



Legislative Report

Maternal and Infant Health Report

Health Care Administration

Healthcare Research and Quality Division

January 2025

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Minnesota Statutes, Chapter 3.197, requires the disclosure of the cost to prepare this report. The estimated cost of preparing this report is \$16,639.

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I. Executive summary

This report was created to provide information to the legislature on the receipt of services and health outcomes for pregnant and postpartum enrollees in the Medical Assistance program. The services and health outcomes reported are prenatal services, doula services, birth by primary cesarean section, birth of an infant who received care in the neonatal intensive care unit, birth of an infant who was premature or who had a low birth weight, postpartum hemorrhage, postpartum care within six weeks of giving birth, and prenatal and postpartum follow-up home visit from a public health nurse. Reporting is aggregated by race-ethnicity. This is the second Maternal and Infant Health Report, and biennial updates are to be provided in subsequent years.

A summary of the findings are as follows:

- Black enrollees had consistently higher rates than all known race and ethnicity groups, across all years, for prenatal visits and doula services. Although Black pregnant people had the highest rate of doula services, this rate never exceeded 5%. Blacks also had the highest rates of low-birth-weight infants encroaching on 12% of births by 2022.
- American Indians had the highest rate of cesarean sections (average rate of 31% between 2017 and 2022), infants born prematurely (average rate of 13% between 2017 and 2022), and infants who spent time in the NICU (average rate of 34% between 2017 and 2022), across all years and race and ethnicity groups.
- The percent change in the rate of postpartum hemorrhaging increased or stayed the same for all groups between 2017 and 2022. Whites had the lowest rate of postpartum hemorrhaging, with an average rate of 5% across all years, and Hispanics, Asian and Pacific Islanders, and American Indians had an average rate of between 7% and 8%; Black enrollees fell in the middle with a rate of 6%.
- Hispanics saw the highest rates of postpartum care within six weeks of delivery in 2017, 2018, 2020, and 2021 with rates of 77%, 75%, 73%, and 75% respectively.

II. Legislation

Minnesota Statutes 256B.795:

(a) The commissioner of human services, in consultation with the commissioner of health, shall submit a biennial report beginning April 15, 2022, to the chairs and ranking minority members of the legislative committees with jurisdiction over health policy and finance on the effectiveness of state maternal and infant health policies and programs addressing health disparities in prenatal and postpartum health outcomes. For each reporting period, the commissioner shall determine the number of women enrolled in the Medical Assistance program who are pregnant or are in the 12-month postpartum period of eligibility and the percentage of women in that group who, during each reporting period:

- (1) received prenatal services;
- (2) received doula services;
- (3) gave birth by primary cesarean section;
- (4) gave birth to an infant who received care in the neonatal intensive care unit;
- (5) gave birth to an infant who was premature or who had a low birth weight;
- (6) experienced postpartum hemorrhage;
- (7) received postpartum care within six weeks of giving birth; and
- (8) received a prenatal and postpartum follow-up home visit from a public health nurse.

(b) These measurements must be determined through an analysis of the utilization data from claims submitted during each reporting period and by any other appropriate means. The measurements for each metric must be determined in the aggregate stratified by race and ethnicity.

(c) The commissioner shall establish a baseline for the metrics described in paragraph (a) using calendar year 2017. The initial report due April 15, 2022, must contain the baseline metrics and the metrics data for calendar years 2019 and 2020. The following reports due biennially thereafter must contain the metrics for the preceding two calendar years.

III. Introduction

Legislative Mandate

This report is submitted to the Minnesota Legislature pursuant to Minnesota Statutes 2021, section 256B.795, which requires the Minnesota Department of Human Services (DHS) to provide a biennial report to the Legislature on prenatal and postpartum services, aggregated by race/ethnicity to identify existing disparities in health outcomes amongst Medical Assistance enrollees.

Report Background, Implementation, and General Findings

This report was prepared by the Healthcare Research and Quality (HRQ) Division of DHS. The criteria used to identify the population of interest and the relevant pregnancy-related services is based on the use of medical billing codes submitted on medical claims data within the DHS data warehouse. These include the International Classification of Diseases, Tenth Revision, Procedure Coding System (ICD-10-PCS), the Current Procedural Terminology (CPT), CPT Category II codes, the Healthcare Common Procedure Coding System (HCPCS), and revenue codes. For more details about medical billing codes used to identify delivery, services during pregnancy and services following pregnancy, see appendix B.

