I. Influenza-like Illness (ILI) Weekly Summary

- Influenza activity is currently **high**. This risk assessment is based on:
  - The proportion of emergency department visits for ILI was 3.65%, above the regional baseline of 1.02%, and has been increasing for four weeks.
  - The proportion of outpatient provider visits for ILI was 2.64%, above the regional baseline of 0.84%, and has been increasing for one week.
  - The proportion of deaths associated with pneumonia or influenza was 6.77%, below the epidemic threshold of 7.53%.
- 1,195 (31.07%) laboratory specimens tested positive for influenza: 178 influenza A H3N2, 1 influenza A H1N1, 601 influenza A unknown subtype, and 415 influenza B.
- 33 influenza-associated intensive care unit (ICU) hospitalizations were reported during Week 8. 137 ICU hospitalizations have been reported since Week 35 (8/28/16).
- Since Week 35, suburban Cook County has had 0 influenza-associated pediatric deaths, 15 clusters of ILI in schools, and 29 outbreaks of influenza in long-term care facilities.

**Current recommendations:** Promote vaccination, respiratory hygiene, and prompt treatment with antivirals. Facilities may wish to consider temporary visitor restrictions.

Note: Surveillance for ILI in suburban Cook County involves the weekly collection of data from hospitals, physicians' offices, and laboratories. Thank you to all of our surveillance partners for their help in collecting this information.

II. Influenza Activity Level / Disease Burden

**Emergency Department Syndromic Surveillance**

In previous H3N2 predominant seasons since 2010, the peak percent of ER visits for ILI ranged from 2.31% to 5.65% [median: 3.48%]. The percent of ER visits for ILI in Week 8 was 3.65%.
Syndromic Surveillance by Age Group

Outpatient Sentinel Providers

Week Number

Week Number§
### III. Circulating Strains

From Week 5 to Week 8, the percent of lab specimens testing positive for influenza B increased by 128%. Comparatively, the percent of lab specimens testing positive for influenza A (any subtype) increased by 21% during the same time period.

### IV. Seasonal Severity

#### ICU Hospitalizations

<table>
<thead>
<tr>
<th>Hospitalized Case Counts</th>
<th>#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cases</td>
<td>137</td>
</tr>
<tr>
<td><strong>Incidence by Age</strong></td>
<td><strong>Incidence by Region</strong></td>
</tr>
<tr>
<td>0-4</td>
<td>North</td>
</tr>
<tr>
<td>2</td>
<td>55</td>
</tr>
<tr>
<td>5-24</td>
<td>West</td>
</tr>
<tr>
<td>7</td>
<td>26</td>
</tr>
<tr>
<td>25-49</td>
<td>Southwest</td>
</tr>
<tr>
<td>13</td>
<td>22</td>
</tr>
<tr>
<td>50-64</td>
<td>South</td>
</tr>
<tr>
<td>28</td>
<td>34</td>
</tr>
<tr>
<td>65+</td>
<td>87</td>
</tr>
</tbody>
</table>

---

Week 8 / Page 3
V. Regional Flu Activity

- Cook
- Chicago
- DuPage
- All 2016-17
- All 2015-2016

% of Visits for ILI

Week Number

Sep 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50
Oct 51 52 1 2 3 4
Nov 5 6 7 8
Dec 9 10 11 12
Jan 13 14 15 16
Feb 17 18 19 20
Mar
Apr
May
VI. United States Flu Activity


1. Data extracted from syndromic surveillance system, ESSENCE; 45 hospital emergency departments (EDs) participate in ESSENCE. Influenza-like-illness (ILI) defined as a symptom complex of fever and cough or sore throat. ILI = # of ED visits for ILI / total # of ED visits.
2. Data extracted from the U.S. Influenza-like Illness Surveillance Network (ILINet); 6 hospitals and 2 physician offices serve as CDC sentinel sites in Cook County. ILI defined as fever $\geq 100^\circ F$, cough and/or sore throat in the absence of a known cause other than influenza. ILI = # of visits for ILI / total # of visits.
3. Includes viral culture, RT-PCR, and the rapid antigen test. Cases may reside outside suburban Cook County. Participating laboratories: Illinois Department of Public Health Sentinel Laboratories, NorthShore University Health System, Loyola University Medical Center, and ACL Laboratories.
4. Includes only suburban Cook County residents (excludes Evanston, Skokie, Oak Park, and Stickney) with known age and residence. Includes all cases reported through the presented week.
5. Includes all deaths where the immediate cause of death or a contributing factor was pneumonia and/or influenza (aspiration pneumonia excluded). Data includes all of Cook County. The 3-week running median is displayed. The percentage of deaths due to P&I are compared with a seasonal baseline and epidemic threshold value calculated for each week. Seasonal baseline is calculated using a periodic regression model that incorporates a CDC based robust regression procedure applied to data from the previous four years. An increase of 1.645 standard deviations above the seasonal baseline of P&I deaths is considered the “epidemic threshold,” i.e., the point at which the observed proportion of deaths attributed to pneumonia or influenza was significantly higher than would be expected at that time of the year in the absence of substantial influenza-related mortality. http://www.cdc.gov/flu/weekly/overview.htm#Mortality
6. Map produced using the proportion of outpatient visits to health care providers for ILI reported through ILINet. Activity levels are compared to the average percent of ILI visits that occur during weeks with little or no influenza virus circulation. http://www.cdc.gov/flu/weekly/index.htm

$\$Influenza surveillance data are typically aggregated by week. Most years have 52 weeks; however some have 53 weeks. 2014 was a 53-week year. Graphing these years in comparison to 52-week years can be challenging. Because the last week of the calendar year is epidemiologically important for influenza transmission due to holiday family gatherings and school closures, we have graphed these weeks together. In all graphs with 2014-2015 influenza activity represented, Week 53 data appears in the Week 52 column. Consequently, all other data points prior to Week 53 have been moved forward one week, i.e., Week 52 becomes Week 51, Week 51 becomes Week 50, and so on until Week 36 becomes Week 35. This methodology has been adapted from the California Influenza Surveillance Project.