



Report on Pregnant Women, Infants and Children – SFY 2020

July 19, 2021

Governor Mike DeWine | Lt. Governor Jon Husted | Director Maureen Corcoran

[medicaid.ohio.gov](https://www.medicaid.ohio.gov)



Department of Medicaid

Mike DeWine, Governor
Jon Husted, Lt. Governor

Maureen Corcoran, Director

July 19, 2021

Governor Mike DeWine
Ohio House Speaker, the Honorable Bob Cupp
Ohio Senate President, the Honorable Matt Huffman
Ohio House Minority Leader, the Honorable Emilia Strong Sykes
Ohio Senate Minority Leader, the Honorable Kenny Yuko
Ohio Commission on Infant Mortality, Representative Gayle Manning, Co-Chair
Ohio Commission on Infant Mortality, Senator Stephanie Kunze, Co-Chair
Joint Medicaid Oversight Committee, Representative Thomas F. Patton, Chair
Legislative Service Commission Director, Wendy Zhan

RE: Pregnant Women, Infants, and Children Report - State Fiscal Year 2020

The attached report is provided in compliance with Section 5162.13 of the Ohio Revised Code requiring the Ohio Department of Medicaid (ODM) to report annually about the effectiveness of the Medicaid program meeting the health care needs of low-income pregnant women, infants, and children. In addition, this report focuses on infant mortality, preterm births, and low birthweight infants.

The rates reported for infant mortality, preterm births and low birthweight infants are calculated for individuals who have Medicaid and individuals who do not have Medicaid, based on both Medicaid data and infant death and birth files from The Ohio Department of Health Bureau of Vital Statistics.

The linkage process to match vital statistics information to Medicaid deliveries has been updated and improved. At the same time, the methodology used to calculate infant mortality rates has been revised to align with the standard utilized by public health officials, including the National Center for Health Statistics (NCHS) and the Ohio Department of Health (ODH). These changes have been applied to all years 2017 forward. Given these notable revisions and a greater match success with the new linkage process, direct comparison to outcomes reported in prior years (2016 and earlier) is not informative.

Sincerely,

Maureen M. Corcoran
Director

Enclosure

50 W. Town Street, Suite 400
Columbus, Ohio 43215
medicaid.ohio.gov

An Equal Opportunity Employer and Service Provider

Table of Contents

Section I: Profile of Ohio Births	4
1.1 Overall Medicaid Enrollment	4
1.2 Profile of Ohio Births and Medicaid Demographics	4
1.3 Demographic Information Related to Ohio Births	5
1.3.1 Ohio Births by Maternal Race	5
1.3.2 Ohio Births by Maternal Ethnicity.....	6
1.3.3 Maternal Age	7
1.3.4 Marital Status.....	7
1.4 Medicaid Program Enrollment and Gestational Age	8
Section II: Birth Outcomes and Risk Factors	9
2.1 Infant Mortality	9
2.2 Preterm Birth and Low Birthweight	11
2.2.1 Risk Factors for Preterm Birth and Low Birthweight	12
2.3 Preterm Birth Reduction Efforts	15
2.4 Smoking Cessation	16
Section III: Perinatal Episode of Care	17
Section IV: Prenatal and Postnatal Visits	18
4.1 Measure Results by Statewide Average, Medicaid Managed Care Plan, and Fee for service	18
Section V: Behavioral Health Services	20
Section VI: Medicaid Prenatal Care, Delivery, and Infant Costs	21
Section VII: Children in Medicaid	23
7.1 Summary of Medicaid’s Children’s Eligibility and Demographics Calendar Year 2018	23
7.2 Children’s Chronic and Behavioral Health Conditions Frequency Distribution	23
7.3 Quality Measures for Children	24
7.3.1 Primary Care Access and Preventive Care	24
7.3.2 Acute and Chronic Conditions	26
7.3.3 Behavioral Health Care	26
7.3.4 Behavioral Health Care for Multi-System Youth.....	27
7.4 School-Based Measures Comparing Medicaid to Non-Medicaid Youth	27
7.5 Children Initiatives	30
Section VIII: References	32
Appendices	33

PLEASE NOTE: When race data is collected through Ohio Benefits, it is an optional, self-reported data field. Due to the significant level of non-reported race data on Medicaid eligibility / claims records, this information will not always be included in this report.

Section I: Profile of Ohio Births

1.1 Overall Medicaid Enrollment

Figure 1 presents the average monthly enrollment in Ohio Medicaid for calendar years (CY) 2017 - 2019. Fluctuations in average enrollment is caused by many factors. Policy changes (changes in eligibility criteria or enrollment processes), program changes (new eligibility programs / funding), economic changes (Medicaid is a countercyclical program, in that enrollment and spending generally increase when there is a downturn in the economy leading to increased employment) are all elements affecting Medicaid enrollment. While these factors alone do not entirely capture the dynamics of Medicaid enrollment, fluctuations are expected and reviewed in context with program goals and expenditure expectations.

Figure 1: Ohio Medicaid Enrollment, CY 2017 – 2019

Average Monthly Enrollment		
2017	2018	2019
3,071,625	2,928,962	2,813,449

1.2 Profile of Ohio Births and Medicaid Demographics

Medicaid plays a significant role in access to health care for pregnant women and children in Ohio. In CY 2017 – 2019, Medicaid has consistently paid for approximately 53-55% of births in Ohio (see Figure 2). The information below is based on the total number of births to Ohio residents* on the CY 2017 - 2019 birth files provided by the Ohio Department of Health (ODH) Vital Statistics (VS) file; Medicaid-paid deliveries are identified via Medicaid claims/eligibility data. Throughout this report, comparisons are made between individuals with Medicaid and individuals without Medicaid based on the linked VS birth and death data and Medicaid claims/eligibility data. The VS to Medicaid deliveries match process has been updated and improved. These changes have been applied to all years 2017 forward. Due to substantially greater match success with the new process, additional births to mothers with less stable living arrangements and less consistent engagement with public services are now included; this affects outcome measures and so direct comparison to prior years (2016 and earlier) reported in previous year’s reports is not informative. *Please see Appendix A for more information on the linkage process.* The population of individuals without Medicaid, often referred to collectively as “non-Medicaid” in this report, includes those Ohioans with commercial insurance, without insurance, and those who are self-employed or otherwise obtain or purchase private insurance.

Figure 2: Ohio Births by Payer, CY 2017 – 2019

	# of Births (N)			% of Total Births		
	2017	2018	2019	2017	2018	2019
All	133,892	132,136	131,423	100%	100%	100%
Medicaid	74,174	71,344	69,532	55.40%	53.99%	52.91%
Non-Medicaid	59,718	60,792	61,891	44.60%	46.01%	47.09%

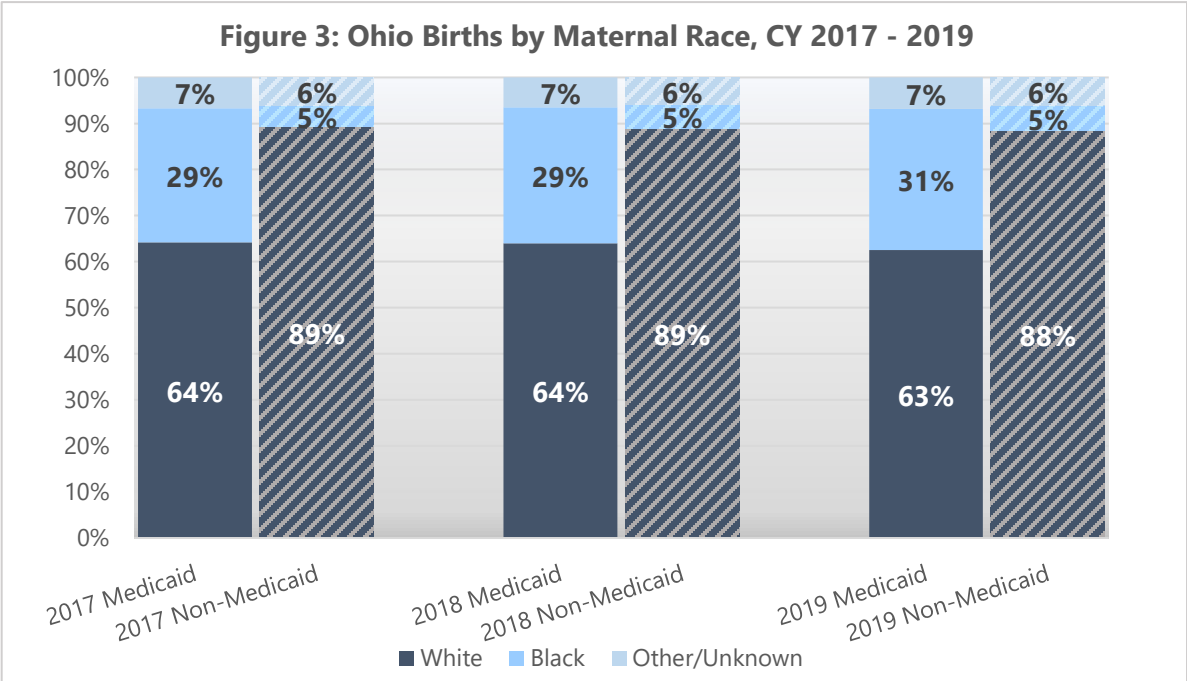
1.3 Demographic Information Related to Ohio Births

* This number reflects births that occurred in Ohio to Ohio residents.

Throughout CYs 2017 - 2019, there are notable differences in the demographics of mothers with Medicaid-paid deliveries as compared to mothers with non-Medicaid paid deliveries (Figures 3-5). This report includes comparisons between individuals with Medicaid and those without Medicaid by demographic factors known to be associated with birth outcomes: race, ethnicity, maternal age, and marital status. ¹⁻³

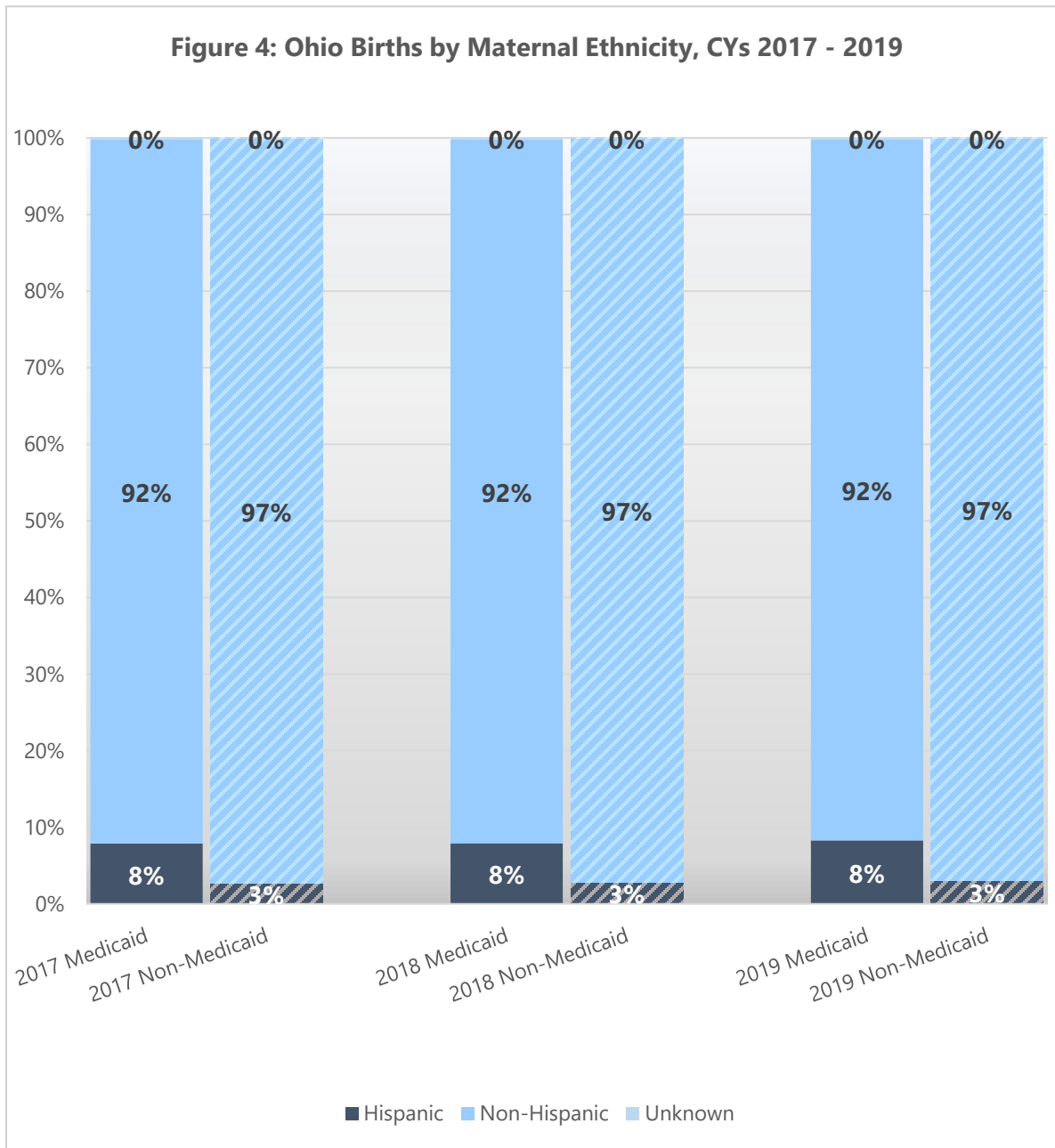
1.3.1 Ohio Births by Maternal Race

The composition of Ohio’s population has been stable over the last several years. As the graphs below show, there are significant differences in race between the populations with and without Medicaid insurance. The population with Medicaid has a six-fold greater proportion of Black births compared to the population without Medicaid.



