Mississippi State Department of Health
TO PROMOTE AND PROTECT THE HEALTH OF ALL MISSISSIPPIANS

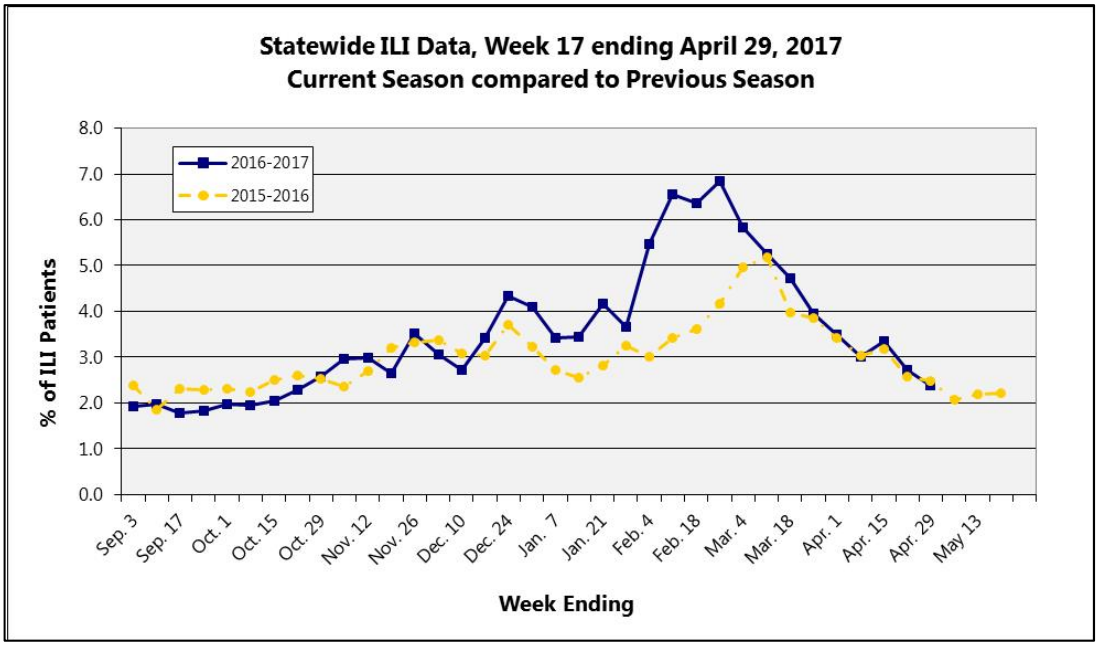
2016-2017
Influenza Report
Week 17
April 23 – April 29, 2017

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

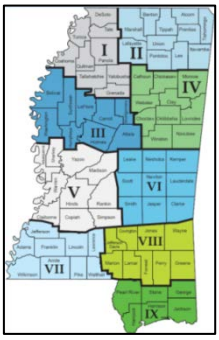


During week **17** (04/23/17 - 04/29/17), the state ILI rate (**2.4%**) was comparable to the previous week (**2.7%**) and to this time last year (**2.5%**). | **Figure 1**

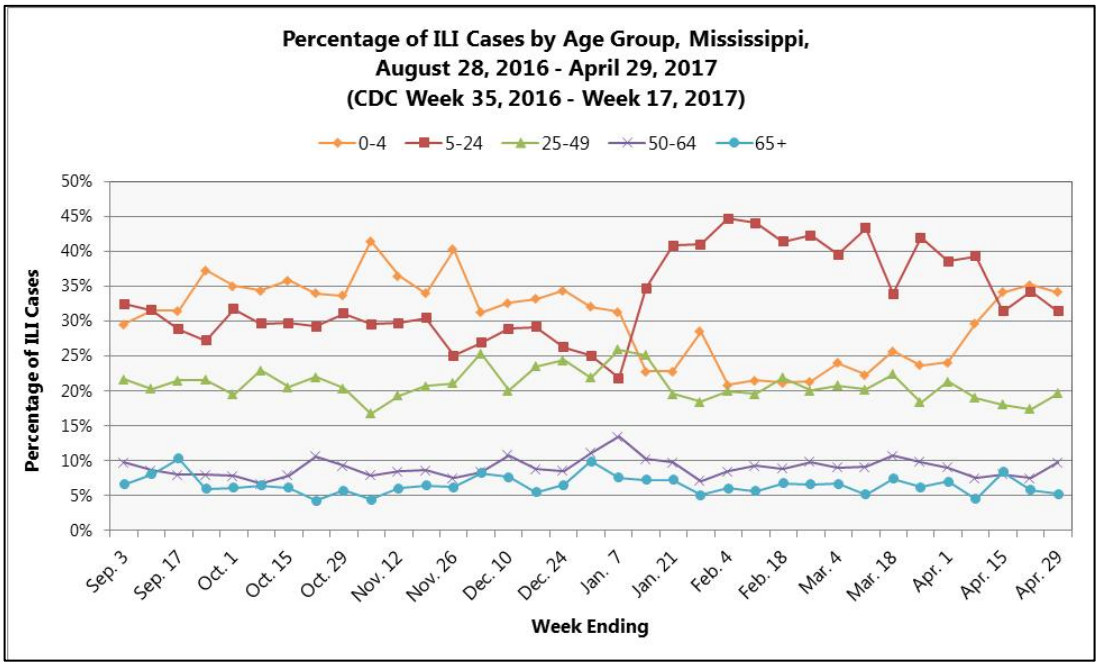
Total number of patients seen by sentinel providers in the last three weeks.| **Table 1**

2016-2017 Influenza Season					
CDC Week	**Week Ending**	**Number of ILI Reports**	**Total patients**	**ILI symptoms**	**ILI Rate (%)**
17	**Apr. 29**	**127**	**16793**	**402**	**2.4%**
16	Apr. 22	135	17764	483	2.7%
15	Apr. 15	136	17454	583	3.3%

During week **17**, **two** districts (1 and 6) had an increase in ILI activity, while **three** districts (4, 8, and 9) had a decrease. **Four** districts (2, 3, 5, and 7) remained about the same. *Information is provisional only and may change depending on additional reporting from sentinel providers.* | **Table 2**