This report is intended to identify disparities in prenatal and postpartum health outcomes for pregnant people enrolled in a Medical Assistance program. Minnesota Health Care Programs (MHCP) enrollment data, along with claims data were used to identify healthcare coverage, approximate date of delivery, prenatal and postpartum periods, as well as services provided prior to delivery and following delivery. The MDH birth-match data was primarily used to link mothers to newborns. Data provided by MDH also includes infant-level descriptive data, which was used to supplement claims data. The birth-match files include fields, which flag newborns (1) who spent time in the neonatal-intensive care unit (NICU), (2) were born with a low birth weight, or (3) were born prematurely. These flags, along with revenue, diagnosis, and medical procedure codes found in DHS fee-for-service (FFS) claims and managed care (MC) encounter data, were used to identify newborns characterized in items #4 and #5 of the legislative requirements.

Inclusion in the report was limited to enrollees who had 1) a claim indicating delivery of a live newborn and 2) comprehensive Medical Assistance coverage during the prenatal and postpartum periods. Without the delivery claim, it would be impossible to know the timeline of a person's pregnancy, given the nature of the data available for the analysis. As some MHCP programs do not cover pregnancy related services, the individuals included in the report were limited to those with comprehensive Medical Assistance coverage during both periods of pregnancy. Specifically, those included in this report had ten to eleven months of enrollment during the pregnancy/post-delivery period. This included nine months of coverage prior to delivery and two months of coverage after delivery with no more than one month without coverage during the entire time period. This is a necessary requirement for individuals who may have had coverage through a private insurer during either period of the pregnancy as those claims would not be accessible to the State. In addition, reporting on non-livebirth outcomes is often

incomplete making it challenging to identify people who have had these experiences. For this reason, those who experienced a stillbirth, for example, were not included in this report. However, it is important to acknowledge that these people may have received prenatal and/or postpartum care during their pregnancy period and these services are not captured in this report.

Race and ethnicity were determined using demographic data collected at the time of enrollment in health or other benefit programs. The enrollees were categorized into one of six groups—Asian and Pacific Islanders, Black, Hispanic, American Indian, White, and Unknown. Individuals who identified as Hispanic were categorized as such without taking race into consideration. All other non-Hispanics were categorized into one of the five other groups accordingly. Enrollees whose race and ethnicity could not be determined, about 8.5%, were categorized as ‘unknown’.

Metrics #4 and #5 were further limited to birthing people whose newborns were immediately covered by Medical Assistance and whose newborns could be linked to their birthing parent by way of the birth-match data provided by MDH.

Rates for report items #1-3 and #6-8 were aggregated by race and ethnicity, with the number of people who delivered a live newborn each year as the denominator. Metrics #4 and #5 were aggregated in a similar way, but had a more restrictive inclusion criteria, as these metrics report on birth outcomes involving the newborns. To ensure completeness of the newborns’ claims data, these metrics were limited to birthing parents whose newborns were immediately covered by medical assistance.

This report is based on observed trends in the data for the entire population that meets the inclusion criteria described previously. As such, no statistical tests of significance were performed for two reasons. First, population-based data (i.e., all people with a live birth and comprehensive coverage rather than a partial sample of such people) are not subject to sampling error. Therefore, the numbers observed represent the population parameters rather than a statistical representation of those parameters. Second, with population sizes in the tens of thousands even minor differences across sub-populations are often seen as statistically significant. To better enable policy discussion, the decision was made to focus on the magnitude of differences and not the statistical significance of differences.

The report includes percentages based on small person counts i.e., infrequently occurring events within the breakouts of race and ethnic groups of smaller size. This is particularly true with infrequently used provider services, such as care by doulas. Consequently, further investigation may be helpful to understand the circumstances concerning the low reporting and careful interpretation of the results may be warranted as well. Specifically, there may be a larger context driving the low reporting within service categories and/or across racial/ethnic groups.

