



# MISSISSIPPI TITLE V MCH NATIONAL OUTCOME MEASURES FOR THE NEEDS ASSESSMENT

**Office of Health Data and Research  
Office of Health Services  
Mississippi State Department of Health**

September 2024

## Health Services Office of Health Data and Research Needs Assessment

### NOM 1: Early Prenatal Care

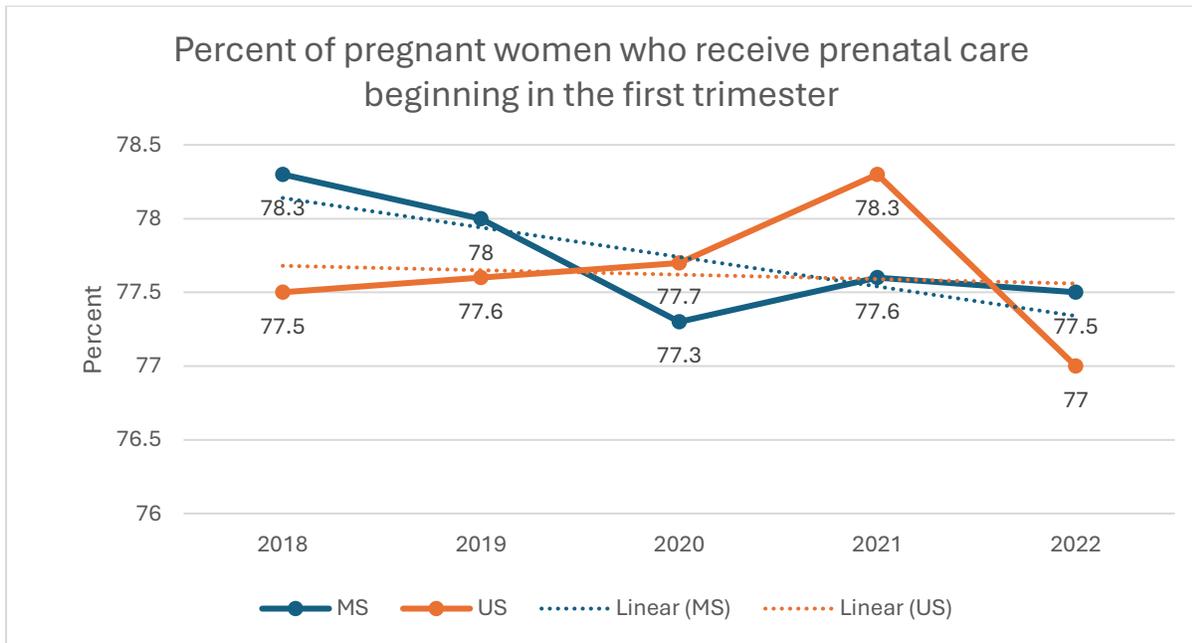
The percentage of pregnant women receiving early prenatal care (PNC) in the first trimester in Mississippi (MS) shows a slight decrease from 78.3 % in 2018 to 77.5 % in 2022. In the US, the percentage increased from 77.5% in 2018 to 78.3% in 2021 and decreased to 77.0% in 2022. The details are in Table 1 and Figure 1 below.

**Table 1:** Percent of Pregnant Women who received Prenatal Care Beginning in the First Trimester.

	<b>2018</b> (95% CI)	<b>2019</b> (95% CI)	<b>2020</b> (95% CI)	<b>2021</b> (95% CI)	<b>2022</b> (95% CI)
<b>MS</b>	78.3 (77.8- 78.7)	78.0 (77.6- 78.4)	77.3 (76.8- 77.7)	77.6 (77.1- 78)	77.5 (77.0 -77.9)
<b>US</b>	77.5 (77.4- 77.5)	77.6 (77.6- 77.6)	77.7 (77.7- 77.8)	78.3 (78.3- 78.4)	77.0 (76.9 – 77.0)

Based on 95% confidence interval (CI), we can conclude that the decrease from 2018 to 2020 in MS is statistically significant. However, the overall decrease in MS from 2018 to 2022 is not statistically significant. When compared to the US, MS is statistically significantly higher in 2018 and 2022 but not in 2019. For 2020 and 2021, the percentage in the US is statistically significantly higher than MS.

**Figure 1:** Percent of Pregnant Women who received Prenatal Care Beginning in the First Trimester



Data Source: National Vital Statistics System

## NOM 2: Severe Maternal Morbidity

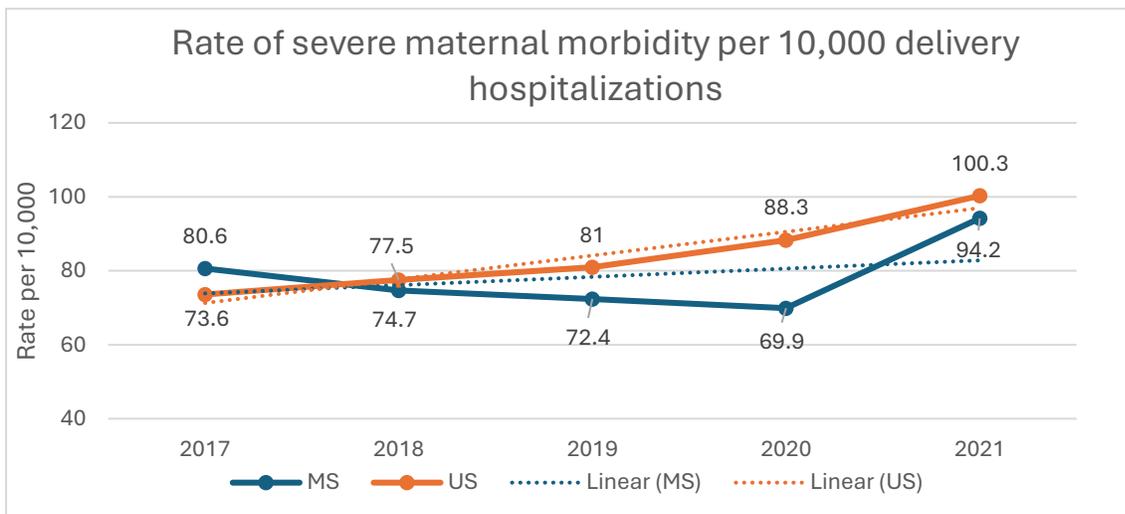
The rate of Severe Maternal Morbidity (SMM) in MS decreased from 80.6 in 2017 to 69.9 in 2020, indicating an improvement. However, the rate increased to 94.2 in 2021. The rate of SMM for the US increased from 73.6 in 2017 to 100.3 in 2021 which indicates an upward trend over the five years. The details are outlined in Table 2 and Figure 2 below.

**Table 2:** Rate of severe maternal morbidity per 10,000 delivery hospitalizations (Severe Maternal Morbidity)

	2017 (95% CI)	2018 (95% CI)	2019 (95% CI)	2020 (95% CI)	2021 (95% CI)	2022
MS	80.6 (71.3- 89.9)	74.7 (65.7- 83.8)	72.4 (63.5- 81.4)	69.9 (61- 78.8)	94.2 (83.8- 104.6)	...
US	73.6 (72.7- 74.5)	77.5 (76.5- 78.4)	81.0 (80.1- 82)	88.3 (87.3- 89.3)	100.3 (99.3- 101.4)	---

Based on 95% CI, the decrease in MS from 2017 to 2020 is not statistically significant. However, from 2020 to 2021 the increase is statistically significant. When compared to the US, MS rate for 2017 is higher than the US but is not statistically significant. From 2018 to 2021, the rate for MS is lower than for US but only 2020 is statistically significant.

**Figure 2:** Rate of severe maternal morbidity per 10,000 delivery hospitalizations (Severe Maternal Morbidity)



Data Source: Healthcare Cost and Utilization Project- State Inpatient Databases

Note: Data not available for 2022

### NOM 3: Maternal Mortality

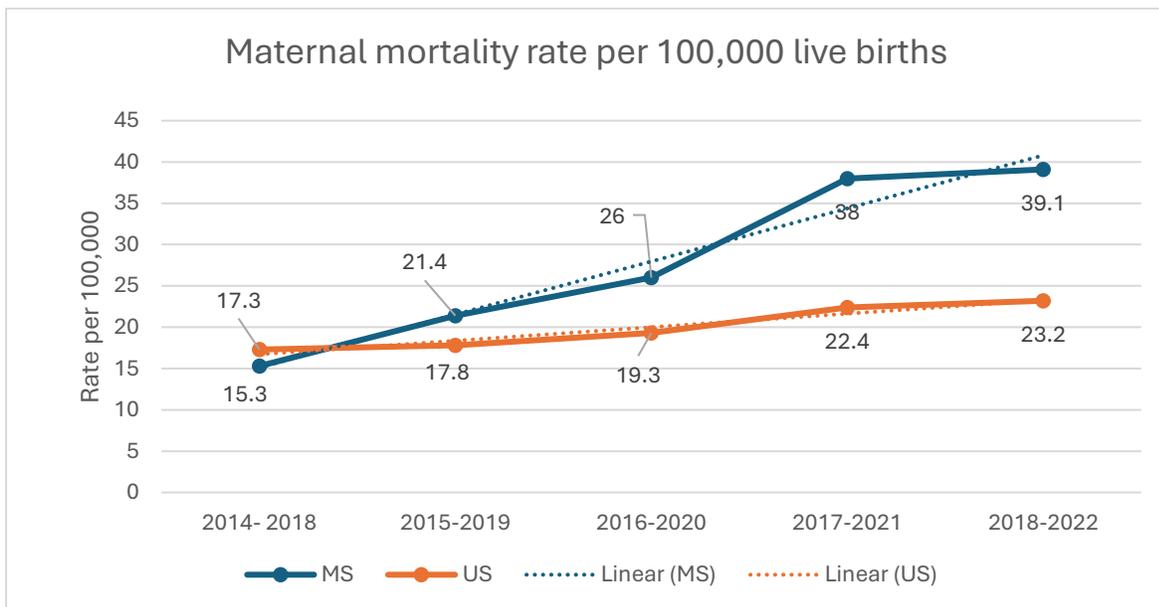
The Maternal Mortality (MM) rate in MS shows a concerning increase in the trend from 15.3 to 39.1 (per 100,000 live births) over the years indicating a significant increase in maternal deaths whereas for the US we can also see an increase in trend from 17.3 to 23.2 (per 100,000 live births) at a slower rate when compared to MS. The details of the estimates are in Table 3 and Figure 3 below.

**Table 3:** Maternal mortality rate per 100,000 live births (Maternal Mortality)

	<b>2014_2018</b> <b>(95% CI)</b>	<b>2015_2019</b> <b>(95% CI)</b>	<b>2016_2020</b> <b>(95% CI)</b>	<b>2017_2021</b> <b>(95% CI)</b>	<b>2018_2022</b> <b>(95% CI)</b>
<b>MS</b>	15.3 (10.3- 22)	21.4 (15.3- 29.1)	26.0 (19.2- 34.5)	38.0 (29.6- 48.1)	39.1 (30.5 – 49.4)
<b>US</b>	17.3 (16.7- 17.9)	17.8 (17.2- 18.4)	19.3 (18.7- 19.9)	22.4 (21.7- 23.1)	23.2 (22.5 -23.9)

Based on 95% CI the increase in MS from one year to the next subsequently is not statistically significant. However, when compare 2014 – 2018 to 2018 – 2022, the increase is statistically significant. When we compare MS to the US, based on the 95% CI, MS rate is lower than that for the US in 2014-2018 but it is not statically significant. As for, 2015 – 2019 and 2016-2020, MS rates are higher than the US but are not statistically significant. But for the year 2017-2021 and 2018-2022 the rates in MS are statistically significantly higher than US.

**Figure 3:** Maternal mortality rate per 100,000 live births (Maternal Mortality)



Data Source: National Vital Statistics System

## NOM 4: Low Birth Weight

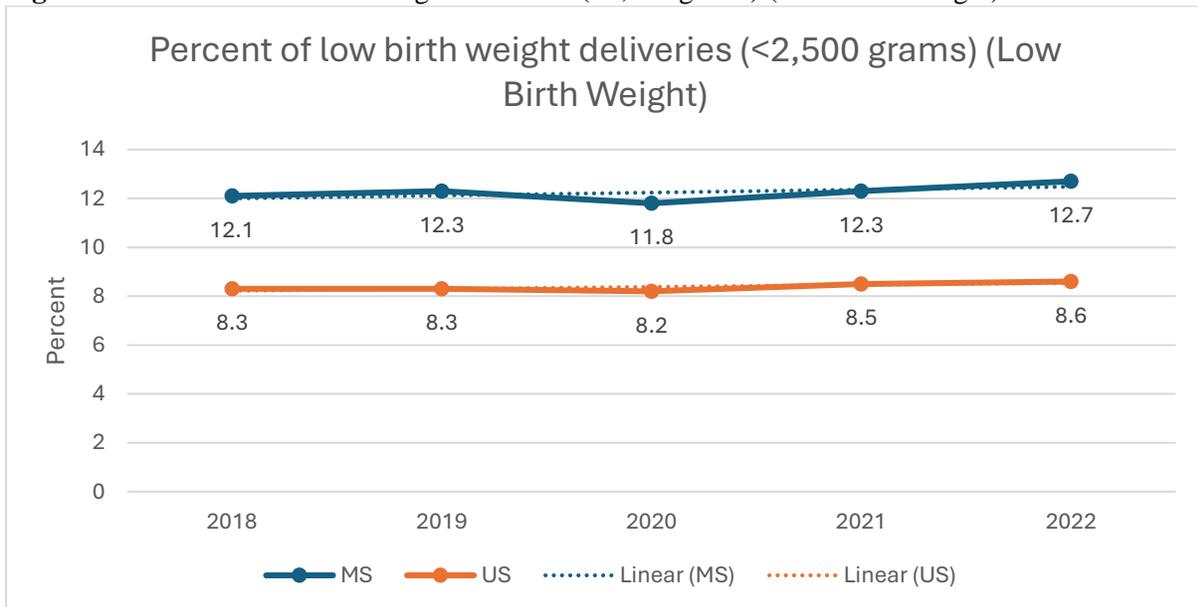
The percentage of Low Birth Weight (LBW) deliveries in MS shows a slight increase from 12.1% in 2018 to 12.7% in 2022. In the US the percentage is relatively the same during 2018 and 2019 (8.3%) with a slight decrease in 2020 (8.2%) and an increase in 2021 to 2022 from 8.5% to 8.6%. The details are shown in Table 4 and Figure 4 below.

**Table 4:** Percent of low-birth-weight deliveries (<2,500 grams) (Low Birth Weight)

	<b>2018</b> <b>(95% CI)</b>	<b>2019</b> <b>(95% CI)</b>	<b>2020</b> <b>(95% CI)</b>	<b>2021</b> <b>(95% CI)</b>	<b>2022</b> <b>(95% CI)</b>
<b>MS</b>	12.1 (11.8- 12.5)	12.3 (12- 12.7)	11.8 (11.5- 12.2)	12.3 (12- 12.7)	12.7 (12.4- 13.1)
<b>US</b>	8.3 (8.3- 8.3)	8.3 (8.3- 8.3)	8.2 (8.2- 8.3)	8.5 (8.5- 8.5)	8.6 (8.6- 8.6)

Based on 95% CI, the increased rates in MS from 2018 to 2022 is not statistically significant. When compared to the US, the MS rate is significantly higher than that for the US for each year.