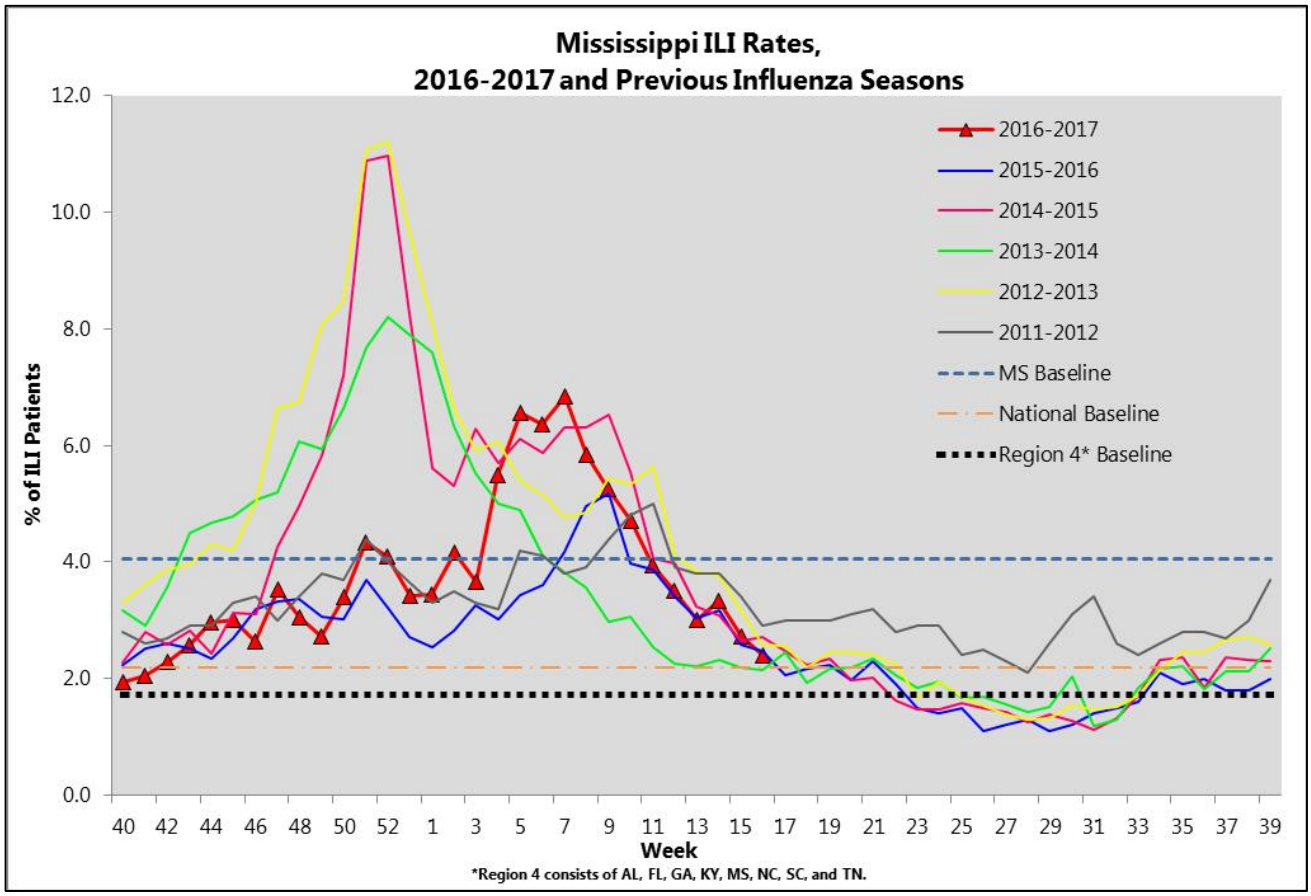


MSDH District ILI Rates (%) 2016-2017		
District	**Week 16**	**Week 17**
State	*2.7*	*2.4*
I	2.5	3.0
II	2.6	2.2
III	0.6	0.5
IV	2.8	1.6
V	2.3	1.8
VI	2.9	4.9
VII	3.7	3.4
VIII	2.0	1.2
IX	3.2	2.7

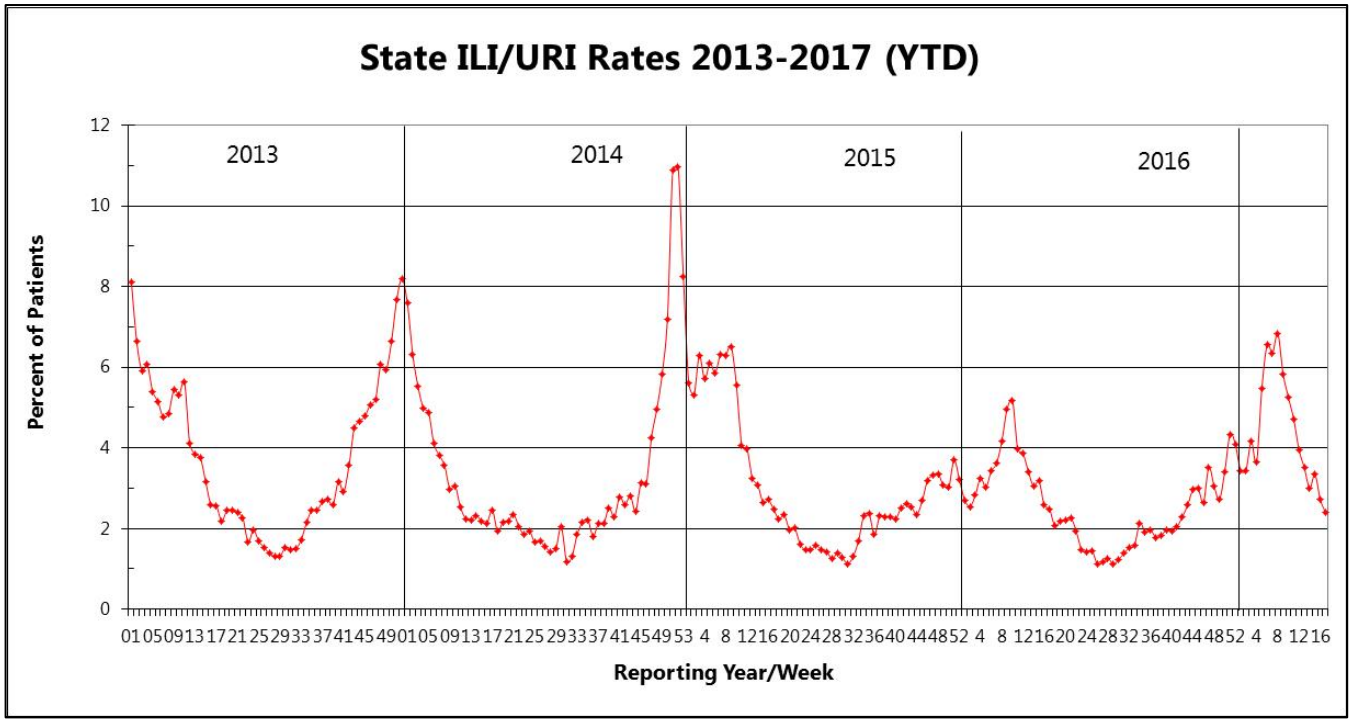


Overall, the percentage of reported ILI cases has been highest among those in the **0-4** and **5-24 years**. This trend continued during week **17**. | **Figure 2**

The 2016-17 state ILI rate was **above** the Region 4 baseline, **comparable** to the national baseline, but was **below** the state baseline, for week **17**. | **Figure 3**

