



Chicago Flu Update



Rahm Emanuel, Mayor

March 16, 2018

Julie Morita, MD, Commissioner

News & Updates

Influenza B continues to account for the majority of positive influenza specimens (64%) and of reported influenza-associated ICU hospitalizations (80%). During past influenza seasons, influenza B was the predominant circulating strain in the latter half of the influenza season. CDC interim 2017-2018 vaccine effectiveness estimates¹ report that the influenza vaccine is 42% effective against influenza B viruses. Vaccination is the best way to protect against influenza infection and all Chicagoans aged six months and older are encouraged to get vaccinated. In partnership with Walgreens pharmacy, CDPH has made additional influenza vaccine available for no out-of-pocket cost to individuals who are uninsured or unable to pay; visit the CDPH website² for specific pharmacy locations. Also available is the City's easy-to-use interactive map³ to find a location near you to get a flu shot.

What is the risk?

Currently, the risk of influenza infection has decreased.

Are severe cases of influenza occurring?

For the week of March 4-10, 2018, 15 influenza-associated ICU hospitalizations were reported (Figure 1).

Since October 1, 2017, 485 influenza-associated ICU hospitalizations have been reported; 407 were positive for influenza A (128 H3N2, 18 H1N1, and 261 unknown subtype [subtyping not attempted or not all subtypes tested]) and 78 were positive for influenza B. The median age of reported cases is 62 years (range of 5 days-102 years); 51 (11%) cases were admitted from long-term care facilities (LTCF) and 19 outbreaks have been reported in LTCFs; two pediatric deaths were reported including one ICU hospitalization; selected attributes are summarized in Table 1.

There were 33 reported deaths[‡] among influenza-associated ICU hospitalizations; twenty-five (76%) were positive for influenza A, 18 (55%) were 65 years of age and older, and five (15%) had a reported influenza vaccination. The median number of days from a positive influenza test to death was three days (range of 1-6 days).

Table 1. Selected attributes of influenza-associated intensive care unit hospitalizations reported for Chicago residents during the 2017-2018 season, October-May.

Age Group	#	%	Sex	#	%
0-4	42	9	Male	221	46
5-17	34	7	Female	264	54
18-24	15	3	Med. Cond./Complication [†]		
25-49	59	12	Lung Disease	141	29
50-64	124	26	Cardiac Disease	132	27
≥65	211	44	Diabetes	115	24
			Ventilator Support	120	25
Race/Ethnicity			Reported Deaths [‡]	33	7
NH-White	124	26	Treatment/Vaccination [†]		
NH-Black	253	52	Reported Antiviral Tx	350	72
Hispanic	95	20	Reported Flu Shot	143	29
Asian/Other	13	3			

* Percentages may not add up to 100 due to rounding. † As reported in INEDSS (Illinois National Electronic Disease Surveillance System); ‡ Date of death occurring within one week of positive influenza test among reported influenza-associated ICU hospitalizations.

laboratories performing influenza RT-PCR. For the week of March 4-10, 2018, with 6 laboratories reporting, 188 of the 1,014 (18.5%) specimens tested for influenza were positive [31 A (H3N2), 2 A (H1N1)pdm09, 34 A unknown subtype and 121 influenza B] (Figure 2). Since October 1, 2017, 4,305 of 22,959 (18.7%) specimens tested for influenza have been positive; 3,538 typed as influenza A (1,218 H3N2, 165 (H1N1)pdm09, 2,155 unknown subtype [subtyping not performed or not all subtypes tested]) and 767 typed as influenza B.

Figure 1. Number of influenza-associated ICU hospitalizations reported for Chicago residents, for the current season (2017-2018) by influenza type and subtype, October-May.

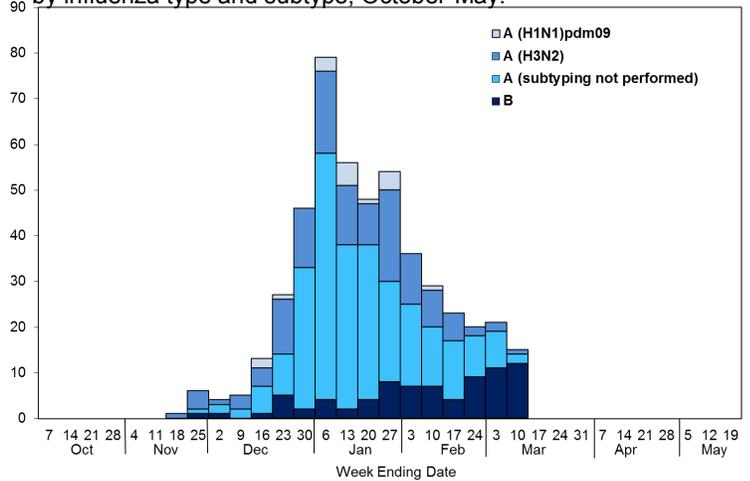
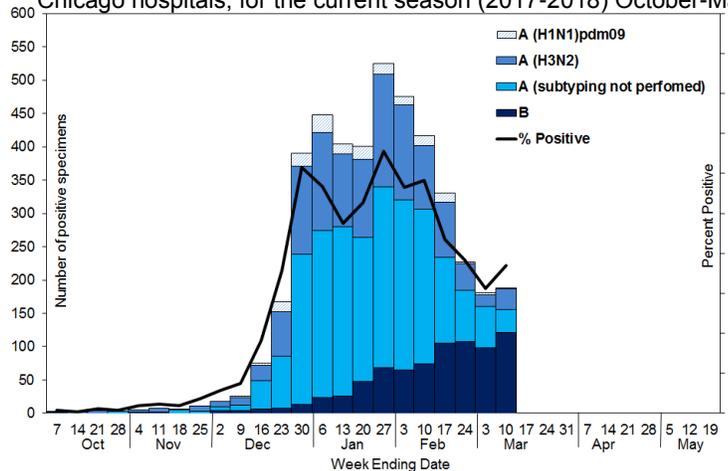


