



## Connecticut Department of Public Health Influenza Final Surveillance Summary for 2013-2014 Influenza Season

The following summary describes influenza activity in Connecticut from August 25, 2013 through August 23, 2014 including the 2013-2014 influenza season which traditionally is considered the 8 month period from October through May. Overall, 2013-2014 influenza activity was lower than that observed during the 2012-2013 season. However, the 2013-2014 influenza season was characterized with two distinct activity waves; an initial wave that peaked in January 2014 followed by a second wave that peaked during April 2014. Please also see previous Connecticut annual influenza season summaries, which are located on our Influenza Statistics webpage:

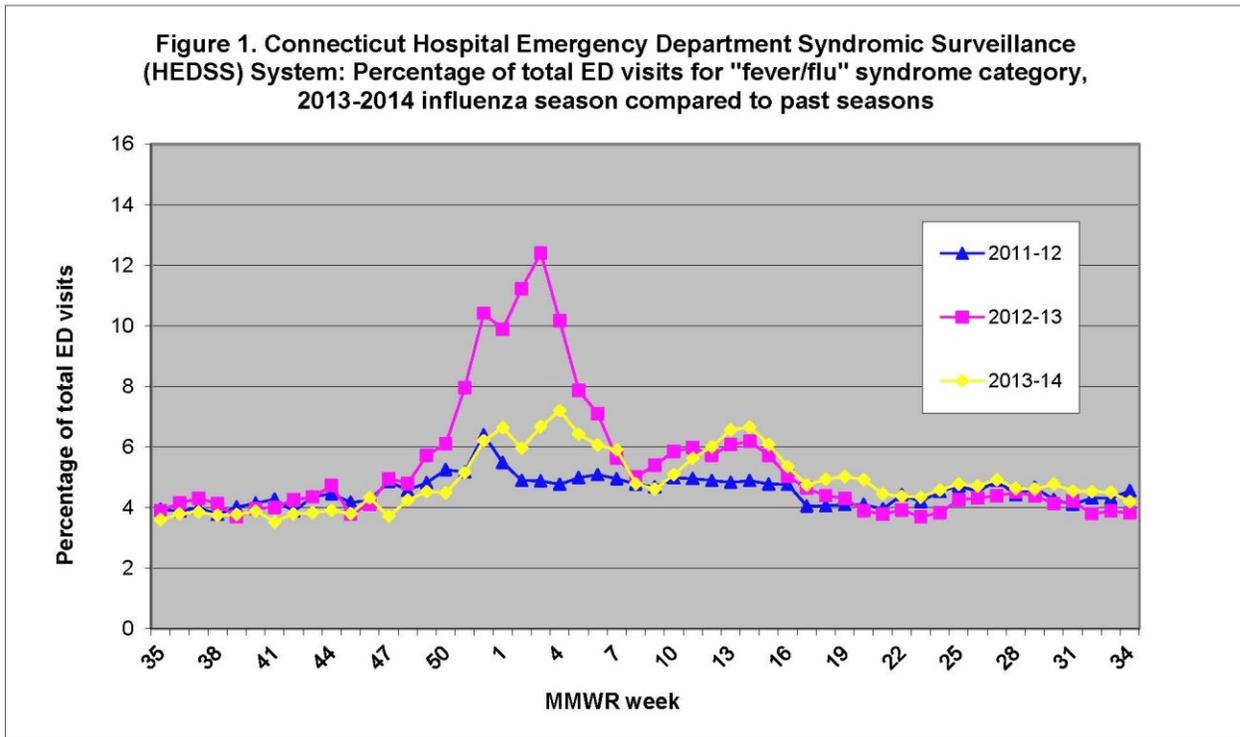
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In Connecticut, the Department of Public Health (DPH) utilizes multiple surveillance systems to monitor for circulating influenza flu viruses and track various indicators of influenza-associated illness. Data from these various surveillance systems were reviewed and updated each week. A summary of the surveillance findings of these various systems during this 2013-2014 monitoring period are described below:

