

# Vermont 2017/2018 End of Influenza Surveillance Season Report

## Flu Surveillance Season

START                      END  
 MMWR Week 40      MMWR Week 20  
 10/1/2017              5/19/2018

Month	MMWR Week #	VT Flu Geographic Spread
	40	No Activity
October	41	Sporadic
	42	Sporadic
	43	Sporadic
November	44	Sporadic
	45	Sporadic
	46	Sporadic
	47	Sporadic
December	48	Sporadic
	49	Local
	50	Regional
	51	Regional
	52	Widespread
January	1	Widespread
	2	Widespread
	3	Widespread
	4	Widespread
February	5	Widespread
	6	Widespread
	7	Widespread
March	8	Local
	9	Local
	10	Sporadic
	11	Sporadic
	12	Sporadic
April	13	Regional
	14	Regional
	15	Regional
	16	Local
	17	Regional
May	18	Local
	19	Local
	20	Sporadic

There are five geographic spread levels for influenza (No Activity, Sporadic, Local, Regional, and Widespread) as defined by CDC\*:

<https://www.cdc.gov/flu/weekly/overview.htm>  
 Each Wednesday during the flu surveillance season, states and territories report their geographic spread to CDC. The spread is determined using influenza-like illness (ILI)\* reports, laboratory testing results, and outbreak information available at the time of report. In the 2017/2018 season, 54 jurisdictions reported: all 50 states, the District of Columbia, Guam, Puerto Rico, and the US Virgin Islands.

Geographic spread refers only to where flu and ILI have been reported in the state, not the severity of illness.

Geographic spread in Vermont was at the highest level (**Widespread**) for 8 weeks from the end of December to mid-February. This is earlier than the 2016/2017 season when geographic spread was not **Widespread** until early February and remained there until early April.

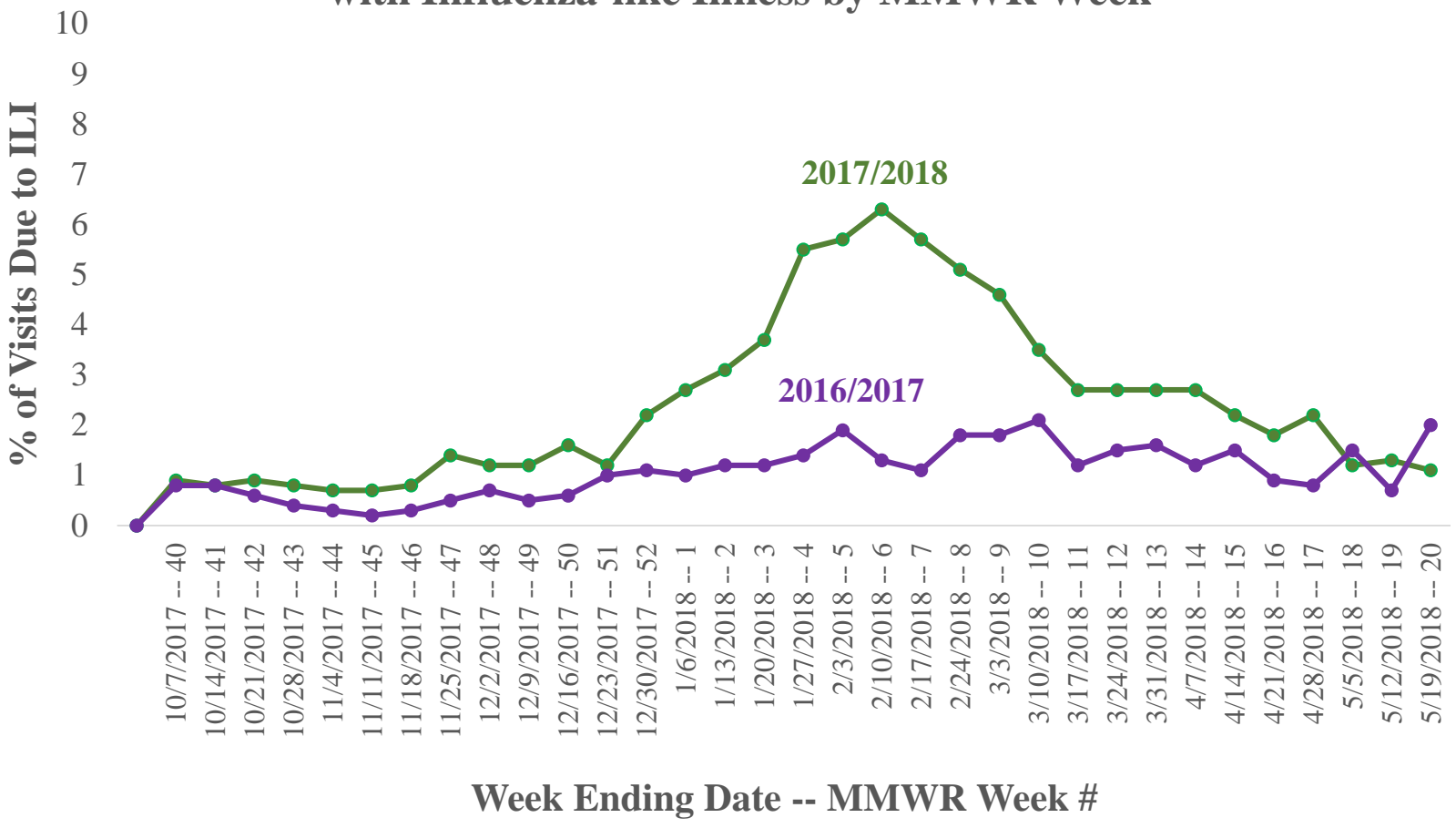
\*The Centers for Disease Control and Prevention (CDC) is the nation's health protection agency working 24/7 to protect America from health, safety, and security threats. You can read more about CDC's mission here:

<https://www.cdc.gov/about/organization/mission.htm>

# SENTINEL PROVIDER DATA

During the 2017/2018 season, visits to providers and emergency departments (EDs) for influenza-like illness increased starting in late December and peaked in early February. The highest percentage of visits due to ILI was 6.3%. During the season, 10 providers and 6 EDs reported ILI data to the Vermont Department of Health (VDH). ILI data is more robust when a higher percentage of provider reports are received.

