Weekly Influenza Surveillance Report
Week Ending March 19, 2022
MMWR Week 11

The NH Department of Health and Human Services (DHHS) provides weekly influenza surveillance reports during the traditional influenza season, which starts at the beginning of October and continues through mid-May. The 2021–22 influenza season began on 10/03/2021.

Summary for New Hampshire

<table>
<thead>
<tr>
<th>Influenza-Like Illness (ILI)</th>
<th>Acute Respiratory Illness (ARI)</th>
<th>Pneumonia and Influenza-Like Illness (ILI) Related Deaths</th>
<th>Respiratory Specimens Submitted to the Laboratory</th>
<th>Flu Activity**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 11</td>
<td>0.4% = slight increase from previous week</td>
<td>1.3% = similar to previous week</td>
<td>4.5% (below threshold*)</td>
<td>684 Total: ▪ 684 negative</td>
</tr>
</tbody>
</table>

*Epidemic threshold = 11.3%

**Flu activity for both week 11 (ending 3/19/22) and week 12 (ending 3/26/22) is ‘sporadic’.

New Hampshire Surveillance

Outpatient Illness Surveillance

The two components of outpatient illness surveillance in New Hampshire are as follows:

1. **U.S. Outpatient Influenza-like Illness Surveillance Network (ILINet):** Beginning in 1997, NH has participated in this collaborative effort between the Centers for Disease Control and Prevention, state and local health departments, and health care providers. For the 2021-22 influenza season, 12 NH health care providers are participating. Participating providers report the proportion of patients who present with influenza-like illness (ILI) on a weekly basis. ILI is defined as 1) a fever and 2) cough and/or sore throat. Participating providers are also asked to collect respiratory specimens from select patients and submit them to the PHL for viral subtyping.

2. **The Automated Hospital Emergency Department Data (AHEDD) system:** This system is a collaborative effort between NH acute care hospitals and the NH DHHS. Currently, 26 hospitals electronically transmit real-time data from emergency department encounters throughout the day to NH DHHS. However, data could only be used in a meaningful way for 21 of the reporting hospitals due to key changes in how some hospitals report chief complaint text into AHEDD (i.e., changes in method of reporting resulted in challenges at comparing to historical data for determining if respiratory illness was elevated). Chief complaint text within the system is queried for complaints of acute respiratory illness (ARI) in patients seen in emergency departments. While ARI includes encounters that fit the definition of ILI above, it also includes encounters for complaints such as acute bronchitis or otitis media.
Because these two systems collect information using different methods and represent different patient populations, it is expected that the proportions of ILI and ARI seen in these systems will differ. However, the overall trend of activity is expected to be similar.

<table>
<thead>
<tr>
<th>Patient Visits/Encounters</th>
<th>Reporting Providers/Hospitals</th>
<th>ILI</th>
<th>ARI</th>
<th>Change from Previous Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>ILINet</td>
<td>5/1,238</td>
<td>10</td>
<td>0.4%</td>
<td>Slight increase from 0.3%</td>
</tr>
<tr>
<td>AHEDD</td>
<td>161/12,636</td>
<td>21</td>
<td>1.3%</td>
<td>Similar to 1.2%</td>
</tr>
</tbody>
</table>

Maps illustrating the degree of ARI activity for each of the ten counties for weeks 11 and 12 are available at [http://www.dhhs.nh.gov/dphs/cdcs/influenza/arisurveillance.htm](http://www.dhhs.nh.gov/dphs/cdcs/influenza/arisurveillance.htm)

**Laboratory Surveillance**

The NH Public Health Laboratories (PHL) receives respiratory specimens for influenza testing from health care providers and hospitals throughout the State. During the current influenza season the PHL is testing all specimens submitted for Covid testing for both influenza and for SARS-CoV-2, leading to a substantial increase in testing.

### Results of Specimens Received by the PHL and Cumulative Totals for the 2021-22 Influenza Season

<table>
<thead>
<tr>
<th>Results</th>
<th>Week 11 (3/13/22–3/19/22)</th>
<th>YTD (10/03/21–3/26/22)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># specimens</td>
<td>% of total positive</td>
</tr>
<tr>
<td>Influenza A (H1)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Influenza A (H3)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Influenza A (H1N1)pdm09</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Influenza A, unsubtypeable</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Influenza B</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Negative for influenza</td>
<td>684</td>
<td>49,720</td>
</tr>
</tbody>
</table>

Ω Unable to be subtyped at PHL due to poor sample quality.
increase in the number of specimens being tested each week. Testing is important to identify circulating influenza viral subtypes and to confirm specimens that test positive by rapid test.

