

MONTANA MEDICAID BIRTH REPORT

2014 - 2023

Office of Health and Data
Analytics

December 2024

Table of Contents

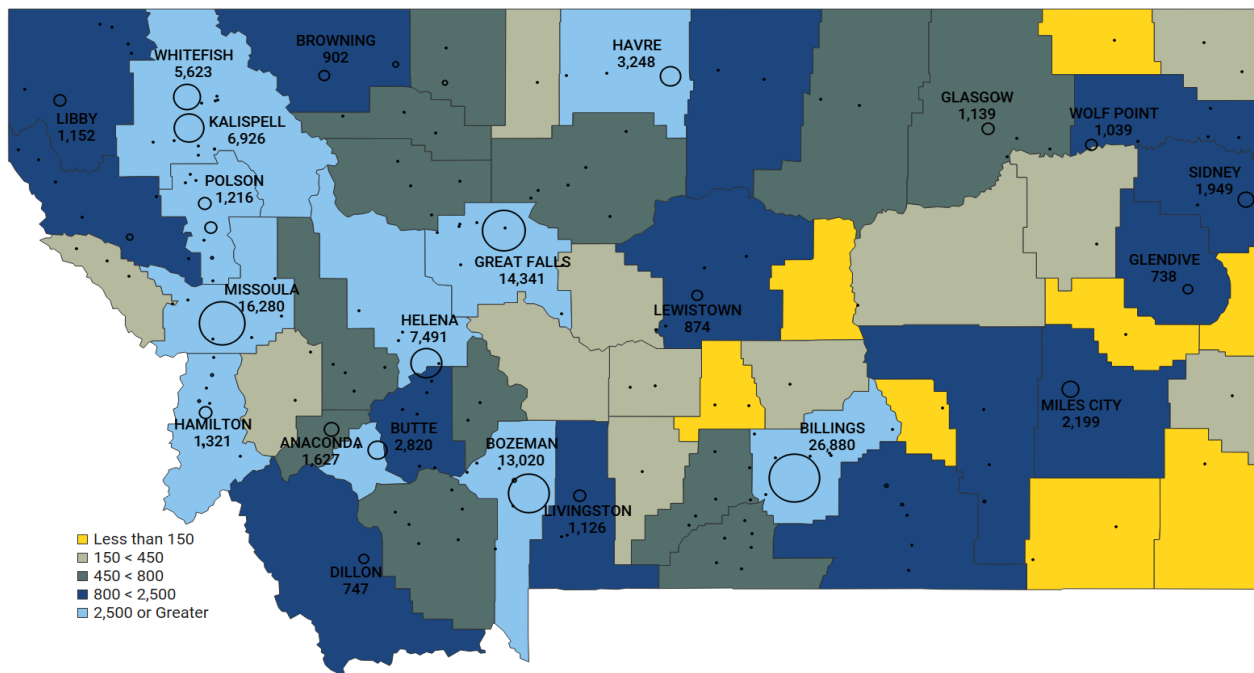
INTRODUCTION.....	3
MEDICAID BIRTH CRITERIA.....	4
AVERAGE MEDICAID BIRTH REIMBURSEMENT	6
LOW BIRTH WEIGHT AND PREMATURE CHILDREN.....	8
ADEQUATE PRENATAL CARE AND FIRST TRIMESTER PRENATAL CARE.....	15
MEDICAID CHILD REIMBURSEMENT OVER TIME	19
MOST EXPENSIVE BIRTHS.....	21
MEDICAID CHILDBIRTH REIMBURSEMENT	22
INFANT DEATHS	23
DISTANCE TO CARE.....	24
SUMMARY	26

INTRODUCTION

Montana Vital Statistics birth records for calendar years 2014 – 2023 were compared against Medicaid enrollment information to create a comprehensive list of Medicaid births and the Medicaid claims data associated with those births. Medicaid pregnancy, deliveries, and postnatal claims were identified using diagnosis, surgical, and drug codes.

FIGURE 1: ALL MONTANA BIRTHS, CALENDAR YEARS 2014 – 2023

County coloring is based on mother's residence reported at time of the birth.



Circle size and city values are based on the total number of births reported in that city.

A few women and children with Medicaid claims indicating pregnancy or delivery were not matched to a Montana vital statistic birth record. Babies usually do not have social security numbers requiring them to be matched by name and their name can change from the claim to the birth record. For example, on the Medicaid claim the child might have the mother’s maiden name as their last name, but on the birth record have their father’s last name. Or in the case of adoption, the child’s first and last names may change. Another example is a mother enrolled in Montana Medicaid giving birth in Denver, resulting in a birth record in the state of Colorado, not Montana. The small percentage of non-matches has little impact on the study and are not included in this report.

MEDICAID BIRTH CRITERIA

A Medicaid birth is defined as any child that had a paid Medicaid claim indicating delivery; a paid Medicaid claim in the first month of life; or a child that has been matched to a mother eligible for Medicaid and the mother has a paid Medicaid claim indicating the delivery of the child. Including any child with a paid claim in the first month of life ensures the inclusion of those children born with severe health conditions whose initial claims may not have had a birth diagnosis, but the diagnosis of a more serious health condition.

**FIGURE 2: MONTANA MEDICAID BIRTHS
PERCENT OF TOTAL BIRTHS BY COUNTY, CALENDAR YEARS 2014 – 2023**

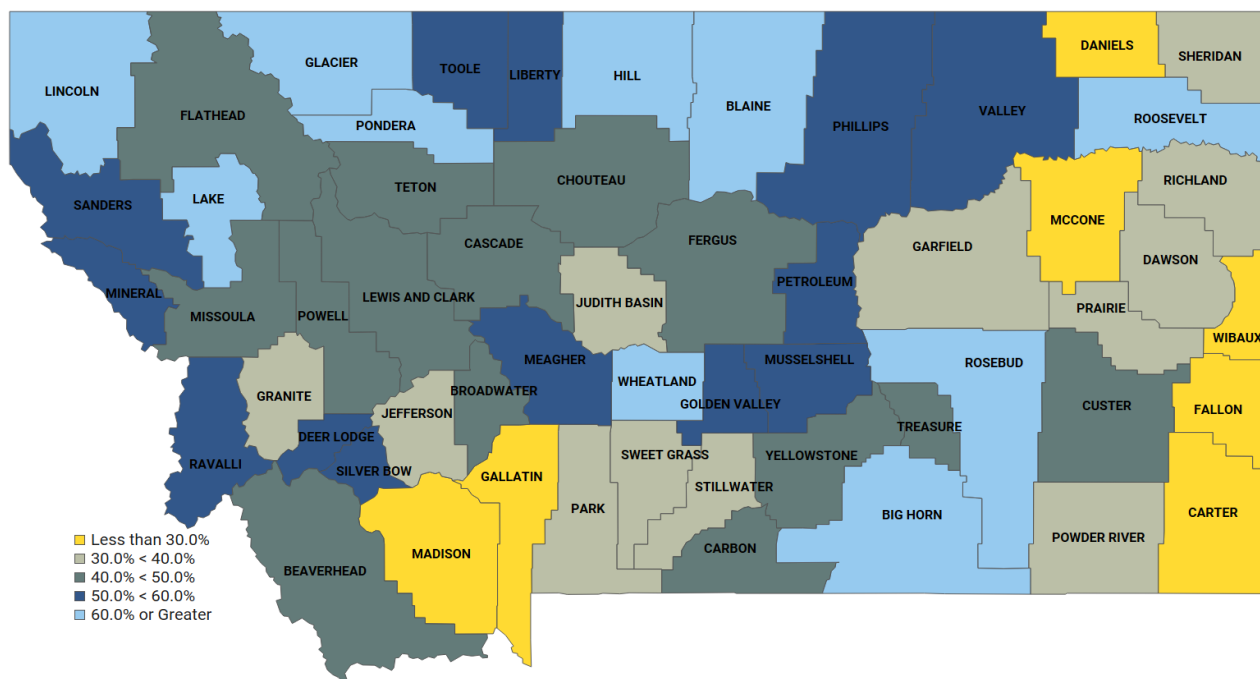


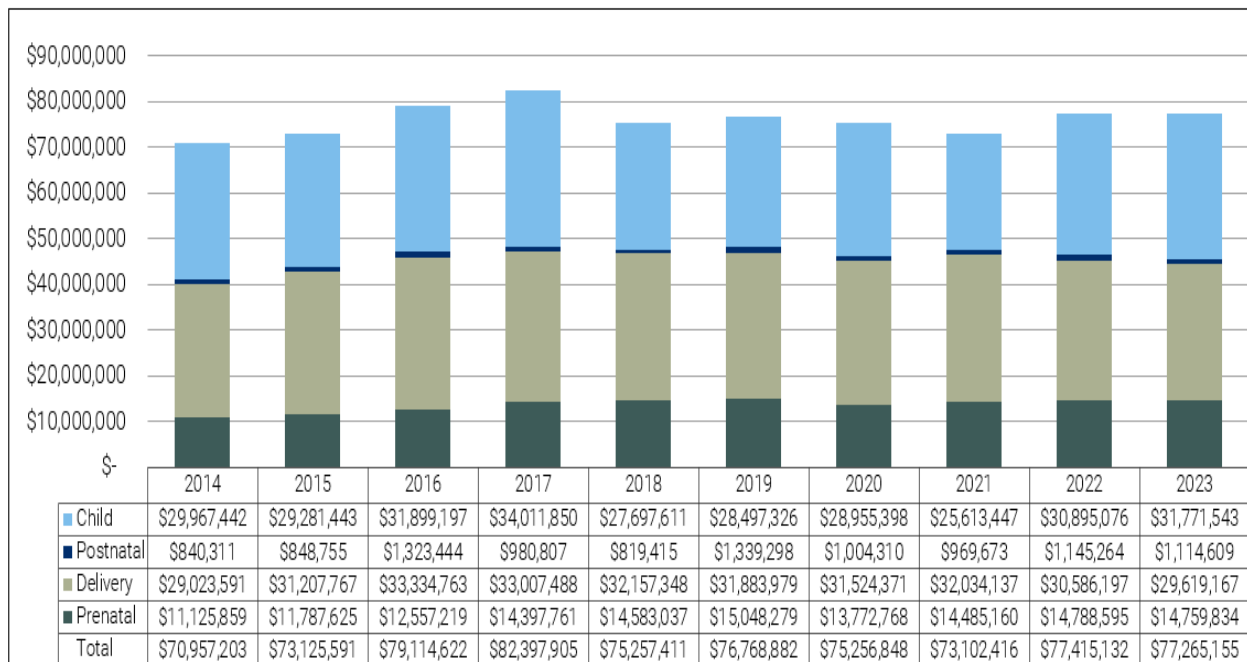
Figure 2 shows the percentage of Medicaid births in a county as compared to all births in that county in calendar years 2014 to 2023. The counties in blue have a higher percent of Medicaid births than the Montana average of 46.9%. The county of residence of the birth mother is determined by the mother’s address on the birth record.

TABLE 1: ALL MONTANA BIRTHS COMPARED TO MEDICAID BIRTHS

Calendar Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Montana Births	12,626	12,765	12,487	11,974	11,710	11,321	10,993	11,432	11,398	11,345
Medicaid Births	6,061	6,275	6,288	6,061	5,779	5,416	5,001	5,001	4,867	4,607
Percent Medicaid	48	49.2	50.4	50.6	49.4	47.8	45.5	43.7	42.7	40.6

Table 1 illustrates that the number of births for Montana residents was relatively consistent from year to year with the largest increase of 4% seen between 2020 and 2021. The number of Montana births peaked in 2015 with 12,765 births. Births have since declined an average of 1.46% each year ending at 11,345 births for 2023. The number of Medicaid births and their proportion to all births have experienced a similar trend over the same period with Medicaid births increasing until 2016 with a peak of 6,288 births. The number of Medicaid births then decreases at an annual rate of 3.79%, a bigger decrease than the total Montana births decline, ending in 2023, at 4,607 Medicaid births, representing 40.6% of the total births in Montana during 2023.

