



Chicago Flu Update



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News & Updates

Among reported pediatric influenza-associated ICU hospitalizations, 55% tested positive for influenza B compared to 14% among those 50 years of age and older; a recent [study](#)¹ has shown that mortality associated with pediatric influenza B infection was greater than that of influenza A and among healthy children hospitalized with influenza B, those 10 years and older had a significant risk of ICU admission. An influenza quadrivalent vaccine is available that is designed to protect against two influenza A viruses and two influenza B viruses; everyone 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 list of [City of Chicago Fast-Track Immunization Clinics](#)² 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.

What is the risk?

Currently, the risk of influenza infection is high.

Are severe cases of influenza occurring?

For the week of February 26-March 4, 2017, 25 influenza-associated ICU hospitalizations were reported (Figure 1).

Since October 2, 2016, 169 influenza-associated ICU hospitalizations have been reported; 125 were positive for influenza A (75 H3N2, 1 H1N1pdm09 and 49 unknown subtype [subtyping not attempted or not all subtypes tested]) and 44 were positive for influenza B. The median age of reported cases is 60 years (range of 2 months - 100 years). Seven deaths have been reported among ICU cases including one pediatric patient and 14 cases were admitted from long-term care facilities; selected characteristics are summarized in **Table 1**.

Table 1. Selected attributes of influenza-associated intensive care unit hospitalizations reported for Chicago residents for current season (2016-2017), October-May.

Age Group	#	%*	Sex	#	%
0-4	15	9	Male	75	44
5-17	16	9	Female	94	56
18-24	4	2	Med. Cond./Complication [†]		
25-49	24	14	Lung Disease	57	34
50-64	36	21	Cardiac Disease	49	29
≥65	74	44	Diabetes	49	29
			Ventilator Support	46	27
Race/Ethnicity			Treatment/Vaccination [†]		
NH-White	51	30	Reported Deaths	7	4
NH-Black	60	36	Reported Antiviral Tx	118	70
Hispanic	48	28	Reported Flu Shot	72	43
Asian	10	6			

* Percentages may not add up to 100 due to rounding; † Among cases with reported information.

How much influenza-like illness is occurring?

CDPH receives data from influenza 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).

Several hospitals in Chicago that provide emergent care report on a weekly basis the total number of emergency department visits, and of those visits, the number with ILI. For the week of February 26-March 4, 2017, with 9 hospitals reporting, 4.6% of emergency department visits were due to ILI (Figure 2).

Figure 1. Number of influenza-associated ICU hospitalizations reported for Chicago residents, for the current season (2016-2017) by influenza type and subtype, October-May.

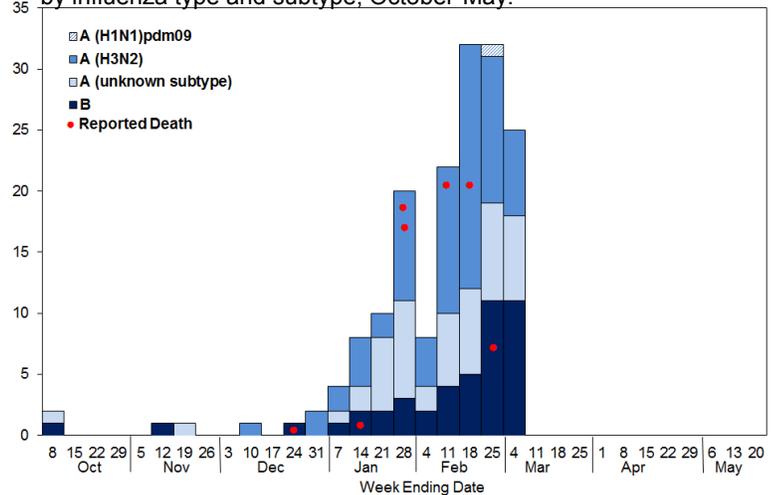
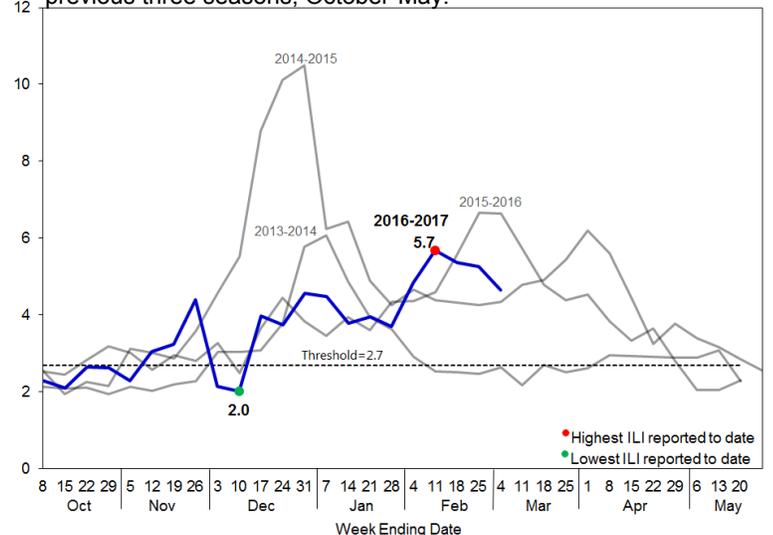