It was found that Black birthing people had consistently higher rates than all known race and ethnicity groups, across all years, for prenatal visits and use of doula services. Although Blacks had the highest rate of doula services, this rate never exceeded 5%. The infrequent observation of doula services in our claims data makes this number of questionable value as the data does not allow for sufficient observation of doula services. Black enrollees also had the highest rates of low-birth-weight infants encroaching on 12% of births by 2022.

American Indians had the highest rate of cesarean sections (with an average rate of 31% between 2017 and 2022), and infants born prematurely (ranging from about 11% to about 16% each year) and infants who spent time in the NICU (average rate of 34% between 2017 and 2022), across all years and race and ethnicity groups.

The percent change in the rate of postpartum hemorrhaging increased or stayed the same for all groups between 2017 and 2022. Whites had the lowest average rate of postpartum hemorrhaging across all years (5%), and Hispanics, Asian and Pacific Islanders, and American Indians had an average rate of between 7% and 8%; on average, Blacks fell in the middle with a rate of 6%. Hispanic birthing people saw the highest rates of postpartum care within six weeks of delivery in 2017, 2018, 2020, and 2021, with rates of 77%, 75%, 73%, and 75% respectively.

The rate of newborns born prematurely or with a low birth weight were reported separately. The rate of low birth weight for all newborns in the analysis hovered between 8% and 9% between 2017 and 2022. Black mothers had the highest rate of newborns with low birth weight across all years except for 2017 and 2021; in 2017, American Indian newborns had the highest rate of low birth weight; in 2021, both American Indians and Blacks had a rate of roughly 11%. American Indians had the highest rate of newborns born prematurely across all years. The average, for all new mothers between 2017 and 2022 was 10%. American Indians had rates between 11% and 16%.

Finally, one can say that despite having relatively high rates of prenatal visits (both in terms of the number of enrollees with at least one visit, and the average number of visits) both American Indians and Blacks trend towards worse birth outcomes on some of the measures included in the report. This speaks to the fact that other factors outside of prenatal visits, including important social determinants of health, contribute to overall birth outcomes. Additionally, the overall quality of prenatal care received is not well addressed by claims data analysis alone and this is particularly notable for communities of color whose prenatal care has been well documented to be frequently unequal.

IV. Data Reports

Demographic Summary

While not requested by the legislature, some demographic context of the population is included. Age, as well as race/ethnic distributions are provided for purposes of context.

In terms of age composition, enrollees who delivered a live newborn between 2017 and 2022 were between the ages of 12 and 53, with 50% between the ages of 24 and 33 years. The youngest 25% were between the age of 12 and 24 and the oldest 25% were between 32 and 53.

For consistency of comparison, enrollees who identified as female from the Medical Assistance population were similarly selected with a minimum age of 12 and a maximum age of 53. In this comparative population 50% are between 18 and 40. The youngest 25% in the comparison group are between 12 and 19. The oldest 25% in the Medicaid equivalent group are between 38 and 53 years of age.