FIGURE 3: TOTAL MEDICAID BIRTH REIMBURSEMENTS



In calendar year (CY) 2023 Montana Medicaid paid health care reimbursement for 40.6% of all births in Montana and Medicaid spent over \$77 million in reimbursements related to these births. Figure 3 stratifies the Medicaid reimbursement made for the Medicaid births, including for individuals that also had third party insurance liability (TPL) in addition to their Medicaid coverage.

- Child - Paid Medicaid claims with a first date of service in the first month of the child’s life. This is all claims including hospital stays initiated in the first month of life.
- Postnatal - Paid Medicaid claims for women associated with a postnatal diagnosis, surgical procedure code for the first 42 days after the birth of their child.
- Delivery - Paid Medicaid claims for women associated with a delivery diagnosis, surgical procedure code within 10 days of the child’s birth.
- Prenatal - Paid Medicaid claims for women associated with a pregnancy diagnosis, surgical procedure code, drug code during their pregnancy.

Birth reimbursements throughout this report, unless otherwise stated, refers to a mother’s prenatal, delivery, and postnatal claims, as well as claims for the child during the first month of its life.

AVERAGE MEDICAID BIRTH REIMBURSEMENT

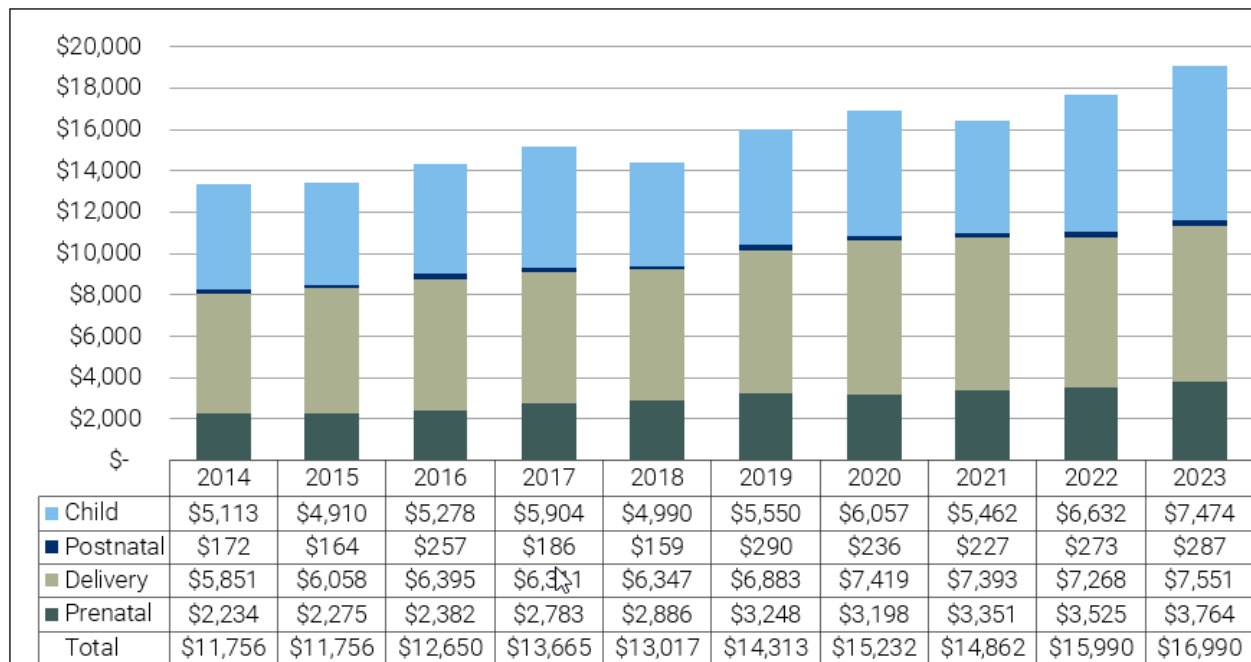
Table 2 breaks out the reimbursement and number of births in each category. This table excludes individuals when they have TPL. For example, a mother may have TPL in the prenatal phase but not the postnatal. The mother is excluded from the table for prenatal reimbursement but included in the postnatal. When a person has TPL, their other insurance pays, then Medicaid pays second, resulting in a smaller claim reimbursement amount for Medicaid. All reimbursement amounts throughout this report, unless otherwise stated, are from only those individuals that do not have any TPL for a given category. This is done to report what Medicaid pays for a birth without the variance of how much different TPL payments affect the average payment.

TABLE 2: REIMBURSEMENT AND BIRTHS BY CATEGORY AND YEAR, TPL EXCLUDED

		Child	Prenatal	Delivery	Postnatal	Total Births
2014	Reimbursement	\$ 29,379,793	\$ 10,670,357	\$ 28,460,530	\$ 828,293	\$ 69,338,974
	Individuals	5,746	4,776	4,864	4,813	5,898
2015	Reimbursement	\$ 28,951,992	\$ 11,249,166	\$ 30,528,331	\$ 818,399	\$ 71,547,889
	Individuals	5,897	4,945	5,039	4,994	6,086
2016	Reimbursement	\$ 30,982,468	\$ 11,790,112	\$ 32,557,133	\$ 1,304,208	\$ 76,633,920
	Individuals	5,870	4,950	5,091	5,080	6,058
2017	Reimbursement	\$ 33,540,133	\$ 13,638,664	\$ 32,395,901	\$ 955,872	\$ 80,530,571
	Individuals	5,681	4,901	5,133	5,129	5,893
2018	Reimbursement	\$ 27,002,394	\$ 14,045,828	\$ 31,533,715	\$ 784,266	\$ 73,366,203
	Individuals	5,411	4,867	4,968	4,929	5,636
2019	Reimbursement	\$ 28,339,131	\$ 14,239,245	\$ 31,181,323	\$ 1,310,672	\$ 75,070,372
	Individuals	5,106	4,384	4,530	4,517	5,245
2020	Reimbursement	\$ 28,309,319	\$ 12,927,602	\$ 30,953,977	\$ 984,750	\$ 73,175,647
	Individuals	4,674	4,042	4,172	4,179	4,804
2021	Reimbursement	\$ 25,273,818	\$ 13,831,784	\$ 31,363,053	\$ 959,640	\$ 71,428,295
	Individuals	4,627	4,128	4,242	4,236	4,806
2022	Reimbursement	\$ 30,233,325	\$ 14,086,765	\$ 29,967,962	\$ 1,121,743	\$ 75,409,795
	Individuals	4,559	3,996	4,123	4,107	4,716
2023	Reimbursement	\$ 31,471,190	\$ 13,969,540	\$ 28,760,893	\$ 1,080,781	\$ 75,282,404
	Individuals	4,211	3,711	3,809	3,762	4,431

Medicaid doesn’t always pay for all categories for each Medicaid birth. Not every mother has prenatal, delivery, and postnatal claims. Mothers can move out of state after delivery or acquire other insurance at some time during their pregnancy. The child may be on Medicaid, but the mother is not. To balance for these variances, the Total Unduplicated non-TPL births, not individuals, for the year is reported in the Total Births column in Table 2.

FIGURE 4: AVERAGE MEDICAID BIRTH REIMBURSEMENT

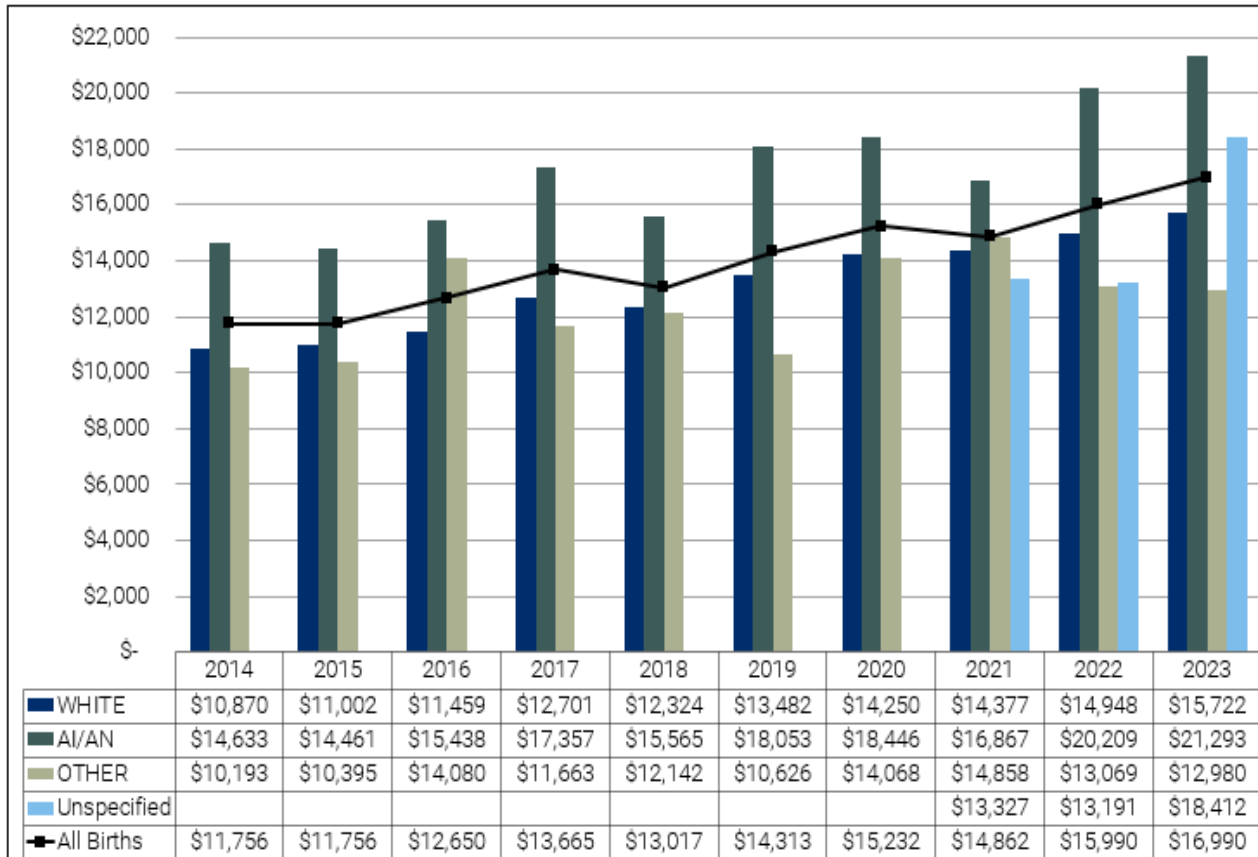


In Figure 4, the average reimbursement is calculated for each reimbursement category: Child, Postnatal, Delivery, and Prenatal. The Total line is not the sum of the average reimbursement for each category. The “Total” line is calculated by summing the four reimbursement categories and dividing by the unduplicated births for the year. For example, In Table 2, for CY2014 the average Medicaid birth reimbursement “Total” is the total money reimbursed in each category, \$69,338,974, divided by the number of unduplicated non-TPL Medicaid births for the year, 5,898, for an average Medicaid Birth reimbursement of \$11,756.

Average Medicaid birth reimbursement can shift up or down from year to year but over the course of the study period has increased on average, 4.18% per year. The median birth reimbursement increased from \$8,484 in 2014 to \$11,317 in 2023, an average increase of 3.25% per year.

