



# 2018-2019 Influenza Surveillance Report

## Week 16

Apr. 14 – Apr. 20, 2019

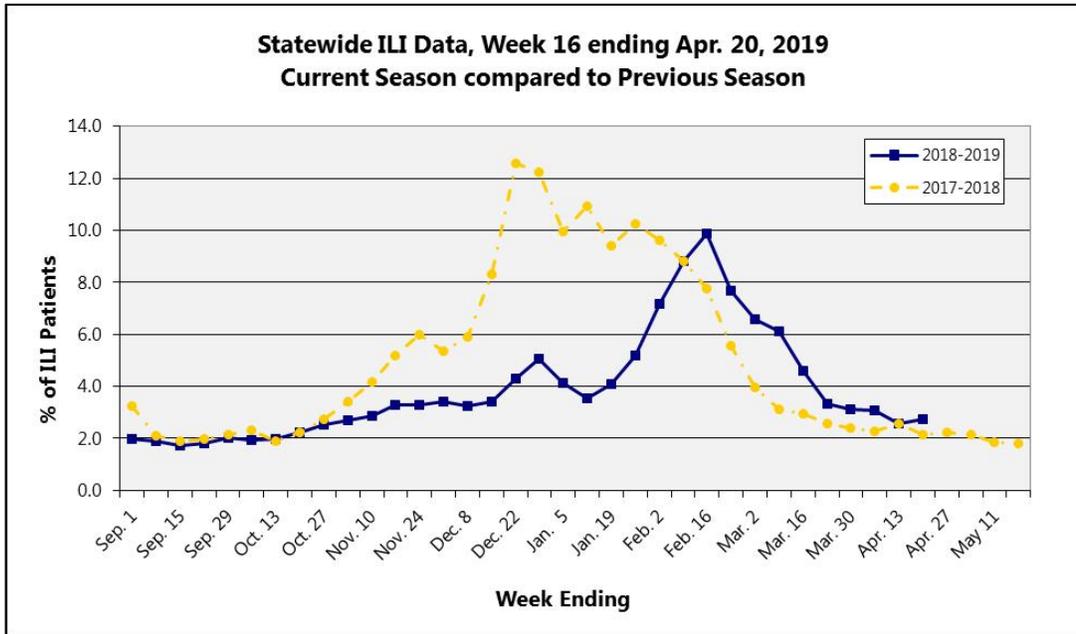
### About our flu activity reporting

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 **16** (04/14/19-04/20/19), the overall state ILI rate (**2.7%**) was **comparable** to the previous week (**2.6%**), but was slightly above this time last year (**2.1%**). | [Figure 1](#)

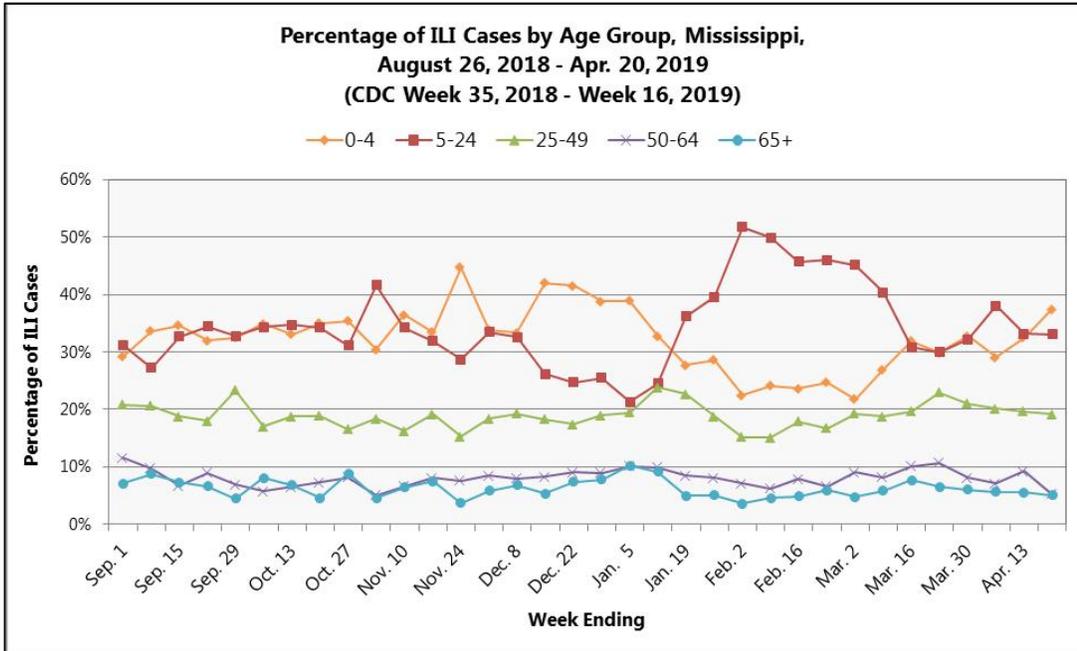
Total number of patients treated by sentinel providers in the last three weeks. | **Table 1**

2018-2019 Influenza Season					
CDC Week	Week Ending	Number of reports received from Sentinel Providers	Total patients	ILI symptoms	ILI Rate (%)
<b>16</b>	<b>Apr. 20</b>	<b>164</b>	<b>16601</b>	<b>454</b>	<b>2.7</b>
15	Apr. 13	162	17761	453	2.6
14	Apr. 6	164	17425	536	3.1

During week **16**, four districts (1, 3, 4, and 7) had an increase in ILI activity, while one district (2) had a decrease. Four districts (5, 6, 8, and 9) remained about the same. *Information is provisional only and may change depending on additional reporting from sentinel providers.* | **Table 2**



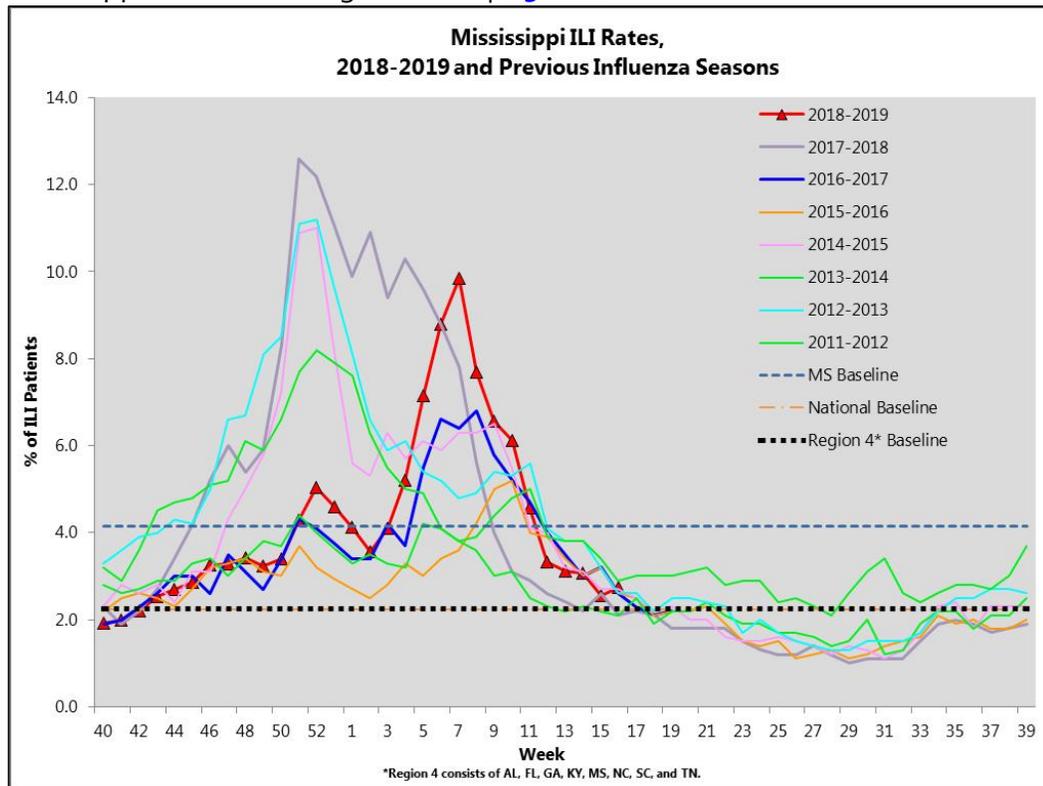
MSDH District ILI Rates (%) 2018-2019		
District	Week 15	Week 16
State	2.6	2.7
I	1.8	2.6
II	6.2	0.4
III	1.2	2.9
IV	2.6	4.2
V	2.5	2.5
VI	2.1	2.1
VII	3.9	5.2
VIII	1.2	1.0
IX	2.8	2.4