## Percent of Visits Reported by Vermont Sentinel Providers with Influenza-like Illness by MMWR Week

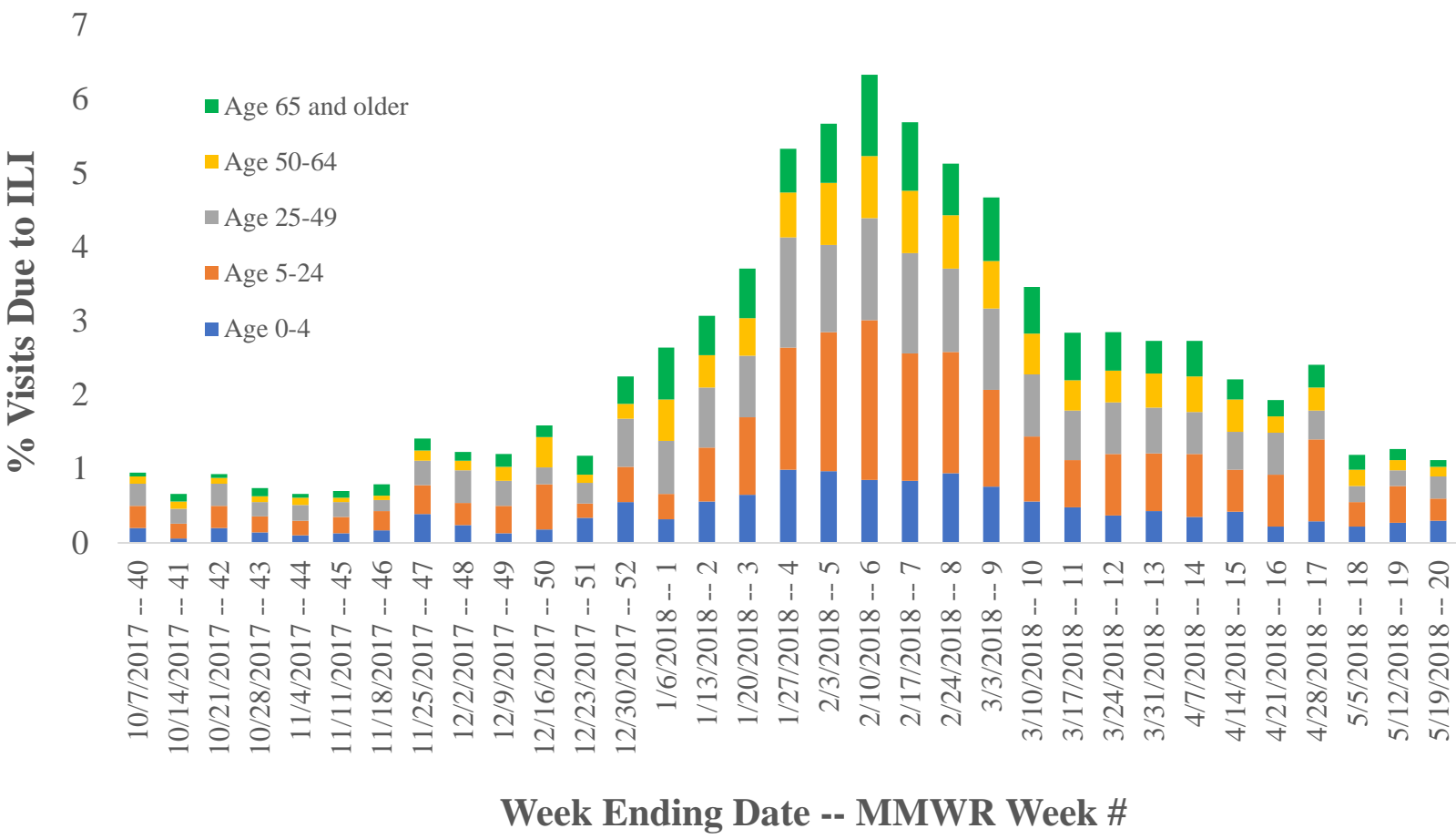


The 2016/2017 season saw a lower percentage of visits for ILI compared to the 2017/2018 season. The percent of visits due to ILI during the 2016/2017 season peaked at 2.1%. The high number of visits during the 2017/2018 season reflects the severity of the season, the fact that more media attention was put on influenza, and that VDH put out more influenza communication.

# SENTINEL PROVIDER DATA

The age group with the highest percentage of visits to a provider or ED for ILI during the 2017/2018 season was 5-24. This represents only a portion of the providers and EDs around the state and means that other individuals may have sought care for ILI but were not captured by our reports.

**Percent of Visits Reported by Vermont Sentinel Providers with Influenza-like Illness by Age Group by MMWR Week, 2017/2018**



This is similar to what was seen during the 2016/2017 season when the 5-24 age group was also the group with the highest number of visits to sentinel providers.

# LABORATORY DATA

The Vermont Department of Health Laboratory (VDHL) performs influenza testing on specimens submitted from sentinel sites as well as those submitted from facilities during potential influenza outbreaks. Similar to what was seen nationally, influenza A was the most frequently identified influenza virus type.

## VDHL (2017/2018)

# Tested	373
# Positive	228 (61.1%)
# Flu A	178 (78.1%)
# Flu B	50 (21.9%)

## VDHL (2016/2017)

# Tested	393
# Positive	319 (81.2%)
# Flu A	229 (71.8%)
# Flu B	90 (28.2%)

Three hospitals in Vermont report to the National Respiratory and Enteric Virus Surveillance System (NREVSS): Central Vermont Medical Center, Southwestern Vermont Medical Center, and University of Vermont Medical Center. These hospitals report all influenza tests performed at their facility and the test result (negative for influenza, influenza A, or influenza B).