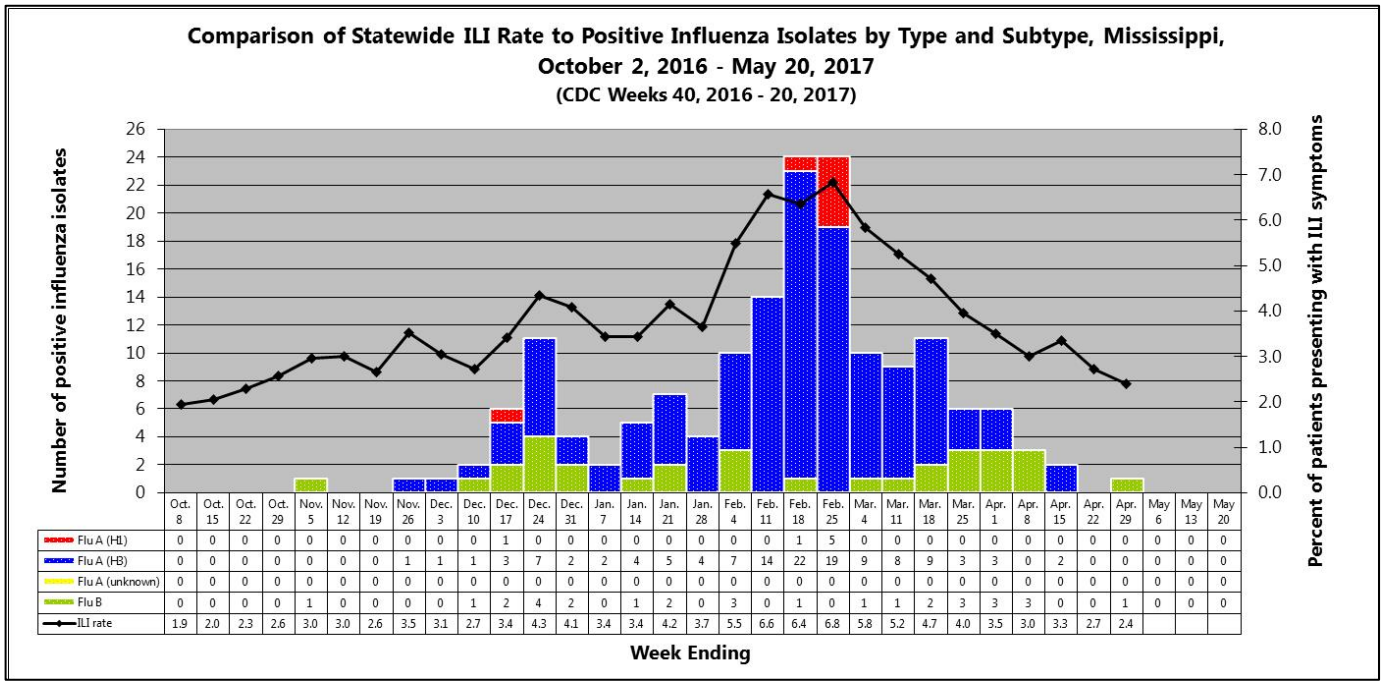


Mississippi ILI Rates 2013-2017 | **Figure 4**



Flu Testing Reports

From week **40** (week ending Oct. 8th) through week **17** (week ending April 29th), **164** laboratory confirmed influenza samples were identified by the MSDH Public Health Laboratory. One hundred twenty-six (77%) samples were identified as influenza A (H3), 31 (19%) were identified as influenza B, and seven (4%) were identified as influenza A (H1). | **Figure 5**



	Oct. 8	Oct. 15	Oct. 22	Oct. 29	Nov. 5	Nov. 12	Nov. 19	Nov. 26	Dec. 3	Dec. 10	Dec. 17	Dec. 24	Dec. 31	Jan. 7	Jan. 14	Jan. 21	Jan. 28	Feb. 4	Feb. 11	Feb. 18	Feb. 25	Mar. 4	Mar. 11	Mar. 18	Mar. 25	Apr. 1	Apr. 8	Apr. 15	Apr. 22	Apr. 29	May 6	May 13	May 20
Flu A (H1)	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0
Flu A (H3)	0	0	0	0	0	0	0	1	1	1	3	7	2	2	4	5	4	7	14	22	19	9	8	9	3	3	0	2	0	0	0	0
Flu A (unknown)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flu B	0	0	0	0	1	0	0	0	0	1	2	4	2	0	1	2	0	3	0	1	0	1	1	2	3	3	3	0	0	1	0	0	0
ILI rate	1.9	2.0	2.3	2.6	3.0	3.0	2.6	3.5	3.1	2.7	3.4	4.3	4.1	3.4	3.4	4.2	3.7	5.5	6.6	6.4	6.8	5.8	5.2	4.7	4.0	3.5	3.0	3.3	2.7	2.4			

The influenza cases were identified from the following counties: Alcorn (3), Attala (4), Choctaw (2), Coahoma (9), Copiah (4), Covington (2), DeSoto (1), Forrest (3), George (3), Harrison (2), Hinds (5), Holmes (2), Jackson (2), Jones (3), Lafayette (5), Lauderdale (3), Lawrence (1), Leake (2), Lee (4), Leflore (3), Lincoln (14), Lowndes (9), Madison (2), Marion (2), Marshall (6), Monroe (5), Neshoba (7), Newton (5), Oktibbeha (10), Pearl River (2), Perry (1), Pike (5), Pontotoc (3), Quitman (1), Rankin (4), Sharkey (1), Simpson (2), Tallahatchie (3), Tate (2), Tippah (4), Warren (2), Washington (4), Webster (2), and Winston (5).

National and Mississippi Pediatric Mortality Surveillance

Nationally, **ten** influenza-associated pediatric deaths were reported to CDC during week **17**. One death was associated with an influenza A (H3) virus and occurred during week 17 (week ending April 29th). One death was associated with an influenza A virus for which no subtyping was performed and occurred during week 10 (week ending March 11th). Five deaths were associated with an influenza B virus and occurred during weeks 7, 15, and 16 (weeks ending February 18th, April 15th, and April 22nd, respectively). One death that was reported earlier this season was reclassified by the reporting jurisdiction. **89** influenza-associated pediatric deaths have been reported during the 2016-2017 season.

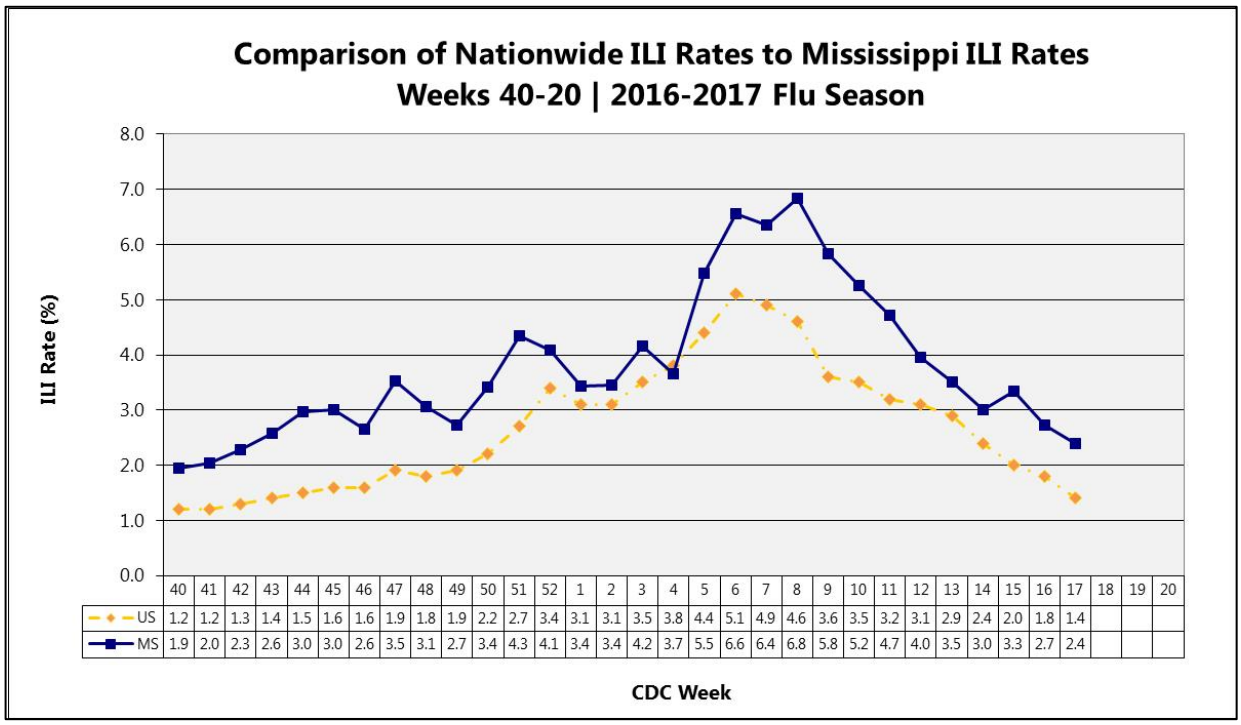
Three influenza-associated pediatric deaths that occurred during the 2015-2016 season were reported to CDC during week **17**. One death was associated with an influenza A (H1N1)pdm09 virus, one was