The race categories on the vital statistics birth records were condensed into 3 groups: White, American Indian / Alaska Native (AI/AN), and Other (African American, Hispanic, Asian, or Other). If race was not provided on the birth record, then the race provided in Medicaid enrollment data was used. Starting in CY2021 those people that didn’t provide a race in birth or Medicaid records are listed as Unspecified. Average Medicaid birth reimbursement by race is charted in Figure 5.

FIGURE 5: AVERAGE MEDICAID BIRTH REIMBURSEMENT BY RACE



The AI/AN population consistently has higher than average Medicaid birth reimbursement. These higher reimbursement amounts may be attributed to the population’s higher than average percentage of low-birth-weight births as noted in Figure 8. The AI/AN population is small enough that expensive low birth weight births could have an impact on the average birth reimbursement for the population.

LOW BIRTH WEIGHT AND PREMATURE CHILDREN

Low birth weight (LBW) and premature children were identified using the child’s birth record from Vital Statistics. A child with a vital statistics birth record indicating a birth weight of 2,499 grams or less is considered a LBW child in the study. A premature child is defined as a child that has a gestational age of less than 37 weeks. Figures 6 through 9 are based solely on vital statistic birth record information.

FIGURE 6: PREMATURE BIRTHS

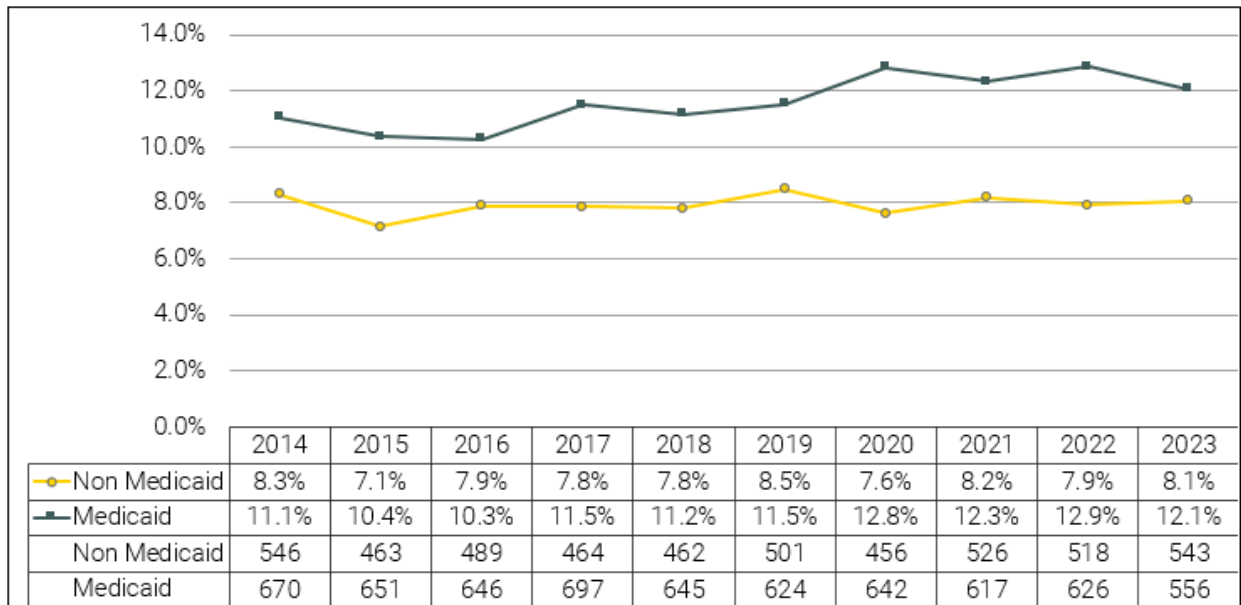


Figure 6 shows that the percentages of premature births have remained consistent over the study period for non-Medicaid births. Medicaid births have a higher percentage of premature births when compared to non-Medicaid and has increased slightly over the past 6 years.

FIGURE 7: LOW BIRTH WEIGHT

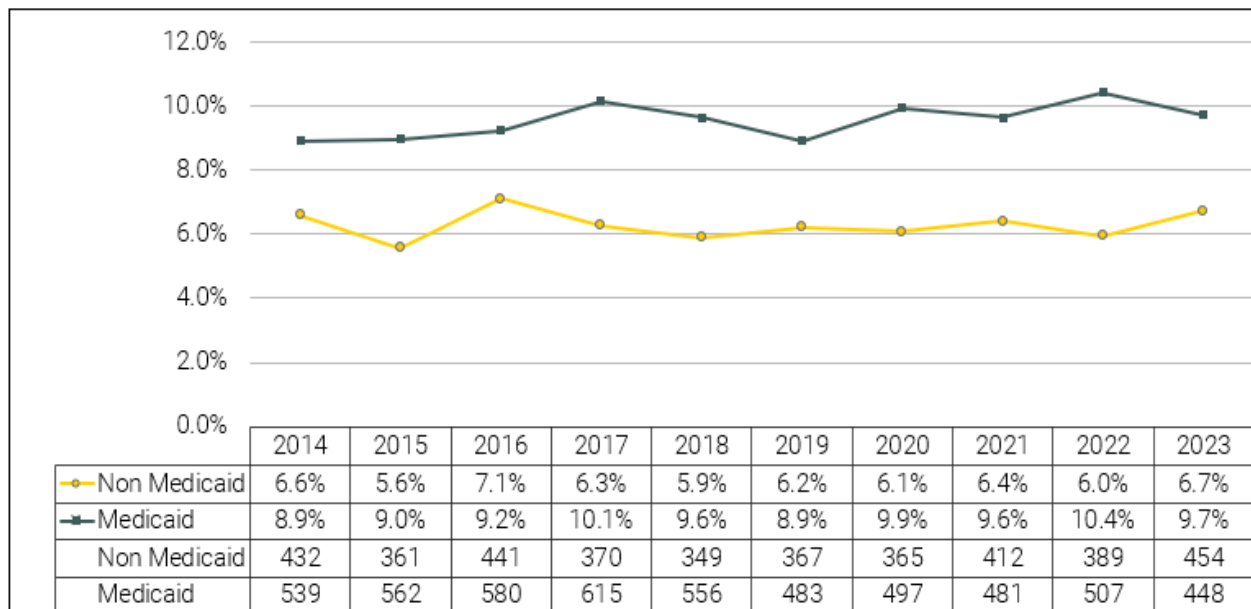


Figure 7 shows that the percentages of LBW have remained consistent over the study period. Medicaid births have a higher percentage of LBW births when compared to non-Medicaid Montana births.

FIGURE 8: PREMATURE & LOW BIRTH WEIGHT BY RACE

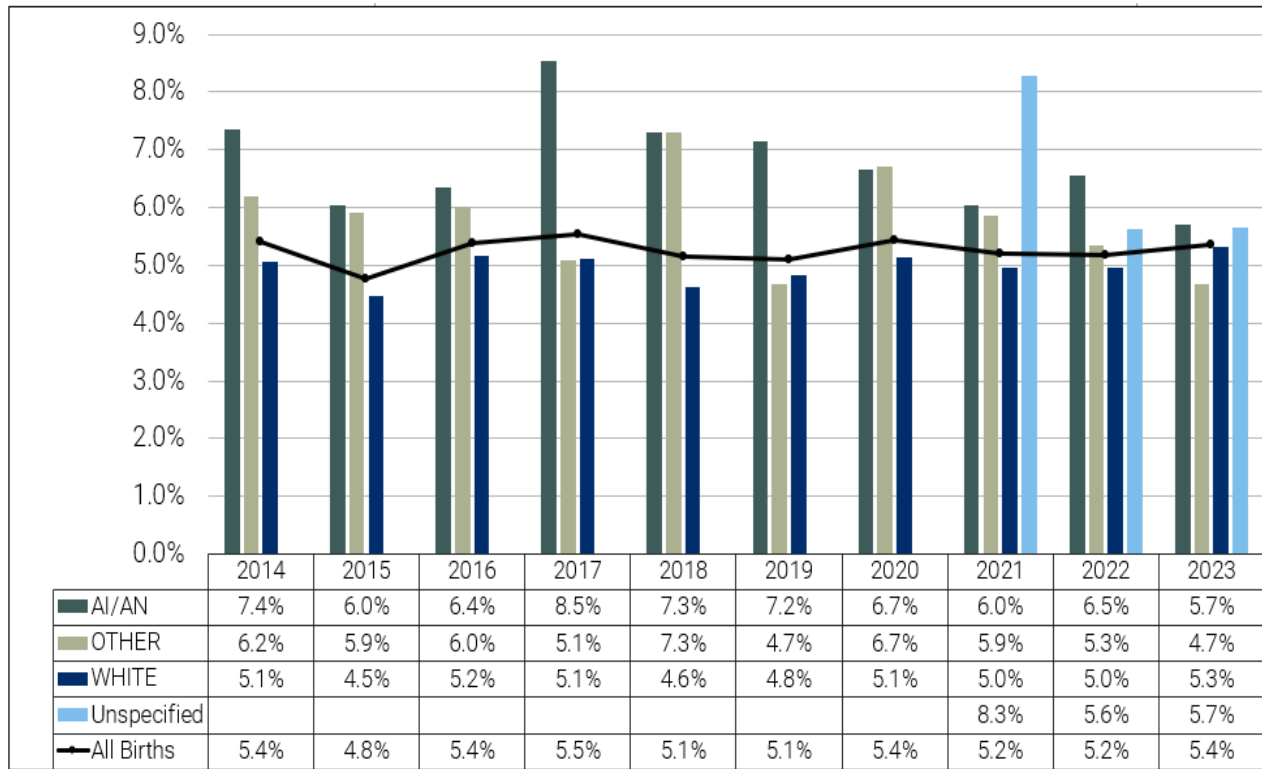
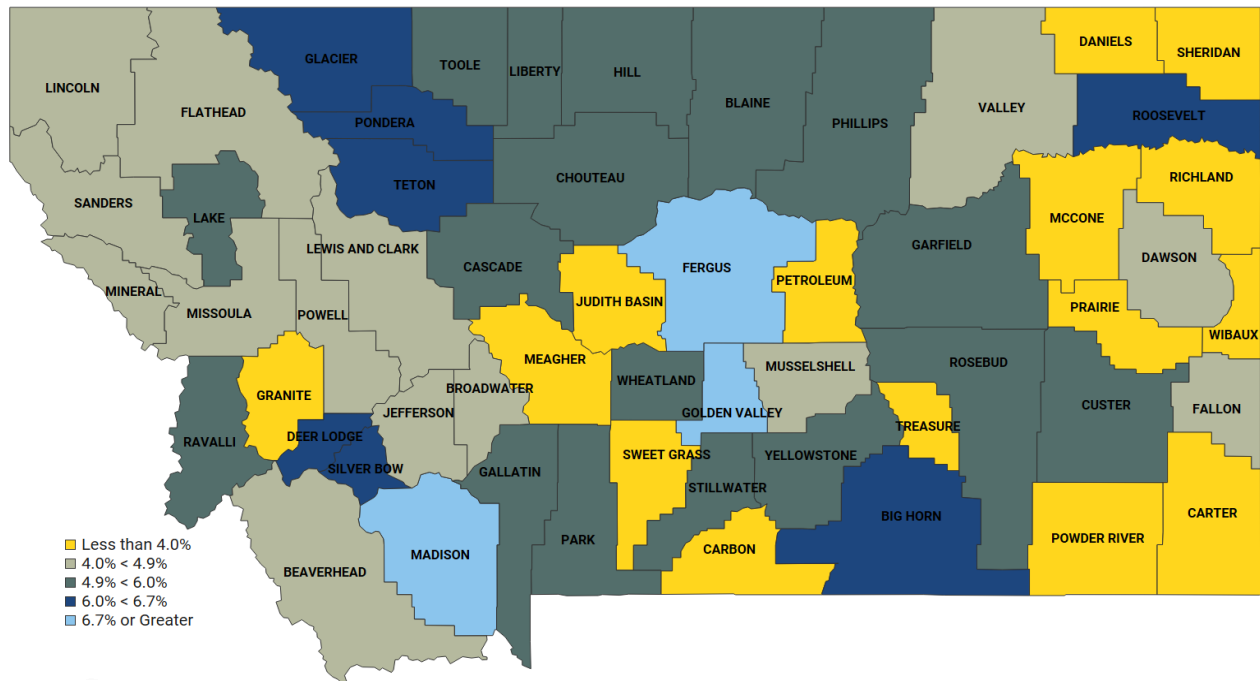


Figure 8 shows that all race groups except for White generally have a higher percentage of Premature & LBW births than for all births.