**Supplemental Influenza Results**

In addition to PHL influenza test results, DHHS is now reporting supplemental influenza test results from participating clinical laboratories throughout the state. Supplemental influenza test results are for specimens collected from patients who present with respiratory illness and may be generated by a variety of assays, including real-time polymerase chain reaction (RT-PCR) or rapid influenza diagnostic tests (RIDT). Currently there are 12 participating clinical laboratories that submit weekly results. Results were reported for 577 specimens tested during week 11, and 25 (4.3%) were positive for influenza.

<table>
<thead>
<tr>
<th>Results</th>
<th>RIDT</th>
<th>PCR-based*</th>
<th>RIDT</th>
<th>PCR-based*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td># specimens</td>
<td>% positive</td>
<td># specimens</td>
<td>% positive</td>
</tr>
<tr>
<td>Influenza A</td>
<td>0</td>
<td>0</td>
<td>25</td>
<td>100.0</td>
</tr>
<tr>
<td>Influenza B</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Negative</td>
<td>12</td>
<td>540</td>
<td>2,038</td>
<td>17,135</td>
</tr>
<tr>
<td>Total</td>
<td>12</td>
<td>565</td>
<td>2,240</td>
<td>17,583</td>
</tr>
</tbody>
</table>

*It is noted that a portion of these specimens with positive influenza A results were shipped to PHL for subtyping, thus some of these results are also reported in the previous PHL table.

**Pneumonia and Influenza (P&I) Mortality**

Pneumonia and Influenza (P&I) deaths in New Hampshire are identified through review of electronically

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*Seasonal baseline is calculated using the previous 5 years of data. If the proportion of P&I deaths for a given week exceeds the baseline value for that week by a statistically significant amount (1.645 standard deviations), then P&I deaths are said to be above the epidemic threshold, and the proportion of deaths above threshold are considered attributable to influenza.*
filed death certificates by looking at the causes of death listed on each death certificate. The following graph, which shows the proportion of deaths attributed to P&I, represents all deaths recorded by NH’s Division of Vital Records Administration. This includes resident and non-resident deaths that occurred within the State, and may not include deaths of NH residents that occurred out-of-state, or cases being investigated by the Medical Examiner’s Office.

- 4.5% of all deaths recorded in NH were reported as due to P&I. This is below the epidemic threshold of 11.3%.
- Nine adult influenza-related deaths have been identified so far this influenza season. The counties of residence for the persons with an identified influenza-related death are Carroll, Grafton, Hillsborough, Merrimack, and Rockingham. No pediatric influenza-related deaths have been identified this influenza season. Due to delays in electronic filing of death certificates, newly identified deaths in the last week may have occurred at any point during the flu season and not necessarily within the last week.

**Influenza Activity in New Hampshire as Assessed by the State Epidemiologist**

The weekly reporting to the CDC of Geographic Spread of influenza Activity has been discontinued for the 2021-22 influenza season. Although the flu activity level will not be reported weekly to CDC as it normally would, the DHHS will continue to characterize this variable and include it in these NH weekly influenza reports.

- Overall influenza activity in NH for week 11 was **sporadic**.
- Influenza activity in NH for week 12 was **sporadic**.

Reported flu activity level is based on ILI reported by the participating providers and AHEDD surveillance systems, reported outbreaks in facilities, and reports of laboratory confirmed influenza. Influenza activity levels are defined by CDC as follows:

- **No Activity:** Low ILI activity and no laboratory-confirmed cases of influenza.
- **Sporadic:** Low ILI activity and isolated laboratory-confirmed influenza cases or a single influenza outbreak has been reported.
- **Local:** Increased ILI activity or influenza outbreaks in a single region of the state, and recent laboratory-confirmed influenza in that region.
- **Regional:** Increased ILI activity or influenza outbreaks in $\geq 2$, but less than half of state regions, and recent laboratory-confirmed influenza in affected regions.
- **Widespread:** Increased ILI activity or influenza outbreaks in at least half of state regions, and recent laboratory-confirmed influenza in the state.

