Chicago Influenza Surveillance Activity Report

Surveillance Week 40 (September 29-October 5, 2019)

Chicago Flu Update

HEALTHY CHICAGO
CHICAGO DEPARTMENT OF PUBLIC HEALTH

Lori E. Lightfoot, Mayor | October 11, 2019 | Allison Arwady, MD, MPH, Acting Commissioner

News & Updates

This is the first *Chicago Flu Update* of the 2019-2020 influenza season. This report will be issued every Friday until May 2020. The Illinois Department of Public Health recently issued Influenza Testing and Reporting Guidance[1] which outlines influenza testing recommendations and reporting requirements. Vaccination is the best way to protect against influenza infection and all Chicagoans 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 vaccination 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.

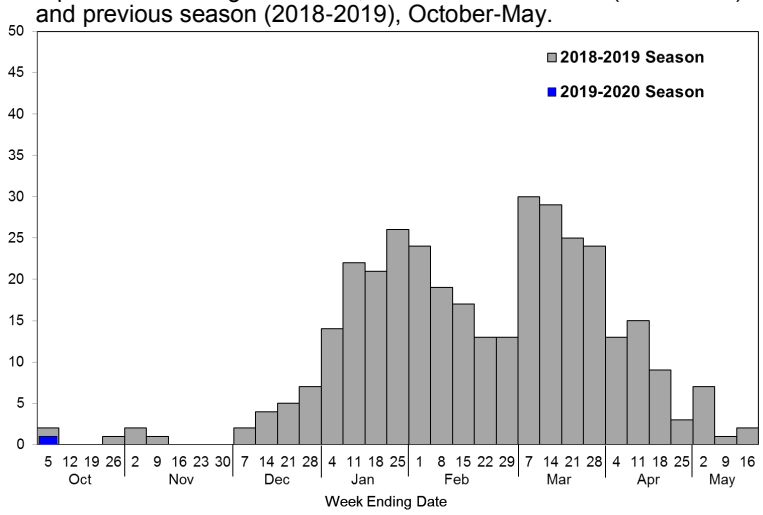
What is the risk?

Currently, the risk of influenza infection is low.

Are severe cases of influenza occurring?

For the week of September 29-October 5, 2019, one influenza-associated ICU hospitalization was reported, which was positive for influenza A (H3N2) (**Figure 1**).

Figure 1. Number of influenza-associated ICU hospitalizations reported for Chicago residents, for the current season (2019-2020) and previous season (2018-2019), October-May.



Influenza Season Severity

The CDC Influenza Division recently published[3] a study on utilizing surveillance indicators to assess the overall severity of influenza seasons which may help guide public health action.

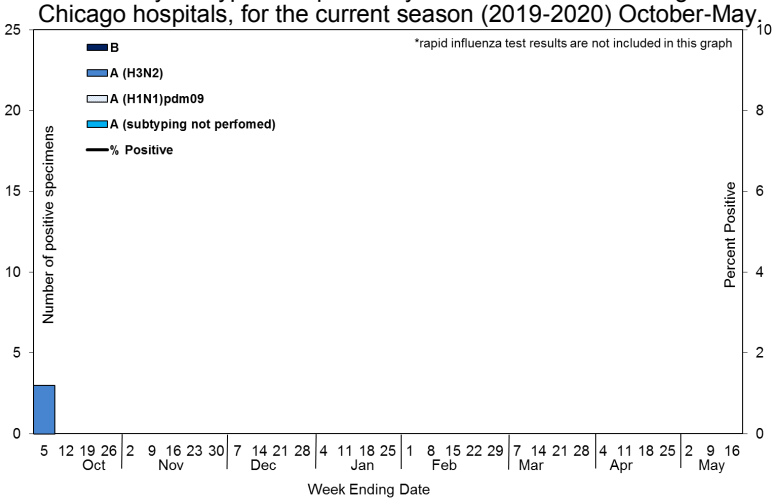
Applying these methods to Chicago surveillance indicators, severity was determined for the previous nine influenza seasons (**Table 1**). The severity of Chicago influenza seasons closely matched those assessed in the study. The majority of the Chicago influenza seasons were categorized as *moderate* severity while two influenza seasons were categorized as *high* and *very high* severity. The 2014-2015 season was characterized by the mismatch of the influenza A (H3N2) virus component of the vaccine to circulating virus and 2017-2018 was characterized by a record number of ICU hospitalizations and a high percentage of specimens testing positive for influenza. The 2018-2019 season was categorized as *low* severity; CDC national data was consistent with moderate severity. Assessing the severity of an influenza season can be useful for response efforts as well as for future planning activities.

