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 09 (02/23/14-03/01/14), the overall state ILI rate (3.1%) decreased from the previous week (3.6%) and was lower than this time last year (5.4%). | 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>09</td>
<td>March 1</td>
<td>17160</td>
<td>529</td>
<td>3.1%</td>
</tr>
<tr>
<td>08</td>
<td>Feb. 22</td>
<td>17931</td>
<td>640</td>
<td>3.6%</td>
</tr>
<tr>
<td>07</td>
<td>Feb. 15</td>
<td>16781</td>
<td>641</td>
<td>3.8%</td>
</tr>
</tbody>
</table>
During week 09, six districts (3, 4, 5, 6, 7, and 9) had a decrease in ILI activity, while three districts (1, 2, and 8) remained about the same. Information is provisional only and may change depending on additional reporting from sentinel providers. | Table 2

<table>
<thead>
<tr>
<th>District</th>
<th>Week 08</th>
<th>Week 09</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>3.6</td>
<td>3.1</td>
</tr>
<tr>
<td>I</td>
<td>1.3</td>
<td>1.4</td>
</tr>
<tr>
<td>II</td>
<td>2.5</td>
<td>2.4</td>
</tr>
<tr>
<td>III</td>
<td>12.1</td>
<td>5.7</td>
</tr>
<tr>
<td>IV</td>
<td>3.5</td>
<td>2.6</td>
</tr>
<tr>
<td>V</td>
<td>2.8</td>
<td>2.0</td>
</tr>
<tr>
<td>VI</td>
<td>10.7</td>
<td>8.0</td>
</tr>
<tr>
<td>VII</td>
<td>3.5</td>
<td>2.8</td>
</tr>
<tr>
<td>VIII</td>
<td>2.0</td>
<td>1.7</td>
</tr>
<tr>
<td>IX</td>
<td>4.1</td>
<td>3.7</td>
</tr>
</tbody>
</table>

Since week 35, the percentage of reported ILI cases has been highest among those in the 0-4 and 5-24 years of age groups. This trend continued into week 09. | Figure 2
The 2013-14 state ILI rate was above the national and Region 4 baselines, but was below the state baseline for week 09. | Figure 3

Mississippi ILI Rates 2010-2014 | Figure 4
Flu Testing Reports

From week 40 (week ending October 5th) through week 09 (week ending March 1st), 132 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 three were identified as influenza B.

The influenza cases were identified from the following counties: Adams (4), Alcorn (1), Amite (2), 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
National and Mississippi Pediatric Mortality Surveillance

Nationally, four influenza-associated pediatric deaths were reported to CDC during week 09. Two deaths were associated with an influenza A virus for which no subtyping was performed and occurred during weeks 03 (week ending January 18th) and 09 (week ending March 1st). One death was associated with an influenza B virus and occurred during week 08 (week ending February 22nd) and one death was associated with an influenza A and B virus co-infection and occurred during week 08 (week ending February 22nd). | Figure 6

Sixty-five influenza-associated pediatric deaths have been reported nationally during the 2013-2014 season. Of the 65 deaths, 58 (89%) have been attributed to influenza A viruses, three (5%) to an influenza B virus, two (3%) to an influenza A/B virus not distinguished, and two (3%) to an influenza A and B virus co-infection. | Figure 7
Mississippi has had one influenza-associated pediatric death reported during this influenza season.

### National ILI Surveillance

For week **09**, the MS ILI rate (3.1%) continued to remain **above** the national ILI rate (2.0%), but continued to follow national trends. | **Figure 8**

![Comparison of Nationwide ILI Rates to Mississippi ILI Rates](image)

**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 <strong>AND</strong> recent (within the past 3 weeks) laboratory evidence of influenza in that region. ILI activity in other regions is not increased <strong>OR</strong> two of more institutional outbreaks (ILI or lab confirmed) within a single region <strong>AND</strong> 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 <strong>AND</strong> recent (within the past 3 weeks) lab confirmed influenza in the affected regions <strong>OR</strong> Institutional outbreaks (ILI or lab confirmed) in at least 2 regions but fewer than half of the regions <strong>AND</strong> 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 <strong>AND</strong> recent (within the past 3 weeks) lab confirmed influenza in the state.</td>
</tr>
</tbody>
</table>
During week 09, influenza activity continued to decrease in the United States.¹ Figure 9

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

Additional information:

<table>
<thead>
<tr>
<th></th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSDH Flu and Pneumonia</td>
<td><a href="http://msdh.ms.gov/msdhsite/_static/14,0,199.html">http://msdh.ms.gov/msdhsite/_static/14,0,199.html</a></td>
</tr>
<tr>
<td>Google Flu Trends</td>
<td><a href="http://www.google.org/flutrends/">http://www.google.org/flutrends/</a></td>
</tr>
</tbody>
</table>
Appendix

Figure 1

Statewide ILI Data, Week 09 ending March 1, 2014
Current Season compared to Previous Season

% of ILI Patients

2012-2013
2013-2014

CDC Week
Figure 2

Percentage of ILI Cases by Age Group, Mississippi, August 25, 2013 - March 1, 2014 (CDC Week 35, 2013 - Week 09, 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.
Figure 4

State ILI/URI Rates 2010-2014 (YTD)

Percent of Patients

Reporting Year/Week

2010
2011
2012
2013
Comparison of Statewide ILI Rate to Positive Influenza Isolates by Type and Subtype, Mississippi, September 29, 2013 - March 1, 2014 (CDC Weeks 40, 2013 - 09, 2014)

Week Ending

- Flu A (H1)
- Flu A (H3)
- Flu A (unknown)
- Flu B
- ILL rate

Number of positive influenza isolates

Percent of patients presenting with ILI symptoms

Oct 5 13 8 5 4 5 11 7 6 3 13 9 11 7 5 3 3 4 2 0 0
Oct 12 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Oct 19 0 0 0 0 0 0 0 0 0 2 3 1 8 1 1 0 0 1 0 0 0
Nov 2 0 0 0 0 0 0 0 0 0 1 0 0 0 1 0 0 0 0 1
Nov 9 3.2 2.9 3.6 4.5 4.7 4.8 5.1 5.2 6.1 5.9 6.6 7.7 8.2 7.6 6.3 5.5 5.8 4.9 4.1 3.8 3.6 3.1
Figure 6

**Number of Influenza-Associated Pediatric Deaths by Week of Death and Influenza Type, Nationwide, September 29, 2013 - March 1, 2014**

(CDC Week 40, 2013 - Week 09, 2014)
Figure 7

Percentage of Influenza-Associated Pediatric Deaths by Influenza Type, Nationwide, September 30, 2013 - March 1, 2014 (CDC Week 40, 2013 - Week 09, 2014)

- Flu A
- Flu B
- Flu A/B Not Distinguished
- Flu A/B

N=65
Comparison of Nationwide ILI Rates to Mississippi ILI Rates
Weeks 40-09 | 2013-2014 Flu Season

US ILI rates from the Centers for Disease Control and Prevention: http://www.cdc.gov/flu/weekly/
*This map indicates geographic spread and does not measure the severity of influenza activity.