



2017-2018 Influenza Season, Update for Week 12* (Week ending Saturday, 03/24/2018)

Key Points

- ✓ Although national influenza activity has been past peak for six weeks, it remains at moderate levels and is geographically widespread within several regions of the continental United States including the Northeast. The US Centers for Disease Control and Prevention (CDC) recently reported a decreased percentage (2.7%) of people seeing their health care provider with influenza-like-illness (ILI), which continues to decline from the high percentage (7.7 %) observed during the peak weeks of the current 2017-2018 flu season.
- ✓ In Connecticut, influenza activity is also past peak but we continue to observe an elevated percentage of patients presenting to hospital emergency departments and outpatient providers with ILI, along with elevated numbers of flu-associated hospitalizations and deaths.
- ✓ Classification of Connecticut geographic activity also remains at **widespread****.
- ✓ Although influenza A (H3N2) viruses have been predominate within the US and Connecticut for most of the 2017-2018 season, numbers of influenza B viruses are beginning to circulate in equal numbers with influenza A viruses.
- ✓ As elevated flu activity will likely continue through the end of April in Connecticut, 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 decreased for the past six weeks, but at 6.4% remain 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 decreased for the past six weeks, but at 3.2% remain 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 is now at a level of 3.3%, below the level of 4% statewide; generally considered the baseline when there may be increased pneumonia hospitalizations due to influenza (Figure 3).

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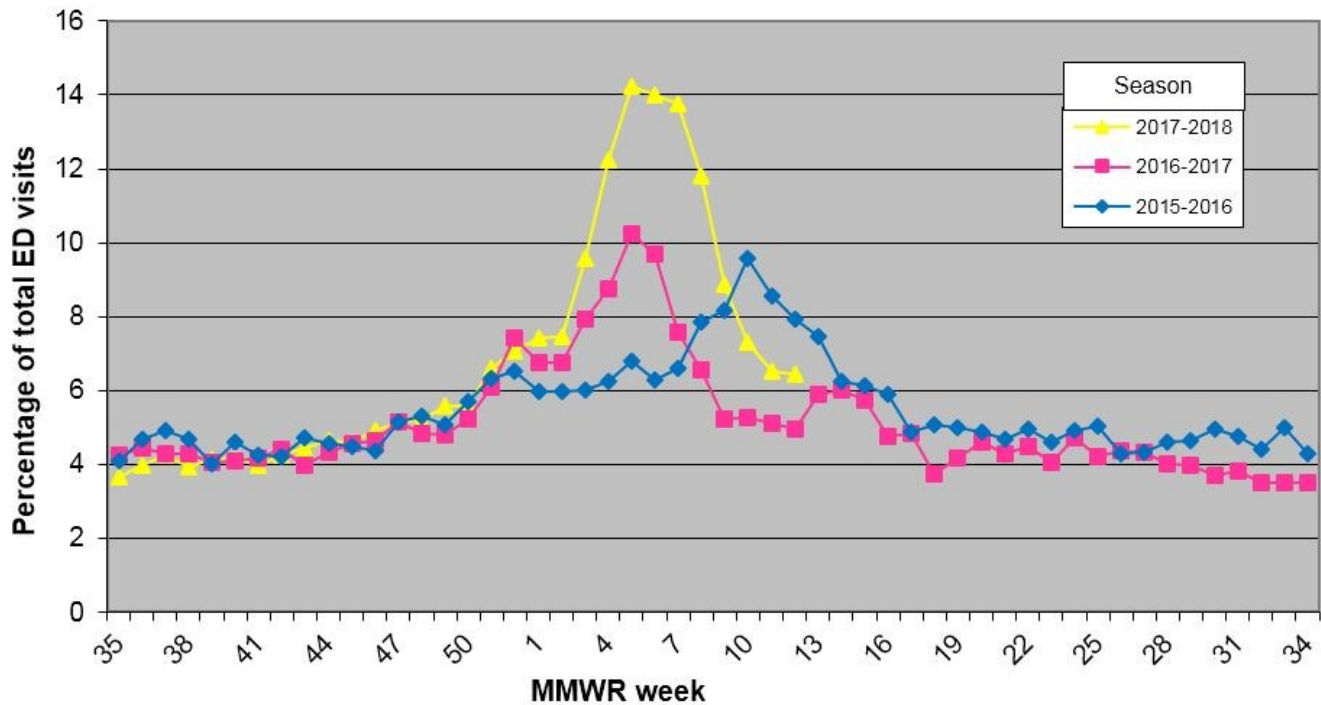
- A total of 2,754 hospitalized patients with laboratory-confirmed influenza admitted between August 27 and March 24, 2018 have been reported to date. Of these 2,754 reports, 1,548 were Type A (subtype unspecified), 521 were Type A (H3N2), 32 were Type A (2009 H1N1), 647 were influenza B virus, and 6 of unknown type. A total of 131 influenza-associated deaths (93 associated with flu A, 37 with flu B, 1 of unknown type). Of these deaths, 110 were among patients greater than 65 years of age, 12 were 50-64 years of age, 5 were 25-49 years of age, 1 was between 19-24 years of age, and 3 were ≤ 18 years of age. The current season total of 131 deaths is above the range of influenza-associated deaths (1-65) reported during the previous five seasons (Figures 4 & 5).
- A total of 9,318 influenza positive laboratory tests have been reported during the current season (August 27 – March 24, 2018): Fairfield (2,940), New Haven (2,649), Hartford (1,504 reports), Middlesex (601), New London (508), Windham (339), Litchfield (317), Tolland (192) and currently unknown county (268). Of the 9,318 positive influenza reports: 5,023 were Type A (subtype unspecified), 1,224 were Type A (H3N2), 169 were Type A (2009 H1N1), 2,888 were influenza B viruses, and 14 of unknown type. Please note that the percentage of influenza B infections is continuing to increase (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 13 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 13 are also displayed) and flu type. Please note that the vast majority of hospitalizations among New Haven and Middlesex County residents are associated with influenza A infections although influenza B infections are increasing. 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). Please also note that hospitalizations for weeks 3, 4 and 5 were the highest numbers reported within the last three flu seasons.

