Influenza Weekly Report

2013 Week 05 (January 27 – February 2) through 2014 Week 05 (January 26 – February 1)

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Data for the graphs and tables on the following pages are provisional and may be updated as additional information becomes available.

**Purpose**

The purpose of this report is to provide an overview of and statistics for the influenza season in Nevada for the local public health authorities, sentinel providers and the public.

**Influenza-Like Illness Network Surveillance (ILINet)**

Respiratory specimens tested for influenza by the World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NRVESS) collaborating laboratories by sub-type. There were 8,282 specimens collected nationally during week 5 that were tested for influenza; of these 1,626 tested positive for influenza or the percent positive was 21.7%.

**Figure 1**

![National Influenza Positive Tests by Week 53 Week View (2013 WK 5 - 2014 WK 5)](image)


Of the 54 specimens tested for influenza at both the Nevada State Public Health Laboratory and Southern Nevada Public Health Laboratory for sentinel providers, 10 were positive with influenza during week 5 or 18.5%.

**Figure 2**

![Nevada (ILI Providers) Influenza Laboratory Confirmed Positive by Week 53 Week View (2013 WK 5 - 2014 WK 5)](image)

*Source of Data: CDC: ILINet.*
Nevada State Public Health Laboratory (NSPHL) has tested 611 specimens this season with 290 positive from sentinel providers (47.5% positive). Southern Nevada Public Health Laboratory (SNPHL) has reported 34 positive influenza specimens through the Pediatric Early Warning Sentinel Surveillance (PEWSS). The state of Nevada data in table 1 is reflected in figure 2. Nationally, there have been 174,683 specimens sent to the WHO and NERVSS laboratories with 33,841 positive or 19.4%. The national numbers in table 1 are reflected in figure 1.

<table>
<thead>
<tr>
<th></th>
<th>NSPHL</th>
<th>SNPHL</th>
<th>State of Nevada (Week 5)</th>
<th>State of Nevada (Season)</th>
<th>National (Week 5)</th>
<th>National (Season)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specimens Tested</td>
<td>611</td>
<td>190</td>
<td>54</td>
<td>801</td>
<td>8,288</td>
<td>174,683</td>
</tr>
<tr>
<td>Positives to Influenza</td>
<td>290</td>
<td>34</td>
<td>10</td>
<td>324</td>
<td>1,626</td>
<td>33,841</td>
</tr>
</tbody>
</table>

Influenza A:

- A(2009 H1N1): 288/33/10/100; 321/99.1/1,511/92.9; 32,742/96.8
- A(Sub-typing not performed): 278/32/10/100; 310/96.6/816/54.0; 20,270/61.9
- A(H3): 10/1/0/0; 11/3.4/31/2.1; 753/2.3

Influenza B:

- 2/1/0/0; 1/0.9/115/7.1; 1,098/3.2

Source of Data: CDC: FluView Report and CDC: ILINet.

For week 5, Nevada reported regional activity to the CDC, along with 18 states (Alabama, Alaska, Colorado, Florida, Georgia, Kentucky, Louisiana, Minnesota, Montana, New Mexico, Oregon, South Dakota, Tennessee, Texas, Utah, Washington, Wisconsin, and Wyoming). Activity level1 is derived from data analyzed from Influenza-like Illness (ILI) surveillance (laboratory and sentinel data), and data reported to the state through NBS/NETSS.

Influenza-like Illness (ILI) Network Surveillance has each sentinel providers report the number of patients that meet the ILI case definition2 and number of patients that visit the provider weekly, which increased from 17,131 (week 4) to 17,408 (week 5). The "percentage of visits" is the number of ILI patients divided by the total number of patient visit per week. Nevada’s ILI percentage of visits to providers increased to 2.3% during week 5, and is at the state baseline of 2.3%. Region 9 decreased in ILI to 4.2% from 4.6%, and includes the following states/territories: Arizona, California, Guam, Hawaii, and Nevada. The nation decreased from 3.4% to 3.2% during week 5.

1: Activity level: Appendix Table 4.
During week 5, 2.3% of patient visits in Nevada to sentinel providers were due to ILI. This is a .1% percentage point decrease from week 5 of the 2012-2013 influenza season.

The count and rate increased from week 4 to week 5, from 359 to 393, and 12.8 to 13.9 per 100,000 population. The rate is calculated by the number of patients presented with ILI divided the state population by 100,000. The estimated state population for 2014 is 2,819,321.

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**Figure 4**

**Figure 5**

**Figure 6**
Providers for the sentinel surveillance are grouped by county, then the percent is calculated by ILI visits and total patient visits. During week 5, Elko, Washoe and White Pine counties had high activity; Churchill County had moderate activity; Douglas, Eureka, Humboldt, and Lincoln counties did not report for week 5 (Figure 7). Overall, Nevada had low activity monitored through ILINet (Figure 8).

**Figure 7**

![ILI Activity Level (MMWR Week 5)](image)

Source of Data: CDC: ILINet.

**Figure 8**

![Influenza-Like Illness (ILI) Activity Level Indicator Determined by Data Reported to ILINet](image)

Influenza Positive Surveillance (NBS and NETSS)

Positive cases of influenza are reported to the state health division for surveillance purposes. Figure 10 and 11 reflect all positive influenza cases reported to the state. Types of influenza testing include commercial rapid diagnostic test (rapid), viral culture, fluorescent antibody, enzyme immunoassay, RT-PCR (PCR), and Immunohistochemistry. The two most common test types in Nevada are Rapid and PCR tests. During week 5, there were 46 H1N1 cases and 171 Influenza A cases with unknown sub typing. There were 24 positive Influenza B cases. Overall, there were 253 influenza positive tests in Nevada, whereas during the previous season for week 5, there were 533 cases.