**National Surveillance**

- Influenza activity is increasing in most of the country.
- The majority of influenza viruses detected in the U.S. are A(H3N2).
- CDC is now reporting data for both influenza genetic and antigenic characterization. Most of the H3N2 viruses so far are genetically closely related to the vaccine virus. However, antigenic data show that the majority of the H3N2 viruses characterized are antigenically different from the vaccine reference viruses. The majority of B/Victoria viruses characterized are antigenically similar to the vaccine reference virus.
- The proportion of outpatient visits for influenza-like illness (ILI) was 1.8%, which is below the national baseline of 2.5%. Nine of the 10 HHS regions, including Region 1 (New England), are below their region-specific baselines; Region 7 is above its baseline.
- The percentage of deaths due to pneumonia, influenza, and/or COVID-19 (PIC) in the National Center for Health Statistics (NCHS) Mortality Surveillance System for MMWR week 11 was reported...
at 9.1%, which is above the epidemic threshold (7.1%). An assessment of underlying or contributing cause of death on the death certificates indicates that current PIC mortality is due primarily to COVID-19 and not influenza.

- No influenza-associated pediatric deaths were reported to CDC during week 11. A total of 13 influenza-associated pediatric deaths occurring during the 2021-2022 season have been reported to CDC.

**Laboratory Surveillance**

Public Health laboratories located in all 50 states and Washington D.C. reported specimens testing positive during week 11 for influenza viruses, as follows:

<table>
<thead>
<tr>
<th>Flu Season</th>
<th>Influenza A (H1N1) pdm09</th>
<th>Influenza A (H3N2)</th>
<th>Influenza A Subtyping not performed</th>
<th>Influenza B – Yamagata lineage</th>
<th>Influenza B – Victoria lineage</th>
<th>Influenza B – lineage not performed</th>
<th>Percentage of Specimens Testing Positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 11 2021-22</td>
<td>0 (0%)</td>
<td>174 (51.6%)</td>
<td>163 (48.4%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>337/11,958 (2.8%)</td>
</tr>
</tbody>
</table>

**Genetic Characterization**

CDC has begun to report data for influenza genetic characterization. Most of the H3N2 viruses so far are genetically closely related to the vaccine virus.

**Antigenic Characterization**

CDC has antigenically characterized 77 influenza viruses from October 3, 2021 – March 19, 2022, including 2 A(H1N1)pdm09 viruses, 61 A(H3N2) viruses, and 14 B/Victoria lineage viruses. No B/Yamagata lineage viruses were available for antigenic characterization. The CDC characterizes antigenicity by how well antibodies made against the vaccine strains recognize circulating virus that have been grown in cell culture. Of the characterized viruses, the vaccine antibodies recognized:

- 50% of influenza A(H1N1) samples
- 3% of influenza A(H3N2) samples with cell-grown vaccine antibodies; 30% with egg-based vaccine antibodies
- 79% of influenza B/Victoria samples

**Antiviral Resistance**

CDC assesses susceptibility of influenza viruses to antiviral medications including the neuraminidase inhibitors (oseltamivir, zanamivir, and peramivir) and the PA endonuclease inhibitor baloxavir. Viruses collected in the United States since October 3, 2021, were tested for antiviral susceptibility as follows:
An annual flu vaccine is the best way to protect against flu and its potentially serious complications. CDC recommends everyone 6 months of age or older who does not have a medical contraindication to get a flu vaccine.

- Antiviral treatment is recommended as early as possible for patients with confirmed or suspected influenza who have severe, complicated, or progressive illness; who require hospitalization; or who are at greater risk for influenza-related complications.
- Additional information on recommendations for treatment and chemoprophylaxis of influenza virus infection with antiviral agents is available at [https://www.cdc.gov/flu/treatment/index.html](https://www.cdc.gov/flu/treatment/index.html).
- To prevent the spread of antiviral resistant virus strains, CDC reminds clinicians and the public of the need to continue hand and cough hygiene measures for the duration of any symptoms of influenza, even while taking antiviral medications. Additional information on influenza topics is available from CDC at [http://www.cdc.gov/flu](http://www.cdc.gov/flu).

### Report Date: 3/29/22
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All data in this report are based upon information provided to the New Hampshire Department of Health and Human Services under specific legislative authority. The numbers reported may represent an underestimate of the true absolute number and incidence rate of cases in the state. The unauthorized disclosure of any confidential medical or scientific data is a misdemeanor under New Hampshire law. The department is not responsible for any duplication or misrepresentation of surveillance data released in accordance with this guideline.