



Chicago Flu Update



City of Chicago
Rahm Emanuel, Mayor

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Chicago Department of Public Health
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What is the risk?

Currently, the risk of influenza infection is low. Vaccination is the best way to protect against influenza infection and all Chicagoans aged six months and older are encouraged to get vaccinated. Chicagoans should ask their healthcare provider or pharmacist about vaccine availability. For those without a healthcare provider or whose healthcare providers do not have the influenza vaccine, a schedule of [City of Chicago influenza vaccine clinics](#)¹ is available on the City website and by calling 311. To locate the closest City of Chicago clinic or retail pharmacy, go to www.chicagoflushots.org.

Are severe cases of influenza occurring?

The Illinois Department of Public Health (IDPH) has issued [influenza testing and reporting guidelines](#)². Suspected novel and variant influenza, pediatric influenza-associated deaths, influenza-associated ICU hospitalizations and outbreaks of influenza-like illness in a congregate setting should all be reported to CDPH via [IN-EDSS](#)³. For the week of November 9-15, 2014, one influenza-associated ICU hospitalization was reported which was positive for influenza A (H3N2).

Since September 28, 2014, four influenza-associated ICU hospitalizations have been reported (**Figure 1**). Among the total ICU hospitalizations reported 3 were positive for influenza A (2 H3N2 and 1 unknown subtype) and 1 was positive for influenza B.

How much influenza-like illness is occurring?

CDPH receives data from over 60 surveillance sites across Chicago, which report the total number of patient visits seen weekly, and of those visits, the number with influenza-like illness (ILI) (i.e., fever of 100°F or greater, with cough or sore throat). All hospitals in Chicago that provide emergent care are required to report on a weekly basis the total number of emergency department visits, and of those visits, the number with ILI. For the week of November 9-15, 2014 (week 46), with 14 hospitals reporting, 2.7% of emergency department visits were due to ILI (**Figure 2**).

ESSENCE is an electronic syndromic surveillance system that utilizes emergency department chief complaint data submitted daily by participating Chicago hospitals. ILI activity is determined solely based on the patient's chief complaint and does not take into account the entire medical record, as the ILI activity reported in **Figure 2** does.

Currently, 10 Chicago hospitals submit data to ESSENCE. For the week of November 9-15, 2014, <1% of emergency department visits were due to ILI (**Figure 3**). Several outpatient clinics and hospital emergency departments throughout Chicago participate in CDC's Influenza-like Illness Surveillance Network (**ILINet**) by reporting on the number of patients with ILI seen weekly. From November 9-15, 2014, with 45 facilities reporting, 3.1% of visits were due to influenza-like illness (**Figure 4**).

Figure 1. Number of influenza-associated intensive care unit hospitalizations reported for Chicago residents, for current season (2014-2015) and previous season (2013-2014), October-May.

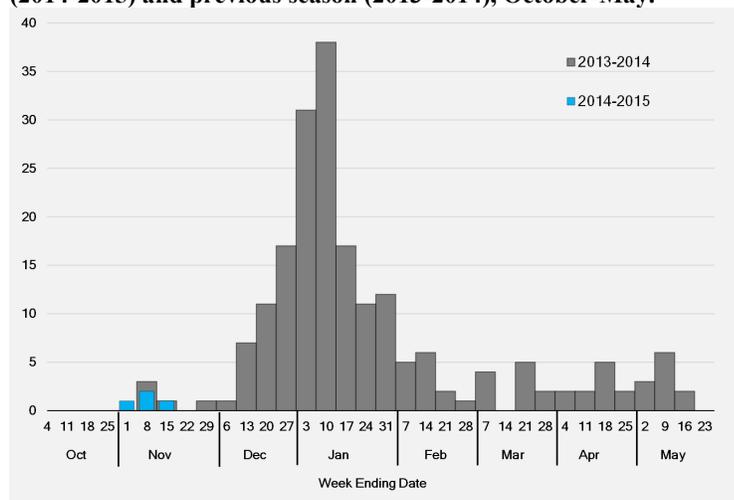
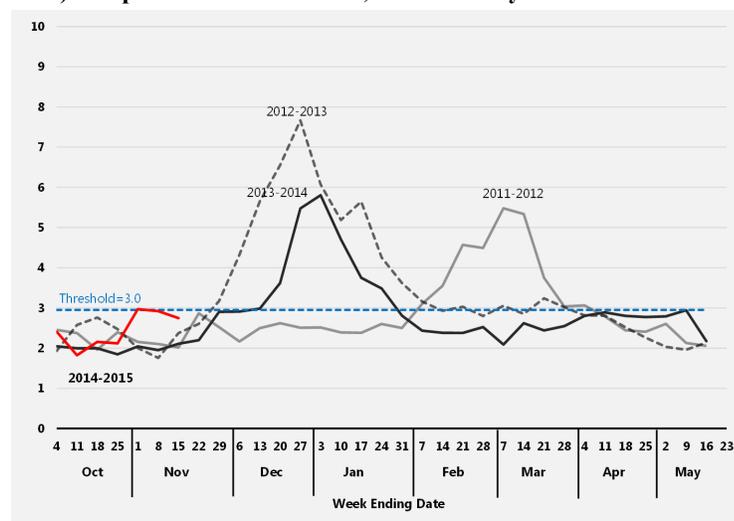