- The DPH examines the percentage of total emergency department (ED) visits attributed to the “fever/flu” syndrome category each week to identify periods when these visits exceed a level of 5% statewide; generally considered the minimum threshold when there are elevated influenza-associated ED visits. During the 2013-2014 influenza season, the percentage of “fever/flu” ED visits exceeded 5% from mid-December 2013 through mid-February 2014 and again from early March to mid-May 2014. A peak level of 7.2% was observed during the week ending January 25, 2014, MMWR week 4, while a second peak level of 6.7% was observed during the week ending April 5, 2014, MMWR week 14 (Figure 1).
- The DPH examines the percentage of outpatient visits to a network of 29 non-hospital based providers with influenza-like illness (ILI) each week to determine when these visits exceed a level of 1% statewide; generally considered the baseline when there are increased influenza-associated visits in the outpatient setting. During the 2013-2014 influenza season, the percentage of outpatient ILI visits remained above 1% statewide from mid-December 2013 through mid-June 2014. Peak levels of 1.9% were observed during both the week ending February 8, 2014, MMWR week 6, and the week ending March 22, 2014, MMWR week 12 (Figure 2).
- The DPH also examines the percentage of unscheduled hospital admissions due to pneumonia each week to determine when these admissions exceed a level of 4% of all unscheduled hospital admissions statewide; generally considered the baseline when there may be increased pneumonia hospitalizations due to influenza and other severe respiratory infections. The percentage of weekly hospital pneumonia admissions remained above 4% of all unscheduled admissions, statewide from December 2013 through May 2014 (Figure 3).

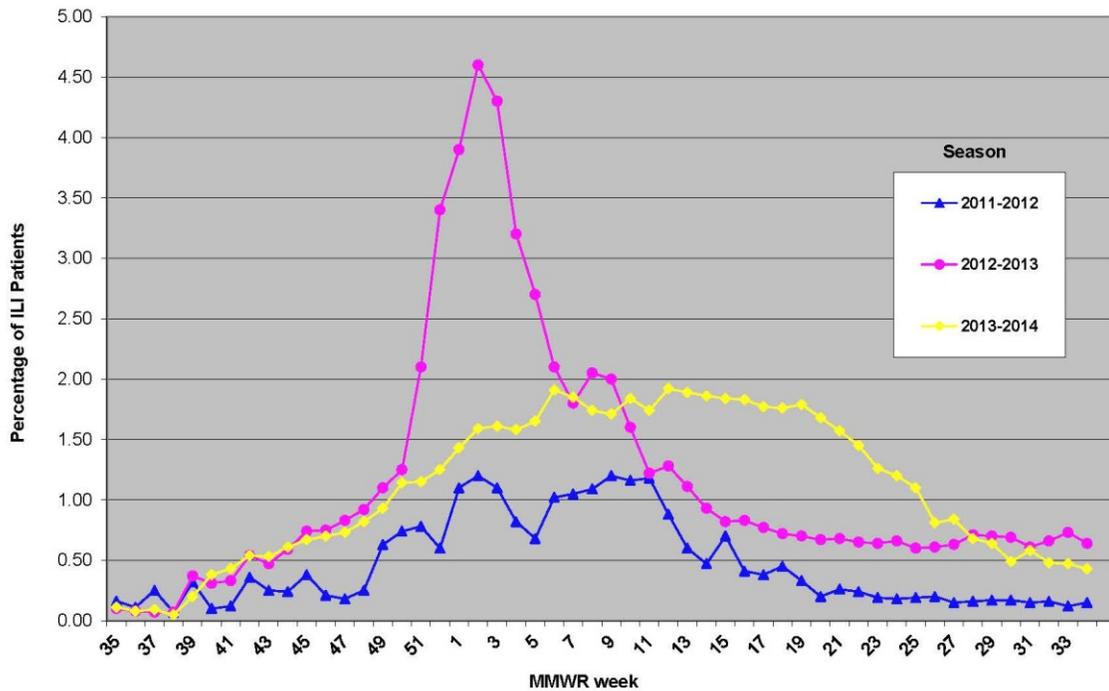
- Influenza associated hospitalizations have been reportable in Connecticut since October 2009. During the 2013-2014 influenza season, a total of 1,983 persons hospitalized with influenza-associated illness were reported and included 1,570 (79%) Type A and 413 (21%) Type B. Of the 418 Type A isolates that were subtyped, 269 (64%) were Type A (2009 H1N1) and 149 (36%) were Type A (H3N2); 1,152 Type A were unspecified (Figure 4).
- Influenza associated deaths of individuals 18 years of age or younger have been reportable in Connecticut since January 2005 and influenza associated deaths of all ages since October 2009. A total of 46 influenza associated deaths were reported, including 10 in patients with Type A (H3N2), 7 Type A (2009 H1N1), 22 in patients with Type A subtype unspecified, and 7 in patients with Type B infections. All deaths were among patients at least 30 years of age including 32 (70%) who were greater than 65 years of age. A larger proportion of Type A (H3N2) influenza associated hospitalizations and deaths were seen among individuals who were greater than 65 years of age (Figure 5).
- The DPH also tracks reports of laboratory-confirmed influenza. Positive results were reported from residents of all 8 Connecticut counties and included: 2,169 from New Haven County, 1,923 from Fairfield County, 1,825 from Hartford County, 304 Windham County, 296 New London County, 248 Tolland County, 219 Middlesex County, and 218 from Litchfield County. Of the 7,202 positive influenza reports, 5,630 (78%) were Type A, 1,502 (21%) were Type B, and 70 (1%) were of unknown type. Of the 1901 Type A isolates that were subtyped, 1,381 (73%) were Type A (2009 H1N1) and 520 (27%) were Type A (H3N2); 3,729 Type A were unspecified (Figure 6 & 7).
- The 2013-2014 influenza season was characterized by two distinct activity waves. The first wave was predominantly comprised of influenza A (2009 H1N1) virus, and peaked during the week ending January 25, 2014, MMWR week 4. A second wave, which was predominantly, comprised of both influenza A (H3N2) and influenza B, peaked during the week ending April 12, 2014, MMWR week 15. The largest numbers of flu-associated hospitalizations were also seen during this late-season second wave (Figure 4).