Figure 9 shows the percentage of Premature & LBW births in a county as compared to all births in the county. This metric only includes those children identified as Premature & LBW births on the birth record. The counties in orange and red have a higher-than-average percent of Premature & LBW births. Keep in mind, for counties with small numbers of total births, each Premature & LBW birth has a greater impact on the percentage for that county. The county of residence is determined by the mother’s address from the birth records.

**FIGURE 9: PREMATURE & LOW BIRTH WEIGHT AS PERCENT OF TOTAL BIRTHS
BY COUNTY, CALENDAR YEARS 2014 TO 2023**



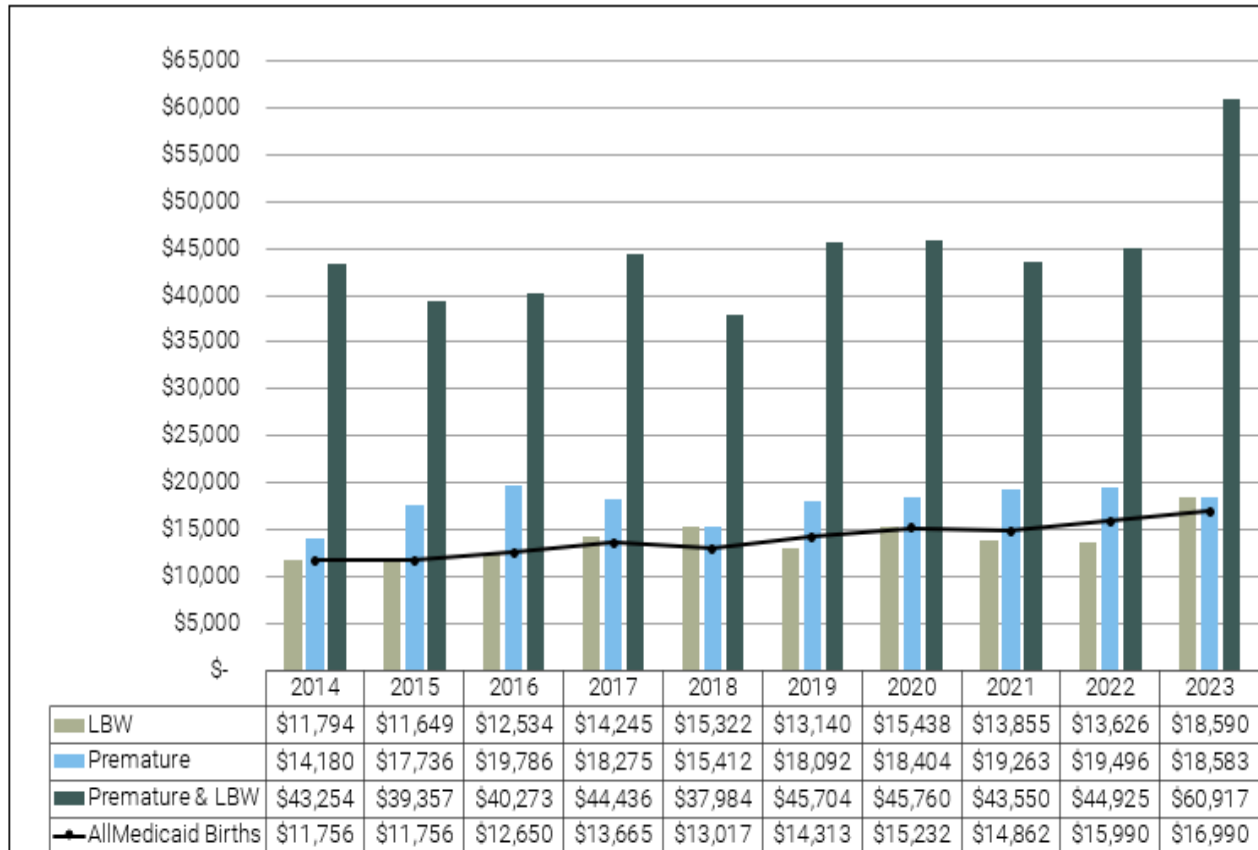
A review of Medicaid claims for children with a claim indicating a birth weight of less than or equal to 2,499 grams or a claim that indicates a gestational age of less than 37 weeks found an additional 68 more premature births and 196 more LBW births in the Medicaid group in CY2023 than the data from the vital statistic birth records. These additional births are not included in the above charts to keep the comparisons between non-Medicaid and Medicaid births comparable.

When performing the analysis regarding reimbursement these additional children discovered through claim diagnosis codes were included as LBW or premature births.

There is a lot of overlap between premature births and LBW births (i.e., early delivery makes it more likely the child is LBW and vice versa). Using both the births identified by Medicaid claims data and from the birth record, 60% of LBW babies are also born premature and roughly 57% of premature babies are also LBW.

Figure 10 compares the average birth reimbursement for all Medicaid births to average reimbursement for premature only births, LBW only births, and births that are Premature & LBW.

FIGURE 10: PREMATURE OR LOW BIRTH WEIGHT AVERAGE REIMBURSEMENT



Medicaid reimbursement for children that are Premature & LBW are on average over three times more expensive than an average Medicaid birth. Children that are only LBW or only premature are just slightly more expensive than the average Medicaid birth.

Premature or LBW births accounted for approximately 36% of the Medicaid reimbursed amount, but only about 18% of the Medicaid births

The next portion of this report focuses on Medicaid births that are both Premature & LBW, as they appear to be the more critical population based on total birth reimbursement.

FIGURE 11: MEDICAID BIRTHS WITH CHILD REIMBURSEMENT OVER \$100,000

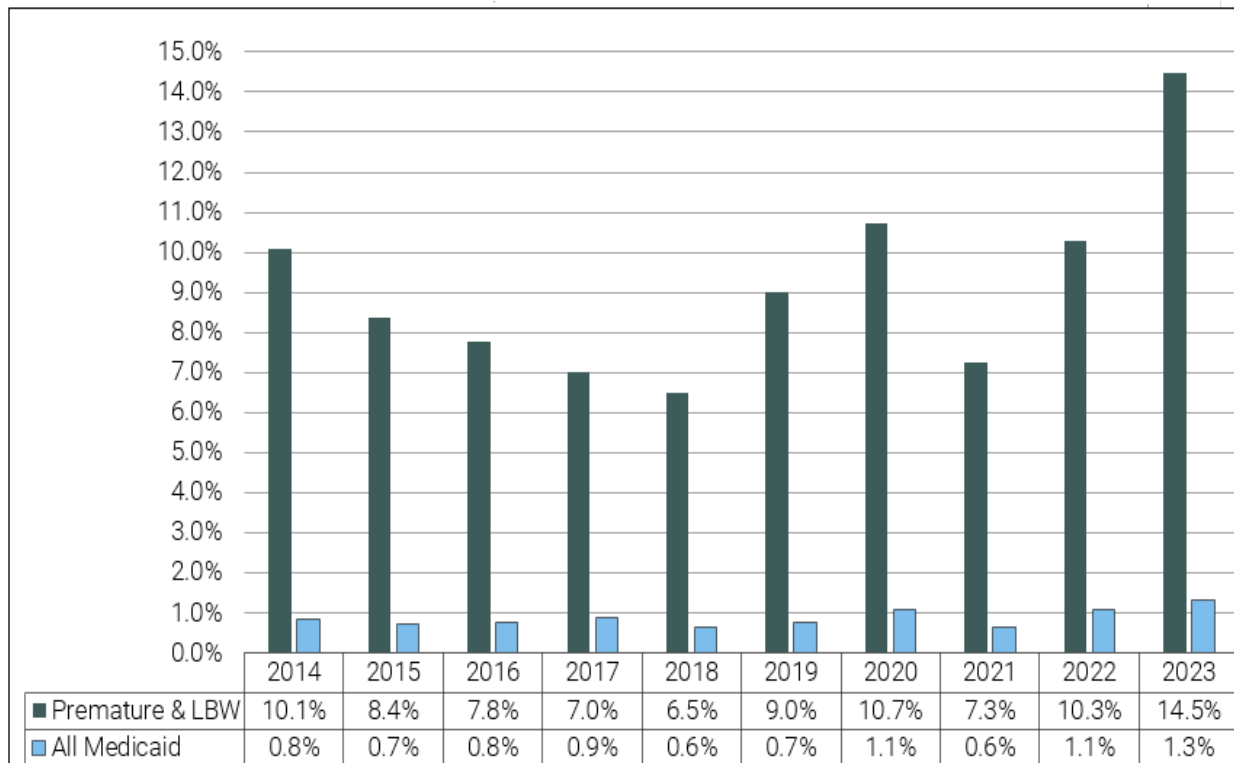
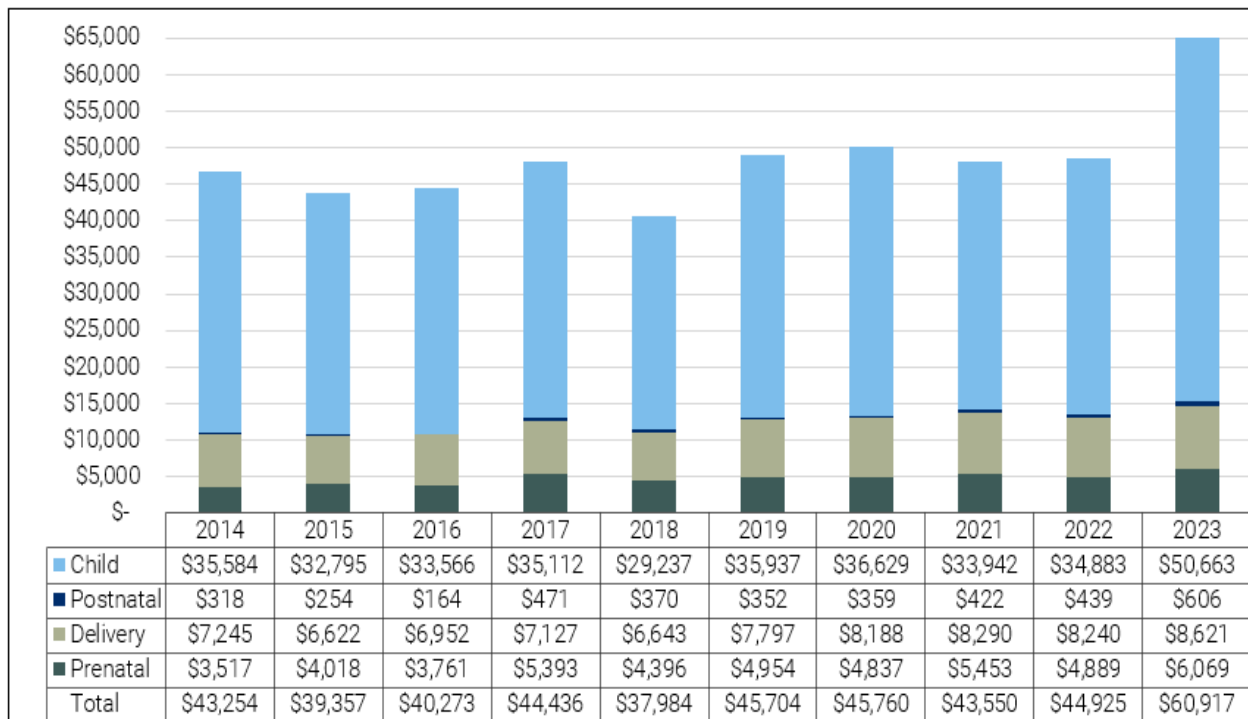


Figure 11 graphs the percentage of births for Premature & LBW and all Medicaid births with over \$100,000 in paid Medicaid claims with a first date of service during the first month of the child’s life. This figure includes children indicated as Premature & LBW births by a diagnosis in claims data. Premature & LBW children consistently have a greater chance of exceeding \$100,000 in their first month of life when compared against regular Medicaid.

