

Vermont 2018-2019 End of Influenza Surveillance Season Report

Flu Surveillance Season

START

MMWR Week 40
(Week End Date
10/6/2018)

END

MMWR Week 20
(Week End Date
5/18/2019)

| Month | MMWR Week # | VT Flu Geographic Spread |
|----------|-------------|--------------------------|
| October | 40 | No Activity |
| | 41 | Sporadic |
| | 42 | Sporadic |
| | 43 | Sporadic |
| November | 44 | Sporadic |
| | 45 | Sporadic |
| | 46 | Local |
| | 47 | Sporadic |
| December | 48 | Regional |
| | 49 | Regional |
| | 50 | Regional |
| | 51 | Regional |
| | 52 | Widespread |
| January | 1 | Widespread |
| | 2 | Widespread |
| | 3 | Widespread |
| | 4 | Widespread |
| February | 5 | Widespread |
| | 6 | Widespread |
| | 7 | Widespread |
| | 8 | Widespread |
| March | 9 | Local |
| | 10 | Local |
| | 11 | Regional |
| | 12 | Sporadic |
| | 13 | Sporadic |
| April | 14 | Regional |
| | 15 | Local |
| | 16 | Regional |
| | 17 | Sporadic |
| 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 2018-2019 season, 54 jurisdictions reported: all 50 states, the District of Columbia, Guam, Puerto Rico, and the US Virgin Islands.

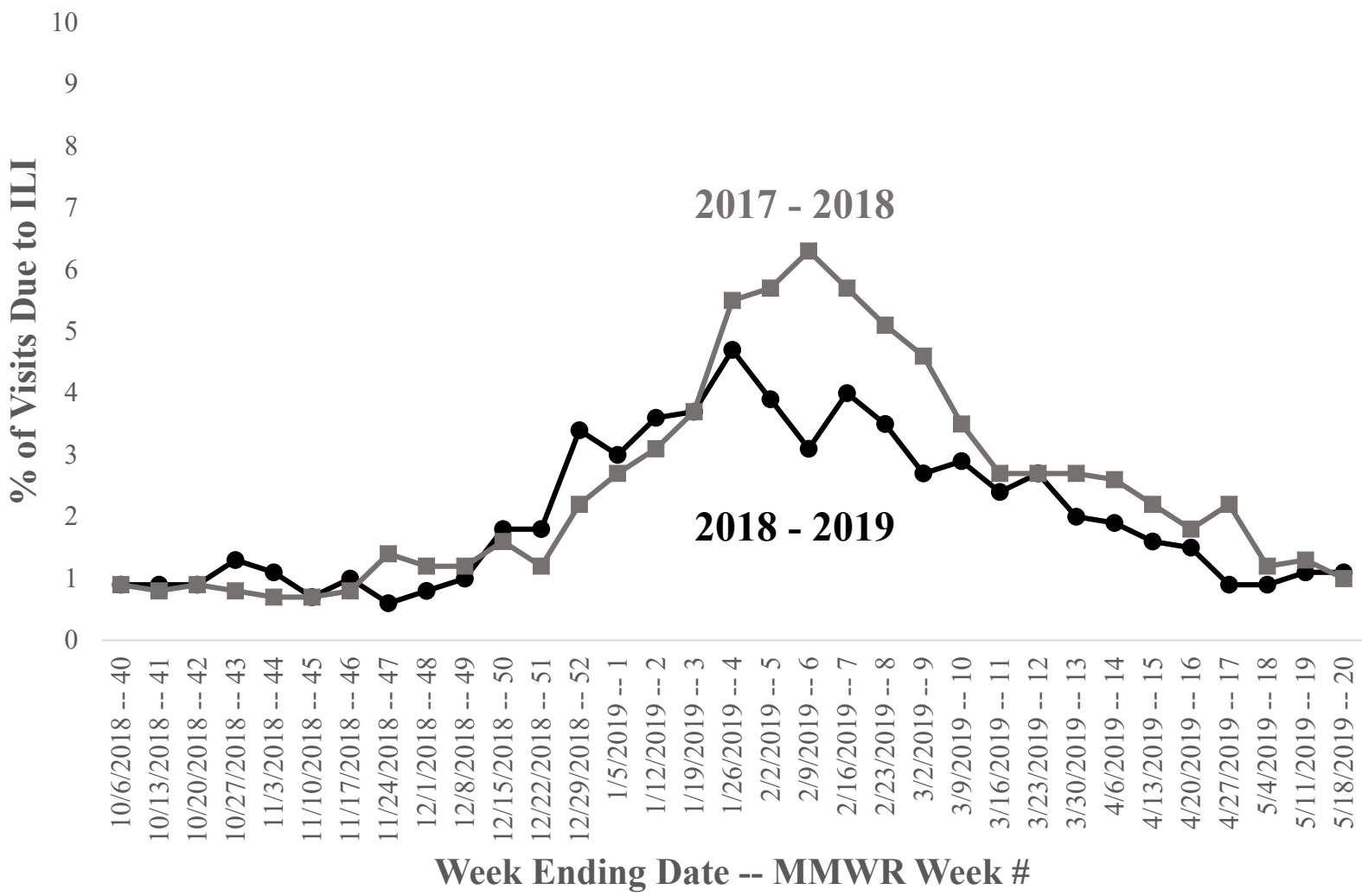
Geographic spread refers only to where flu and ILI have been reported in the state, not the severity of illness.

