North Dakota Weekly Influenza Update
2016-17 Influenza Season

Through week **201709**, the week ending **03/4/2017**
All data are preliminary and based on reports received at the time of publication.

Edited by: Jill K Baber, MPH
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**Weekly Narrative** Reported influenza cases decreased again this week. However, we likely have at least several weeks to go before influenza is no longer widespread, so serious influenza prevention efforts should continue.

Outpatient influenza-like illness increased slightly this week, after last week’s decrease. The decrease in cases in entirely due to a decrease in influenza A; influenza B case counts continued to go up this week.

<table>
<thead>
<tr>
<th>Influenza Cases by Type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A, unspecified</strong></td>
</tr>
<tr>
<td><strong>2009 A H1N1</strong></td>
</tr>
<tr>
<td><strong>A H3</strong></td>
</tr>
<tr>
<td><strong>B, unspecified</strong></td>
</tr>
<tr>
<td><strong>B Yamagata</strong></td>
</tr>
<tr>
<td><strong>B Victoria</strong></td>
</tr>
</tbody>
</table>
| **Total**                        | **4877**

All laboratory-identified cases of influenza (including identification via rapid test) are reportable in North Dakota. Statistics do not include data from people who did not seek medical care for their illness, or who sought medical care but were diagnosed based on symptoms, not with a laboratory test.
Demographic Data

*Data obtained from ad-hoc reports and state Vital Statistics. Hospitalizations and deaths are not required to be reported in North Dakota, although pediatric flu deaths are nationally reportable.

### Case Count for Lab-Confirmed Cases by Age Group

- <10: 1378
- 10-19: 967
- 20-29: 494
- 30-39: 396
- 40-49: 312
- 50-59: 402
- 60+: 928

### Case Count for Lab-Confirmed Cases by Gender

- Male: 2525
- Female: 2352

### Lab-Confirmed Cases by County

*Reported Influenza Deaths and Hospitalizations*

*Data obtained from ad-hoc reports and state Vital Statistics. Hospitalizations and deaths are not required to be reported in North Dakota, although pediatric flu deaths are nationally reportable.*
Outbreaks and Multi-season Comparison

Outbreaks There have been 23 reported outbreaks of influenza-like illness in long term or basic care settings so far this season: one attributed to influenza A H3N2, 12 attributed to influenza A, one co-circulation of influenza A and parainfluenza 3, four attributed to influenza B, one attributed to parainfluenza 2, and four with an unidentified cause.

There have been 6 outbreaks of influenza in childcare centers reported this season, and 3 outbreaks reported in school. Outbreaks in schools, assisted living facilities, workplaces, and in the general community are common during the influenza season.

Multi-Season Comparison The 2016-17 influenza season has likely peaked, and the Influenza A H3N2 strain has continued to predominate. Influenza A H3N2 can be especially severe in the elderly, but all age groups are at risk for severe influenza infection. In addition, influenza B has made up a larger proportion of cases than is typical this flu season.

<table>
<thead>
<tr>
<th>Season</th>
<th>Total Cases</th>
<th>Peak Week (week ending)</th>
<th>Predominant Strain</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-13</td>
<td>4,831</td>
<td>12/29/2012</td>
<td>A H3N2</td>
</tr>
<tr>
<td>2013-14</td>
<td>2,923</td>
<td>1/4/2014</td>
<td>2009 A H1N1</td>
</tr>
<tr>
<td>2015-16</td>
<td>1,942</td>
<td>3/12/2016</td>
<td>2009 A H1N1</td>
</tr>
<tr>
<td>2016-17</td>
<td>4,877</td>
<td>02/18/2017</td>
<td>A H3N2</td>
</tr>
</tbody>
</table>
**Sentinel Surveillance: Outpatient Influenza-like Illness**

**Outpatient Surveillance** The North Dakota Department of Health (NDDoH) participates with other states and jurisdictions in the U.S. Outpatient Influenza-like Illness Surveillance Network (ILINET). Data from this project is used in the CDC’s weekly FluView report, providing data for the colored state map. Participating outpatient clinics send data on the number of patients in each of five age groups experiencing ILI, and the number of patients seen for any reason each week. ILI is defined as:

- Fever of 100°F or greater
- With a cough AND/OR sore throat

Data for all providers is pooled, and a state-wide statistic for percent of visits for ILI is produced. In North Dakota, a percent ILI of **1.4%** or greater is considered season-level activity.

