2018-2019
Influenza Surveillance Report
Week 03
Jan. 13 – Jan. 19, 2019

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 03 (01/13/19-01/19/19), the overall state ILI rate (4.2%) increased from the previous week (3.6%), but was lower than this time last year (9.4%).

| Figure 1 |

During week 03, five districts (1, 2, 3, 7, and 9) had an increase in ILI activity, while one district (8) had a decrease. Three districts (4, 5, and 6) remained about the same.

Information is provisional only and may change depending on additional reporting from sentinel providers. | Table 2 |

# Table 1

<table>
<thead>
<tr>
<th>2018-2019 Influenza Season</th>
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<tbody>
<tr>
<td>CDC Week</td>
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| Table 2 |

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<th>MSDH District ILI Rates (%) 2018-2019</th>
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<td>District</td>
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<tr>
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</table>
Overall, the percentage of reported ILI cases has been highest among those in the **0-4** and **5-24 years** of age groups. The percentage of ILI cases decreased in the **0-4** and **65+ years** of age groups, but increased in the **5-24 years** of age group during week **03**. The percentage of ILI cases in the two other 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 **03**. | **Figure 3**
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.

During week 02, the percentage of patients with a chief complaint or diagnosis of influenza-like illness 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. BioSense ILI data for week 03 was not available at the time of this report. | 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 03 (week ending January 19th), three outbreaks were reported to MSDH. MSDH investigates all reported outbreaks, and of the three reported outbreaks, complete information was available for all of them. Two of the outbreaks were attributed to influenza A (H3), and one was due an influenza A virus, unknown subtype.

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

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), 33 laboratory confirmed influenza samples have been identified by the MSDH Public Health Laboratory. Seven (21%) were identified as influenza A (H1), 25 (76%) were identified as influenza A, H3, and one (3%) was identified as an influenza B. | Figure 6

The influenza cases were identified from the following counties: Attala (3), Carroll (1), Copiah (2), Covington (1), Hancock (1), Harrison (6), Hinds (4), Jones (1), Leake (1), Marion (4), Neshoba (1), Newton (1), Rankin (3), Tate (1), and Winston (1). The county of residence for two of the cases was unknown.
National and Mississippi Pediatric Mortality Surveillance

Nationally, three influenza-associated pediatric deaths were reported to CDC during week 03. Two deaths were associated with an influenza A(H1N1)pdm09 virus and occurred during weeks 51 and 2 (weeks ending December 22, 2018 and January 12, 2019, respectively). One death was associated with an influenza A virus for which no subtyping was performed and occurred during week 1 (week ending January 5, 2019). Twenty-two influenza-associated pediatric deaths have been reported to CDC for the 2018-2019 season. | Figure 7

Of the 22 influenza-associated pediatric deaths reported nationally during the 2018-2019 season, 21 (95%) have been attributed to influenza A viruses and one (5%) 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 03, the Mississippi (4.2%), national (3.3%) and Region 4 (3.0%) ILI rates increased. While the MS ILI rate was at its baseline, the national and Region 4 ILI rates were both above their respective baselines. | Figure 9

![Comparison of Nationwide and Region 4* ILI Rates to Mississippi ILI Rates](image_url)

*Region 4 consists of AL, FL, GA, KY, MS, NC, SC, and TN.
During week 03, influenza activity increased in the United States.¹ | **Figure 10**

Mississippi reported “Regional” for the influenza activity during week 03. | **Table 3**

<table>
<thead>
<tr>
<th>Level of Flu Activity</th>
<th>Definition</th>
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<tr>
<td>No Activity</td>
<td>Overall clinical activity remains low and there are no lab confirmed cases.</td>
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<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>
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<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>
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<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>
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<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>
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¹For 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:

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<td>and Prevention FluView</td>
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<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>
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Appendix

Figure 1

Statewide ILI Data, Week 03 ending Jan. 19, 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. 19, 2019
(CDC Week 35, 2018 - Week 03, 2019)

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

Week Ending

Percentage of ILI Cases
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 5

Comparison of the BioSense and Statewide ILI Rates, Mississippi
August 26, 2018 - Jan. 19, 2019
(CDC Week 35, 2018 - Week 03, 2019)

% of ILI Patients

Week Ending

- Statewide
- BioSense
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 19, 2019 (CDC Week 40, 2018 - Week 03, 2019)
**Figure 8**

Percentage of Influenza-Associated Pediatric Deaths by Influenza Type, Nationwide, Sept. 30, 2018 - January 19, 2019
(CDC Week 40, 2018 - Week 03, 2019)
N = 22
Figure 9

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

CDC Week

*Region 4 consists of AL, FL, GA, KY, MS, NC, SC, and TN.
Figure 10

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

Week Ending Jan 19, 2019 - Week 3

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.