**Figure 4:** Percent of low-birth-weight deliveries (<2,500 grams) (Low Birth Weight)



Data Source: National Vital Statistics System

## NOM 5: Preterm Birth

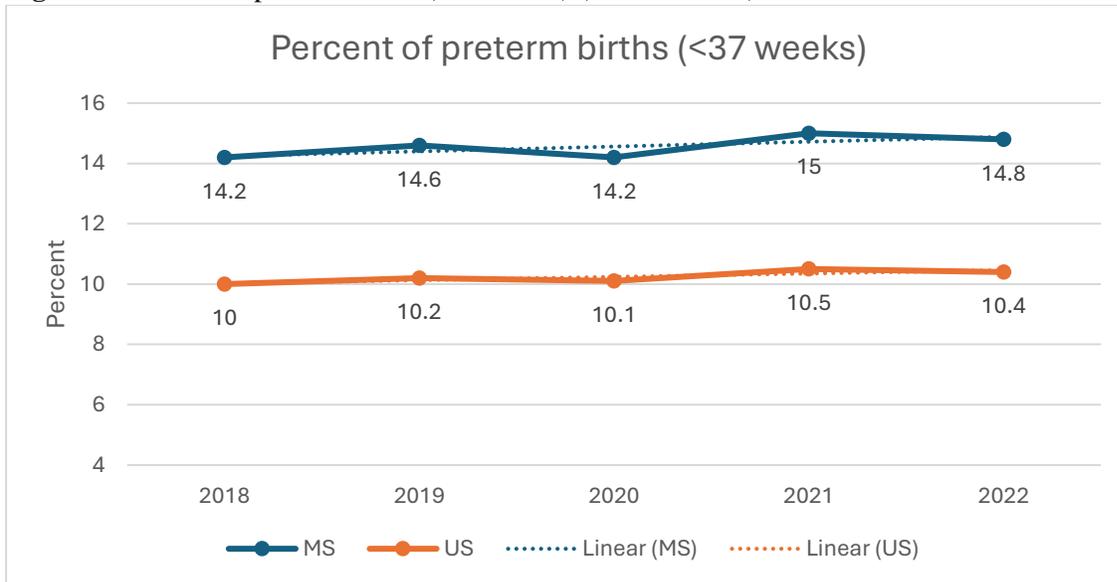
The percentage of preterm birth (PTB) in MS fluctuated slightly over the years starting at 14.2% in 2018 and increasing to 14.8% in 2022. For the US the percentages show similar fluctuations starting at 10% in 2018 and increasing slightly to 10.4% in 2022. (Table 5 and Figure 5)

**Table 5:** Percent of preterm births (<37 weeks) (Preterm Birth)

	<b>2018</b> (95% CI)	<b>2019</b> (95% CI)	<b>2020</b> (95% CI)	<b>2021</b> (95% CI)	<b>2022</b> (95% CI)
<b>MS</b>	14.2 (13.9- 14.6)	14.6 (14.2- 14.9)	14.2 (13.8- 14.6)	15.0 (14.6- 15.3)	14.8 (14.4- 15.2)
<b>US</b>	10.0 (10- 10.1)	10.2 (10.2- 10.3)	10.1 (10.1- 10.1)	10.5 (10.5- 10.5)	10.4 (10.4- 10.4)

Based on 95% CI, although there is a significant increase from 2020 to 2021 in MS, the overall increased in the rate for MS from 2018 to 2022 is not statistically significant. Compared to the US, the rate in MS is statistically significantly higher than the rate in the US for each year.

**Figure 5:** Percent of preterm births (<37 weeks) (Preterm Birth)



Data Source: National Vital Statistics System

## NOM 6: Early Term Birth

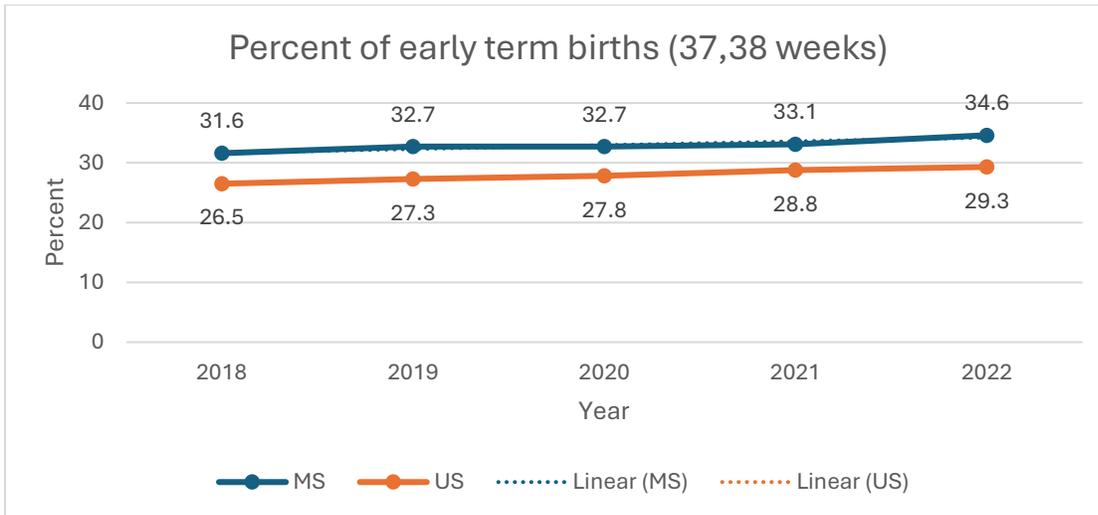
The percentage of early-term births (ETB) has been increasing steadily in MS from 2018 with 31.6% to 34.6% in 2022. However, the percentage was the same for the years 2019 and 2020 with 32.7%. The percentage of early-term births in the US also shows an increase in trend from 26.5% in 2018 to 29.3% in 2022. (Table 6 and Figure 6).

**Table 6:** Percent of early term births (37, 38 weeks) (Early Term Birth)- ETB

	<b>2018</b> <b>(95% CI)</b>	<b>2019</b> <b>(95% CI)</b>	<b>2020</b> <b>(95% CI)</b>	<b>2021</b> <b>(95% CI)</b>	<b>2022</b> <b>(95% CI)</b>
<b>MS</b>	31.6 (31.1- 32.1)	32.7 (32.2- 33.1)	32.7 (32.3- 33.2)	33.1 (32.6- 33.6)	34.6 (34.1-35.1)
<b>US</b>	26.5 (26.5- 26.6)	27.3 (27.3- 27.4)	27.8 (27.7- 27.8)	28.8 (28.7- 28.8)	29.3 (29.3 -29.4)

Based on 95% CI, the percentage of increase from 2018 to 2022 in MS is statistically significant. Compared to the US, MS percentages are statistically significantly higher than the US for each of the years.

**Figure 6:** Percent of early term births (37, 38 weeks) (Early Term Birth)- ETB



Data Source: National Vital Statistics System

## NOM 8: Perinatal Mortality

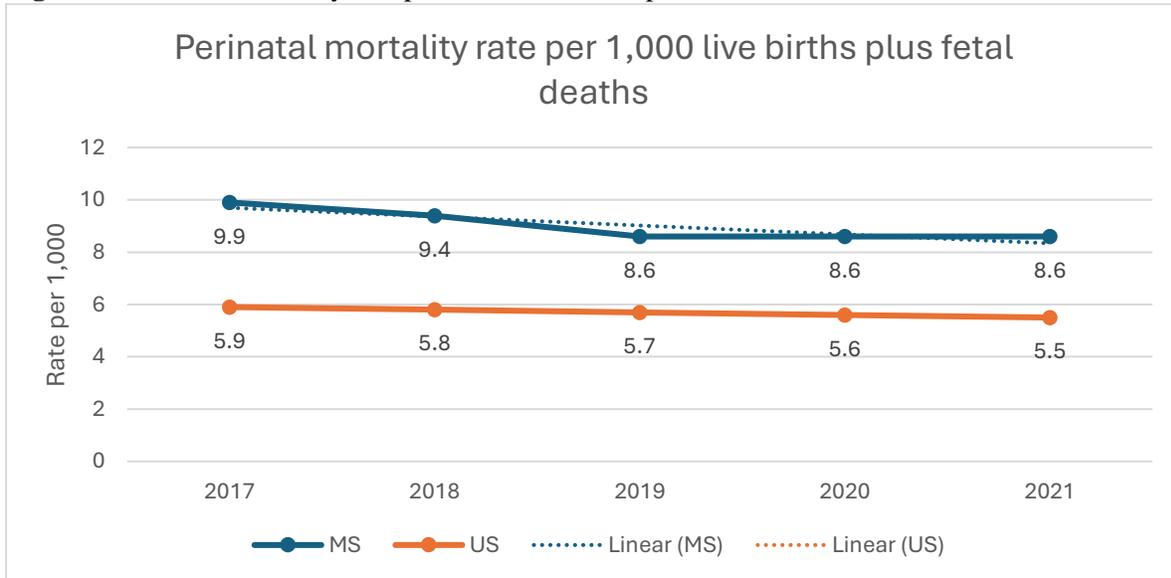
The Perinatal Mortality (PNM) rate in MS has decreased from 9.9 in 2017 to 8.6 in 2019 and has been consistently the same since then. The rate also declined from 5.9 in 2017 to 5.5 in 2021 for the US. We can observe that both the US and MS show a positive trend towards decreasing perinatal mortality rate but the rate in MS remained higher than that of the US over the years. (Table 8 and Figure 8).

**Table 8:** Perinatal mortality rate per 1,000 live births plus fetal deaths

	<b>2017</b> <b>(95% CI)</b>	<b>2018</b> <b>(95% CI)</b>	<b>2019</b> <b>(95% CI)</b>	<b>2020</b> <b>(95% CI)</b>	<b>2021</b> <b>(95% CI)</b>	<b>2022</b>
<b>MS</b>	9.9 (8.9- 10.9)	9.4 (8.4- 10.4)	8.6 (7.6- 9.5)	8.6 (7.6- 9.6)	8.6 (7.6- 9.5)	...
<b>US</b>	5.9 (5.9- 6)	5.8 (5.8- 5.9)	5.7 (5.6- 5.8)	5.6 (5.6- 5.7)	5.5 (5.5- 5.6)	....

Based on 95% CI, the decrease in the rate for MS is not statistically significant from the year 2017 to 2021 sequentially. When compared to the US, MS rates are statistically significantly higher than the US each year.

**Figure 8:** Perinatal mortality rate per 1,000 live births plus fetal deaths



Data Source: National Vital Statistics System

Note: No data available for 2022

### NOM 9.1: Infant Mortality

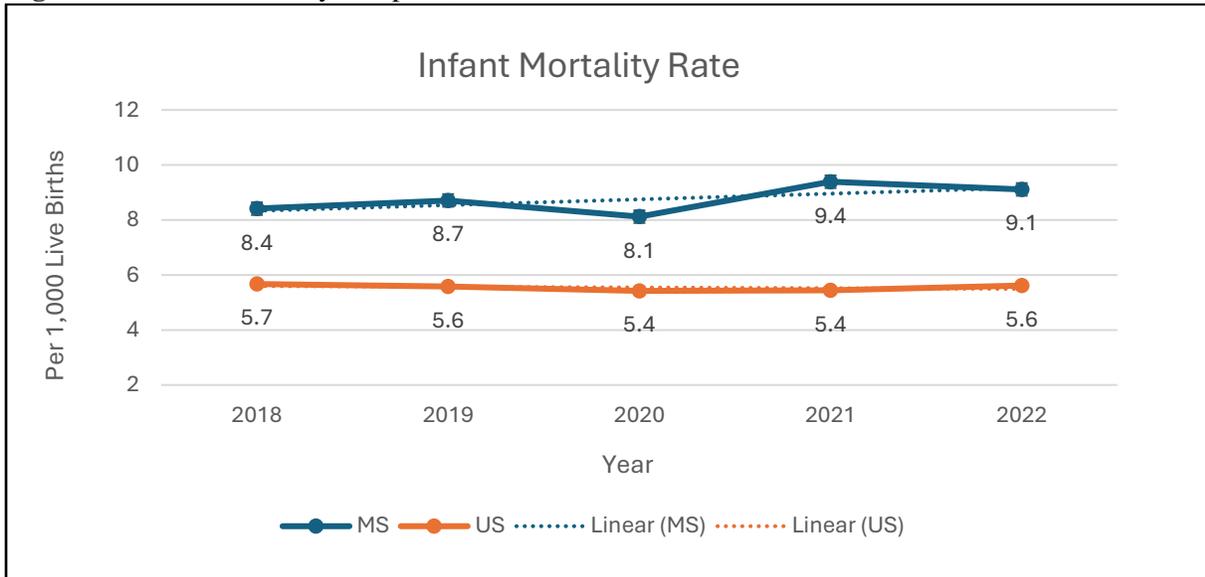
From 2018 to 2022, the Infant death rate (per 1,000 live births) in Mississippi increased from 8.4 (per 1,000 live births) in 2018 to 9.1 (per 1,000 live births) in 2022 with some fluctuations during the years. For the US, the rate slightly decreased during these years. The details are in Table 9.1 and Figure 9.1 below:

**Table 9.1:** Infant mortality rate per 1,000 live births

	<b>2018</b> <b>(95% CI)</b>	<b>2019</b> <b>(95% CI)</b>	<b>2020</b> <b>(95% CI)</b>	<b>2021</b> <b>(95% CI)</b>	<b>2022</b> <b>(95% CI)</b>
MS	8.4 (7.5-9.3)	8.7 (7.7-9.7)	8.1 (7.2-9.1)	9.4 (8.4-10.0)	9.1 (8.1-10.1)
US	5.7 (5.6-5.7)	5.6 (5.5-5.7)	5.4 (5.3-5.5)	5.4 (5.4-5.5)	5.6 (5.5-5.7)

Based on a 95% Confidence Interval (CI), we cannot conclude that there is a statistically significant increase from 2018 to 2022 in Mississippi. Compared with the US overall, the Infant death rate of Mississippi is statistically significantly higher than the Infant death rate of the US for each of these years at 95% Confidence Interval level.

**Figure 9.1:** Infant mortality rate per 1,000 live births



Data source: Centers for Disease Control and Prevention (CDC) website.

## NOM 9.2: Neonatal Mortality

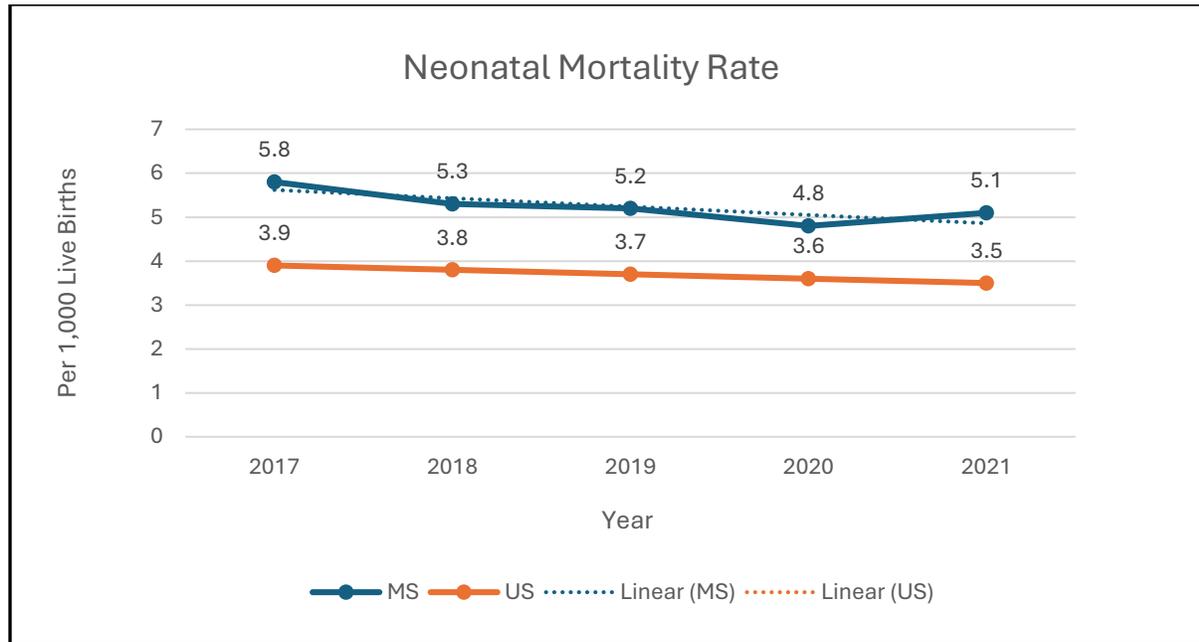
In Mississippi, the Neonatal Mortality Rate (per 1,000 live births) decreased from 5.8 (per 1,000 live births) in 2017 to 5.1 (per 1,000 live births) in 2021. In the US, the rate steadily decreased from 3.9 in 2017 to 3.5 in 2021. The details are in Table 9.2 and Figure 9.2 below:

**Table 9.2:** Neonatal mortality rate per 1,000 live births

	<b>2017</b> (95% CI)	<b>2018</b> (95% CI)	<b>2019</b> (95% CI)	<b>2020</b> (95% CI)	<b>2021</b> (95% CI)	<b>2022</b>
MS	5.8 (5.0-6.5)	5.3 (4.5-6.0)	5.2 (4.4-5.9)	4.8 (4.1-5.6)	5.1 (4.3-5.8)	....
US	3.9 (3.8-3.9)	3.8 (3.7-3.8)	3.7 (3.6-3.8)	3.6 (3.5-3.6)	3.5 (3.4-3.6)	.....

Based on a 95% Confidence Interval (CI), we cannot conclude that there is a statistically significant decrease from 2017 to 2021 in Mississippi. Compared with the US national, the rate of Mississippi is statistically significantly higher than the rate of the US national overall for each of these years at 95% Confidence Interval level.

**Figure 9.2:** Neonatal mortality rate per 1,000 live births



*Data Source:* National Vital Statistics System. Centers for Disease Control and Prevention (CDC) website

Note: 2022 data is not available for both MS and the US.