associated with an influenza A virus for which no subtyping was performed, and one was associated with an influenza B virus. This brings the total number of reported influenza-associated pediatric deaths occurring during that season to 92

Mississippi has had **two** 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

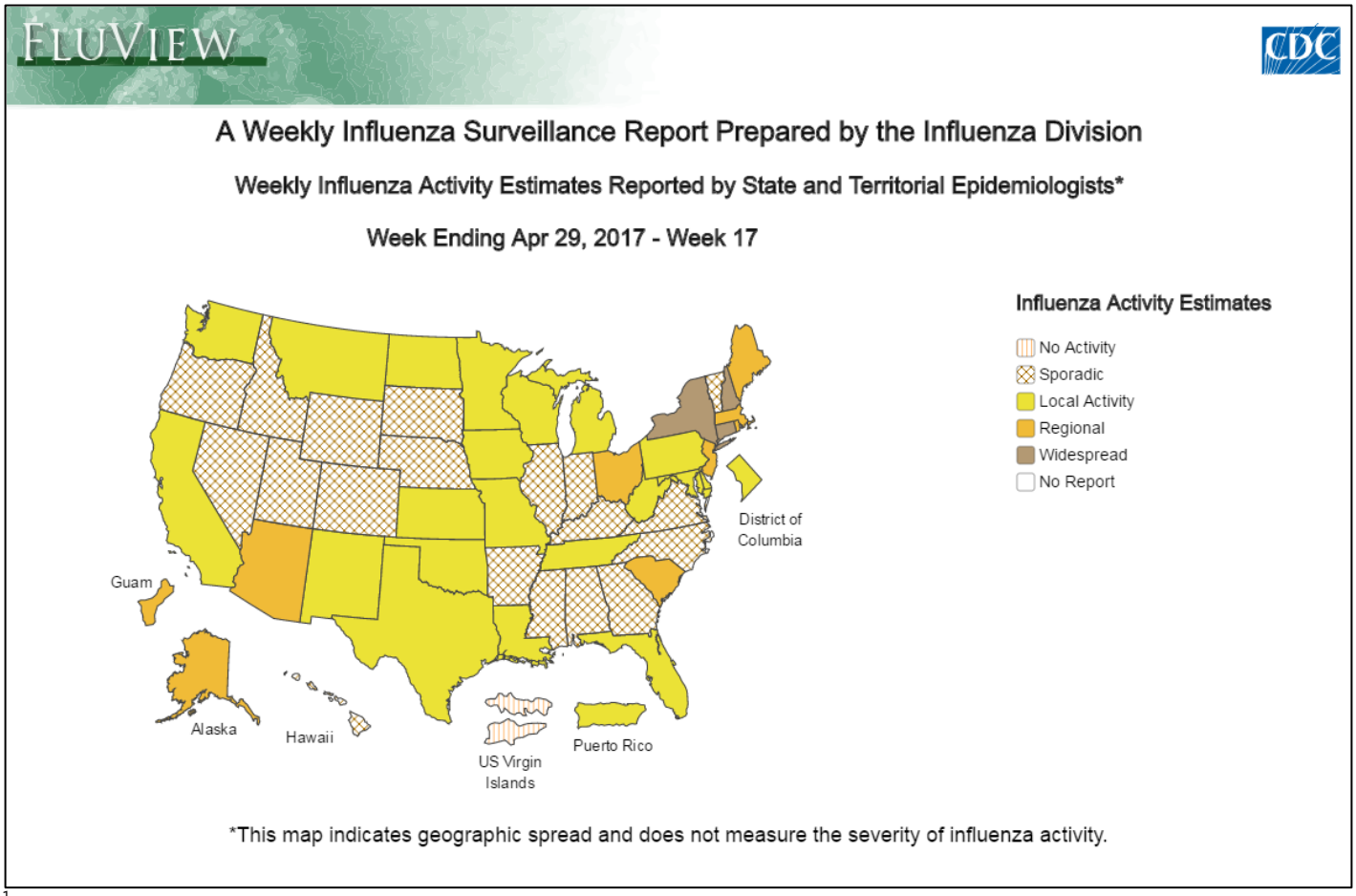
For week **17**, the MS ILI rate (2.4%) was **above** the national ILI rate (1.4%). | **Figure 6**



	40	41	42	43	44	45	46	47	48	49	50	51	52	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
US	1.2	1.2	1.3	1.4	1.5	1.6	1.6	1.9	1.8	1.9	2.2	2.7	3.4	3.1	3.1	3.5	3.8	4.4	5.1	4.9	4.6	3.6	3.5	3.2	3.1	2.9	2.4	2.0	1.8	1.4			
MS	1.9	2.0	2.3	2.6	3.0	3.0	2.6	3.5	3.1	2.7	3.4	4.3	4.1	3.4	3.4	4.2	3.7	5.5	6.6	6.4	6.8	5.8	5.2	4.7	4.0	3.5	3.0	3.3	2.7	2.4			

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

During week **17**, influenza activity **decreased** in the United States.[1] | **Figure 7**



[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.

Mississippi reported "**Sporadic**" for the influenza activity during week **17**. | **Table 3**

Level of Flu Activity	**Definition**
No Activity	Overall clinical activity remains low and there are no lab confirmed cases.
Sporadic	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.
Local	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
Regional	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.
Widespread	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.