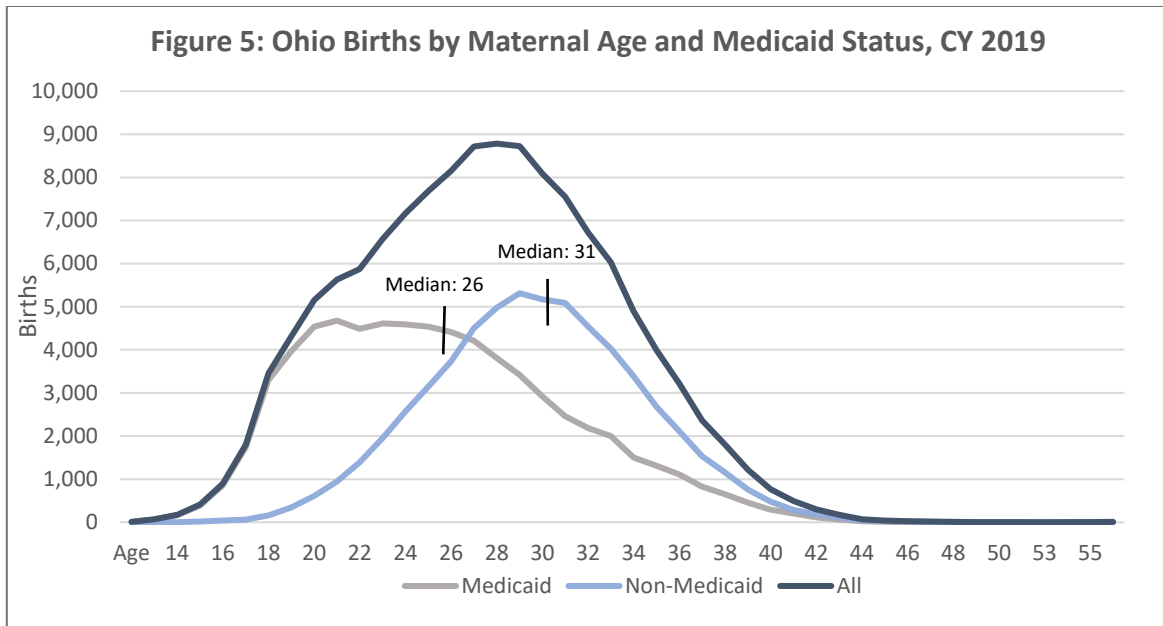
1.3.2 Births by Maternal Ethnicity

For CYs 2017-2019, Medicaid has consistently financed more births among the Hispanic population compared to non-Medicaid payers.



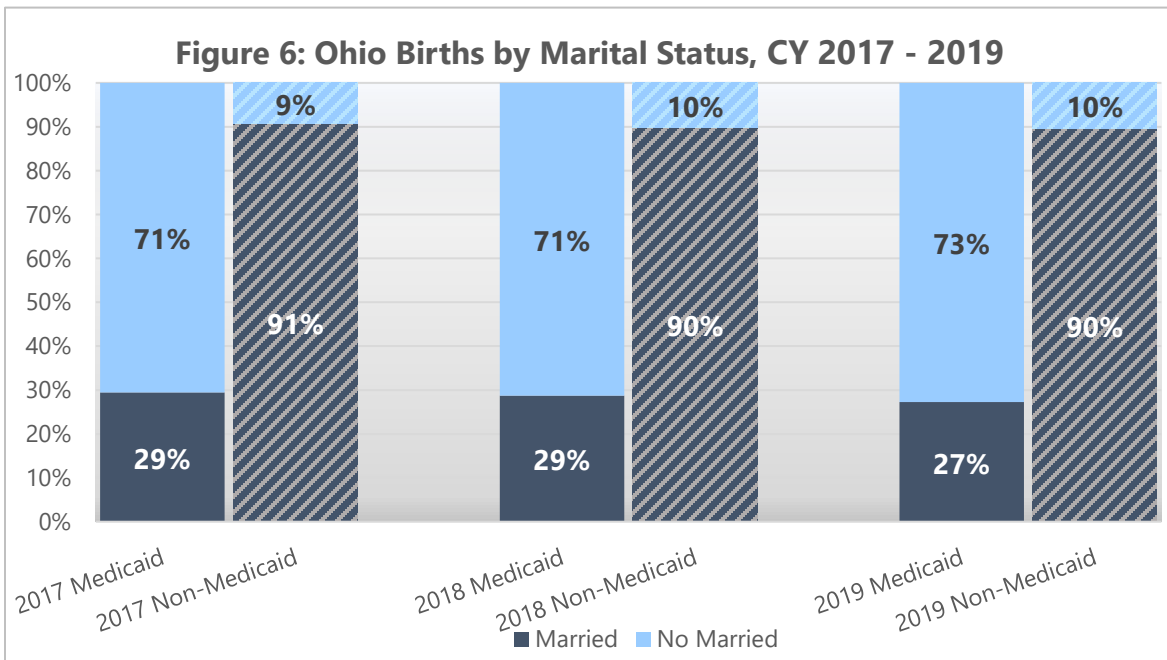
1.3.3 Maternal Age

As shown in Figure 5, a disparity exists in the maternal age of Ohio mothers when comparing women with Medicaid to those not receiving Medicaid benefits at the time of delivery. For CYs 2017 – 2019, the median age for mothers with a Medicaid-paid delivery was 26 years of age. The median age for women with non-Medicaid paid deliveries was 30 years of age in 2017, increasing to 31 in 2018 and 2019.



1.3.4 Marital Status

In 2019, 27% of women with Medicaid-paid deliveries were married, as compared to 90% of women with non-Medicaid paid deliveries. This is a slight decline over 2017 and 2018, when 29% of women with Medicaid-paid deliveries were identified as being married.



1.4 Medicaid Program Enrollment and Gestational Age

Using the linked VS/Medicaid data, in CY 2017, 2018 and 2019 respectively, 61,644 (CY 2017), 61,715 (CY 2018), and 59,999 (CY 2019) women enrolled in Ohio Medicaid delivered a liveborn infant[†].

Approximately two-thirds of the women were enrolled in Ohio Medicaid nine months prior to the delivery date (69% in CY 2017, 67% in CY 2017, and 65% in CY 2019). As these women were enrolled in Medicaid throughout their entire pregnancy, they were removed from the analysis below, which details gestational age at enrollment into the Medicaid program. In this analysis, 18,908 (CY 2017), 20,546 (CY 2018), and 20,828 (CY 2019) women who delivered on Medicaid were not enrolled in Medicaid prior to their pregnancy. Of the women who were not already enrolled in Medicaid prior to their pregnancy, 22% (CY 2017), 34% (CY 2018), and 44% (CY 2019) were enrolled in Medicaid during their first trimester. For these women, the average gestational age at first enrollment was 16.3 weeks in CY 2019, a notable improvement from 20.3 weeks in 2017 and 18.0 weeks in 2018 (see figures 7-9). Please note that the date of first enrollment in tables 6-12 reflect the initial Medicaid enrollment date regardless of program type; it is not specific to fee for service (FFS) or managed care plan (MCP) enrollment.

Figure 7: Average Gestational Age at First Enrollment for Women Not Enrolled Prior to Pregnancy, CY 2017 - 2019

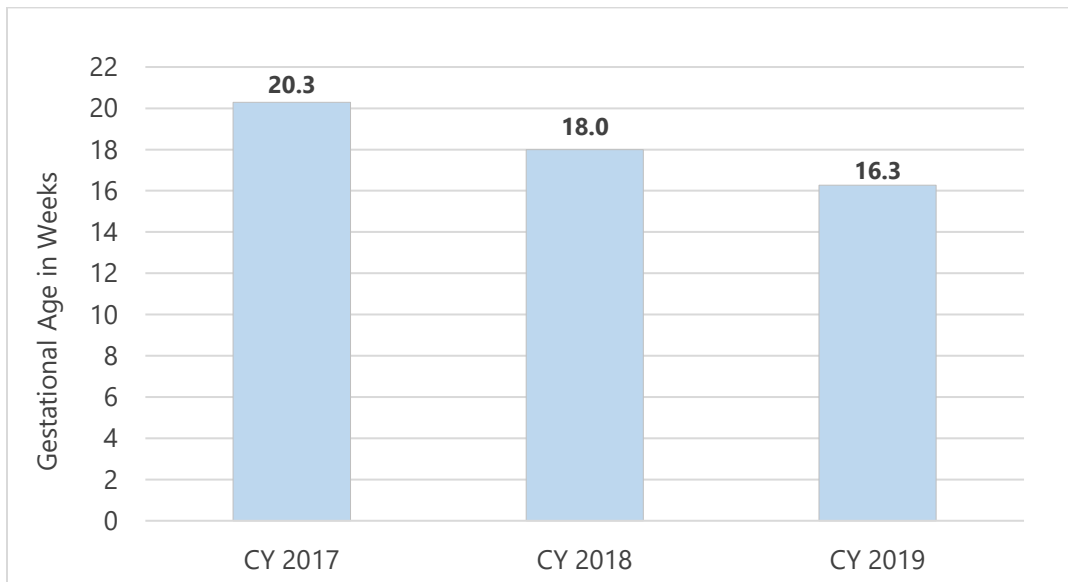


Figure 8: First Enrollment by Gestational Age in Weeks, CY 2019

[†] The number is lower than the total number of births because the total births includes both linked mothers and babies whereas this only includes mothers who were enrolled at delivery. Mothers who gave birth twice (e.g., January and December) were counted twice, once for each delivery. In the case of a multiple birth delivery (e.g., twins), the mother was counted once.

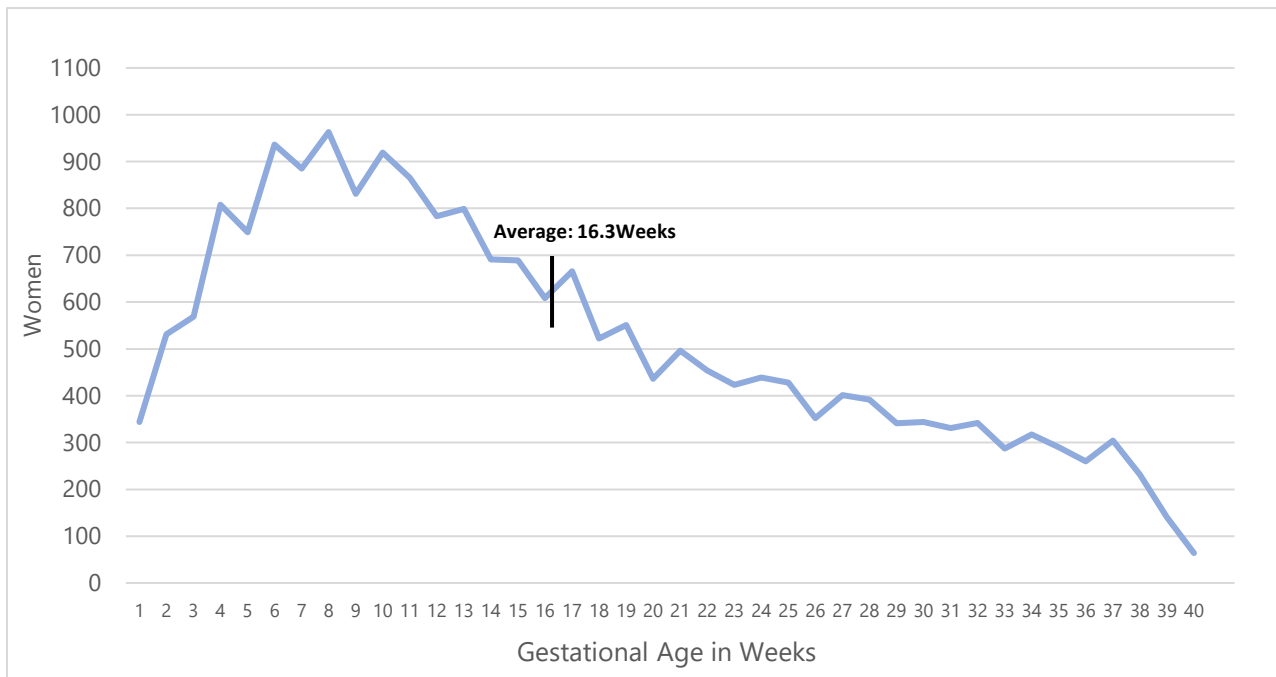
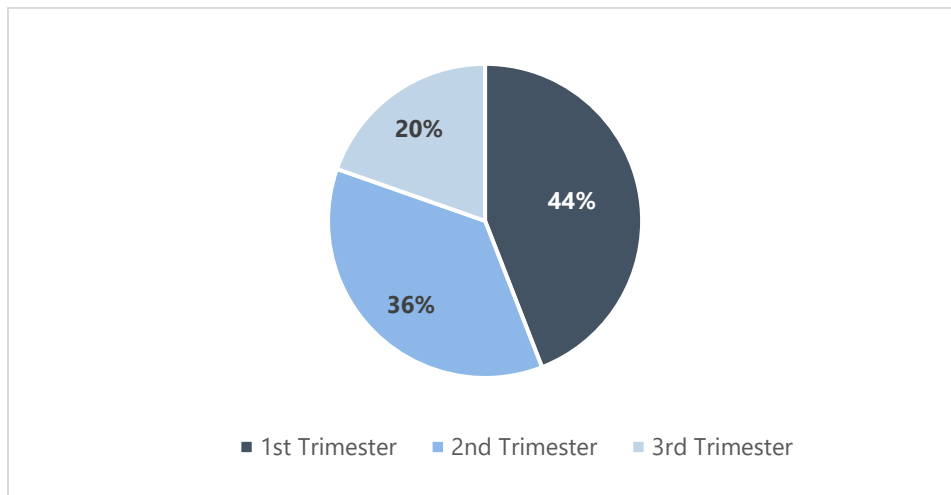


Figure 9: First Enrollment by Trimester, CY 2019



Section II: Birth Outcomes and Risk Factors

2.1 Infant Mortality

For CYs 2017-2019, the methodology used to calculate infant mortality rates was revised to align with the standard utilized by public health officials, including the National Center for Health Statistics (NCHS) and ODH. This rate represents the number of deaths in a specific year divided by the number of live births within that same year, multiplied by 1,000. The infant mortality rates presented in prior years' reports were derived using a cohort approach, which identifies all infants who were born with Ohio maternal residence and follows them through their first year of life.

ODM calculated Ohio's infant mortality rate based on the linked VS/Medicaid data. The numerator for

rates (deaths) is produced using information from death certificates (Mortality dataset), while the denominator (live births) is calculated from information on the birth certificates (Birth dataset). Therefore, for race and ethnic-specific rates, the numerator is based on infant race as reported on the death certificate, while the denominator is based on the mother’s race as reported on the birth certificate. Please note that ODM’s rates do not include Ohio residents who gave birth out of state, which is an important distinction between the rates published by ODH and those generated by ODM.

While the infant mortality rate for the Medicaid population has gradually improved between 2017 and 2019, as detailed in the table below, the overall trend reported by the Department of Health over the last 10 years indicates no improvement. Mothers in the Medicaid program experienced 9.49 deaths per 1,000 live births in 2017, 9.05 deaths per 1,000 live births in 2018, and 8.67 deaths per 1,000 live births in 2019.