### NOM 9.3 - Post neonatal Mortality

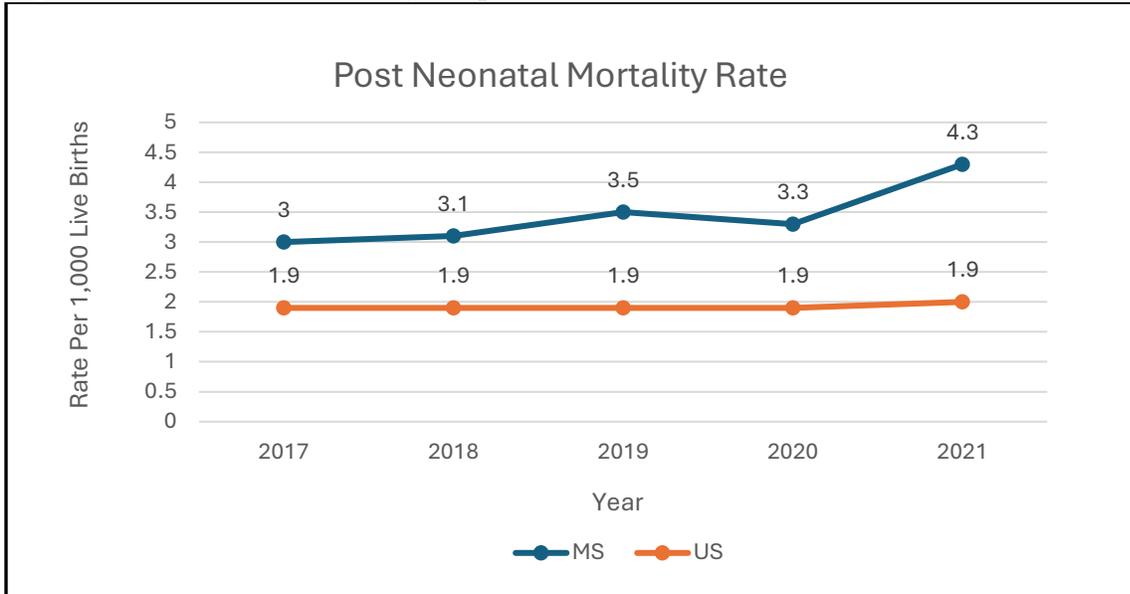
The Post neonatal death rate (per 1,000 live births) for Mississippi increased from 3 (per 1,000 births live birth) in 2017 to 4.3 (per 1,000 live births) in 2021. For the US, the rates remained the same from 2017 to 2021 and increased slightly in 2022. The details are in Table 9.3 and Figure 9.3 below:

**Table 9.3:** Post neonatal mortality rate per 1,000 live births

	<b>2017</b> <b>(95% CI)</b>	<b>2018</b> <b>(95% CI)</b>	<b>2019</b> <b>(95% CI)</b>	<b>2020</b> <b>(95% CI)</b>	<b>2021</b> <b>(95% CI)</b>	<b>2022</b> <b>(95% CI)</b>
MS	3.0 (2.4-3.5)	3.1 (2.6-3.7)	3.5 (2.9-4.2)	3.3 (2.7-3.9)	4.3 (3.6-5.0)	-----
US	1.9 (1.9-2.0)	1.9 (1.8-1.9)	1.9 (1.8-1.9)	1.9 (1.8-1.9)	1.9 (1.9-2.0)	2.0 (2.0-2.07)

Based on a 95% Confidence Interval (CI), we cannot conclude that there is a statistically significant increase from 2017 to 2021 in Mississippi. Compared with the US national overall, the rate in Mississippi is statistically significantly higher than the rate in the US national for each of these years 2017-2021 at a 95% Confidence Interval level.

**Figure 9.3:** Post neonatal mortality rate per 1,000 live births



Data Source: National Vital Statistics System. Centers for Disease Control and Prevention (CDC) website.

Note: 2022 data not available for MS.

## NOM 9.4 - Preterm-related Mortality

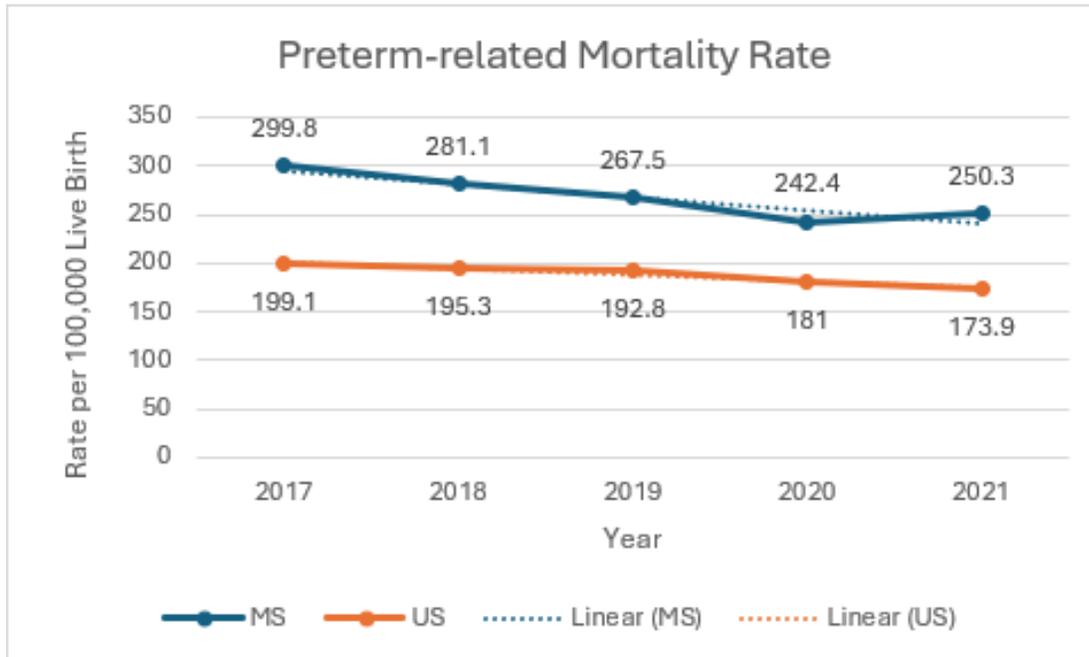
From 2017 to 2020, the preterm-related mortality rate (per 100,000 live births) in Mississippi decreased from 299.8 (per 100,000 live births) in 2017 to 242.4 in 2020 and slightly increased to 250.3 (per 100,000 live births) in 2021. The US also decreased from 199.1 in 2017 to 173.9 in 2021. The details are in Table 9.4 and Figure 9.4 below:

**Table 9.4:** Preterm-related mortality rate per 100,000 live births

	<b>2017</b> <b>(95% CI)</b>	<b>2018</b> <b>(95% CI)</b>	<b>2019</b> <b>(95% CI)</b>	<b>2020</b> <b>(95% CI)</b>	<b>2021</b> <b>(95% CI)</b>
MS	299.8 (244.2-355.4)	281.1 (227-335.2)	267.5 (217.1-326.1)	242.4 (193.9-299.5)	250.3 (200.7-308.5)
US	199.1 (194.6-203.5)	195.3 (190.9-199.8)	192.8 (188.3-197.2)	181.0 (176.6-185.4)	173.9 (169.6-178.2)

Based on a 95% Confidence Interval (CI), we cannot conclude that there is a statistically significant decrease from 2017 to 2021 in Mississippi. Compared with the US national overall (2017-2021), the rate in Mississippi is statistically significantly higher than the rate in the US overall for each of these years at 95% Confidence Interval level.

**Figure 9.4:** Preterm-related mortality rate per 100,000 live births



Data Source: National Vital Statistics System (NVSS)

## NOM 9.5: SUID Mortality

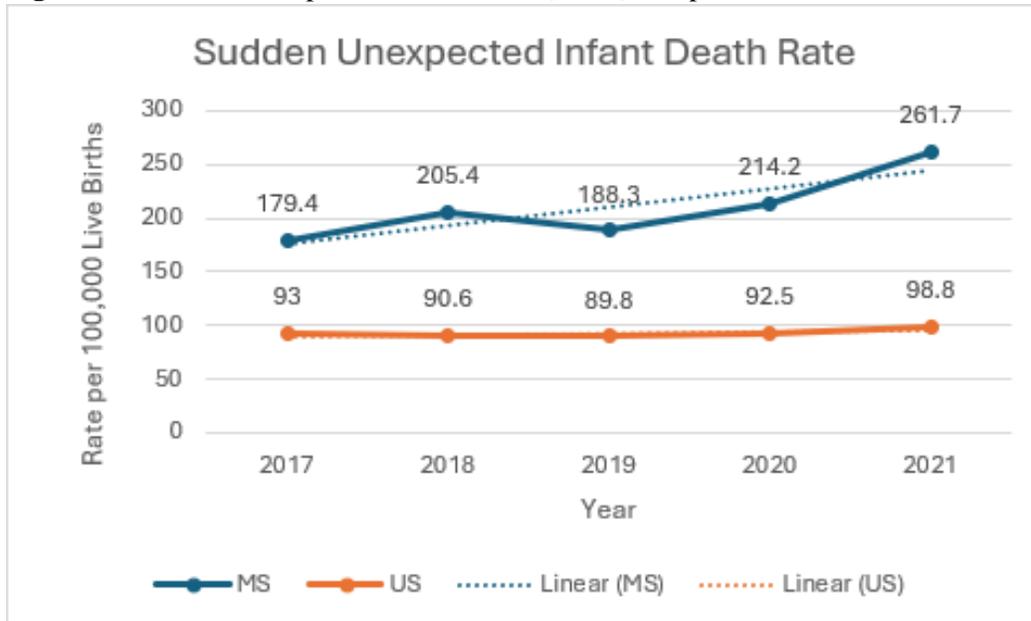
The Sudden Unexpected Infant Death (SUID) Rate (per 100,000 live births) in Mississippi increased from 179.4 (per 100,000 live births) in 2017 to 205.4 in 2018 and then decreased to 188.3 in 2019 then increased again to 261.7 (per 100,000 live births) in 2021. The US decreased from 93.0 in 2017 to 92.5 in 2020 with some fluctuations during these years then increased to 98.8 in 2021. The details are in Table 9.5 and Figure 9.5 below:

**Table 9.5:** Sudden Unexpected Infant Death (SUID) rate per 100,000 live births

	<b>2017</b> <b>(95% CI)</b>	<b>2018</b> <b>(95% CI)</b>	<b>2019</b> <b>(95% CI)</b>	<b>2020</b> <b>(95% CI)</b>	<b>2021</b> <b>(95% CI)</b>
MS	179.4 (139.0-227.8)	205.4 (161.8-257.2)	188.3 (146.5-238.4)	214.2 (168.8-268.2)	261.7 (208.3-315.1)
US	93.0 (89.9-96.0)	90.6 (87.6-93.7)	89.8 (86.7-92.8)	92.5 (89.3-95.6)	98.8 (95.5-102.0)

Based on a 95% Confidence Interval (CI), in Mississippi, we cannot conclude that there is a statistically significant increase from 2017 to 2021. Compared with the US national overall, the rate in Mississippi is statistically significantly higher than the rate in the US national overall for each of these years (2017-2021) at the 95% Confidence Interval level.

**Figure 9.5:** Sudden Unexpected Infant Death (SUID) rate per 100,000 live births



Data source: National Vital Statistics System (NVSS)

Note: There is no 2022 data available for MS and the US.

## NOM 10 - Drinking during Pregnancy

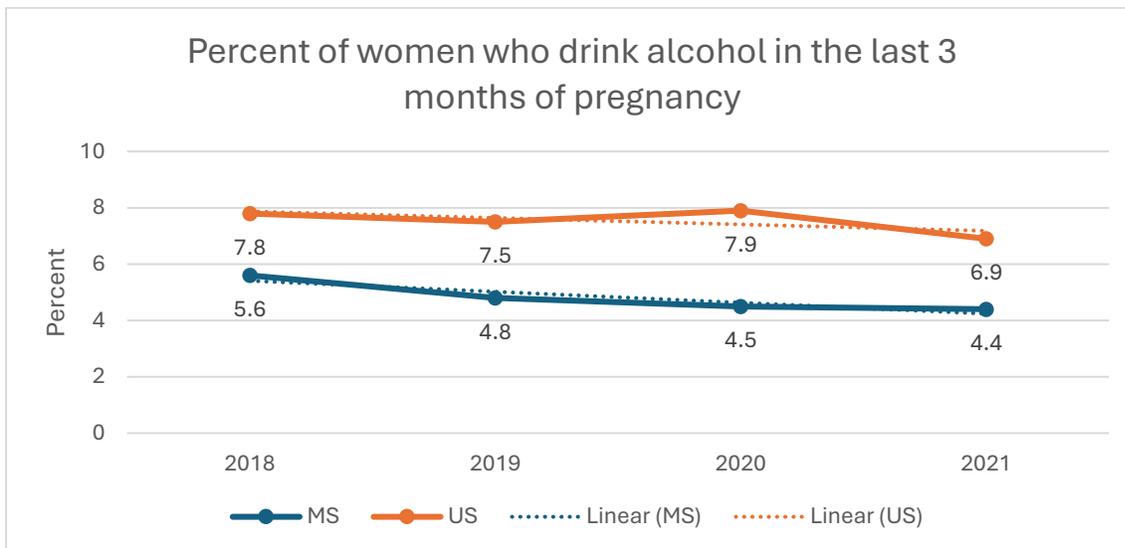
The percentage of women who drink alcohol in the last 3 months of pregnancy in MS decreased from 5.6% in 2018 to 4.4% in 2021. The percentage for the US also decreased from 7.8% in 2018 to 6.9% in 2021 and then increased to 7.8% in 2022. The percentages were higher in the US than in MS over the years. (Table 10 and Figure 10)

**Table 10:** Percent of women who drink alcohol in the last 3 months of pregnancy

	<b>2018</b> (95% CI)	<b>2019</b> (95% CI)	<b>2020</b> (95% CI)	<b>2021</b> (95% CI)	<b>2022</b>
<b>MS</b>	5.6 (4.2- 7.5)	4.8 (3.5- 6.4)	4.5 (3.1- 6.6)	4.4 (3- 6.3)	....
<b>US</b>	7.8 (7.2- 8.3)	7.5 (7- 8.1)	7.9 (7.3- 8.5)	6.9 (6.4- 7.5)	7.8 (7.1-8.5)

Based on the 95% confidence Interval, we cannot conclude that the decrease in percentage in MS is statistically significant. Compared to the US, the percentage from 2019 to 2021 are statistically significantly lower. However, the lower percentage for MS in 2018 is not statistically significant.

**Figure 10:** Percent of women who drink alcohol in the last 3 months of pregnancy



Data Source: Pregnancy Risk Assessment Monitoring System

Note: There is no 2022 data available for MS.

## NOM 11 - Neonatal Abstinence Syndrome

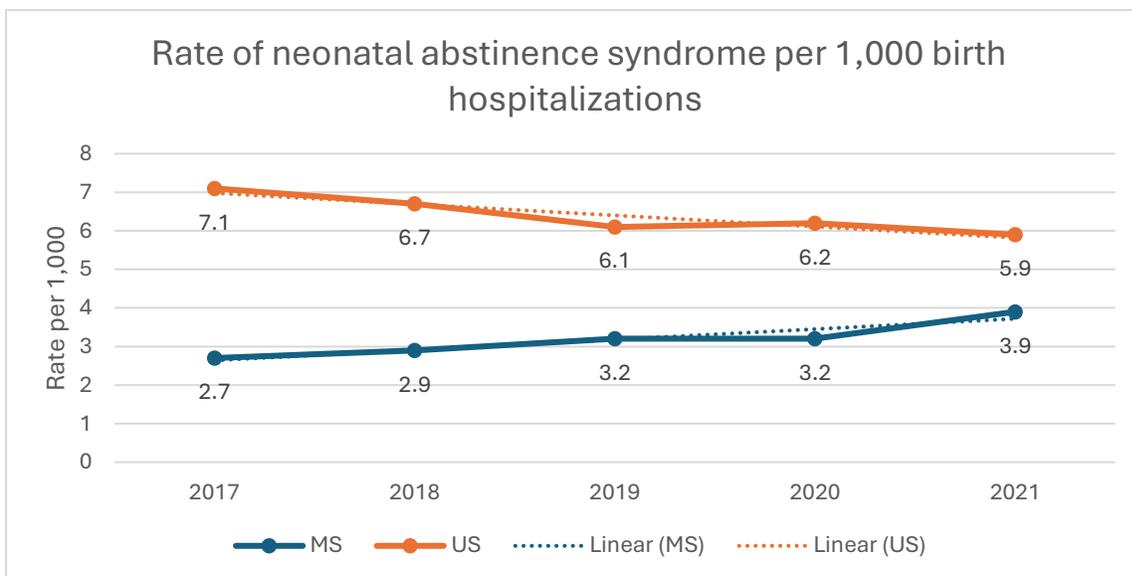
The rate of Neonatal Abstinence Syndrome (NAS) in MS shows a gradual increase over the years from 2.7 in 2017 to 3.9 in 2021. The rate remained the same for the years 2019 and 2020 with 3.2. Whereas the rate of neonatal abstinence syndrome in the US decreased from 7.1 in 2017 to 5.9 in 2021, indicating a downward trend. The NAS rates in MS have been lower than those of the NAS rates in the US throughout the years. Although the rates of MS remain below the US rate, we can observe that there is an increase in the trend over the years for MS. (Table and 11 Figure 11)

**Table 11:** Rate of neonatal abstinence syndrome per 1,000 birth hospitalizations

	2017 (95% CI)	2018 (95% CI)	2019 (95% CI)	2020 (95% CI)	2021 (95% CI)	2022
<b>MS</b>	2.7 (2.2- 3.3)	2.9 (2.4- 3.5)	3.2 (2.6- 3.8)	3.2 (2.6- 3.8)	3.9 (3.3- 4.6)	....
<b>US</b>	7.1 (7.1- 7.2)	6.7 (6.6- 6.8)	6.1 (6.1- 6.2)	6.2 (6.1- 6.2)	5.9 (5.8- 5.9)	....