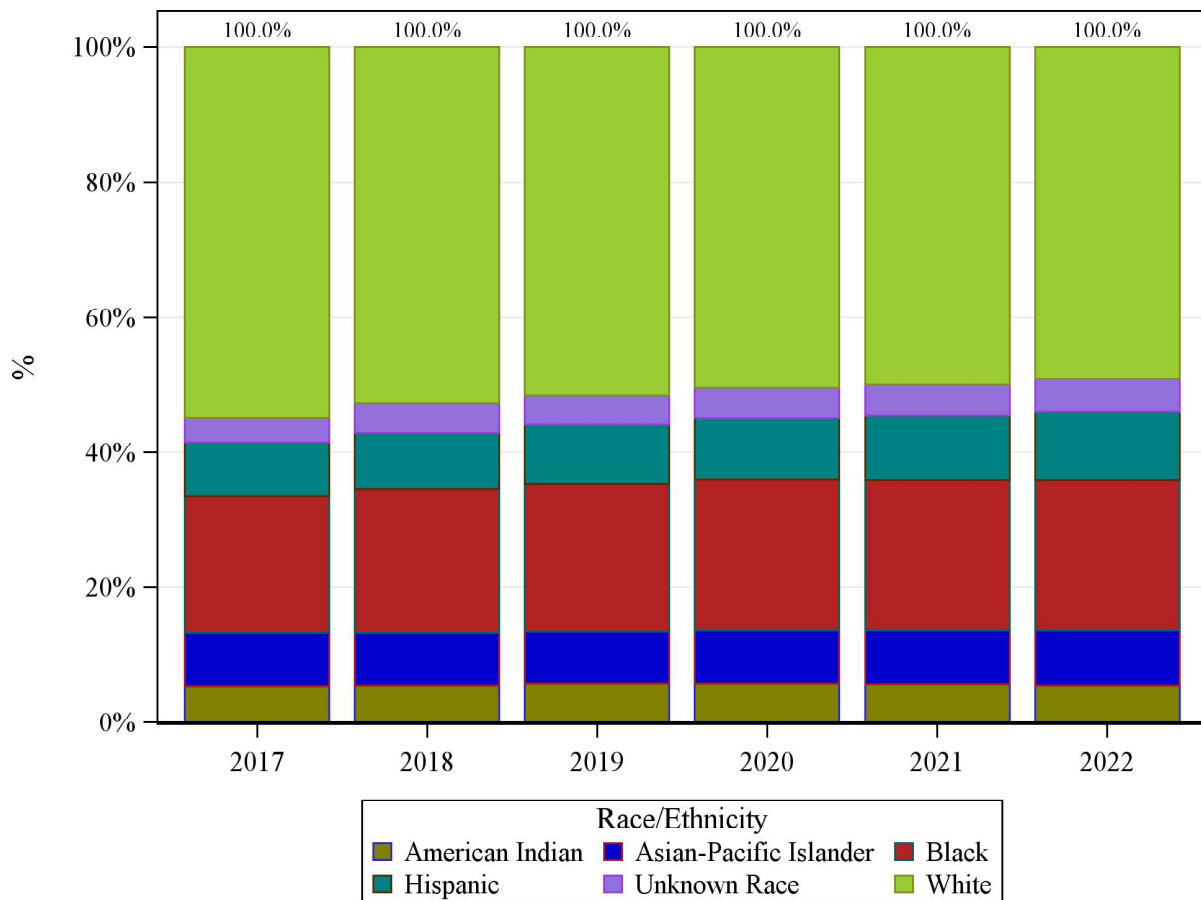
Table 1: Age of birthing people included in analysis vs MA equivalent population

Age										
Year	Minimum		25 th percentile		Median (50 th percentile)		75 th percentile		Maximum	
	Enrollees in report	All female identifying enrollees age 12-53	Enrollees in report	All female identifying enrollees age 12-53	Enrollees in report	All female identifying enrollee age 12-53	Enrollees in report	All female identifying enrollee age 12-53	Enrollees in report	All female identifying enrollee age 12-53
2017	12	12	24	19	28	28	32	38	53	53
2018	12	12	24	18	28	28	32	38	53	53
2019	14	12	24	18	28	28	32	39	52	53
2020	12	12	24	18	28	29	33	39	53	53
2021	12	12	24	19	28	29	33	39	53	53
2022	13	12	24	19	29	29	33	40	53	53

Since 2017, the racial and ethnic composition of all enrollees identifying as female (regardless of pregnancy/delivery status) of childbearing age enrolled in full-coverage Medical Assistance for at least eleven months between 2017 and 2022 remained relatively constant. Across all years, Hispanic female

identifying enrollees made-up roughly 8.0% - 9.0% of the population, while Asian and Pacific Islanders represented about 7.5% of this population. American Indian enrollees consistently represent nearly 5.5% - 6.0% of the population across all years. The percentage of Black female identifying enrollees had been increasing steadily, with Black enrollees comprising between 20.0% and 22.0% of the population in 2017 through 2022. The percent of those whose race/ethnicity is unknown increased slightly from about 3.6% in 2017 to over 4.5% in 2021 and 2022. The percent of White enrollees included in this population has been gradually decreasing over the years; nearly 55.0% in 2017 but declining to just under 50.0% by 2022.