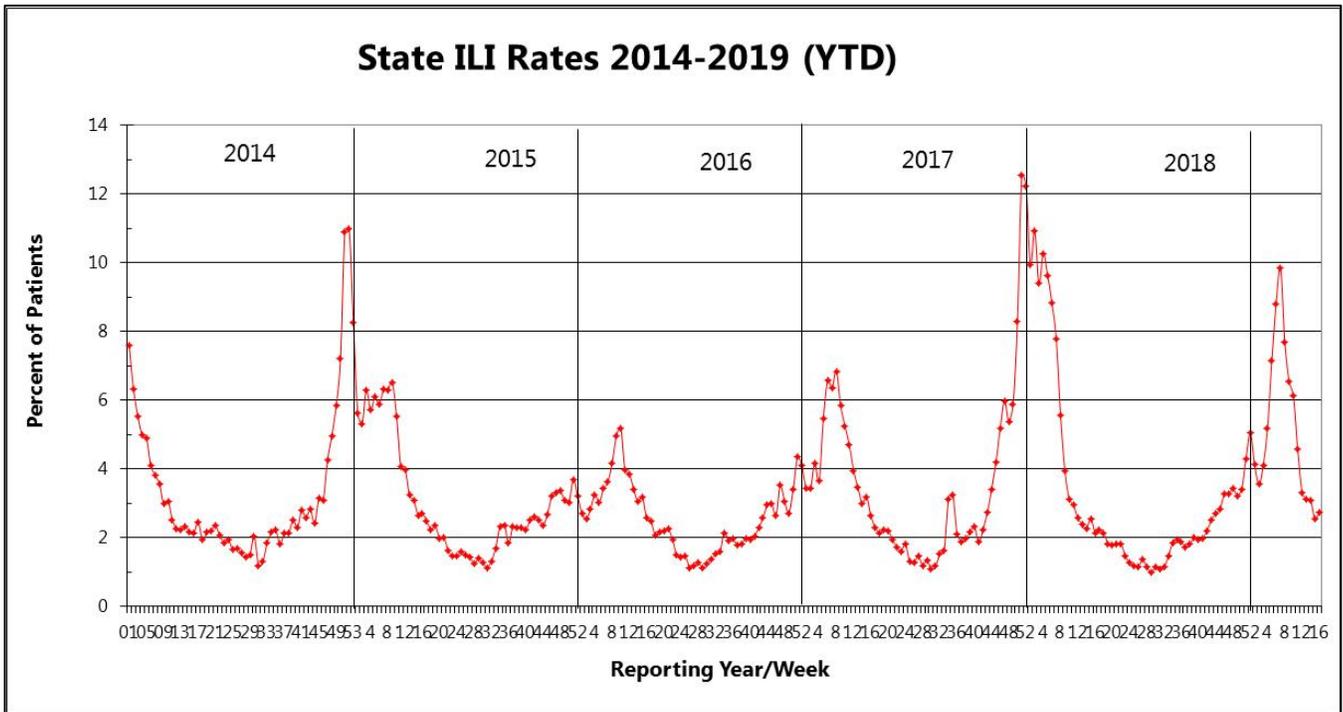
Overall, the percentage of reported ILI cases has been highest among those in the 0-4 and 5-24 years of age groups. During week 16, the percentage of ILI cases **increased** in the

0-4 years of age group, but **decreased** in the 50-64 years of age group. The percentage of ILI cases in the other age groups remained constant when compared to the previous week. | [Figure 2](#)

The 2018-19 state ILI rate was **slightly above** the national and Region 4 baselines, but was **below** the Mississippi baseline, during week 16. | [Figure 3](#)

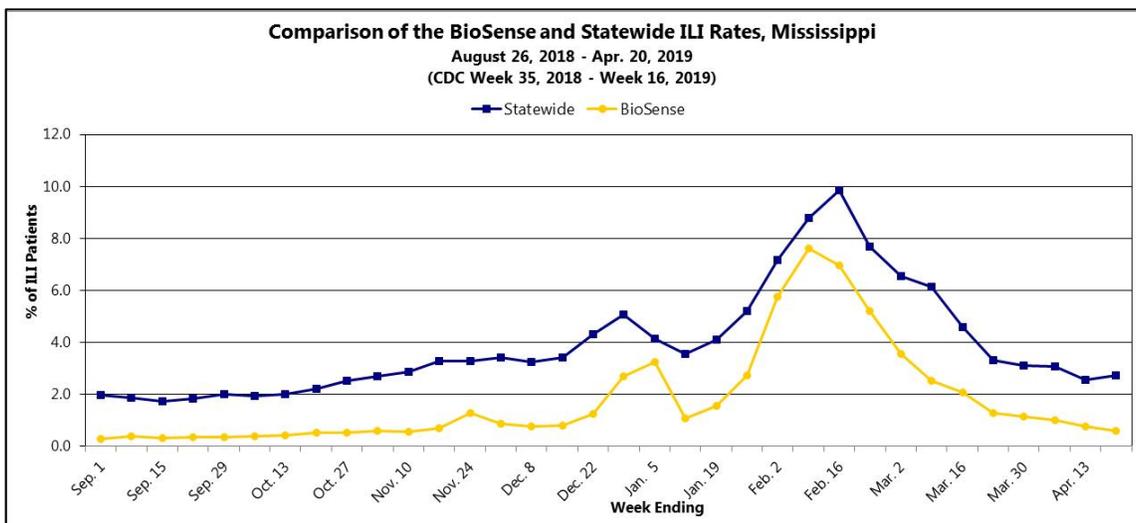


Mississippi ILI Rates 2014-2019 | [Figure 4](#)



### 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.



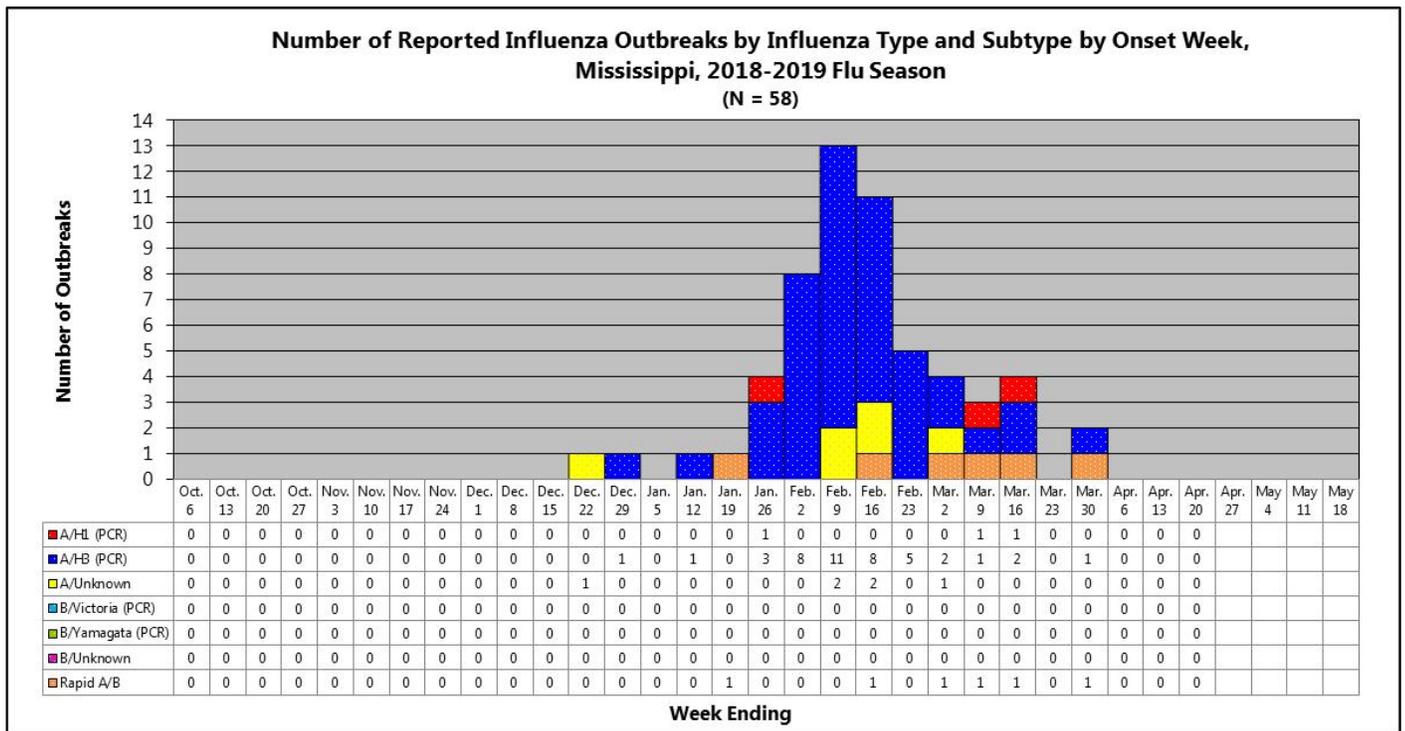
The percentage of patients with a chief complaint or diagnosis of influenza-like illness

during week 16 slightly decreased from the previous week, while the statewide ILI rate was comparable. | [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 6<sup>th</sup>) and week **16** (week ending April 20<sup>th</sup>), 64 outbreaks were reported to MSDH, with the last outbreak reported on April 1<sup>st</sup>. MSDH investigates all reported outbreaks, and of the 64 reported outbreaks, complete information was available for 58 of them. Three (5%) of the outbreaks were attributed to influenza A/H1, 43 (74%) were attributed to influenza A/H3, six (10%) were due to an influenza A virus, unknown subtype, and six (10%) were due to an unknown influenza type. | [Figure 6](#)