Based on 95% CI, the rate increase in MS from 2017 to 2021 is statistically significant. However, when comparing each year subsequently, it is not statistically significant. When compared to the US rates, the rate in MS is statistically significantly lower than the US for each of these years.

**Figure 11:** Rate of neonatal abstinence syndrome per 1,000 birth hospitalizations



Data Source: Healthcare Cost and Utilization Project- State Inpatient Databases

Note: No data available for 2022

**NOM 14: Tooth decay or cavities**

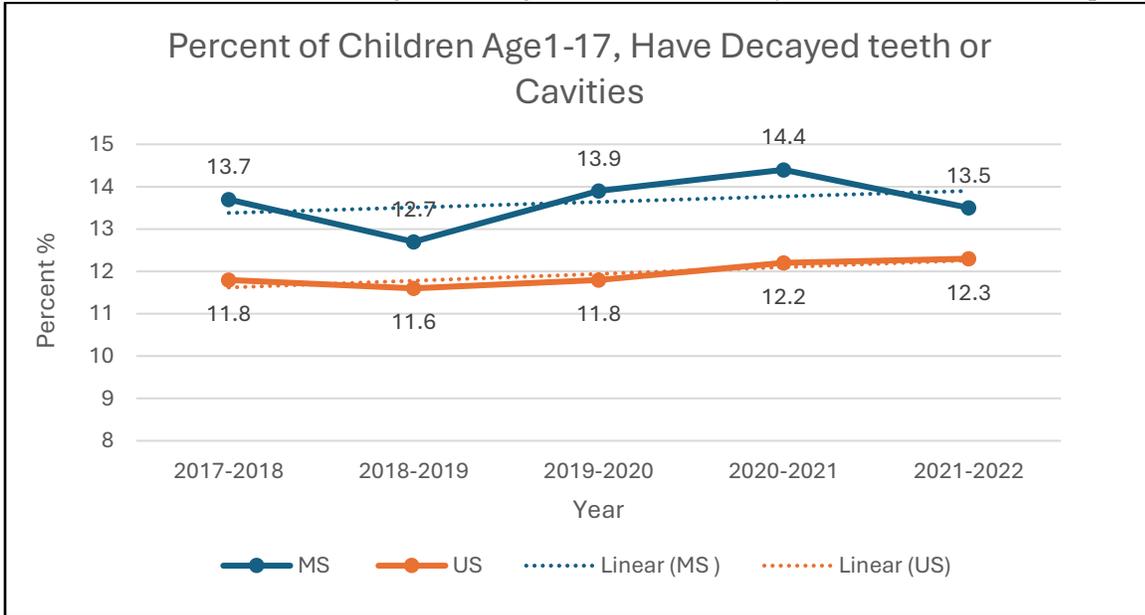
From 2017 to 2021, the percentage of children, ages 1 through 17, who have decayed teeth or cavities in Mississippi fluctuated from 2017-2018 to 2021-2022. In the US, the rates slightly increased from 11.8 in 2017-2018 to 12.3 in 2021 – 2022. The details are in Table 14 and Figure 14 below:

**Table 14:** Percent of children, ages 1 through 17, who have decayed teeth or cavities in the past year

	<b>2017-2018 (95% CI)</b>	<b>2018-2019 (95% CI)</b>	<b>2019-2020 (95% CI)</b>	<b>2020-2021 (95% CI)</b>	<b>2021-2022 (95% CI)</b>
MS	13.7 (11.1-16.9)	12.7 (10.2-15.7)	13.9 (11.6-16.5)	14.4 (12.2-16.9)	13.5 (11.1-16.2)
US	11.8 (11.1-12.5)	11.6 (11.1-12.2)	11.8 (11.2-12.4)	12.2 (11.7-12.8)	12.3 (11.8-12.7)

Based on a 95% Confidence Interval (CI), we cannot conclude that there is a statistically significant difference from 2017-2018 to 2021-2022. Compared with the US national overall, the rate in Mississippi is higher than the rate in the US for each of these years, However, we cannot conclude that there is a statistically significant higher rate at a 95% Confidence Interval level.

**Figure 14:** Percent of children, ages 1 through 17, who have decayed teeth or cavities in the past year



Data source: National Survey of Children's Health (NSCH).

**NOM 15: Child Mortality**

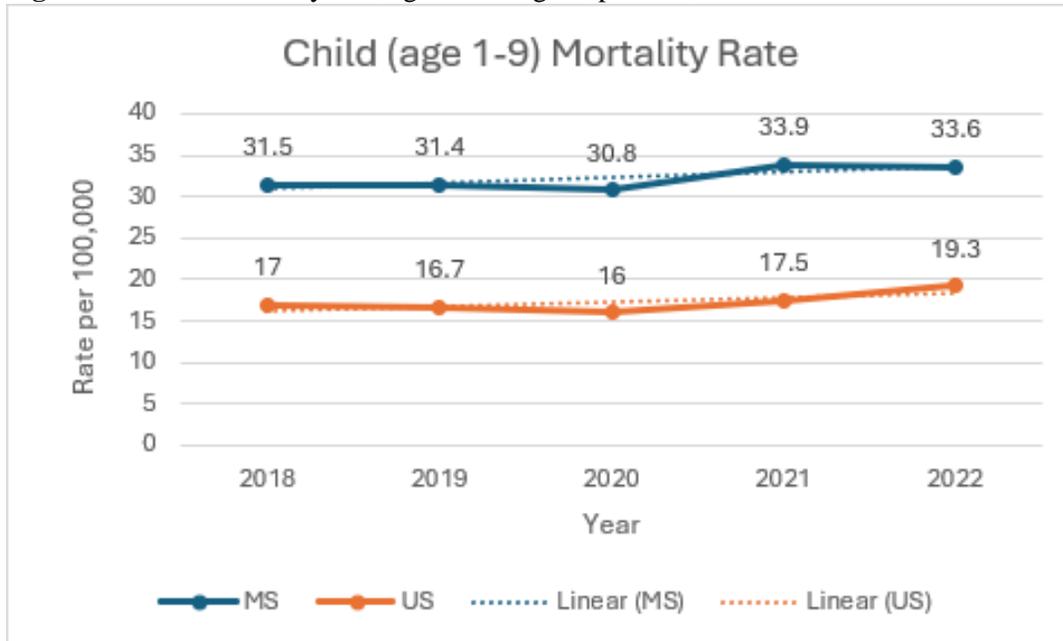
From 2018 to 2021, children aged 1 through 9 mortality rate (per 100,000) in Mississippi increased from 31.5 (per 100,000) in 2018 to 33.6 (per 100,000) in 2022. For the US, the rate slightly increased from 17.0 in 2018 to 19.3 in 2022 with some fluctuations in between. The details are in Table 15 and Figure 15 below:

**Table 15:** Child Mortality rate, ages 1 through 9, per 100,000

	<b>2018</b> <b>(95% CI)</b>	<b>2019</b> <b>(95% CI)</b>	<b>2020</b> <b>(95% CI)</b>	<b>2021</b> <b>(95% CI)</b>	<b>2022</b> <b>(95% CI)</b>
MS	31.5 (25.6-37.6)	31.4 (25.4-37.4)	30.8 (24.9-36.8)	33.9 (27.6-40.2)	33.6 (27.3-40.0)
US	17.0 (16.6-17.5)	16.7 (16.3-17.1)	16.0 (15.6-16.4)	17.5 (17.1-17.9)	19.3 (18.8-19.7)

Based on a 95% Confidence Interval (CI), we cannot conclude that there is a statistically significant increase from 2018 to 2022 in Mississippi. Compared with the US national, the Child (age 1-9) mortality rate of Mississippi is statistically significantly higher than the Child (1-9) mortality rate of the US national overall for each of these years at 95% Confidence Interval level.

**Figure 15:** Child Mortality rate, ages 1 through 9, per 100,000



Data source: National Vital Statistics System (NVSS)

**NOM 16.1: Adolescent Mortality**

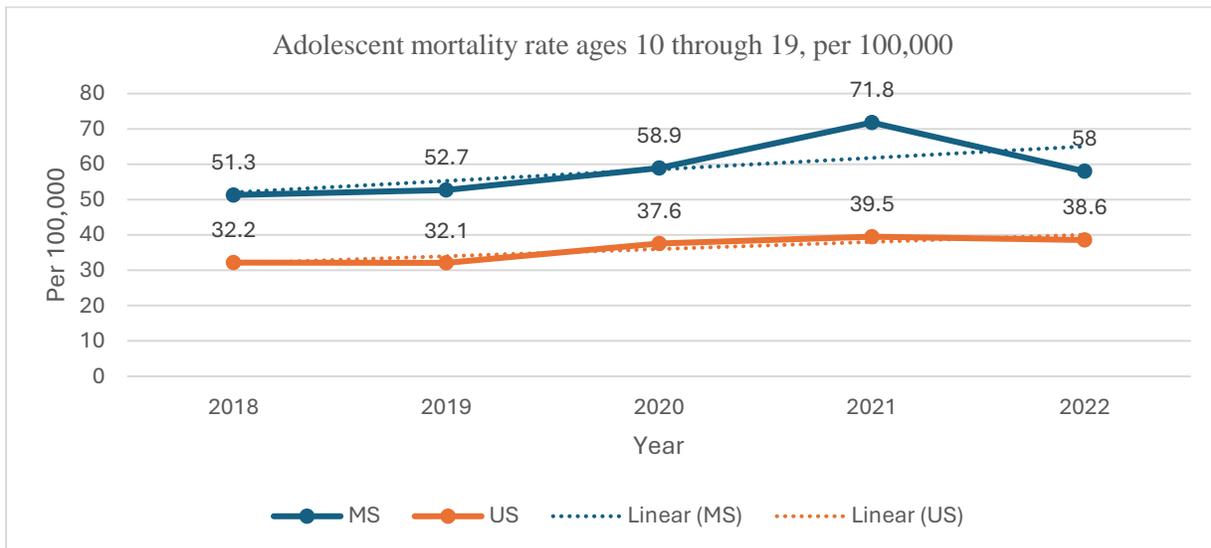
The adolescent mortality rate in MS increased from 51.3 in 2018 to 71.8 in 2021. Thereafter, it slightly declined to 58 in 2022. The national rate remained relatively stable from 2018 to 2019, at around 32.2 and 32.1, and jumped in 2021 to 39.5. In 2022, the rate slightly decreased to 38.6. (Table and 16.1 Figure 16.1)

**Table 16.1:** Adolescent mortality rate ages 10 through 19, per 100,000

	<b>2018 (95% C.I)</b>	<b>2019 (95% C.I)</b>	<b>2020 (95% C.I)</b>	<b>2021 (95% C.I)</b>	<b>2022 (95% C.I)</b>
MS	51.3 (44.4-58.3)	52.7 (45.7-59.8)	58.9 (51.4-66.3)	71.8 (63.6-80.0)	58.0 (50.5-65.4)
US	32.2 (31.6-32.7)	32.1 (31.5-32.6)	37.6 (37-38.2)	39.5 (38.9-40.1)	38.6 (38-39.2)

Based on 95% CI, from the year 2020 to 2021 MS rate statistically significantly increased. However, the increase from 2018 to 2022 is not statistically significant. When compared to the US rates Mississippi consistently had a statistically significantly higher adolescent mortality rate across all five years.

**Figure 16.1:** Adolescent mortality rate ages 10 through 19, per 100,000



Data source: National Vital Statistics System (NVSS)

## NOM 16.2: Adolescent Motor Vehicle Death

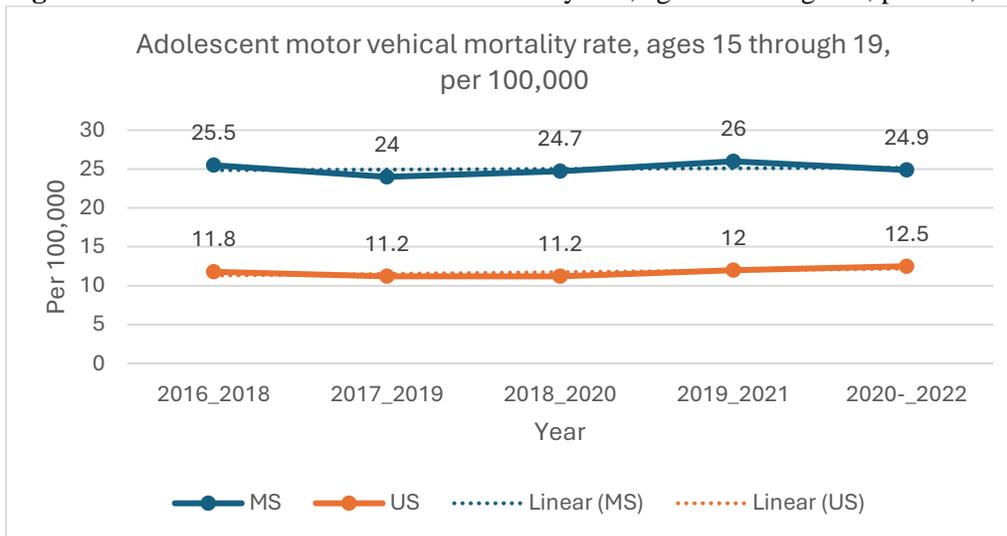
The rates in Mississippi are much higher, beginning in 2016 -2018 at 25.5, falling to 24 in 2017 -2019, and then gradually rising to 26 by 2019-2021 and a small dip to 24.9 in 2020\_2022 whereas the U.S had a constant rate from 11.8 to with little increase to 12 in 2020-2022 and 12.5 in 2020\_2022. (Table and 16.2 Figure 16.2)

**Table 16.2:** Adolescent motor vehicle mortality rate, ages 15 through 19, per 100,000

	<b>2016_2018</b> <b>(95% C.I)</b>	<b>2017_2019</b> <b>(95% C.I)</b>	<b>2018_2020</b> <b>(95% C.I)</b>	<b>2019_2021</b> <b>(95% C.I)</b>	<b>2020_2022</b> <b>(95% C.I)</b>
MS	25.5 (21.5-29.4)	24.0 (20.1-27.8)	24.7 (20.8-28.7)	26.0 (21.9-30.1)	24.9 (21-28.9)
US	11.8 (11.6-12.1)	11.2 (10.9-11.4)	11.2 (10.9-11.5)	12.0 (11.7-12.3)	12.5 (12.3-12.8)

Based on 95% CI, we cannot conclude that there has been a statistically significant decrease in the adolescent motor vehicle mortality rate in MS over the years. The data indicates that Mississippi consistently had a statistically significant higher rate of adult motor vehicle deaths than the national rate.

