



Chicago Flu Update



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News & Updates

This will be the last *Chicago Flu Update* issued for the 2017-2018 influenza surveillance season; the next update will be issued in October 2018. CDPH will continue to monitor surveillance indicators throughout the summer months. Chicago received an immunization coverage award at the National Immunization Conference in Atlanta on May 15th for outstanding progress towards the Healthy People 2020 target of 70% influenza vaccination coverage for children aged 6 months to 17 years during the 2016-2017 influenza season. Vaccination is the best way to protect against influenza infection and all Chicagoans aged six months and older are encouraged to get vaccinated annually.

What is the risk?

Currently, the risk of influenza infection is low.

Are severe cases of influenza occurring?

For the week of May 13-19, 2018, one influenza-associated ICU hospitalization was reported (**Figure 1**).

Since October 1, 2017, 582 influenza-associated ICU hospitalizations have been reported; 437 (75%) were positive for influenza A (135 H3N2, 20 H1N1, and 282 unknown subtype [subtyping not attempted or not all subtypes tested]) and 145 (25%) were positive for influenza B. The median age of reported cases is 63 years (range of 5 days-102 years); 62 (11%) cases were admitted from long-term care facilities (LTCF) and 22 outbreaks have been reported in LTCFs; three pediatric deaths were reported including one ICU hospitalization; selected attributes are summarized in **Table 1**.

There were 38 reported deaths[‡] among influenza-associated ICU hospitalizations; twenty-six (68%) were positive for influenza A, 21 (55%) were 65 years of age and older, and seven (18%) had a reported influenza vaccination. The median number of days from influenza test performed to death was two and a half 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	44	8	Male	268	46
5-17	42	7	Female	314	54
18-24	17	3	Med. Cond./Complication [†]		
25-49	68	12	Lung Disease	166	29
50-64	145	25	Cardiac Disease	164	28
≥65	266	46	Diabetes	141	24
Race/Ethnicity			Ventilator Support	147	25
NH-White	143	25	Reported Deaths [‡]	38	7
NH-Black	305	52	Treatment/Vaccination [†]		
Hispanic	116	20	Reported Antiviral Tx	430	74
Asian/Other	18	3	Reported Flu Shot	171	29

^{*} 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.

(1.6%) specimens tested for influenza were positive [1 A (H3N2), 1 A (H1N1)_{pdm09}, 0 A unknown subtype and 7 influenza B] (**Figure 2**). Since October 1, 2017, 5,085 of 30,912 (16.4%) specimens tested for influenza have been positive; 3,681 typed as influenza A (1,267 H3N2, 175 (H1N1)_{pdm09}, 2,239 unknown subtype [subtyping not performed or not all subtypes tested]) and 1,404 typed as influenza B. Overall, the 2017-2018 season had the highest percentage of specimens testing positive for influenza since the 2009 pandemic; last season, approximately 10% of specimens tested for influenza were positive. This season also saw the highest number of specimens tested for influenza (and other respiratory viruses); a 43% increase from last season.

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.

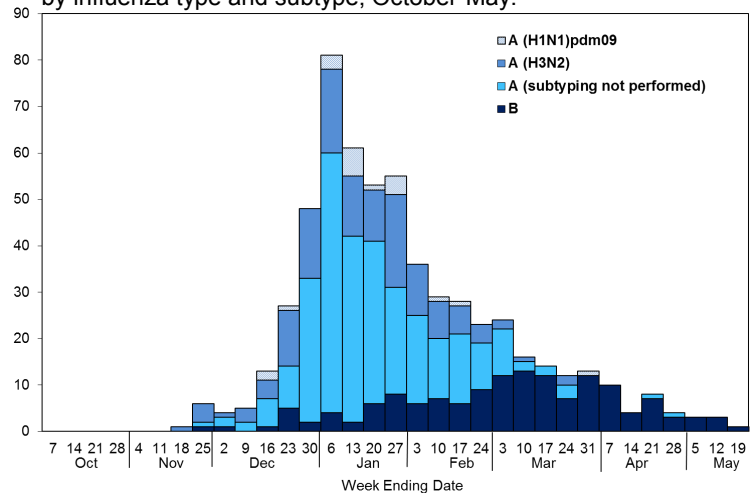
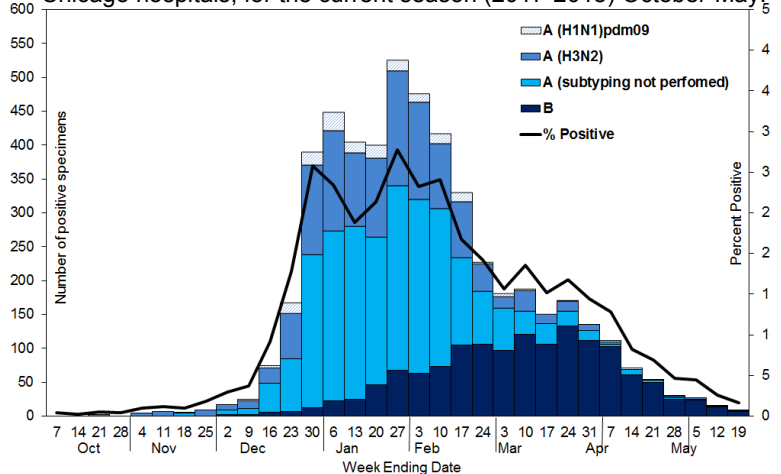