* 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>

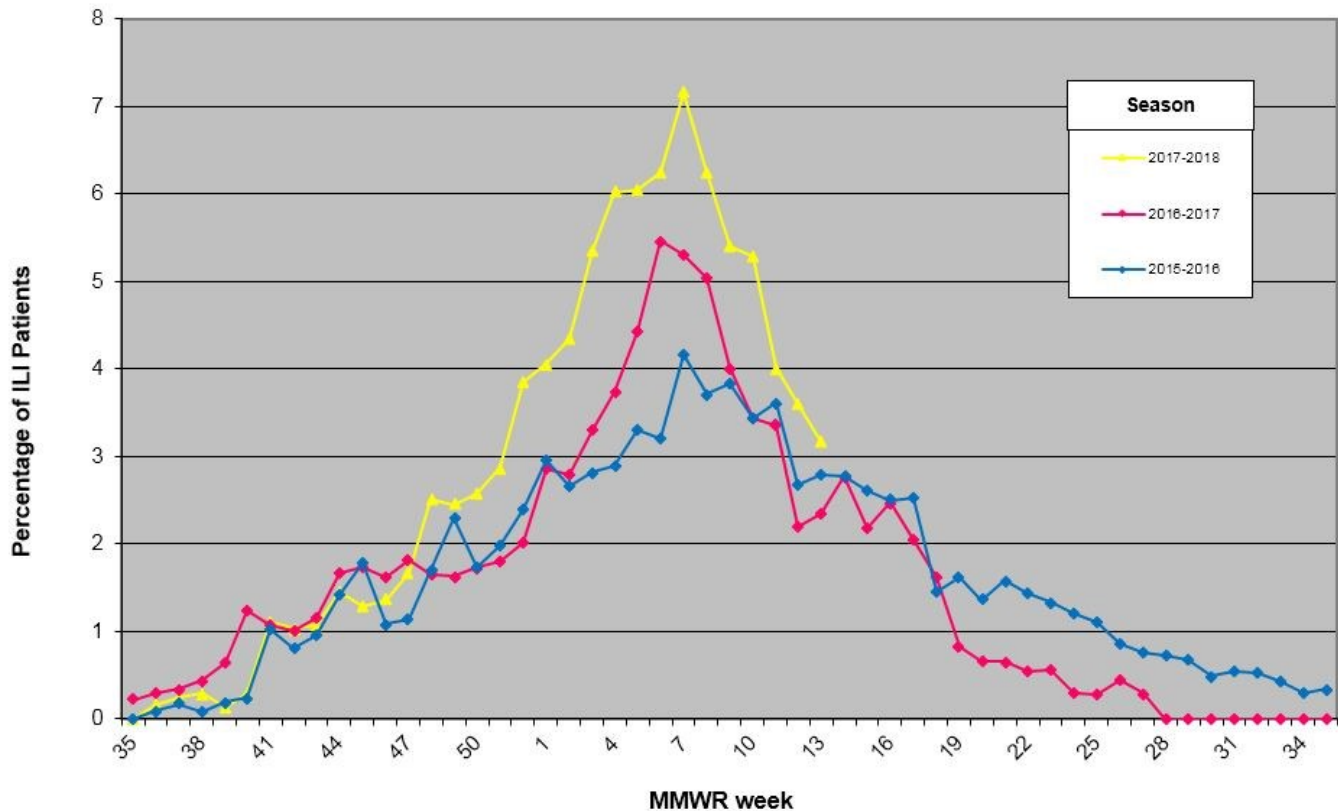
The **Hospital Emergency Department Syndromic Surveillance (HEDSS) System** receives daily electronic reports on ED visits from all 33 hospital-affiliated emergency departments in Connecticut. Data include a listing of total patient visits with information on their chief complaint, including fever/flu.