Figure 2. Percent of specimens testing positive (by RT-PCR) for influenza by subtype as reported by local laboratories serving Chicago hospitals, for the current season (2017-2018) October-May.



Which influenza strains are circulating?

Data on influenza virus test results are reported by Chicago laboratories performing influenza RT-PCR. For the week of March 4-10, 2018, with 6 laboratories reporting, 188 of the 1,014 (18.5%) specimens tested for influenza were positive [31 A (H3N2), 2 A (H1N1)pdm09, 34 A unknown subtype and 121 influenza B] (Figure 2). Since October 1, 2017, 4,305 of 22,959 (18.7%) specimens tested for influenza have been positive; 3,538 typed as influenza A (1,218 H3N2, 165 (H1N1)pdm09, 2,155 unknown subtype [subtyping not performed or not all subtypes tested]) and 767 typed as influenza B.

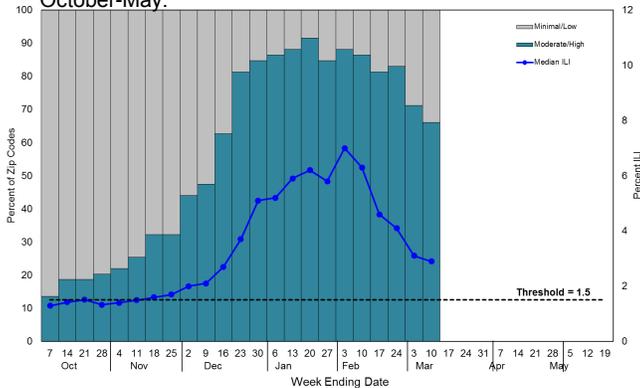
How much influenza-like illness is occurring?

ESSENCE is an electronic syndromic surveillance system used to monitor influenza-like illness by utilizing the chief complaints of patients visiting emergency departments. Currently, all Chicago hospitals submit data to ESSENCE on a daily basis, covering every emergency department visit in the city. For the week of March 4-10, 2018, 838 of the 25,118 (3.3%) total emergency department visits were due to influenza-like illness (ILI) (Figure 3). Children less than five years of age had the highest percentage of visits due to ILI at 10.0%, down from a peak of 19.4% five weeks ago.

In addition to emergency departments, several outpatient clinics throughout Chicago participate in CDC's Influenza-like Illness Surveillance Network (ILINet) by also reporting on a weekly basis the total number of outpatient clinic visits, and of those visits, the number with influenza-like illness (ILI). For the week of March 4-10, 2018, with 22 facilities reporting, 2.1% of outpatient clinic visits were due to influenza-like illness (Figure 4).

Figure 5 represents the percentage of emergency department visits due to influenza-like illness aggregated by patient zip code. For the week of March 4-10, 2018, 39 of 59 (66%) zip codes had ILI activity levels in the moderate to high categories and 20 (34%) had ILI activity levels in the minimal to low categories; the median percent ILI was 2.9% with a range from <1% to 11.1% (Figure 6).

Figure 6. Percent of zip codes with minimal/low and moderate/high ILI activity levels and overall median ILI, Chicago, by week, for the current season (2017-2018), October-May.



Where can I get more information?

The Centers for Disease Control and Prevention's FluView⁴ 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 Illinois⁵ and Suburban Cook County⁶ 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 Chicago⁷.

Reporting Information

The Illinois Department of Public Health (IDPH) has issued influenza testing and reporting recommendations⁸ healthcare facilities can report cases to the Chicago Department of Public Health via the Illinois National Electronic Disease Surveillance System (INEDSS)⁹

Figure 3. Percent of emergency department visits attributed to influenza-like illness for Chicago zip codes based on chief complaint data submitted to ESSENCE, Chicago, by week, for the current season (2017-2018) and previous season, October-May.