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.



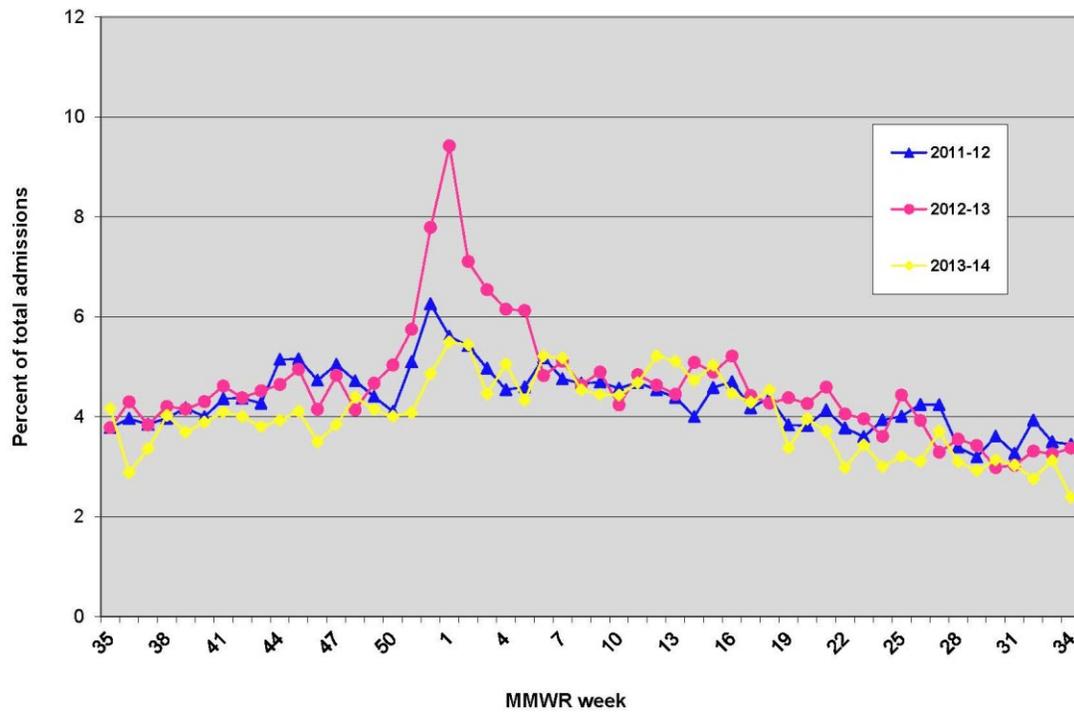
**Sentinel Provider Surveillance System:** Reporting of influenza-like illness (ILI) is conducted through a statewide network of volunteer outpatient providers known as ILINet. The proportion of patients exhibiting ILI is reported to the DPH on a weekly basis. ILI is defined as a cough or sore throat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

**Figure 2. Outpatient Influenza-like Illness Surveillance Network (ILINet), Percentage of Patients with Influenza-like Illness (ILI); 2011-12, 2012-13, 2013-14**



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.