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 12 (week ending 03/24/18)



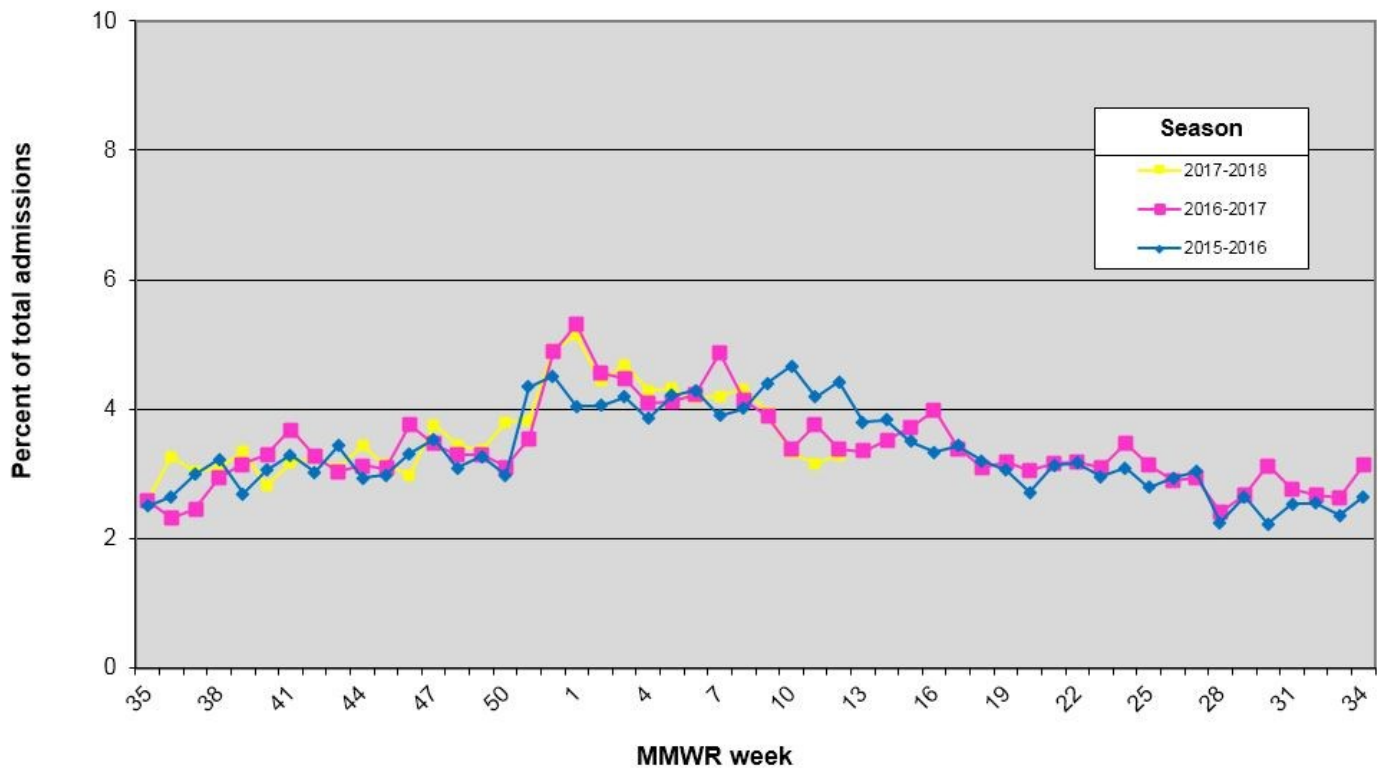
Sentinel Provider Surveillance System: Reporting of influenza-like illness (ILI) is conducted through a statewide network of volunteer outpatient providers known as ILINet. The proportion of patients exhibiting ILI is reported to the DPH on a weekly basis. ILI is defined as a cough or sore throat in 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 = 2754) with Positive Lab Tests by Subtype & Week, Connecticut, through 3/24/2018