## NREVSS (2017/2018)

# Tested	7824
# Positive	1699 (21.9%)
# Flu A	1292 (76%)
# Flu B	407 (24%)

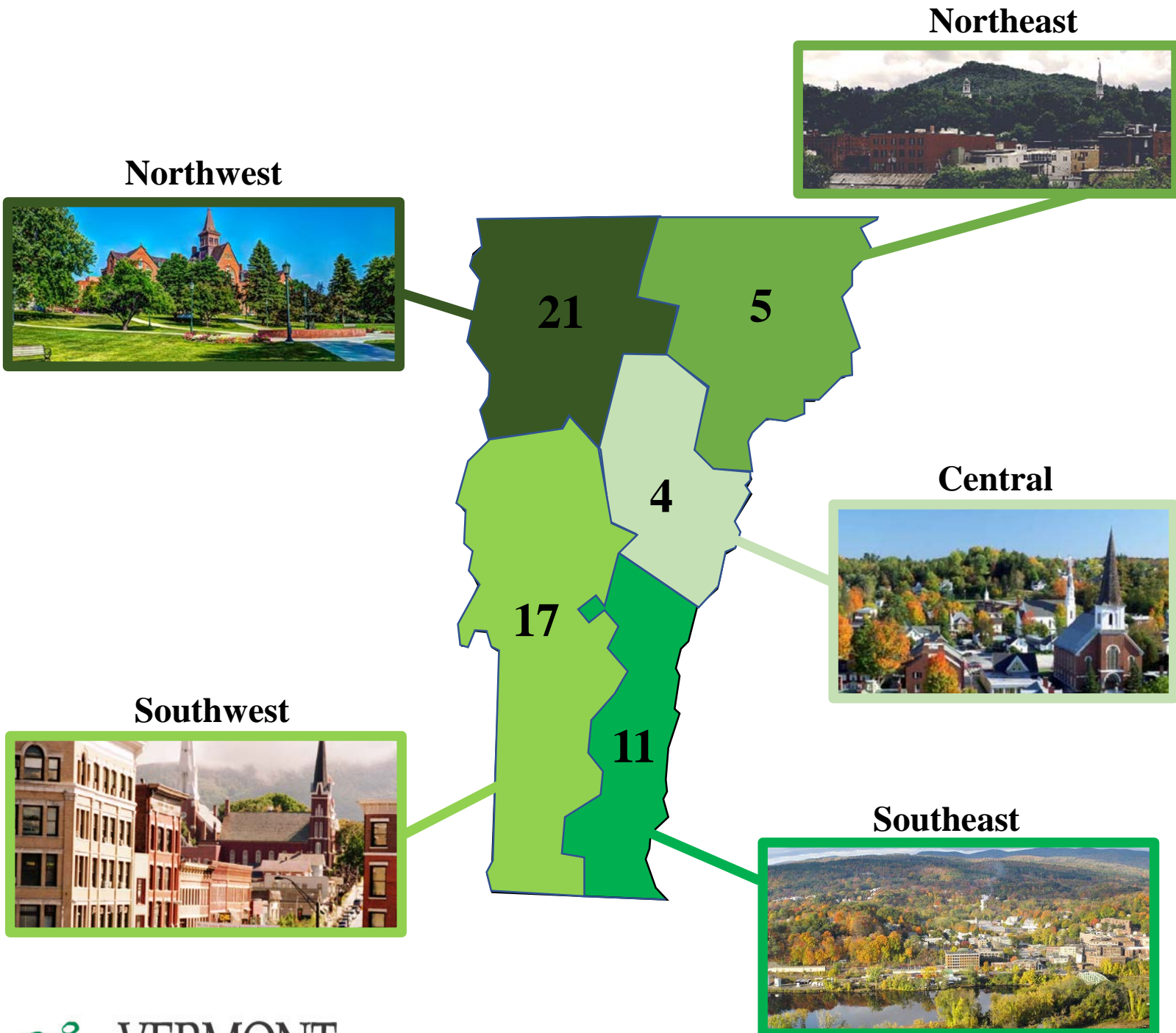
## NREVSS (2016/2017)

# Tested	5266
# Positive	741 (14.1%)
# Flu A	516 (70%)
# Flu B	225 (30%)

# ILI OUTBREAK DATA

## BY REGION

All suspected ILI outbreaks in institutional settings\* are required to be reported to the VDH. During the 2017/2018 season, there were 58 outbreaks reported. This is higher than seen at the end of the 2016/2017 season when 25 outbreaks were reported. There are likely multiple reasons for this increase including a severe influenza season and outbreak guidance was shared with additional facilities that had not been reached out to in previous seasons.



\*Examples of institutional settings: long-term care facilities, schools, child care facilities, shelters, correctional facilities.

# ILI OUTBREAK DATA

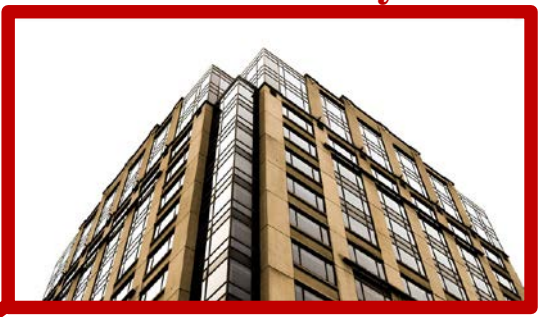
## BY FACILITY TYPE

At the start of the 2017/2018 influenza season, outbreak information and guidance was sent to LTCFs\*\*, schools, and childcare facilities. Similar to the 2016/2017 season, most reported outbreaks were in LTCFs (17 reported last season) followed by schools (7 reported last season).