Geographic spread in Vermont was at the highest level (Widespread) for 9 weeks from the end of December to the end of February. This is similar to what was seen in the 2017-2018 season.

SENTINEL PROVIDER DATA

During the 2018-2019 season, visits to providers and emergency departments (EDs) for influenza-like illness (ILI) increased starting in mid-December and peaked in late January. The highest percentage of visits due to ILI was 4.7%. During the season, 10 providers and 8 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 with Influenza-like Illness Reported by Sentinel Providers by MMWR Week

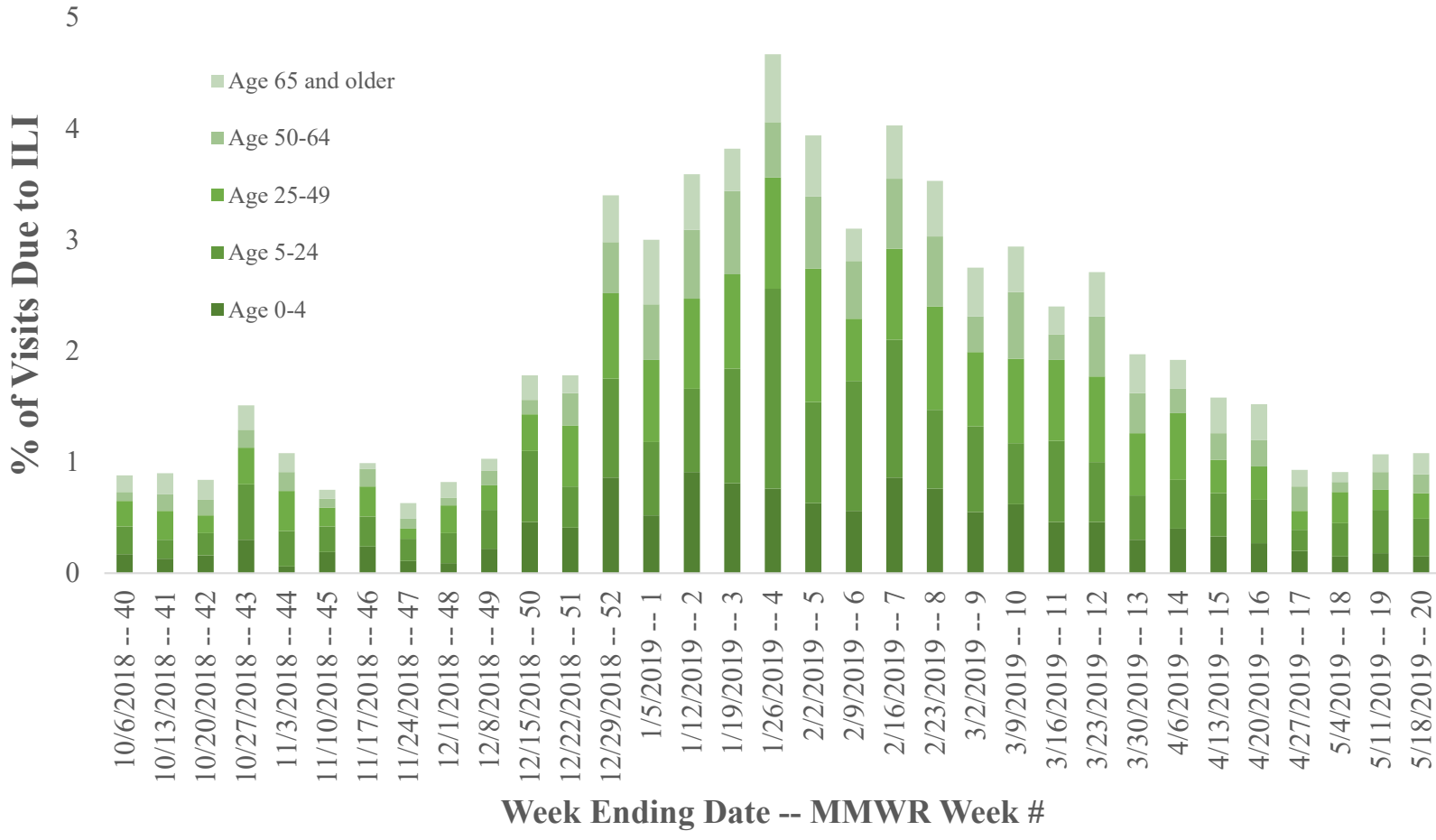


During the 2017-2018 season, the percent of visit for ILI peaked at 6.3%.

SENTINEL PROVIDER DATA

Ages 5-24 years had the highest percentage of visits to a provider or ED for ILI during the 2018-2019 season. 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 with Influenza-like Illness by Age Group Report by Vermont Sentinel Providers by MMWR Week, 2018-2019