Additional influenza information:

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

Appendix

Figure 1

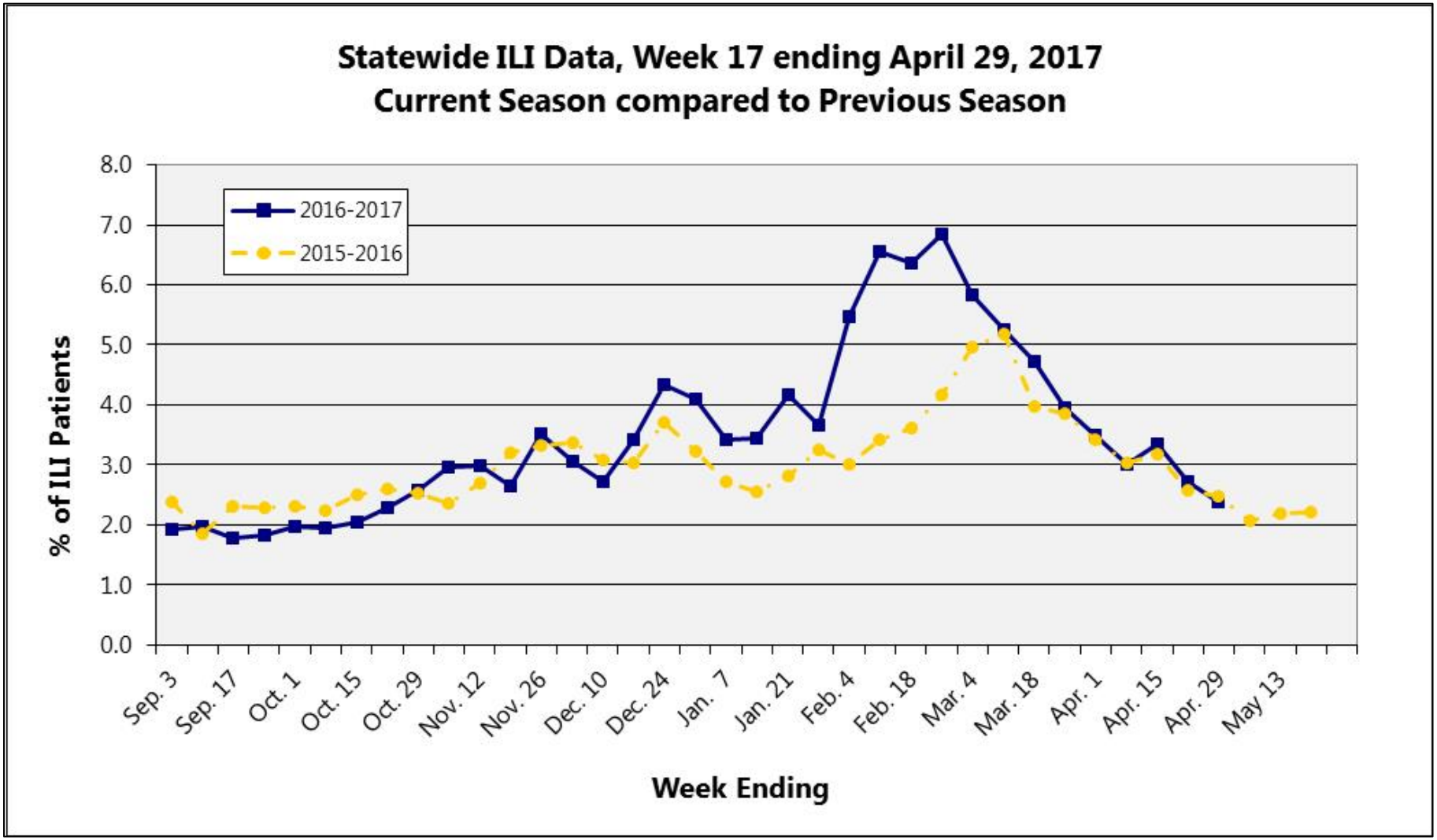


Figure 2

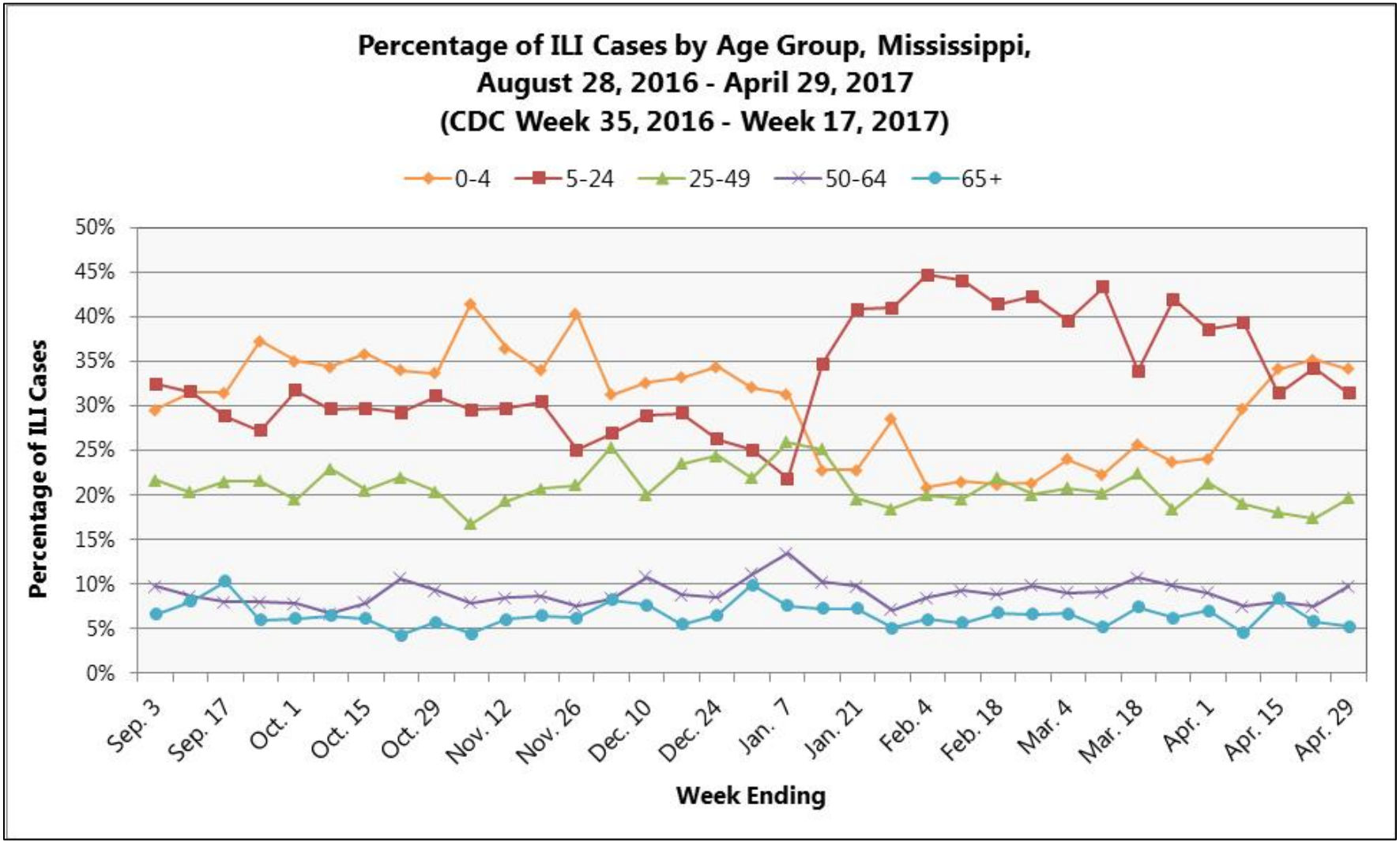

Percentage of ILI Cases by Age Group, Mississippi,
August 28, 2016 - April 29, 2017
(CDC Week 35, 2016 - Week 17, 2017)
0-4
5-24
25-49
50-64
65+
Percentage of ILI Cases
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Sep. 3
Sep. 17
Oct. 1
Oct. 15
Oct. 29
Nov. 12
Nov. 26
Dec. 10
Dec. 24
Jan. 7
Jan. 21
Feb. 4
Feb. 18
Mar. 4
Mar. 18
Apr. 1
Apr. 15
Apr. 29
Week Ending

