



2017-2018 Influenza Season, Update for Week 4* (Week ending Saturday, 01/27/2018)

Key Points

- ✓ National influenza activity continues to increase and remains widespread throughout the continental United States. The CDC recently reported an additional increase in the percentage (6.6%) of people seeing their health care provider with influenza-like-illness (ILI), again the highest percentage observed since the 2009 H1N1 pandemic.
- ✓ In Connecticut, influenza activity remains high and widespread with an increasing percentage of patients presenting to hospital emergency departments and outpatient providers with ILI, as well as increasing numbers of flu-associated hospitalizations and deaths.
- ✓ Classification of Connecticut geographic activity remains at **widespread****.
- ✓ Influenza A (H3N2) viruses continue to predominate within the US and Connecticut although influenza B viruses are also being reported.
- ✓ There is still time to obtain your flu vaccine and take other important steps to prevent influenza-related illness and hospitalization:
- ✓ <http://www.portal.ct.gov/DPH/Infectious-Diseases/Immunization/Seasonal-Influenza>

The Department of Public Health (DPH) uses multiple surveillance systems to monitor circulating flu viruses throughout the year. All data are considered preliminary and updated with available information each week starting in October and ending in May.

- Statewide emergency department visits attributed to the “fever/flu syndrome” have increased to 12.4%, which one of the highest levels observed in recent seasons and well above the level of 5% statewide; generally considered the minimum threshold when there are elevated influenza-associated ED visits (Figure 1).
- The percentage of outpatient visits with influenza-like illness (ILI) have remained above 5%, well above the level of 1% statewide; generally considered the baseline when there are increased influenza-associated visits in the outpatient setting (Figure 2).
- The percentage of unscheduled hospital admissions due to pneumonia remains above the level of 4% statewide; generally considered the baseline when there may be increased pneumonia hospitalizations due to influenza (Figure 3).
- A total of 1,154 hospitalized patients with laboratory-confirmed influenza admitted between August 27 and January 27, 2018 have been reported to date. Of these 1,154 reports, 790 were Type A (subtype unspecified), 195 were Type A (H3N2), 6 were Type A (2009 H1N1), and 163 were influenza B virus. A total of 52 influenza-associated deaths (41 associated with flu A, 11 with flu B). Of these deaths, 44 were among patients greater than 65 years of age, 4 were 50-64 years of age, 3 were 25-49 years of age, and 1 was between 5-17 years of age. The current season total of 52 deaths is within the range of influenza-associated deaths (1-65) reported during the previous five seasons (Figures 4 & 5).

- A total of 2,996 influenza positive laboratory tests have been reported during the current season (August 27 – January 27, 2018): Fairfield (812), New Haven (802), Hartford (764 reports), Middlesex (202), New London (160), Litchfield (98), Windham (84), and Tolland County (74). Of the 2,996 positive influenza reports: 1,949 were Type A (subtype unspecified), 534 were Type A (H3N2), 35 were Type A (2009 H1N1), 476 were influenza B viruses, and 2 of unknown type (Figures 6 & 7).
- Three additional figures are again included in this week's update. Since 2003, the Connecticut Emerging Infections Program at the Yale School of Public Health conducts active surveillance for laboratory-confirmed, influenza-associated hospitalizations as part of the national FluSurv-NET system. EIP staff work with the Connecticut Department of Public Health (CTDPH), the Centers for Disease Control and Prevention (CDC), and local hospitals to conduct surveillance for hospitalized cases of influenza among residents of southern Connecticut. Together with other FluSurv-NET sites, these data provide near real time estimates of influenza severity in the US: <https://publichealth.yale.edu/eip/projects/flu.aspx>. Figure 8 displays total New Haven and Middlesex County resident hospitalizations by MMWR week* (current counts for week 5 are also displayed) and age category. Please note that the vast majority of hospitalizations are among residents greater than 65 years of age. Figure 9 displays total New Haven and Middlesex County resident hospitalizations by MMWR week* (current counts for week 5 are also displayed) and flu type. Please note that week 4 hospitalizations were the highest reported within the last three flu seasons; the vast majority of hospitalizations among New Haven and Middlesex County residents are associated with influenza A infections. Figure 10 compares these current 2017-2018 influenza season New Haven and Middlesex County resident hospitalizations with those of the previous two influenza seasons (2016-17 and 2015-16).