Figure 10: Ohio Medicaid Infant Mortality Rates by Medicaid Status, CYs 2017 – 2019

	Infant Mortality Rate	
	Medicaid	Non-Medicaid
2017	9.49	5.17
2018	9.05	5.26
2019	8.67	4.69

Figure 11: Ohio Infant Mortality Rates by Medicaid Status, Race, and Ethnicity, CYs 2017 – 2019

	Race			Ethnicity		
	White	Black	Other/Unknown	Hispanic	Non-Hispanic	Unknown
Medicaid						
2017	7.12	15.32	6.26	6.71	9.69	N/A
2018	7.01	13.73	7.55	6.90	9.23	N/A
2019	6.63	13.20	6.95	6.27	8.88	N/A
Non-Medicaid						
2017	3.58	16.88	4.69	9.32	4.13	N/A
2018	3.89	14.45	2.79	2.88	4.42	N/A
2019	3.68	18.94	5.89	4.79	4.61	N/A

Figure 11 shows the infant mortality rate broken down by Medicaid status, race, and ethnicity. Between 2017 and 2019 infant mortality rates went down slightly for both the White and Black populations in Medicaid; the most notable improvement was seen in Black women with Medicaid; the rates for the Black population without Medicaid are the highest across all groups. Hispanic mothers historically have had the lowest overall infant mortality rates. It is important to note that 2017 was among the highest rates of infant mortality in the last 10 years for the Black population. While improvement over the last three years is notable, it has only now returned to levels seen in 2009.

It is important to take denominator size (N) into account when comparing demographic breakdowns. The Hispanic population is much smaller than the others, particularly in the non-Medicaid population, resulting in fairly wide swings in the rates.

2.2 Very Preterm Birth, Preterm Birth and Low Birthweight

Prematurity (birth prior to 37 weeks gestation) and low birthweight (a birthweight under 2,500 grams) are significant risk factors for infant mortality.⁴ Prematurity is an issue that is not limited to the population of individuals with Medicaid, but is a broader public health issue across the state. very preterm birth (VPTB:<32 weeks gestation), preterm birth (PTB:<37 weeks gestation), and low birthweight (LBW) rates have remained consistent over time (CYs 2017 – 2019) for both Medicaid and non-Medicaid paid births (Figure 12).

Figure 12: Ohio Very Preterm, Preterm and Low Birthweight Rates by Medicaid Status, CYs 2017 – 2019

	Very Preterm Birth		Preterm Birth		Low Birthweight	
	Medicaid	Non-Medicaid	Medicaid	Non-Medicaid	Medicaid	Non-Medicaid
2017	3.13%	1.20%	12.25%	7.95%	10.86%	5.53%
2018	3.18%	1.04%	12.32%	7.73%	10.90%	5.34%
2019	3.32%	1.12%	12.72%	7.91%	10.89%	5.63%

Similar to the racial and ethnic breakdown of infant mortality rates in section 2.1, the VPTB, PTB, and LBW rates by Medicaid status, race, and ethnicity remain consistent over time, with infants in the Medicaid program not faring as well (Figures 13 and 14). In parallel to the trends seen with infant mortality rates by race, the rates for VPTB, PTB, and LBW are higher for the Black populations for all three measurement years with or without coverage by Medicaid.

Figure 13: Ohio Very Preterm, Preterm and Low Birthweight Rates by Medicaid Status and Race, CYs 2017 – 2019

	Medicaid			Non-Medicaid		
	White	Black	Other/Unknown	White	Black	Other/Unknown
Very Preterm Births						
2017	2.67%	4.30%	2.41%	1.11%	2.91%	1.41%
2018	2.86%	4.01%	2.54%	0.09%	2.64%	1.09%
2019	2.93%	4.24%	2.72%	0.09%	0.31%	2.00%
Preterm Births						
2017	11.39%	14.65%	9.96%	7.61%	12.80%	9.28%
2018	11.66%	14.06%	10.99%	7.51%	11.67%	7.48%
2019	12.10%	14.25%	11.42%	7.56%	12.00%	8.96%
Low Birthweight						
2017	9.43%	14.30%	9.62%	5.12%	9.84%	8.27%
2018	9.72%	13.69%	9.92%	4.92%	10.68%	6.96%
2019	9.59%	13.74%	9.96%	5.15%	9.87%	8.55%

Figure 14: Ohio Very Preterm, Preterm and Low Birthweight Rates by Medicaid Status and Ethnicity, CYs 2017 – 2019

	Medicaid			Non-Medicaid		
	Hispanic	Non-Hispanic	Unknown	Hispanic	Non-Hispanic	Unknown
Very Preterm Births						
2017	2.56%	3.17%	6.01%	1.68%	1.12%	7.02%
2018	2.18%	3.26%	6.62%	0.09%	1.03%	17.07%
2019	2.29%	3.40%	6.02%	1.58%	1.09%	15.38%
Preterm Births						
2017	11.35%	12.32%	12.03%	9.51%	7.90%	17.54%
2018	10.18%	12.48%	27.21%	7.32%	7.73%	21.95%
2019	11.22%	12.83%	23.31%	8.63%	7.87%	21.54%
Low Birthweight						
2017	8.97%	11.01%	15.91%	6.50%	5.49%	15.79%
2018	8.17%	11.11%	24.06%	4.96%	5.35%	15.00%
2019	8.18%	11.11%	18.80%	6.43%	5.59%	17.46%

Regarding ethnicity, VPTB and PTB rates are somewhat static and similar for the Hispanic population, as compared to the non-Hispanic population among individuals with and without Medicaid. Hispanic LBW rates are lower than non-Hispanic LBW rates in the Medicaid subpopulation, while LBW rates for the Hispanic population as compared to the non-Hispanic population are similar in the subpopulation of individuals without Medicaid.

2.2.1 Risk Factors for Preterm Birth and Low Birthweight

In the section that follows ODM describes risk factors for mothers covered by the Medicaid program compared to those who do not have Medicaid coverage. As the data shows, there is a greater risk for a preterm and/or low birthweight delivery if the mother had either a previous preterm birth or poor birth outcome, low maternal weight gain, smoked during pregnancy, delivered within 18 months of a prior delivery, or received little or no prenatal care.¹⁻³

As shown in Figure 15, women with Medicaid experience higher rates of these risk factors compared to women without Medicaid, with the exception of birth spacing, which is lower in the Medicaid population. Low maternal weight gain and birth spacing show a slight increase in prevalence over time (CYs 2017-2019) for both Medicaid and non-Medicaid covered populations. While the measure for previous preterm birth improves in the non-Medicaid population only, improvements are noted in the rates of smoking during pregnancy and previous poor outcome for both populations. Although the gap in smoking rates between Medicaid and non-Medicaid pregnancies slightly narrowed over time, the rates for pregnant women with Medicaid were approximately seven to eight times higher than rates for mothers not covered by Medicaid. In CY 2019, 19.87% of mothers with Medicaid coverage smoked during pregnancy, compared to 2.64% of mothers without Medicaid. For all the tables and trends below please note the limited number of observations. More data will be required to ascertain the strength of the trends.

Figure 15: Selected Risk Factors for Prematurity and Low Birthweight, CY 2017 – 2019

	Previous Preterm Birth		Low Maternal Weight Gain		Smoking During Pregnancy		Previous Poor Outcome		Birth Spacing (< 18 months)		No Prenatal Care	
	Medicaid	Non-Medicaid	Medicaid	Non-Medicaid	Medicaid	Non-Medicaid	Medicaid	Non-Medicaid	Medicaid	Non-Medicaid	Medicaid	Non-Medicaid
2017	7.45%	3.94%	33.68%	23.39%	22.63%	2.67%	6.57%	4.52%	6.44%	7.97%	2.23%	0.64%
2018	8.15%	4.18%	34.14%	24.25%	21.84%	2.67%	7.76%	6.37%	6.89%	8.24%	2.18%	0.68%
2019	8.33%	4.10%	34.27%	24.65%	19.87%	2.64%	6.99%	5.30%	6.97%	8.58%	2.18%	0.80%

Figure 16: Selected Risk Factors for Prematurity and Low Birthweight in Ohio Medicaid-Paid Births by Race, CY 2017-2019

	Previous Preterm Birth			Low Maternal Weight Gain			Smoking During Pregnancy			Previous Poor Outcome			Birth Spacing (< 18 months)			No Prenatal Care		
	White	Black	Other/Unknown	White	Black	Other/Unknown	White	Black	Other/Unknown	White	Black	Other/Unknown	White	Black	Other/Unknown	White	Black	Other/Unknown
2017	6.31%	10.22%	6.33%	31.53%	37.08%	39.63%	29.29%	12.09%	4.32%	5.44%	8.95%	7.00%	6.53%	6.56%	5.04%	1.99%	2.87%	1.65%
2018	6.91%	11.12%	6.91%	32.16%	37.24%	39.69%	28.47%	11.30%	4.09%	6.58%	9.82%	7.17%	6.80%	7.32%	5.92%	2.05%	2.58%	1.67%
2019	7.15%	10.94%	7.41%	32.38%	36.90%	40.02%	26.18%	10.44%	3.90%	6.03%	9.00%	6.80%	7.11%	7.09%	5.13%	2.03%	2.57%	1.82%

When comparing these pregnancy risk factors across racial breakdowns within the Medicaid program, mothers who are white have less risk factors. This disparity is most pronounced in the previous preterm birth measure, which highlights that only 7.15% of White mothers had a previous preterm infant compared to 10.94% of mothers who are Black. The measure of smoking during pregnancy shows rates in the White population that are well over twice that of the Black population covered by Medicaid (Figure 16). While only a short-term trend, and further observations will be required, two patterns should be noted; CY2019 shows a slight improvement across all risk factors for the Black population compared to CY 2018, and Black mothers achieved a lower birth spacing rate than White mothers in CY 2019.

Figure 17: Selected Risk Factors for Prematurity and Low Birthweight in Ohio Non-Medicaid Paid Births by Race, CY 2017 – 2019

	Previous Preterm Birth			Low Maternal Weight Gain			Smoking During Pregnancy			Previous Poor Outcome			Birth Spacing (< 18 months)			No Prenatal Care		
	White	Black	Other/Unknown	White	Black	Other/Unknown	White	Black	Other/Unknown	White	Black	Other/Unknown	White	Black	Other/Unknown	White	Black	Other/Unknown
2017	3.82%	6.79%	3.51%	22.57%	32.97%	28.19%	2.84%	1.98%	0.72%	4.32%	7.90%	4.83%	8.03%	8.21%	6.92%	0.56%	1.47%	1.15%
2018	4.04%	6.85%	3.93%	23.40%	34.04%	28.37%	2.84%	2.08%	0.62%	6.09%	9.57%	7.61%	8.32%	8.32%	7.00%	0.63%	1.59%	0.65%
2019	3.92%	7.91%	3.15%	23.65%	33.53%	30.67%	2.80%	2.55%	0.52%	5.08%	8.82%	5.20%	8.67%	8.80%	6.94%	0.71%	1.54%	1.27%

The trends in risk factors for individuals without Medicaid are similar. Black mothers without Medicaid coverage again experience greater rates of risk factors, particularly for previous preterm births or poor birth outcomes, but also for low maternal weight gain and no prenatal care. For those women not insured by Medicaid, smoking rates are only slightly lower for Blacks (2.55% in CY 2019) compared to 2.80% for Whites in CY 2019 – strikingly less than the 10.44% for Blacks and 26.18% in CY 2019 for women covered in the Medicaid program.

Figure 18: Selected Risk Factors for Prematurity and Low Birthweight in Ohio Medicaid-Paid Births by Ethnicity, CY 2017 – 2019

	Previous Preterm Birth			Low Maternal Weight Gain			Smoking During Pregnancy			Previous Poor Outcome			Birth Spacing (< 18 months)			No Prenatal Care		
	Hispanic	Non-Hispanic	Unknown	Hispanic	Non-Hispanic	Unknown	Hispanic	Non-Hispanic	Unknown	Hispanic	Non-Hispanic	Unknown	Hispanic	Non-Hispanic	Unknown	Hispanic	Non-Hispanic	Unknown
2017	7.00%	7.49%	9.49%	38.16%	33.29%	35.41%	8.61%	23.83%	17.48%	6.40%	6.59%	5.84%	5.44%	6.53%	1.60%	1.47%	2.29%	4.24%
2018	7.68%	8.18%	14.70%	40.20%	33.62%	31.71%	7.22%	23.10%	18.07%	7.13%	7.62%	8.09%	6.07%	6.97%	5.05%	1.52%	2.24%	0.88%
2019	7.93%	8.36%	7.52%	39.48%	33.81%	33.75%	6.95%	21.00%	26.80%	6.03%	7.08%	7.52%	5.49%	7.11%	4.50%	1.77%	2.21%	5.60%

When considering ethnicity, Hispanic populations covered by Medicaid have slightly lower rates of these risk factors compared to non-Hispanics in all areas, with the exception of low maternal weight gain, which impacts 39.48% of Hispanic women compared to 33.81% of non-Hispanic mothers. Rates of these risk factors are generally not widely disparate between Hispanic and non-Hispanic populations, except for smoking during pregnancy, which is almost three times higher in non-Hispanic women compared to Hispanic women (21.00% vs 6.95%). For women without Medicaid, the Hispanic and non-Hispanic populations have fairly similar rates of these risk factors given the fact that this subgroup is small, rendering the data subject to wide fluctuation.

Figure 19: Selected Risk Factors for Prematurity and Low Birthweight in Ohio Non-Medicaid Paid Births by Ethnicity, CY 2017 – 2019

	Previous Preterm Birth			Low Maternal Weight Gain			Smoking During Pregnancy			Previous Poor Outcome			Birth Spacing (< 18 months)			No Prenatal Care		
	Hispanic	Non-Hispanic	Unknown	Hispanic	Non-Hispanic	Unknown	Hispanic	Non-Hispanic	Unknown	Hispanic	Non-Hispanic	Unknown	Hispanic	Non-Hispanic	Unknown	Hispanic	Non-Hispanic	Unknown
2017	4.97%	3.91%	1.64%	29.92%	23.22%	14.89%	1.87%	2.69%	6.00%	4.78%	4.52%	1.64%	7.42%	7.99%	8.33%	1.13%	0.62%	3.85%
2018	5.54%	4.14%	10.64%	29.48%	24.09%	34.48%	1.62%	2.70%	2.70%	7.15%	6.35%	4.26%	6.48%	8.29%	10.81%	1.05%	0.67%	8.11%
2019	4.31%	4.09%	5.48%	31.87%	24.38%	45.24%	1.44%	2.68%	4.44%	5.70%	5.28%	6.85%	7.07%	8.62%	11.76%	2.13%	0.74%	8.47%

*Variable rate observed as a result of a small population size

2.3 Preterm Birth Reduction Efforts

The state of Ohio remains committed to reducing the incidence of preterm birth, one of the largest contributors to infant mortality. ODM has a long-standing preterm birth prevention effort in partnership with perinatal clinicians and hospitals affiliated with the Ohio Perinatal Quality Collaborative (OPQC), as well as Medicaid MCPs, sister state agencies, home health agencies, pharmacies and community organizations to prevent preterm birth through identifying and addressing risk factors for poor birth outcomes.