**Figure 16.2:** Adolescent motor vehicle mortality rate, ages 15 through 19, per 100,000



Data source: National Vital Statistics System (NVSS)

**NOM 16.3: Adolescent Suicide**

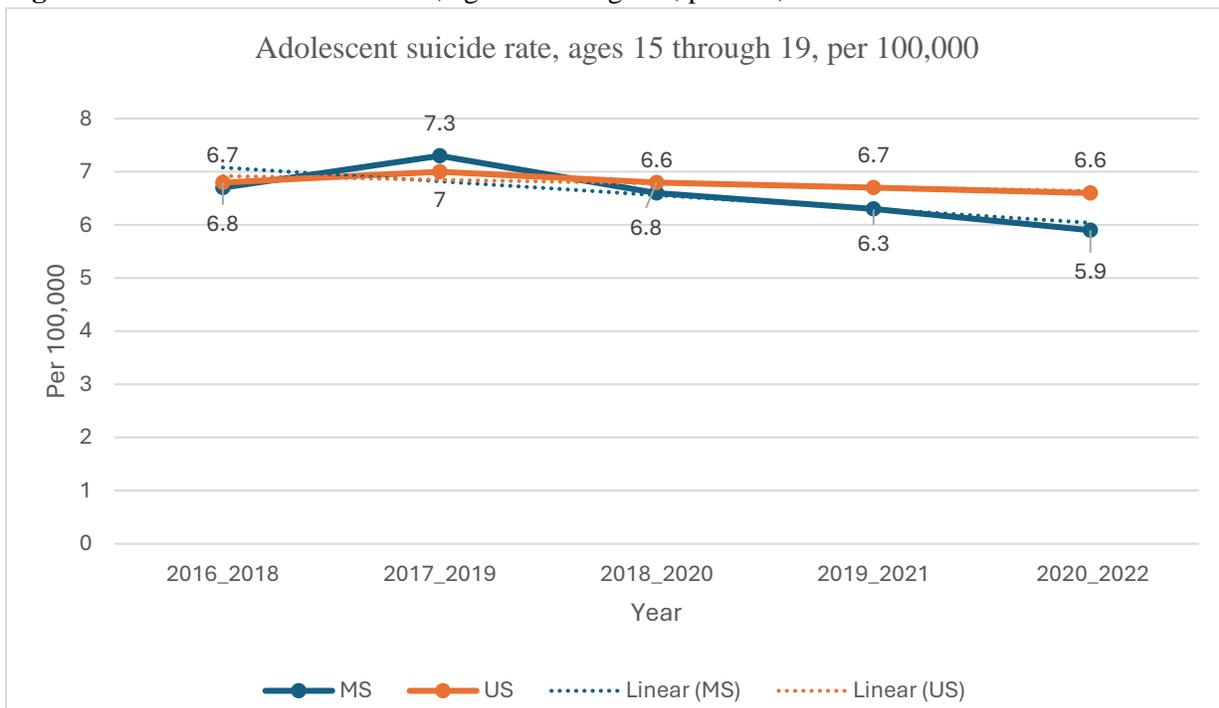
The suicide rate in Mississippi fluctuated slightly over the period, starting at 6.7 in 2016-2018 and dropping to 5.9 by 2020-2022. The national suicide rate remained relatively stable, starting at 6.8 in 2016-2018 and slightly decreasing to 6.6 by 2020-2022. Overall, adolescent suicide rates have decreased slightly in the United States and Mississippi in recent years. (Table and 16.3 Figure 16.3)

**Table 16.3:** Adolescent suicide rate, ages 15 through 19, per 100,000

	<b>2016_2018</b> <b>(95% C.I)</b>	<b>2017_2019</b> <b>(95% C.I)</b>	<b>2018_2020</b> <b>(95% C.I)</b>	<b>2019_2021</b> <b>(95% C.I)</b>	<b>2020_2022</b> <b>(95% C.I)</b>
MS	6.7 (5.3-8.3)	7.3 (5.9-9.0)	6.6 (5.3-8.2)	6.3 (5.0-7.9)	5.9 (4.6-7.5)
US	6.8 (6.7-7.0)	7 (6.8-7.1)	6.8 (6.7-6.9)	6.7 (6.6-6.8)	6.6 (6.5-6.7)

Based on 95% CI, we cannot conclude that there has been a statistically significant decrease in the suicide rate in MS over the years. Mississippi’s suicide rates are generally like the national average indicating no statistically significant difference between Mississippi and the U.S. in adolescent suicide rates during these years.

**Figure 16.3:** Adolescent suicide rate, ages 15 through 19, per 100,000



Data source: National Vital Statistics System (NVSS)

**NOM 17.1: CYSHCN**

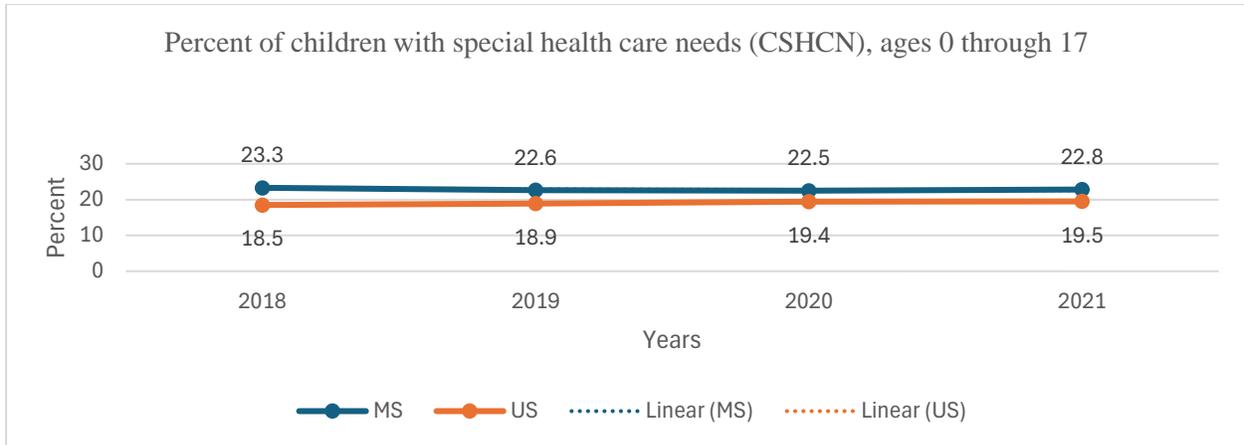
From 18.5% in 2018 to 19.5% in 2021, the percentage of children in the United States who require special health care increased gradually. While it stayed relatively stable, ranging between 22.5% and 23.3% throughout the same period, Mississippi's percentage was steadily higher than the national percentage. The number of children in the US that require special health care is steadily rising, with Mississippi continuing to have higher but comparatively stable rates. (Table 17.1 and Figure 17.1)

**Table 17.1:** Percent of children with special health care needs (CSHCN), ages 0 through 17

	<b>2018</b> (95% CI)	<b>2019</b> (95% CI)	<b>2020</b> (95% CI)	<b>2021</b> (95% CI)	<b>2022</b>
MS	23.3 (20.1 - 26.8)	22.6 (19.7 - 25.7)	22.5 (19.9 - 25.5)	22.8 (20.2 - 25.6)	.....
US	18.5 (17.8 - 19.2)	18.9 (18.3 - 19.5)	19.4 (18.8 - 20)	19.5 (19 - 20)	.....

Based on a 95% confidence interval (CI) we cannot conclude that there has been a statistically significant increase in Mississippi over the years. Compared to the US the rates for 2018, 2019, and 2021 are statistically significantly higher than the percentage in the US.

**Figure 17.1:** Percent of children with special health care needs (CSHCN), ages 0 through 17.



Data Source: National Survey of Children's Health (NSCH)

Note: No data available for 2022

## NOM 17.2: CYSHCN Systems of Care

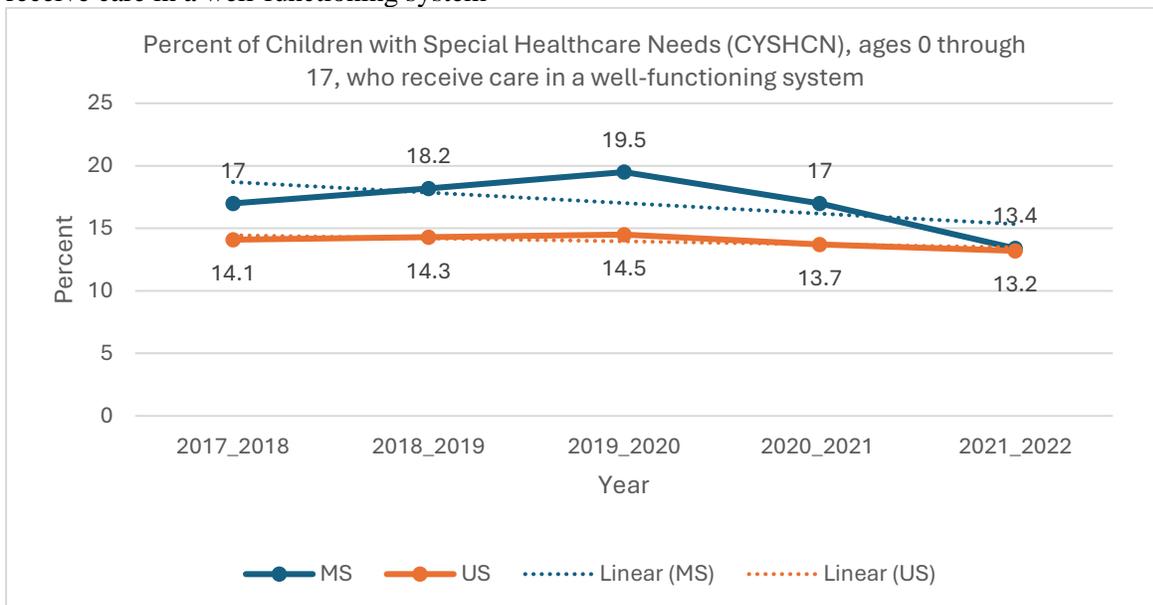
The percentage of children with special health care needs (CYSHCN), ages 0 through 17, who receive care in a well-functioning system in Mississippi increased from 17.0% in 2017-2018 to 19.5 in 2019-2020. By 2021-2022, nevertheless, it had decreased to 13.4%, approaching the national average. The percentage of CYSHCN receiving care in an efficient system has been declining in Mississippi and the United States in recent years. (Table and 17.2 Figure 17.2)

**Table 17.2:** Percent of children with special health care needs (CYSHCN), ages 0 through 17, who receive care in a well-functioning system

	2017_2018 (95% CI)	2018_2019 (95% CI)	2019_2020 (95% CI)	2020_2021 (95% CI)	2021_2022 (95% CI)
MS	17.0 (11.7 - 24.1)	18.2 (13.3 - 24.5)	19.5 (14.4 - 25.9)	17.0 (12.4 - 22.8)	13.4 (10.0-17.7)
US	14.1 (12.9 - 15.3)	14.3 (13.3 - 15.3)	14.5 (13.6 - 15.5)	13.7 (12.8 - 14.6)	13.2 (12.4-14.0)

Based on 95% CI, we cannot conclude that there is a statistically significant increase and decrease in the percentages of children with CYSHCN ages 0 through 17 who received care in a well-functioning system over the years in MS. And the same when compared to the US we cannot conclude that there is a statistically significant higher in MS percentage than the US.

**Figure 17.2:** Percent of children with special health care needs (CYSHCN), ages 0 through 17, who receive care in a well-functioning system



**Data Source:** National Survey of Children’s Health (NSCH)

### NOM 17.3: Autism

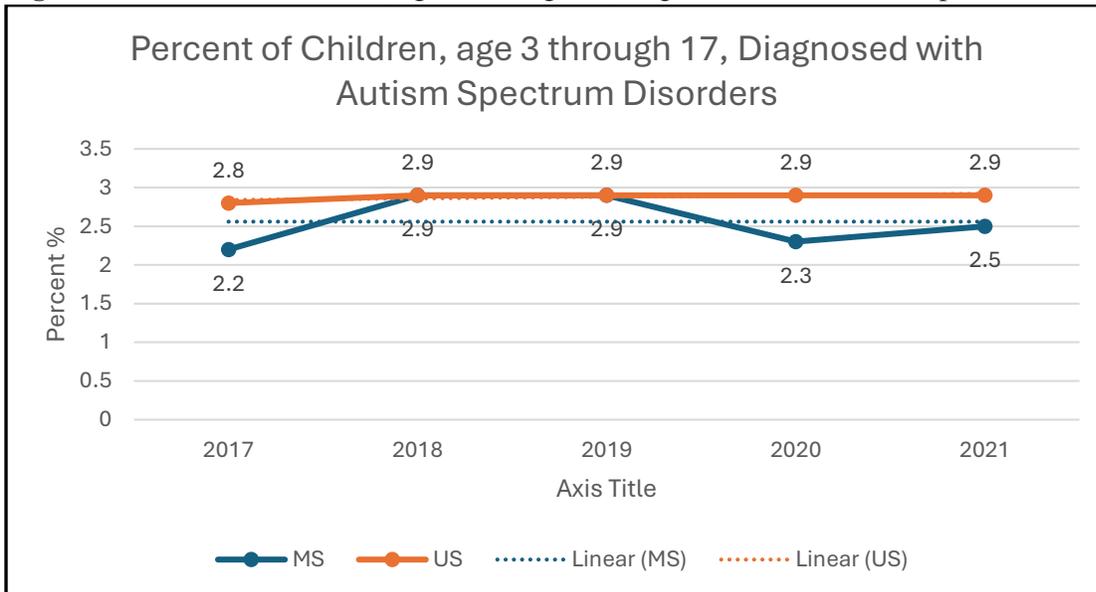
In five years, the percentage of children aged 3 through 17, diagnosed with an autism spectrum disorder in Mississippi increased from 2.2 in 2017 to 2.5 in 2021 with some fluctuations in between. In the US, the rate increased from 2.8 in 2017 to 2.9 in 2018 and then remained the same until 2021. The details are in Table 17.3 and Figure 17.3 below:

**Table 17.3:** Percent of children, ages 3 through 17, diagnosed with an autism spectrum disorder

	<b>2017</b> <b>(95% CI)</b>	<b>2018</b> <b>(95% CI)</b>	<b>2019</b> <b>(95% CI)</b>	<b>2020</b> <b>(95% CI)</b>	<b>2021</b> <b>(95% CI)</b>
MS	2.2 (1.1-4.2)	2.9 (1.7-4.8)	2.9 (1.8-4.7)	2.3 (1.5-3.7)	2.5 (1.7-3.8)
US	2.8 (2.5-3.2)	2.9 (2.6-3.4)	2.9 (2.6-3.3)	2.9 (2.7-3.2)	2.9 (2.7-3.1)

Based on a 95% Confidence Interval (CI), we cannot conclude that there is a statistically significant difference from 2017 to 2022 in Mississippi. In Comparison, the MS rate is lower than the rate in the US during the years 2017, 2020, and 2021. However, we cannot conclude that the MS rate is statistically significantly lower than the US rate for each of these years at the 95% Confidence Interval level.

**Figure 17.3:** Percent of children, ages 3 through 17, diagnosed with an autism spectrum disorder



**Data Source:** National Survey of Children’s Health (NSCH)

Note: No data available for 2022

**NOM: 17.4: ADD/ADHD**

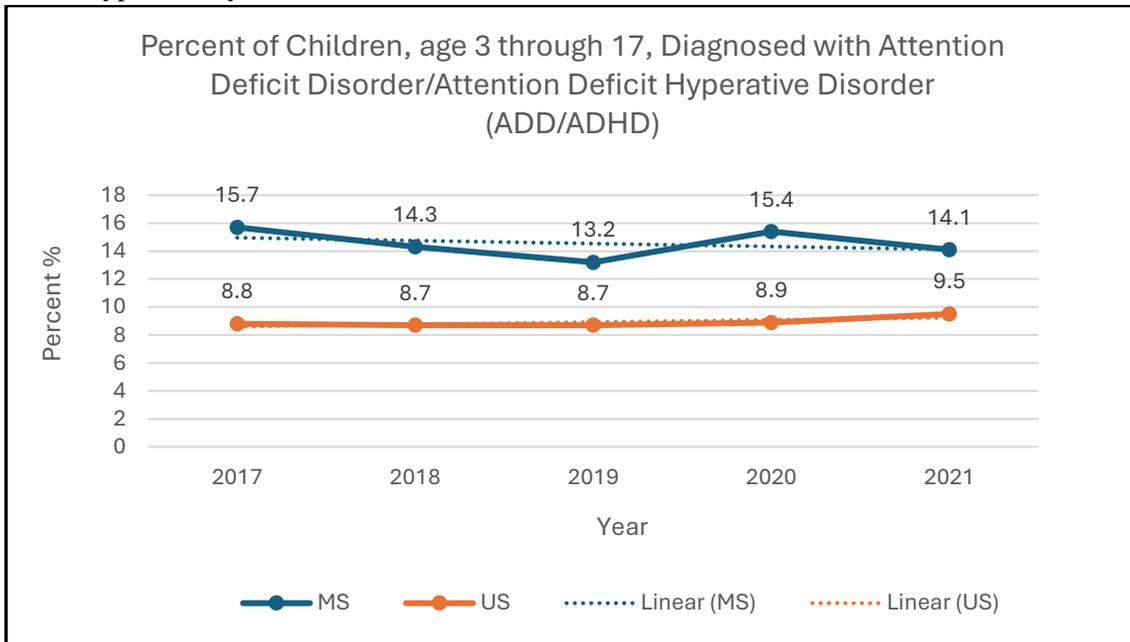
From 2017 to 2021, the percentage of children aged 3 through 17, diagnosed with an attention deficit disorder/attention deficit hyperactivity disorder in MS decreased from 15.7 in 2017 to 14.1 in 2021 with some fluctuation during these years. In the US, the rate increased from 8.8 in 2017 to 9.5 in 2021. The details are in Table 17.4 and Figure 17.4 below:

**Table 17.4:** Percent of children, ages 3 through 17, diagnosed with attention deficit disorder/attention deficit hyperactivity disorder

	<b>2017 (95% CI)</b>	<b>2018 (95% CI)</b>	<b>2019 (95% CI)</b>	<b>2020 (95% CI)</b>	<b>2021 (95% CI)</b>
MS	15.7 (12.6-19.4)	14.3 (11.2-17.9)	13.2 (10.8-15.9)	15.4 (12.9-18.2)	14.1 (11.9-16.7)
US	8.8 (8.3-9.3)	8.7 (8.2-9.2)	8.7 (8.3-9.2)	8.9 (8.5-9.4)	9.5 (9.1-9.9)

Based on a 95% Confidence Interval (CI), we cannot conclude that there is a statistically significant decrease from 2017 to 2022 in Mississippi. Compared with the US national, the percentage in Mississippi is statistically significantly higher than the percentage of the US overall for each of these years at 95% Confidence Interval level.

