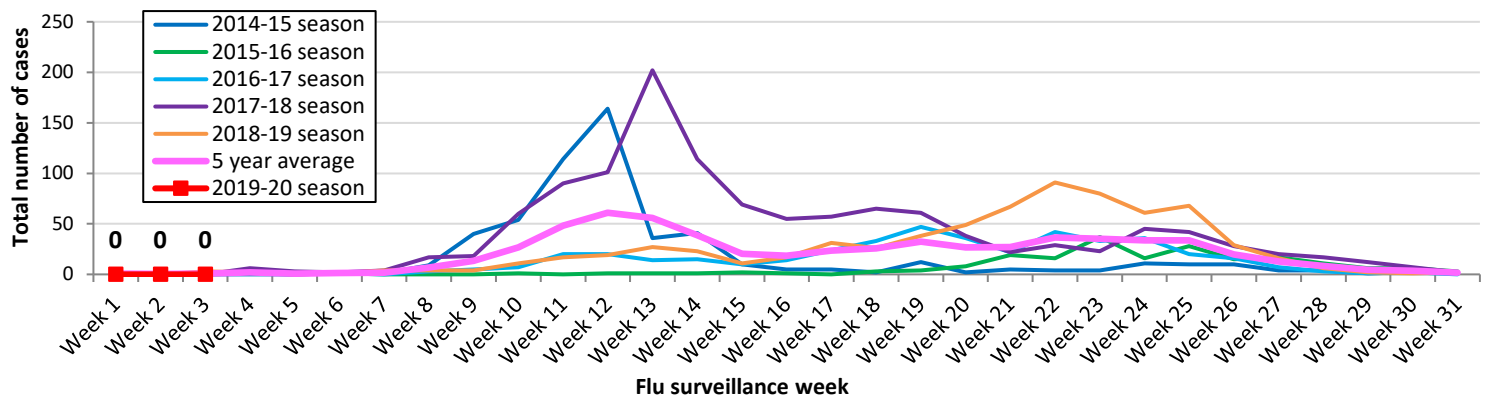
Table 1: Overall Influenza Activity Indicators in Summit County by Week				
	Week 2 MMWR 42 N (%) <sup>1</sup>	Week 3 MMWR 43 N (%) <sup>1</sup>	Percent change from previous week	Number of weeks increasing or decreasing
<b>Lab Reports</b>				
Test Performed	416	<b>403</b>	- 3.2%	↓1
Positive Tests (Number and %)	2 (0.5)	<b>2 (0.5)</b>	NC	NC
Influenza A (Number and %)	0 (0.0)	<b>2 (0.5)</b>	+ 100%	↑1
Influenza B (Number and %)	2 (0.5)	<b>0 (0.0)</b>	- 100%	↓1
<b>Acute care hospitalization for Influenza:</b>	0	<b>0</b>	--	--
<b>Influenza ILI Community Report:</b>				
Long-term Care ILI	0	<b>0</b>	--	--
Correctional & Addiction Facility	0	<b>0</b>	--	--
Physician Offices & University Clinic	0	<b>0</b>	--	--
<b>Pharmacy Prescriptions</b>				
Zanamivir (Relenza)	0	<b>0</b>	--	--
Oseltamivir (Tamiflu)	5	<b>2</b>	- 60.0%	↓1
Baloxavir marboxil (Xofluza)	0	<b>0</b>	--	--
<i>Total</i>	0	<b>0</b>	--	--
<b>Schools absenteeism<sup>2</sup></b>	6.9	<b>5.8</b>	- 15.9%	↓1
<b>Deaths</b>				
Pneumonia associated	0 (0.0)	<b>2 (1.6)</b>	+ 100%	↑1
Influenza associated	0	<b>0</b>	--	--
<b>Emergency room visits (EpiCenter)<sup>3</sup></b>				
Constitutional Complaints	448 (7.7)	<b>465 (7.8)</b>	0.2%	NC
Fever and ILI	60 (1.0)	<b>67 (1.1)</b>	7.8%	↑1
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 6 schools or school districts throughout Summit County (n = 10,459 students)				
3) Percent is from total number of emergency room interactions				
<b>Note:</b> 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				

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



**Influenza-associated hospitalization:** Summit County hospitals reported no influenza-associated hospitalizations during Week 3. **Figure 2** displays weekly confirmed hospitalization count for Summit County (**cumulative count to date = 0**).