The timely identification of pregnancy and assessment of risk factors has been found to be one of the greatest needs in this effort. Building on past quality improvement work, ODM has worked with partners to create a web-based, standardized Pregnancy Risk Assessment and Notification Form (PRAF 2.0) for real time population health management. When clinicians and other stakeholders submit the PRAF, it efficiently communicates key medical and social needs of the pregnant individual to her Medicaid managed care plan, and the information is integrated into Ohio Benefits to automate the maintenance of Medicaid coverage throughout the pregnancy and postpartum period. The PRAF 2.0 also provides same-day notification to the patient's MCP and ODH for timely referral to home visiting and tobacco cessation services. PRAF 2.0 is also scheduled to include referrals to ODH Women, Infant, and Children (WIC) program and Ohio Department of Job and Family Services (ODJFS) Statewide Automated Child Welfare Information System (SACWIS) Q1 2021. If progesterone for the prevention of preterm birth is indicated and the patient elects to receive injections within her home, this same PRAF can be optionally used to automatically notify the appropriate specialty pharmacy and home health agency to eliminate complexity and expedite the timely provision of this important therapy.

The provision of progesterone rates presented in Figure 20 reflect the percentage of women with Medicaid who had a high-risk pregnancy, as determined by either a prior preterm birth or shortened cervix during their pregnancy, who were administered progesterone to help prevent preterm birth. ODM recognizes that this measure is not precise enough to exclusively identify progesterone candidacy, but it does identify a much higher-risk subpopulation of women at risk of preterm birth. The percentage of women receiving progesterone has continued to increase between 2017 and 2019, albeit at a slower rate, likely reflecting current research emphasizing the effectiveness among a more limited population with preterm birth due to short cervix. This trend warrants close monitoring and comparison to the percentage of Medicaid women who have had previous preterm births due to short cervix to ensure that administration is appropriate.

Additional trends which warrant further exploration are adverse pregnancy outcomes due to social determinant of health risks and individuals with a history of late miscarriages. The social environment of pregnant individuals impact birth outcomes. Linkage to community support through group prenatal care and use of less traditional providers (doulas, midwives) bring focus to non-health system connections for the reduction of preterm birth. Individuals with histories of late miscarriages are not captured as having preterm births but are high risk for preterm birth during the next pregnancy. Interventions addressing both these populations are being considered. In 2021, ODM intends to implement to the extent possible programs, providers and services that support moms and babies through data-driven, evidence-based initiatives. These programs will leverage the PRAF 2.0 to ensure women receive timely connections to physical, social, and emotional supports that are necessary to meaningfully reduce health outcome disparities.

Figure 20: Overall Progesterone Rates for Medicaid-Paid High-Risk Pregnancies by Maternal Race and Ethnicity, CYs 2017 – 2019

	Overall Rate	Race			Ethnicity	
		White	Black	Other	Hispanic	Non-Hispanic
2017	33.13%	30.73%	35.83%	44.90%	41.65%	32.70%
2018	34.84%	33.73%	37.36%	27.29%	28.19%	35.32%
2019	34.97%	34.52%	36.13%	31.07%	30.73%	35.28%

ODM continues to work with preterm birth prevention partners, especially in communities of greatest infant mortality disparities, to improve use of the PRAF database to spur immediate connectivity to community and health services, including evidence-based home visiting programs such as Nurse Family Partnership.

	CENTERING PREGNANCY	HOME VISITING	COMMUNITY HEALTH WORKERS	OTHER COMMUNITY-BASED INTERVENTIONS
Butler	★	★	★	★
Cuyahoga	★	★	★	★
Franklin	★	★	★	★
Hamilton	★		★	★
Lucas			★	★
Mahoning	★	★	★	★
Montgomery	★	★	★	★
Stark	★	★	★	★
Summit	★	★	★	★

While some efforts to improve pre-term birth rates are anchored in Ohio’s health systems, there is growing awareness of the importance of the social factors or determinants that contribute to poor birth outcomes. As such, ODM and the MCPs continue to support community infant mortality grants that attempt to scale community-based work that may garner more trust for the culturally appropriate social and emotional support that families require given the extra stressors of pregnancy. Most of the communities have chosen to support ODH evidence-based home visit programs, Centering™, or group prenatal care efforts and the use of community health workers that are often connected to a Pathways Hub. This community initiative also welcomes innovation from doulas, fatherhood groups, and others committed to the care of mothers and infants.

2.4 Smoking Cessation

Smoking is one of the most common modifiable risk factors for infant mortality as it increases the risk of preterm birth, low birthweight and sleep-related deaths. Ohio is expanding publicly funded maternal and child health programs and recommended clinical practice guidelines from the U.S. Public Health Service that teach how to encourage smoking cessation. The state also promotes a nationally recognized, evidence-based smoking cessation model to reduce smoking among women during pregnancy. The *Moms Quit for Two* program utilizes the “Baby and Me – Tobacco Free” model and is offered across Ohio by many local health departments, Ohio Equity Institute teams, and other community organizations.

Rates presented in Figure 21 show the percentage of members aged 15-44 screened for tobacco use who received cessation counseling intervention if identified as a tobacco user, as reported on Medicaid claims. The procedure codes used to calculate this measure are voluntary, so the calculated rates may be underrepresented in Medicaid claims data.

Figure 21: Tobacco Cessation and Counseling for Women 15-44 Years of Age by Race and Ethnicity, CYs 2017 – 2019

	Overall Rate	Race			Ethnicity	
		White	Black	Other	Hispanic	Non-Hispanic
2017	10.72%	11.72%	8.87%	9.19%	9.55%	10.76%
2018	21.14%	22.23%	18.92%	20.58%	23.55%	21.04%
2019	35.89%	36.53%	33.43%	41.60%	38.99%	35.74%

There has been a dramatic increase in the rates of tobacco screening and counseling for women across all races and ethnicities in the Medicaid program. Beginning in 2017, the *Preventive Care and Screening Tobacco Use: Screening and Cessation Intervention* measure was added to the list of quality metrics for providers participating in Ohio’s patient-centered medical home initiative, the Comprehensive Primary Care (CPC) program. This level of accountability, as well as additional focus through the Smoke-Free Families quality improvement efforts, the Baby and Me-Tobacco Free model, and the 2018 Medicaid support for the Quitline may all have influenced these improvements.

Section III: Perinatal Episode of Care

As payers across the country are shifting away from a FFS payment structure that may not offer sufficient accountability for quality in care that drives improved health outcomes, ODM has implemented a payment mechanism bundling together an entire episode of care for the delivery of a newborn infant. The episode is triggered by a live birth and includes all prenatal care 280 days before the delivery through postnatal care 60 days after discharge from the delivering facility. The obstetrical provider is assigned as the principal accountable provider (PAP) as he/she is in the best position to guide ideal birth outcomes, both in quality and cost. The PAP subsequently receives relevant reports to assist in the management of this population. Please see <https://medicaid.ohio.gov/provider/PaymentInnovation/Episodes> for more details.

There are three quality metrics in the perinatal episode of care with thresholds that must be exceeded in order to be eligible for gain-sharing: rates of prenatal HIV screening, caesarean sections rate, and post-partum visits. Quality thresholds for these measures for 2019 are 61%, 34%, and 66% respectively, and ODM plans to raise these threshold rates over time. In 2019, Ohio PAPs exceeded the prenatal HIV screening and post-partum visit rates, averaging 84% and 80% respectively. The average caesarean section rate was 30%. The care of the newborn is addressed through three separate episodes across low, moderate, and high-risk levels based on gestational age.

Despite the fact that the perinatal episode has been linked to incentive payments since 2016, improvements in quality have not been fully realized as most perinatal improvement efforts have focused on more granular aspects of care for specialized populations. While the episodes of care program has been suspended for CYs 2020 and 2021 due to the COVID-19 pandemic, ODM plans to refine the perinatal episode with additional views of the high-risk population using new sources of data, including social determinants of health, and new quality measures (e.g., evidence-based practices for high risk women, connections to community supports, and metrics of neonatal outcomes). These enhancements bring focus to a higher-risk subset of

women, thereby connecting payments for high quality health care in the Medicaid program to a statewide strategy that helps reduce disparities in maternal and infant outcomes.

Section IV: Prenatal and Postnatal Visits

4.1 Measure Results by Statewide Average, Medicaid MCPs, and FFS

HEDIS, the Healthcare Effectiveness Data and Information Set, is a health care quality measurement tool developed by the National Committee for Quality Assurance (NCQA) that is used by more than 90% of America's health plans to monitor the provision of health services across five domains of care. Self-reported, audited HEDIS data from Ohio's five MCPs, as well as administrative FFS data were used to examine prenatal and postpartum care within the Medicaid program, as detailed in Figure 22. Self-reported, audited HEDIS rates may contain data from both claims and medical record reviews (hybrid methodology), while FFS data is solely claims based (administrative); therefore, the results between MCPs and FFS may not be comparable.

Figure 22: Medicaid MCP Self-Reported, Audited HEDIS and FFS Rates, CYs 2017 – 2019

	Timeliness of Prenatal Care		Postpartum Care	
	Overall Reported Rate	NCQA Percentile Range	Overall Reported Rate	NCQA Percentile Range
STATEWIDE				
2017	81.1%	P25-P50	63.4%	P25-P50
2018	83.5%	P50-P75	65.8%	P50-P75
2019	86.89%	P50-P75	77.53%	≥P90
BUCKEYE				
2017	86.6%	P50-P75	63.7%	P25-P50
2018	79.1%	P25-P50	59.4%	P10-P25
2019	90.75%	P75-P90	78.35%	≥P90
CARESOURCE				
2017	78.6%	P25-50	62.3%	P25-50
2018	83.7%	P50-P75	66.4%	P50-P75
2019	82.00%	P25-P50	75.67%	≥P90
MOLINA				
2017	82.8%	P25-50	62.6%	P25-50
2018	83.0%	P25-P50	67.4%	P50-P75
2019	98.54%	≥P90	79.81%	≥P90
PARAMOUNT				
2017	83.0%	P25-50	69.1%	P50-75
2018	86.4%	P50-P75	70.3%	P75-P90
2019	91.48%	≥P90	79.56%	≥P90
UNITED HEALTH				
2017	83.7%	P50-75	64.3%	P25-50
2018	85.5%	P50-P75	65.5%	P50-P75
2019	87.35%	P50-P75	80.05%	≥P90
FFS				
2017	50.2%	N/A	31.0%	N/A
2018	57.3%	N/A	28.3%	N/A
2019	70.01%	N/A	40.35%	N/A

Using HEDIS methodology, in 2019, the percentage of women in Medicaid MCPs who received timely prenatal care was 86.9%, an increase from 83.5% in 2018. The percentage of women who received a postpartum visit on or between 21 and 56 days after delivery also increased in 2019 to 77.5%, from 65.8% in 2018.

The percentile ranking represents how Ohio's Medicaid MCPs' HEDIS results compare with national Medicaid benchmarks collected by NCQA. For example, Ohio's Medicaid MCPs were between the fiftieth and seventy-fifth national percentiles for the timeliness of prenatal care HEDIS measure in comparison with other

Medicaid MCPs across the country in 2018 and 2019, and between the twenty-fifth and fiftieth percentile for 2017. For the postpartum visits (between 7 and 84 days after delivery), Ohio's Medicaid MCPs were greater than the ninetieth percentile in 2019, between the fiftieth and seventy-fifth percentile in 2018, and between the twenty-fifth and fiftieth percentiles in 2017. Please note that the period evaluated for the postpartum visit was changed for 2019 to 'between 7 and 84 days after delivery'; for prior years, the postpartum visit period was '21 to 56 days after delivery'. This change should be taken into consideration when comparing the 2019 Postpartum Care Visit rates to prior year rates.

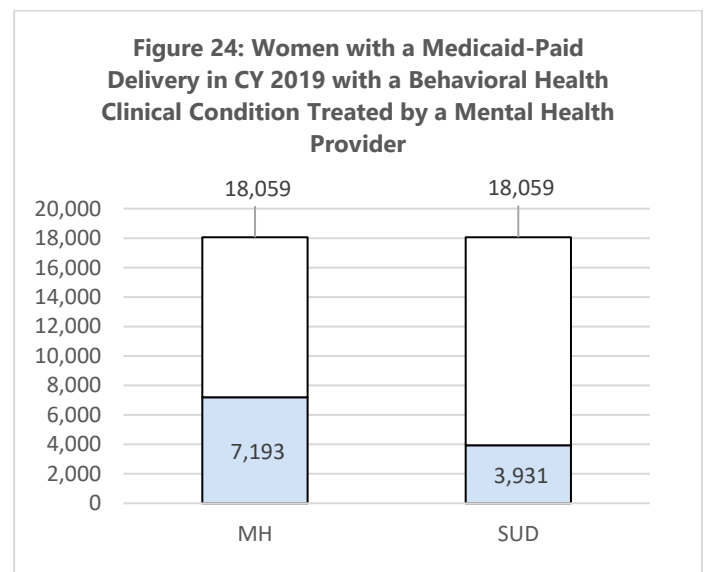
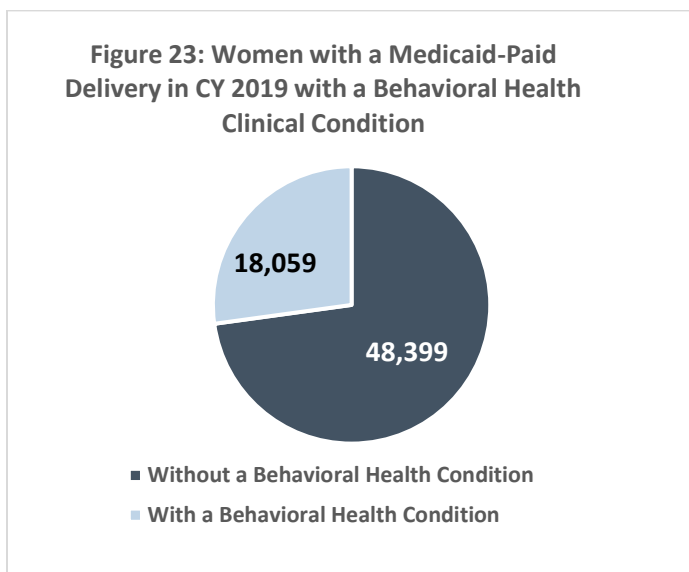
While performance is largely better than average by these measures, ODM is still focused on improving maternal and infant outcomes and eliminating disparities in ways that may not be reflected by this measurement framework.

Established five years ago, the Community Infant Mortality Partnership brings together the Medicaid MCPs and Ohio's nine counties with the highest infant mortality disparities, activating communities to address the racial disparities, social determinants of health and isolation that negatively impact this critical period of life. To date, there has been a focus on group education with or without formal prenatal care (Centering™), home visiting, utilization of community health workers independently and through the Pathways Hub model, and a variety of other place-based initiatives that include peer supports, doulas and fathers. Sites have activated neighborhoods and report different improvements, including improved connectivity and trust among women, improved breastfeeding rates, and reduced preterm births. ODM also has hosted focus groups to listen to the voices of women in their pregnancy and postpartum experiences. Women in the Medicaid program expressed distrust in the health systems citing lack of provider empathy and inadequate communication. They also expressed a lack of social supports, community resources, and routine coverage of community services such as doulas and lactation nurses. These all will be taken into consideration as ODM implements strategies to continuously improve maternal and infant outcomes.