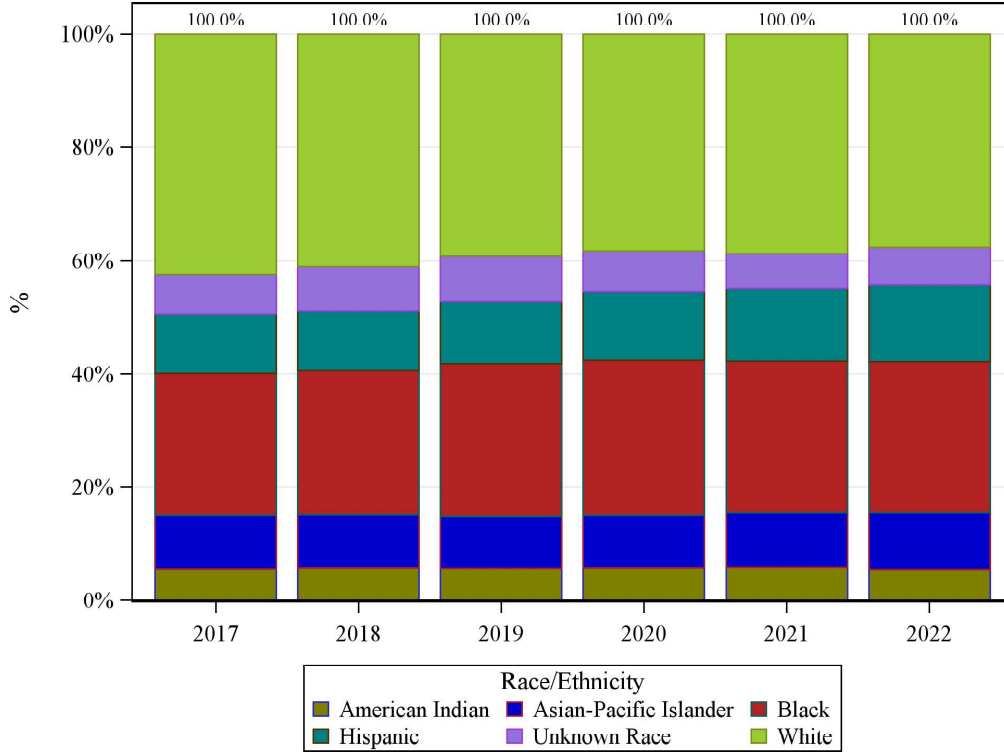
Figure 1: Distribution of race and ethnicity by year, female identifying enrollees with at least 11 months of MA coverage



The birthing people included in this report, according to the selection criteria previously described, look relatively similar to the overall Medical Assistance population of female identifying enrollees of childbearing age. Between 2017 and 2022, roughly 6.0% of people with comprehensive Medical Assistance coverage throughout the duration of their pregnancy that resulted in a live birth are American Indian. Approximately 9 - 10% of the people in this report are Asian and Pacific Islanders, between 25.0% and 28.0% are Black, and enrollees whose race/ethnicity information could not be identified account for about 7.0% - 8.0% of those included in the analysis. Nearly 43.0% of the enrollees

included in the 2017 figures are White: this percentage decreases gradually across all years dropping to 37.6% by 2022.