Table 1. Influenza season severity for the previous nine seasons based on surveillance indicators, Chicago.

Severity Category*	Influenza Season
Very High	2014-2015
High	2017-2018
Moderate	2010-2011,2011-2012,2012-2013, 2013-2014,2015-2016,2016-2017
Low	2018-2019

*Preliminary; severity categories are based on the availability of current surveillance indicators, each of which has its own limitations.

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 (2019-2020) 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 September 29-October 5, 2019, 3 of the 373 (<1%) specimens tested for influenza were positive for influenza A (H3N2) (**Figure 2**). In 2018-2019, 31,105 specimens were tested for influenza (and other respiratory pathogens); a total of 3,292 (10.6%) were positive, the majority (94%) were influenza A. Among the positive influenza A specimens, only 1,023 (33%) were subtyped; of those subtyped, 728 (71%) were H1N1pdm09.

[1] www.dph.illinois.gov/sites/default/files/publications/20190916idphohp-annual-flu-testing.pdf [2] https://www.chicago.gov/city/en/depts/cdph/supp_info/health-protection/flu-clinics-in-the-city-of-chicago.html; [3] Biggerstaff M, Kniss K, Jernigan DB, et al. Systematic Assessment of Multiple Routine and Near Real-Time Indicators to Classify the Severity of Influenza Seasons and Pandemics in the United States, 2003-2004 Through 2015-2016. *Am J Epidemiol*. 2018;187(5):1040–1050.

How much influenza-like illness is occurring?

Several outpatient clinics throughout Chicago participate in CDC's Influenza-like Illness Surveillance Network (ILINet) by 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 September 29-October 5, 2019, 95 of the 5,737 (1.7%) reported outpatient clinic visits were due to influenza-like illness (**Figure 3**).

In addition to ILINet, ESSENCE is an electronic syndromic surveillance system that utilizes the chief complaints of patients visiting emergency departments to monitor for influenza-like illness. Currently, ESSENCE captures nearly every emergency department visit in the city on a daily basis. For the week of September 29-October 5, 2019, 393 of the 24,267 (1.6%) total emergency department 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 September 29-October 5, 2019, 10 of 59 (17%) zip codes had ILI activity levels in the moderate to high; this is similar to last season where 17% of zip codes were also at moderate to high levels for the same time period.

Where can I get more information?

The Centers for Disease Control and Prevention's FluView[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[5] and Suburban Cook County[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[7].

Reporting Information

Healthcare facilities can report cases to the Chicago Department of Public Health via the Illinois National Electronic Disease Surveillance System (INEDSS)[8]. Contact SyndromicSurveillance@cityofchicago.org for more information. The Chicago Department of Public Health has previously issued guidance on reporting influenza-associated ICU hospitalizations[9].

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WWW.CHICAGO.GOV/FLU

Figure 3. Percent of medically-attended **outpatient** visits attributed to influenza-like illness as reported by **ILINet** facilities, Chicago, by week for the current season (2019-2020) and previous season, October-May.

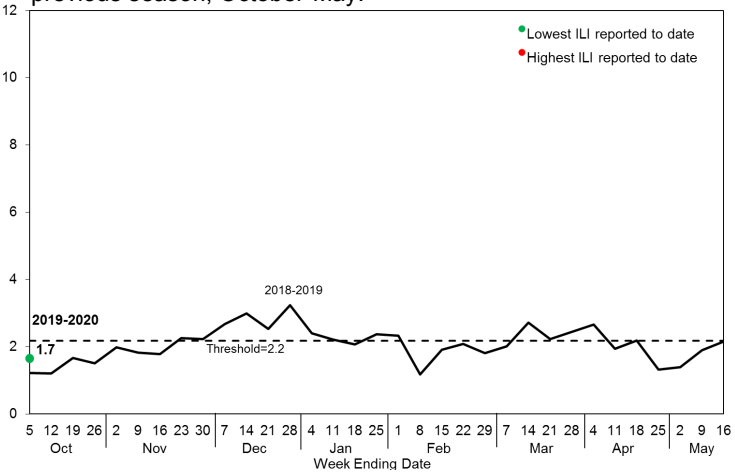


Figure 4. Percent of **emergency department** visits attributed to influenza-like illness for Chicago zip codes based on chief complaint data submitted to **ESSENCE**, Chicago, by week, for the current season (2019-2020) and previous two seasons, October-May.