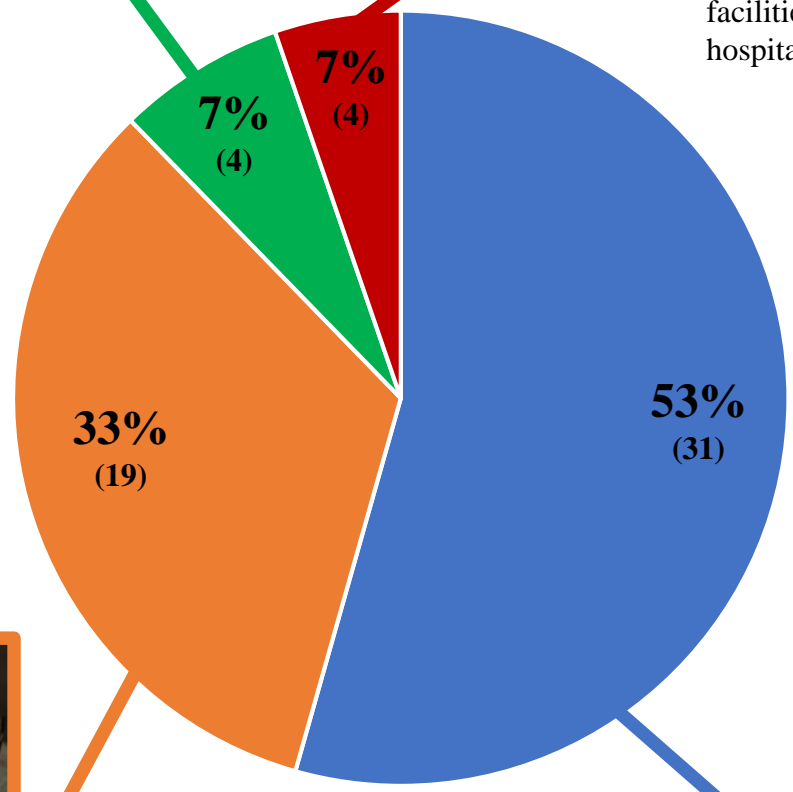
### Child Care Facility



### Other Facility\*



\*Examples of Other Facilities: shelters, correctional facilities, dormitories, hospitals, cruise ships, etc.



### School



### LTCF\*\*



\*\*LTCF = Long-term Care Facility

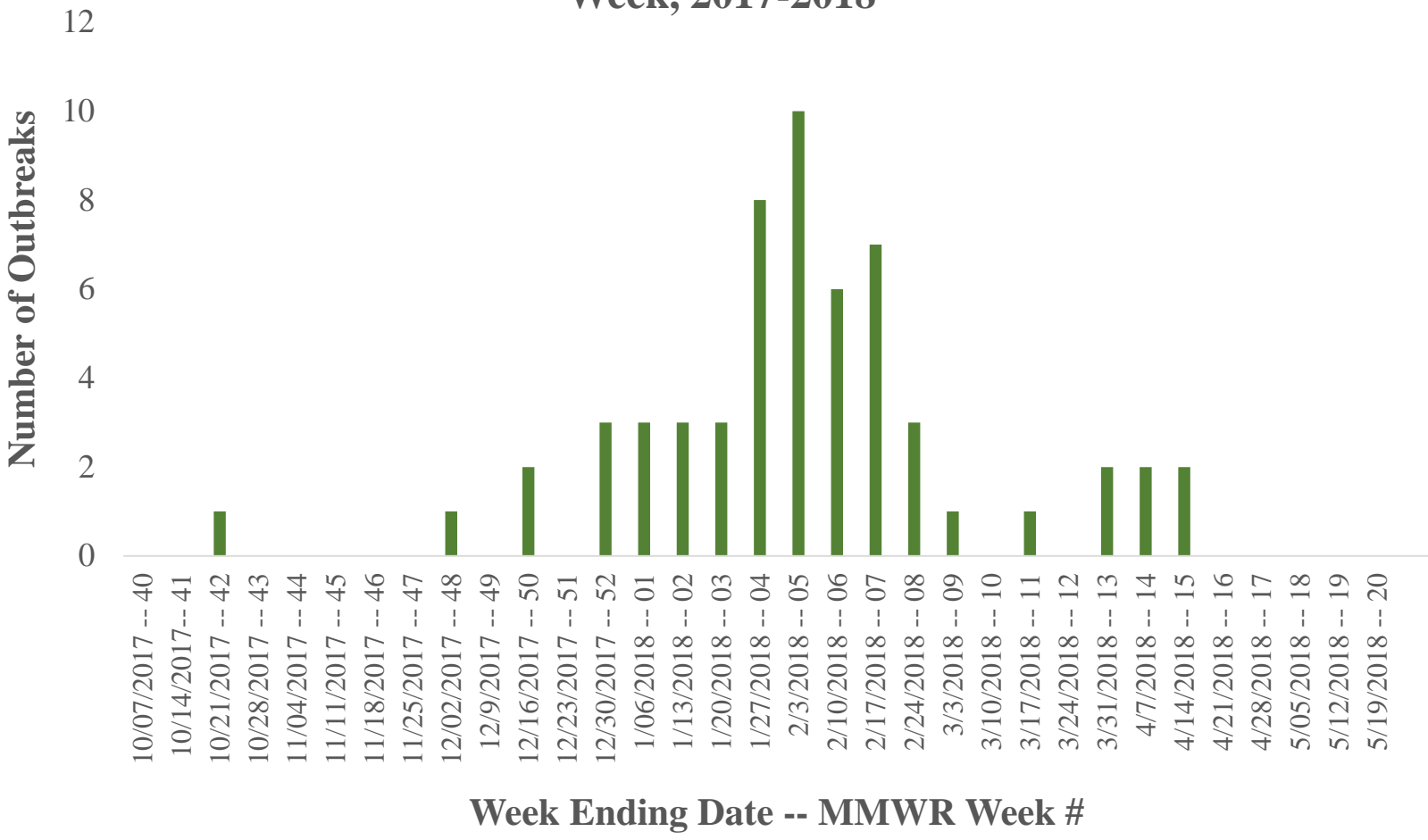
# ILI OUTBREAK DATA

## BY DATE OF OUTBREAK



Of the 58 outbreaks reported to the health department during the 2017/2018 season, the majority occurred from the end of December 2017 through the end of February 2018.