**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 67 ILI-related visits reported during Week 3, which was 1.1% of total ED visits (n = 5998). This rate was slightly higher than as the ILI rate during Week 2.

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

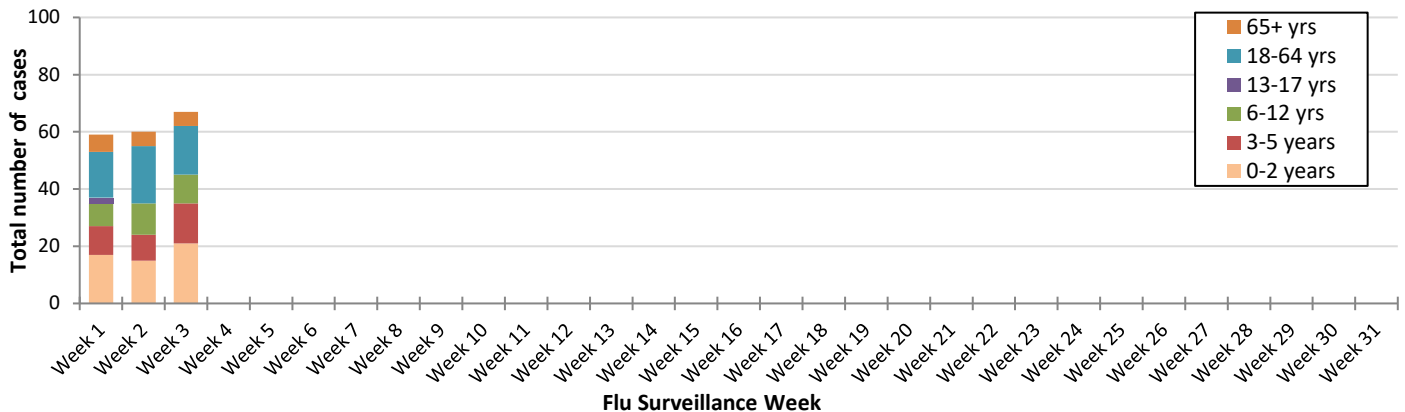
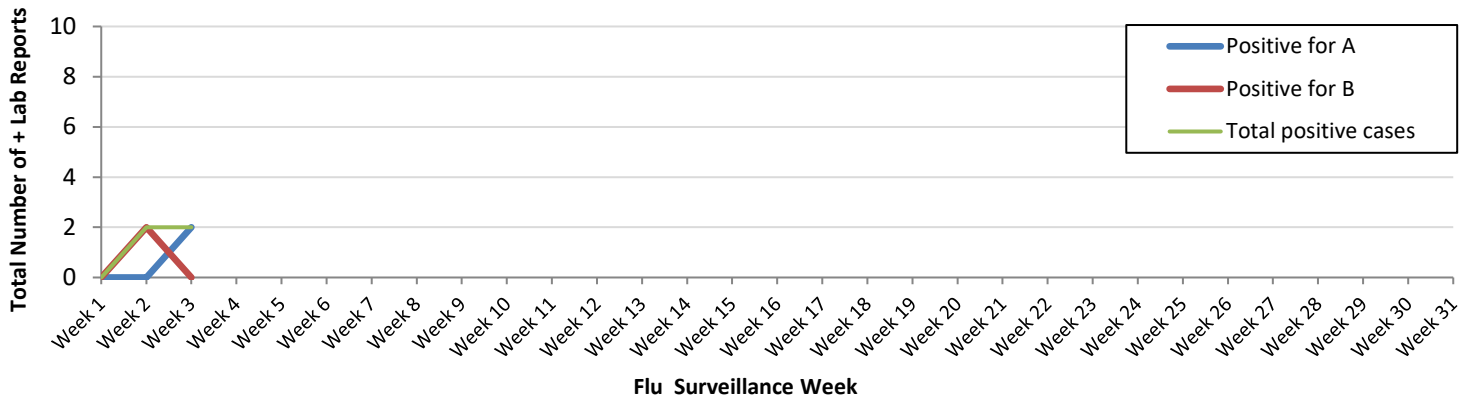


Figure 4. Influenza diagnostic tests with positive results completed by Summit County health facilities, 2019 - 2020 season



## Ohio Influenza Activity: from the Ohio Department of Health:

### Current Ohio Activity Level (Geographic Spread) – Sporadic

*Definition: Small numbers of laboratory-confirmed influenza cases or a single laboratory-confirmed influenza outbreak has been reported, but there is no increase in cases of ILI.*

During MMWR Week 43, 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 visits with patients exhibiting constitutional symptoms are slightly above baseline levels statewide; fever and ILI specified ED visits are also above baseline levels. Reported cases of influenza-associated hospitalizations are below the seasonal threshold\*. There were 20 influenza-associated hospitalizations reported during MMWR Week 43.