Figure 3

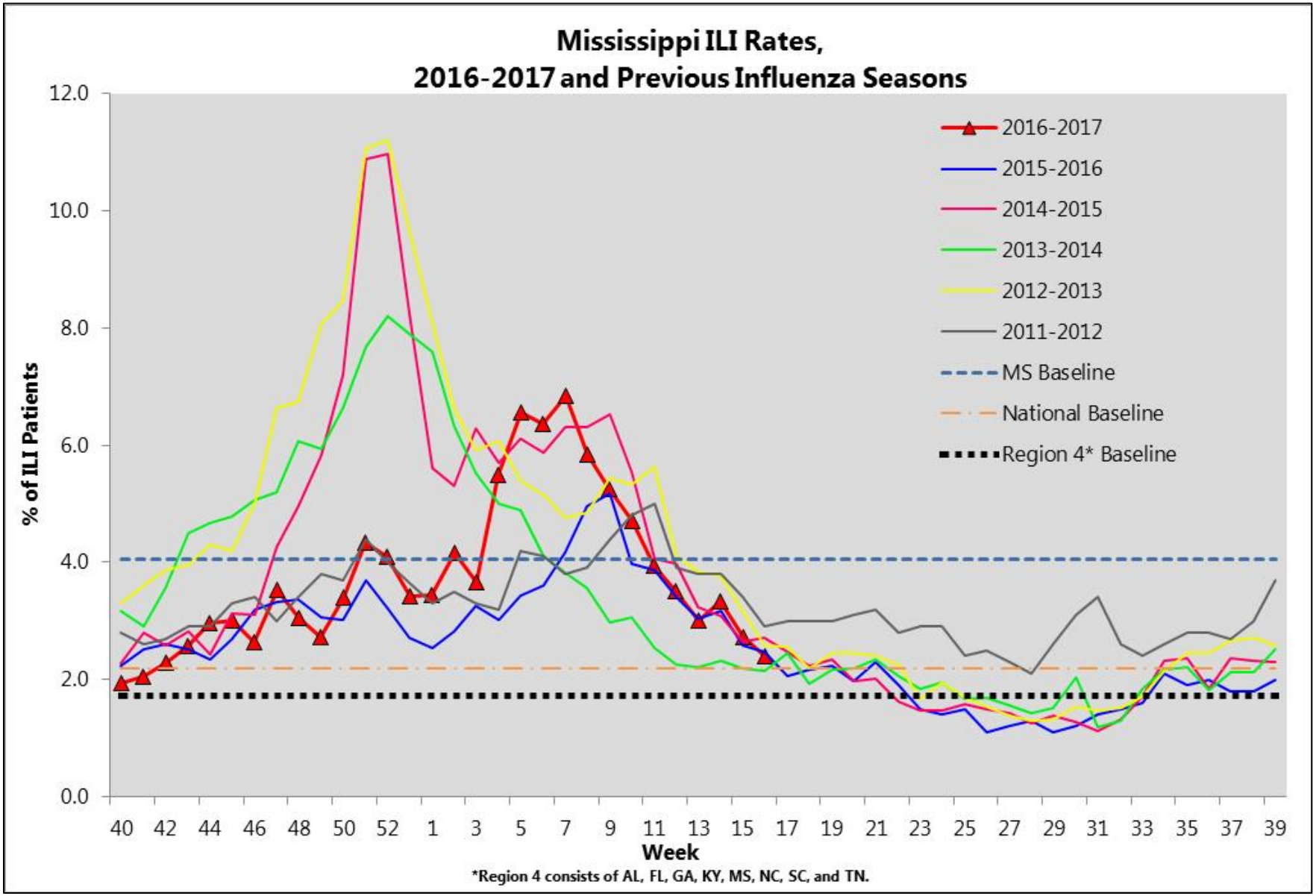

Mississippi ILI Rates,
2016-2017 and Previous Influenza Seasons
% of ILI Patients
12.0
10.0
8.0
6.0
4.0
2.0
0.0
40 42 44 46 48 50 52 1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39
Week
2016-2017
2015-2016
2014-2015
2013-2014
2012-2013
2011-2012
MS Baseline
National Baseline
Region 4* Baseline
*Region 4 consists of AL, FL, GA, KY, MS, NC, SC, and TN.