This is similar to what was seen during the 2017-2018 season when 5-24 was also the age group with the highest number of visits.

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 AH1N1 was the most frequently identified influenza virus type for most of the season with an increase of AH3N2 starting in February.

| VDHL (2018-2019) | |
|-----------------------------|-----------|
| Tested | 437 |
| Positive | 373 (85%) |
| Flu A | 369 (99%) |
| H1N1 | 220 (59%) |
| H3N2 | 139 (38%) |
| Unsubtypeable | 8 (2%) |
| H1N1 + H3N2 co-infection | 2 (1%) |
| # Flu B | 4 (1%) |

| VDHL (2017-2018) | |
|------------------|-----------|
| Tested | 373 |
| Positive | 228 (61%) |
| Flu A | 178 (78%) |
| H1N1 | 22 (12%) |
| H3N2 | 156 (88%) |
| Flu B | 50 (22%) |

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 (2018-2019) | |
|--------------------|------------|
| Tested | 8595 |
| Positive | 1668 (19%) |
| Flu A | 1584 (95%) |
| Flu B | 84 (5%) |

| NREVSS (2017-2018) | |
|--------------------|--------------|
| Tested | 7824 |
| Positive | 1699 (21.9%) |
| Flu A | 1292 (76%) |
| Flu B | 407 (24%) |