### Ohio Influenza Activity Summary Dashboard (October 20 – 26, 2019):

Data Source	Current week value	Percent Change from last week <sup>1</sup>	# of weeks <sup>2</sup>	Trend Chart <sup>3</sup>
Influenza-like Illness (ILI) Outpatient Data (ILINet Sentinel Provider Visits)	0.67%	-18.29%	↓ 1	
Thermometer Sales (National Retail Data Monitor)	984	5.92%	↑ 3	
Fever and ILI Specified ED Visits (EpiCenter)	1.69%	3.68%	↑ 6	
Constitutional ED Visits (EpiCenter)	8.51%	2.16%	↑ 2	
Confirmed Influenza-associated Hospitalizations (Ohio Disease Reporting System)	20	-9.09%	↓ 1	
Outpatient Medical Claims Data <sup>4</sup>	0.32%	-23.81%	↓ 2	

<sup>1</sup>Interpret percent changes with caution. Large variability may be exhibited in data sources with low weekly values.

<sup>2</sup>Number of weeks that the % change is increasing or decreasing.

<sup>3</sup>Black lines represent current week’s data; red lines represent baseline averages

<sup>4</sup>Medical Claims Data provided by athenahealth®

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

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

Nationally, flu activity is low and similar to what has been observed during recent previous seasons at the same time, but Louisiana and Puerto Rico are experiencing high levels of influenza-like-illness.

- **Viral Surveillance:** Nationally, influenza A(H3N2) viruses have been reported more frequently than other influenza viruses this season; however, influenza B/Victoria viruses have predominated in the south and southeast regions (regions 4 and 6). The majority (75%) of all influenza viruses and 86% of the influenza B viruses reported by clinical laboratories thus far this season were from the south and southeast regions (regions 4 and 6).
  - **Virus Characterization:** Virus characterization data will be updated starting later this season when sufficient numbers of specimens have been tested.
  - **Antiviral Resistance:** Antiviral resistance data will be updated starting later this season when sufficient numbers of specimens have been tested.
- **Influenza-like Illness Surveillance (Figure 5):** The proportion of outpatient visits for influenza-like illness (ILI) remained low at 1.9%, which is below the national baseline of 2.4%. All regions reported ILI below their region-specific baseline level.
  - **ILI State Activity Indicator Map (Figure 6):** Puerto Rico and Louisiana reported high ILI activity; seven states reported low activity; and New York City, the District of Columbia, and 42 states experienced minimal ILI activity. Data was insufficient to report in the US Virgin Islands.
- **Geographic Spread of Influenza (Figure 7):** The geographic spread of influenza was reported regional in Louisiana, and in ten states was reported as local; the District of Columbia, Puerto Rico, the U.S. Virgin Islands and 38 states reported sporadic activity; Rhode Island reported no activity; and Guam did not report.
- **Pneumonia and Influenza Mortality:** For Week 42, the proportion of deaths attributed to pneumonia and influenza (P&I) was 5.1%, which was below the system-specific epidemic threshold (5.8%) in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- **Influenza-associated Pediatric Deaths:** No influenza-associated pediatric deaths were reported to CDC during Week 43.