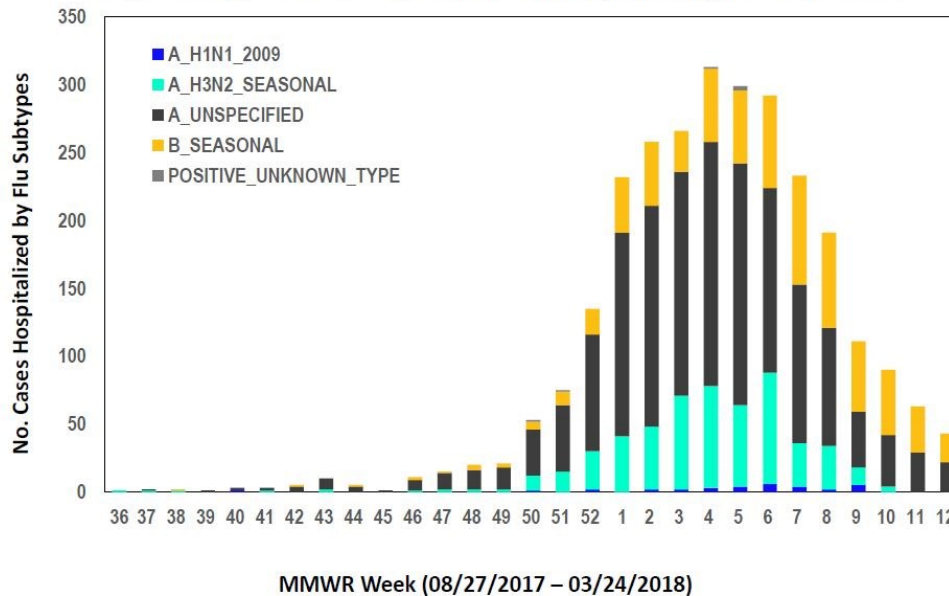
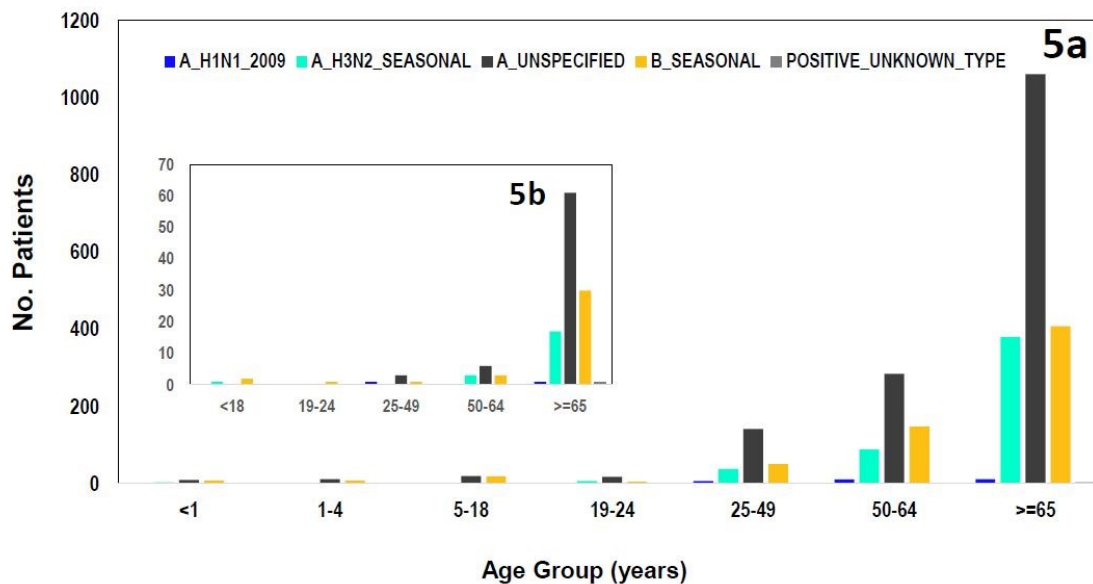