**Number of Outbreaks Reported to VDH by MMWR Onset Week, 2017-2018**



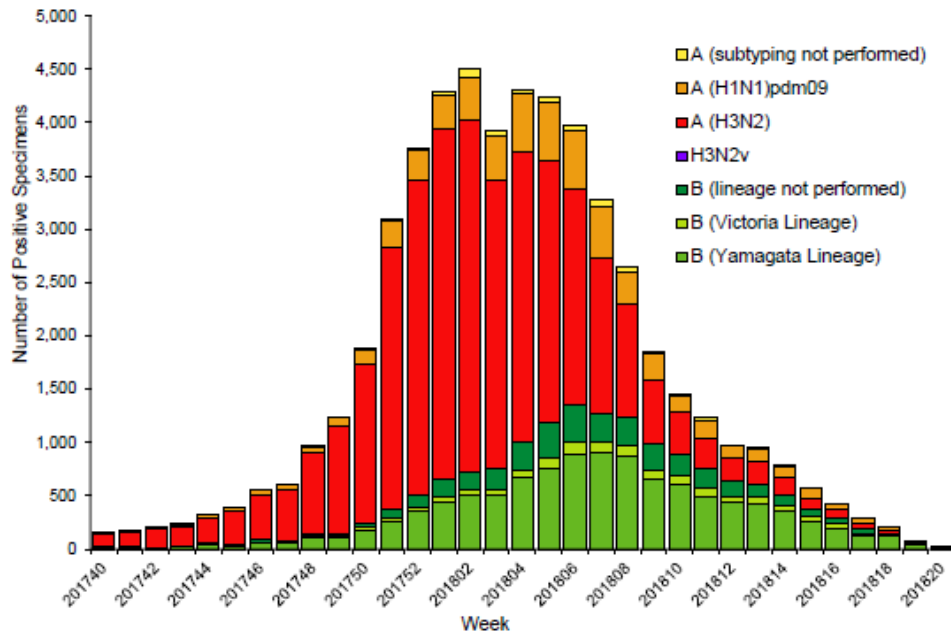
In the 2016/2017 season, there was no distinct peak as seen in the 2017/2018 season. During the 2016/2017 season, there were fewer outbreaks spread over more time, from the end of December to early April.

# CDC OVERVIEW OF FLU IN THE US



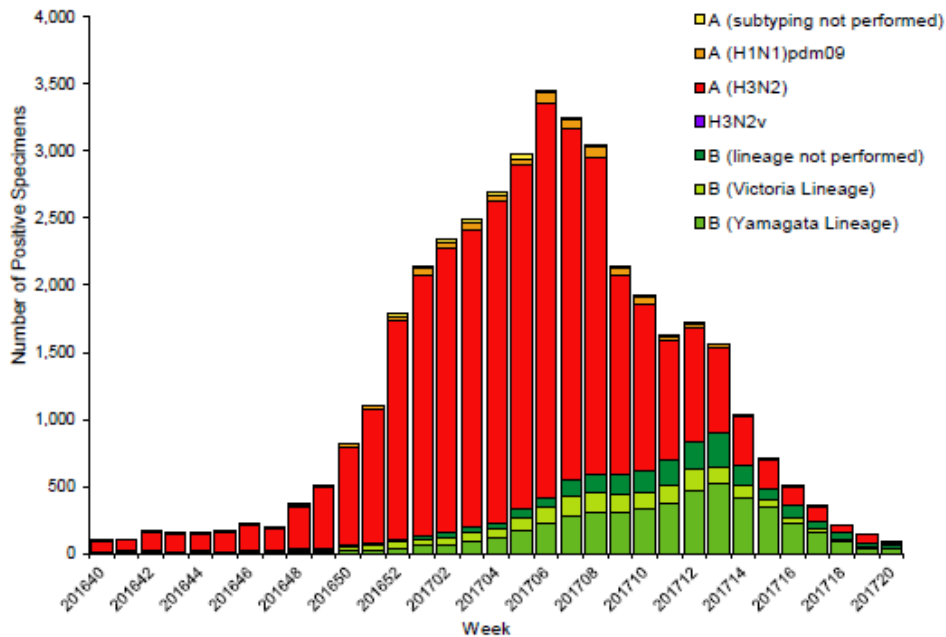
Influenza AH3 viruses dominated the 2017/2018 season. Starting in early March, influenza B was more frequently reported than influenza A.

Influenza Positive Tests Reported to CDC by U.S. Public Health Laboratories, National Summary, 2017-2018 Season



In the previous 2016/2017 season, influenza AH3 was also the most frequently identified virus type. Starting in late March, influenza B was more frequently reported than influenza A.

Influenza Positive Tests Reported to CDC by U.S. Public Health Laboratories, National Summary, 2016-2017 Season



