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 5.88%, above the regional baseline of 1.06%, and has been increasing for five weeks.
  - The proportion of outpatient provider visits for ILI was 4.04%, above the regional baseline of 0.81%, and has been decreasing for one week.
  - The proportion of deaths associated with pneumonia or influenza was 8.59%, above the epidemic threshold of 6.66%.
- Two thousand three hundred and fourteen (32.22%) laboratory specimens tested positive for influenza: 259 influenza A H3N2, 38 influenza A H1N1, 1851 influenza A unknown subtype, and 166 influenza B.
- Fifty-four influenza-associated intensive care unit (ICU) hospitalizations were reported during Week 2. Two hundred and three ICU hospitalizations have been reported since Week 35.
- Since Week 35, 0 influenza-associated pediatric deaths, 6 clusters of ILI in schools, and 21 influenza outbreaks in long-term care facilities have been reported.
- **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

<table>
<thead>
<tr>
<th>Emergency Department Syndromic Surveillance¹</th>
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<tbody>
<tr>
<td>0%</td>
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</table>

Week Number:
- Sep 35
- Oct 36
- Nov 37
- Dec 38
- Jan 39
- Feb 40
- Mar 41
- Apr 42
- May 43
- Jun 44
- Jul 45
- Aug 46
- Sep 47
- Oct 48
- Nov 49
- Dec 50
- Jan 51
- Feb 52
- Mar 1
- Apr 2
- May 3
- Jun 4
- Jul 5
- Aug 6
- Sep 7
- Oct 8
- Nov 9
- Dec 10
- Jan 11
- Feb 12
- Mar 13
- Apr 14
- May 15
- Jun 16
- Jul 17
- Aug 18
- Sep 19
- Oct 20

Weekly Surveillance Report
Week 2: Jan 7th – Jan 13th, 2018
Syndromic Surveillance by Age Group

Outpatient Sentinel Providers

Week Number

Week Number$
III. Circulating Strains

![Graph showing circulating strains over time]

IV. Seasonal Severity

**ICU Hospitalizations**

<table>
<thead>
<tr>
<th>Cumulative Case Count</th>
<th>Incidence Rate</th>
<th>Per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cases</td>
<td>203</td>
<td>8.95</td>
</tr>
</tbody>
</table>

**Incidence Rate by Age**

- 0-4: 5.58
- 5-24: 1.16
- 25-49: 1.46
- 50-64: 8.17
- 65+: 44.98

**Incidence Rate by Region**

- North: 9.27
- West: 7.54
- Southwest: 10.17
- South: 8.90

![Graph showing ICU hospitalizations over time]
Pneumonia and Influenza Mortality

- Baseline
- Epidemic Threshold
- PI Death (Smoothed)

% of All Deaths Due to Pneumonia/Influenza

Season and Week Number

V. Regional Flu Activity

- Cook
- Chicago
- DuPage
- All 2017-18
- All 2016-2017

% of Visits for ILI

Week Number
VI. United States Flu Activity

2017-18 Influenza Season Week 2 ending Jan 13, 2018

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


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); 5 hospitals and 3 physician offices serve as CDC sentinel sites in Cook County. ILI defined as fever ≥ 100°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. Cases reported are suburban Cook County residents (excluding Evanston, Skokie, Oak Park, and Stickney) with known age and residence. Cases aggregated by week of admission. Includes all cases reported through the presented week. Rates calculated with 2010 census data.
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 and has one week lag behind other surveillance indicators. 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.