2012-2013
Influenza Report
Week 16
April 14 – April 20, 2013

About our flu activity reporting
MSDH relies upon selected sentinel health practitioners across the state to report the percentage of non-trauma 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

For week 16 (04/14/2013-04/20/2013), the overall state ILI rate (3.0%) decreased from last week (3.7%) and was lower when compared to this time last year (3.5%).

Figure 1

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

<table>
<thead>
<tr>
<th>CDC Week</th>
<th>Week Ending</th>
<th>Non-trauma patients</th>
<th>ILI symptoms</th>
<th>ILI Rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>Apr. 20</td>
<td>13807</td>
<td>411</td>
<td>3.0%</td>
</tr>
<tr>
<td>15</td>
<td>Apr. 13</td>
<td>14827</td>
<td>553</td>
<td>3.7%</td>
</tr>
<tr>
<td>14</td>
<td>Apr. 06</td>
<td>13908</td>
<td>617</td>
<td>4.4%</td>
</tr>
</tbody>
</table>
During week 16, one district (2) had an increase in ILI activity, while five districts (1, 4, 6, 7, and 9) had a decrease. Three districts (3, 5, 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 15</th>
<th>Week 16</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>3.7</td>
<td>3.0</td>
</tr>
<tr>
<td>1</td>
<td>2.1</td>
<td>0.9</td>
</tr>
<tr>
<td>2</td>
<td>1.9</td>
<td>3.2</td>
</tr>
<tr>
<td>3</td>
<td>5.9</td>
<td>5.6</td>
</tr>
<tr>
<td>4</td>
<td>5.2</td>
<td>4.7</td>
</tr>
<tr>
<td>5</td>
<td>2.2</td>
<td>2.0</td>
</tr>
<tr>
<td>6</td>
<td>9.3</td>
<td>6.5</td>
</tr>
<tr>
<td>7</td>
<td>3.1</td>
<td>2.5</td>
</tr>
<tr>
<td>8</td>
<td>2.1</td>
<td>1.8</td>
</tr>
<tr>
<td>9</td>
<td>3.8</td>
<td>3.1</td>
</tr>
</tbody>
</table>

Since week 35, the number of reported ILI cases has been highest among people in the 5 to 24 years of age group, followed by those in the 0 to 4 years of age group. During Week 16, the number of reported ILI cases was highest among individuals in the 0 to 4 years of age group. | Figure 2
The 2012-13 state ILI rate was above the national baseline, but was below the state baseline for week 16. | Figure 3

Mississippi ILI Rates, 2012-2013 and Previous Seasons

Mississippi ILI Rates 2010-2013 | Figure 4

State ILI/URI Rates 2010-2013 (YTD)
**Flu Testing Reports**

From week 35 (week ending September 1st) through week 16 (week ending April 20th), 165 positive influenza samples were identified by MSDH. 125 were influenza A and 40 were influenza B. 116 were subtyped as influenza A (H3) and six were subtyped as influenza A (H1). Three samples did not have subtyping performed. The last positive influenza sample identified by MSDH occurred in week 14 (week ending April 6th).

The influenza cases were identified from the following counties: Amite (2), Attala (3), Benton, Calhoun, Carroll, Chickasaw (4), Clarke (2), Clay, Copiah (2), Covington (4), DeSoto (4), Grenada, Harrison (12), Hinds (12), Itawamba (2), Jefferson Davis (5), Kemper (2), Lamar (5), Lauderdale, Lawrence, Lee (6), Leflore (3), Madison (2), Marion (4), Marshall (28), Monroe (6), Neshoba (2), Oktibbeha (7), Pearl River, Pontotoc (3), Rankin (5), Sharkey, Tate (7), Tippah (3), Tishomingo (5), Union (3), Walthall (2), Warren, Washington (7), and Yazoo (3).
National Pediatric Mortality Surveillance

Nationally, there were five influenza-associated pediatric deaths reported to CDC during week 16. One death was associated with an influenza A virus for which the subtype was not determined and occurred during week 16 (week ending April 20th). Four deaths were associated with influenza B viruses and occurred during weeks 03 (week ending January 19th), 13 (week ending March 30th), 14 (week ending April 6th), and 15 (week ending April 13th). | Figure 6

The total number of influenza-associated pediatric deaths reported during the 2012-2013 season is 131. Of the 131 deaths, 69 (53%) have been attributed influenza B viruses, 30 (23%) to influenza A viruses for which the subtype was not determined, 27 (21%) to influenza A (H3) viruses, 4 (3%) to influenza A (H1) viruses, and 1 (0.8%) to an influenza A and B virus. | Figure 7

Mississippi has had one influenza-associated pediatric death reported during this influenza season. Additional data can be found at: http://gis.cdc.gov/GRASP/Fluview/PedFluDeath.html.
National ILI Surveillance

For week 16, the MS ILI rate continued to remain above the national rate. | Figure 8

Mississippi reported “Sporadic” flu activity for week 16. | Table 4

<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 16, influenza activity decreased 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:

| Centers for Disease Control and Prevention | http://cdc.gov/flu/ |
| 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/ |
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Appendix

Figure 1

Statewide ILI Data, Week 16 ending April 20, 2013
Current Season compared to Previous Season

[Graph showing Statewide ILI Data for the current season compared to the previous season from 2011-2012 and 2012-2013.]
Figure 2

ILI Cases by Age Group, Mississippi, August 26, 2012 - April 20, 2013
(CDC Week 35, 2012 - Week 16, 2013)
Figure 3

Mississippi ILI Rates, 2012-2013 and Previous Seasons

- 2012-2013 (current season)
- 2011-2012
- 2010-2011
- 2009-2010
- MS Baseline
- National Baseline

% of ILI Patients vs. Week
Figure 4

State ILI/URI Rates 2010-2013 (YTD)

Percent of Patients

Reporting Year/Week

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

2010 2011 2012 2013
**Figure 5**

Comparison of Statewide ILI Rate to Positive Influenza Isolates by Type and Subtype, Mississippi, August 26, 2012 - April 20, 2013 (CDC Week 35, 2012 - Week 16, 2013)

- **Flu A (H1)**
- **Flu A (H3)**
- **Flu A (Unknown)**
- **Flu B**
- **ILI rate**

*Graph showing the number of positive influenza isolates and percent of non-trauma patients presenting with URI/ILI symptoms over time.*

*Data representations for each category are color-coded and displayed over a timeline from September 1, 2012, to April 20, 2013.*
Figure 6

Number of Influenza-Associated Pediatric Deaths by Week of Death and Influenza Type and Subtype, Nationwide, September 30, 2012- April 20, 2013
(CDC Week 40, 2012- Week 16, 2013)
Figure 7

Percentage of Influenza-Associated Pediatric Deaths by Influenza Type and Subtype, Nationwide, September 30, 2012 - April 20, 2013 (CDC Week 40, 2012 - Week 16, 2013)

- Flu A (H1): 53%
- Flu A (H3): 21%
- Flu A (unknown): 23%
- Flu B: 3%
- Flu A/B: 0.80%

n=131
Figure 8

Comparison of Nationwide ILI Rates to Mississippi ILI Rates
Weeks 40-16 | 2012-2013 Flu Season

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

CDC Week
Figure 9

FLU VIEW

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

Week Ending April 20, 2013 - Week 16

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