2013-2014
Influenza Report
Week 07
February 9 – February 15, 2014

About our flu activity reporting
MSDH relies upon selected sentinel health practitioners across the state to report the percentage of total patient visits consistent with an influenza-like illness (ILI: fever of 100°F or higher AND cough and/or sore throat). Also, providers are supplied with specimen collection kits. Samples are submitted to the Mississippi Public Health Laboratory for influenza PCR testing. Reports are used to estimate the state’s ILI rate and the magnitude of the state’s influenza activity. Reports represent only the distribution of flu in the state, not an actual count of all flu cases statewide. Information is provisional only and may change depending on additional reporting from sentinel providers.

State ILI Surveillance

The state ILI rate had been slowly, but steadily increasing since week 41. However, beginning in week 01, the overall state ILI rate began to decrease. During week 07 (02/09/14-02/15/14), the overall state ILI rate (4.1%) was comparable to the previous week (4.2%), but was lower than this time last year (4.8%). Figure 1

Total number of patients treated by sentinel providers in the last three weeks. | Table 1

<table>
<thead>
<tr>
<th>CDC Week</th>
<th>Week Ending</th>
<th>Total patients</th>
<th>ILI symptoms</th>
<th>ILI Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>07</td>
<td>Feb. 15</td>
<td>14037</td>
<td>580</td>
<td>4.1%</td>
</tr>
<tr>
<td>06</td>
<td>Feb. 08</td>
<td>15905</td>
<td>661</td>
<td>4.2%</td>
</tr>
<tr>
<td>05</td>
<td>Feb. 01</td>
<td>16564</td>
<td>809</td>
<td>4.9%</td>
</tr>
</tbody>
</table>
During week 07, two districts (5 and 8) had a slight increase in ILI activity, while seven districts (1, 2, 3, 4, 6, 7, and 9) had a decrease. Information is provisional only and may change depending on additional reporting from sentinel providers. | Table 2

<table>
<thead>
<tr>
<th>District</th>
<th>Week 06</th>
<th>Week 07</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>4.2</td>
<td>4.1</td>
</tr>
<tr>
<td>I</td>
<td>1.2</td>
<td>0.5</td>
</tr>
<tr>
<td>II</td>
<td>8.8</td>
<td>5.3</td>
</tr>
<tr>
<td>III</td>
<td>9.6</td>
<td>8.0</td>
</tr>
<tr>
<td>IV</td>
<td>5.5</td>
<td>5.0</td>
</tr>
<tr>
<td>V</td>
<td>1.4</td>
<td>1.8</td>
</tr>
<tr>
<td>VI</td>
<td>11.6</td>
<td>9.7</td>
</tr>
<tr>
<td>VII</td>
<td>2.9</td>
<td>2.5</td>
</tr>
<tr>
<td>VIII</td>
<td>2.1</td>
<td>2.8</td>
</tr>
<tr>
<td>IX</td>
<td>4.8</td>
<td>4.5</td>
</tr>
</tbody>
</table>

Since week 35, the percentage of reported ILI cases has been highest among those in the 5-24 years of age group. This trend continued into week 07. | Figure 2
The 2013-14 state ILI rate was above the national and Region 4 baselines, but was below the state baseline for week 07. | Figure 3

Mississippi ILI Rates, 2013-2014 and Previous Seasons

Mississippi ILI Rates 2010-2014 | Figure 4

State ILI/URI Rates 2010-2014 (YTD)
Flu Testing Reports

From week 40 (week ending October 5th) through week 07 (week ending February 15th), 131 positive influenza samples were identified by MSDH. One hundred thirteen (113) of the samples were identified as influenza A (2009 H1N1). Sixteen samples were identified as influenza A (subtype not performed) and two were identified as influenza B.

The influenza cases were identified from the following counties: Adams (4), Alcorn (1), Amite (1), Benton (2), Chickasaw (1), Clay (1), Coahoma (5), Copiah (2), Covington (1), Forrest (4), George (2), Grenada (2), Hancock (2), Harrison (17), Hinds (2), Itawamba (1), Jackson (16), Jones (2), Lamar (1), Lauderdale (1), Lawrence (3), Leake (2), Lee (16), Lincoln (1), Marion (1), Marshall (7), Monroe (7), Neshoba (1), Oktibbeha (5), Pearl River (2), Pike (1), Prentiss (1), Stone (1), Tallahatchie (1), Tate (4), Tunica (1), Washington (3), Wayne (1), and Yalobusha (1). The counties of four influenza cases were unknown. | Figure 5
Nationally, \textbf{two} influenza-associated pediatric deaths were reported to CDC during week \textit{07}. One death was associated with a 2009 H1N1 virus and occurred during week 06 (week ending February 8\textsuperscript{th}) and one death was associated with an influenza A virus for which no subtyping was performed and occurred during week 05 (week ending February 1\textsuperscript{st}).  

\textbf{Figure 6}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure6.png}
\caption{Number of Influenza-Associated Pediatric Deaths by Week of Death and Influenza Type and Subtype, Nationwide, September 29, 2013 - February 15, 2014 (CDC Week 40, 2013 - Week 07, 2014)}
\end{figure}

Fifty-two influenza-associated pediatric deaths have been reported nationally during the 2013-2014 season. Of the 52 deaths, 48 (92\%) have been attributed to influenza A viruses, one (2\%) to an influenza B virus, two (4\%) to an influenza A/B virus not distinguished, and one (2\%) to an influenza virus whose type was not determined.  