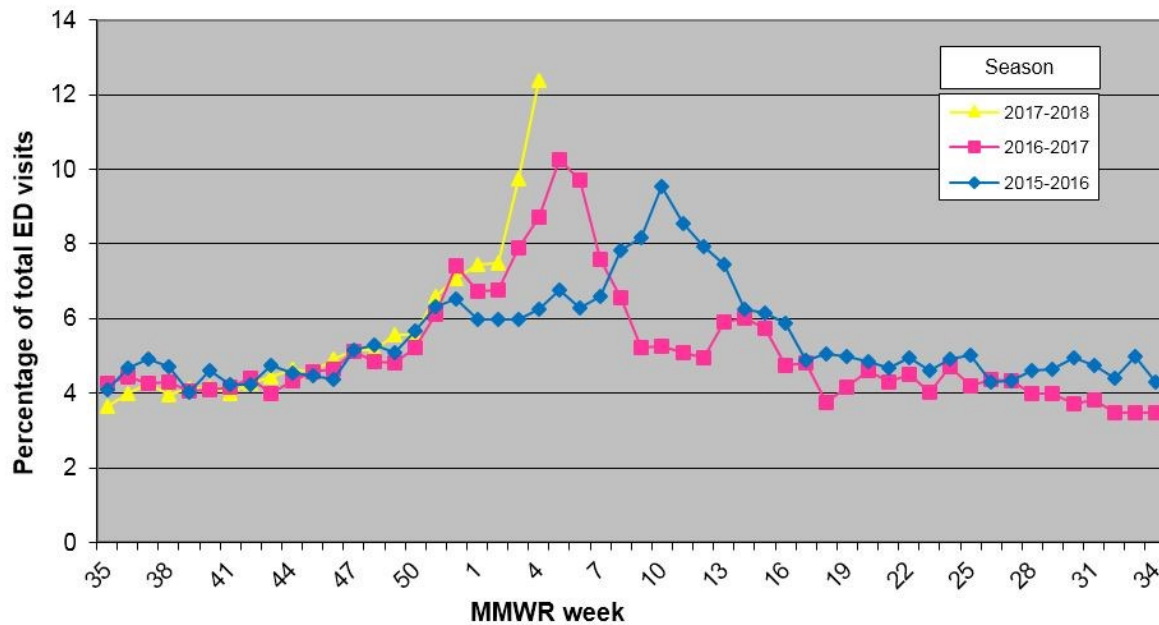
* *Week numbers refer to the Morbidity and Mortality Weekly Report calendar used by the federal Centers for Disease Control and Prevention (CDC) for national disease surveillance.*

** *Definitions for the estimated levels of geographic spread of influenza activity available at:*

<http://www.cdc.gov/flu/weekly/overview.htm>

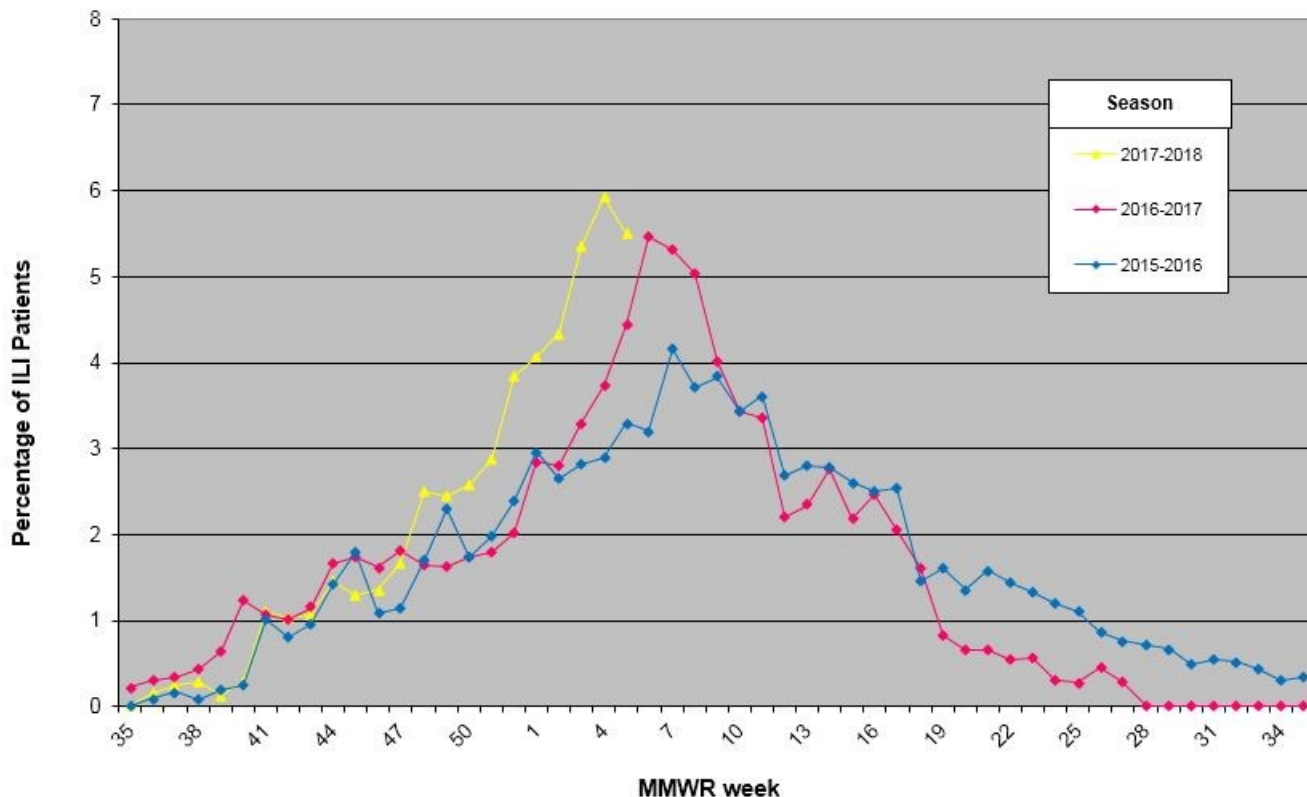
The **Hospital Emergency Department Syndromic Surveillance (HEDSS) System** receives daily electronic reports on ED visits from more than half of Connecticut's acute care hospitals. Data include a listing of total patient visits with information on their chief complaint, including fever/flu.