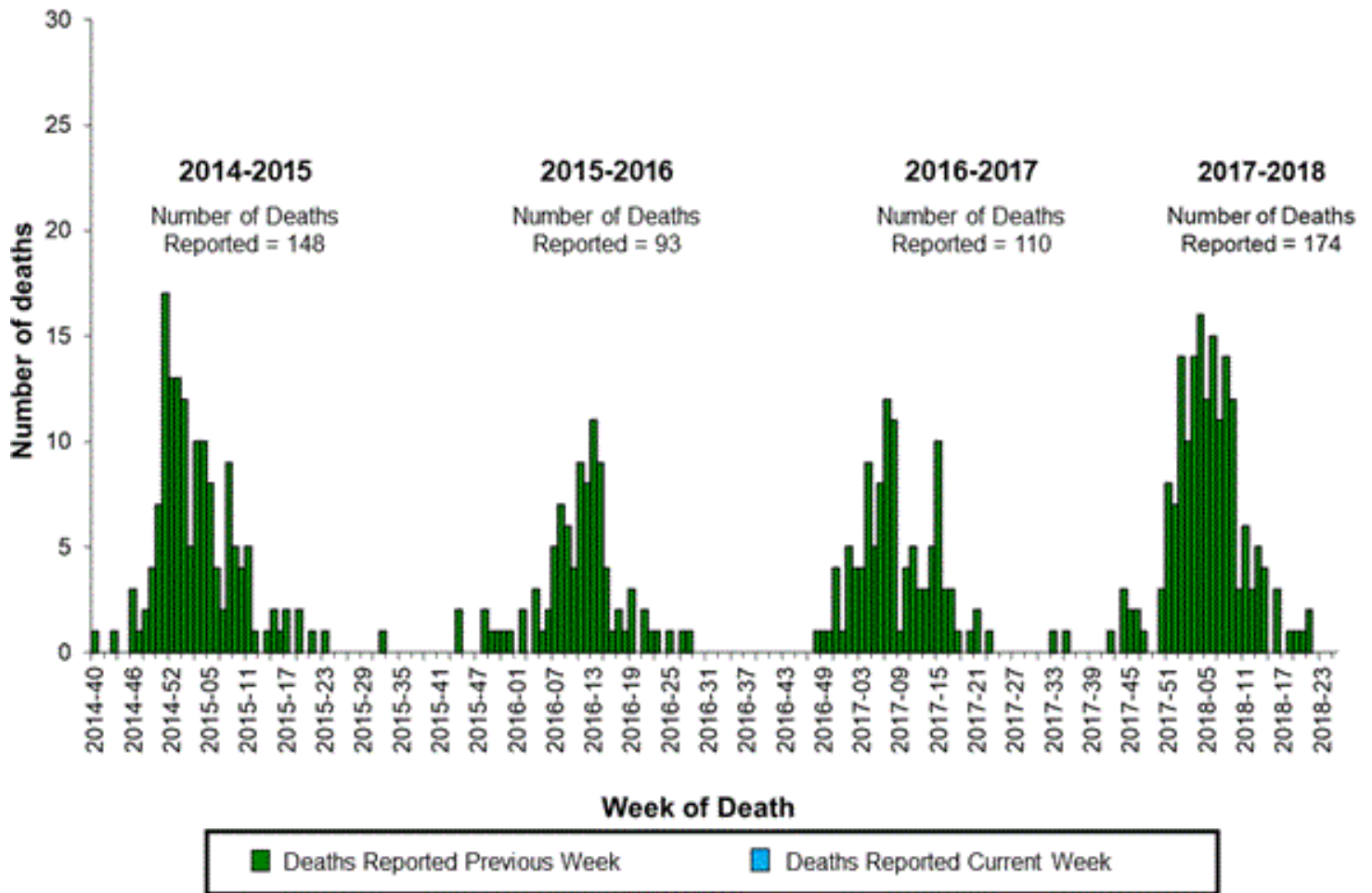


# CDC OVERVIEW OF FLU IN THE US



During the 2017/2018 season there were 174 reported influenza-associated pediatric deaths.

## Number of Influenza-Associated Pediatric Deaths by Week of Death: 2014-2015 season to present

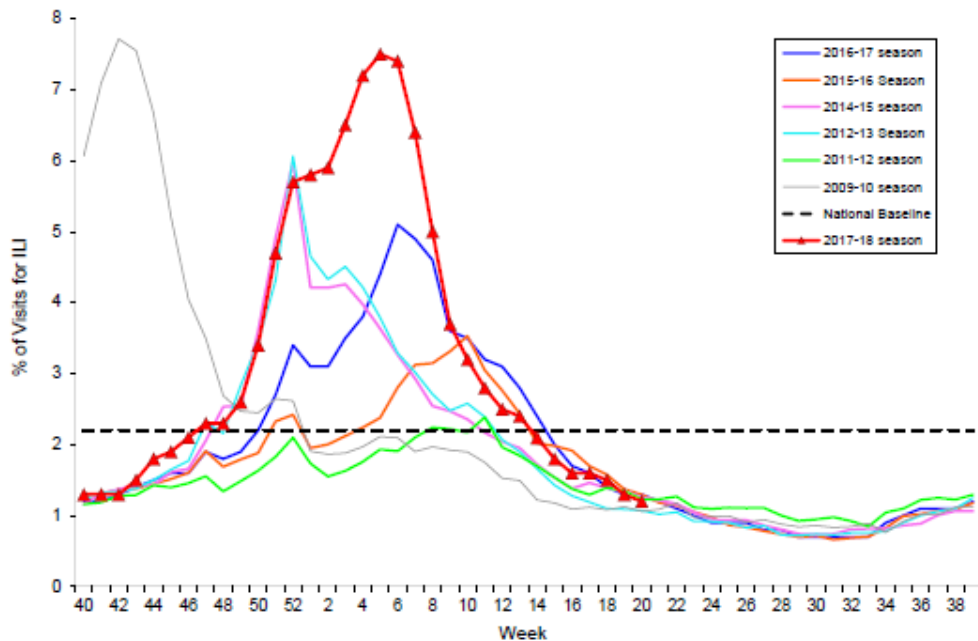


In the 2016/2017 season there were 110 reported influenza-associated pediatric deaths.