\textbf{Figure 7}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure7.png}
\caption{Percentage of Influenza-Associated Pediatric Deaths by Influenza Type and Subtype, Nationwide, September 30, 2013 - February 15, 2014 (CDC Week 40, 2013 - Week 07, 2014)}
\end{figure}

Mississippi has had \textbf{one} influenza-associated pediatric death reported during this influenza season.
National ILI Surveillance

For week 07, the MS ILI rate (4.1%) continued to remain above the national ILI rate (2.5%), but continued to follow national trends. | Figure 8

Mississippi reported “Local” flu activity for week 07. | Table 3

<table>
<thead>
<tr>
<th>Level of Flu Activity</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No Activity</strong></td>
<td>Overall clinical activity remains low and there are no lab confirmed cases.</td>
</tr>
<tr>
<td><strong>Sporadic</strong></td>
<td>Isolated cases of lab confirmed influenza in the state; ILI activity is not increased OR a lab-confirmed outbreak in a single institution in the state; ILI activity is not increased.</td>
</tr>
<tr>
<td><strong>Local</strong></td>
<td>Increased ILI within a single region AND recent (within the past 3 weeks) laboratory evidence of influenza in that region. ILI activity in other regions is not increased OR two of more institutional outbreaks (ILI or lab confirmed) within a single region AND recent (within the past 3 weeks) lab confirmed influenza in that region. Other regions do not have increased ILI and virus activity is no greater than sporadic in those regions</td>
</tr>
<tr>
<td><strong>Regional</strong></td>
<td>Increased ILI in at least 2 regions but fewer than half of the regions AND recent (within the past 3 weeks) lab confirmed influenza in the affected regions OR Institutional outbreaks (ILI or lab confirmed) in at least 2 regions but fewer than half of the regions AND recent lab confirmed influenza in the affected regions</td>
</tr>
<tr>
<td><strong>Widespread</strong></td>
<td>Increased ILI and/or institutional outbreaks (ILI or lab confirmed) in at least half of the regions AND recent (within the past 3 weeks) lab confirmed influenza in the state</td>
</tr>
</tbody>
</table>
During week 07, influenza activity decreased, but remained elevated in the United States.\textsuperscript{1}

\textsuperscript{1}For up-to-date information on flu activity nationwide, please refer to the CDC’s website: http://www.cdc.gov/flu/weekly/fluactivitysurv.htm.

\begin{center}
\begin{tabular}{|l|l|}
\hline
\textbf{Additional information:} & \\
\hline
Centers for Disease Control and Prevention & http://cdc.gov/flu/ \\

Centers for Disease Control and Prevention FluView & http://www.cdc.gov/flu/weekly/ \\

Flu.gov & http://www.flu.gov/ \\

MSDH Flu and Pneumonia & http://msdh.ms.gov/msdhsite/_static/14,0,199.html \\

Google Flu Trends & http://www.google.org/flutrends/ \\

\hline
\end{tabular}
\end{center}
Appendix

Figure 1

Statewide ILI Data, Week 07 ending February 15, 2014
Current Season compared to Previous Season

% of ILI Patients

CDC Week

2012-2013

2013-2014
Figure 2

Percentage of ILI Cases by Age Group, Mississippi, August 25, 2013 - February 15, 2014
(CDC Week 35, 2013 - Week 07, 2014)

[Graph showing the percentage of ILI cases by age group from week 35 of 2013 to week 07 of 2014.]
Figure 3

Mississippi ILI Rates, 2013-2014 and Previous Seasons

- 2013-2014 (current season)
- 2012-2013
- 2011-2012
- 2010-2011
- MS Baseline
- National Baseline
- Region 4* Baseline

*Region 4 consists of AL, FL, GA, KY, MS, NC, SC, and TN.
State ILI/URI Rates 2010-2014 (YTD)
Figure 6

Number of Influenza-Associated Pediatric Deaths by Week of Death and Influenza Type and Subtype, Nationwide, September 29, 2013- February 15, 2014
(CDC Week 40, 2013- Week 07, 2014)
Figure 7

Percentage of Influenza-Associated Pediatric Deaths by Influenza Type and Subtype, Nationwide, September 30, 2013 - February 15, 2014 (CDC Week 40, 2013 - Week 07, 2014)

*Flu A* | *Flu B* | *Flu A/B Not Distinguished* | *Flu A/B*  
--- | --- | --- | ---  
2% | 4% | 2% | 92%  

N=52
Figure 8

Comparison of Nationwide ILI Rates to Mississippi ILI Rates

Weeks 40-07 | 2013-2014 Flu Season

US ILI rates from the Centers for Disease Control and Prevention: http://www.cdc.gov/flu/weekly/

CDC Week
Figure 9

A Weekly Influenza Surveillance Report Prepared by the Influenza Division
Weekly Influenza Activity Estimates Reported by State and Territorial Epidemiologists*

Week Ending February 15, 2014 - Week 7

*This map indicates geographic spread and does not measure the severity of influenza activity.