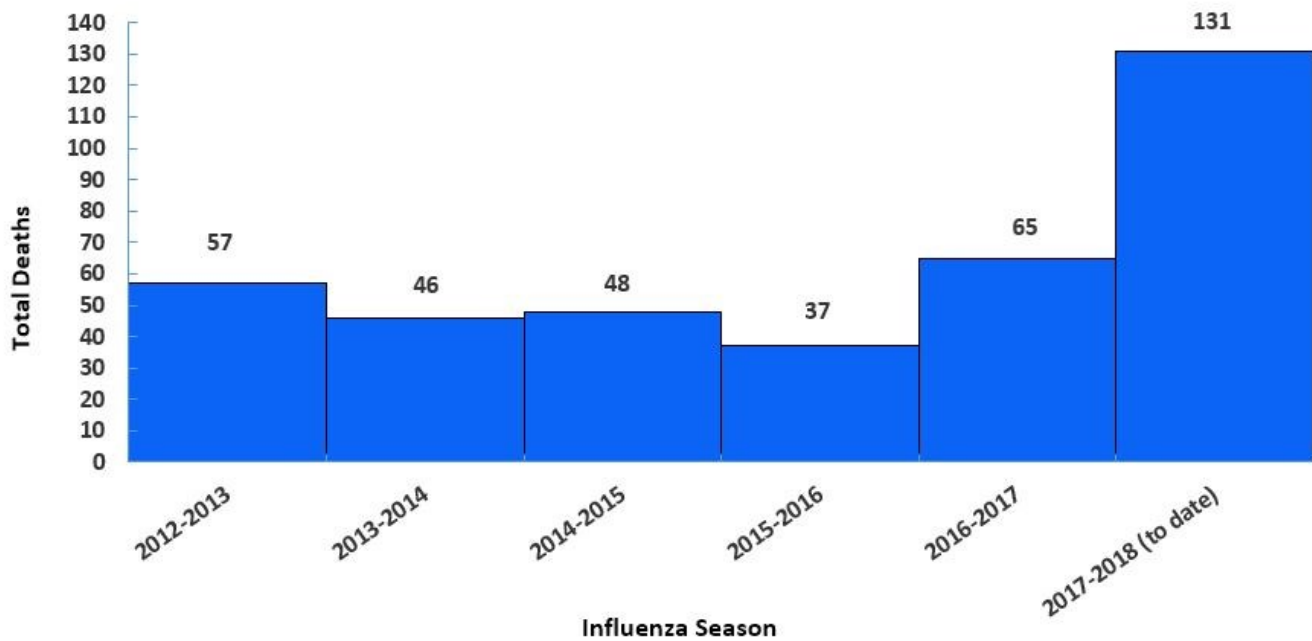


