2019-2020
Influenza Surveillance Report
Week 01
Dec. 29, 2019 – Jan. 4, 2020

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.

Content

❖ **State ILI Surveillance**

❖ **Influenza Outbreaks**

❖ **Flu Testing Reports**

❖ **National and Mississippi Pediatric Mortality Surveillance**

❖ **National ILI Surveillance**

❖ **Appendix**

  • **Figure 1** (Statewide ILI Data, Current Season compared to Previous Season)
  • **Figure 2** (Percentage of ILI Cases by Age Group, Mississippi)
  • **Figure 3** (Mississippi ILI Rates, 2018-2019 and Previous Seasons)
  • **Figure 4** (State ILI Rates 2014-2018 (YTD))
  • **Figure 5** (Comparison of the BioSense and Statewide ILI Rates)
  • **Figure 6** (Comparison of Statewide ILI Rate to Positive Influenza Isolates by Type and Subtype, Mississippi)
  • **Figure 7** (Number of Influenza-Associated Pediatric Deaths by Week of Death and Influenza Type, Nationwide)
  • **Figure 8** (Percentage of Influenza-Associated Pediatric Deaths by Influenza Type, Nationwide)
  • **Figure 9** (Comparison of Nationwide and Region 4 ILI Rates to Mississippi ILI Rates)
  • **Figure 10** (CDC FluView Weekly Influenza Activity Map)
State ILI Surveillance

During week 01 (12/29/19-01/04/20), the overall state ILI rate (6.4%) decreased from the previous week (8.4%), but was higher than this time last year (4.1%).

**Table 1**

<table>
<thead>
<tr>
<th>2019-2020 Influenza Season</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDC Week</td>
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<tr>
<td>-----------</td>
</tr>
<tr>
<td>01</td>
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<tr>
<td>52</td>
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<tr>
<td>51</td>
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</tbody>
</table>

During week 01, all nine districts had a decrease in ILI activity. *Information is provisional only and may change depending on additional reporting from sentinel providers.*

**Table 2**

<table>
<thead>
<tr>
<th>MSDH District ILI Rates (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019-2020</td>
</tr>
<tr>
<td>-----------------------------</td>
</tr>
<tr>
<td>District</td>
</tr>
<tr>
<td>---------</td>
</tr>
<tr>
<td>State</td>
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<tr>
<td>I</td>
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<td>II</td>
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<td>VI</td>
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<tr>
<td>VII</td>
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<tr>
<td>VIII</td>
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<tr>
<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. During week 01, the percentage of ILI cases in the 25-49, 50-64, and 65+ years of age groups increased, but decreased in the 5-24 years of age group, when compared to the previous week. The percentage of ILI cases in the 0-4 age group remained constant.  

**Figure 2**

The 2019-20 state ILI rate was above the national, Region 4, and state baselines for week 01.  

**Figure 3**

*Region 4 consists of AL, FL, GA, KY, MS, NC, SC, and TN.*
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 (ending October 5, 2019) and week 01 (week ending January 4, 2020), five outbreaks were reported to MSDH. MSDH investigates all reported outbreaks, and of the five reported outbreaks, complete information was available for three of them. All three outbreaks were attributed to influenza A/H1.

The influenza outbreaks have occurred in the following counties: Alcorn, Amite, Pontotoc, Scott, and Tunica.

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 5th), 113 laboratory confirmed influenza samples have been identified by the MSDH Public Health Laboratory. Ten (9%) were identified as influenza A/H1, 13 (12%) were identified as influenza A/H3, and 90 (80%) was identified as an influenza B/Victoria. | Figure 6
The county of residence for one of the cases was unknown.