Figure 1. Connecticut Hospital Emergency Department Syndromic Surveillance (HEDSS) System: Percentage of total ED visits for "fever/flu" syndrome category, 2017-2018 influenza season compared to past seasons, MMWR Week 4 (week ending 01/27/18)



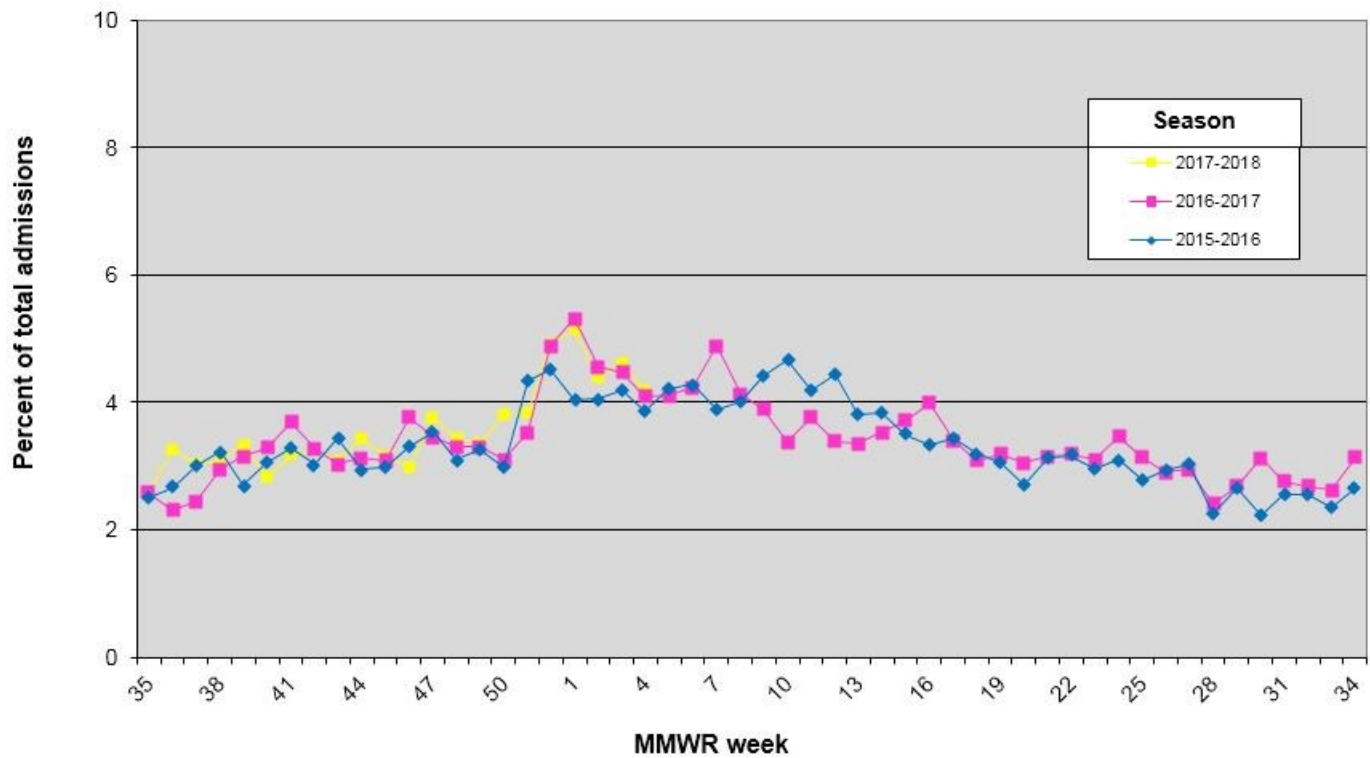
Sentinel Provider Surveillance System: Reporting of influenza-like illness (ILI) is conducted through a statewide network of volunteer outpatient providers known as ILINet. The proportion of patients exhibiting ILI is reported to the DPH on a weekly basis. ILI is defined as a cough or sore throat in the absence of a known cause, and the presence of a fever > 100° F.