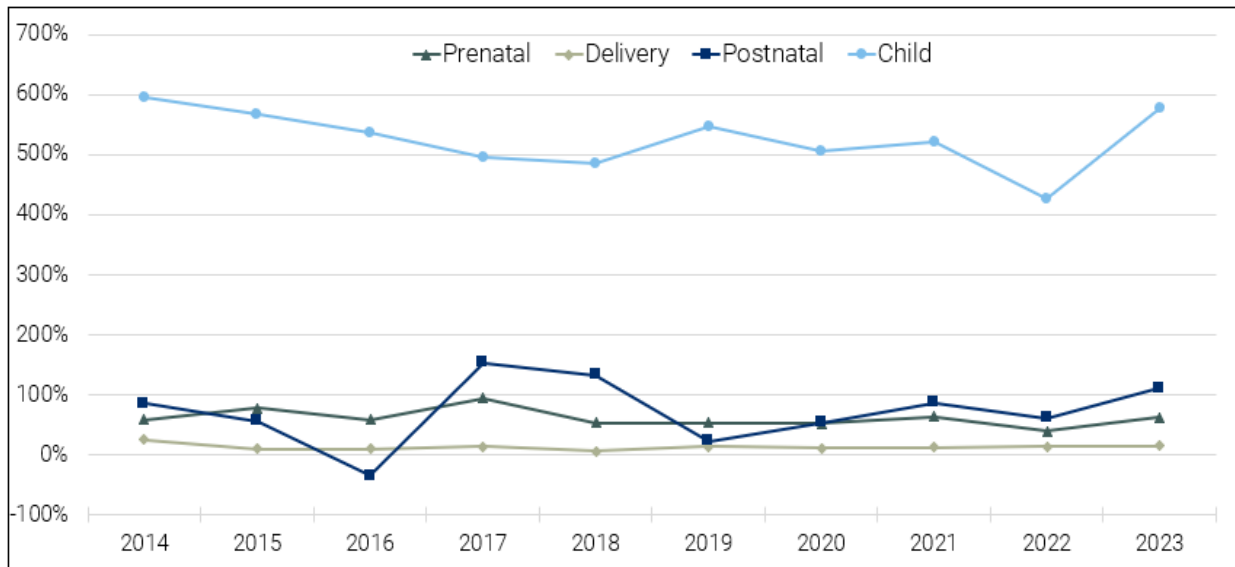
Figure 12 breaks out the total birth reimbursement for Medicaid Premature & LBW children that do not have TPL.

FIGURE 12: AVERAGE PREMATURE & LOW BIRTH WEIGHT REIMBURSEMENT


- Child** - The average of paid Medicaid claims with a first date of service in the first month of the child’s life. This is all claims including hospital stays initiated in the first month of life.
- Postnatal** - The average of paid Medicaid claims for women associated with a postnatal diagnosis, surgical procedure code for the first 42 days after the birth of their child.
- Delivery** - The average of paid Medicaid claims for women associated with a delivery diagnosis, surgical procedure code within 10 days of the child’s birth.
- Prenatal** - The average of paid Medicaid claims for women associated with a pregnancy diagnosis, surgical procedure code, drug code, or DRG code during their pregnancy.

The major difference in reimbursement between the Premature & LBW and an average birth paid by Medicaid is the Child category. Figure 12 shows that the Child paid amounts for Premature & LBW births are around 6.3 times that of the reimbursement for an average birth. For example, in 2017 the Child category for Premature & LBW births was 495% more than the average birth reimbursement. Comparatively, the mother’s total reimbursement for a Premature & LBW birth increased around 40%.

FIGURE 13: PREMATURE & LOW BIRTH WEIGHT REIMBURSEMENT INCREASE



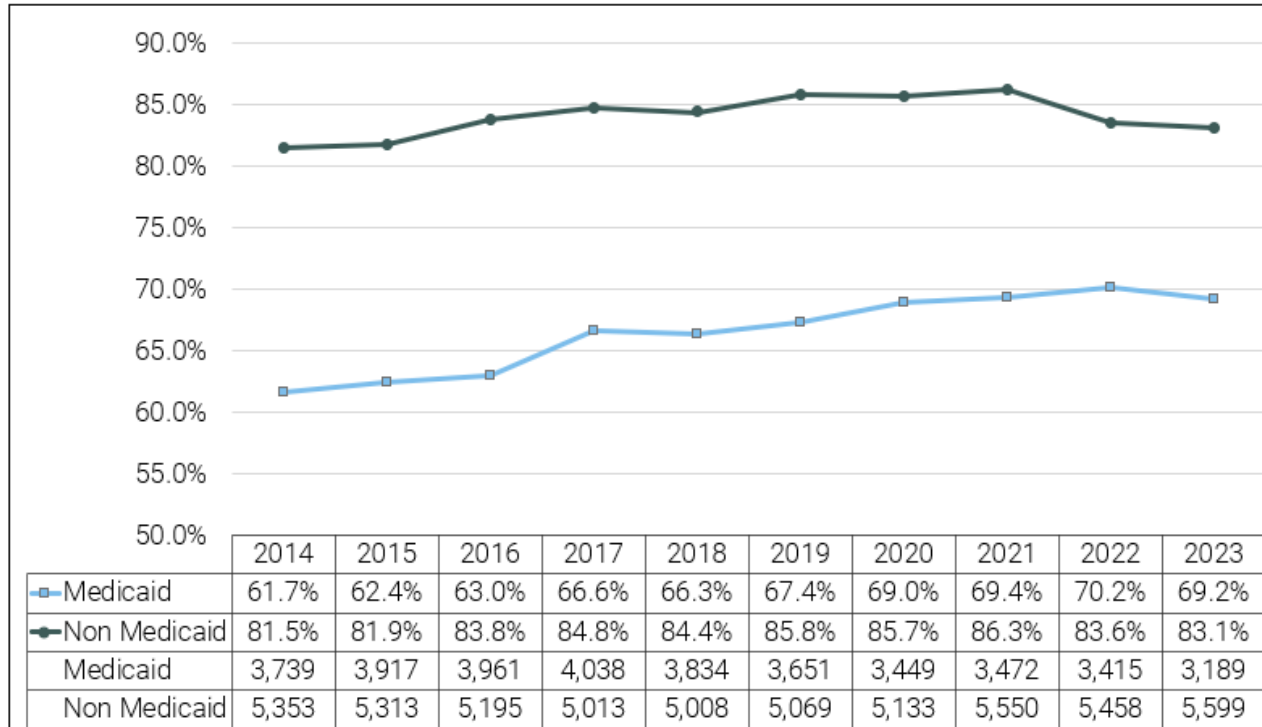
As previously noted, the Child category is the total of all Medicaid claims that have a first date of service in the first month of the child’s life. Since hospital admissions are paid for the entire stay, if a child is hospitalized starting in their first month of life, that entire claim amount is included in their Child category. The increase in the Child category for Premature & LBW children indicates these children have longer initial hospital stays.

ADEQUATE PRENATAL CARE AND FIRST TRIMESTER PRENATAL CARE

Adequacy of prenatal care calculations are based on the Adequacy of Prenatal Care Utilization Index which measures the utilization of prenatal care on two dimensions. The first dimension, adequacy of initiation of prenatal care, measures the timing of initiation using the date prenatal care began as reported on the birth record. The second dimension, adequacy of received services, is measured by taking the ratio of actual number of visits reported in the vital statistics data to expected number of visits. The expected number of visits is based on the American College of Obstetrics and Gynecology prenatal care visitation standards for uncomplicated pregnancies and is adjusted for the gestational age at initiation of care, and for the gestational age at delivery. To be classified as having received adequate prenatal care, the mother must have begun prenatal care within the first trimester *and* received 80% or more of the recommended number of prenatal office visits.

Figure 14 shows the percent of non-Medicaid births that begin prenatal care in the first trimester compared to Medicaid births.

FIGURE 14: PRENATAL CARE STARTED IN FIRST TRIMESTER



One explanation for the difference between Medicaid and non-Medicaid pregnancies in Figure 14 is that some Medicaid mothers did not have health insurance prior to becoming pregnant. Becoming pregnant gave the mother access to Medicaid, but not without delay. However, this only partly explains the difference since 68.9% of Medicaid mothers with continuous enrollment started prenatal care in the first trimester compared to 63.3% for mothers with non-continuous enrollment.

If we focus solely on the mothers who began prenatal care in their first trimester, as Figure 15 does, we find the behavior of Medicaid and non-Medicaid mothers to be much more similar. An average of 83.1% of Medicaid mothers who began prenatal care in the first trimester received 80% of their recommended prenatal checkups compared to an average of 88.9% of non-Medicaid mothers.