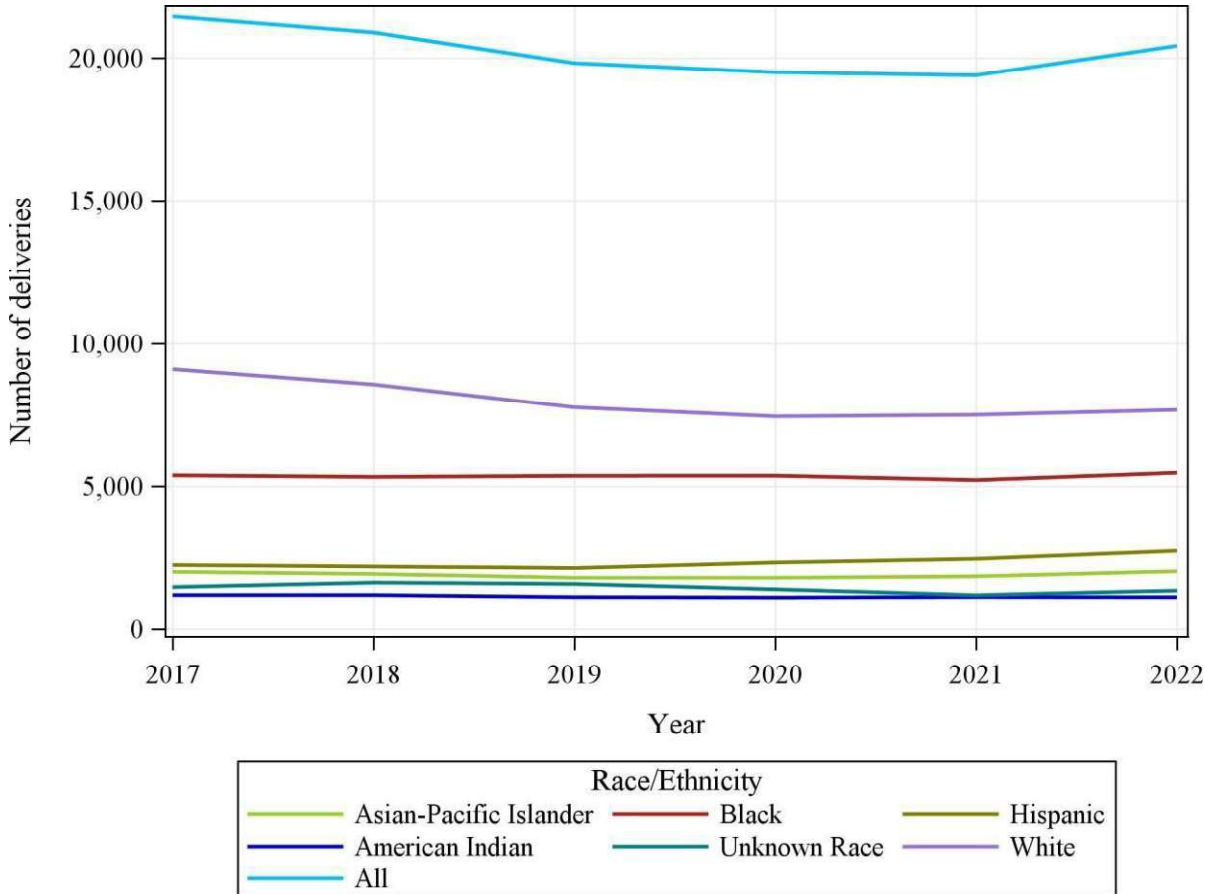
Figure 2: Distribution of race and ethnicity by year for pregnant people included in analysis