**Figure 2. Outpatient Influenza-Like Illness Surveillance Network (ILINet),
Percentage of Patients with Influenza-Like Illness (ILI);
2015-16, 2016-17, 2017-18**



The **Hospital Admissions Syndromic Surveillance (HASS) System**, receives daily electronic reports from all 32 acute care hospitals in Connecticut. Information on unscheduled admissions, including those for pneumonia that may be associated with influenza infections, is submitted.

Figure 3: Connecticut Hospital Admissions Syndromic Surveillance (HASS) System, Percentage of total statewide admissions for pneumonia; 2015-16, 2016-17, 2017-18



Influenza-associated Hospitalizations: In Connecticut, influenza-associated hospitalizations and deaths are reportable. Data collected describe the more serious illnesses associated with influenza infections.

Figure 4. Hospitalized Patients (n =1154) with Positive Lab Tests by Subtype & Week, Connecticut, through 1/27/2018

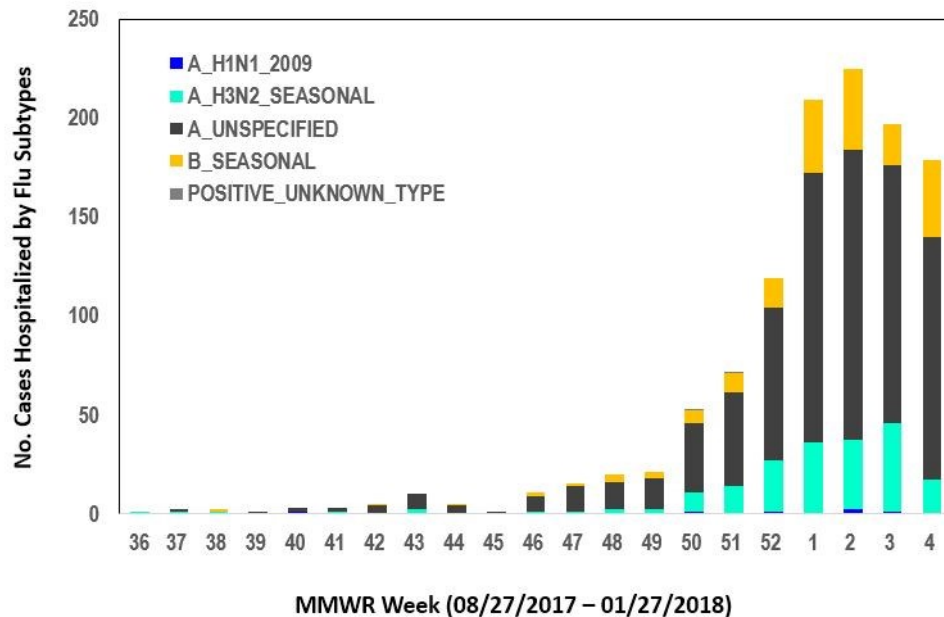
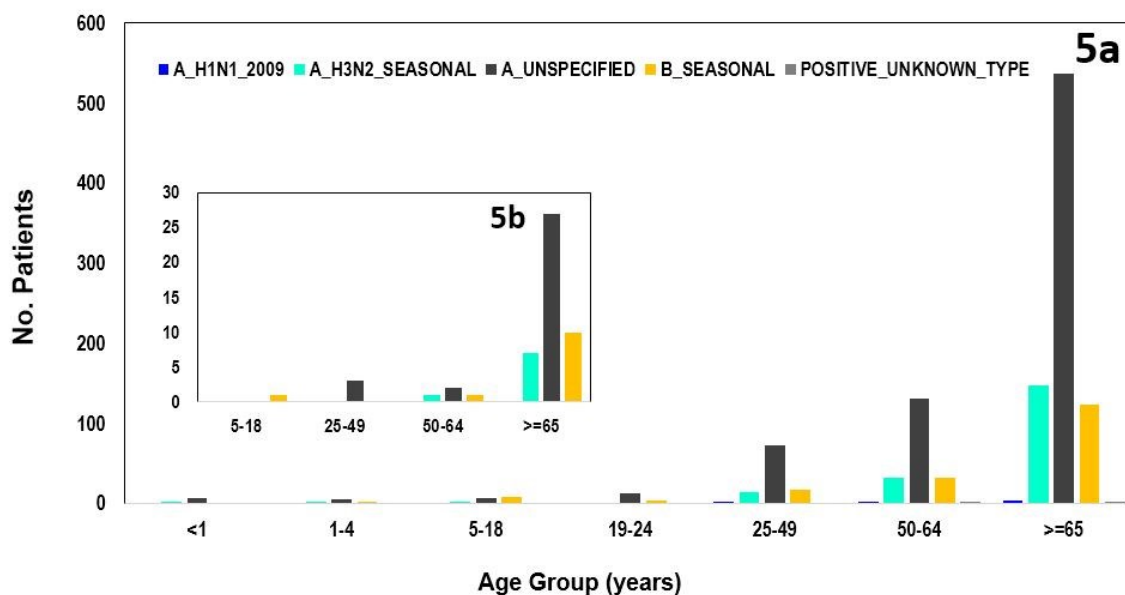
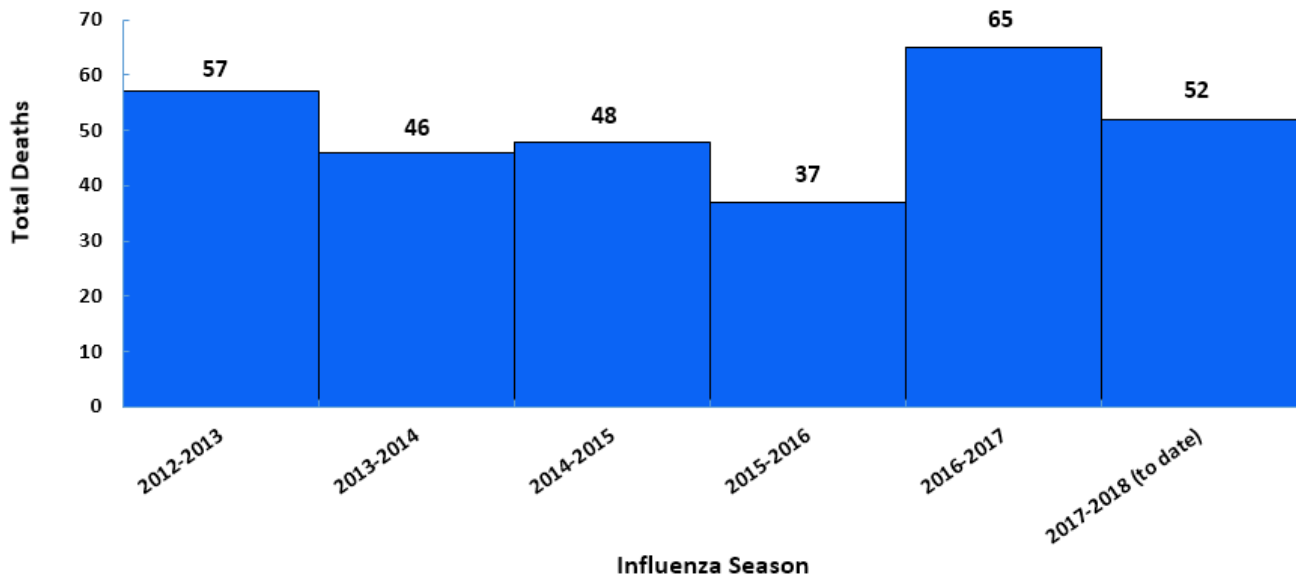


Figure 5. Hospitalized Patients (5a, n=1154) and Flu-Associated Death (5b, n=52) with Positive Laboratory Tests by Influenza Subtype and Age Group, Connecticut, through 1/27/2018



Influenza-associated Deaths: Comparative analysis of total number of influenza-related deaths in Connecticut, over the past eight flu seasons.