Figure 2. Percent of emergency department visits attributed to influenza-like illness based on manual reporting as determined by individual hospitals, Chicago, by week, for the current season (2014-2015) and previous three seasons, October-May.



¹http://www.cityofchicago.org/city/en/depts/cdph/provdrs/flu/svcs/cdph_flu_shot_sitesacrosschicago.html; ²http://www.idph.state.il.us/flu/OHPLabs-Influenza_annual_Testing_and_Reporting_Memo_01_10-2-2014.pdf; ³<https://dph.partner.illinois.gov/>

Which influenza strains are circulating?

Data on influenza virus test results are reported by Chicago laboratories performing influenza subtyping. For the week of November 9-15, 2014, with 6 laboratories reporting, 12 of the 375 (3.2%) specimens tested for influenza were positive. Among this week's positive specimens, 11 were typed as influenza A (9 H3N2 and 1 unknown subtype) and 1 was typed as influenza B. Since September 28, 2014, 25 of 2,402 (1%) specimens tested for influenza have been positive; 16 typed as influenza A (13 H3N2 and 3 unknown subtype) and 9 were typed as influenza B. (Figure 5).

Influenza A (H3N2) Antigenic Drift

CDC surveillance of influenza viruses shows that some of the influenza A (H3N2) viruses collected domestically and internationally in recent months are antigenically different ("drifted") from the H3N2 vaccine component. Only 13 influenza A (H3N2) viruses collected in the U.S. since October 1, 2014 have been characterized so far this season. Of these, seven (54%) are like the A (H3N2) vaccine virus; most of the remaining six (46%) have been characterized as an antigenic variant virus which has been selected for the 2015 Southern Hemisphere influenza vaccine. If drifted influenza A (H3N2) viruses circulate broadly in the U.S. this season, this could translate into a reduced vaccine effectiveness against circulating H3N2 viruses. However, studies have shown evidence that seasonal influenza vaccination can sometimes induce cross-protection. While the vaccine effectiveness may be reduced, the vaccine can still offer protection. In addition, more than one type of influenza usually circulates during a single season and influenza vaccines protect against three or four different influenza viruses. Vaccination continues to offer the best protection against influenza infection even when there are some antigenically drifted viruses circulating in the community.

Where can I get more information?

The Centers for Disease Control and Prevention's [FluView](http://www.cdc.gov/flu/weekly/index.htm)⁴ report provides national updates and trends related to the intensity of influenza activity across the United States, as well as detailed information on antiviral resistance, severity of illness, and other topics. Updates specific to [Illinois](http://www.idph.state.il.us/flu/surveillance.htm)⁵ and [Suburban Cook County](http://www.cookcountypublichealth.org/data-reports#Influenza)⁶ are also available online. Current and archived issues of the *Chicago Flu Update* can be found on the CDPH website section [Current Flu Situation in Chicago](http://www.cityofchicago.org/city/en/depts/cdph/supp_info/influenza/current_flu_situationinchicago2011.html)⁷. In 2013, the Metropolitan Chicago Healthcare Council (MCHC) and CDPH released "[Stop the Spread: A Health Care Guide to Influenza Preparedness](http://www.mchc.com/EWEB/upload/MCHC_Influenza_2013.pdf)"⁸. This report provides an overview of influenza, its impact on public health and how hospitals can prepare for, mitigate the impact of and respond to influenza infections and outbreaks.

Figure 3. Percent of **emergency department** visits attributed to influenza-like illness based on chief complaint data submitted to **ESSENCE**, Chicago, by week, for the current season (2014-2015) and the previous three seasons, October-May.