### National and Mississippi Pediatric Mortality Surveillance

Nationally, five influenza-associated pediatric deaths were reported to CDC during week 01. Two deaths occurred during week 52 (week ending December 28, 2019) and three deaths occurred during week 01 (week ending January 4, 2020). Three were associated with influenza B viruses that did not have a lineage determined, and two were associated with influenza A(H1N1)pdm09 viruses. Thirty-two influenza-associated pediatric deaths have been reported to CDC for the 2019-2020 season. | Figure 7

Of the 32 influenza-associated pediatric deaths reported nationally during the 2019-2020 season, 11 (34%) have been attributed to influenza A viruses and 21 (66%) to influenza B viruses. | Figure 8
Mississippi has had no influenza-associated pediatric deaths reported during this influenza season.

For additional information on influenza-associated pediatric deaths, please refer to the CDC's FluView.

National ILI Surveillance

During week 01, the Mississippi (6.4%), national (5.8%) and Region 4 (6.2%) ILI rates decreased, but were still above their respective baselines. | Figure 9

![Comparison of Nationwide and Region 4* ILI Rates to Mississippi ILI Rates Weeks 40-20 | 2019-2020 Flu Season](chart.png)

*Region 4 consists of AL, FL, GA, KY, MS, NC, SC, and TN.
During week 01, influenza activity decreased in the United States.\(^1\) | Figure 10

Mississippi reported “Regional” for the influenza activity during week 01. | Table 3

<table>
<thead>
<tr>
<th>Level of Flu Activity</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Activity</td>
<td>Overall clinical activity remains low and there are no lab confirmed cases.</td>
</tr>
<tr>
<td>Sporadic</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>Local</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>Regional</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>Widespread</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>

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

<table>
<thead>
<tr>
<th>Source</th>
<th>URL</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. 4, 2020
Current Season compared to Previous Season

% of ILI Patients

Week Ending

2019-2020
2018-2019
Figure 2

Percentage of ILI Cases by Age Group, Mississippi, August 25, 2019 - Jan. 4, 2020
(CDC Week 35, 2019 - Week 01, 2020)

- **0-4**
- **5-24**
- **25-49**
- **50-64**
- **65+**

Percentage of ILI Cases

Week Ending
Figure 3

Mississippi ILI Rates, 2018-2019 and Previous Influenza Seasons

% of ILI Patients

Week

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

State ILI Rates 2015-2020 (YTD)
Figure 5

Comparison of the BioSense and Statewide ILI Rates, Mississippi
August 25, 2019 - Jan. 4, 2020
(CDC Week 35, 2019 - Week 01, 2020)

% of ILI Patients

Week Ending

Aug. 31  Sep. 14  Sep. 28  Oct. 12  Oct. 26  Nov. 9  Nov. 23  Dec. 7  Dec. 21  Jan. 4
Figure 6

Comparison of Statewide ILI Rate to Positive Influenza Isolates by Type and Subtype, Mississippi
Sept. 29, 2019 - May 16, 2020
(CDC Weeks 40, 2019 - 20, 2020)
Figure 7

Number of Influenza-Associated Pediatric Deaths by Week of Death and Influenza Type, Nationwide, Sept. 29, 2019 - Jan. 4, 2020 (CDC Week 40, 2019 - Week 01, 2020)
Figure 8

Percentage of Influenza-Associated Pediatric Deaths by Influenza Type, Nationwide, Sept. 29, 2019 - Jan. 4, 2020 (CDC Week 40, 2019 - Week 01, 2020) 
N = 32

- Flu A: 34%
- Flu B: 66%
**Figure 9**

Comparison of Nationwide and Region 4* ILI Rates to Mississippi ILI Rates

**Weeks 40-20 | 2019-2020 Flu Season**

*Region 4 consists of AL, FL, GA, KY, MS, NC, SC, and TN.*
A Weekly Influenza Surveillance Report Prepared by the Influenza Division

Weekly Influenza Activity Estimates Reported by State and Territorial Epidemiologists*

Week Ending Jan 04, 2020 - Week 1

Influenza Activity Estimates

- No Activity
- Sporadic
- Local Activity
- Regional
- Widespread
- No Report

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