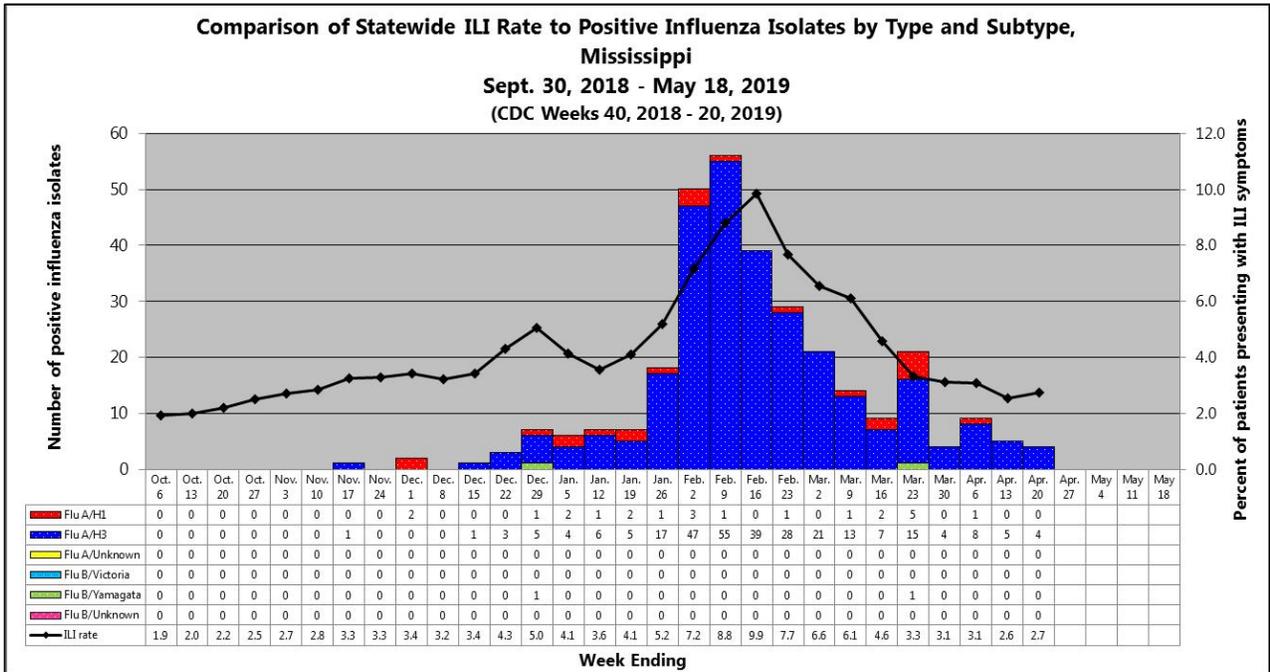
The influenza outbreaks occurred in the following counties: Attala (1), Bolivar (1), Calhoun (1), Covington (1), DeSoto (1), Forrest (3), Franklin (1), Greene (1), Hancock (1), Harrison (2), Hinds (3), Jackson (2), Jones (4), Kemper (1), Lafayette (2), Lauderdale (1), Leake (1), Lee (1), Lincoln (3), Madison (2), Marion (3), Monroe (2), Neshoba (2), Newton (1), Oktibbeha (1), Pearl River (2), Perry (1), Pike (2), Pontotoc (1), Rankin (3), Smith (2), Stone (1), Tallahatchie (1), Tate (2), Tishomingo (1), Tunica (1), Union (1), Warren (1), Webster (1), and Yazoo (2).

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 6<sup>th</sup>), **313** laboratory confirmed influenza samples have been identified by the MSDH Public Health Laboratory. Twenty-three (7%) were identified as influenza A/H1, 288 (92%) were identified as influenza A/H3, and two (0.6%) was identified as an influenza B/Yamagata. | [Figure 7](#)

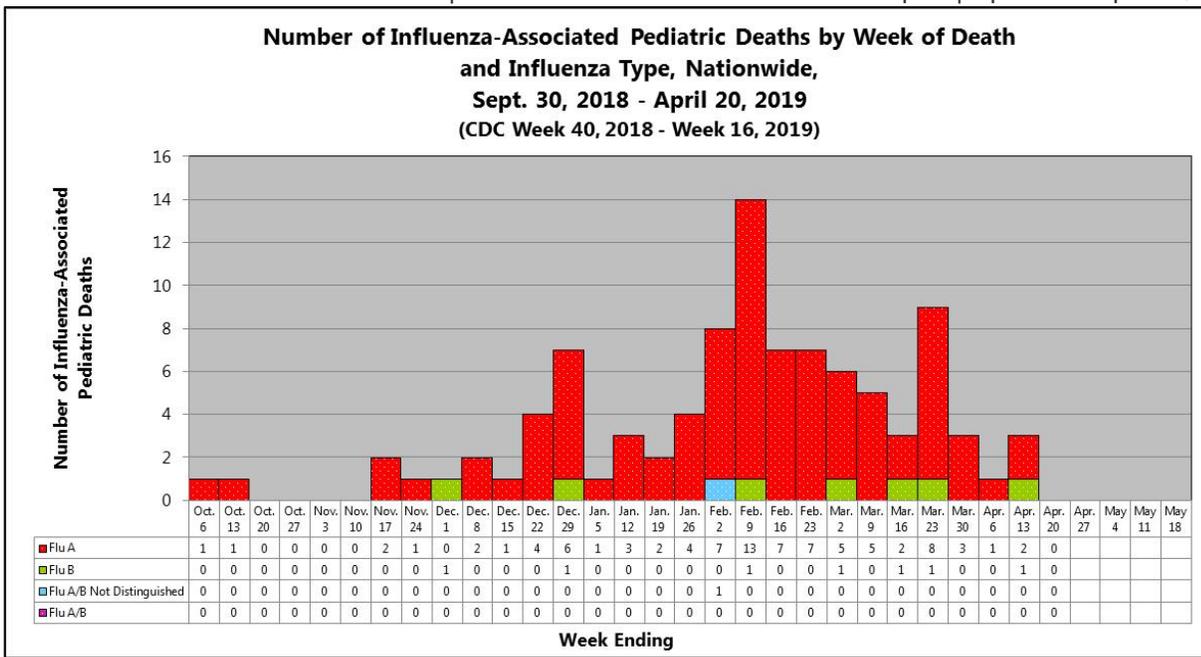


The influenza cases were identified from the following counties: Attala (36), Bolivar (2), Calhoun (1), Carroll (1), Choctaw (2), Clarke (1), Copiah (2), Covington (4), DeSoto (1), Forrest (16), Franklin (2), George (3), Greene (2), Hancock (6), Harrison (28), Hinds (29), Holmes (3), Jackson (11), Jones (9), Kemper (2), Lafayette (3), Lamar (2), Lauderdale (3), Leake (18), Lee (2), Leflore (2), Lincoln (4), Lowndes (1), Madison (7), Marion (9), Marshall (6), Monroe (3), Neshoba (14), Newton (4), Oktibbeha (6), Pearl River (9), Pike (9), Pontotoc (1), Rankin (23), Scott (1), Smith (2), Tallahatchie (1), Tate (3), Tishomingo (2), Tunica (2), Union (2), Winston (7), and Yazoo (3). The county of residence for three of the cases was unknown.

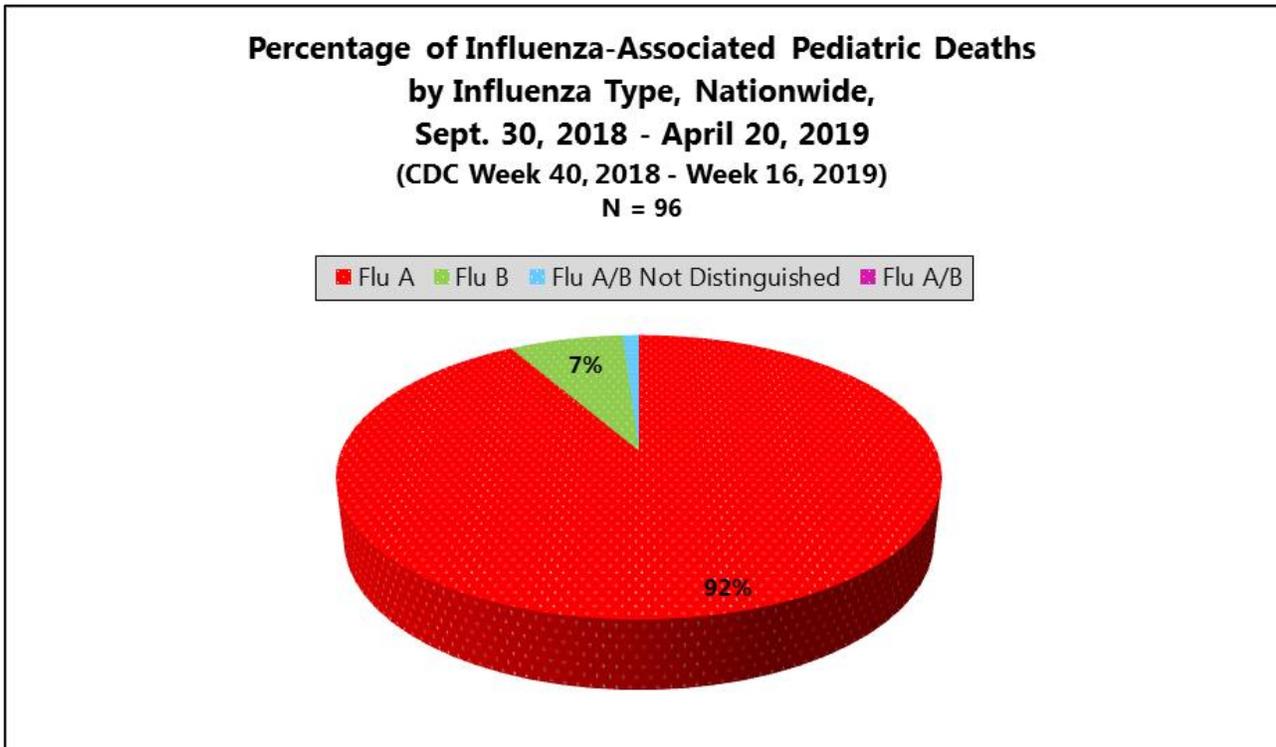
### National and Mississippi Pediatric Mortality Surveillance

Nationally, **five** influenza-associated pediatric deaths were reported to CDC during week **16**. One death was associated with an influenza A(H3) virus and occurred during week 15 (week ending April 13, 2019). Two deaths were associated with an influenza A virus for which no subtyping was performed and occurred during weeks 12 and 13 (weeks ending March 23 and March 30, 2019, respectively). Two deaths were associated with influenza B virus and occurred during weeks 11 and 15 (weeks ending March 16 and April 13, 2019, respectively). **Ninety-six** influenza-associated pediatric deaths have been reported to CDC for the 2018-2019 season. | [Figure 8](#)

Mississippi has had **one** influenza-associated pediatric death reported during this influenza season.



