Chicago Flu Update

What is the risk?
Currently, the risk of influenza infection continues to increase.

Are severe cases of influenza occurring?
For the week of January 22-28, 2017, 13 influenza-associated ICU hospitalizations were reported (Figure 1).

Since October 2, 2016, 40 influenza-associated ICU hospitalizations have been reported; 30 were positive for influenza A (14 H3N2 and 16 unknown subtype [subtyping not attempted or not all subtypes tested]) and 10 were positive for influenza B. The median age of reported cases is 65 years (range of 2-96 years); selected attributes are summarized in Table 1.

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 January 22-28, 2017, with 9 hospitals reporting, 3.7% 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 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 January 22-28, 2017, 2.6% of all emergency department visits were due to ILI; Southside hospitals had slightly higher ILI at 3.2%, Northside hospitals at 2.7% and Westside hospitals had the lowest at 2.0% (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 January 22-28, 2017, with 24 facilities reporting, 5.5% 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 January 22-28, 2017, with 6 laboratories reporting, 88 of the 779 (11.3%) specimens tested for influenza were positive (59 A (H3N2), 1 A (H1N1pdm09), 8 A [unknown subtype], and 20 influenza B).

Since October 2, 2016, 385 of 9,745 (4.0%) specimens tested for influenza have been positive; 296 typed as influenza A (252 H3N2, 5 H1N1pdm09, and 39 unknown subtype [subtyping not attempted or not all subtypes tested]) and 89 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 where 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 three seasons, Chicago, Weeks 40-04.

<table>
<thead>
<tr>
<th>Influenza Season</th>
<th>% Pos.</th>
<th>% A H3N2</th>
<th>% A H1N1pdm09</th>
<th>% A Not Sub-typed</th>
<th>% B</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-2014</td>
<td>9.4</td>
<td>1.7</td>
<td>68.1</td>
<td>27.5</td>
<td>2.6</td>
</tr>
<tr>
<td>2014-2015</td>
<td>16.9</td>
<td>77.8</td>
<td>0</td>
<td>17.5</td>
<td>4.5</td>
</tr>
<tr>
<td>2015-2016</td>
<td>1.7</td>
<td>5.2</td>
<td>66.9</td>
<td>22.1</td>
<td>5.8</td>
</tr>
<tr>
<td>2016-2017</td>
<td>4.0</td>
<td>65.5</td>
<td>1.3</td>
<td>10.1</td>
<td>23.1</td>
</tr>
</tbody>
</table>

**Where can I get more information?**

The Centers for Disease Control and Prevention’s FluView® 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® and Suburban Cook County® 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®.