Figure 5. Hospitalized Patients (5a, n = 2754) and Flu-Associated Death (5b, n=131) with Positive Laboratory Tests by Influenza Subtype and Age Group, Connecticut, through 3/24/2018



Influenza-associated Deaths: Comparison of the total number of flu-associated deaths reported in Connecticut during the current and previous five flu seasons starting with the onset of improved reporting during the 2012-13 flu season.

Figure 5c. Total Number of Influenza-associated Deaths in Connecticut by Influenza Season, 2012-13 through 3/28/2018



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 = 9318) by Influenza Subtype and Week, Connecticut, through 3/24/2018

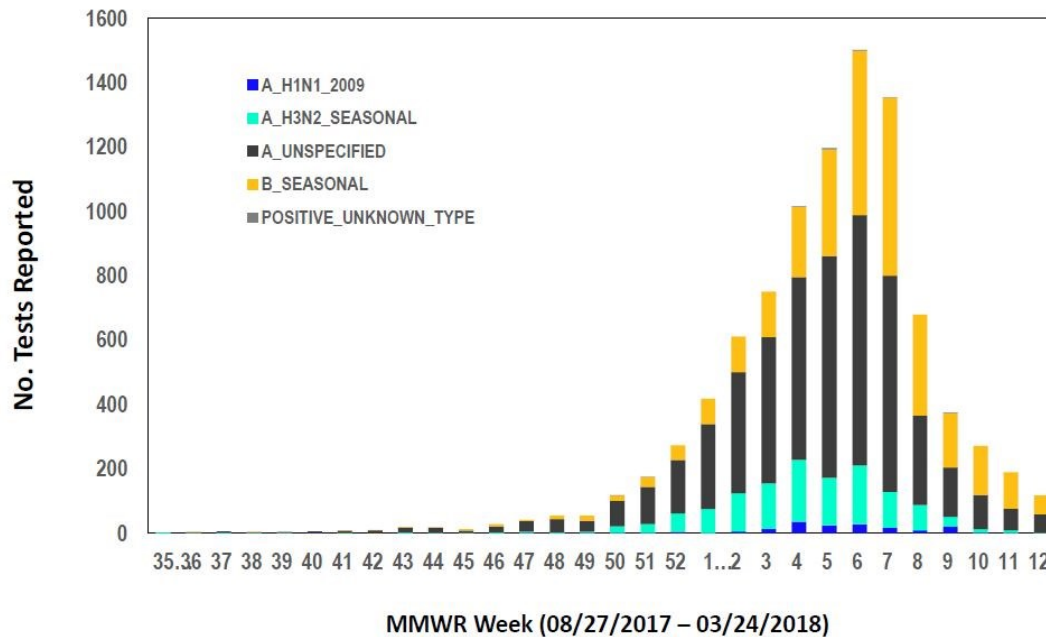
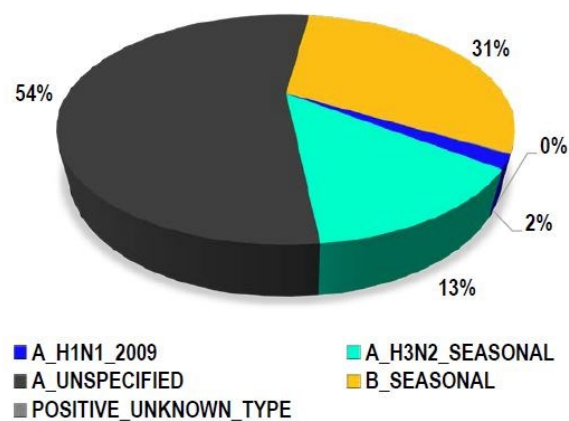