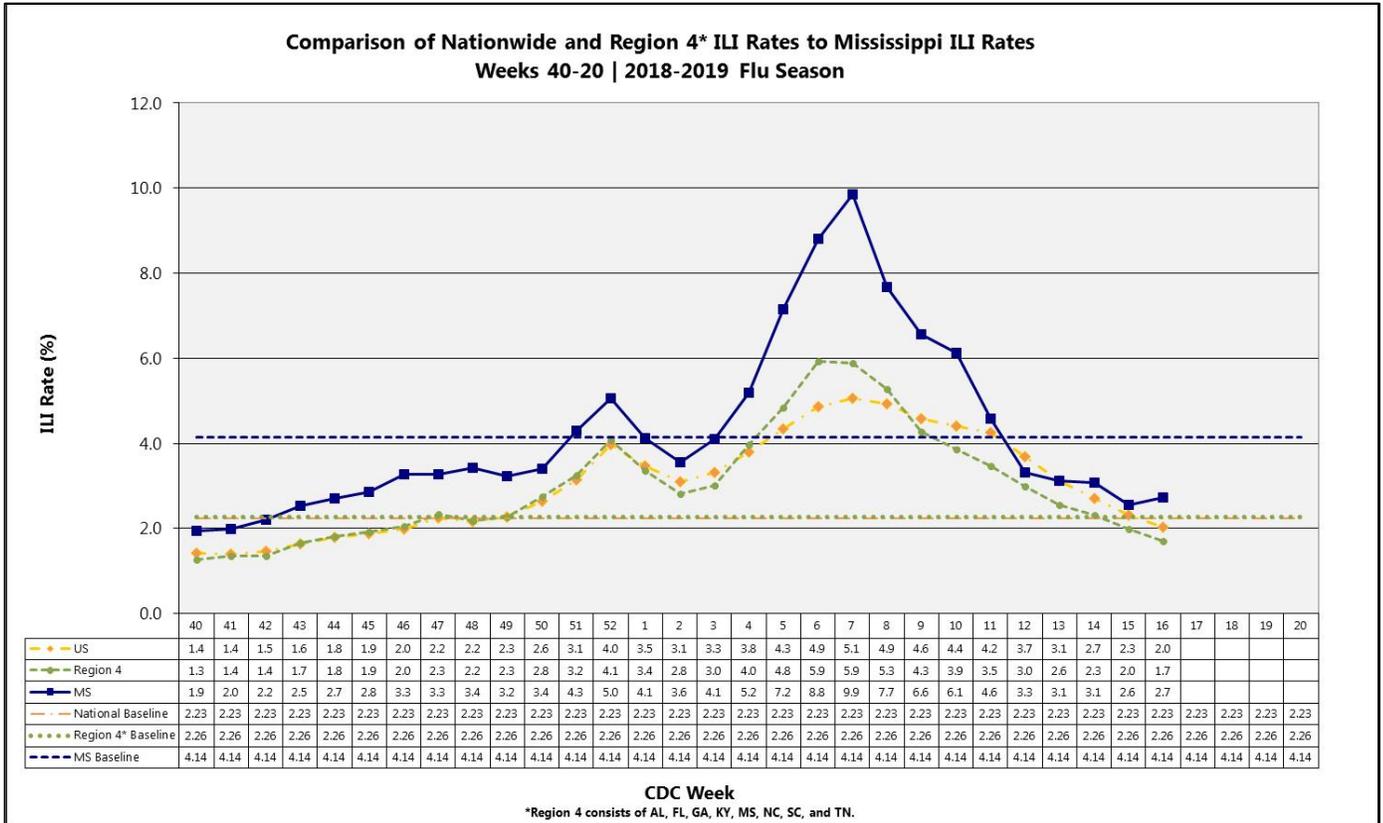
Of the **96** influenza-associated pediatric deaths reported nationally during the 2018-2019 season, 88 (92%) have been attributed to influenza A viruses, seven (7%) to influenza B viruses, and one (1%) to an influenza virus for which type was not determined. | [Figure 9](#)



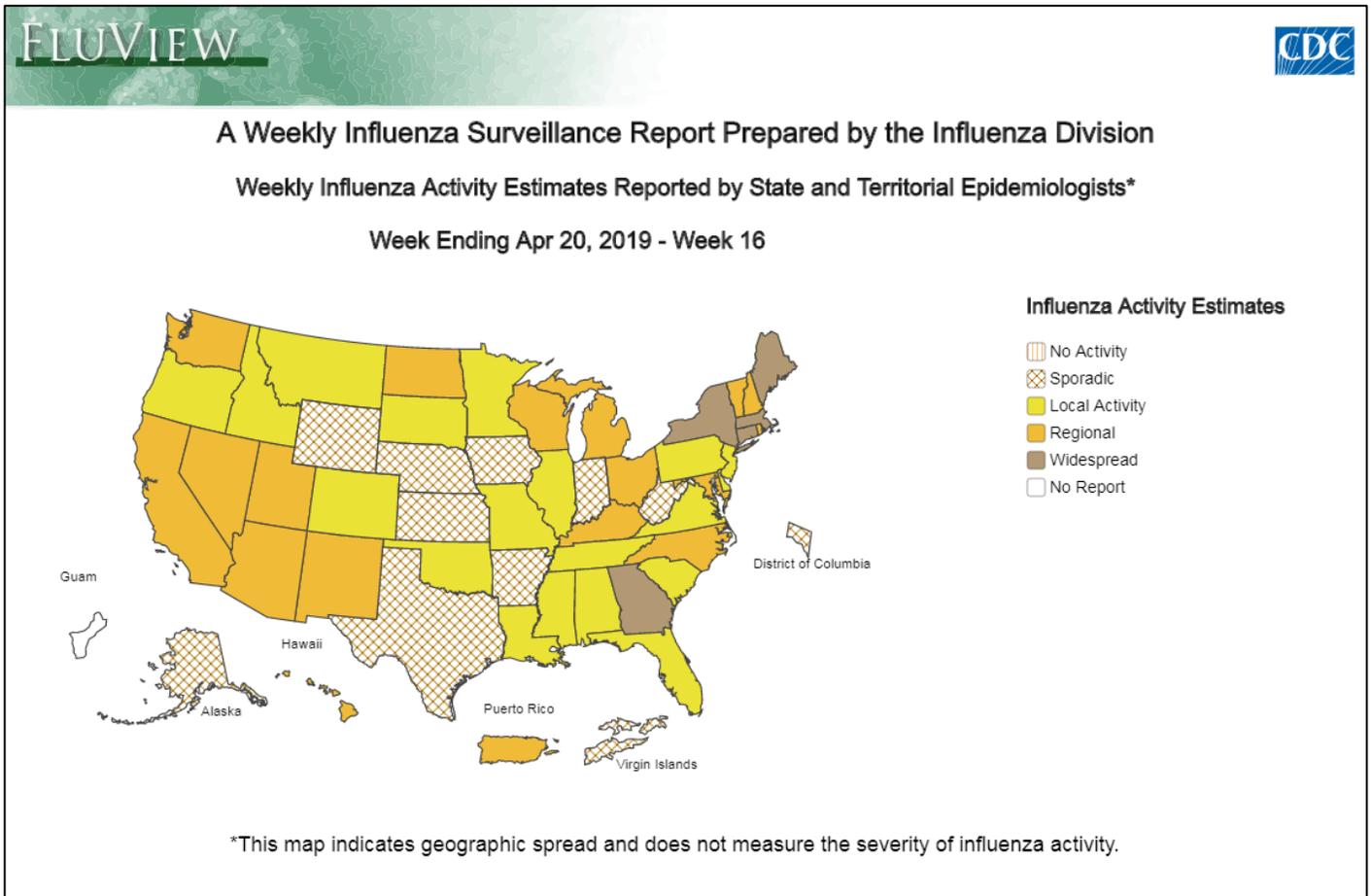
For additional information on influenza-associated pediatric deaths, please refer to the [CDC's FluView](#).

