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.*

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State ILI Surveillance

During week 01 (12/30/18-01/05/19), the overall state ILI rate (4.1%) decreased from the previous week (5.1%), and was lower than this time last year (9.9%). | Figure 1

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

<table>
<thead>
<tr>
<th>2018-2019 Influenza Season</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDC Week</td>
</tr>
<tr>
<td>01</td>
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<tr>
<td>52</td>
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<td>51</td>
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</table>

During week 01, one district (6) had an increase in ILI activity, while eight districts had a decrease. One district (9) remained about the same. Information is provisional only and may change depending on additional reporting from sentinel providers. | Table 2

<table>
<thead>
<tr>
<th>MSDH District ILI Rates (%) 2018-2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>District</td>
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<tr>
<td>State</td>
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<td>VIII</td>
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<td>IX</td>
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</tbody>
</table>
Overall, the percentage of reported ILI cases has been highest among those in the 0-4 and 5-24 years of age groups. While the percentage of ILI cases decreased in the 5-24 years of age group and increased in the 65+ years of age group during week 01, the percentage of ILI cases in the other three age groups remained constant when compared to the previous week. | Figure 2

The 2018-19 state ILI rate was above the national and Region 4 baselines, but was at the Mississippi baseline, during week 01. | Figure 3
Mississippi ILI Rates 2014-2018 | Figure 4

Syndromic ILI Surveillance

The Mississippi State Department of Health also collects influenza syndromic surveillance data through the CDC BioSense Platform. This data is comprised of chief complaints and diagnosis codes and is submitted electronically by participating hospitals and clinics throughout the state in near real-time. The BioSense data is an additional tool to monitor influenza activity in Mississippi.

The percentage of patients with a chief complaint or diagnosis of influenza-like illness during week 01 decreased from the previous week, as did the statewide ILI rate. The BioSense ILI rate appears to be following the same trend as the statewide ILI rate. | Figure 5
Influenza Outbreaks

Outbreaks are reportable in Mississippi as a Class 1A event and must be reported by telephone within 24 hours of first knowledge or suspicion to the Mississippi State Department of Health. For more information on reportable diseases and conditions, please refer to the MSDH List of Reportable Diseases and Conditions.

Between week 40 (week ending October 6th) and week 01 (week ending January 5th), two outbreaks were reported to MSDH. MSDH investigates all reported outbreaks, and of the two reported outbreaks, complete information was available for one of them. This outbreak was due an influenza A virus, unknown subtype.

The influenza outbreaks have occurred in the following counties: Marion and Smith.

For additional information on infection control measures in health care facilities and managing influenza outbreaks in long-term care facilities, please refer to the CDC’s webpages: https://www.cdc.gov/flu/professionals/infectioncontrol/index.htm and https://www.cdc.gov/flu/professionals/infectioncontrol/ltc-facility-guidance.htm, respectively.

Flu Testing Reports

Since week 40 (week ending October 6th), 17 laboratory confirmed influenza samples have been identified by the MSDH Public Health Laboratory. Three (18%) were identified as influenza A (H1), 13 (76%) were identified as influenza A, H3, and one (6%) was identified as an influenza B. | Figure 6

The influenza cases were identified from the following counties: Attala (1), Copiah (2), Covington (1), Harrison (2), Hinds (1), Leake (1), Marion (4), Neshoba (1), Rankin (2), and Winston (1). The county for one of the cases was unknown.
National and Mississippi Pediatric Mortality Surveillance

Nationally, three influenza-associated pediatric deaths were reported to CDC during week 01. One death was associated with an influenza A(H3) virus, one death was associated with an influenza A(H1N1)pdm09 virus, and one death was associated with an influenza A virus for which no subtyping was performed. All three deaths occurred during week 52 (week ending December 29, 2018). Sixteen influenza-associated pediatric deaths have been reported to CDC for the 2018-2019 season. | Figure 7

Of the 16 influenza-associated pediatric deaths reported nationally during the 2018-2019 season, 15 (94%) have been attributed to influenza A viruses and one (6%) to an influenza B virus. | Figure 8

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

During week 01, the Mississippi (4.1%), national (3.5%), and Region 4 (3.3%) ILI rates decreased, but were either at or above their respective baselines. | Figure 9
During week 01, influenza activity **remained elevated** in the United States.\(^1\) | **Figure 10**

Mississippi reported "**Local**" for the influenza activity during week 01. | **Table 3**

<table>
<thead>
<tr>
<th>Level of Flu Activity</th>
<th>Definition</th>
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<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 OR 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 OR 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>

\(^1\)For up-to-date information on flu activity nationwide, please refer to the CDC's website: [http://www.cdc.gov/flu/weekly/fluactivitysurv.htm](http://www.cdc.gov/flu/weekly/fluactivitysurv.htm).
### Additional influenza information:

<table>
<thead>
<tr>
<th>Institution</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>
</tbody>
</table>
Appendix

**Figure 1**

Statewide ILI Data, Week 01 ending Jan. 5, 2019  
**Current Season compared to Previous Season**

% of ILI Patients

Week Ending

- **2018-2019**
- **2017-2018**
Figure 2

Percentage of ILI Cases by Age Group, Mississippi, August 26, 2018 - Jan. 5, 2019
(CDC Week 35, 2018 - Week 01, 2019)

Percentage of ILI Cases

Week Ending
Figure 3

Mississippi ILI Rates, 2018-2019 and Previous Influenza Seasons

*Region 4 consists of AL, FL, GA, KY, MS, NC, SC, and TN.
Figure 4

State ILI Rates 2014-2018 (YTD)
Figure 5

Comparison of the BioSense and Statewide ILI Rates, Mississippi
August 26, 2018 - Jan. 5, 2019
(CDC Week 35, 2018 - Week 01, 2019)

% of ILI Patients

Week Ending

Sep 1  Sep 15  Sep 29  Oct 13  Oct 27  Nov 10  Nov 24  Dec 8  Dec 22  Jan 5
Figure 6

Comparison of Statewide ILI Rate to Positive Influenza Isolates by Type and Subtype, Mississippi, Sept. 30, 2018 - May 18, 2019
(CDC Weeks 40, 2018 - 20, 2019)
Figure 7

Number of Influenza-Associated Pediatric Deaths by Week of Death and Influenza Type, Nationwide, Sept. 30, 2018 - January 5, 2019 (CDC Week 40, 2018 - Week 01, 2019)
Figure 8

Percentage of Influenza-Associated Pediatric Deaths by Influenza Type, Nationwide, Sept. 30, 2018 - January 5, 2019 (CDC Week 40, 2018 - Week 01, 2019)  
N = 16

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

6%  
94%
Figure 9

Comparison of Nationwide and Region 4* ILI Rates to Mississippi ILI Rates
Weeks 40-20 | 2018-2019 Flu Season

*Region 4 consists of AL, FL, GA, KY, MS, NC, SC, and TN.
*This map indicates geographic spread and does not measure the severity of influenza activity.*