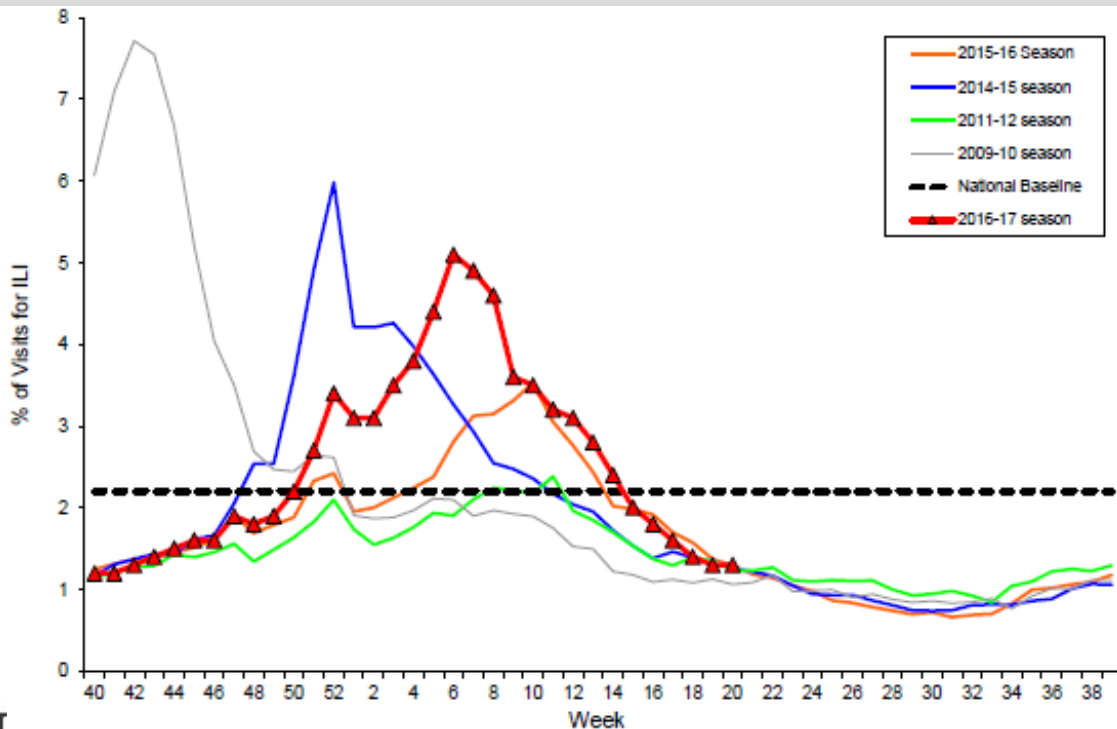
# CDC OVERVIEW OF FLU IN THE US

During the 2017/2018 season, the proportion of outpatient visits for influenza-like illness was at or above baseline (2.2%) for 19 consecutive weeks (end of November through early April) and peaked at week 5 (week ending February 3<sup>rd</sup>) at 7.5%.

Percentage of Visits for Influenza-like Illness (ILI) Reported by the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet), Weekly National Summary, 2017-2018 and Selected Previous Seasons



During the 2016/2017 season, the proportion of outpatient visits for influenza-like illness was at or above baseline (2.2%) for 17 consecutive weeks (end of December through early April) and peaked at week 6 (week ending February 11) at 5.1%.



# CDC OVERVIEW OF FLU IN THE US



Between October 1<sup>st</sup>, 2017 and May 19<sup>th</sup>, 2018, clinical laboratories tested 1,210,053 specimens for influenza virus and public health laboratories tested 98,446.

## Clinical Labs (2017/2018)

# Tested	1,210,053
# Positive	224,113 (18.5%)
# Flu A	151,413 (67.6%)
# Flu B	72,700 (32.4%)

## Public Health Labs (2017/2018)

# Tested	98,446
# Positive	53,790 (54.6%)
# Flu A	38,303 (71.2%)
# Flu B	15,487 (28.8%)

Between October 2<sup>nd</sup>, 2016 and May 20<sup>th</sup>, 2017, clinical laboratories tested 865,168 specimens for influenza and public health laboratories tested 84,303.

## Clinical Labs (2016/2017)

# Tested	865,168
# Positive	121,223 (14%)
# Flu A	84,854 (30%)
# Flu B	36,369 (70%)

## Public Health Labs (2016/2017)

# Tested	84,303
# Positive	40,728 (48.3%)
# Flu A	31,736 (77.9%)
# Flu B	8,992 (22.1%)

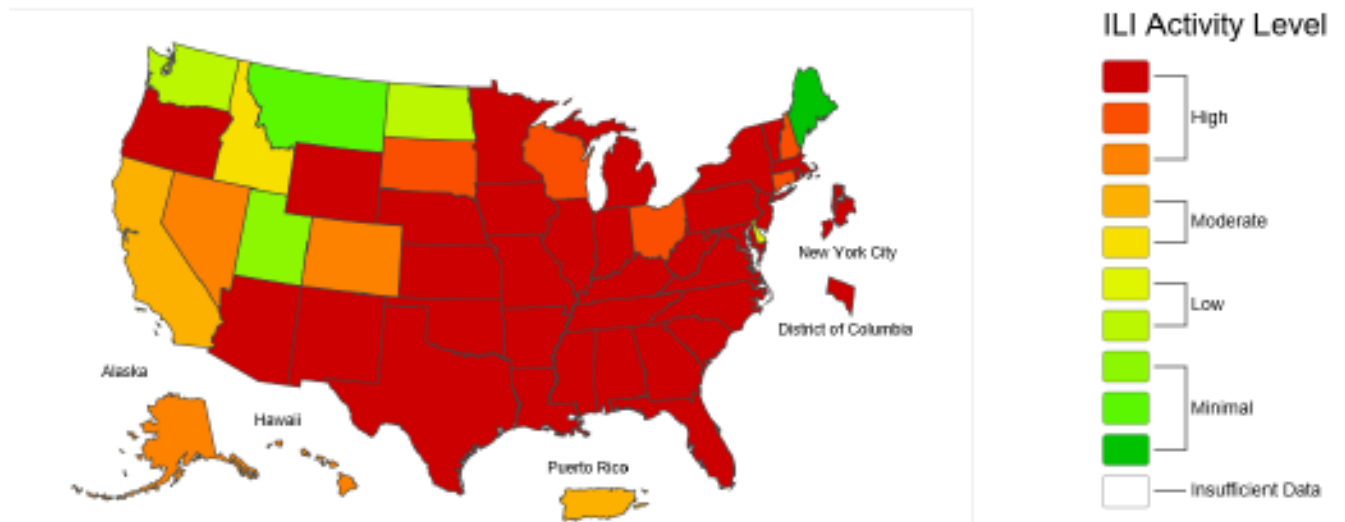
# CDC OVERVIEW OF FLU IN THE US



Weekly jurisdiction-level measure of ILI activity is generated using information on outpatient visits for ILI and ranges from minimal to high. Activity levels are based on the percent of outpatient visits in a state or territory due to ILI and are compared to the average percent of ILI visits that occur during weeks with little or no influenza virus circulation.