### National ILI Surveillance

During week **16**, the Mississippi ILI rate (2.7%) remained stable, while the national (2.0%) and Region 4 (1.7%) ILI rates decreased. All ILI rates were below its respective baseline. | [Figure 10](#)



During week **16**, influenza activity **continued to decrease** in the United States.<sup>1</sup> | [Figure 11](#)



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

Mississippi reported "**Local**" for the influenza activity during week **16**. | **Table 3**

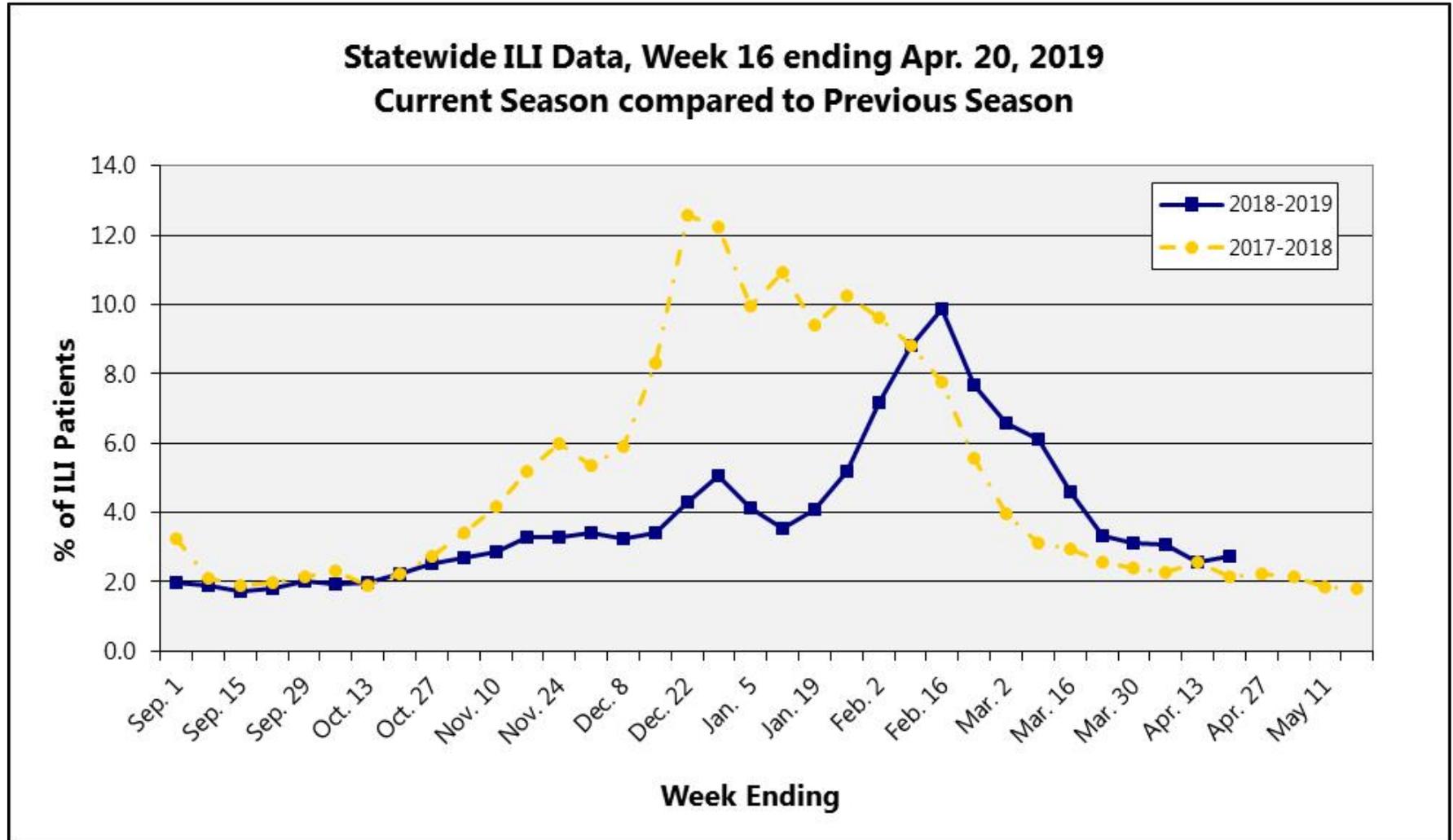
Level of Flu Activity	Definition
<b>No Activity</b>	Overall clinical activity remains low and there are no lab confirmed cases.
<b>Sporadic</b>	Isolated cases of lab confirmed influenza in the state; ILI activity is not increased <u>OR</u> A lab-confirmed outbreak in a single institution in the state; ILI activity is not increased.
<b>Local</b>	Increased ILI within a single region <b>AND</b> recent (within the past 3 weeks) laboratory evidence of influenza in that region. ILI activity in other regions is not increased <u>OR</u> two of more institutional outbreaks (ILI or lab confirmed) within a single region <b>AND</b> 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
<b>Regional</b>	Increased ILI in at least 2 regions but fewer than half of the regions <b>AND</b> recent (within the past 3 weeks) lab confirmed influenza in the affected regions <u>OR</u> Institutional outbreaks (ILI or lab confirmed) in at least 2 regions but fewer than half of the regions <b>AND</b> recent lab confirmed influenza in the affected regions.
<b>Widespread</b>	Increased ILI and/or institutional outbreaks (ILI or lab confirmed) in at least half of the regions <b>AND</b> recent (within the past 3 weeks) lab confirmed influenza in the state.

**Additional influenza information:**

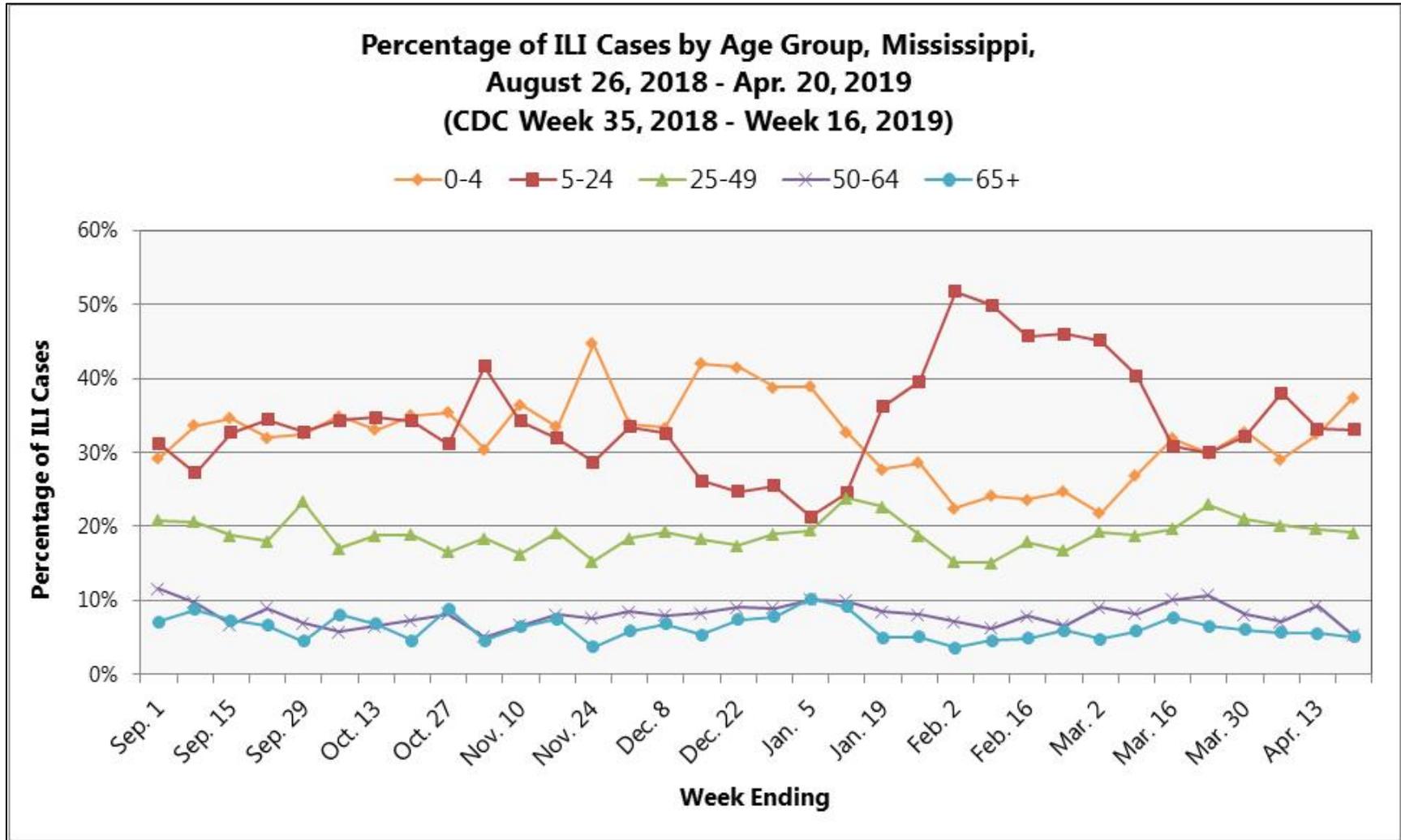
<b>Centers for Disease Control and Prevention</b>	<a href="http://cdc.gov/flu/">http://cdc.gov/flu/</a>
<b>Centers for Disease Control and Prevention FluView</b>	<a href="http://www.cdc.gov/flu/weekly/">http://www.cdc.gov/flu/weekly/</a>
<b>MSDH Flu and Pneumonia</b>	<a href="http://msdh.ms.gov/msdhsite/_static/14,0,199.html">http://msdh.ms.gov/msdhsite/_static/14,0,199.html</a>
<b>World Health Organization FluNet</b>	<a href="http://www.who.int/influenza/gisrs_laboratory/flunet/en/">http://www.who.int/influenza/gisrs_laboratory/flunet/en/</a>