Figure 4

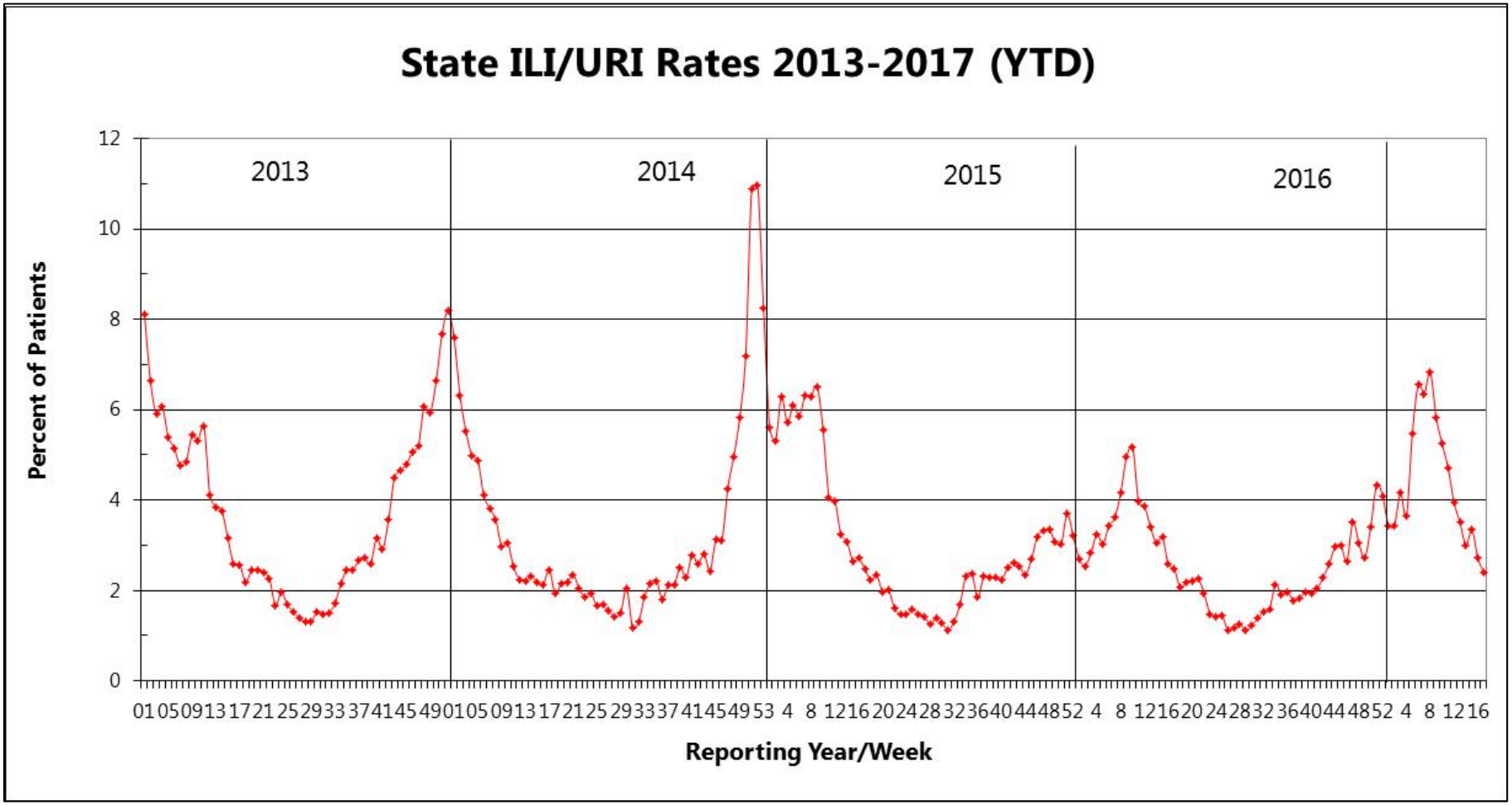
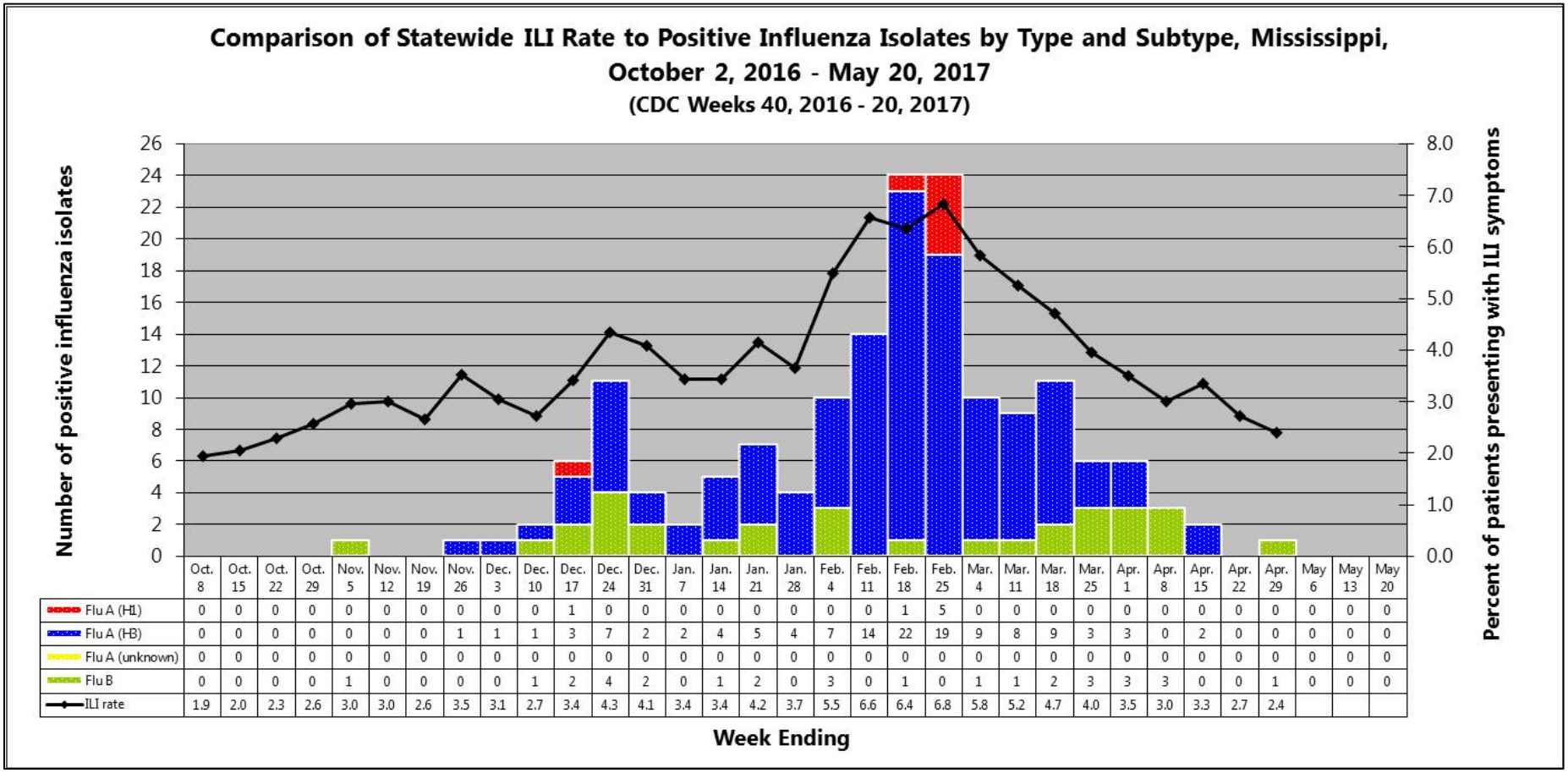

State ILI/URI Rates 2013-2017 (YTD)
Percent of Patients
0
2
4
6
8
10
12
2013
2014
2015
2016
01 05 09 13 17 21 25 29 33 37 41 45 49 01 05 09 13 17 21 25 29 33 37 41 45 49 53 4 8 12 16 20 24 28 32 36 40 44 48 52 4 8 12 16 20 24 28 32 36 40 44 48 52 4 8 12 16
Reporting Year/Week