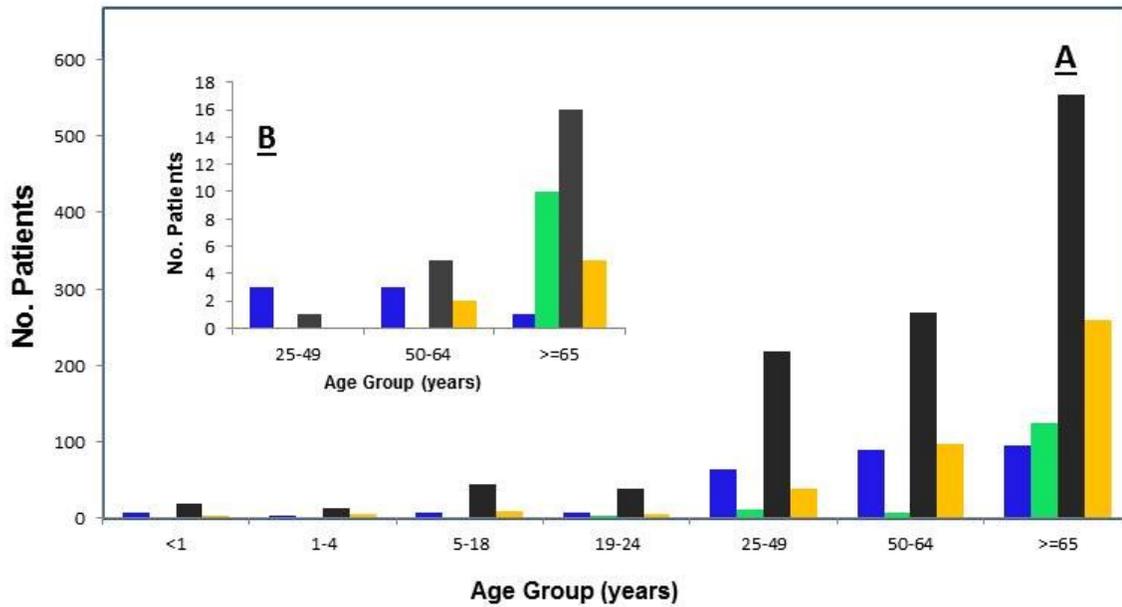
**Figure 3. Connecticut Hospital Admissions Syndromic Surveillance (HASS) System, Percent of total statewide admissions for pneumonia; 2011-12, 2012-13, 2013-14**





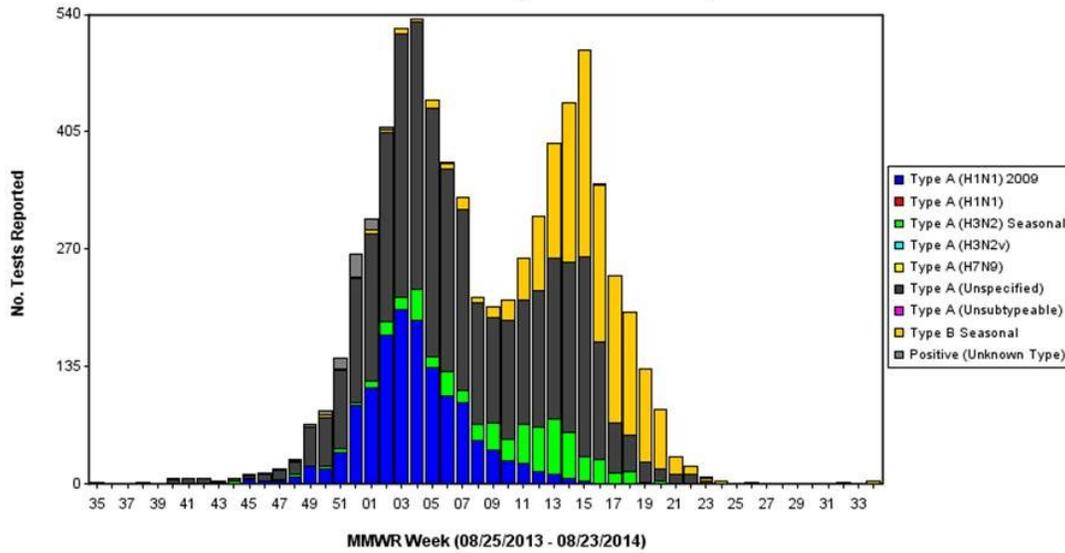
**Influenza Associated Hospitalizations and Deaths:** Hospitalized patients with positive influenza tests, and influenza associated deaths are reportable findings in Connecticut. The DPH tracks the number of hospitalized persons with positive influenza tests and deaths associated with infection from influenza.

**Figure 5. Hospitalized Patients (n=1983, A) and Flu-Associated Deaths (n=46, B) with Positive Laboratory Tests by Influenza Subtype and Age Group, Connecticut, as of 9/23/2014**



**Laboratory confirmed influenza:** 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 = 7202) by Influenza Subtype and Week, Connecticut (as of 9/23/2014)**



**Figure 7. Proportion of Cumulative Positive Laboratory Tests (n = 7202) by Influenza Subtype, Connecticut (as of 9/23/2014)**