Figure 2. Percent of specimens testing positive (by RT-PCR) for influenza by subtype as reported by local laboratories serving Chicago hospitals, for the current season (2017-2018) October-May.



Which influenza strains are circulating?

Data on influenza virus test results are reported by Chicago laboratories performing influenza RT-PCR. For the week of May 13-19, 2018, with 6 laboratories reporting, 9 of the 552

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 May 13-19, 2018, 393 of the 24,891 (1.6%) total emergency department visits were due to influenza-like illness (ILI) (Figure 3).

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 May 13-19, 2018, with 21 facilities reporting, 1.6% 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 May 13-19, 2018, 12 of 59 (20%) zip codes had ILI activity levels in the moderate to high categories and 47 (80%) had ILI activity levels in the minimal to low categories; the median percent ILI was 1.4% (range of <1%-4%) (Figure 6).

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.

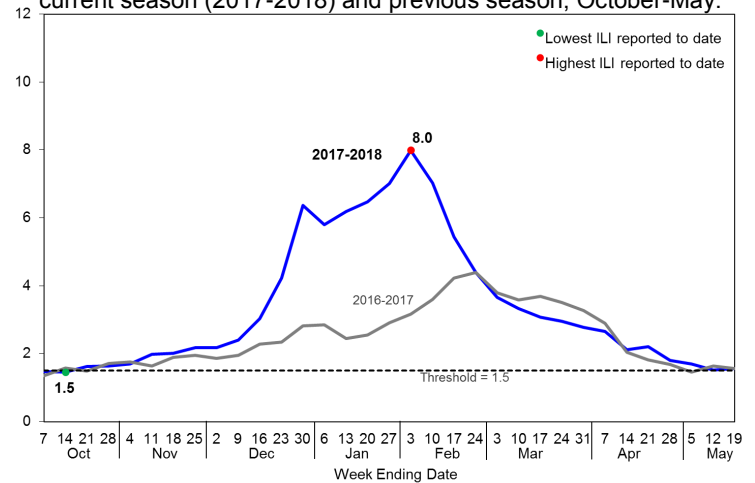


Figure 4. Percent of medically-attended outpatient visits attributed to influenza-like illness as reported by ILINet facilities, Chicago, by week, for the current season (2017-2018) and previous three seasons, October-May.

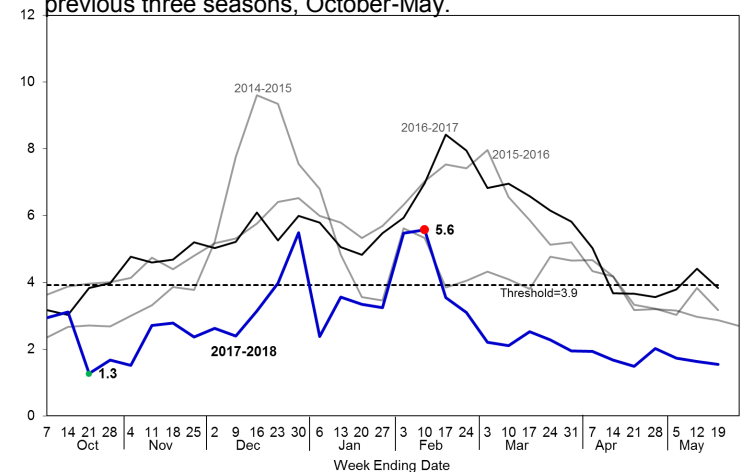


Figure 5. Influenza-like Illness (ILI) activity level by patient zip code determined by chief complaint data submitted to ESSENCE, Chicago, for week of May 13-19, 2018 (Week 20).