FIGURE 15: PERCENT OF PRENATAL VISITS COMPLETED WHEN CARE STARTED IN 1ST TRIMESTER

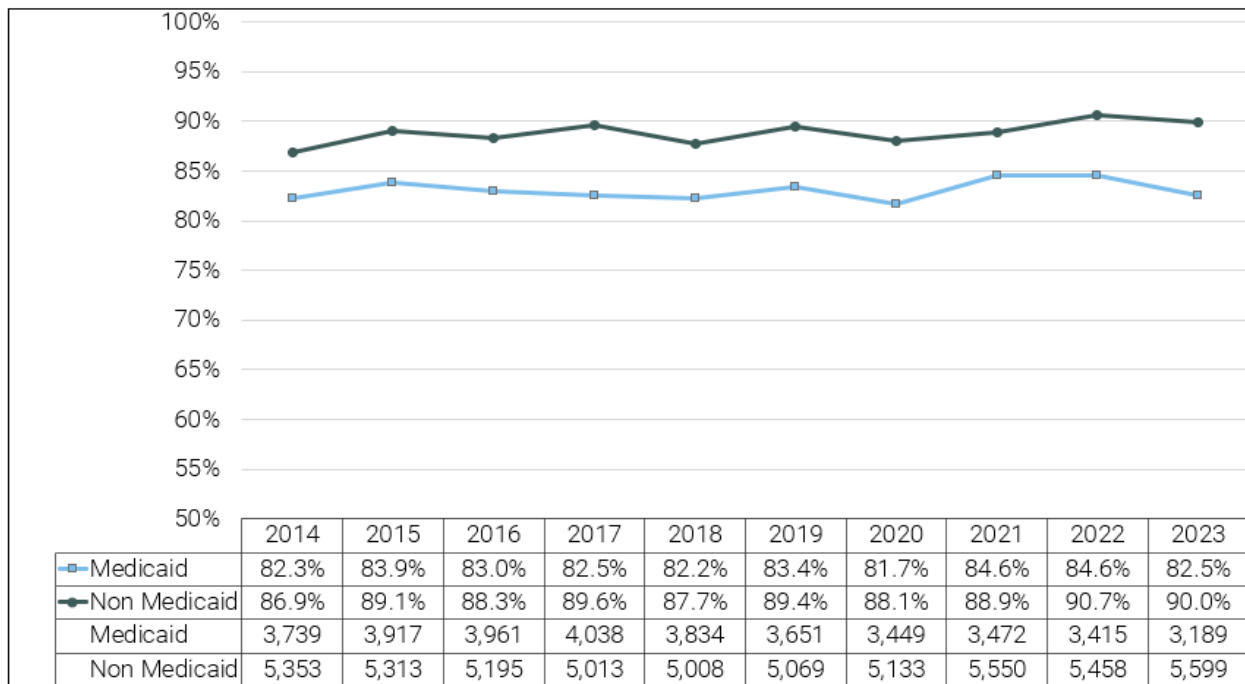
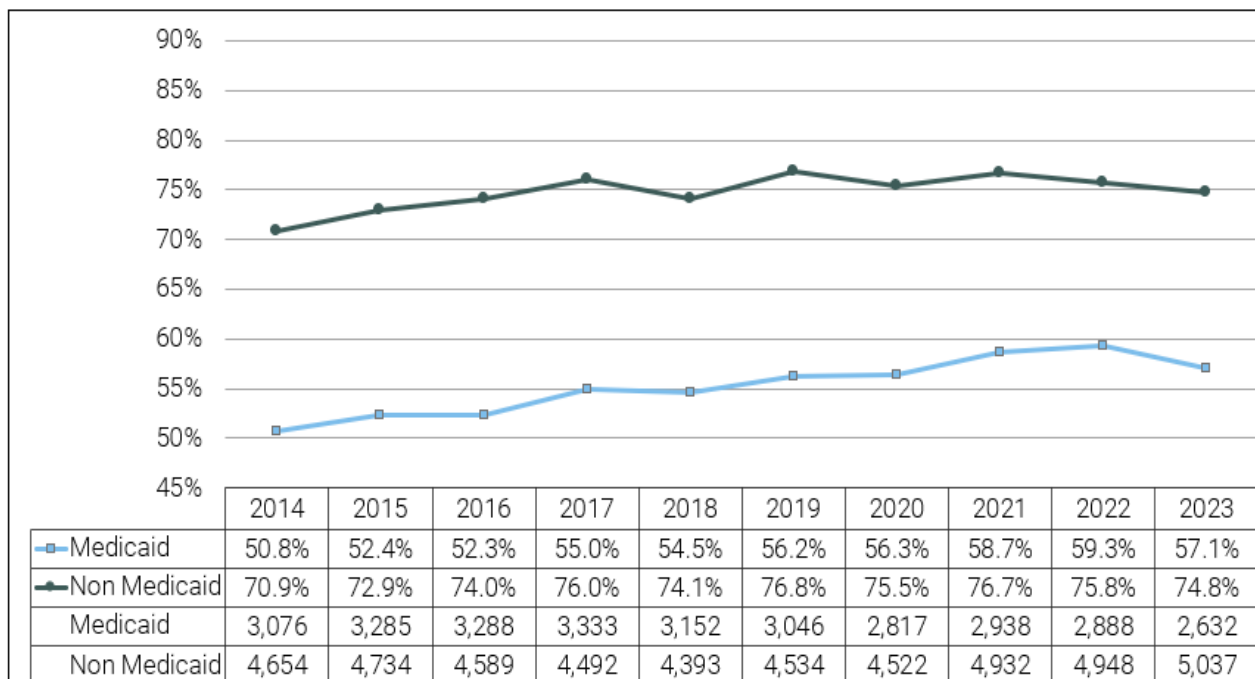


Figure 16 shows the outcome of combining both dimensions for Adequate Prenatal Care. Medicaid pregnancies consistently have a lower percentage of adequate prenatal care than non-Medicaid.

FIGURE 16: RECEIVED ADEQUATE PRENATAL CARE



In addition to looking at Medicaid versus non-Medicaid groups for adequate prenatal care it was also graphed by mother's race group. Figure 17 shows that AI/AN and Other have lower rates of adequate prenatal care than the White race category.

FIGURE 17: ADEQUATE PRENATAL CARE BY RACE

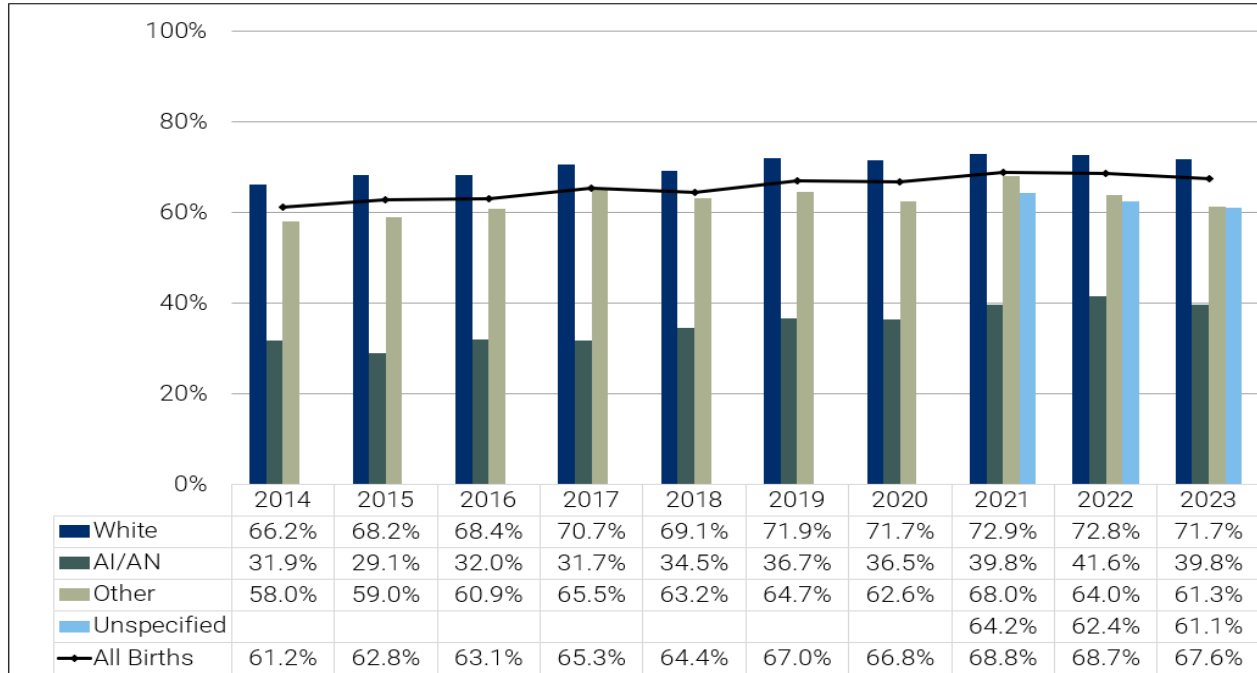
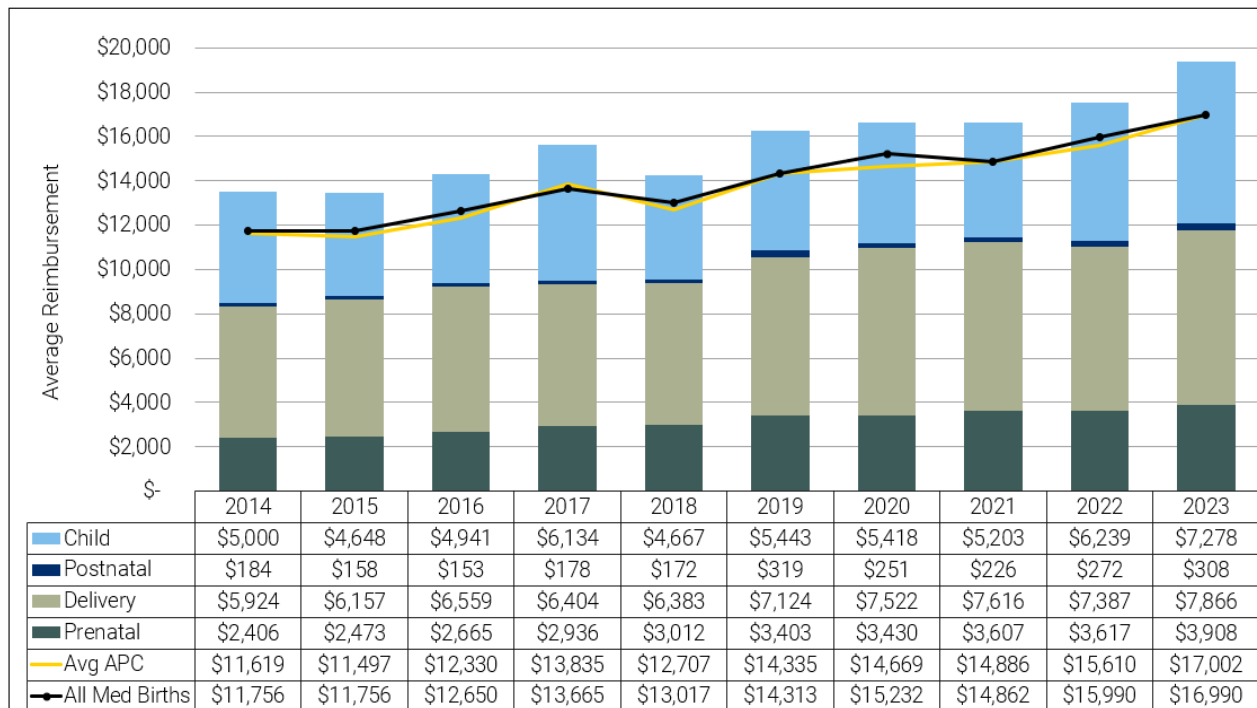


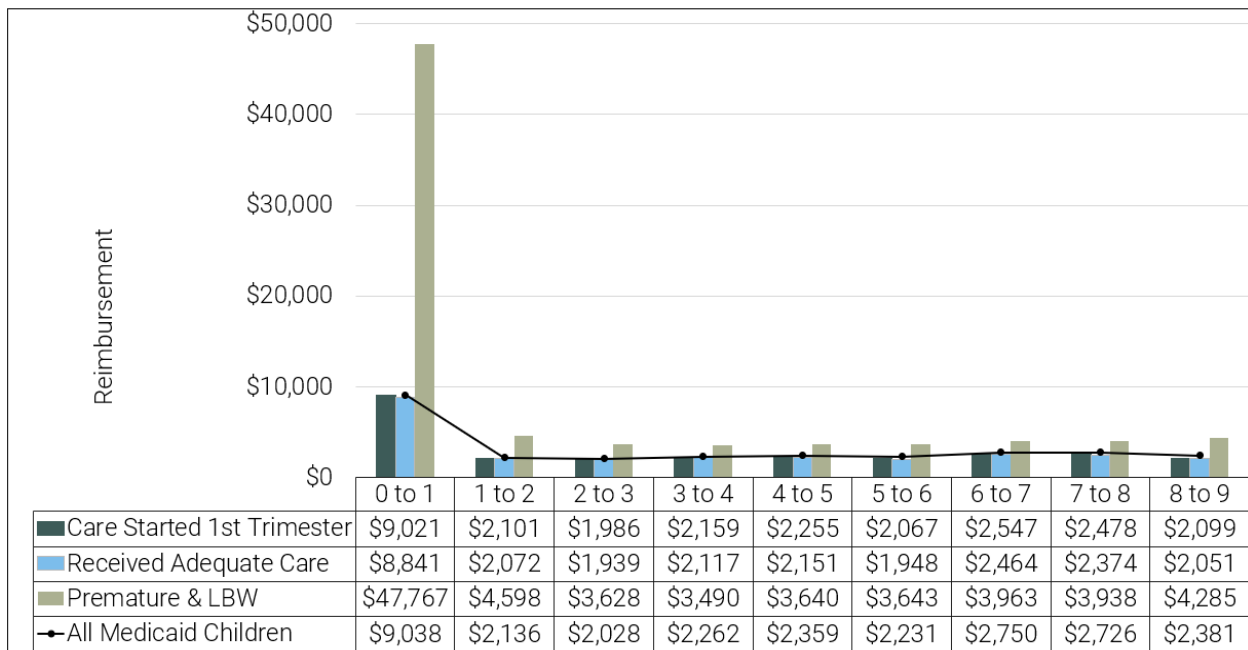
FIGURE 18: NON TPL MEDICAID BIRTHS RECEIVING ADEQUATE PRENATAL CARE



If we compare reimbursement categories for births with adequate prenatal care to the average birth, we find that generally mothers receiving adequate prenatal care have less reimbursement than the average Medicaid birth in child and delivery categories. However, they do have more reimbursement in prenatal care as would be expected. Total reimbursement for adequate prenatal care births is 0.7% less than All Medicaid births across the ten years of the study.