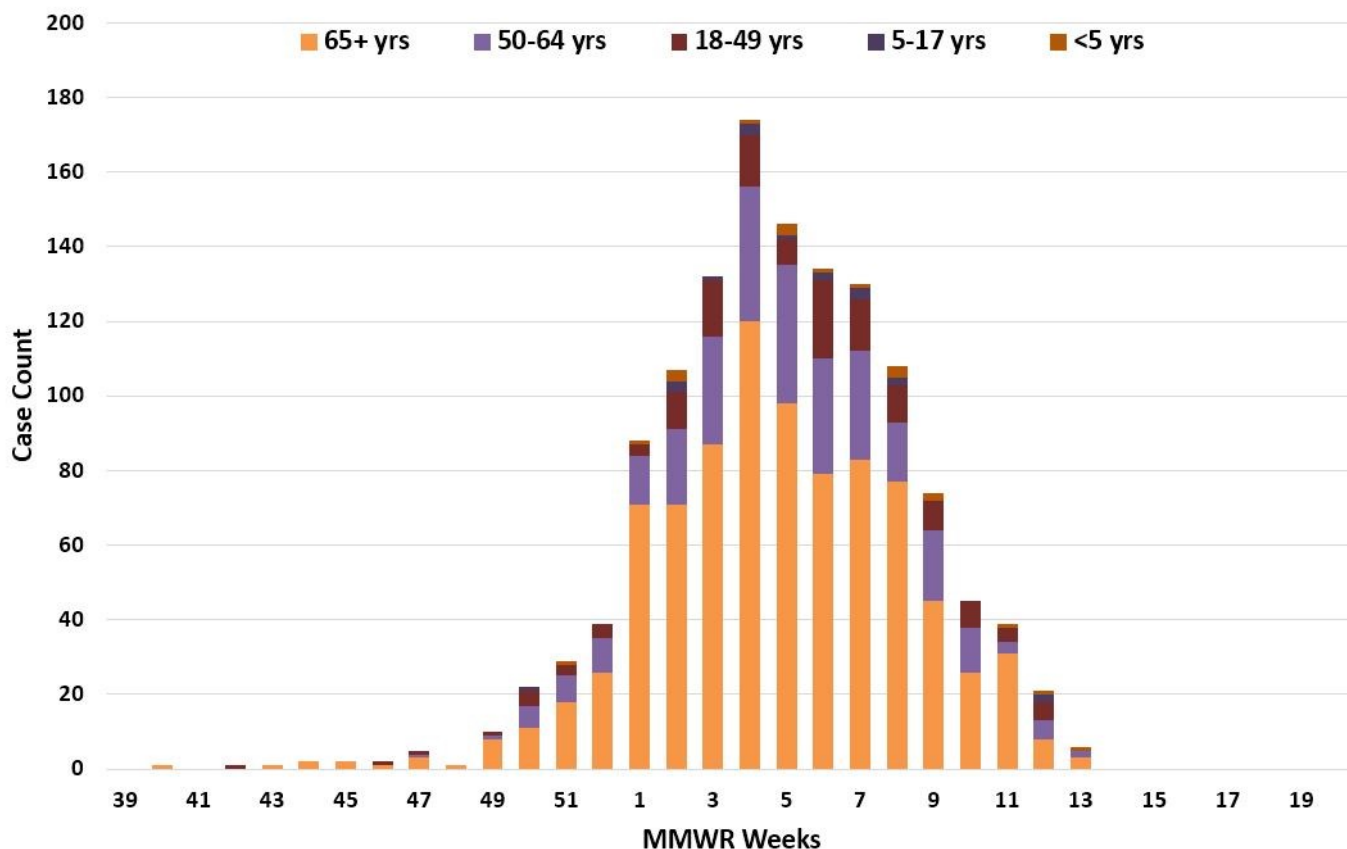
Figure 7. Proportion of Cumulative Positive Laboratory Tests (n = 9318) by Influenza Subtype, Connecticut, through 3/24/2018