## Appendix

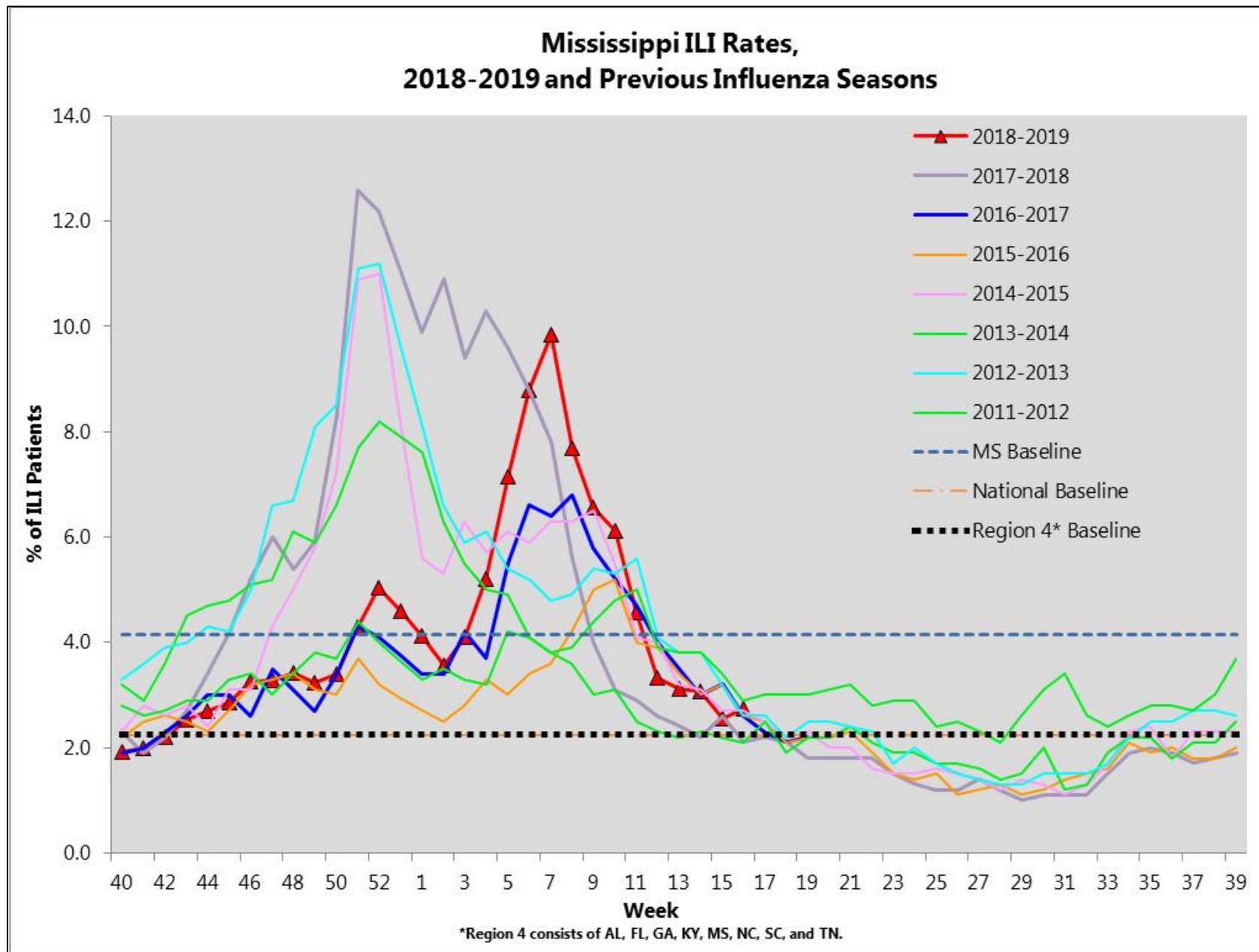
Figure 1



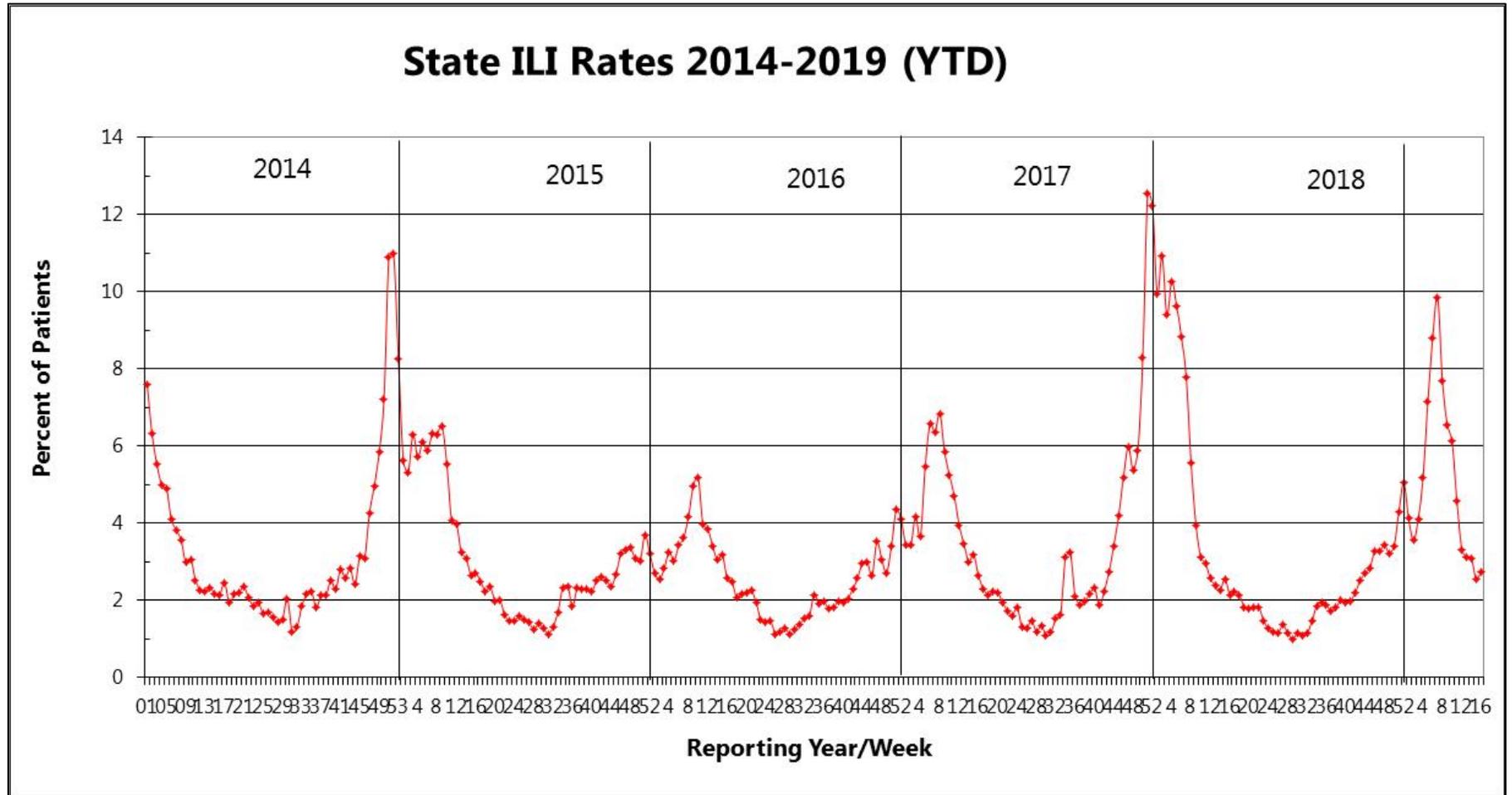
**Figure 2**



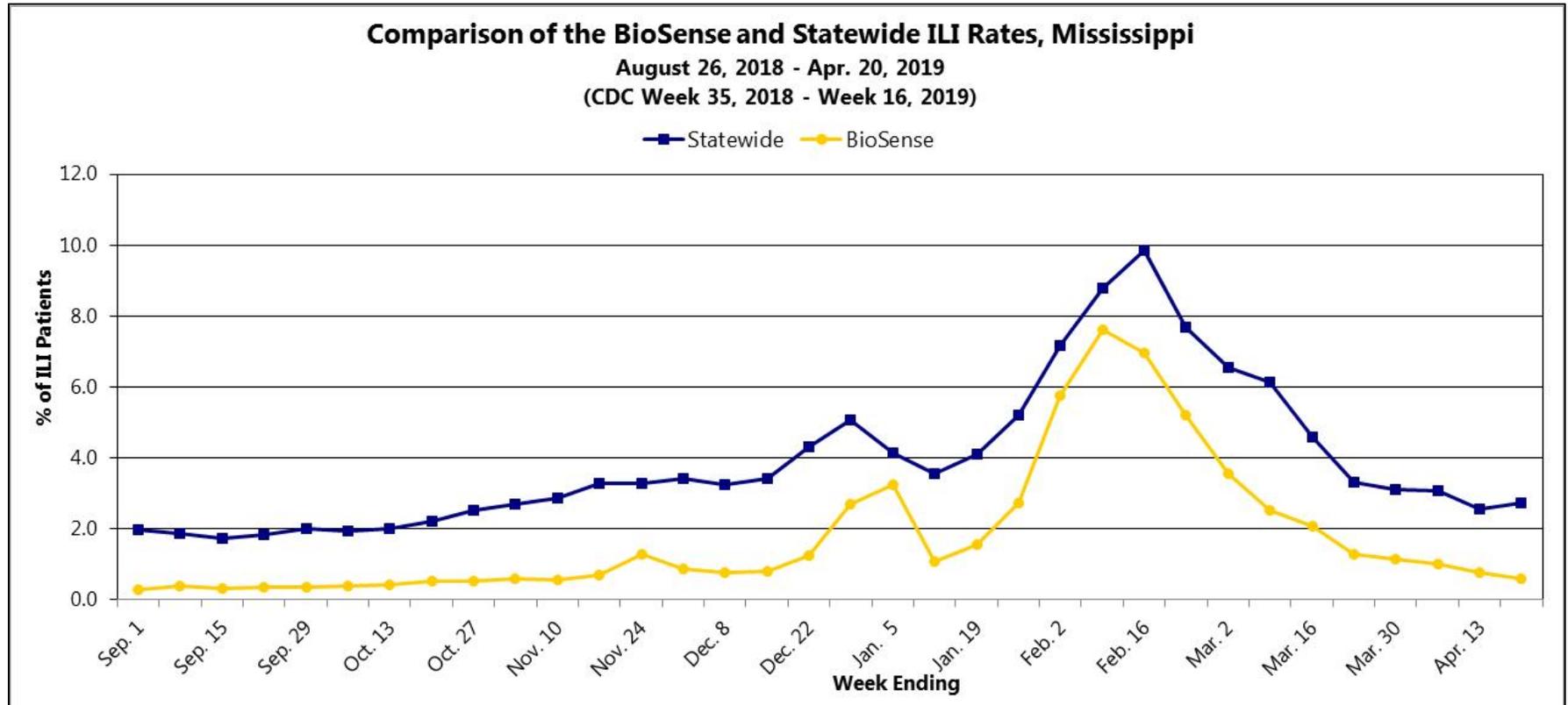