**Figure 17.4:** Percent of children, ages 3 through 17, diagnosed with attention deficit disorder/attention deficit hyperactivity disorder



**Data Source:** National Survey of Children’s Health (NSCH)

Note: No data available for 2022

## NOM 18: Mental Health Treatment

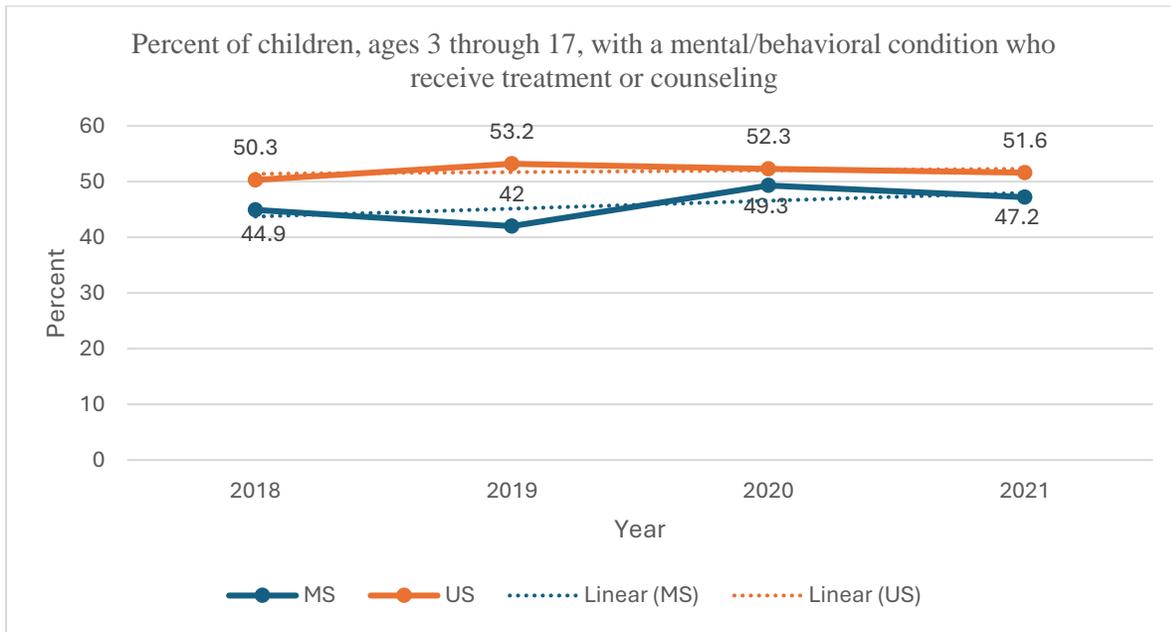
In Mississippi, the percentage of children receiving mental health treatment showed fluctuations over the years, starting at 44.9% in 2018, dropping slightly to 42.0% in 2019, peaking at 49.3% in 2020, and then decreasing again to 47.2% in 2021. In the US the percentage of children receiving mental health treatment from 2018 to 2021, was about the same with a slight increase and decrease. (Table and 18 Figure 18)

**Table 18:** Percent of children, ages 3 through 17, with a mental/behavioral condition who receive treatment or counseling

	<b>2018</b> <b>(95% CI)</b>	<b>2019</b> <b>(95% CI)</b>	<b>2020</b> <b>(95% CI)</b>	<b>2021</b> <b>(95% CI)</b>	<b>2022</b>
MS	44.9 (33.6-53.7)	42.0 (32.3-52.5)	49.3 (40-58.6)	47.2 (38.2-56.4)	-
US	50.3 (47.9-52.8)	53.2 (50.9-55.5)	52.3 (50.1-54.6)	51.6 (49.6-53.5)	-

Based on 95% CI, we cannot conclude that there is a statistically significant increase in the percentage of children receiving mental health treatment in MS from 2018 to 2021. And, there is no statistically significant difference between MS and the US national average based on the 95% confidence level.

**Figure 18:** Percent of children, ages 3 through 17, with a mental/behavioral condition who receive treatment or counseling



**Data Source:** National Survey of Children’s Health (NSCH)

Note: Data for 2022 is not available

## NOM 19: Children's Health Status

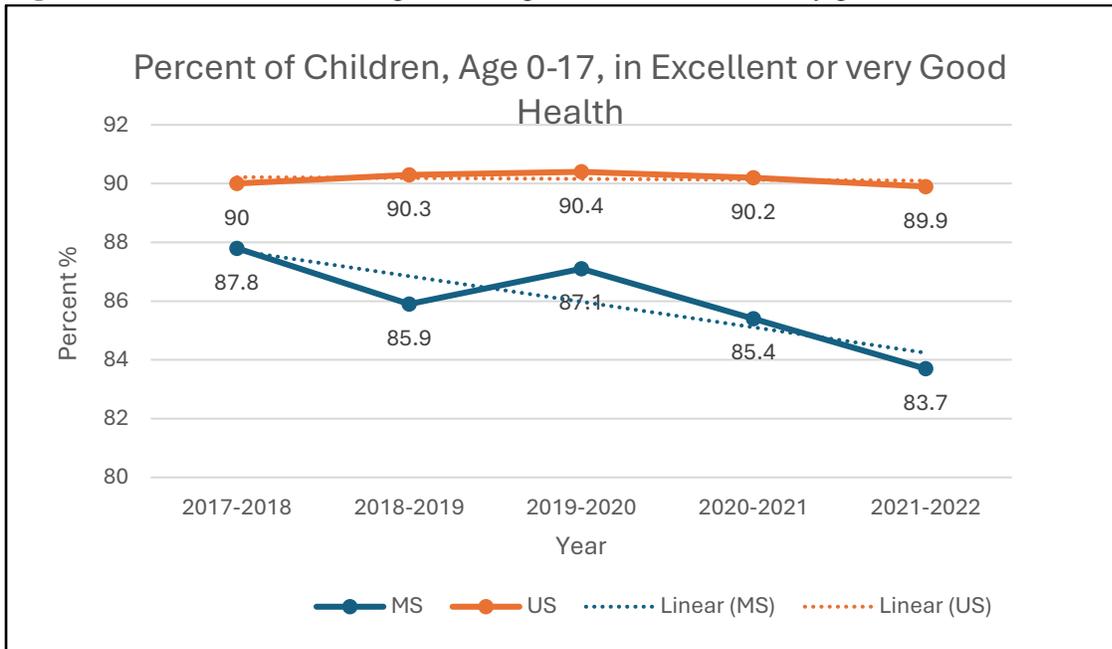
From 2017-2018 to 2021-2022, the percentage of children in Mississippi, aged 0 through 17 in excellent or very good health decreased from 87.8 percent in 2017-2018 to 83.7 percent in 2021-2022. The US percent remains relatively the same. The details are in Table 19 and Figure 19 below:

**Table 19:** Percent of children, ages 0 through 17, in excellent or very good health

	<b>2017-2018 (95% CI)</b>	<b>2018-2019 (95% CI)</b>	<b>2019-2020 (95% CI)</b>	<b>2020-2021 (95% CI)</b>	<b>2021-2022 (95% CI)</b>
MS	87.8 (84.8-90.2)	85.9 (82.8-88.5)	87.1 (84.5-89.3)	85.4 (82.7-87.8)	83.7 (80.7-86.3)
US	90.0 (89.3-90.7)	90.3 (89.7-90.8)	90.4 (89.9-91.0)	90.2 (89.7-90.7)	89.9 (89.4-90.4)

However, based on a 95% Confidence Interval (CI), we cannot conclude that there is a statistically significant decrease from 2017-2018 to 2021-2022 in Mississippi. In comparison, the percentage in Mississippi is statistically significantly lower than the US national overall for the years 2018-2019, 2019-2020, 2020-2021, and 2021-2022. And, we cannot conclude that the percentage of children, ages 0 through 17, in excellent or very good health in Mississippi in 2017-2018 is statistically significantly lower than the percentage in the US overall in 2017-2018 at 95% Confidence level.

**Figure 19:** Percent of children, ages 0 through 17, in excellent or very good health



Data source: National Survey of Children's Health (NSCH)

## NOM 20: Obesity (Ages 10 – 17)

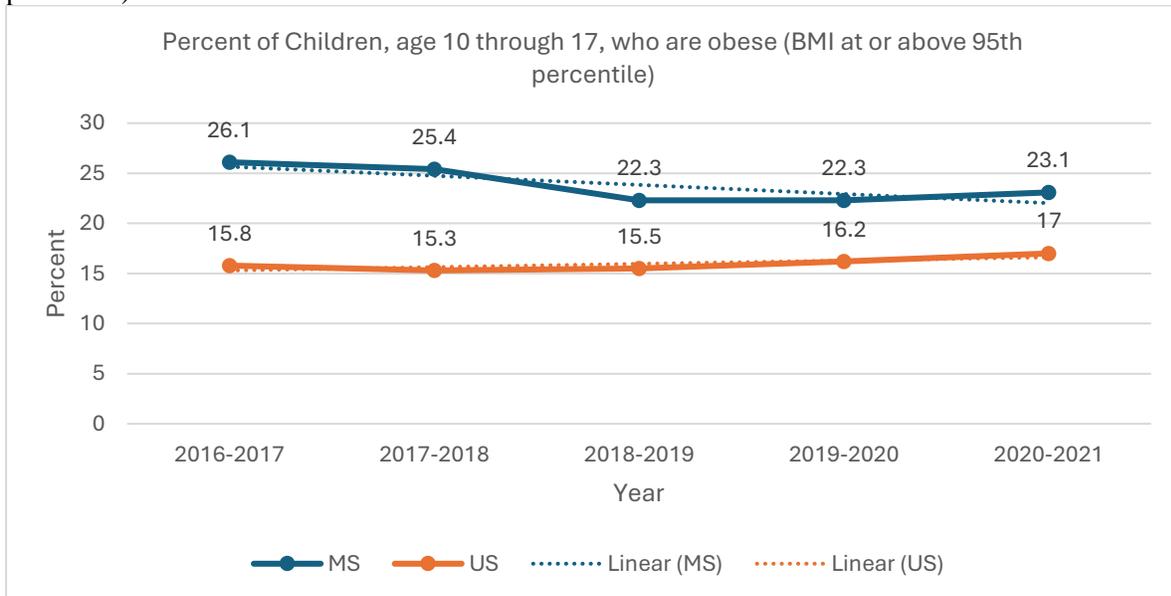
From 2016-2017 to 2020-2021, the percentage of adolescents, ages 10 through 17, who are obese (BMI at or above the 95th percentile) in Mississippi decreased from 26.1% in 2016-2017 to 23.1% in 2020-2021. In the US, the percentage increased from 15.8% in 2016-2017 to 17% in 2020-2021. The details are in Table 20.1 and Figure 20.1 below:

**Table 20.1:** Percent of adolescents, ages 10 through 17, who are obese (BMI at or above the 95th percentile)

	<b>2016-2017 (95% CI)</b>	<b>2017-2018 (95% CI)</b>	<b>2018-2019 (95% CI)</b>	<b>2019-2020 (95% CI)</b>	<b>2020-2021 (95% CI)</b>
MS	26.1 (21.1-31.8)	25.4 (20.5-31.0)	22.3 (18.3-26.9)	22.3 (18.5-26.7)	23.1 (19.3-27.5)
US	15.8 (14.8-16.8)	15.3 (14.2-16.3)	15.5 (14.5-16.6)	16.2 (15.3-17.2)	17.0 (16.2-17.9)

Based on a 95% Confidence Interval (CI), we cannot conclude that there is a statistically significant decrease in Mississippi from 2016-2017 to 2020-2021. In comparison, the percentage in Mississippi is statistically significantly higher than the percentage in the US overall for each of these years at 95% Confidence Interval level.

**Figure 20.1:** Percent of adolescents, ages 10 through 17, who are obese (BMI at or above the 95th percentile)



Data Source: National Survey of Children's Health (NSCH)

Note: Data for 2022 is not available

**NOM 20: Obesity (Ages 2-4)**

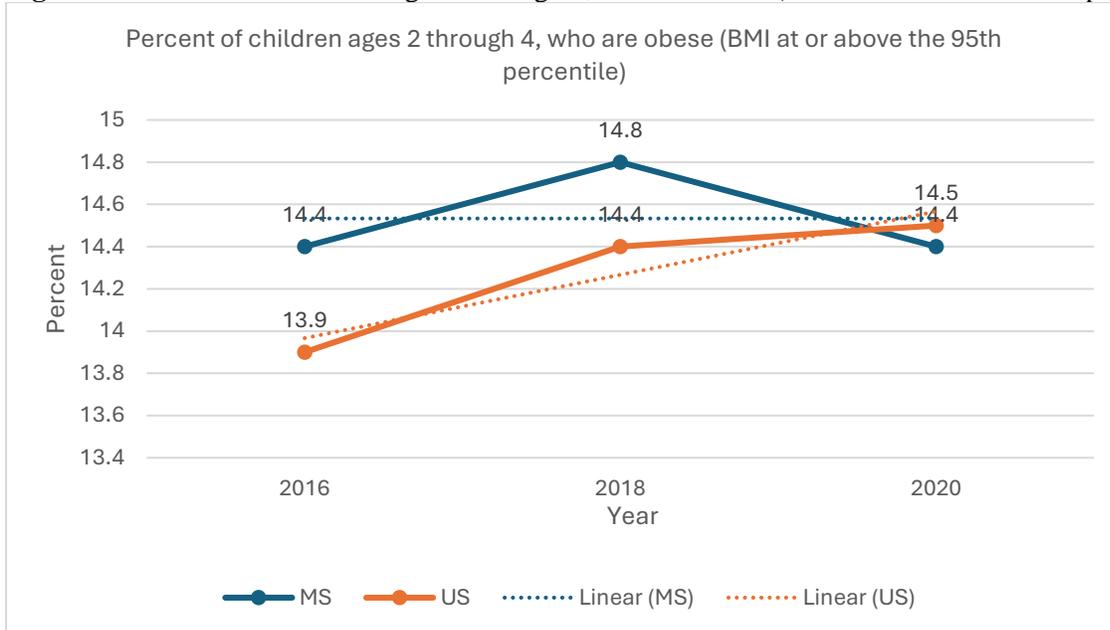
From 2016 to 2020, the percentage of children, ages 2 through 4, who are obese (BMI at or above the 95th percentile) in Mississippi increased from 14.4% in 2016 to 14.8% in 2018 and then decreased to 14.4% in 2020. In the US, the percentage increased from 13.9% in 2016 to 14.5% in 2020. The details are in Table 20.2 and Figure 20.2 below:

**Table 20.2:** Percent of children, ages 2 through 4, who are obese (BMI at or above the 95th percentile)

	<b>2016</b> <b>(95% CI)</b>	<b>2017</b> <b>(95% CI)</b>	<b>2018</b> <b>(95% CI)</b>	<b>2019</b> <b>(95% CI)</b>	<b>2020</b> <b>(95% CI)</b>
MS	14.4 (14.0-14.8)	.....	14.8 (14.4-15.2)	.....	14.4 (13.9-14.9)
US	13.9 13.9-14.0	.....	14.4 (14.3-14.4)	.....	14.5 (14.4-14.5)

Based on 95% CI, we cannot conclude that there is a statistically significant difference in the percentage of children, ages 2 through 4, who are obese (BMI at or above the 95th percentile) in Mississippi. Compared to the US, MS had a statistically significantly higher percentage than the US in 2016 and 2018. However, there is no statistically significant difference between the US and MS in 2020.