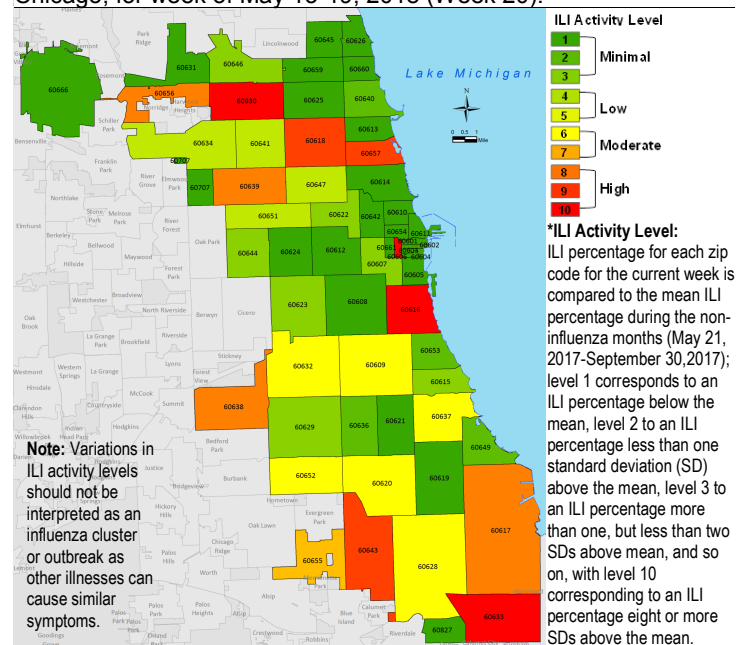
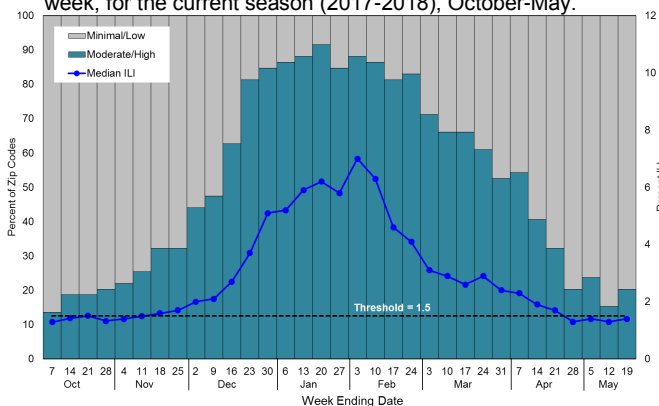


Figure 6. Percent of zip codes with minimal/low and moderate/high ILI activity levels and overall median ILI, Chicago, by week, for the current season (2017-2018), October-May.



Where can I get more information?

The Centers for Disease Control and Prevention's FluView¹ 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 Illinois² and Suburban Cook County³ 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 Chicago⁴.

Reporting Information

The Illinois Department of Public Health (IDPH) has issued influenza testing and reporting recommendations⁵ healthcare facilities can report cases to the Chicago Department of Public Health via the Illinois National Electronic Disease Surveillance System (INEDSS)⁶

All data are preliminary and may change as more reports are received.

¹ <http://www.cdc.gov/flu/weekly/index.htm>; ² <http://dph.illinois.gov/topics-services/diseases-and-conditions/influenza/surveillance>; ³ <http://cookcountypublichealth.org/data-reports/communicable-diseases>; ⁴ https://www.cityofchicago.org/city/en/depts/cdpH/supp_info/health-protection/current_flu_situationinchicago2011.html;

⁵ <http://dph.illinois.gov/sites/default/files/publications/publications-ohp-annual-flu-testing-guidance-10132017.pdf>; ⁶ <https://dph.partner.illinois.gov/>