Section V: Behavioral Health Services

ODM, in collaboration with the Ohio Department of Mental Health and Addiction Services (OMHAS), implemented significant revisions and enhancements to the Medicaid behavioral health benefit beginning January 2018. Changes included the addition of new services for people with high intensity needs and alignment of the procedure codes used by Ohio’s behavioral health providers to better integrate physical and behavioral health care.

Of the women enrolled in Ohio Medicaid identified as having had a birth via the linked VS/Medicaid data[†], 25% (17,723) in CY 2017, 26% (17,669) in CY 2018, and 27% (18,059) in CY 2019 had a behavioral health clinical condition identified by a primary diagnosis on a Medicaid claim[†] (Figures 23 and 24). Of those women, approximately 40-42% received services from a community mental health center (CMHC), and 21-22% received addiction services from a substance use disorder (SUD) clinic. Women receiving SUD clinic services, 12% (2,210) in CY 2017, 12% (2,192) in CY 2018, and 11% (2,028) in CY 2019 utilized medication assisted treatment (MAT) services for substance abuse issues.



ODM continues efforts to address the needs of pregnant and postpartum women with opioid use disorder (OUD). The Maternal Opiate Medical Supports Plus (MOMS+) quality improvement initiative builds on the MOMS pilot project, which expanded the use of MAT through an integrated care model that coordinated behavioral health and prenatal care with social supports for opioid-dependent pregnant women. The pilot resulted in greater utilization of behavioral health services, including MAT, greater postpartum retention in MAT, and reduced out-of-home placement for program participants compared to a matched sample of opioid dependent pregnant women who received treatment as usual.

The MOMS+ project — launched in 2018 — uses these integrated sites as the hubs of a hub-and-spoke model to mentor and support newly engaged outpatient maternity care teams across Ohio. While the hubs are more closely associated with the larger tertiary centers where higher risk MAT inductions and other care can be delivered, the spoke or partner sites are supported by stronger local behavioral health and medication assisted treatment programs, as well as pediatric practitioners who can continue care long-term. The mentoring sites also help maternity care providers develop the capacity to provide induction therapy close to home, collaborate with local child welfare, and link to housing and other social service resources in their

communities, culminating in more effective plans of safe care as referenced in the Comprehensive Addiction and Recovery Act (CARA). MOMS+ is currently in the early stages of developing best practices for the transition of maternal and infant care to the community with a longer-term focus on preventive care, specific developmental and infectious-disease-related considerations, parenting and social service support, and continued trauma-informed care.

Section VI: Medicaid Prenatal Care, Delivery, and Infant Costs

The average total cost during pregnancy of a woman enrolled in Medicaid (all covered services for nine months prior to the delivery month to one month after the delivery month) was \$8,652 in 2017, \$8,873 in 2018, and \$9,181 in 2019 (see Figure 25). Prenatal and delivery costs[‡] paid by Medicaid include direct FFS payments to service providers, and capitation and birth premium payments to managed care providers for women enrolled in managed care.

In 2019, the total cost paid by Medicaid for prenatal care and deliveries was \$638,373,292 for 69,532 births. Of these Medicaid payments, 52% of these dollars (\$334,796,580) paid for deliveries compared to 48% (\$303,576,712) which covered prenatal care. Only costs and member months for the period in which a woman had Medicaid eligibility were included. A woman may have utilized Medicaid for only a portion of her pregnancy, and in some instances only for the delivery of the infant.

Costs paid by Medicaid during an infant's first year of life included direct FFS payments to service providers, and capitation payments to managed care providers for infants enrolled in managed care. In 2019, 71,344 infants were eligible and enrolled in Medicaid for at least a portion of their first year of life.

The total cost paid by Medicaid for the first year of life for infants enrolled in 2019 was \$985,688,704. Only costs and member months for those months of the infants' first year of life in which the infant had Medicaid eligibility were included; an infant may have utilized Medicaid for only a portion of their first year of life.

Overall, costs for prenatal care, deliveries, and infants in the first year of life increased from CY 2018 to CY 2019. Total costs for prenatal care and deliveries increased by 1% from 2018 to 2019, with the average cost per woman with a delivery increasing by 3.5%; the average cost per member month increased by 4%. The number of deliveries decreased by 2.5% from 2018 to 2019 (i.e., from 71,344 deliveries in 2018 to 69,532 in 2019). For infants in the first year of life, total costs increased by 0.3% from 2018 to 2019, average cost per infant increased by 4.2%, and average cost per member month increased by approximately 6.3%. The total number of infants decreased by 3.8%.

For CY 2019, managed care costs accounted for approximately 90% of the costs for infants in the first year of life, approximately 95% of delivery costs, and approximately 95% of the total costs for deliveries and prenatal care. The FFS costs for infants in the first year of life, deliveries, and total costs for deliveries and prenatal care accounted for 10%, 5%, and 5% of total costs for each category, respectively. There were no industry standard data sources available with current costs of national Medicaid prenatal care, deliveries, and/or infant care for comparison with Ohio data.

[‡] Delivery costs include FFS delivery costs, delivery capitation payments and estimated delivery payments for certain managed care members as determined by the applicable capitation rate cell payment.

Figure 25: Total and Average Cost of Deliveries, Prenatal Care, and Infants, CY 2017 – 2019

	Deliveries	Prenatal Care	Total Prenatal Care and Delivery Care	Infants— First Year of Life
Total Beneficiaries				
2017	74,174	74,174	74,174	70,004
2018	71,344	71,344	71,344	74,174
2019	69,532	69,532	69,532	71,344
Total Cost				
2017	\$340,829,530	\$300,849,744	\$641,753,448	\$863,649,749
2018	\$335,816,208	\$297,219,104	\$633,035,312	\$983,028,022
2019	\$334,796,580	\$303,576,712	\$638,373,292	\$985,688,704
Average Cost/Beneficiary				
2017	\$4,595	\$4,056	\$8,652	\$12,337
2018	\$4,707	\$4,166	\$8,873	\$13,253
2019	\$4,815	\$4,366	\$9,181	\$13,816
Total Member Months				
2017	N/A	578,599	724,286	883,697
2018	N/A	547,423	687,371	938,016
2019	N/A	528,879	665,666	884,819
Average Cost/Member Month				
2017	N/A	\$520	\$886	\$977
2018	N/A	\$543	\$921	\$1,048
2019	N/A	\$574	\$959	\$1,114

Section VII: Children in Medicaid

Ohio Medicaid provides care to nearly 3 million Ohioans—including approximately 1.3 million youth, more than 36,000 of whom are in the foster care and adoption system. The demographics of the infants, children, adolescents, and adults under 21 years of age are delineated in Figure 26.

7.1 Summary of Medicaid’s Children’s Eligibility and Demographics CY 2019

Figure 26: Medicaid Monthly Average by Age Group, Gender, Race and Play Type, CY 2019

	Monthly Average	% of Total Medicaid Children
AGE IN YEARS		
<1 Year	79,106	6.2%
1-5 Years	337,905	26.5%
6-12 Years	450,886	35.3%
13-18 Years	329,928	25.9%
19-20 Years	78,162	6.1%
GENDER		
Female	629,796	49.4%
Male	646,189	50.6%
RACE		
Caucasian	714,826	56.0%
Black	396,693	31.1%
Asian/ Pacific Islander	23,851	1.9%
American Indian Or Alaskan Native	7,436	0.6%
Other	2,858	0.2%
Not Provided	130,323	10.2%
PLAN TYPE		
MCP (Managed Care)	1,221,815	95.8%
Indemnity (FFS)	54,172	4.2%
TOTAL MEDICAID CHILDREN	1,275,987	

7.2 Children’s Chronic and Behavioral Health Conditions Frequency Distribution

The overall monthly average number of youth under age 21 enrolled in Medicaid is 1,275,987. Of these Medicaid youth, 37% (467,418) have at least one chronic condition, and 25% (320,697) have at least one behavioral health condition. While asthma and other respiratory conditions top the list for physical health conditions requiring care for physical health, attention deficit with hyperactivity disorder remains the most prominent behavioral health condition. Figures 27 and 28 detail additional clinical diagnoses that prompted care for youth in CY 2019.

Figure 27: Top 10 Most Prevalent Chronic Health Conditions among Medicaid Youth CY 2019

	Patient Count	All Medicaid Children
Asthma	93,500	7%
Other specified and unspecified upper respiratory disease	87,917	6%
Acute and chronic tonsillitis	30,902	2%
Esophageal disorders	29,635	2%
Menstrual disorders	28,895	2%
Headache; including migraine	23,959	2%
Allergic reactions	23,134	2%
Hearing loss	21,545	2%
Musculoskeletal congenital conditions	21,494	2%
Obesity	19,229	1%

Figure 28: Prevalence of Behavioral Health Conditions Among Medicaid Youth CY 2019

	Patient Count	All Medicaid Children
ADHD	142,257	10%
Adjustment Disorders	96,169	7%
Anxiety	93,032	7%
Conduct Disorder	84,444	6%
Other Depression	45,975	3%
Major Depression	31,824	2%
PTSD	26,999	2%
Autism	21,187	2%
Self Harm	17,345	1%
Other Psychological	10,368	1%
Bipolar Disorder	8,096	1%
Impulse Control Disorders	6,805	0.5%
Schizophrenia	4,254	0.3%
Delirium Dementia	2,211	0.2%
Mood Disorders	1,606	0.1%
Personality Disorders	1,066	0.1%

7.3 Quality Measures for Children

Just as HEDIS results were used to assess quality for the maternity population, HEDIS specifications were utilized to assess care across three domains for children: primary care access and preventive care, acute and chronic care, and behavioral health care.

Data displayed in Figures 29, 30, and 31 include self-reported, audited HEDIS data from Ohio Medicaid’s five MCPs, as well as administrative FFS data. Self-reported, audited HEDIS rates may contain data from both claims and medical record reviews (hybrid methodology), while FFS data is solely claims based (administrative); therefore, the results between MCPs and FFS may not be comparable.

7.3.1 Primary Care Access and Preventive Care

In 2019, 61.6% of infants in the Medicaid program had six or more well-child visits with a primary care physician during their first 15 months of life, a slight increase from 59.1% in 2018. The rate of children in their third, fourth, fifth, and sixth year of life who received one or more well-child visits with a primary care practitioner in 2019 was 72.8%, up from 72.2% in 2018. Among adolescents, the percentage of those who met the well-care visit criteria also increased from 50.8% in 2018 to 54.6% in 2019, but still represent the group of youth least likely to be seen for preventive services.

Figure 29: Well-Care Measures Medicaid MCP Self-Reported, Audited HEDIS and FFS Rates, CYs 2017-2019

	Well-Child Visits (First 15 Months of Life, Six or More Visits)		Well-Child Visits (Third, Fourth, Fifth, and Sixth Year of Life)		Adolescent Well-Care Visits	
	Overall Reported Rate	NCQA Percentile Range	Overall Reported Rate	NCQA Percentile Range	Overall Reported Rate	NCQA Percentile Range
STATEWIDE						
2017	57.9%	P25-P50	71.2%	P25-P50	51.0%	P50-P75
2018	59.1%	P25-P50	72.2%	P25-P50	50.8%	P25-P50
2019	61.6%	P25-P50	72.8%	P25-P50	54.6%	P50-P75
BUCKEYE						
2017	60.3%	P25-50	68.6%	P25-P50	56.2%	P50-P75
2018	65.9%	P25-P50	67.8%	P25-P50	56.5%	P50-P75
2019	65.9%	P50-P75	67.9%	P25-P50	56.5%	P50-P75
CARESOURCE						
2017	57.2%	P25-50	73.0%	P50-P75	51.3%	P50-P75
2018	56.9%	P10-P25	74.7%	P50-P75	49.9%	P25-P50
2019	58.3%	P10-25	74.7%	P50-P75	55.2%	P50-P75
MOLINA						
2017	61.8%	P25-50	69.1%	P25-P50	46.2%	P25-P50
2018	58.4%	P10-P25	69.6%	P25-P50	50.1%	P25-P50
2019	61.1%	P25-P50	70.2%	P25-P50	51.2%	P25-P50
PARAMOUNT						
2017	58.6%	P25-50	69.3%	P25-P50	45.7%	P25-P50
2018	62.8%	P25-P50	71.1%	P25-P50	48.2%	P25-P50
2019	70.6%	P75-P90	73.2%	P50-P75	51.1%	P25-P50
UNITED HEALTH						
2017	52.6%	P10-25	68.6%	P25-P50	52.6%	P50-P75
2018	59.5%	P25-P50	68.9%	P25-P50	51.7%	P25-P50
2019	63.8%	P25-P50	71.3%	P25-P50	54.3%	P25-P50
FFS						
2017	26.4%	N/A	38.4%	N/A	23.4%	N/A
2018	30.3%	N/A	34.2%	N/A	23.9%	N/A
2019	32.23%	N/A	26.77%	N/A	23.51%	N/A

Figure 30 delineates additional details related to dental services, immunizations and lead testing. In 2019, 51.5% of children in the Medicaid program received at least one dental visit, an improvement from 50.8% in 2018. The percentage of children two years of age with a Childhood Immunization Status, Combination 3* by their second birthday, decreased from 63.9% in 2018 to 62.0% in 2019. The rate of lead screening in children two years of age, also dropped from 67.7% in 2018 to 66.7% in 2019. FFS is not included in the tables given the small numbers of children and not meeting denominator criteria for measures. See Appendix D for a breakout of specific rates for managed care and FFS.

Figure 30: Preventive Measures Medicaid MCP Self-Reported, Audited HEDIS, CYs 2017-2019

	Annual Dental Visits		Childhood Immunization Status, Combination 3*		Lead Screening in Children	
	Overall Reported Rate	NCQA Percentile Range	Overall Reported Rate	NCQA Percentile Range	Overall Reported Rate	NCQA Percentile Range
STATEWIDE MCP						
2017	50.5%	P25-P50	63.3%	P10-P25	68.9%	P25-P50
2018	50.8%	P25-P50	63.9%	P10-P25	67.7%	P25-P50
2019	51.47%	P25-P50	62.00%	P10-P25	66.61%	P25-P50

* Combination 3 vaccinations for Childhood Immunization Status includes DTap, IPV, MMR, Hib, HepB, VZV, and PCV.

7.3.2 Acute and Chronic Conditions

In 2019, among children who were diagnosed with pharyngitis and received an antibiotic, 75.8% received a strep test, a decline from 81 % in 2018. The percentage of children with asthma who were dispensed controller asthma medications for at least 75% of their treatment period was 35.3% for children 5-11 years of age, up from 33.8% in 2018. And for youth 12-18 years of age, the rate increased from 35% in 2018, to 37.8% in 2019. FFS is not included in the tables given the small numbers of children and not meeting denominator criteria for measures. See Appendix D for a breakout of managed care and fee-for-service specific rates.