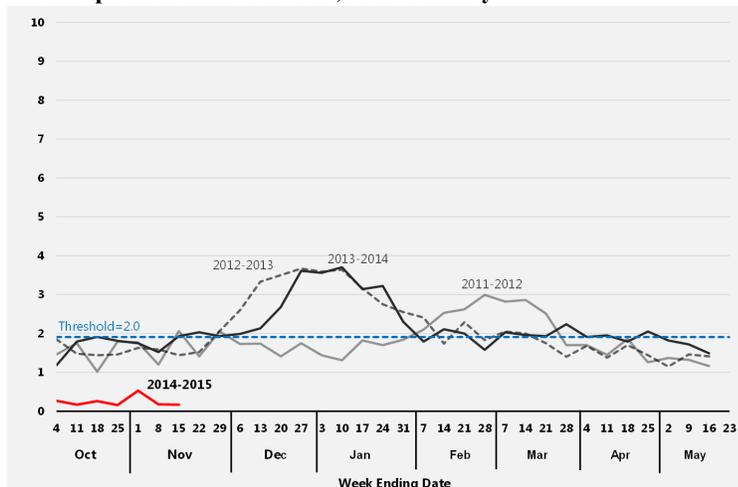


Figure 4. Percent of medically attended visits attributed to influenza-like illness as reported by ILINet facilities, Chicago, by week, for the current season (2014-2015) and the previous three seasons, October-May.

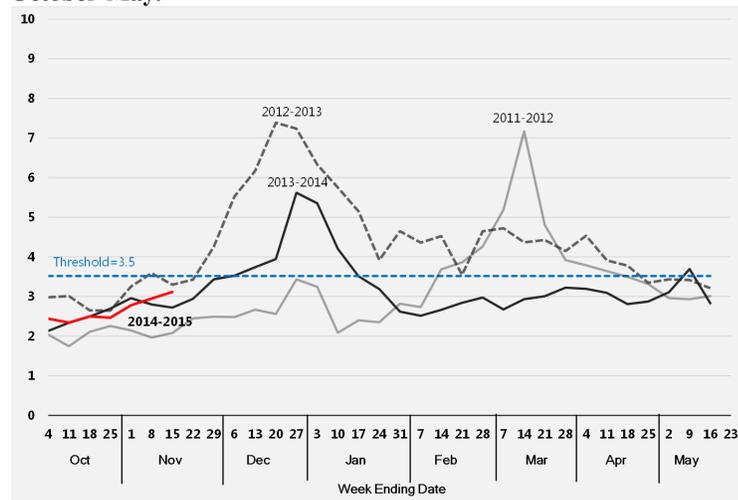
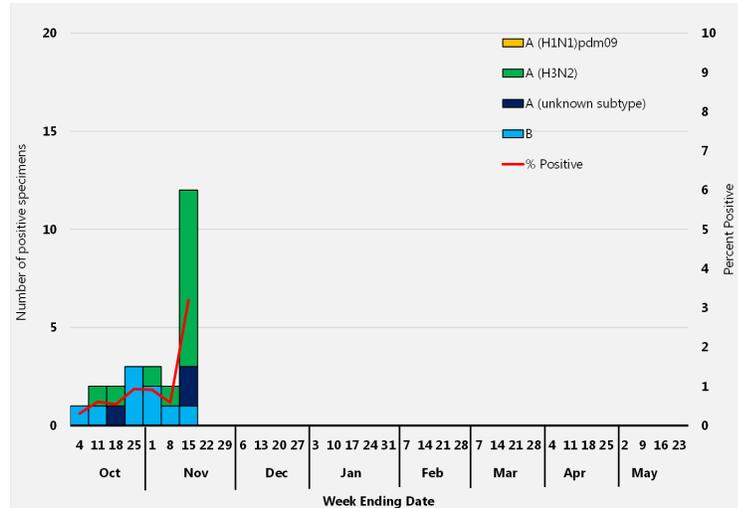


Figure 5. Percent of specimens testing positive (by RT-PCR) for influenza by subtype as reported by local laboratories serving Chicago hospitals, for the current season (2014-2015) October-May.



⁴<http://www.cdc.gov/flu/weekly/index.htm>; ⁵<http://www.idph.state.il.us/flu/surveillance.htm>; ⁶<http://www.cookcountypublichealth.org/data-reports#Influenza>; ⁷http://www.cityofchicago.org/city/en/depts/cdph/supp_info/influenza/current_flu_situationinchicago2011.html; ⁸http://www.mchc.com/EWEB/upload/MCHC_Influenza_2013.pdf