ILI OUTBREAK DATA

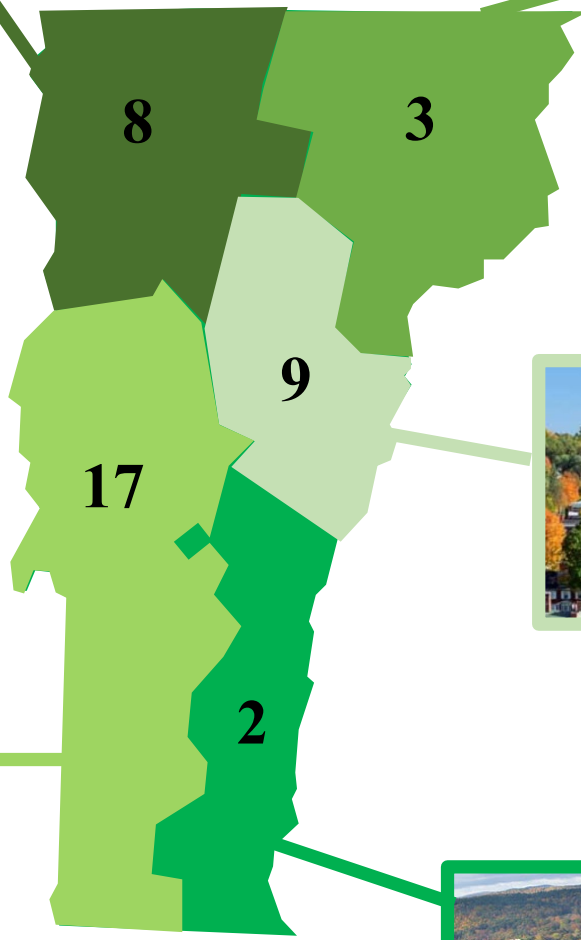
BY REGION

All suspected ILI outbreaks in institutional settings* are required to be reported to the Vermont Department of Health. During the 2018-2019 season there were 39 outbreaks reported. This is lower than was reported during the 2017-2018 season when 58 outbreaks were reported.

Northwest



Northeast



Southwest



Central



Southeast



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

ILI OUTBREAK DATA

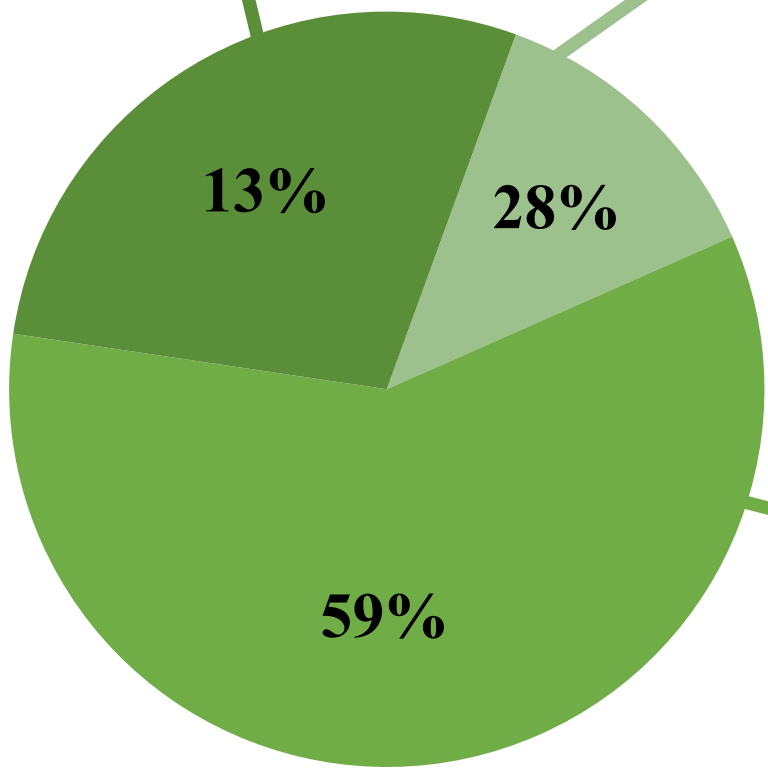
BY FACILITY TYPE

At the start of the season, outbreak information and guidance was sent to LTCFs, schools, and child care facilities. During the 2018-2019 season, most outbreaks were reported from LTCFs (23), followed by schools (11), and child care facilities (5). This is similar to what was seen during the 2017-2018 season when 53% (31) of outbreaks were reported from LTCFs, 33% (19) from schools, 7% (4) from child care facilities, and 7% (4) from other facilities.