MEDICAID CHILD REIMBURSEMENT OVER TIME

FIGURE 19: CHILD AVERAGE MEDICAID REIMBURSEMENT BY AGE IN YEARS



The study also looked at reimbursement for Medicaid children over time. The child had to have at least one paid claim in the first month of life to be included. Then, to be included in any subsequent period, the child had to be enrolled in Medicaid and they were excluded from any period where they were eligible for TPL.

Since claims can often cross over time periods, claims are grouped according to the first date of service on the claim. Each analysis period shows the total of paid Medicaid claims that had a first day of service in that age period. Figure 19 shows the average total Medicaid paid claims for each year of the child’s life for several birth populations. As the chart dramatically illustrates, the most expensive year on average for any Medicaid child is during the first year of life. Figure 20 breaks out the reimbursement amounts during the first year of life by month.

FIGURE 20: AVERAGE MEDICAID REIMBURSEMENT BY AGE IN MONTHS FOR FIRST YEAR OF LIFE

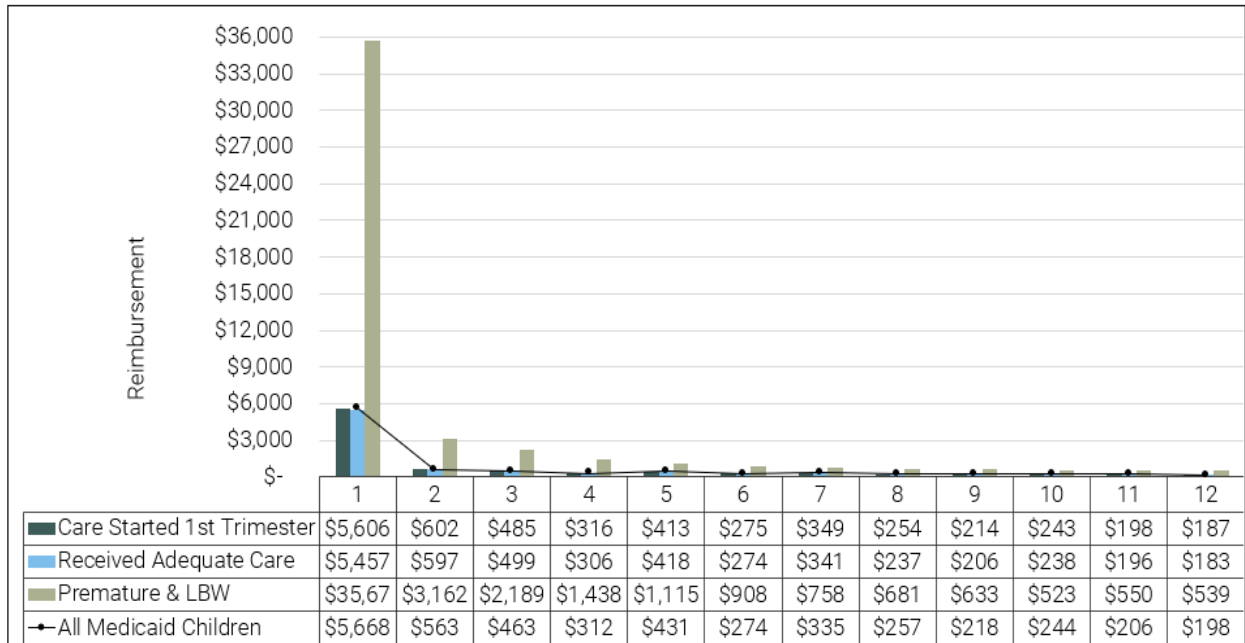


Figure 20 shows that reimbursement incurred for the first month of life is a significant factor in determining total reimbursement for the first year of life. Keep in mind that prenatal, delivery, and postnatal reimbursements are not included, only reimbursements from claims for the child. This reinforces that the most critical and expensive time for a child is in the first month of life when the child has their initial hospital stay at birth.

MOST EXPENSIVE BIRTHS

In this section of the report, the analysis focuses on the 100 most expensive Medicaid births from calendar years 2014-2023. The total birth reimbursement which includes prenatal, delivery, postnatal, and all claims with a first date of service in the child’s first month of life were totaled for all Medicaid births during the study period. The one hundred most expensive births were then compared to all Medicaid births and all births in Montana

TABLE 3: COMPARISON OF 100 MOST EXPENSIVE MEDICAID BIRTHS TO ALL MEDICAID BIRTHS

	Most Expensive		All Medicaid Births		All Births	
	Number	% of Births	Number	% of Births	Number	% of Births
Infant Deaths	8	8.0%	381	0.7%	592	0.5%
Premature & LBW	71	71.0%	3,568	6.4%	6,196	5.2%
Mother Smoked during Pregnancy	31	31.0%	13,379	24.2%	15,602	13.2%
Mother Drank during Pregnancy	4	4.0%	838	1.5%	1,212	1.0%
Prenatal Care Started First Trimester	67	67.0%	36,665	66.2%	89,356	75.7%
Received Adequate Prenatal Care	53	53.0%	30,455	55.0%	77,290	65.5%
Multiple Births	17	17.0%	1,793	3.2%	3,838	3.3%
*Average Child	\$368,765		\$5,668			
*Average Delivery	\$11,790		\$6,693			
*Average Prenatal	\$10,003		\$2,918			
*Average Postnatal	\$7,406		\$222			
*Average Total Birth	\$391,458		\$13,846			
Total Births in Group	100		55,356		118,051	

* Does not include those births with Third Party Liability Insurance (TPL).

Table 3 further supports that Medicaid births on average are higher risk births. Medicaid births have a higher percentage of Premature & LBW, highlighted in blue in Table 3. Medicaid mothers are more likely to smoke cigarettes during their pregnancy, highlighted in gray. The above factors indicate that Medicaid serves a higher risk population than that of the general population.

When you compare the one hundred most expensive Medicaid births to the average Medicaid birth, you see a dramatic increase in infant deaths and Premature & LBW. These factors reinforce that Premature & LBW births increase expenses to Medicaid significantly, see orange highlighting in Table 3. The most expensive births also had a higher percentage of multiple births.

Medicaid mothers are on average slightly younger than the general population, see Table 4. This is most noticeable for the percentage of births for mothers less than twenty years of age, see Table 5. 9.5% of all Medicaid births and 10.0% of the top 100 most expensive Medicaid births

were births to teenage mothers 19 and under, compared to 4.9% of the overall population. This suggests that some expensive births result from teen pregnancies.

TABLE 4: MOTHER’S AVERAGE AGE BY CALENDAR YEAR

Calendar Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Medicaid	24.9	26.5	26.7	26.9	27.2	27.3	27.5	27.5	27.8	27.8
Top 100	25.4	27.8	27.4	30.2	29.6	24.2	29.6	27.7	31.0	30.0
All Births	27.7	28.5	28.7	28.9	29.0	29.2	29.4	29.5	29.7	29.7

TABLE 5: MOTHER’S AGE DISTRIBUTION

Calendar Year	<16	16 to 17	18 to 19	20 to 24	25 to 34	35 to 44	> 44
Medicaid	0.4%	2.0%	7.1%	30.9%	49.4%	10.2%	0.1%
Top 100	0.0%	3.0%	7.0%	23.0%	50.0%	16.0%	1.0%
All Births	0.2%	1.0%	3.7%	20.5%	59.2%	15.3%	0.2%

MEDICAID CHILDBIRTH REIMBURSEMENT

When comparing reimbursement across Medicaid, much of the difference in average reimbursement is driven by the reimbursement for Premature & LBW births. Table 6 shows the total Medicaid reimbursed for all Medicaid children for the first year of life. Included in this table are children who have met the criteria for Medicaid birth as outlined on page 4 of this report. The table shows that over 23% of the children born Premature & LBW have Medicaid reimbursement totaling over \$50,000, while total Medicaid births have 2.38% of the children born with reimbursement more than \$50,000. Even though there are not many Medicaid births for mothers 15 years and younger, the table does show that there is an increase in the number of children with high reimbursement amounts. The number of children with reimbursement over \$75,000 is 2.39% for mothers 15 years old and younger and 1.53% for all Medicaid mothers.

TABLE 6: MEDICAID BIRTHS STRATIFIED BY REIMBURSEMENT

Medicaid Costs	All Medicaid Cases		Premature LBW		Mother Received Adequate Prenatal Care		Mother's age 15 or less	
	Number	% of Group	Number	% of Group	Number	% of Group	Number	% of Group
> \$ 50,000	1,320	2.38%	846	23.71%	670	2.20%	7	3.35%
> \$ 75,000	845	1.53%	568	15.92%	438	1.44%	5	2.39%
> \$ 100,000	653	1.18%	447	12.53%	343	1.13%	3	1.44%
> \$ 150,000	416	0.75%	280	7.85%	220	0.72%	1	0.48%
> \$ 200,000	259	0.47%	170	4.76%	139	0.46%	1	0.48%
> \$ 300,000	123	0.22%	71	1.99%	68	0.22%	0	0.00%
> \$ 400,000	74	0.13%	44	1.23%	46	0.15%	0	0.00%
Total in Group	55,356		3,568		30,455		209	

Note that each reimbursement category in Table 6 is inclusive of the previous groupings, for example, the 447 Premature & LBW cases with Medicaid reimbursement amounts more than \$100,000 are included in the 568 cases in excess of \$75,000.

INFANT DEATHS

Children that die within one year of their birth are labeled as infant deaths in the study. This data was derived using a variable in the vital statistics record indicating the child died in their first year of life. In addition, if a child's Medicaid eligibility record showed a date of death within the first year of their life they are included as an infant death.