Between January 21<sup>st</sup> and February 10<sup>th</sup>, 2018, 46 (87%) of the 53 jurisdictions (all 50 states, New York City, the District of Columbia, and Puerto Rico) that reported experienced high ILI activity.

**Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet**  
2017-18 Influenza Season Week 4 ending Jan 27, 2018



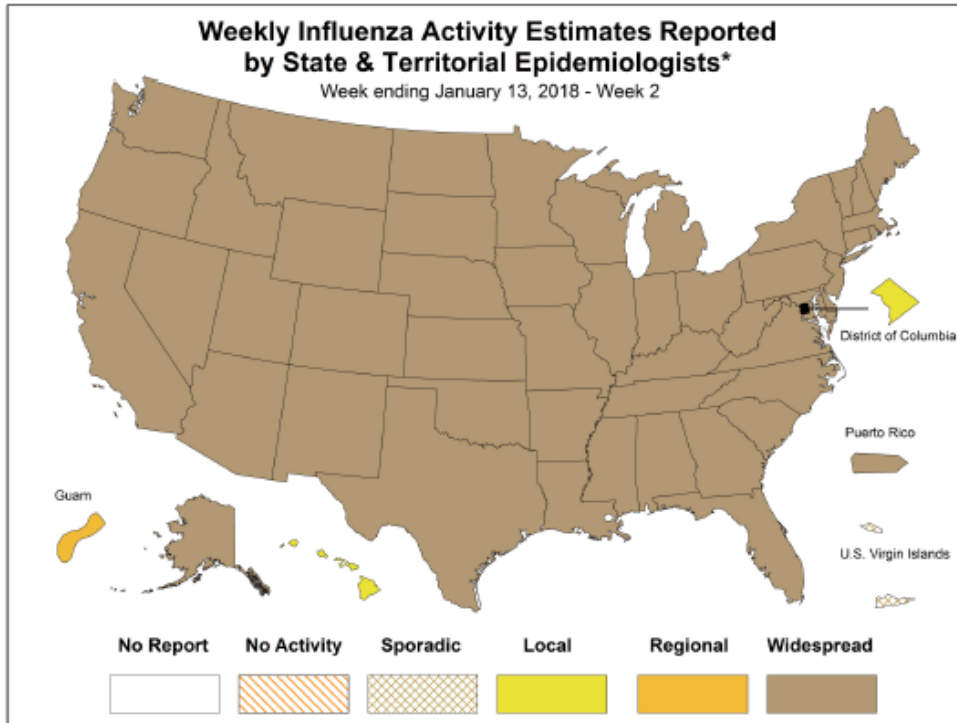
During the week of February 5<sup>th</sup> to February 11<sup>th</sup>, 2017, the number of jurisdictions experiencing elevated ILI activity peaked when 31 states experienced high ILI activity.

**Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet**  
2016-17 Influenza Season Week 6 ending Feb 11, 2017



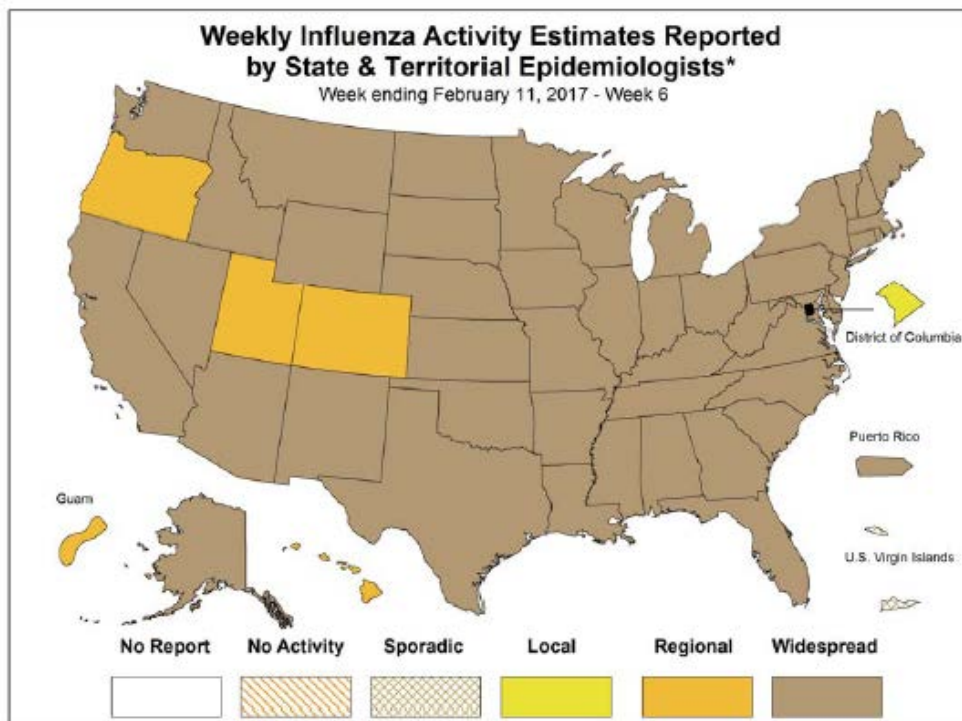
# CDC OVERVIEW OF FLU IN THE US

During the 2017/2018 season, the peak number of jurisdictions reporting widespread activity in a single week was 50 (93%) and occurred for 3 consecutive weeks (December 31<sup>st</sup>, 2017 to January 20<sup>th</sup>, 2018).



\* This map indicates geographic spread & does not measure the severity of influenza activity

During the 2016/2017 season, the peak number of jurisdictions reporting widespread activity in a single week was 47 (87%) and occurred during the week of February 5<sup>th</sup> to 11<sup>th</sup>, 2017.



\* This map indicates geographic spread & does not measure the severity of influenza activity