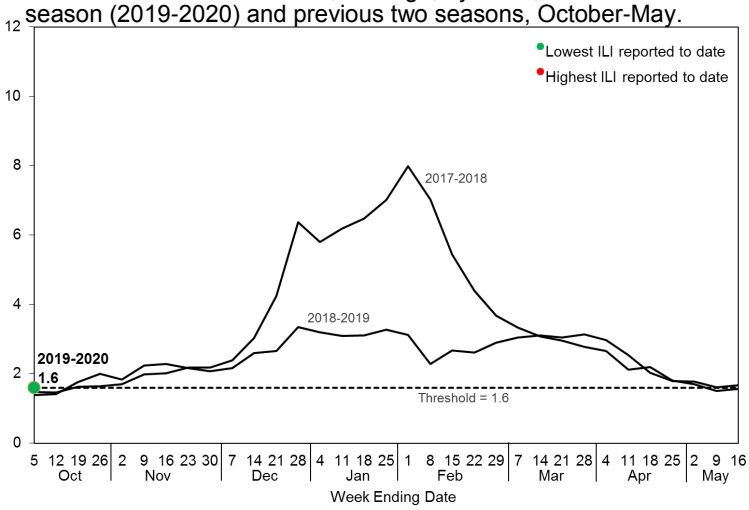
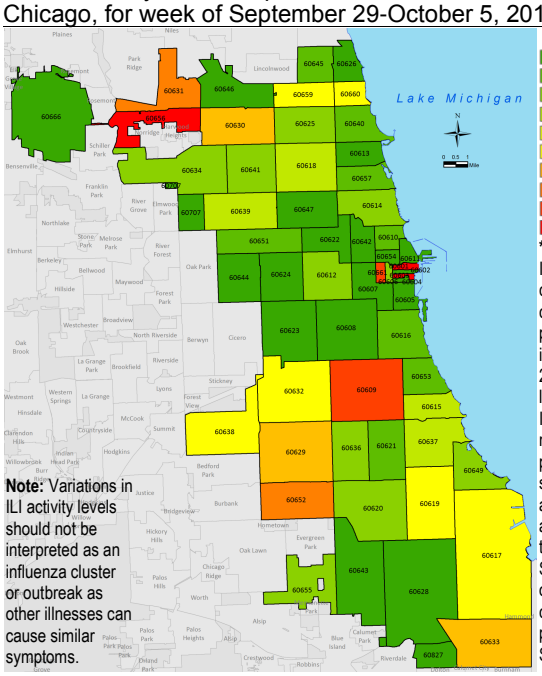


Figure 5. Influenza-like Illness (ILI) activity level by patient zip code determined by chief complaint data submitted to **ESSENCE**, Chicago, for week of September 29-October 5, 2019 (Week 40).



Note: Variations in ILI activity levels should not be interpreted as an influenza cluster or outbreak as other illnesses can cause similar symptoms.

***ILI Activity Level:** ILI percentage for each zip code for the current week is compared to the mean ILI percentage during the non-influenza months (May 19, 2019-September 28,2019); level 1 corresponds to an ILI percentage below the mean, level 2 to an ILI percentage less than one standard deviation (SD) above the mean, level 3 to an ILI percentage more than one, but less than two SDs above mean, and so on, with level 10 corresponding to an ILI percentage more than eight SDs above the mean.

[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] https://dph.partner.illinois.gov/ ; [9] https://www.chicagohan.org/documents/14171/39923/Reporting+Influenza-Associated+ICU+Hospitalizations/bc2f49b2-cf74-487c-9441-0b0a930e4b41