Figure 5c. Total Number of Influenza-Related Deaths in Connecticut by Influenza Season, 2012-13 through 1/27/2018



Laboratory Surveillance: Positive influenza tests are laboratory reportable findings in Connecticut. The DPH tracks these results to determine what types, subtypes, and strains are circulating.

Figure 6. Positive Laboratory Tests (n = 2996) by Influenza Subtype and Week, Connecticut, through 1/27/2018

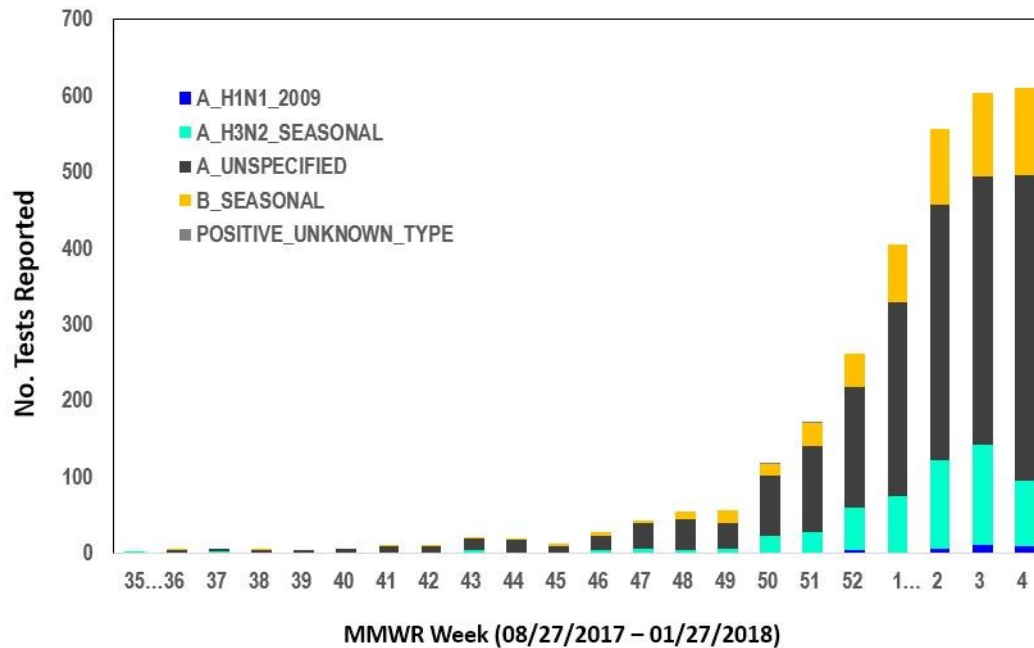
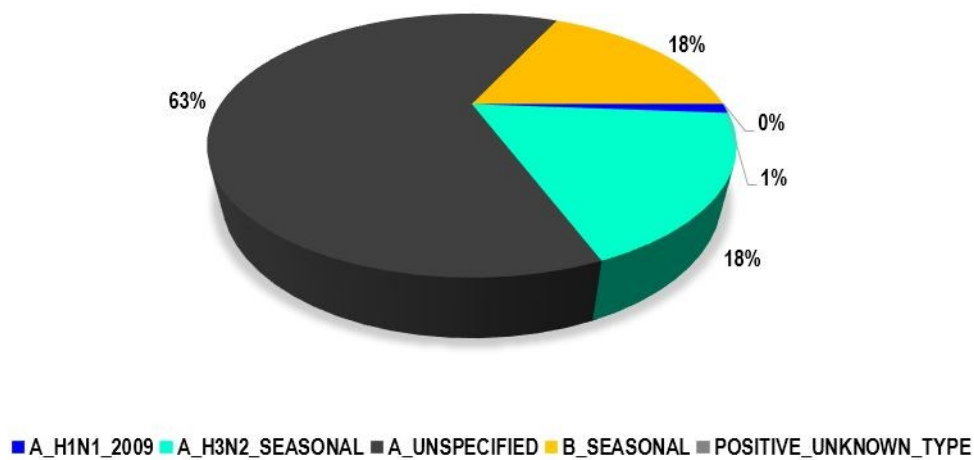