Child Care Facility



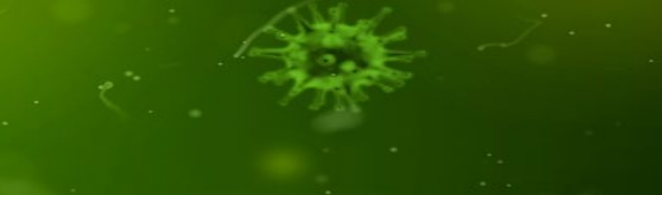
School



Long-Term Care Facility

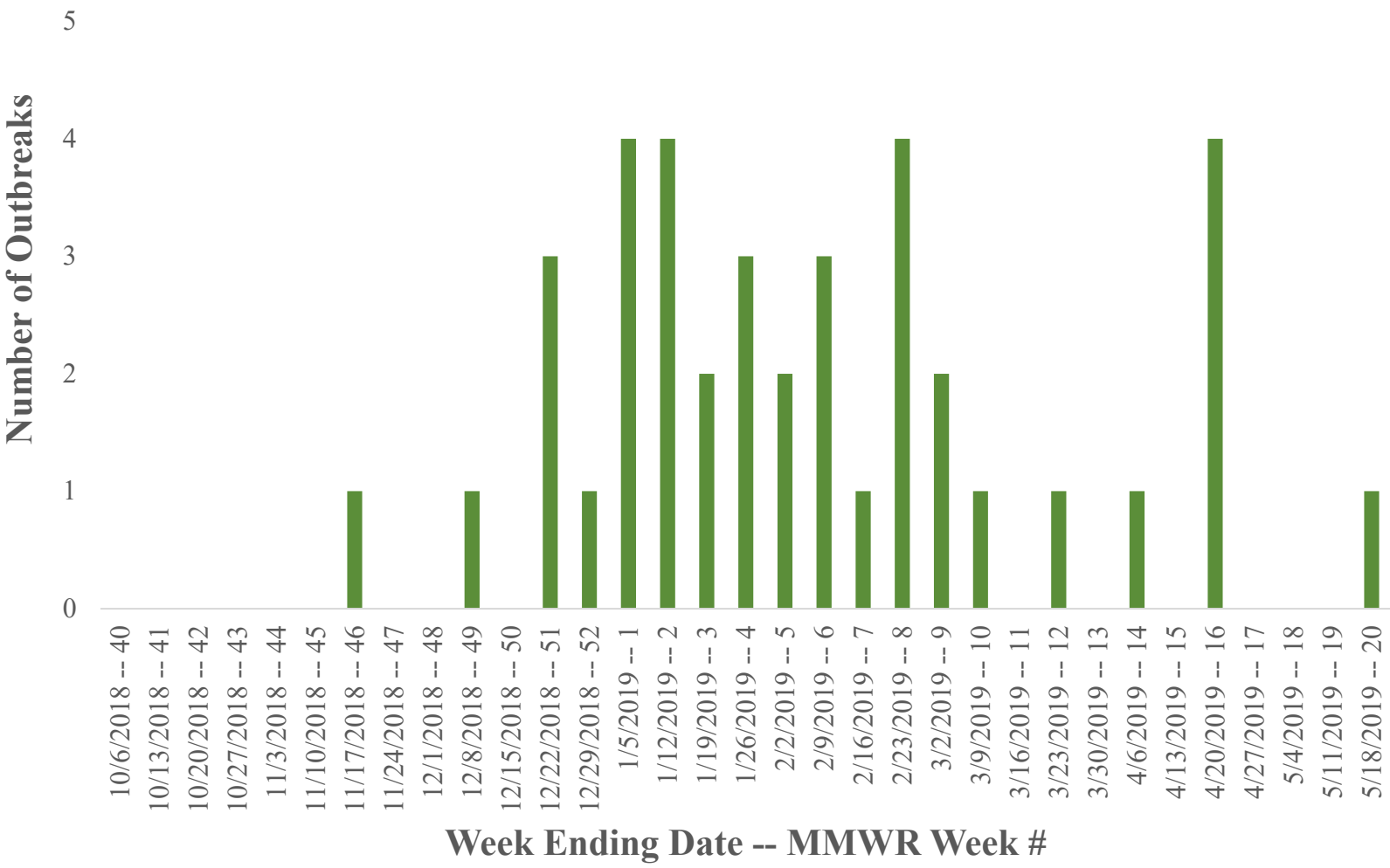
ILI OUTBREAK DATA

BY DATE OF OUTBREAK



Of the 39 outbreaks reported to the health department during the 2018-2019 season, the majority occurred between the end of December 2018 and the beginning of March 2019.