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

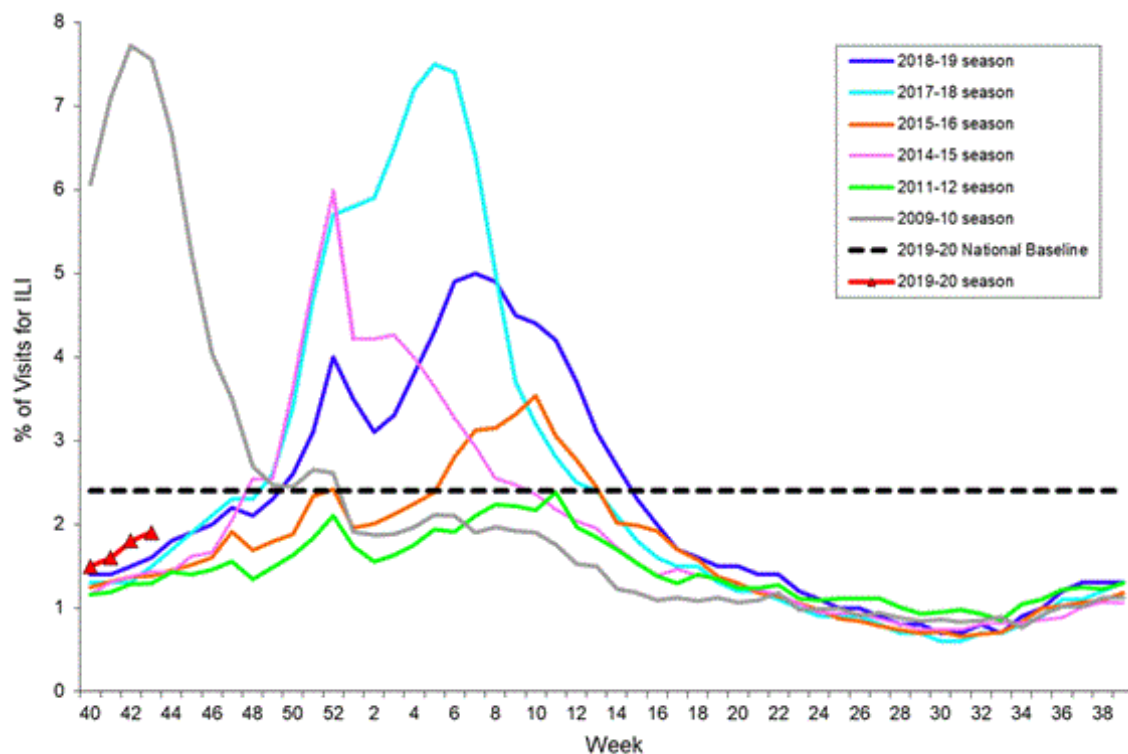


Figure 6. Influenza-like illness (ILI) activity level indicator determined by data reported to ILINet