Figure 5



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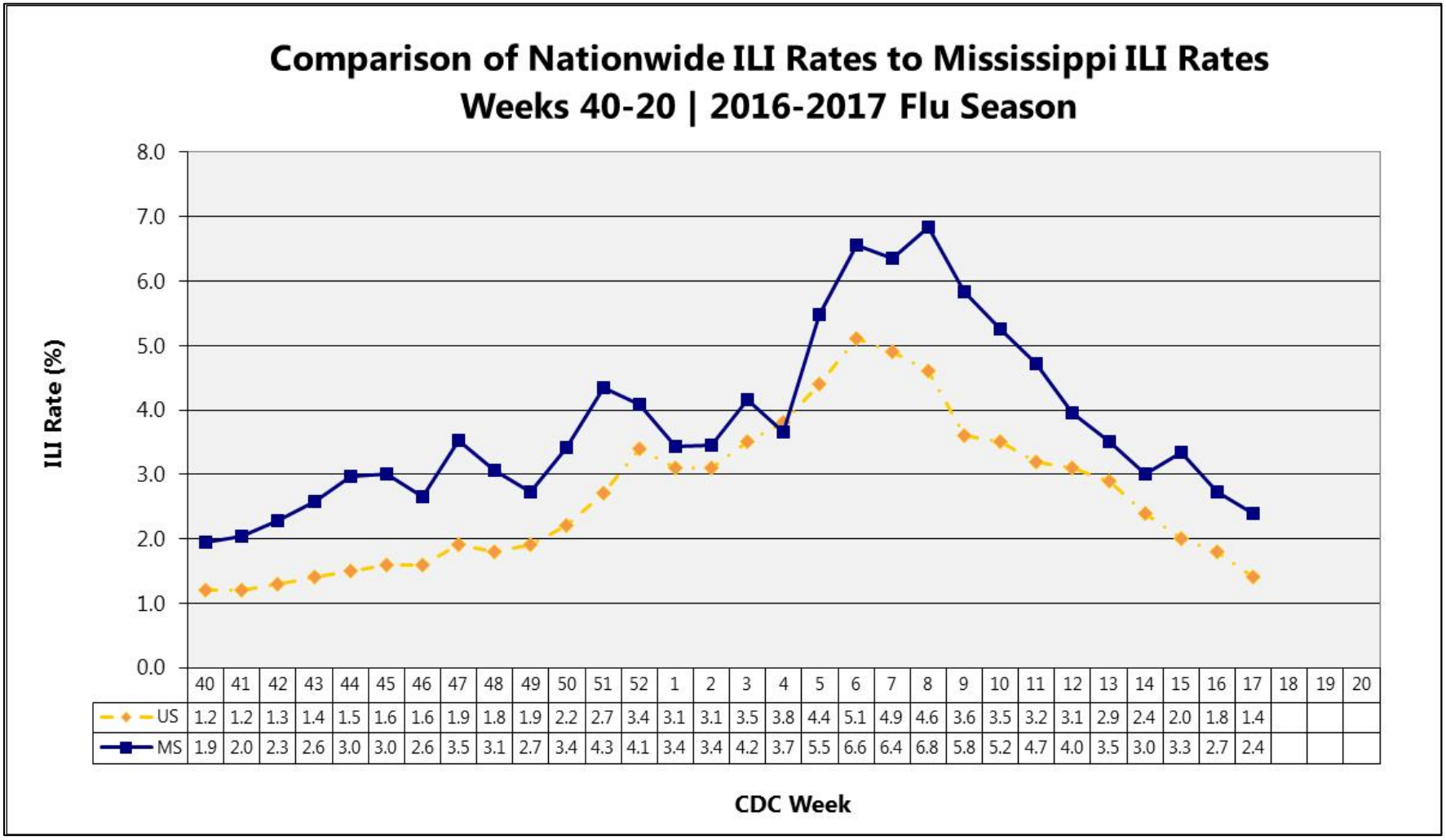
Flu A (H1)	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	0	0	0	0	0
Flu A (H3)	0	0	0	0	0	0	0	1	1	1	3	7	2	2	4	5	4	7	14	22	19	9	8	9	3	3	0	2	0	0	0	0	0
Flu A (unknown)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flu B	0	0	0	0	1	0	0	0	0	1	2	4	2	0	1	2	0	3	0	1	0	1	1	2	3	3	3	0	0	1	0	0	0
ILI rate	1.9	2.0	2.3	2.6	3.0	3.0	2.6	3.5	3.1	2.7	3.4	4.3	4.1	3.4	3.4	4.2	3.7	5.5	6.6	6.4	6.8	5.8	5.2	4.7	4.0	3.5	3.0	3.3	2.7	2.4			

Figure 6



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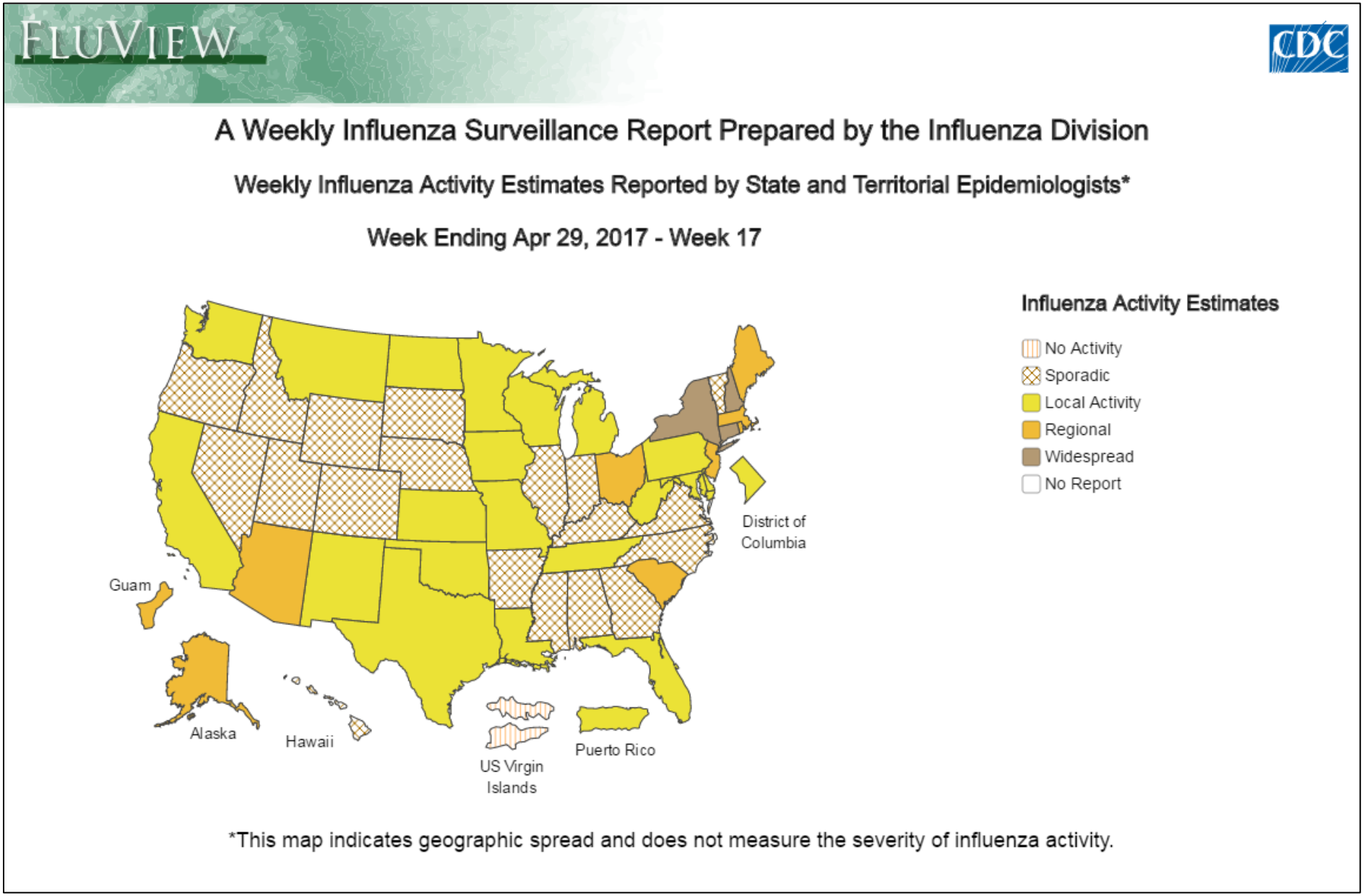
MS	1.9	2.0	2.3	2.6	3.0	3.0	2.6	3.5	3.1	2.7	3.4	4.3	4.1	3.4	3.4	4.2	3.7	5.5	6.6	6.4	6.8	5.8	5.2	4.7	4.0	3.5	3.0	3.3	2.7	2.4			

Figure 7


FLUVIEW
CDC
A Weekly Influenza Surveillance Report Prepared by the Influenza Division
Weekly Influenza Activity Estimates Reported by State and Territorial Epidemiologists*
Week Ending Apr 29, 2017 - Week 17
Influenza Activity Estimates
No Activity
Sporadic
Local Activity
Regional
Widespread
No Report
District of Columbia
Guam
Alaska
Hawaii
US Virgin Islands
Puerto Rico
*This map indicates geographic spread and does not measure the severity of influenza activity.