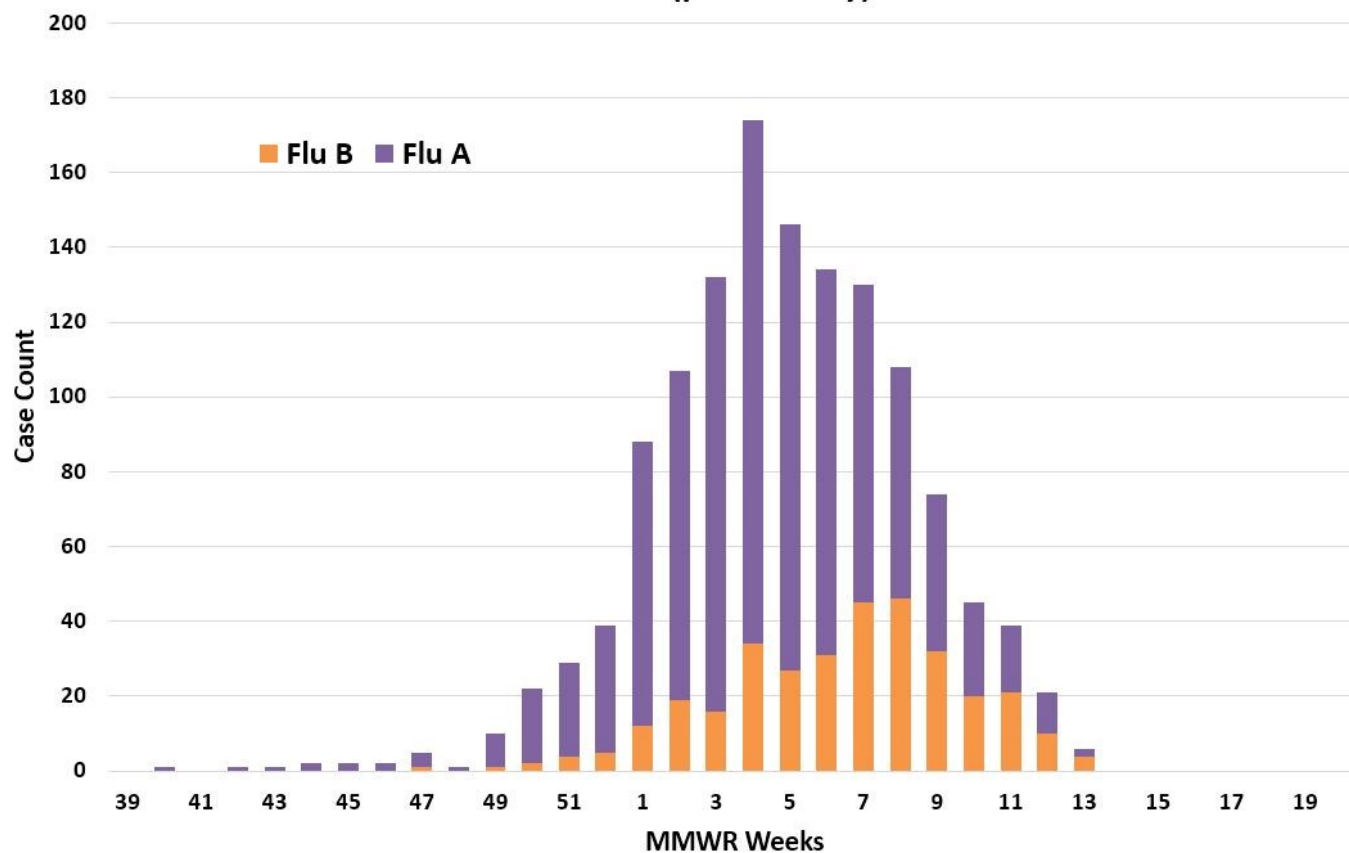
Hospitalizations in residents of New Haven and Middlesex Counties: Three new figures are included in this week's update. Since 2003, the Connecticut Emerging Infections Program at the Yale School of Public Health conducts active surveillance for laboratory-confirmed, influenza-associated hospitalizations 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 2017-28 March 2018**



**Figure 9: Influenza-Associated Hospitalizations,
New Haven and Middlesex Counties, CT Emerging Infections Program
2017-18 (preliminary)**



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