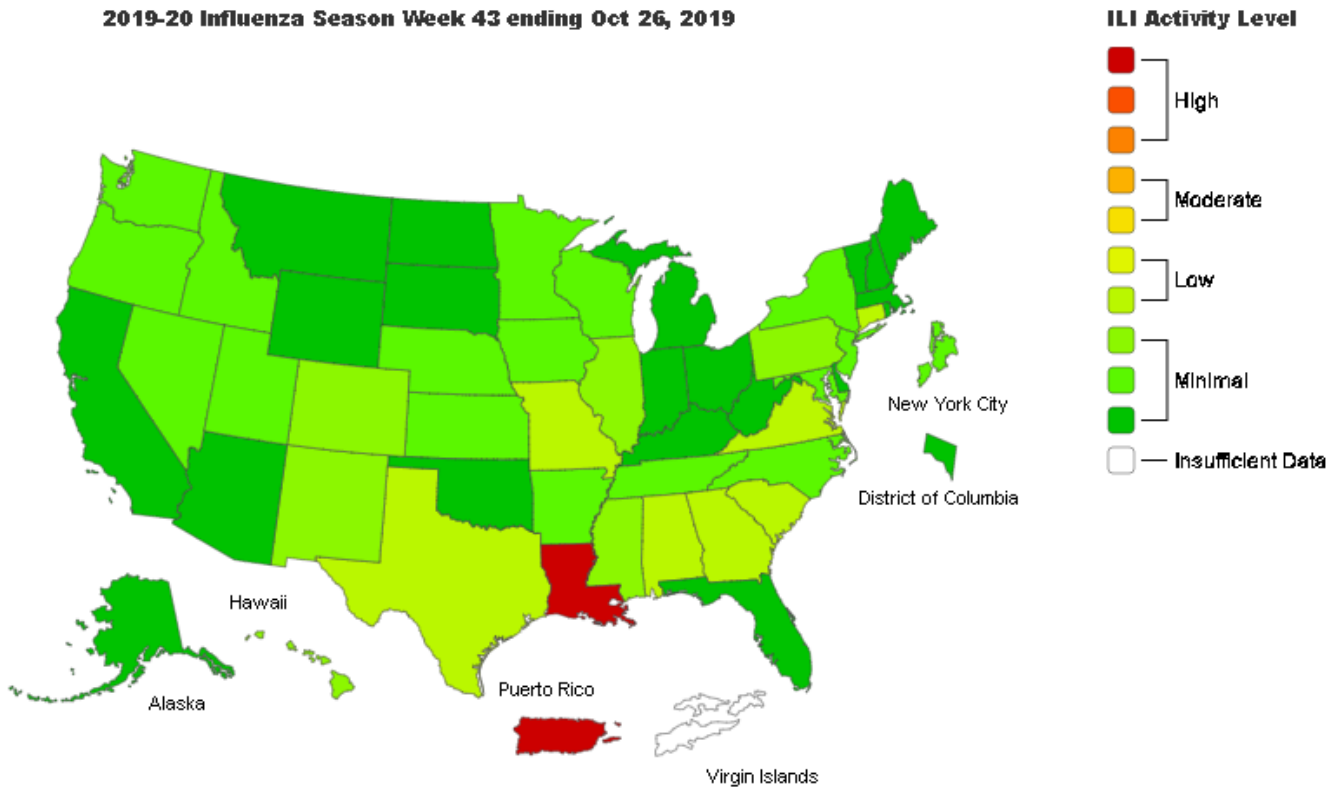
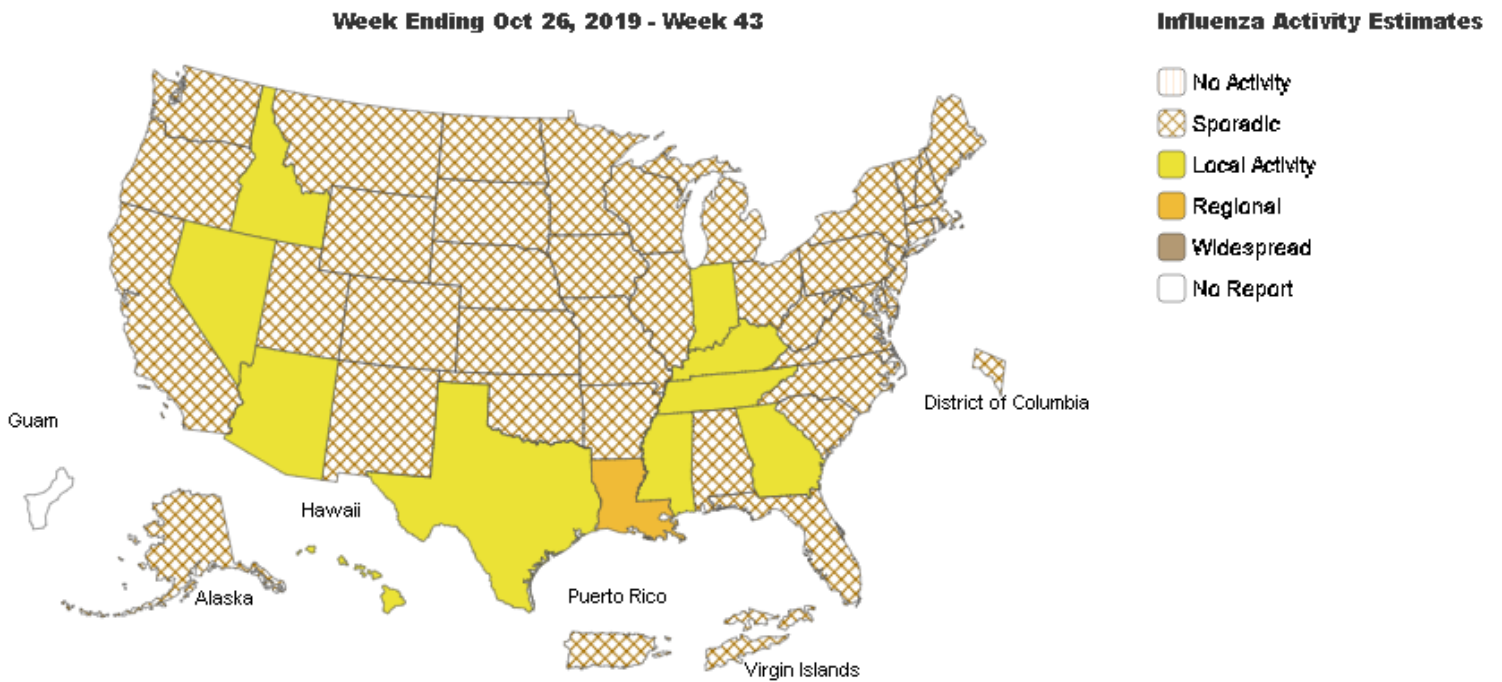


Figure 7. Weekly influenza activity (geographic spread) estimates reported by state and territorial epidemiologists