**Figure 20.2:** Percent of children ages 2 through 4, who are obese (BMI at or above the 95th percentile)



**Data Source:** WIC

Note: Date not available for 2017, 2019 and 2022

**NOM 21: Uninsured**

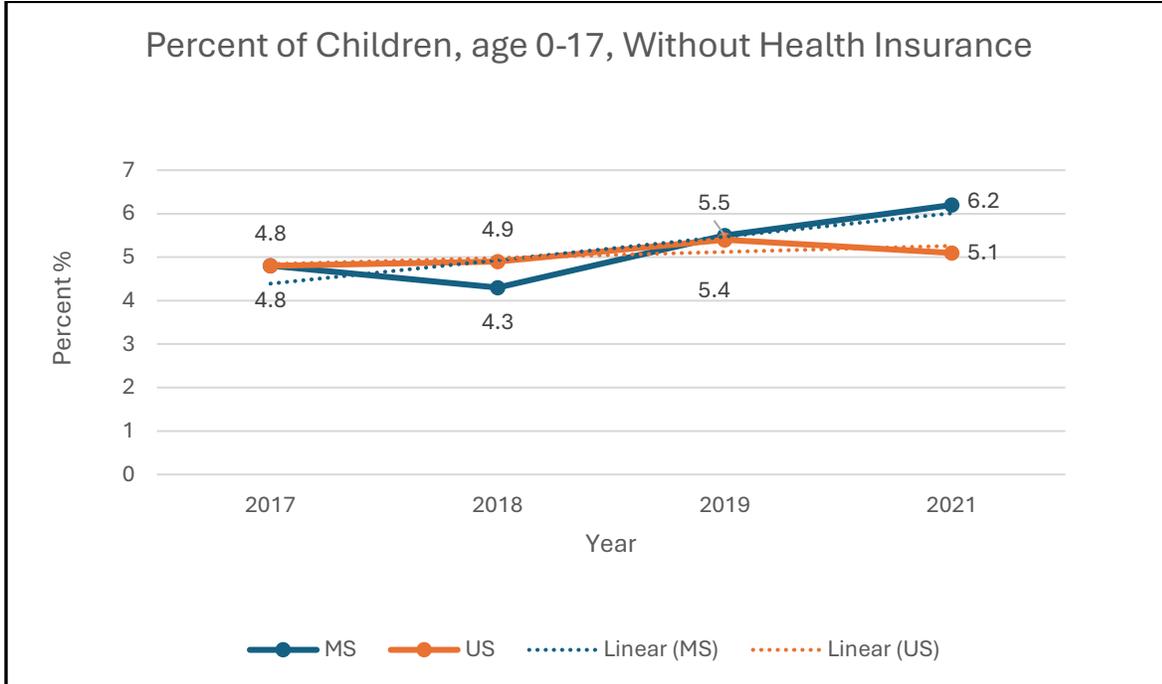
From 2017 to 2021, the percentage of Children, aged 0-17, without health insurance in Mississippi decreased from 4.8% in 2017 to 4.3% in 2018, and increased to 5.5 in 2019 and 6.2 in 2021. In the US, the percentage increased from 4.8 in 2017 to 5.4 in 2019 and decreased slightly in 2021 to 5.1. The details are in Table 21 and Figure 21 below:

**Table 21:** Percent of children, ages 0 through 17, without health insurance

	<b>2017 (95% CI)</b>	<b>2018 (95% CI)</b>	<b>2019 (95% CI)</b>	<b>2020 (95% CI)</b>	<b>2021 (95% CI)</b>
MS	4.8 (4.0-5.8)	4.3 (3.7-5.0)	5.5 (4.7-6.4)	-----	6.2 (5.3-7.3)
US	4.8 (4.7-4.9)	4.9 (4.9-5.0)	5.4 (5.3-5.5)	-----	5.1 (5.0-5.2)

However, based on a 95% Confidence Interval (CI), we cannot conclude that there is a statistically significant increase in Mississippi from the year 2017 to 2021. In comparison, the percentage in Mississippi in 2021 was statistically significantly higher than the percentage in the US in 2021, but we cannot conclude that there is a statistically significant difference between MS and the US for the years 2017, 2018, and 2019 at 95% Confidence Interval level.

**Figure 21:** Percent of children, ages 0 through 17, without health insurance



Data Source: American Community Survey (ACS)

Note: There is no data available for the year 2020

## NOM 22.1: Childhood Vaccination

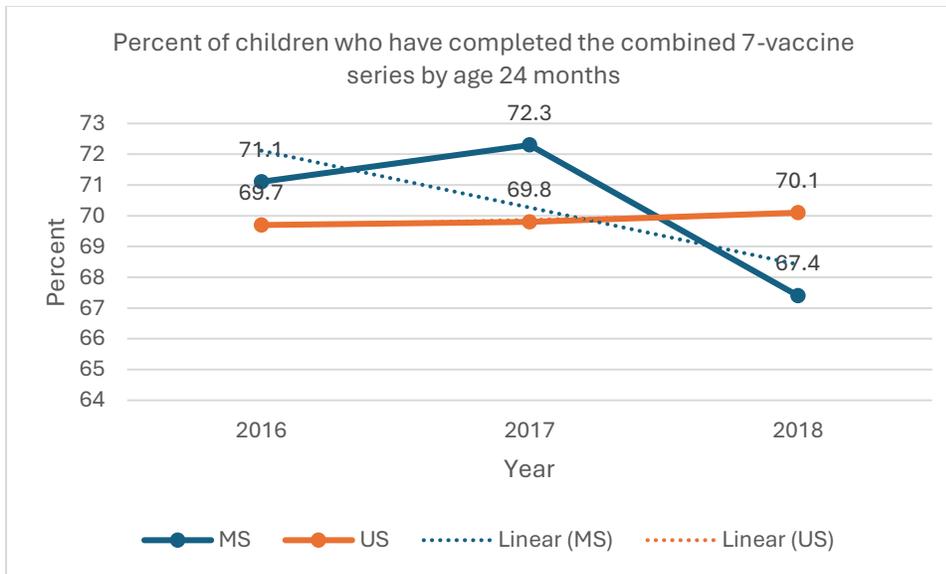
In Mississippi, the percentage of children who completed the combined 7-vaccine series by age 24 months was 71.1% in 2016, it increased to 72.3% in 2017 and then decreased to 67.4% in 2018. In the US the percentage increased from 69.7% in 2016 to 70.1% in 2018 (See Table 22.1 and Figure 22.1)

**Table 22.1:** Percent of children who have completed the combined 7-vaccine series (4:3:1:3\*:3:1:4) by age 24 months

	<b>2016 (95% C.I)</b>	<b>2017 (95% C.I)</b>	<b>2018 (95% C.I)</b>
MS	71.1 (63.8-78.1)	72.3 (64.9-79.3)	67.4 (59.6-75)
US	69.7 (68.0-71.3)	69.8 (68.4-71.3)	70.1 (68.8-71.5)

The percentage in MS is higher than that of the US in 2016 and 2017, however, based on 95% CI, we cannot conclude that the Mississippi percentage is statistically significantly higher than the percentage in the US. In 2018, the percentage in MS is lower than that of the US but it is not statistically significant.

**Figure 22.1:** Percent of children who have completed the combined 7-vaccine series (4:3:1:3\*:3:1:4) by age 24 months



**Data Source:** National Immunization Survey (NIS)

Note: Data not available 2019 to 2022.

## NOM 22.2: Flu Vaccination

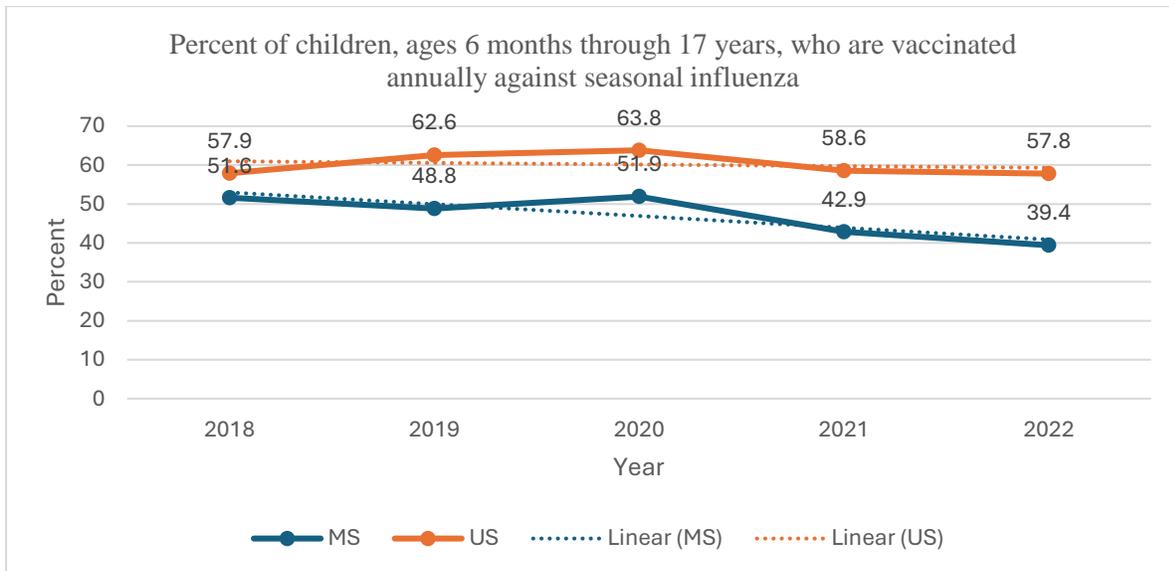
Mississippi's vaccination rates, which began at 51.6% in 2018, fell to 39.4% by 2022, and have continuously lower than the national average. In the US the percentage increased from 57.9% in 2018 to 63.8% in 2020 and then decreased thereafter. (Table and 22.2 Figure 22.2)

**Table 22.2:** Percent of children, ages 6 months through 17 years, who are vaccinated annually against seasonal influenza

	<b>2018</b> <b>(95% CI)</b>	<b>2019</b> <b>(95% CI)</b>	<b>2020</b> <b>(95% CI)</b>	<b>2021</b> <b>(95% CI)</b>	<b>2022</b> <b>(95% CI)</b>
MS	51.6 (47.9-54.6)	48.8 (45.7-51.9)	51.9 (48.5-55.3)	42.9 (38.9-47.0)	39.4 (36.4-42.5)
US	57.9 (57.2-58.5)	62.6 (61.9-63.2)	63.8 (63.2 -64.4)	58.6 (58.1-59.2)	57.8 (57.2-58.3)

Based on 95% CI, the decrease in the MS percentage of children, ages 6 months through 17 years, who are vaccinated annually against seasonal influenza overall is statistically significant from 2018 to 2022. However, when comparing the subsequent years' percentages, the decrease is not statistically significant. In comparison, the percentage for MS is statistically significantly lower than the percentage in the US for each of the years.

**Figure 22.2:** Percent of children, ages 6 months through 17 years, who are vaccinated annually against seasonal influenza



Data Source: National Immunization Survey (NIS)

### NOM 22.3: HPV Vaccination

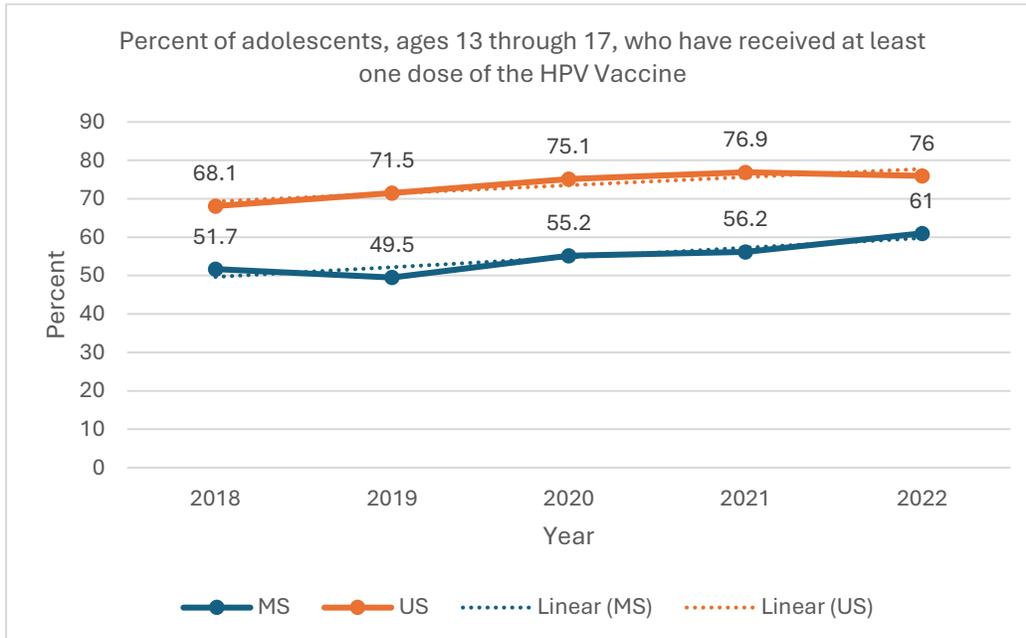
Mississippi’s vaccination rates fluctuated slightly but gradually increased from 49.5% in 2019 to 61% in 2021. Nationally, the HPV vaccination rate showed a consistent and steady increase, from 68.1% in 2018 to 76% in 2022. Mississippi's HPV vaccination rates were consistently lower than the national average from 2018 to 2022, (Table 22.3 and Figure 22.3)

**Table 22.3:** Percent of adolescents, ages 13 through 17, who have received at least one dose of the HPV vaccine

	<b>2018</b> <b>(95% CI)</b>	<b>2019</b> <b>(95% CI)</b>	<b>2020</b> <b>(95% CI)</b>	<b>2021</b> <b>(95% CI)</b>	<b>2022</b> <b>(95% CI)</b>
MS	51.7 (44.9-58.5)	49.5 (42-57.1)	55.2 (48.2-61.9)	56.2 (49.2-63.1)	61 (52.8 – 68.6)
US	68.1 (66.8-69.3)	71.5 (70.1-72.8)	75.1 (73.9-76.2)	76.9 (75.6-78.2)	76 (74.7 -77.3)

Based on 95% CI we cannot conclude that there is a statistically significant increase in the percentage of adolescents, ages 13 through 17, who have received at least one dose of the HPV vaccine in MS from 2018 to 2022. In comparison to the US national average, Mississippi's HPV vaccination rates among adolescents, ages 13 through 17, who have received at least one dose of the HPV were statistically significantly lower than the national average every year from 2018 to 2022.