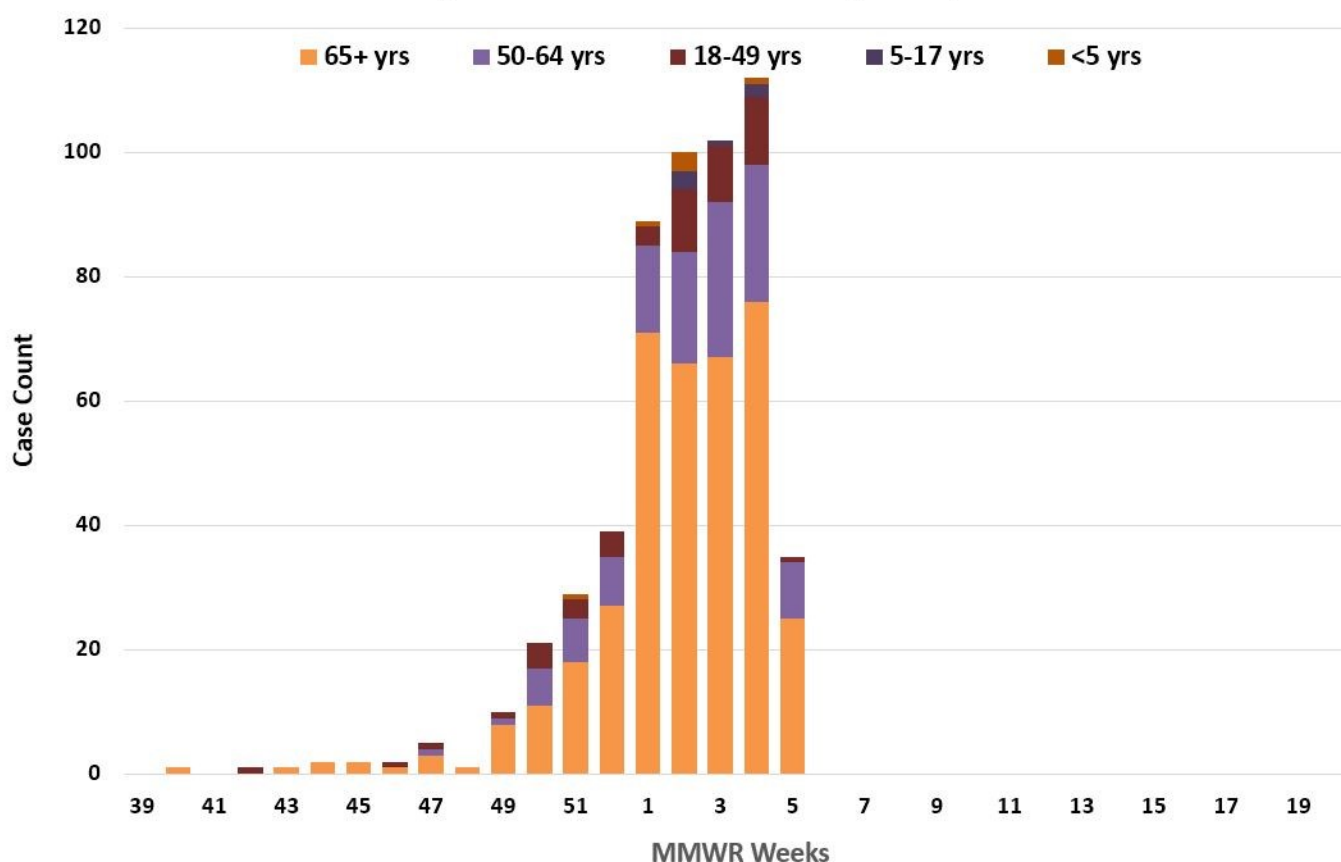
Figure 7. Proportion of Cumulative Positive Laboratory Tests (n =2996) by Influenza Subtype, Connecticut, through 1/27/2018