Figure 31: Acute and Chronic Conditions Measures - Medicaid MCP Self-Reported, Audited HEDIS Rates, CYs 2017-2019

	Appropriate Testing for Children with Pharyngitis		Medication Management for People with Asthma -75% compliance, 5-11 years		Medication Management for People with Asthma -75% compliance, 12-18 years	
	Overall Reported Rate	NCQA Percentile Range	Overall Reported Rate	NCQA Percentile Range	Overall Reported Rate	NCQA Percentile Range
STATEWIDE MCP						
2017	71.2%	P10-P25	33.7%	P50-P75	33.7%	P50-P75
2018	81.0%	P50-P75	33.8%	P50-P75	35.0%	P50-P75
2019	75.78%	P25-P50	35.29%	P50-P75	37.82%	P75-P90

7.3.3 Behavioral Health Care

The subset of measures described in Figure 32 can be used to gauge behavioral health services for youth in the Medicaid program. In 2019, the rate of children and adolescents who had a new prescription for an antipsychotic medication and had documentation of psychosocial care as first line treatment was 81.2%, up from 78.3% in 2018. The rate of adolescents 13-17 years of age who initiated alcohol or drug treatment and had two or more additional alcohol or other drug (AOD) services or medication-assisted treatment (MAT) within 34 days of the initiation visit rose to 23.6% in 2019, from 23.4% in 2018. The rate of children who had a prescription for ADHD medication and remained on the medication for at least 210 days and had at least two follow-up visits in the 9 months after the initiation phase was 59.7% in 2019, down from 64.6% in 2018. FFS is not included in the tables given the small numbers of children and not meeting denominator criteria for measures. See appendix D for a breakout of managed care and fee-for-service specific rates.

Figure 32: Behavioral Health Measures - Medicaid MCP Self-Reported, Audited HEDIS, CYs 2017-2019

	Use of First-Line Psychosocial Care for Children on Antipsychotics		Engagement of Alcohol and Other Drug Abuse or Dependence Treatment, 13-17 years		Follow-Up Care for Children Prescribed ADHD Medication Continuation/Maintenance Phase	
	Overall Reported Rate	NCQA Percentile Range	Overall Reported Rate	NCQA Percentile Range	Overall Reported Rate	NCQA Percentile Range
STATEWIDE MCP						
2017	75.1%	P≥90	22.5%	P75-P90	65.5%	P75-P90
2018	78.3%	P≥90	23.4%	P25-P50	64.6%	P75-P90
2019	81.25%	P≥90	23.56%	P75-P90	59.76%	P50-P75

7.3.4 Behavioral Health Care for Multi-System Youth

While children with Medicaid coverage have seen some improvements in behavioral health supports as indicated in the previous section of this report, children with complex behavioral health conditions remain in dire need of additional services and supports. Ohio currently ranks fortieth in the nation in both young adults (age 18-25) overdose deaths and major depressive episodes in adolescents (ages 12-17). Children with multi-system needs (e.g., in foster care, and/or having a DD, SED, or SUD diagnosis) often need to seek emergency and inpatient care, and behavioral health services make up a disproportionate amount of their health care service delivery costs.

To that end, the Ohio Department of Medicaid is launching a new specialized managed care plan for youth with complex behavioral health and multi-system needs, Ohio Resilience through Integrated Systems and Excellence, or OhioRISE. OhioRISE will provide additional services and supports to approximately 50,000 multi-system youth that will reduce emergency department utilization and inpatient stays by contracting with regional care management entities and expanding access to in-home and community-based services.

7.4 School-Based Health Care

The Ohio Department of Medicaid recognizes the importance of encouraging and supporting a robust partnership between health care and education providers. School-based health initiatives help ensure students are in school, healthy and ready to learn through a school or district's partnerships with health care providers and other community organizations. ODM supports several efforts connecting primary care and behavioral health to school systems and education networks.

7.4.1 School-Based Health Care Support Toolkit

In order to support school districts that are interested in initiating or expanding school-based health care, Ohio has developed a [School-based Health Care Support Toolkit](#). Ohio developed the toolkit to support schools and districts as they begin new — or augment existing — school-based physical and mental health partnerships to meet the needs of the whole child.

7.4.2 School-Based Measures Comparing Medicaid to Non-Medicaid Youth

Because health is an important factor in shaping educational outcomes, ODM and the Ohio Department of Education (ODE) partnered to understand the relationship of academic outcomes to the health status for youth in the Medicaid program. The school-based measures are standard measures routinely calculated by ODE and include touchpoints on a student's journey from kindergarten through high school graduation. Results for Medicaid and non-Medicaid populations in school year 2018 are detailed in Figure 33, with lower performance on all measures for youth in the Medicaid program.

Percent of third graders proficient on English language arts state assessment increased for both Medicaid and non-Medicaid populations from the 2017-2018 school year to 2018-2019 school year. For the Medicaid population, this proficiency increased from 48.3% in 2017-2018 to 53.5% in 2018-2019. For the non-Medicaid population, this proficiency increased from 72.0% in 2017-2018 to 78.2% in 2018-2019.

Percent of seventh graders proficient on the mathematic state assessment decreased for both Medicaid and non-Medicaid populations from the 2017-2018 school year to 2018-2019 school year. For the Medicaid population, this proficiency decreased from 43.3% in 2017-2018 to 41.0% in 2018-2019. For the non-Medicaid population, this proficiency decreased from 69.9.0% in 2017-2018 to 69.5% in 2018-2019.

Four-year high school on-time graduation rates increased for both Medicaid and non-Medicaid populations from the 2017-2018 school year to 2018-2019 school year. For the Medicaid population, this proficiency increased from 73.4 % in 2017-2018 to 74.5% in 2018-2019. For the non-Medicaid population, this proficiency increased from 91.6% in 2017-2018 to 92.1% in 2018-2019.

Also of note, chronic absenteeism rates and disciplinary incident rates decreased in the 2019-2020 school year, but this is likely due to coronavirus (Covid-19) and thus 2019-2020 rates cannot be compared to previous years for these two measures.

Figure 33: School Years 2017-2018, 2018-2019, 2019-2020 Measures by Medicaid Enrollment Status

ACADEMIC MEASURES FOR PWIC REPORT	Percentage - Measure		N Size (Denominator)	
	Medicaid Enrolled *	Not Medicaid	Medicaid Enrolled *	Not Medicaid
2017-18, 2018-19, 2019-20 School Years				
% Demonstrating Readiness Kindergarten Readiness Assessment				
2017-2018 School Year	27.9%	52.9%	53,996	64,102
2018-2019 School Year	26.6%	53.4%	55,688	63,621
2019-2020 School Year	26.6%	53.3%	54,017	65,322
% 3rd graders proficient on English Language Arts state assessment				
2017-2018 School Year	48.3%	72.0%	62,150	73,560
2018-2019 School Year	53.5%	78.2%	60,801	69,926
2019-2020 School Year	NA	NA	NA	NA
% 7th graders proficient on Mathematics state assessment				
2017-2018 School Year	43.3%	69.9%	48,627	74,156
2018-2019 School Year	41.0%	69.5%	52,350	72,508
2019-2020 School Year	NA	NA	NA	NA
Four-year on-time graduation rate (high school)				
2017-2018 School Year (2018 grad cohort)	73.4%	91.6%	47,749	90,289
2018-2019 School Year (2019 grad cohort)	74.5%	92.1%	48,407	89,287
2019-2020 School Year (2020 grad cohort - data lag)	NA	NA	NA	NA
Chronic absenteeism rate ***				
2017-2018 School Year	25.0%	9.9%	653,822	966,765
2018-2019 School Year	28.0%	10.8%	695,540	986,013
2019-2020 School Year	19.7%	7.2%	677,847	989,602
Disciplinary incidents (per 100 FTE) ****				
2017-2018 School Year	NA	NA	NA	NA
2018-2019 School Year	40.3%	13.2%	670,314	947,247
2019-2020 School Year	30.3%	9.7%	656,017	954,286

*For this analysis, a student is flagged as Medicaid-enrolled if he or she participated in any Medicaid program in Ohio at any point in time from July 1, 2017 to June 30, 2018.

*** A student is considered *chronically absent* if he or she is absent for 10% or more of enrolled time. Note, for this measure, 2019-2020 rates may be lower in part due to Covid-19 and thus 2019-2020 rates are not directly comparable to 2017-2018 or 2018-2018 rates.

**** Note, for this measure, 2019-2020 rates may be lower in part due to Covid-19 and thus 2019-2020 rates are not directly comparable to 2018-2019 rates.

7.4.3 Ohio’s Healthy Students Profiles

In conjunction with school-based measures described in section 7.4.2 of this report, Ohio has developed Healthy Students profiles for every school district in the state. These profiles offer district and building-level insights into how key children’s health indicators (e.g., asthma rates) correlate with key educational success indicators (e.g., chronic absenteeism). School districts can download their profiles, along with a guide and frequently asked questions, from the [Ohio Department of Education website](#).

7.4.4 Telehealth In Schools Blueprint and Pilot

On March 9, 2020 the state announced the launch of a telehealth pilot project to connect students with behavioral health providers in the Switzerland of Ohio School District in Monroe County. The objective is to connect the school district with behavioral health services while also providing high-speed internet connections to Ohioans who have been left behind. The district was selected based of its large geographic catchment area, remote Appalachian location, and financial and health care access needs. More information about the Telehealth in Schools Blueprint and Pilot can be found on the [Innovate Ohio website](#).

7.5 Children’s Initiatives

Shortly after being signed into office at the beginning of 2019, Governor DeWine signed an Executive Order to create the Governor’s Office of Children’s Initiatives. This Office has been charged with taking bold steps to give Ohio kids a platform for lifelong success by:

- Elevating the importance of children’s programming in Ohio and drive improvements within the many state programs that serve children.
- Advancing policy related to home visiting, early intervention services, early childhood education, foster care, and child physical and mental health.
- Initiating and guiding enhancements to the early childhood, home visiting, foster care, education, and pediatric health systems.
- Improving communication and coordination across all state agencies that provide services to Ohio’s children.
- Engaging local, federal, and private sector partners to align efforts and investments in order to have the largest possible impact on improving outcomes.

Medicaid is incredibly important to ensuring coverage and access to care for Ohio’s youngest citizens. As the health insurance for more than 1.3 million children in the state, and in some Ohio counties, as the insurer for more than 80% of children under age five residing in the county, Medicaid has great opportunity to improve the lifelong potential for Ohio’s kids.

Governor DeWine’s administration has been enthusiastically and financially supportive of Ohio’s ability to provide health care to low-income children and families. The governor remains focused on children and ODM has continued or initiated several programs to support children’s initiatives. In 2020, ODM:

- Provided a two-year continuation of Ohio Medicaid’s Infant Mortality grant program to support coordinated community programs that target the disparity in the African American infant mortality rate. ODM awarded \$25 million in nine counties for state fiscal year (SFY) 2020 and SFY 2021 to support this targeted disparity reduction effort.
- Significantly expanded telehealth services in response to the pandemic, and adapted existing population health improvement plans to address pandemic conditions.
- Started a multi-system youth innovation fund targeted at existing programs’ non-billable services for children with complex needs to create pathways to coverage under Medicaid. As of December 2020, ODM spent \$10 million in 74 counties in SFYs 20 and 21 to serve 348 multi-system youth, as well as provide technical assistance to counties to build capacity to serve even more children.

- Started a patient-centered medical home program called Comprehensive Primary Care for Kids, which incentivizes pediatric primary care providers to meet children’s specific quality metrics, such as immunizations and lead testing, as well as performing pediatric-specific activities like caring for foster youth, transitioning older children to adult care, and providing school-based care. In 2020, ODM has paid more than \$7 million in per-member per-month incentives to CPC for Kids practices covering more than 700,000 children receiving Medicaid services.
- Released a request for applications to administer OhioRISE, a specialized managed care program for youth with complex behavioral health and multi-system needs that will provide new services to children under 21 enrolled in Medicaid through a collaborative delivery system. OhioRISE will customize care for those children most at risk for out-of-home placement.
- Developed a quality improvement science-based quality withhold strategy as part of its managed care organization contracts that includes strategies to close gaps in care for children missing critical immunizations due to the COVID-19 pandemic.

In 2021, Ohio intends to remain focused on children while operating within the constraints of the pandemic and the budget limitations the pandemic has precipitated. In addition to continuing to administer the program changes initiated in FFY 2020, Ohio plans to:

- Implement programs, providers and services to the extent possible that support moms and babies through data-driven, evidence-based initiatives.
- Begin implementation of OhioRISE to support multi-system youth through new services and supports provided within a framework of coordinated care.
- Continue the focus on the impacts of Substance Use Disorders (SUDs) on women and children, including monitoring and promoting the safe prescribing of opioids (especially prescription rates after C-sections); monitoring and ensuring compliance with engagement in treatment for SUDs, especially involving Medication Assisted Therapy (MAT) administration; and continuing to work with family courts to divert people with SUDs to treatment instead of incarceration.

Section VIII: References

1. Centers for Disease Control and Prevention (2014). Factors Associated with Preterm Birth. Retrieved December 18, 2014 from [http://www.cdc.gov/reproductivehealth/MaternalInfantHealth/PDF/PretermBirth- Infographic.pdf](http://www.cdc.gov/reproductivehealth/MaternalInfantHealth/PDF/PretermBirth-Infographic.pdf).
2. March of Dimes (2014). Low Birthweight. Retrieved December 18, 2014 from <http://www.marchofdimes.org/baby/low-birthweight.aspx#>.
3. Institute of Medicine, Committee on Understanding Premature Birth and Assuring Healthy Outcomes (2007). Preterm Birth Causes, Consequences, and Prevention. Retrieved December 18, 2014 from <http://www.ncbi.nlm.nih.gov/books/NBK11362/pdf/TOC.pdf>.
4. Centers for Disease Control and Prevention. Infant Mortality. Retrieved December 18, 2014 from <http://www.cdc.gov/reproductivehealth/maternalinfanthealth/infantmortality.htm>.
5. National Committee for Quality Assurance. HEDIS & Performance Measurement. Retrieved December 18, 2014 from <http://www.ncqa.org/HEDISQualityMeasurement.aspx>.
6. National Committee for Quality Assurance. HEDIS & Performance Measurement. Retrieved March 7, 2015 from <http://www.ncqa.org/HEDISQualityMeasurement.aspx>.
7. National Committee for Quality Assurance. HEDIS & Performance Measurement. Retrieved November 30, 2016 from <http://www.ncqa.org/HEDISQualityMeasurement.aspx>.
8. National Committee for Quality Assurance. HEDIS & Performance Measurement. Retrieved December 14, 2017 from <http://www.ncqa.org/HEDISQualityMeasurement.aspx>.
9. National Committee for Quality Assurance. HEDIS & Performance Measurement. Retrieved November 18, 2018 from <http://www.ncqa.org/HEDISQualityMeasurement.aspx>.