**Figure 3**



**Figure 4**



**Figure 5**



**Figure 6**

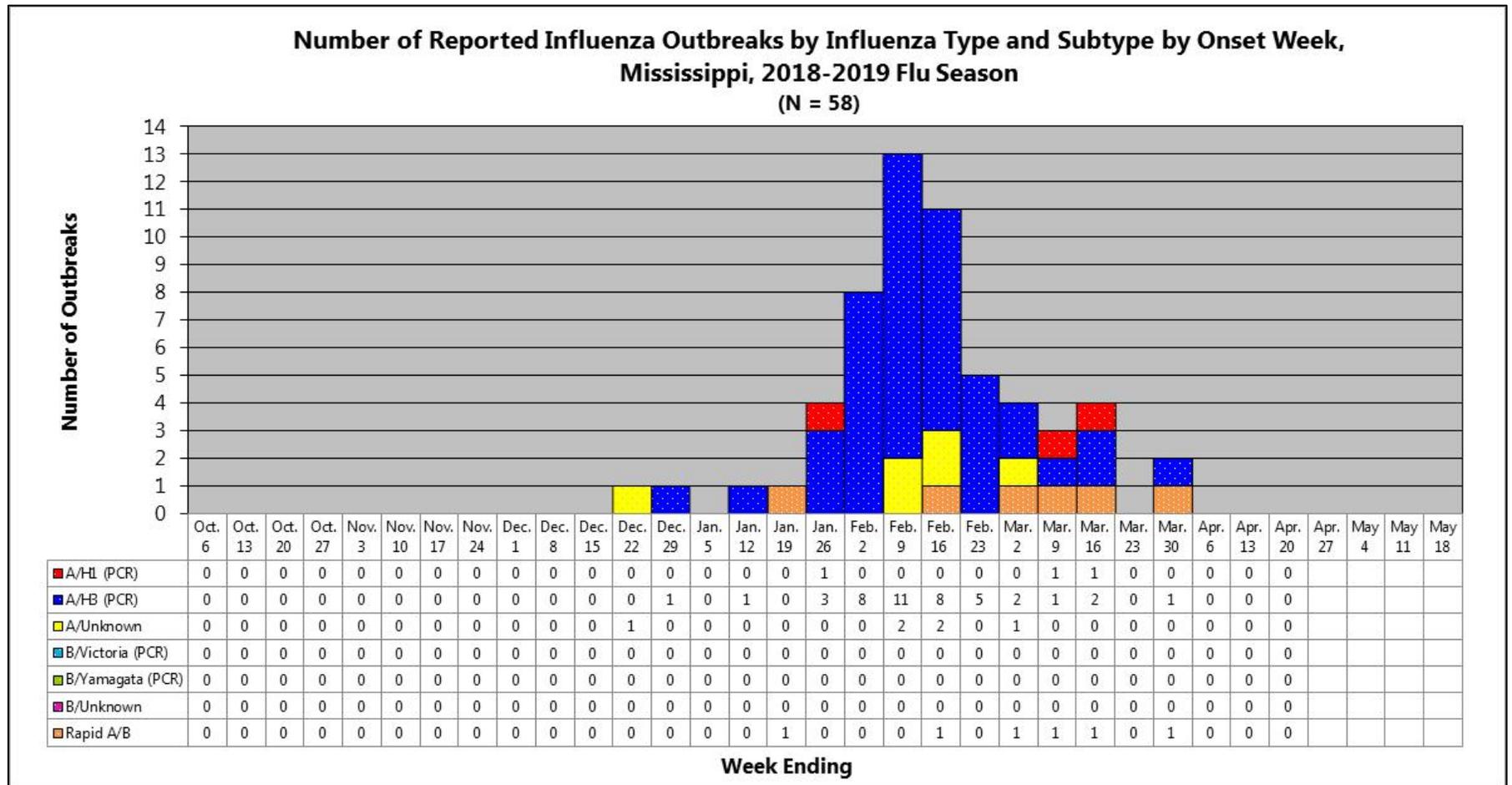
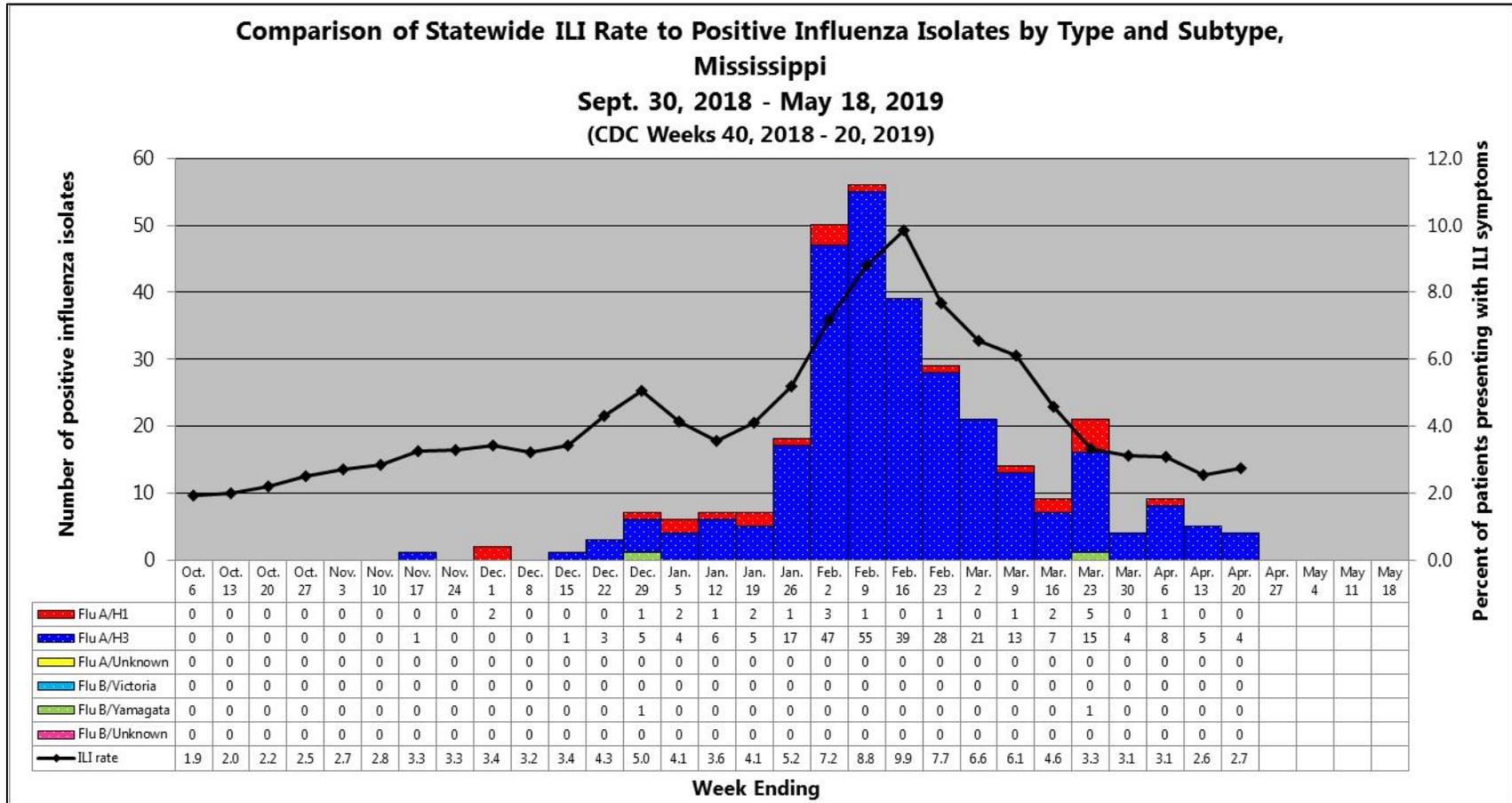
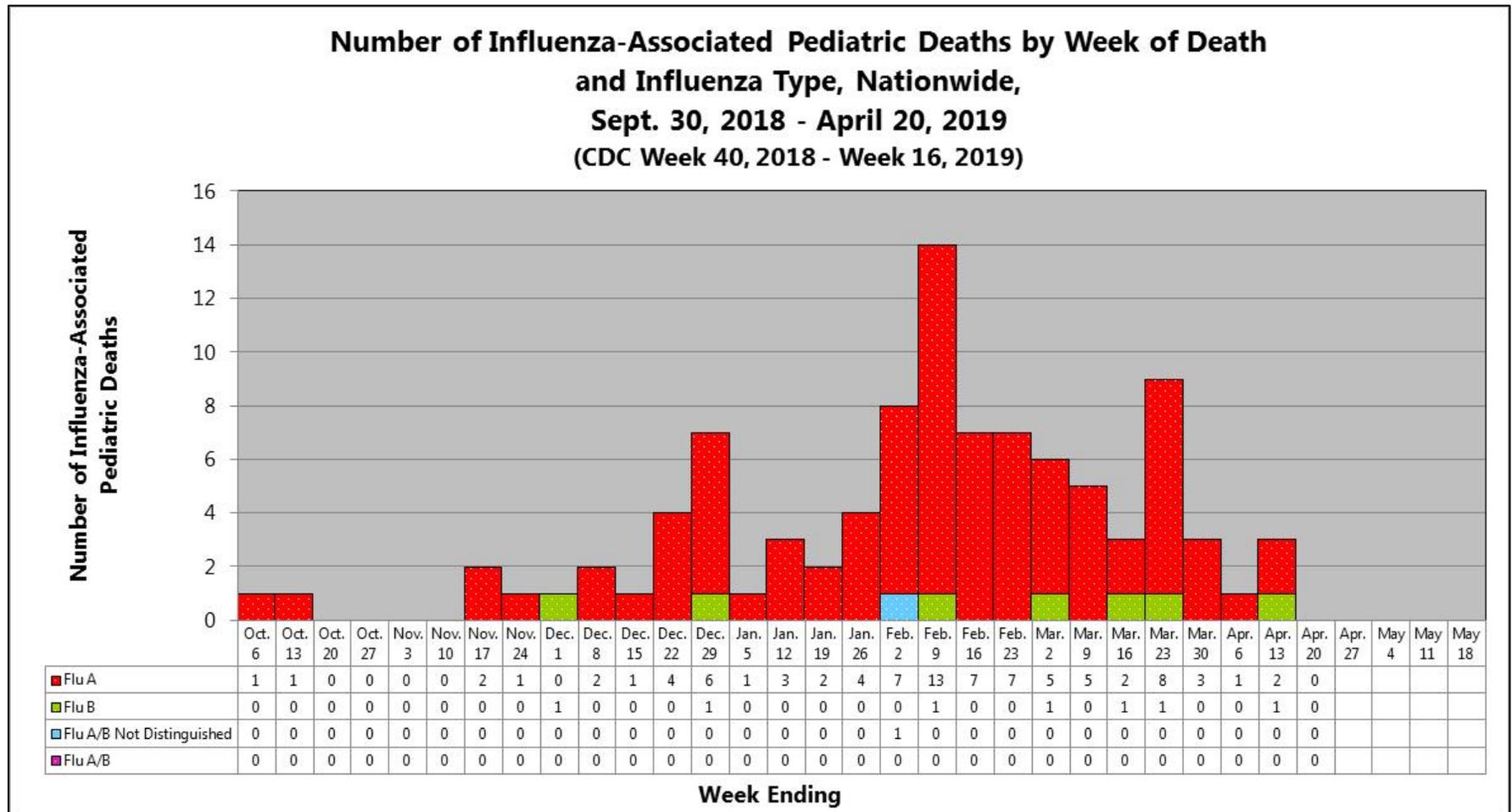