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

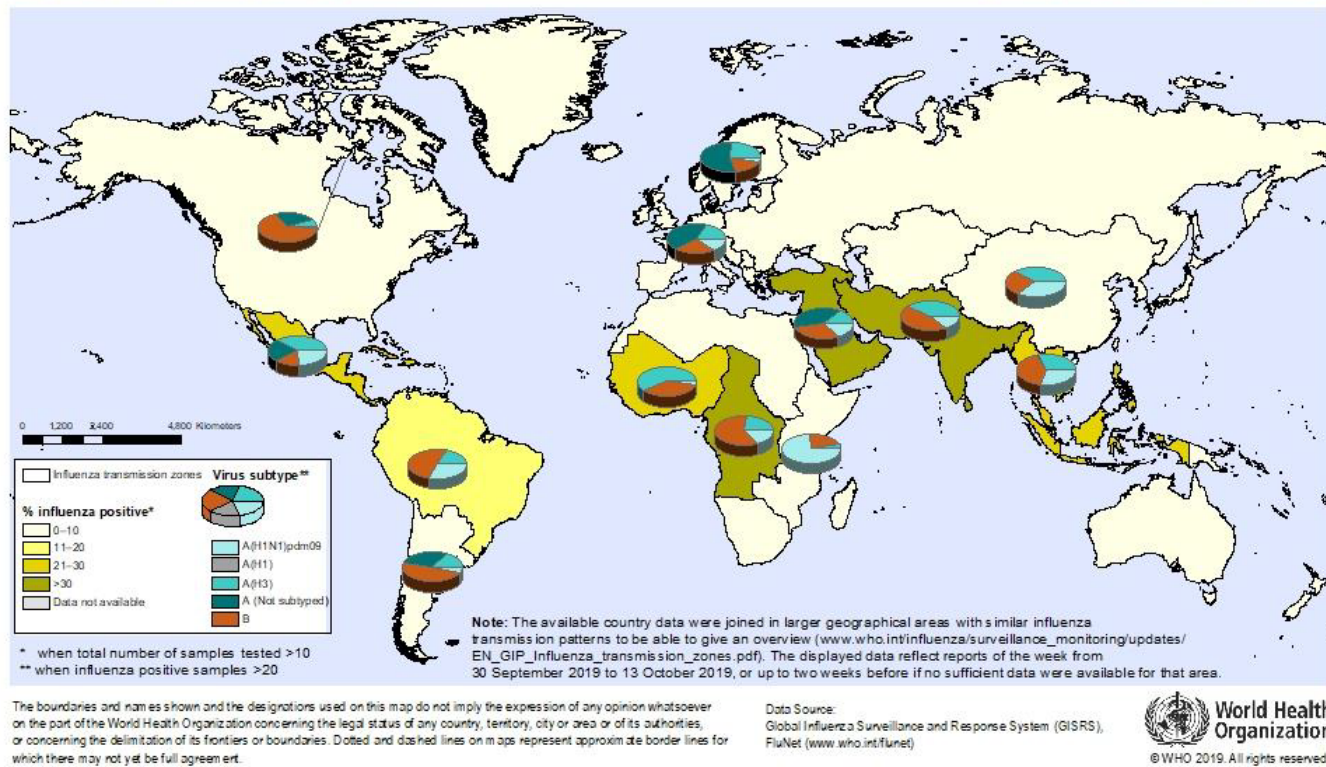
## Global Surveillance:

Influenza Update N° 353, World Health Organization (WHO), published 28 October 2019, based on data up to 13 October 2019. The Update is published every two weeks.

### Summary

- In the **temperate zone of the northern hemisphere**, influenza activity remained at inter-seasonal levels in most countries. However, influenza activity continued to increase across the countries of the Arabian Peninsula.
- In the **Caribbean, and tropical South American countries**, influenza activity was low overall. In Central American countries, influenza activity increased in El Salvador and Nicaragua.
- In **tropical Africa**, increased influenza activity was reported from Western Africa.
- In **Southern Asia**, influenza activity was low across reporting countries.
- In **South East Asia**, influenza activity increased in Lao PDR and the Philippines in recent weeks.
- In the **temperate zones of the southern hemisphere**, influenza activity was low in most countries, though influenza B virus detections continued to be reported in Chile.
- **Worldwide**, seasonal influenza A viruses continued to account for the majority of detections, though the proportion of influenza B viruses increased in recent weeks.
- National Influenza Centres (NICs) and other national influenza laboratories from 103 countries, areas or territories reported data to FluNet for the time period from 30 September 2019 to 13 October 2019 (data as of 2019-10-25 04:07:37 UTC). The WHO GISRS laboratories tested more than 102881 specimens during that time period. 5005 were positive for influenza viruses, of which 3030 (60.5%) were typed as influenza A and 1975 (39.5%) as influenza B. Of the sub-typed influenza A viruses, 595 (35.6%) were influenza A(H1N1)pdm09 and 1076 (64.4%) were influenza A(H3N2). Of the characterized B viruses, 71 (14.1%) belonged to the B-Yamagata lineage and 433 (85.9%) to the B-Victoria lineage.