Appendix A: Data Sources and Methodologies for Calculations

Data Sources

Medicaid information was obtained from Medicaid claims, premium payment records, and eligibility records from ODM's Medicaid Information Technology System (MITS), Business Intelligence and Analytical Research (BIAR) system, and Medicaid's Quality Decision Support System (QDSS). In addition, the ODH Bureau of Vital Statistics provided birth certificate data and linked birth certificate/death certificate data. Where information is reported for Medicaid individuals and non-Medicaid populations, the linked VS/Medicaid data was used.

Linkage of Ohio Birth Certificates to Medicaid Data

Individuals were matched between the vital statistics birth records and Medicaid administrative data using two methods: a match using SSN plus 2 or more of FirstName, LastName and DOB; as well as a probabilistic match.[§] When unique identifiers such as SSN are not available or do not provide an accurate match when confirmed using name and DOB, probabilistic linkage is typically the most efficient and effective way to minimize the risk of linkage error**.

The probabilistic linkage algorithm utilized†† all identifying information in order to assess whether two records in two different datasets refer to the same individual. For identifiers that were not names, such as zip code or date of birth, the algorithm assessed both perfect agreement as well as similarity. Searching for similarity is critical when linking administrative data because a certain percentage of cases contain errors. For example, the date "3/24/1998" shares a certain resemblance to "3/24/2998", and it is possible that the latter is a typographical error and was supposed to be recorded as "3/24/1998". For names, the similarity criteria was more complex because names may differ across datasets for legitimate reasons such as the use of nicknames, name changes, and misspellings. Since mothers and infants appear in the same "Case" in the Medicaid systems, higher confidence in linkage results was obtained via confirming that the mother-infant pair in the vital stats record matched both the mother and infant on the same case in the Medicaid system.

Beyond perfect string matches, first and last names was assessed for similarity using a variety of methods, including but not limited to a string matching score, phonetic equivalence, one of the names is a nickname of the other, the names share a string of five or more common characters, and the first and last names appear to have been swapped. The linkage algorithm then compared this to a population-level database containing names, birthdays and other demographic information and estimate two probabilities: the probability *m* that two records on a certain field would agree if they belong to the same individual, and the probability *u*, that the two fields would agree, but the records belong to different individuals. These probabilities were then used to create agreement and disagreement weights for each field within each record pair to translate the agreement, similarity, and disagreement patterns for a given record pair into a score linked to the probability that the two records referred to the same individual. Record pairs with extremely high matching scores were accepted as matches while record pairs with somewhat high matching scores will be manually reviewed to determine match status.

[§] Fellegi, Ivan P, and Alan B. Sunter. 1969. "A Theory of Record Linkage." *Journal of the American Statistical Association* 64:1183-1210.

** Tromp, Miranda, Anita C. Ravelli, Gouke J. Bonsel, Arie Hasman, and Johannes B. Reitsma. 2011. "Results from Simulated Data Sets: Probabilistic Record Linkage Outperforms Deterministic Record Linkage." *Journal of Clinical Epidemiology* 64:565-572.

† Link Plus, Centers for Disease Control and Prevention. <https://www.cdc.gov/cancer/npcr/tools/registryplus/lp.htm>.

Match statistics are generated throughout the process and are ultimately used to quantify the success of the linkage process. The proportion of Medicaid mothers joined to their infants via a common Ohio birth certificate is known as the “match rate.” The historical annual match rates for the VS-claims birth linkage is depicted in Table 1A.

Table 1A: Combined Average Match Rate to Vital Statistics Birth Records for Mothers (Deliveries) and Infants (Births) in Medicaid Administrative Data

2017	2018	2019
98.4%	99.4%	98.4%

Calculation of Costs During Pregnancy and the Cost of Deliveries

Costs were included for all Medicaid deliveries in CYs 2017-2019. Costs during pregnancy, for the purposes of this report, include all costs for the nine months prior to the month of delivery, the month of delivery and the month following the month of delivery.

The costs of deliveries for women enrolled in managed care include birth premium payments and estimated birth premium payments for women with managed care encounter claims for a delivery service(s), but no delivery premium payment (incurred but not paid deliveries). Estimated birth premium payments were determined using the mother’s county of residence, the last date of service on the delivery encounter claim, and the applicable managed care delivery rate cell code and premium amount (delivery encounter claims included those with a \$0 payment and no indication of third-party payment, and those with a net claim payment >\$0).

Delivery payments for mothers with FFS claims include net payments for inpatient hospital claims with an Ohio diagnosis-related group (DRG) code for a delivery, as applicable for the date of service/delivery. For those mothers with FFS claims indicating delivery, but no inpatient claim with an applicable DRG, the cost of delivery was estimated using the statewide FFS average net payment for inpatient claims with an Ohio DRG code for a delivery. There were deliveries identified for both managed care and FFS for which the Ohio Medicaid cost was \$0: 1) managed care deliveries for which third party payment was rendered and the net payment (by the MCP) was \$0; and 2) FFS claims with an Ohio DRG delivery code in a paid status where the net payment was \$0. Delivery and prenatal care costs were estimated for infants with Medicaid IDs identified on the ODH VS birth file where the mother’s Medicaid ID could not be determined.

Calculation of Costs of Infants in Medicaid

Infant costs include all managed care premium payments for dates of service in the month of birth through the month of the infant’s first birthday if the infant was enrolled in an MCP. In addition, infant costs include FFS claims with dates of service in the month of birth up through the first 365 days of life. Infants may have both FFS claims and managed care premium payments included in the analysis. For CY 2017, costs were estimated for approximately 1.2% of newborns for whom a Medicaid recipient ID could not be determined, but who we were identified on the ODH VS birth file and linked to a mother with Medicaid birth and delivery claims data.

Chronic and Behavioral Health Conditions

Chronic conditions were derived using a chronic condition indicator included in the Clinical Conditions

Software (CCS), developed by the Healthcare Cost and Utilization Project (HCUP). The chronic condition indicator flags claims as chronic at the diagnosis code level and then groups the claim by clinical condition. With that, it is possible for a clinical condition to be acute or chronic, but a member is not included in the count unless the diagnosis code was flagged as chronic by the chronic condition indicator (Figure 27)

Behavioral health conditions also were derived from the CCS. The CCS looks at the primary diagnosis code on FFS claims and encounter data and flags them according to what clinical condition they fall under. For some clinical conditions, diagnosis codes were modified to best capture the prevalence of behavioral health conditions across the Medicaid population (Figure 28).

Appendix B: Low Birthweight (LBW) Births by County, CY 2019

County	Medicaid			Non-Medicaid		
County Name	LBW Births	Total Births	LBW Rate	LBW Births	Total Births	LBW Rate
Adams	15	175	8.57%	0	0	5.32%
Allen	90	773	11.64%	22	480	4.58%
Ashland	25	228	10.97%	18	349	5.16%
Ashtabula	56	673	8.32%	21	356	5.90%
Athens	28	276	10.15%	13	192	6.77%
Auglaize	13	207	6.28%	12	319	3.76%
Belmont	8	53	15.09%	0	0	9.68%
Brown	25	274	9.12%	10	168	5.95%
Butler	223	2368	9.42%	94	2064	4.55%
Carroll	14	147	9.52%	16	130	12.31%
Champaign	17	190	8.95%	10	190	5.26%
Clark	120	1110	10.81%	36	461	7.81%
Clermont	102	919	11.10%	72	1311	5.49%
Clinton	21	269	7.81%	0	0	2.59%
Columbiana	66	605	10.91%	15	329	4.56%
Coshocton	19	225	8.44%	13	219	5.94%
Crawford	37	310	11.94%	9	141	6.38%
Cuyahoga	1038	8005	12.97%	356	5850	6.09%
Darke	19	282	6.74%	19	289	6.57%
Defiance	19	202	9.41%	6	161	3.73%
Delaware	30	386	7.77%	90	1757	5.12%
Erie	47	462	10.17%	10	277	3.61%
Fairfield	87	825	10.55%	53	938	5.65%
Fayette	22	192	11.46%	0	0	4.72%
Franklin	1202	9958	12.07%	489	8269	5.91%
Fulton	23	237	9.71%	9	235	3.83%
Gallia	0	0	3.21%	6	114	5.26%
Geauga	18	154	11.69%	35	736	4.76%
Greene	73	732	9.97%	44	975	4.51%
Guernsey	13	271	4.80%	12	167	7.19%
Hamilton	726	5816	12.48%	280	4665	6.00%
Hancock	48	358	13.41%	33	522	6.32%
Hardin	21	201	10.45%	7	189	3.70%
Harrison	0	0	10.87%	0	0	2.13%
Henry	8	132	6.06%	11	173	6.36%
Highland	21	311	6.75%	10	215	4.65%
Hocking	19	214	8.88%	5	96	5.21%
Holmes	9	106	8.49%	24	673	3.57%
Huron	31	382	8.12%	11	299	3.68%
Jackson	16	206	7.77%	0	0	3.05%
Jefferson	16	188	8.51%	0	0	1.49%
Knox	31	319	9.72%	14	393	3.56%
Lake	92	919	10.01%	68	1259	5.40%

County	Medicaid			Non-Medicaid		
County Name	LBW Births	Total Births	LBW Rate	LBW Births	Total Births	LBW Rate
Lawrence	0	0	20.83%	0	0	0.00%
Licking	85	970	8.76%	64	1025	6.24%
Logan	23	283	8.13%	8	249	3.21%
Lorain	182	1779	10.23%	77	1474	5.22%
Lucas	386	3291	11.73%	119	1866	6.38%
Madison	19	229	8.30%	14	230	6.09%
Mahoning	206	1580	13.04%	40	796	5.03%
Marion	68	540	12.59%	8	199	4.02%
Medina	59	497	11.87%	52	1188	4.38%
Meigs	12	133	9.02%	0	0	6.38%
Mercer	16	171	9.36%	11	404	2.72%
Miami	50	583	8.58%	36	649	5.55%
Monroe	0	0	7.90%	0	0	0.00%
Montgomery	421	3894	10.81%	140	2463	5.68%
Morgan	0	0	3.49%	0	0	4.44%
Morrow	11	179	6.15%	5	186	2.69%
Muskingum	46	612	7.52%	21	339	6.20%
Noble	8	59	13.56%	0	0	6.02%
Ottawa	19	147	12.93%	15	180	8.33%
Paulding	9	101	8.91%	0	0	8.48%
Perry	26	267	9.74%	13	149	8.73%
Pickaway	30	287	10.45%	18	298	6.04%
Pike	21	249	8.43%	7	113	6.20%
Portage	57	604	9.44%	33	729	4.53%
Preble	19	218	8.72%	10	171	5.85%
Putnam	6	103	5.83%	15	320	4.69%
Richland	70	860	8.14%	19	566	3.36%
Ross	64	533	12.01%	15	250	6.00%
Sandusky	36	374	9.63%	11	275	4.00%
Scioto	37	525	7.05%	9	189	4.76%
Seneca	38	316	12.03%	11	242	4.55%
Shelby	25	266	9.40%	16	350	4.57%
Stark	217	2305	9.41%	117	1786	6.55%
Summit	364	3132	11.62%	157	2702	5.81%
Trumbull	135	1354	9.97%	38	705	5.39%
Tuscarawas	53	610	8.69%	30	552	5.44%
Union	15	187	8.02%	38	519	7.32%
Van Wert	20	145	13.79%	8	140	5.71%
Vinton	6	83	7.23%	0	0	10.26%
Warren	71	671	10.58%	110	1772	6.21%
Washington	27	282	9.57%	12	223	5.38%
Wayne	48	488	9.84%	35	948	3.69%
Williams	15	227	6.61%	6	152	3.95%
Wood	45	454	9.91%	52	821	6.33%
Wyandot	15	107	14.02%	0	0	3.33%

Appendix C: Preterm Births by County, CY 2019

County	Medicaid			Non-Medicaid		
County Name	Preterm Births	Total Births	Preterm Rate	Preterm Births	Total Births	Preterm Rate
Adams	13	174	7.47%	9	94	9.57%
Allen	94	763	12.32%	38	491	7.74%
Ashland	33	228	14.47%	23	346	6.65%
Ashtabula	64	672	9.52%	35	359	9.75%
Athens	32	276	11.59%	15	193	7.77%
Auglaize	30	206	14.56%	18	320	5.63%
Belmont	10	52	19.23%	0	0	9.38%
Brown	24	273	8.79%	10	169	5.92%
Butler	304	2339	13.00%	159	2100	7.57%
Carroll	20	145	13.79%	16	132	12.12%
Champaign	26	191	13.61%	16	191	8.38%
Clark	130	1083	12.00%	58	488	11.89%
Clermont	123	909	13.53%	114	1321	8.63%
Clinton	28	264	10.61%	12	197	6.09%
Columbiana	79	600	13.17%	23	336	6.85%
Coshocton	26	225	11.56%	16	220	7.27%
Crawford	46	309	14.89%	13	144	9.03%
Cuyahoga	1126	7934	14.19%	486	5957	8.16%
Darke	23	281	8.19%	28	291	9.62%
Defiance	21	203	10.35%	10	159	6.29%
Delaware	46	387	11.89%	138	1758	7.85%
Erie	53	459	11.55%	17	283	6.01%
Fairfield	102	825	12.36%	87	945	9.21%
Fayette	22	192	11.46%	8	105	7.62%
Franklin	1291	9865	13.09%	703	8434	8.34%
Fulton	23	238	9.66%	13	237	5.49%
Gallia	11	158	6.96%	8	113	7.08%
Geauga	20	151	13.25%	50	741	6.75%
Greene	94	736	12.77%	70	979	7.15%
Guernsey	20	268	7.46%	15	172	8.72%
Hamilton	783	5765	13.58%	355	4745	7.48%
Hancock	48	354	13.56%	49	527	9.30%
Hardin	28	202	13.86%	13	182	7.14%
Harrison	0	0	8.70%	0	0	8.51%
Henry	13	132	9.85%	16	173	9.25%
Highland	29	310	9.36%	17	216	7.87%
Hocking	27	214	12.62%	11	98	11.22%
Holmes	14	108	12.96%	28	670	4.18%
Huron	40	381	10.50%	21	301	6.98%
Jackson	22	207	10.63%	9	131	6.87%
Jefferson	25	185	13.51%	0	0	4.35%
Knox	50	315	15.87%	22	395	5.57%