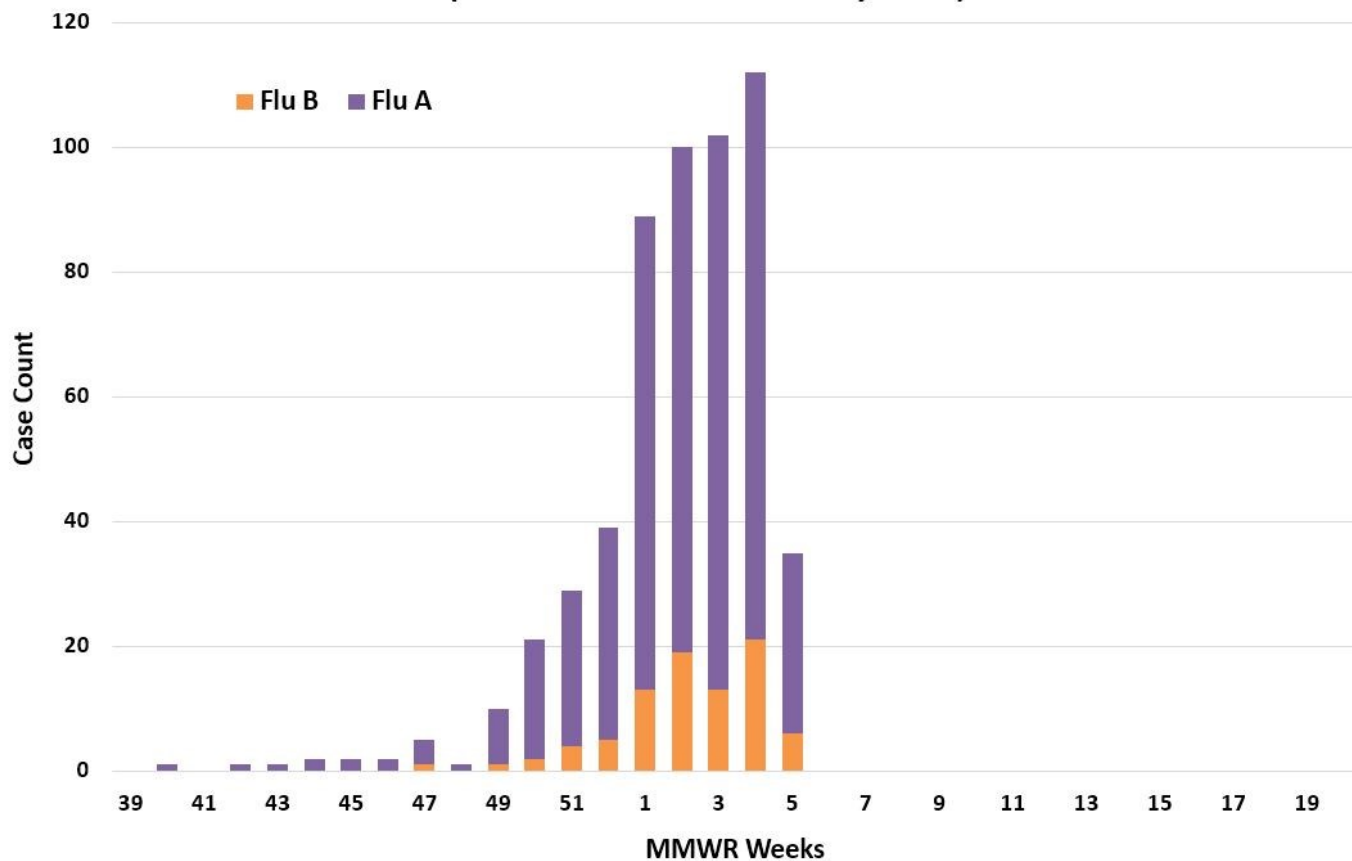
Hospitalizations in residents of New Haven and Middlesex Counties: Three new figures are included in this week's update. Since 2003, the Connecticut Emerging Infections Program at the Yale School of Public Health conducts active surveillance for laboratory-confirmed, influenza-associated hospitalizations as part of the national FluSurv-NET system. EIP staff work with the Connecticut Department of Public Health (CTDPH), the Centers for Disease Control and Prevention (CDC), and local hospitals to conduct surveillance for hospitalized cases of influenza among residents of southern Connecticut. Together with other FluSurv-NET sites, these data provide near real time estimates of influenza severity in the US:

<https://publichealth.yale.edu/eip/projects/flu.aspx>

**Figure 8. Influenza-Associated Hospitalizations, by Age Group
New Haven and Middlesex Counties,
(1 October 2017-1 February 2018)**



**Figure 9. Influenza-Associated Hospitalizations, by Flu Type
New Haven and Middlesex Counties
(1 October 2017-1 February 2018)**



**Figure 10. Influenza Hospitalizations, New Haven and Middlesex Counties
CT Emerging Infections Program,
2015-16 through 2017-18 (preliminary)**