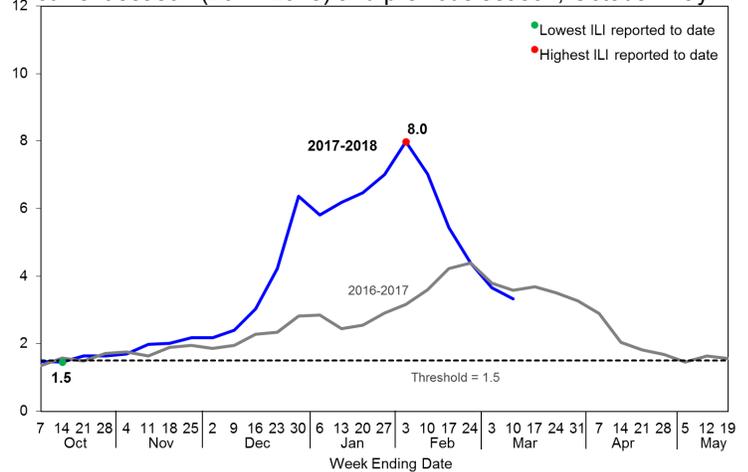


Figure 4. Percent of medically-attended outpatient visits attributed to influenza-like illness as reported by ILINet facilities, Chicago, by week, for the current season (2017-2018) and previous three seasons, October-May.

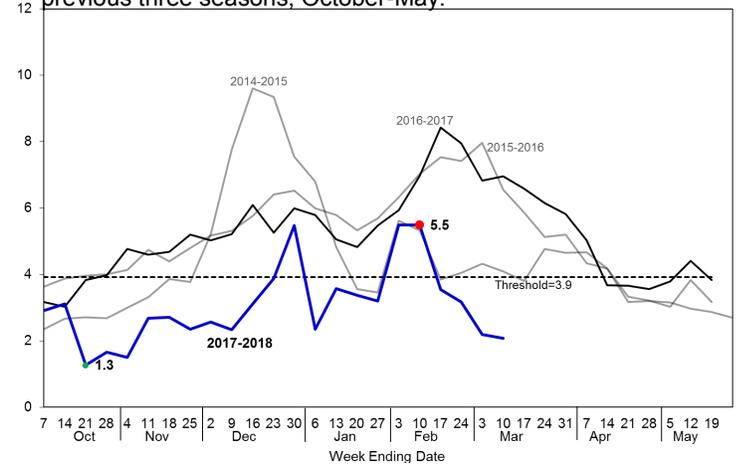
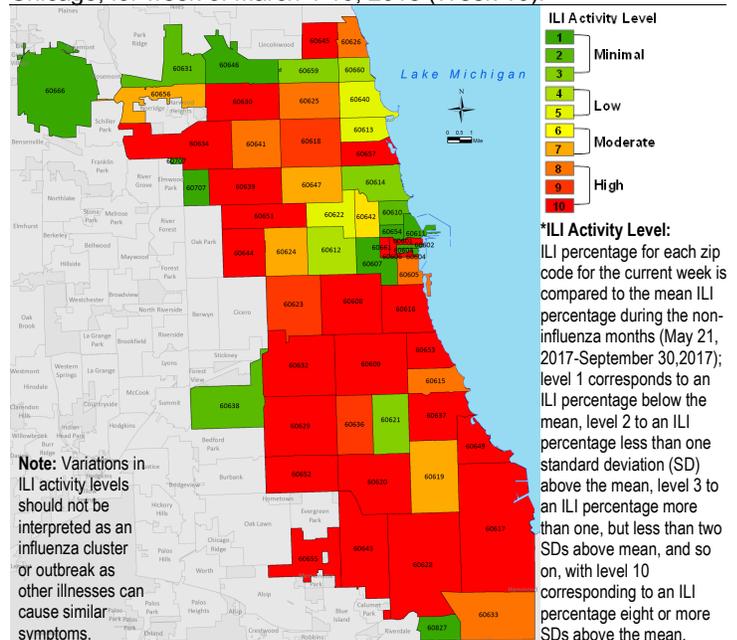


Figure 5. Influenza-like Illness (ILI) activity level by patient zip code determined by chief complaint data submitted to ESSENCE, Chicago, for week of March 4-10, 2018 (Week 10).



⁴ <http://www.cdc.gov/flu/weekly/index.htm>; ⁵ <http://dph.illinois.gov/topics-services/diseases-and-conditions/influenza/surveillance>; ⁶ <http://cookcountypublichealth.org/data-reports/communicable-diseases>; ⁷ https://www.cityofchicago.org/city/en/depts/cdpH/supp_info/health-protection/current_flu_situationinchicago2011.html;

⁸ <http://dph.illinois.gov/sites/default/files/publications/publications-ohp-annual-flu-testing-guidance-10132017.pdf>; ⁹ <https://dph.partner.illinois.gov/>