Figure 2. Percent of emergency department visits attributed to influenza-like illness based on manual reports by individual hospitals, Chicago, by week, for the current season (2016-2017) and previous three seasons, October-May.



¹ <http://pediatrics.aappublications.org/content/early/2016/08/15/peds.2015-4643>; ² https://www.cityofchicago.org/city/en/depts/cdp/supp_info/clinical_health/immunizations_walk-inclinics.html

ESSENCE is an electronic syndromic surveillance system that utilizes emergency department chief complaint data submitted daily by 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, all Chicago hospitals submit data to ESSENCE, covering every emergency department visit in the city. For the week of February 26-March 4, 2017, 3.4% of all emergency department visits were due to ILI; Northside hospitals had slightly higher ILI at 4.1%, followed by Southside hospitals at 3.6% and Westside hospitals had lower ILI at 2.6% (**Figure 3**).

Several outpatient clinics throughout Chicago participate in CDC's Influenza-like Illness Surveillance Network (**ILINet**) by reporting on the number of patients with ILI seen weekly. For the week of February 26-March 4, 2017, with 23 facilities reporting, 6.8% of outpatient visits were due to influenza-like illness (**Figure 4**).

Which influenza strains are circulating?

Data on influenza virus test results are reported by Chicago laboratories performing influenza RT-PCR. For the week of February 26-March 4, 2017, with 5 laboratories reporting, 120 of the 663 (18.1%) specimens tested for influenza were positive (59 A (H3N2), 0 A (H1N1pdm09), 12 A [unknown subtype], and 49 influenza B).

Since October 2, 2016, 1,223 of 14,028 (8.7%) specimens tested for influenza have been positive; 880 typed as influenza A (757 H3N2, 13 H1N1pdm09, and 110 unknown subtype [subtyping not attempted or not all subtypes tested]) and 343 typed as influenza B (**Figure 5**). The cumulative percent of specimens testing positive for influenza is lower than previous seasons during the same time period when influenza A (H3N2) was the predominant strain (**Table 2**).

Table 2. Cumulative percent of specimens testing positive for influenza by RT-PCR by type for the current season (2016-2017) and the previous four seasons, Chicago, Weeks 40-09.

Influenza Season	% Pos.	% A H3N2	% A H1N1pdm09	% A Not Sub-typed	% B
2012-2013*	14.2	73.8	6.3	13.8	6.2
2013-2014	8.7	2.0	69.9	25.6	2.5
2014-2015*	14.8	72.7	0	16.4	10.7
2015-2016	7.1	2.7	77.5	15.9	4.0
2016-2017*	8.7	61.9	1.1	9.0	28.0

* Influenza seasons where A (H3N2) was the predominant circulating strain

Where can I get more information?

The Centers for Disease Control and Prevention's **FluView**³ 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**⁴ and **Suburban Cook County**⁵ 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**.⁶

Figure 3. Percent of emergency department visits attributed to influenza-like illness by hospital region based on chief complaint data submitted to ESSENCE, Chicago, by week, for the current season (2016-2017) and previous three seasons, October-May.