Required Reporting

Medical Assistance Program Deliveries

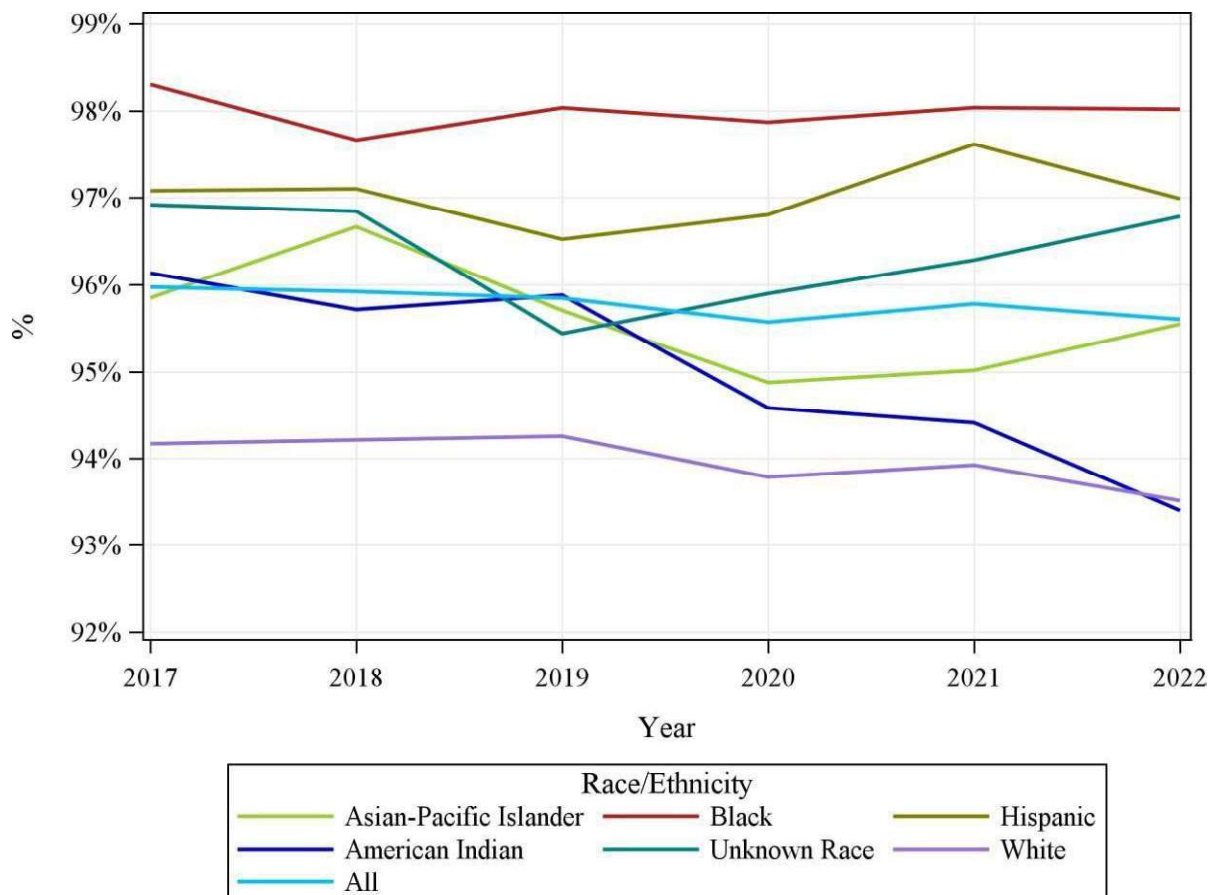
Figure 3: Number of live newborn deliveries by race and ethnicity



The number of live births trended downward slightly between 2017 and 2021; in 2022, the number of deliveries ticked back up, exceeding the raw number of deliveries in 2019, 2020, and 2021. This trend is consistent for the Asian and Pacific Islander, Black, and Hispanic populations. The number of deliveries for Whites and American Indians has been trending downward without an increase in 2022. Although the number of deliveries increased in 2022 to 20,435, that figure did not exceed the number of deliveries documented in 2017 (21,461). The overall number of deliveries reached its lowest point in 2021. The White population saw the most dramatic decrease in live births between 2017 and 2022; deliveries declined by roughly 16%. The only group that observed a larger number of deliveries in 2022 than 2017 are Hispanics; they saw an increase in deliveries of 22% in 2022 relative to 2017. See table 'Deliveries' in appendix A for more details.

Medical Assistance Program Prenatal Visits

Figure 4a: Percent of enrollees, by race and ethnicity, who received at least one prenatal service prior to delivery



Across all six years, an average of 96% of those who delivered a live newborn had at least one prenatal visit. On average, across all years, about 97% of Hispanics and 98% of Black enrollees had at least one prenatal visit, which is roughly 1% - 2% points higher, respectively, than the average rate of all birthing people who had at least one prenatal visit prior to delivery. Whites saw a small decrease in rates between 2017 and 2022, but they have the lowest rates of at least one prenatal visit between 2017 and 2021. Overall, the rate for American Indians decreases over time and in 2022 dips below the rate observed for the White population. See table 'Prenatal Visits' in appendix A for more details.