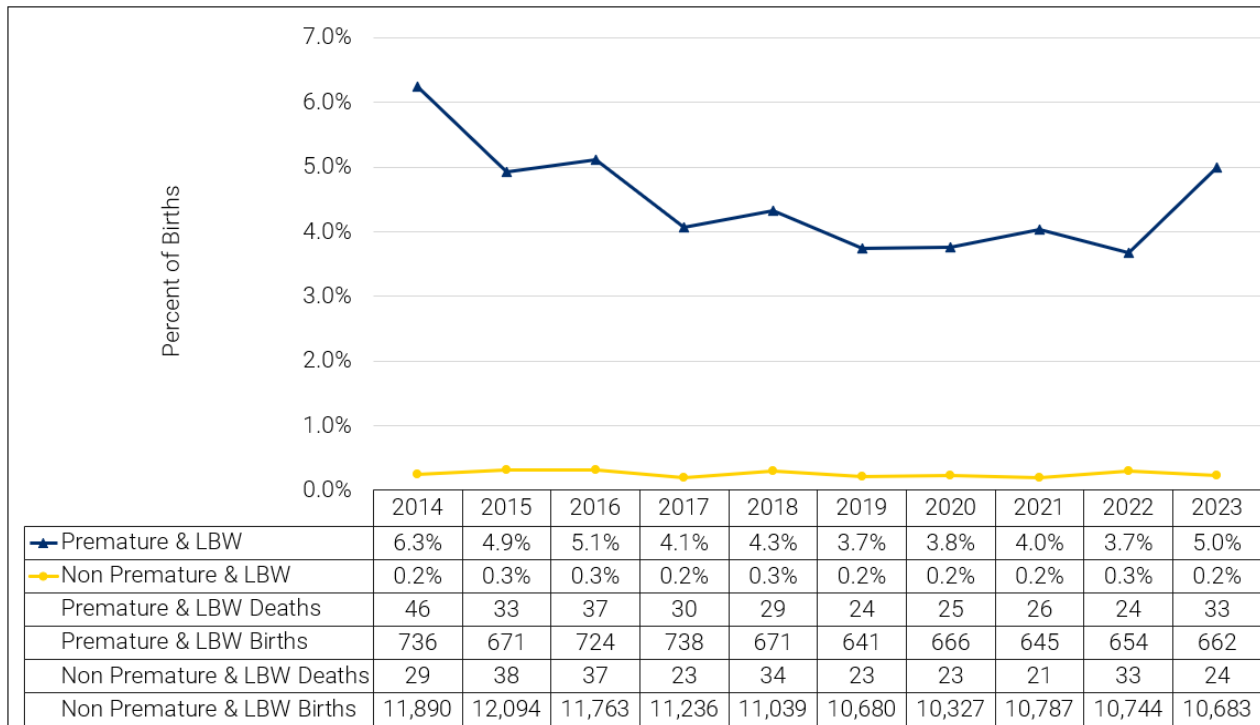
TABLE 7: MONTANA INFANT DEATHS

Calendar Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
All Births	12,626	12,765	12,487	11,974	11,710	11,321	10,993	11,432	11,398	11,345
Total Infant Deaths	75	71	74	53	63	47	48	47	57	57
Deaths Per Births	0.59%	0.56%	0.59%	0.44%	0.54%	0.42%	0.44%	0.41%	0.50%	0.50%

Premature & LBW births account for roughly 64.9% of non-Medicaid infant deaths, yet only 44.6% of Medicaid infant deaths.

In Figure 21 the percent of Premature & LBW that result in infant deaths was charted compared to the percent of infant deaths from non-Premature & LBW children.

FIGURE 21: INFANT DEATHS



The subset of births that are Premature & LBW each year is small and the number of infant deaths each year, even smaller, therefore all results should be viewed as general trends and not absolute statistical inferences.

DISTANCE TO CARE

The distance between a mother’s residential address and where she gave birth was calculated using the mother’s address and the city of birth. Medicaid and non-Medicaid mothers both on average live 23.9 miles from their city of birth. However, mothers of Premature & LBW children live considerably more, 49.7 miles. For high-risk pregnancy or delivery, the mother may need to go to a hospital that is certified for a higher level of neonatal care, located in larger cities. Over the course of the study period the average distance to care has increased slightly as shown in Figure 22.

FIGURE 22: DISTANCE TO CARE

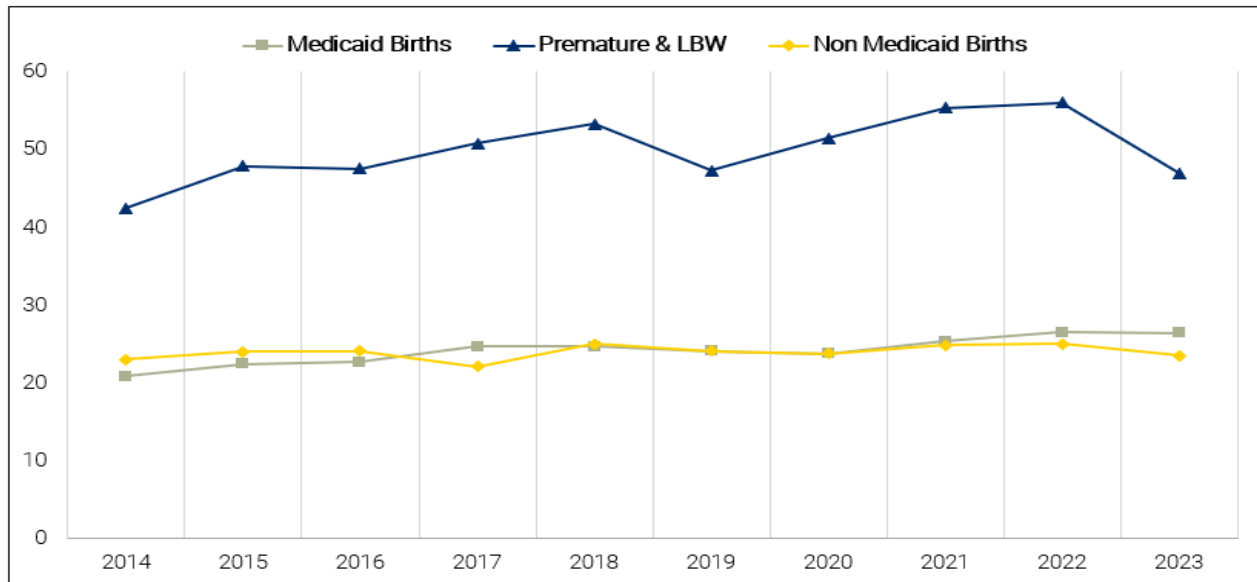
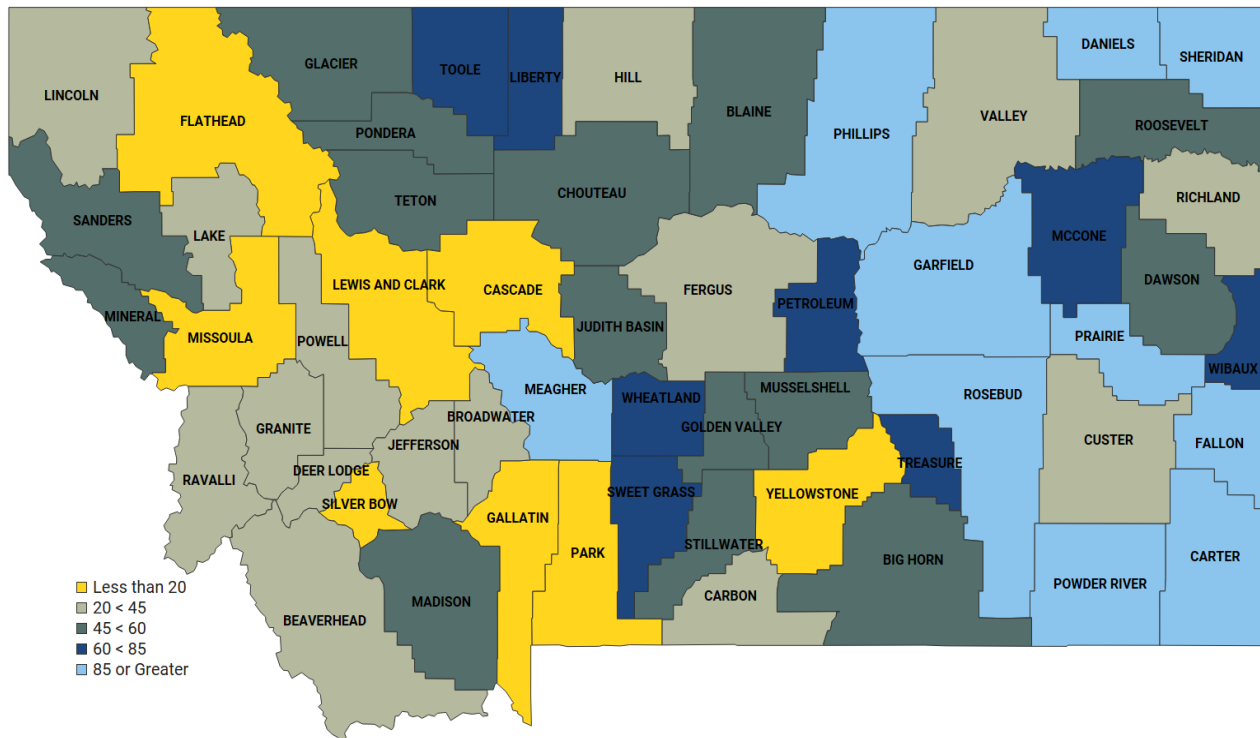


Figure 23 summarizes the distance from the mother's county of residence to the hospital. As expected, counties with larger cities, and thus more inpatient facilities such as Lewis & Clark and Yellowstone, have some of the smallest distances, while more rural counties such as Carter and Sheridan have some of the highest.

FIGURE 23: AVERAGE DISTANCE IN MILES BY MOTHER'S RESIDENTIAL COUNTY CY 2014 - 2023



SUMMARY

The number of births in Montana slowly increased from 12,626 in calendar year 2014 to 12,765 in 2015, an increase of 1.1% over the period. Between 2015 and 2023 Montana births decreased by about 11% over the period with an annual average decrease of 1.46%. Medicaid births have mostly followed the same trend increasing through 2016 then decreasing in the last 7 years of the study period, with the average rate of decrease for Medicaid births from 2015-2023 at 3.79%.

Medicaid spent \$77,265,155 on pregnancies and births in calendar year 2023 for births that occurred in Montana compared to \$70,957,203 in 2014, an 8.9% increase and an average annual increase of 0.95%.

Medicaid has a higher percentage of Premature & LBW births than the general population and reimbursement for these births is over three times that of an average Medicaid birth. Most of the difference in reimbursement is in the Child category, the reimbursement in the first month of the child's life. The AI/AN population has a higher-than-average percentage of births that are Premature & LBW. The average Medicaid paid amount for Premature & LBW birth has increased on average each year of the study by 3.9%.

Medicaid pregnancies and the AI/AN population consistently have a lower percentage of adequate prenatal care than all pregnancies. Medicaid children whose mothers received adequate prenatal care on average had less paid reimbursement from birth to six years of age than the average Medicaid child. Premature and LBW children continued to have more paid reimbursement than the average Medicaid birth through the first six years of life.

When you compare the one hundred most expensive Medicaid births to the average Medicaid birth, there is a dramatic increase in infant deaths and Premature & LBW births for this expensive population. Medicaid mothers are on average slightly younger than the general population. There is an increase in the number of children with over \$50,000 of paid Medicaid claims for those mothers aged 15 or less. Twenty-four percent of the children born Premature & LBW have Medicaid reimbursement totaling over \$50,000.

Mothers living in Montana have seen an increase over the study period in the distance between their residential address and the city of birth, from 22 miles in 2014 to 25 in 2023. Medicaid and non-Medicaid mothers live roughly the same distance from their city of birth. Garfield County had the longest distance to care of 125 miles compared to Missoula County with 7.8 miles.