**Figure 22.3:** Percent of adolescents, ages 13 through 17, who have received at least one dose of the HPV vaccine



Data Source: National Immunization Survey (NIS)

**NOM 22.4: Tdap Vaccination**

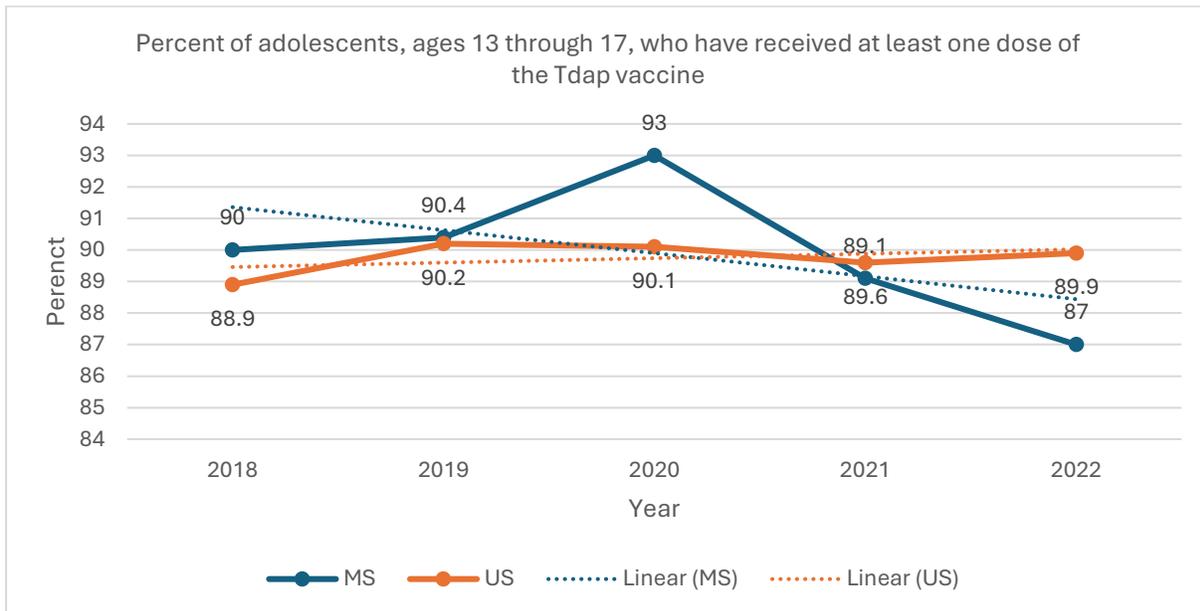
Mississippi continued to have increasing Tdap vaccine immunization rates over time, starting in 2018 at 90.0% and reaching a peak of 93% in 2020 before falling to 87% in 2022. The Tdap vaccine immunization rate in the US stayed constant between 2018 and 2022, varying slightly to 88.9% and 89.9%, respectively. (see Table 22.4 and Figure 22.4)

**Table 22.4:** Percent of adolescents, ages 13 through 17, who have received at least one dose of the Tdap vaccine

	<b>2018</b> <b>(95% CI)</b>	<b>2019</b> <b>(95% CI)</b>	<b>2020</b> <b>(95% CI)</b>	<b>2021</b> <b>(95% CI)</b>	<b>2022</b> <b>(95% CI)</b>
MS	90.0 (84.8-93.6)	90.4 (84.4-94.2)	93.0 (88.9-95.6)	89.1 (83.5-92.9)	87.0 (80.3 – 91.6)
US	88.9 (88-89.7)	90.2 (89.2-91.1)	90.1 (89.2-90.9)	89.6 (88.6-90.5)	89.9 (88.9-90.9)

Based on the 95% CI, we cannot conclude that the increase from 2018 to 2020 and the decrease from 2020 to 2022 in the percentage of Tdap vaccination among adolescents, ages 13 through 17 are statistically significant in MS. When compared to the US, the differences are not statistically significant as well.

**Figure 22.4:** Percent of adolescents, ages 13 through 17, who have received at least one dose of the Tdap vaccine



**Data Source:** National Immunization Survey (NIS)

## NOM 22.5: Meningitis Vaccination

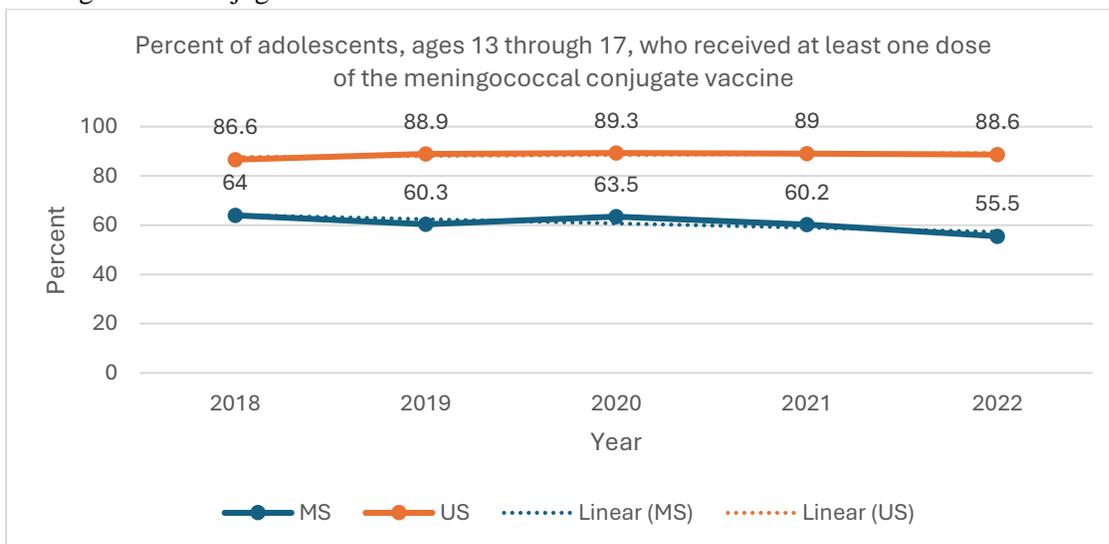
Mississippi's vaccination rates for the meningococcal conjugate vaccine fluctuated slightly, ranging from 64.0% to 55.5% across the five years. There was an increase in the national meningococcal vaccine immunization rate from 86.6% in 2018 to 88.6% in 2022. Mississippi's vaccination rates were consistently lower than the US rates throughout the five years. (see Table 22.5 and Figure 22.5)

**Table 22.5:** Percent of adolescents, ages 13 through 17, who have received at least one dose of the meningococcal conjugate vaccine

	<b>2018</b> <b>(95% CI)</b>	<b>2019</b> <b>(95% CI)</b>	<b>2020</b> <b>(95% CI)</b>	<b>2021</b> <b>(95% CI)</b>	<b>2022</b> <b>(95% CI)</b>
MS	64.0 (57.2-70.3)	60.3 (52.6-67.5)	63.5 (56.4-70)	60.2 (53.1-66.9)	55.5 (55.3 – 55.7)
US	86.6 (85.6-87.5)	88.9 (88-89.8)	89.3 (88.4-90.2)	89.0 (87.9-90)	88.6 (87.6-89.6)

Based on 95% CI we can conclude that there is a statistically significant decrease in the percentage of adolescents, ages 13 through 17, who have received at least one dose of the meningococcal conjugate vaccine in MS from 2018 to 2022. However, the increase and decrease in subsequent years in MS is not statistically significant. When compared to the US national average, Mississippi's meningococcal conjugate vaccination rates among adolescents, ages 13 through 17 were statistically significantly lower than the US national average every year from 2018 to 2022.

**Figure 22.5:** Percent of adolescents, ages 13 through 17, who have received at least one dose of the meningococcal conjugate vaccine



Data Source: National Immunization Survey (NIS)

### NOM 23: Teen Births

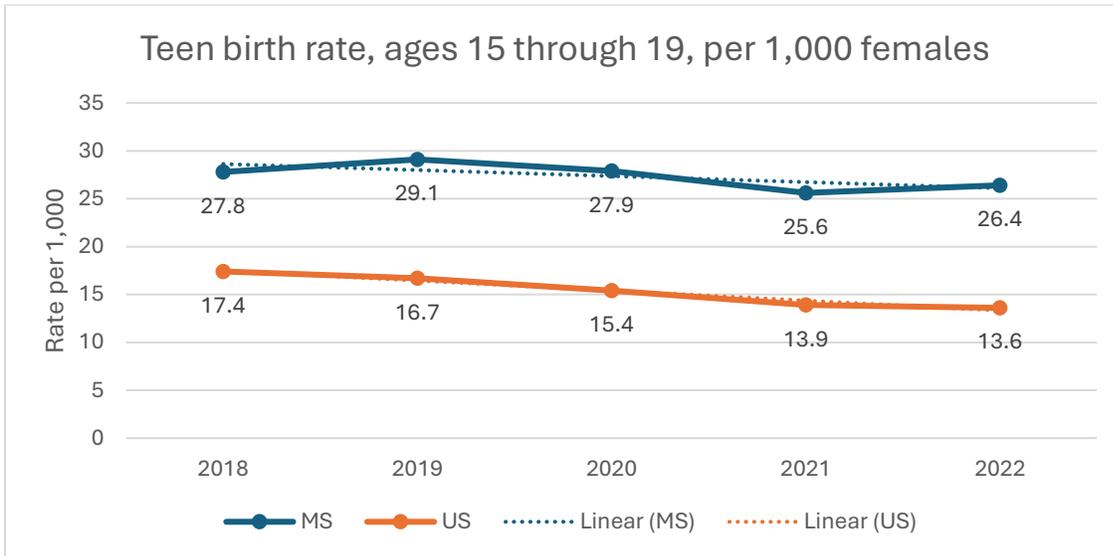
The Teen Birth (TB) rate in MS decreased from 27.8 in 2018 to 26.4 in 2022 (per 1,000 females) with fluctuation in rate during the years. The teen birth rates in the US have been decreasing over the years from 17.4 in 2018 to 13.6 in 2022. There is a declining trend in both the US and MS which suggests some progress. (Table 23 and Figure 23).

**Table 23:** Teen birth rate, ages 15 through 19, per 1,000 females

	<b>2018</b> (95% CI)	<b>2019</b> (95% CI)	<b>2020</b> (95% CI)	<b>2021</b> (95% CI)	<b>2022</b> (95% CI)
<b>MS</b>	27.8 (26.8- 28.9)	29.1 (28- 30.2)	27.9 (26.8- 28.9)	25.6 (24.6- 26.6)	26.4 (25.4- 27.4)
<b>US</b>	17.4 (17.3- 17.5)	16.7 (16.6- 16.7)	15.4 (15.3- 15.5)	13.9 (13.9- 14)	13.6 (13.6- 13.7)

Based on 95% CI, we observed a statistically significant drop in the rate from 2020 to 2021 in MS. However, there is no statistically significant difference in other years. In Comparison, Mississippi is statistically significantly higher than the US in all the years.

**Figure 23:** Teen birth rate, ages 15 through 19, per 1,000 females



Data Source: National Vital Statistics System

## NOM 24: Postpartum Depression

The percentage of women who experience postpartum depressive symptoms following a recent live birth (PPD) in MS decreased from 23.5% in 2018 to 20.8% in 2021. The percentage for the US has been stable from 2018 to 2020 at 13.4% with a slight decrease to 12.7% in 2021.

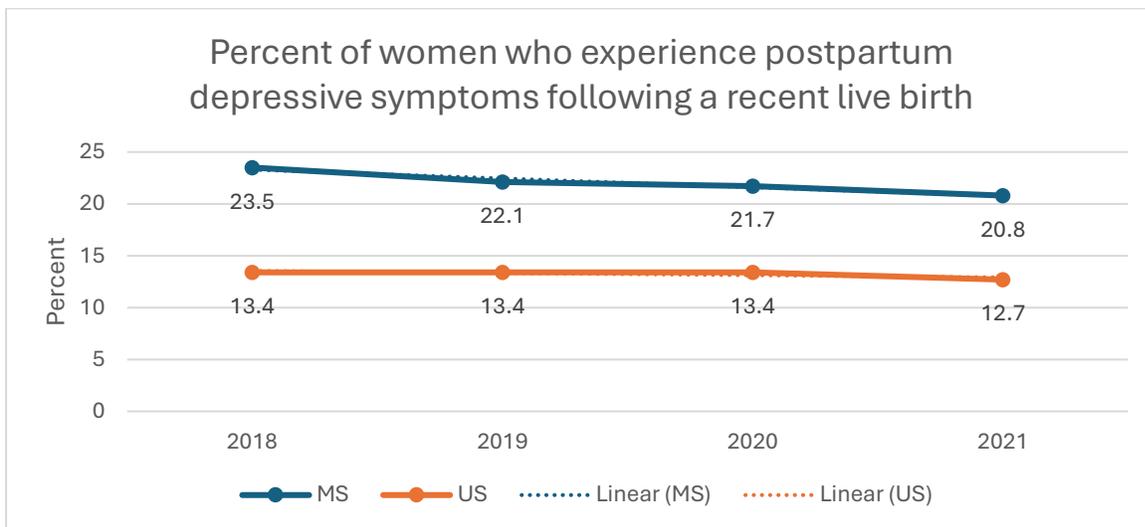
Mississippi has a consistently higher percentage of PPD when compared to the US even though there has been a decrease in trend over the years. (Table 24 and Figure 24)

**Table 24:** Percent of women who experience postpartum depressive symptoms following a recent live birth

	<b>2018</b> <b>(95% CI)</b>	<b>2019</b> <b>(95% CI)</b>	<b>2020</b> <b>(95% CI)</b>	<b>2021 (</b> <b>% CI)</b>	<b>2022</b> <b>(95% CI)</b>
<b>MS</b>	23.5 (20.6- 26.7)	22.1 (19.4- 25.0)	21.7 (18.6- 25.2)	20.8 (17.6- 24.4)	.....
<b>US</b>	13.4 (12.9- 13.9)	13.4 (12.9- 14)	13.4 (12.9- 14)	12.7 (12.2- 13.3)	12.6 (12- 13.2)

Based on 95% CI, we cannot conclude that there is a statistically significant decrease in the percentage of women who experience postpartum depressive symptoms in MS from 2018 to 2021. In comparison MS rate is statistically significantly higher than the US in all the years.

**Figure 24:** Percent of women who experience postpartum depressive symptoms following a recent live birth



Data Source: Pregnancy Risk Assessment Monitoring System

No data available for MS during 2022

**NOM 25: Forgone Health Care**

In Mississippi, the percentage of children aged zero to 17, who were unable to obtain needed health care decreased initially and then gradually increased slightly from 3% to 4.0% by 2021-2022.

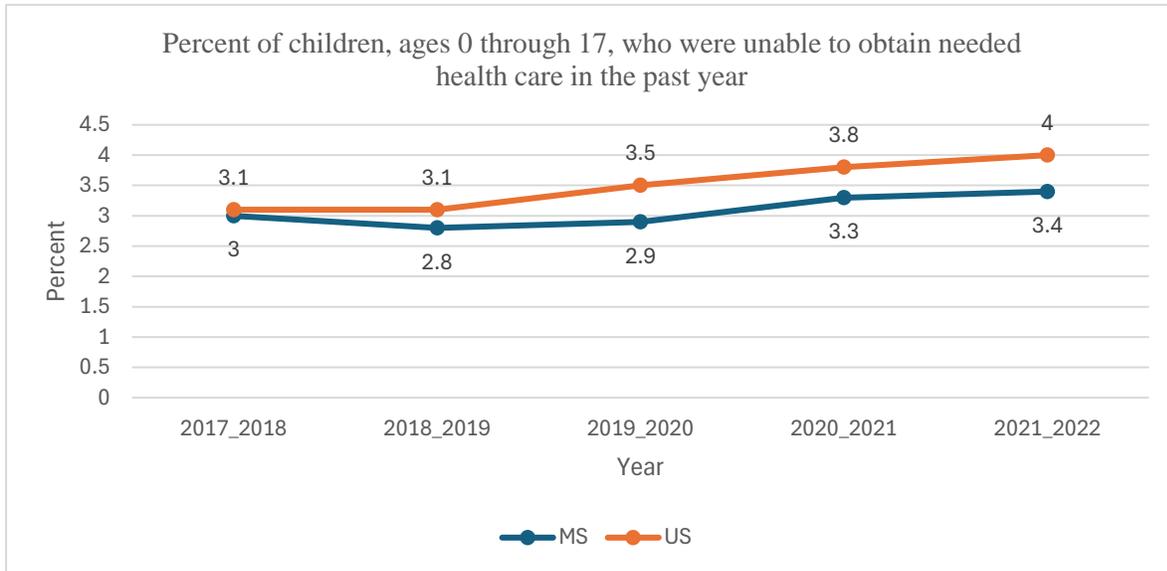
From 2017-2018 to 2020-2021, the percentage of children aged zero to 17, who were unable to obtain needed health care increased nationally from 3.1% to 3.8%. (See Table 25 and Figure 25)

**Table 25:** Percent of children, ages 0 through 17, who were unable to obtain needed health care in the past year.

	<b>2017_2018 (95% CI)</b>	<b>2018_2019 (95% CI)</b>	<b>2019_2020 (95% CI)</b>	<b>2020_2021 (95% CI)</b>	<b>2021_2022 (95% CI)</b>
MS	3.0 (1.9-4.7)	2.8 (1.8 - 4.4)	2.9 (2.0 - 4.3)	3.3 (2.3 - 4.7)	4.0 (4.0 -4.1)
US	3.1 (2.8 - 3.6)	3.1 (2.8 - 3.5)	3.5 (3.2 - 3.9)	3.8 (3.5 - 4.2)	-----

Based on 95% CI, we cannot conclude that the increase in the rate for MS from 2017\_2018 to 2021\_2022 is statistically significant. In comparison, the rate for MS is not statistically significantly lower than the rate in the US from 2017\_2018 to 2020\_2021.

Figure 25: Percent of children, ages 0 through 17, who were unable to obtain needed health care in the past year.



Data source: National Survey of Children's Health (NSCH)

**NOM 7: Early Elective Delivery - No data available**

**Percent of non-medically indicated early elective deliveries**

**NOM 12: Newborn Screening Timely Follow-Up – No Data**

**Percent of eligible newborns screened for heritable disorders with on-time physician notification for out-of-range screens who are followed up in a timely manner.**

**NOM 13: School Readiness – No Data**

**Percent of children meeting the criteria developed for school readiness**

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