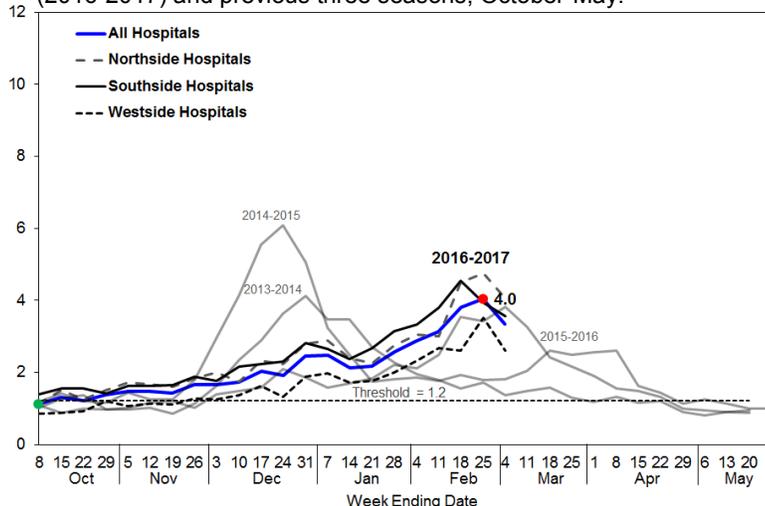


Figure 4. Percent of medically-attended outpatient visits attributed to influenza-like illness as reported by ILINet facilities, Chicago, by week, for the current season (2016-2017) and previous three seasons, October-May.

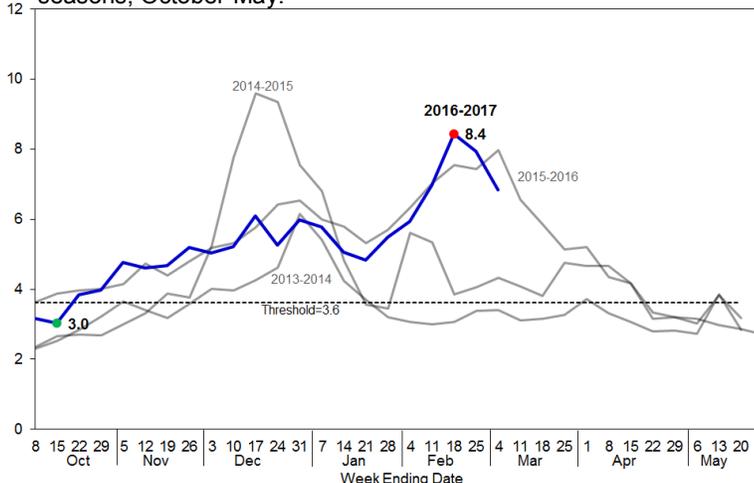
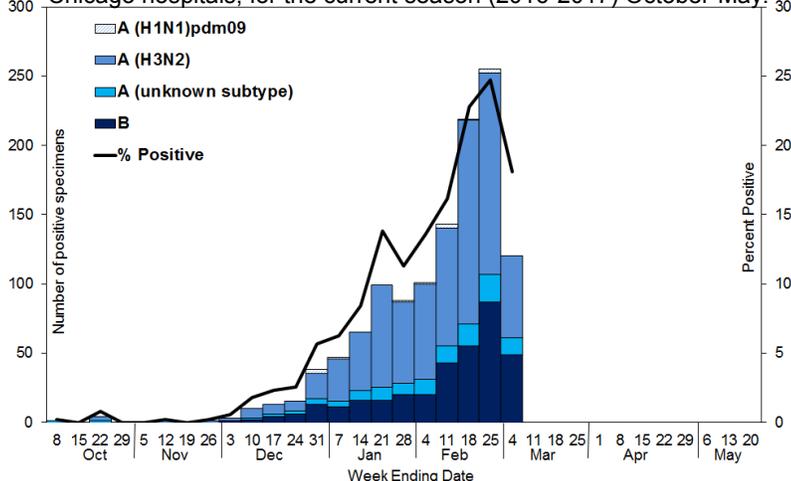


Figure 5. Percent of specimens testing positive (by RT-PCR) for influenza by subtype as reported by local laboratories serving Chicago hospitals, for the current season (2016-2017) October-May.



³<http://www.cdc.gov/flu/weekly/index.htm>; ⁴<http://dph.illinois.gov/topics-services/diseases-and-conditions/influenza/surveillance>; ⁵<http://cookcountypublichealth.org/data-reports/communicable-diseases>; ⁶http://www.cityofchicago.org/city/en/depts/cdph/supp_info/influenza/current_flu_situationinchicago2011.html