County	Medicaid			Non-Medicaid		
County Name	Preterm Births	Total Births	Preterm Rate	Preterm Births	Total Births	Preterm Rate
Lake	108	906	11.92%	108	1276	8.46%
Lawrence	8	24	33.33%	0	0	0.00%
Licking	121	966	12.53%	102	1033	9.87%
Logan	29	281	10.32%	17	252	6.75%
Lorain	210	1764	11.91%	141	1493	9.44%
Lucas	455	3280	13.87%	153	1897	8.07%
Madison	27	226	11.95%	12	234	5.13%
Mahoning	255	1579	16.15%	70	806	8.69%
Marion	70	534	13.11%	16	206	7.77%
Medina	66	495	13.33%	73	1191	6.13%
Meigs	18	133	13.53%	0	0	4.17%
Mercer	19	171	11.11%	24	404	5.94%
Miami	66	578	11.42%	57	656	8.69%
Monroe	6	38	15.79%	0	0	10.26%
Montgomery	501	3887	12.89%	201	2492	8.07%
Morgan	0	0	0.00%	0	0	4.44%
Morrow	14	179	7.82%	13	188	6.92%
Muskingum	60	613	9.79%	36	341	10.56%
Noble	10	59	16.95%	0	0	4.82%
Ottawa	25	150	16.67%	14	178	7.87%
Paulding	16	100	16.00%	9	61	14.75%
Perry	31	265	11.70%	21	151	13.91%
Pickaway	38	291	13.06%	28	296	9.46%
Pike	30	247	12.15%	10	114	8.77%
Portage	68	601	11.31%	50	738	6.78%
Preble	26	216	12.04%	14	170	8.24%
Putnam	13	105	12.38%	29	319	9.09%
Richland	79	855	9.24%	30	575	5.22%
Ross	70	530	13.21%	21	252	8.33%
Sandusky	37	375	9.87%	25	276	9.06%
Scioto	50	526	9.51%	11	190	5.79%
Seneca	54	310	17.42%	18	248	7.26%
Shelby	36	263	13.69%	29	355	8.17%
Stark	253	2301	11.00%	130	1797	7.23%
Summit	402	3126	12.86%	201	2716	7.40%
Trumbull	138	1353	10.20%	59	711	8.30%
Tuscarawas	69	597	11.56%	37	564	6.56%
Union	23	183	12.57%	37	524	7.06%
Van Wert	21	143	14.69%	15	143	10.49%
Vinton	10	83	12.05%	0	0	7.69%
Warren	81	655	12.37%	163	1788	9.12%
Washington	36	281	12.81%	20	225	8.89%
Wayne	54	488	11.07%	49	949	5.16%
Williams	23	222	10.36%	13	159	8.18%
Wood	52	456	11.40%	64	826	7.75%
Wyandot	11	106	10.38%	10	121	8.26%

Appendix D: Managed Care and Fee-For-Service Rates for Child Quality Measures

Table 1: Preventive Measures Medicaid MCP Self-Reported, Audited HEDIS and FFS Rates, CYs 2013-2019

	Annual Dental Visits		Childhood Immunization Status, Combination 3		Lead Screening in Children	
	Overall Reported Rate	NCQA Percentile Range	Overall Reported Rate	NCQA Percentile Range	Overall Reported Rate	NCQA Percentile Range
STATEWIDE						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	47.1%	P25-P50	65.9%	P10-P25	65.6%	P25-P50
2015	48.4%	P25-P50	62.8%	P10-P25	66.2%	P25-P50
2016	49.8%	P25-P50	60.9%	P10-P25	71.4%	P50-P75
2017	50.5%	P25-P50	63.3%	P10-P25	68.9%	P25-P50
2018	50.8%	P25-P50	63.9%	P10-P25	67.7%	P25-P50
2019	51.47%	P25-P50	62.00%	P10-P25	66.61%	P25-P50
BUCKEYE						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	44.50%	P25-P50	66.2%	P10-P25	60.0%	P25-P50
2015	41.70%	P25-P50	63.9%	P10-P25	58.6%	P25-P50
2016	43.50%	P25-P50	62.0%	P10-P25	87.7%	P≥90
2017	45.50%	P10-P25	63.3%	P10-P25	80.2%	P75-P90
2018	45.96%	P10-P25	61.8%	P10-P25	75.4%	P50-P75
2019	46.08%	P10-P25	61.80%	P10-P25	62.77%	P10-P25
CARESOURCE						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	50.40%	P25-P50	67.9%	P25-P50	68.4%	P25-P50
2015	51.30%	P25-P50	63.3%	P10-P25	68.1%	P25-P50
2016	53.10%	P50-P75	61.1%	P10-P25	69.6%	P25-P50
2017	53.40%	P25-P50	64.0%	P10-P25	68.1%	P25-P50
2018	53.67%	P25-P50	64.7%	P10-P25	67.6%	P25-P50
2019	54.20%	P25-P50	61.07%	P10-P25	67.64%	P25-P50
MOLINA						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	42.40%	P10-P25	63.1%	P10-P25	66.6%	P25-P50
2015	48.00%	P25-P50	60.0%	P10-P25	72.2%	P50-P75
2016	46.00%	P25-P50	59.6%	P10-P25	66.7%	P25-P50
2017	49.90%	P25-P50	65.5%	P25-P50	68.1%	P25-P50
2018	51.53%	P25-P50	63.3%	P10-P25	65.9%	P25-P50
2019	53.00%	P25-P50	63.26%	P10-P25	68.15%	P25-P50
PARAMOUNT						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	41.30%	P10-P25	61.8%	P10-P25	56.5%	P10-P25
2015	43.60%	P25-P50	62.3%	P10-P25	58.9%	P25-P50
2016	45.80%	P25-P50	63.3%	P10-P25	58.4%	P10-P25
2017	44.90%	P10-P25	58.4%	P10-P25	66.4%	P25-P50
2018	45.02%	P10-P25	66.9%	P25-P50	64.0%	P25-P50
2019	46.67%	P10-P25	62.29%	P10-P25	66.18%	P25-P50
UNITED HEALTH						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	41.70%	P10-P25	60.1%	P10-P25	59.4%	P25-P50
2015	44.50%	P25-P50	63.5%	P10-P25	62.3%	P25-P50
2016	46.10%	P25-P50	57.7%	P<10	79.1%	P50-P75
2017	45.60%	P10-P25	61.3%	P10-P25	61.4%	P10-P25
2018	46.22%	P10-P25	60.6%	P10-P25	63.8%	P25-P50
2019	46.47%	P10-P25	65.21%	P10-P25	63.75%	P25-P50
FFS						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	N/A	N/A	N/A	N/A	N/A	N/A
2015	N/A	N/A	N/A	N/A	N/A	N/A
2016	N/A	N/A	N/A	N/A	N/A	N/A
2017	29.5%	N/A	9.9%	N/A	45.8%	N/A
2018	28.7%	N/A	10.5%	N/A	43.7%	N/A
2019	25.64%	N/A	12.15%	N/A	38.66%	N/A

* Combination 3 vaccinations for Childhood Immunization Status includes DTap, IPV, MMR, HiB, HepB, VZV, and PCV.

Table 2: Acute and Chronic Conditions Measures Medicaid MCP Self-Reported Audited HEDIS and FFS Rates, CYs 2013-2019

	Appropriate Testing for Children with Pharyngitis		Medication Management for People with Asthma -75% compliance, 5-11 years		Medication Management for People with Asthma -75% compliance, 12-18 years	
	Overall Reported Rate	NCQA Percentile Range	Overall Reported Rate	NCQA Percentile Range	Overall Reported Rate	NCQA Percentile Range
STATEWIDE						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	69.3%	P25-P50	28.3%	P50-P75	25.7%	P50-P75
2015	67.5%	P25-P50	36.3%	P75-P90	33.9%	P75-P90
2016	67.5%	P25-P50	32.5%	P50-P75	31.3%	P50-P75
2017	71.2%	P10-P25	33.7%	P50-P75	33.7%	P50-P75
2018	81.0%	P50-P75	33.8%	P50-P75	35.0%	P50-P75
2019	75.78%	P25-P50	35.29%	P50-P75	37.82%	P75-P90
BUCKEYE						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	62.7%	P10-P25	26.0%	P50-P75	25.0%	P50-P75
2015	62.7%	P10-P25	30.6%	P50-P75	30.7%	P75-P90
2016	64.5%	P10-P25	29.5%	P50-P75	27.8%	P50-P75
2017	68.3%	P10-P25	44.5%	P≥90	43.5%	P≥90
2018	78.3%	P25-P50	40.8%	P75-90	36.9%	P75-P90
2019	75.60%	P25-P50	39.08%	P75-90	40.39%	P75-P90
CARESOURCE						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	70.4%	P25-P50	27.1%	P50-P75	24.6%	P50-P75
2015	70.4%	P25-P50	37.9%	P75-P90	35.3%	P75-P90
2016	71.3%	P25-P50	32.4%	P50-P75	32.2%	P50-P75
2017	73.1%	P25-P50	31.7%	P50-P75	32.3%	P50-P75
2018	81.3%	P50-P75	32.3%	P50-P75	34.6%	P50-P75
2019	75.57%	P25-P50	34.34%	P50-P75	37.63%	P75-P90
MOLINA						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	67.7%	P25-P50	35.4%	P75-P90	33.6%	P75-P90
2015	67.7%	P25-P50	38.5%	P75-P90	37.6%	P≥90
2016	67.6%	P25-P50	34.7%	P75-P90	32.0%	P50-P75
2017	71.2%	P10-P25	34.4%	P50-P75	33.0%	P50-P75
2018	80.3%	P50-P75	35.6%	P75-P90	36.7%	P75-P90
2019	75.13%	P25-P50	35.87%	P50-P75	35.73%	P50-P75
PARAMOUNT						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	65.2%	P25-P50	27.0%	P50-P75	23.9%	P50-P75
2015	65.2%	P25-P50	31.1%	P50-P75	27.0%	P50-P75
2016	63.8%	P10-P25	35.8%	P75-P90	30.5%	P50-P75
2017	68.0%	P10-P25	36.2%	P75-P90	34.8%	P75-P90
2018	83.0%	P50-P75	36.0%	P75-P90	38.8%	P75-P90
2019	77.40%	P25-P50	37.07%	P75-P90	40.12%	P75-P90
UNITED HEALTH						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	71.6%	P50-P75	34.0%	P75-P90	29.6%	P75-P90
2015	71.6%	P25-P50	31.7%	P50-P75	29.5%	P50-P75
2016	67.5%	P25-P50	30.7%	P50-P75	29.0%	P50-P75
2017	71.5%	P10-P25	33.0%	P50-P75	32.0%	P50-P75
2018	80.7%	P50-P75	31.8%	P50-P75	28.7%	P50-P75
2019	76.46%	P25-P50	34.84%	P50-P75	35.41%	P50-P75
FFS						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	N/A	N/A	N/A	N/A	N/A	N/A
2015	N/A	N/A	N/A	N/A	N/A	N/A
2016	N/A	N/A	N/A	N/A	N/A	N/A
2017	76.2%	N/A	41.1%	N/A	43.8%	N/A
2018	81.8%	N/A	38.4%	N/A	38.8%	N/A
2019	81.29%	N/A	44.83%	N/A	50.00%	N/A

Table 3: Behavioral Health Measures Medicaid MCP Self-Reported, Audited HEDIS and FFS Rates, CYs 2013-2019

	Use of First-Line Psychosocial Care for Children on Antipsychotics		Engagement of Alcohol and Other Drug Abuse or Dependence Treatment, 13-17 years		Follow-Up Care for Children Prescribed ADHD Medication Continuation/Maintenance Phase	
	Overall Reported Rate	NCQA Percentile Range	Overall Reported Rate	NCQA Percentile Range	Overall Reported Rate	NCQA Percentile Range
STATEWIDE						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	75.5%	N/A	6.7%	P10-P25	61.7%	P75-P90
2015	77.1%	P≥90	16.1%	P50-P75	63.8%	P75-P90
2016	74.7%	P≥90	21.1%	P50-P75	64.3%	P75-P90
2017	75.1%	P≥90	22.5%	P75-P90	65.5%	P75-P90
2018	78.3%	P≥90	23.4%	P25-P50	64.6%	P75-P90
2019	81.25%	≥P90	23.56%	P75-P90	59.76%	P50-P75
BUCKEYE						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	65.5%	N/A	9.5%	P25-P50	57.5%	P50-P75
2015	66.9%	P50-P75	11.9%	P25-P50	53.6%	P50-P75
2016	81.6%	P≥90	21.8%	P75-P90	54.5%	P50-P75
2017	78.9%	P≥90	23.1%	P75-P90	66.2%	P75-P90
2018	78.7%	P≥90	20.8%	P≥90	67.6%	P75-P90
2019	79.94%	≥P90	17.05%	P50-P75	57.29%	P50-P75
CARESOURCE						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	81.2%	N/A	5.5%	P10-P25	64.7%	P75-P90
2015	81.1%	P≥90	19.4%	P50-P75	68.2%	P≥90
2016	74.2%	P75-P90	23.7%	P75-P90	69.2%	P≥90
2017	76.3%	P≥90	25.8%	P≥90	68.1%	P75-P90
2018	78.4%	P≥90	22.5%	P≥90	69.9%	P ≥ 90
2019	81.30%	≥P90	23.27%	P75-P90	61.43%	P50-P75
MOLINA						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	67.0%	N/A	7.3%	P10-P25	62.2%	P75-P90
2015	70.4%	P75-P90	8.2%	P10-P25	67.0%	P75-P90
2016	68.9%	P75-P90	8.5%	P10-P25	61.5%	P50-P75
2017	68.8%	P75-P90	12.8%	P25-P50	67.2%	P75-P90
2018	75.9%	P≥90	35.6%	P≥90	57.9%	P50-P75
2019	78.71%	≥P90	23.79%	P75-P90	62.01%	P50-P75
PARAMOUNT						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	80.6%	N/A	6.7%	P10-P25	63.8%	P75-P90
2015	81.1%	P≥90	7.6%	P10-P25	62.2%	P50-P75
2016	80.9%	P≥90	10.0%	P10-P25	69.5%	P≥90
2017	81.6%	P≥90	8.3%	P10-P25	69.1%	P75-P90
2018	81.0%	P≥90	17.6%	P≥90	65.8%	P75-P90
2019	84.01%	≥P90	23.77%	P75-P90	55.91%	P50-P75
UNITED HEALTH						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	60.2%	N/A	7.4%	P10-P25	40.2%	P25-P50
2015	68.6%	P75-P90	9.0%	P10-P25	42.8%	P25-P50
2016	71.2%	P75-P90	14.6%	P25-P50	45.2%	P25-P50
2017	66.9%	P50-P75	6.9%	P10-P25	40.8%	P10-P25
2018	77.7%	P≥90	22.2%	P≥90	40.3%	P10-P25
2019	82.49%	≥P90	31.73%	P≥90	54.35%	P25-P50
FFS						
2013	N/A	N/A	N/A	N/A	N/A	N/A
2014	N/A	N/A	N/A	N/A	N/A	N/A
2015	N/A	N/A	N/A	N/A	N/A	N/A
2016	N/A	N/A	N/A	N/A	N/A	N/A
2017	58.8%	N/A	11.4%	N/A	64.7%	N/A
2018	52.3%	N/A	9.7%	N/A	44.2%	N/A
2019	51.74%	N/A	29.20%	N/A	42.42%	N/A