Number of Outbreaks Reported to the Vermont Department of Health by MMWR Onset Week, 2018-2019

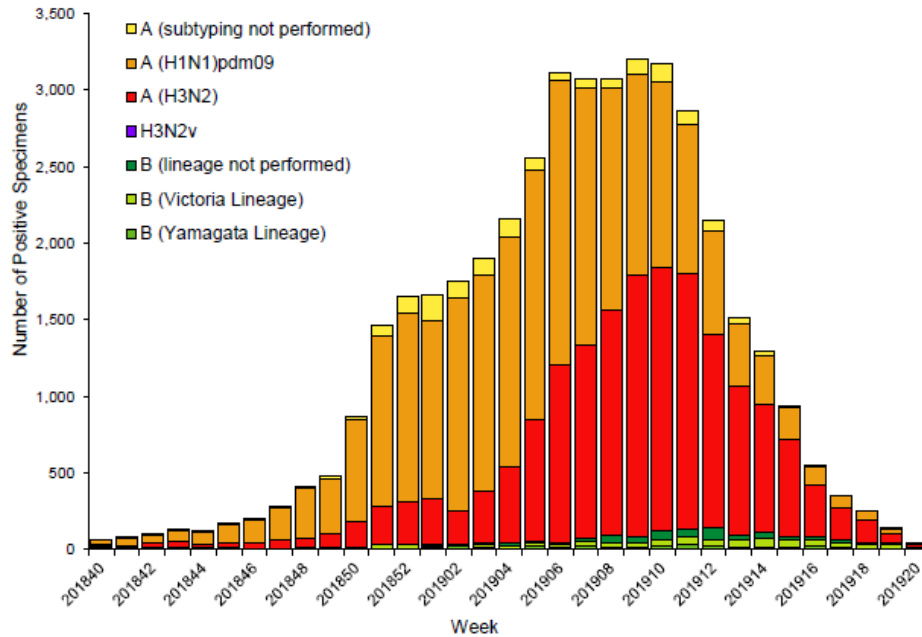


CDC OVERVIEW OF FLU IN THE US



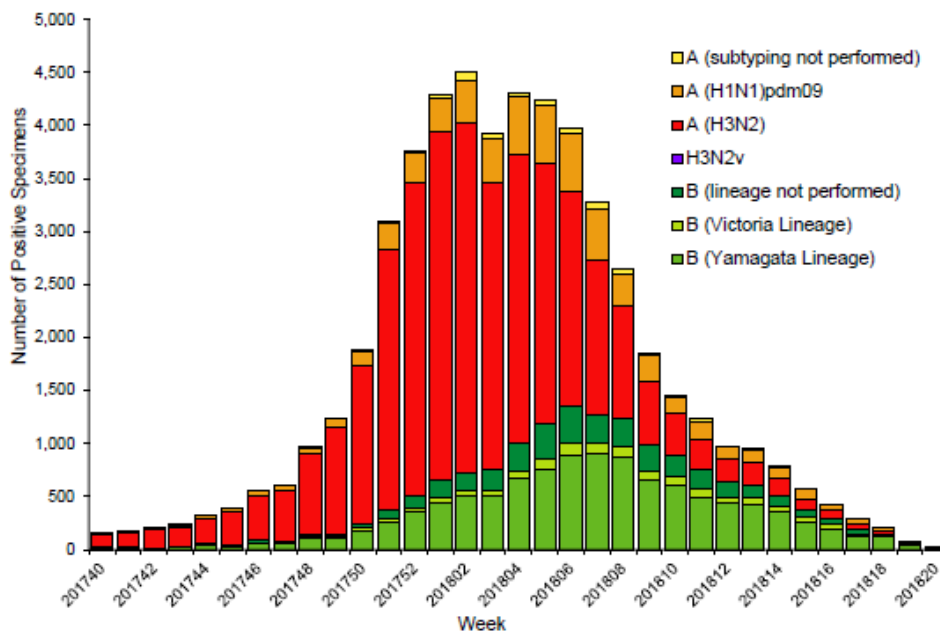
Influenza AH1N1 viruses dominated from October to mid-February of the 2018-2019 season. Influenza AH3N2 was more commonly identified starting in late February. Few numbers of B viruses were identified.

Influenza Positive Tests Reported to CDC by U.S. Public Health Laboratories, National Summary, 2018-2019 Season



In the 2017-2018 season, influenza AH3N2 viruses dominated. Starting in early March, influenza B was more frequently identified than influenza A.

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



CDC OVERVIEW OF FLU IN THE US

In the 2018-2019 season there were 113 reported influenza-associated pediatric deaths. One death was reported from Vermont.

Number of Influenza-Associated Pediatric Deaths by Week of Death: 2015-2016 season to present