Figure 8. Percentage of respiratory specimens that tested positive for influenza, by influenza transmission zone (status as of 25 October 2019)



Source: [https://www.who.int/influenza/surveillance\\_monitoring/updates/latest\\_update\\_GIP\\_surveillance/en/](https://www.who.int/influenza/surveillance_monitoring/updates/latest_update_GIP_surveillance/en/)

# Influenza Human Challenge Study Begins at NIAID-Sponsored Clinical Trial Units

October 23, 2019

A clinical trial in which healthy adults will be deliberately infected with influenza virus under carefully controlled conditions is recruiting volunteers at four Vaccine and Treatment Evaluation Units (VTEUs) supported by NIH's National Institute of Allergy and Infectious Diseases (NIAID). One study aim is to assess how levels of pre-existing influenza antibodies impact the timing, magnitude and duration of a volunteer's flu symptoms following exposure to influenza virus.

The first doses of challenge virus were administered to five volunteers earlier this week. Up to 80 people aged 18 to 50 years will be enrolled in the trial. The study builds on [recent work](#) by scientists in the [NIAID Laboratory of Infectious Diseases](#) to develop a model of influenza disease with controlled human infection studies.

"NIAID investigators have been pioneers in contemporary human influenza challenge trials," said NIAID Director Anthony S. Fauci, M.D. "These trials provide a powerful tool to study many aspects of influenza disease progression and also can help to efficiently assess new treatments and vaccine candidates." He added: "Expanding the capacity to perform human challenge trials is a key goal in NIAID's strategic plan to support the development of vaccines that confer broad and durable protection against influenza. This new trial at the VTEUs will help us achieve that goal."

Volunteers will receive a nasal spray containing a strain of seasonal influenza virus made under good manufacturing practice conditions. The challenge virus, InfluenzaA/Bethesda/MM2/H1N1, was developed by NIAID scientists and reliably produces mild to moderate influenza disease in most recipients. It has been administered to approximately 400 participants in four previous influenza challenge trials conducted at the NIH Clinical Center in Bethesda, Md. No significant safety issues or severe or complicated cases of influenza occurred, and no transmission of the virus outside of the clinic was seen during the earlier trials.

In the current trial, volunteers will remain in the clinic for at least seven full days after being challenged with the virus. Blood samples and nasal and throat swabs taken before and periodically after viral challenge will be used to trace the initiation, size and duration of various immune system responses, and to detect virus shedding. The appearance and resolution of flu symptoms, such as fever and muscle aches and weakness, will be recorded daily by the volunteers and study staff for a total of 14 days after the virus challenge. All volunteers will be followed for approximately 90 days post-challenge and will have additional blood and nasal wash samples taken at several follow-up clinic visits.

Preliminary trial results are expected in May 2020.

Additional information about the trial, H1N1v Virus Challenge Study in Healthy Subjects, is available at [ClinicalTrials.gov](https://clinicaltrials.gov) using the identifier [NCT04044352](https://clinicaltrials.gov/ct2/show/study/NCT04044352).

Source: [https://www.niaid.nih.gov/news-events/influenza-human-challenge-study-begins-niaid-sponsored-clinical-trial-units?utm\\_campaign=+40360542&utm\\_content=&utm\\_medium=email&utm\\_source=govdelivery&utm\\_term=](https://www.niaid.nih.gov/news-events/influenza-human-challenge-study-begins-niaid-sponsored-clinical-trial-units?utm_campaign=+40360542&utm_content=&utm_medium=email&utm_source=govdelivery&utm_term=)