Table 2

<table>
<thead>
<tr>
<th>Reporting Jurisdiction</th>
<th>Reported Influenza Cases by County Jurisdiction and Influenza Type</th>
<th>Current Week (Week 5)</th>
<th>Cumulative Influenza Season</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>H1N1</td>
<td>Total</td>
</tr>
<tr>
<td>Carson City Health and Human Services</td>
<td></td>
<td>3</td>
<td>26</td>
</tr>
<tr>
<td>Rural Health Services</td>
<td></td>
<td>12</td>
<td>26</td>
</tr>
<tr>
<td>Southern Nevada Health District</td>
<td></td>
<td>19</td>
<td>174</td>
</tr>
<tr>
<td>Washoe County Health District</td>
<td></td>
<td>13</td>
<td>27</td>
</tr>
<tr>
<td>State of Nevada</td>
<td></td>
<td>47</td>
<td>253</td>
</tr>
</tbody>
</table>

Clark County experienced a decrease in influenza from week 4 with 212 to 174 influenza cases during week 5. Washoe County experienced a decrease in influenza from week 4, from 40 to 27 influenza cases. Carson City, Churchill, Douglas, Elko, Lander, Lyon, Nye, and White Pine counties all had influenza activity during week 5.

Source of Data: OPHIE: NBS and SNHD: NETSS.
Hospitalizations

There have been 305 hospitalizations associated with influenza this season.

Table 3

<table>
<thead>
<tr>
<th>Reporting Jurisdiction</th>
<th>Influenza Hospitalizations</th>
<th>Cumulative Influenza Season</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Current Week (Week 5)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>#</td>
<td>%</td>
</tr>
<tr>
<td>Carson City Health and Human Services</td>
<td>1</td>
<td>2.8</td>
</tr>
<tr>
<td>Rural Health Services</td>
<td>1</td>
<td>2.8</td>
</tr>
<tr>
<td>Southern Nevada Health District</td>
<td>26</td>
<td>72.2</td>
</tr>
<tr>
<td>Washoe County Health District</td>
<td>8</td>
<td>22.2</td>
</tr>
<tr>
<td>State of Nevada</td>
<td>36</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Reported to Office of Public Health Informatics and Epidemiology from each Jurisdiction.

Pneumonia and Influenza (P&I) Mortality Surveillance

The Pneumonia and Influenza (P&I) mortality percentage is the deaths, where Pneumonia and Influenza is listed as a cause of death, divided by the total deaths in Nevada for each week. There were 32 P&I deaths and 312 total deaths for week 5, as of February 10. The P&I mortality percentage is above the national epidemic threshold at 10.3% (threshold at 7.3%). Nationally, the P&I mortality has surpassed the national epidemic threshold at 8.6%.

Figure 11

Source: OVR: WEVRRS and CDC: FluView.
## Appendix

Activity level in figure 3 is based on the following information.

<table>
<thead>
<tr>
<th>Activity Level</th>
<th>ILI Activity*/Outbreaks</th>
<th>Laboratory Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Activity</td>
<td>Low</td>
<td>And</td>
</tr>
<tr>
<td>Sporadic</td>
<td>Not Increased</td>
<td>And</td>
</tr>
<tr>
<td></td>
<td>Or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Isolated lab-confirmed cases †</td>
<td></td>
</tr>
<tr>
<td>Local</td>
<td>Increased ILI in 1 region**, ILI activity in other regions not increased</td>
<td>And</td>
</tr>
<tr>
<td></td>
<td>Or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lab confirmed outbreak in one institution ‡</td>
<td></td>
</tr>
<tr>
<td>Regional</td>
<td>Recent (within the past 3 weeks) lab evidence of influenza in region with the outbreaks; virus activity is no greater than sporadic in other regions</td>
<td>And</td>
</tr>
<tr>
<td></td>
<td>Or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Recent (within the past 3 weeks) lab confirmed influenza in the affected regions</td>
<td></td>
</tr>
<tr>
<td>Widespread</td>
<td>Increased ILI and/or institutional outbreaks (ILI or lab confirmed) in at least half of the regions</td>
<td>And</td>
</tr>
</tbody>
</table>

*ILI activity can be assessed using a variety of data sources including ILINet providers, school/workplace absenteeism and other syndromic surveillance systems that monitor influenza-like illness.
† Lab confirmed case = case confirmed by rapid diagnostic test, antigen detection, culture, or PCR.
‡ Institution includes nursing home, hospital, prison, school, etc.
**Region: population under surveillance in a defined geographical subdivision of a state.
Nevada has 5 regions.

### Technical Notes

- Influenza-like illness (ILI): a fever greater than or equal 100°F with cough and/or sore throat
- Percent positive: The number of positive influenza laboratory tests divided by the total number of tests performed.
- Incidence rate is per 100,000 population as estimated by the state demographer.
- Rapid influenza diagnostic tests - Rapid Test.
- Real-time reverse transcription polymerase chain reaction - rRT-PCR or PCR.

This report contains information from national and state-level data sources. Influenza surveillance data is collected by a various systems, including:

- Influenza-like Illness Network (ILINet): a sentinel surveillance system in collaboration with the Centers for the Disease Control and Prevention (CDC) where outpatient providers report ILI information weekly.
- National Electronic Telecommunication System for Surveillance (NETSS): a system whereby data is transmitted to CDC. Influenza data collected through NETSS does not provide influenza sub-typing information.
- National Electronic Disease Surveillance System (NEDSS): a system for collecting data and monitoring disease trends and outbreaks.
- NEDDS Based System (NBS): an implementation of the NEDSS standards. It provides a secure, accurate, and efficient means of collecting, transmitting, and analyzing public health data.

### Citations

Comments, suggestions, and requests for further information may be addressed to:

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