**Current Activity** This week, ILI is **4.34%**. We are above the seasonal baseline.

<table>
<thead>
<tr>
<th>Week Number</th>
<th>2016-17 Percent ILI</th>
<th># ILI 0-4 age group</th>
<th># ILI 5-24 age group</th>
<th># ILI 25-49 age group</th>
<th># ILI 50-64 age group</th>
<th># ILI 65+ age group</th>
</tr>
</thead>
<tbody>
<tr>
<td>201706</td>
<td>7.06%</td>
<td>18</td>
<td>62</td>
<td>29</td>
<td>16</td>
<td>9</td>
</tr>
<tr>
<td>201707</td>
<td>5.05%</td>
<td>9</td>
<td>40</td>
<td>19</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td>201708</td>
<td>3.58%</td>
<td>9</td>
<td>18</td>
<td>13</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td><strong>201709</strong></td>
<td><strong>4.34%</strong></td>
<td><strong>8</strong></td>
<td><strong>27</strong></td>
<td><strong>9</strong></td>
<td><strong>9</strong></td>
<td><strong>7</strong></td>
</tr>
</tbody>
</table>

Percent of Outpatient Visits Due to Influenza-like Illness by Week, Current and Previous Season
**Sentinel Surveillance: Laboratory Data**

**Laboratory Surveillance: Influenza** The NDDoH receives influenza testing data from participating sentinel laboratories across North Dakota. The total number of influenza tests (all testing methodologies) and the total number of those tests that are positive are reported each week. Data for all labs is pooled, and a state-wide percent positivity statistic is produced. Percent positivity for influenza testing of 10% is greater is considered a general indicator for season-level influenza activity. **This week, percent positivity for influenza is 25.18%**.

![Graph of Percent Positivity of Influenza Testing and the Total Number of Tests Conducted](chart)

**Laboratory Surveillance: Respiratory Syncytial Virus (RSV)** The NDDoH receives similar testing data for RSV. RSV is a common respiratory virus best known for affecting children; however a person in any age group can become ill and people can get RSV multiple times. RSV also occurs seasonally, over a time period similar to influenza. **This week, percent positivity for RSV is 32.20%**.

![Graph of Percent Positivity of RSV Testing and the Total Number of Tests Conducted](chart)
Other Surveillance Methods: Respiratory Viral Pathogen Testing  The NDDoH’s Division of Laboratory Services tests for a variety of viral respiratory diseases. Advanced molecular testing is completed using influenza PCR, as well as a respiratory viral panel (RVP). Influenza PCR is available at no cost to North Dakota providers, and the RVP is available for a fee. Many of the samples tested on the RVP come from sentinel sites participating in the Acute Respiratory Infection Epidemiology & Surveillance (ARIES) program, which is like an extended version of ILINet that investigates acute respiratory illness (ARI), and involves fairly extensive sample collection.

Influenza A and B continue to be identified at high rates. Parainfluenza, RSV, Rhino/enterovirus, adenovirus, and human metapneumovirus have also been identified in last two weeks at the North Dakota Public Health Lab. (That’s everything we test for!)

If you are provider or lab with questions regarding fee-for-service RVP testing or free influenza testing please call the Division of Laboratory Services at 701.328.6272. Collecting influenza surveillance specimens is an important component of state and national surveillance, so we are grateful all influenza testing specimens we receive.
**Influenza Vaccination Statistics**

**Vaccine Doses Administered** The North Dakota Immunization Information System (NDIIS) provides information on vaccines given in North Dakota. Vaccines given to children are required to be entered into the NDIIS, while vaccines given to adults are often entered into the NDIIS, but are not required to be entered. Many providers in North Dakota have established an electronic connection with the NDIIS, allowing all vaccinations for that provider to be sent to the NDIIS automatically. A total of 254,435 doses of 2016-17 influenza vaccine have been entered into the NDIIS so far this season.

![Influenza Doses Administered by Week](chart1.png)

**Vaccination rates by Age Group** NDIIS data can also be used to estimate the percent of North Dakotans in each age group that have received an influenza vaccination so far this season. This week, the age group with the highest rates is 65+ with 47.3%, and the age group with the lowest vaccination rate is 19-49 year olds, with 17.5%.

![Influenza Vaccination Rates by Age Group, by Week, Estimated by the NDIIS](chart2.png)
Additional Information and Announcements

**National Influenza Surveillance** National influenza activity and surveillance information is available from the CDC FluView website at: www.cdc.gov/flu/weekly/, and is updated every Friday.

**Need a flu vaccine?** Visit www.vaccinefinder.org to find locations providing influenza vaccine near you.

**Are you interested in tracking flu/helping others track flu?** Join Flu Near You! Flu Near You is a website where users self-report symptoms on a weekly basis. Information on influenza-like illness is aggregated at the regional, state, and national level and presented on the Flu Near You website. The website also provides information on where people can get vaccinated for flu. Information at the symptom level is available in aggregate form to state health departments. We will be adding North Dakota Flu Near You data to this report in the coming weeks. If you are interested in participating in Flu Near You, visit www.flunearyou.org.

**ILINet Recruitment** The NDDoH and CDC are looking for more outpatient providers to participate in the ILINet sentinel surveillance program. Data from this program is used at the state and national level for seasonal decision making. A large majority of current and past participants report participation takes less than 15 minutes each week. If your outpatient clinic is interested and willing to participate, please contact Jill Baber at jbaber@nd.gov or 701.328.3341. For more information see our brochure: http://www.ndflu.com/Reporting/ILINetBrochure.pdf.

**Subscribe to this Report** If you did not receive this report directly and would like to, please contact Jill Baber at jbaber@nd.gov or 701.328.3341 to be added to the weekly report email group.

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**Contact Information** For information on influenza surveillance, contact the North Dakota Department of Health Division of Disease Control at 701.328.2378 or visit www.ndflu.com.