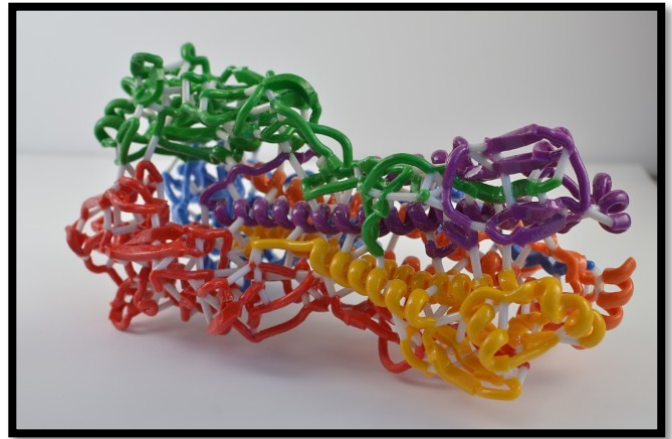


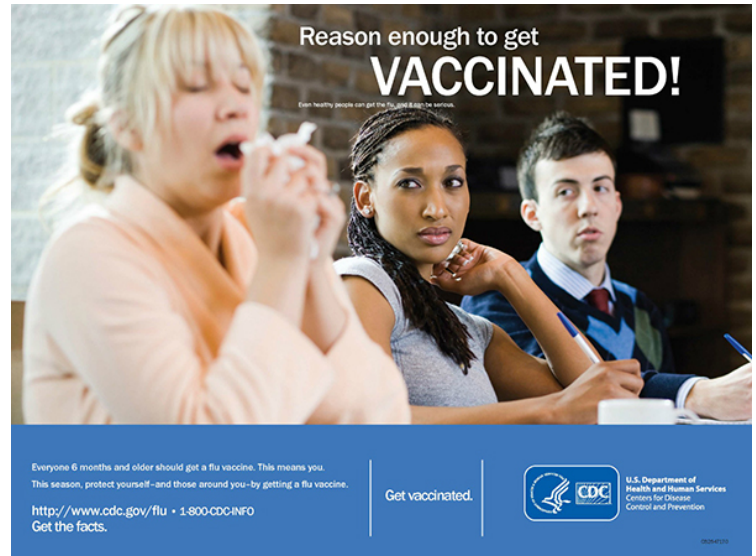
Figure 9. 3D print of hemagglutinin (HA), one of the proteins found on the surface of influenza virus that enables the virus to infect human cells  
*Credit: NIH*

## From CDC: 2019-2020 Flu Season FAQ's

### **When should I get vaccinated?**

Because the timing of the onset, peak and end of flu seasons varies from year to year and cannot be predicted, it is difficult to say when the best time to be vaccinated for any one season is. In trying to balance the need to get many people vaccinated before flu activity begins with concerns about potential waning of vaccine-induced immunity during the flu season, CDC and ACIP recommend that vaccination be offered by the end of October.

Children 6 months through 8 years of age who need 2 doses should receive their first dose as soon as possible after the vaccine becomes available to allow the second dose (which must be administered at least 4 weeks later) to be received by the end of October.



For people who need only one dose for the season, vaccinating early – for example, in July or August –may lead to reduced protection against flu later in the season, particularly among older adults. While vaccination should optimally occur before the onset of flu activity in the community, providers should continue to offer and encourage vaccination as long as flu viruses are circulating and unexpired vaccine is available. To avoid missed opportunities for vaccination, vaccination can be offered during routine health care visits and hospitalizations.

### **Can I get a flu vaccine if I am allergic to eggs?**

The [recommendations](#) for people with egg allergies are unchanged and as follows:

- Persons who are able to eat lightly cooked egg without reaction are unlikely to be egg-allergic.
- Persons who have experienced only hives after exposure to egg should receive any licensed, recommended, age-appropriate flu vaccine (i.e., IIV, RIV4, or LAIV4).
- Persons reporting symptoms other than hives after exposure to egg (such as angioedema, respiratory distress, lightheadedness, or recurrent emesis; or who required epinephrine or another emergency medical intervention) may also receive any licensed and recommended flu vaccine that is otherwise appropriate.
  - Additionally, for these persons, vaccine should be administered in an inpatient or outpatient medical setting and supervised by a health care provider who is able to recognize and manage severe allergic reactions.
- A previous severe allergic reaction to flu vaccine, regardless of the component suspected of causing the reaction, is a contraindication to future receipt of the vaccine.

Source: <https://www.cdc.gov/flu/season/faq-flu-season-2019-2020.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](mailto:cdu@schd.org)). Report was issued on November 1, 2019.