Figure 7



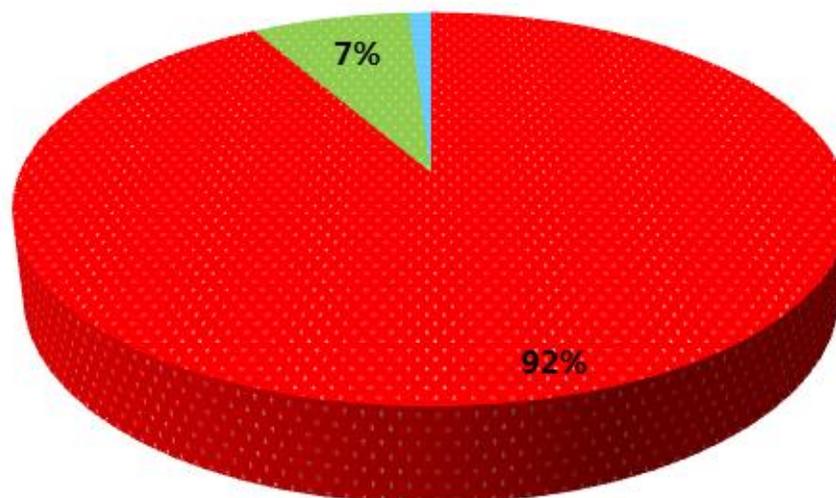
**Figure 8**



**Figure 9**

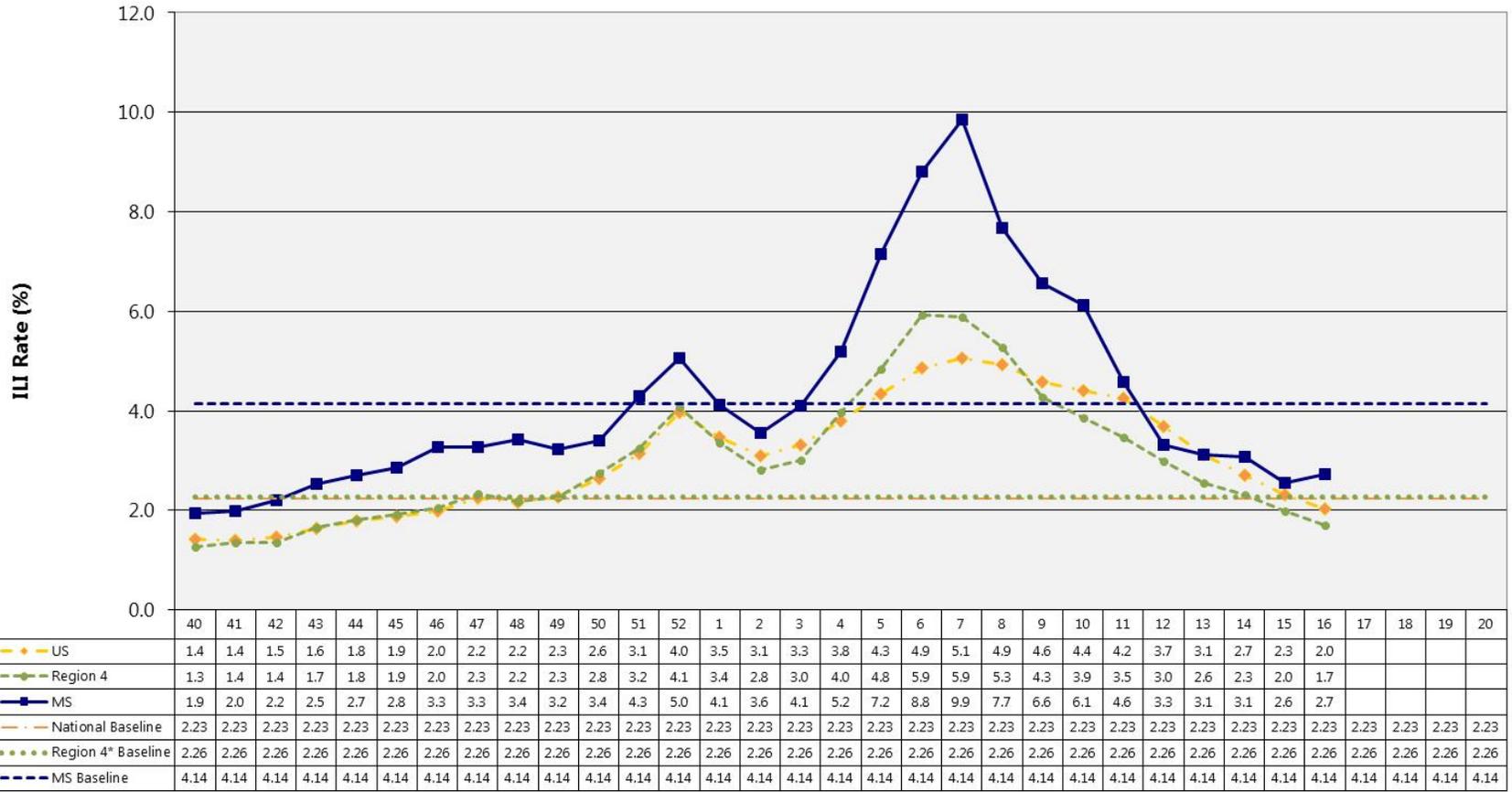
**Percentage of Influenza-Associated Pediatric Deaths  
by Influenza Type, Nationwide,  
Sept. 30, 2018 - April 20, 2019  
(CDC Week 40, 2018 - Week 16, 2019)  
N = 96**

■ Flu A ■ Flu B ■ Flu A/B Not Distinguished ■ Flu A/B



**Figure 10**

**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 11**