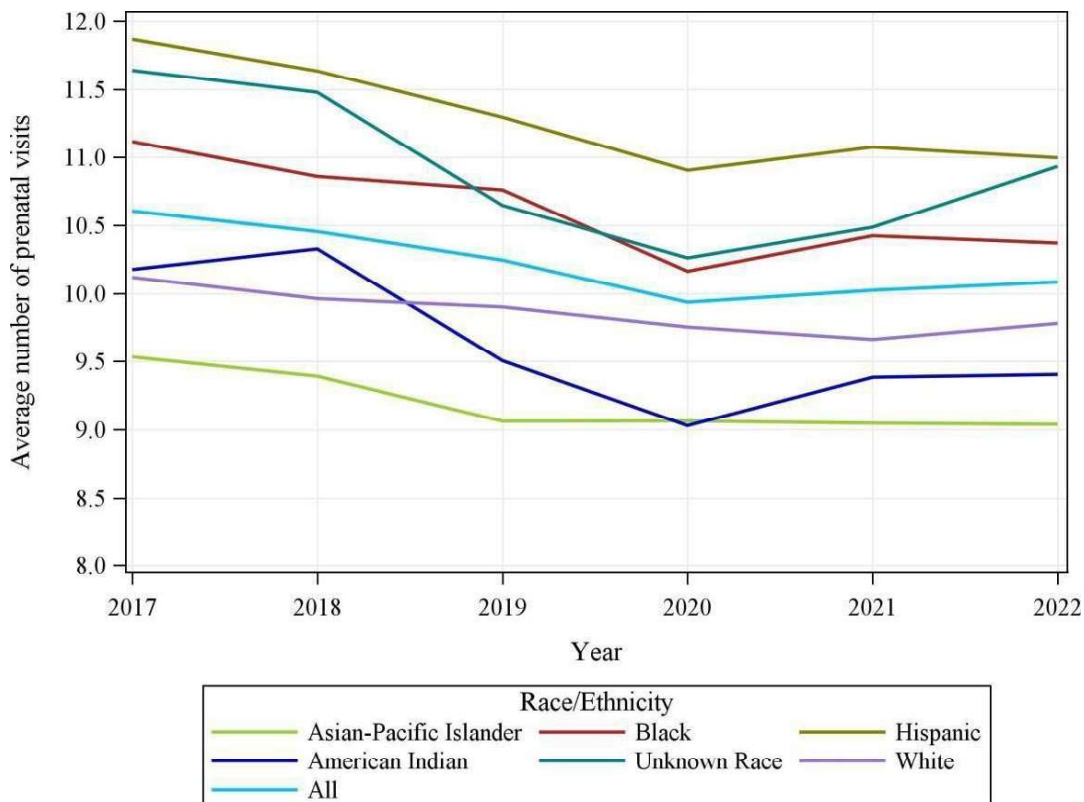
While knowing if a woman received any prenatal care is important, a more telling indicator of utilization of these services is the average number of such visits during a pregnancy. This information is provided in figure 2b. One can see a general trend in reduced frequency of prenatal visits over time.

These trends come with a note of caution about the source data. Specific pregnancy related services can be challenging to identify in claims data. To reduce the number of claims providers need to submit

to a payer organization, services related to pregnancy can be billed on a single claim that is submitted on the day of, or shortly after, the date of delivery. This convenience is known as bundled billing. This claim, which includes a global maternity care billing code, can encompass several services, ranging from a few prenatal visits; all prenatal visits; or all prenatal visits, delivery, and postpartum care rendered within the six-week period following delivery. While this may reduce the complexity of billing on the provider-end, it makes it difficult to assess the precise number of prenatal visits that a person received, prior to delivery.

Global billing codes are quite prevalent in DHS’s claims database. Of the people included in this report, between 6% and 7% only had a single global maternity claim during the entire duration of their pregnancy. Roughly 56% to 59% of enrollees had a global maternity claim and other non-bundled claims indicating other prenatal services. Across all reported years, between 30% and 32% of enrollees had exclusively non-bundled claims; that is to say, these individuals did not have their delivery, or any prenatal services billed under a global billing code. For this reason, the average number of prenatal visits prior to delivery is an estimate, based on the midpoint of services indicated for a specific global maternity billing code. For more information regarding the prevalence of bundled claims in the DHS warehouse, see ‘Appendix B’. For more information about global maternity billing CPT/HCPCs codes, see ‘Appendix C’.

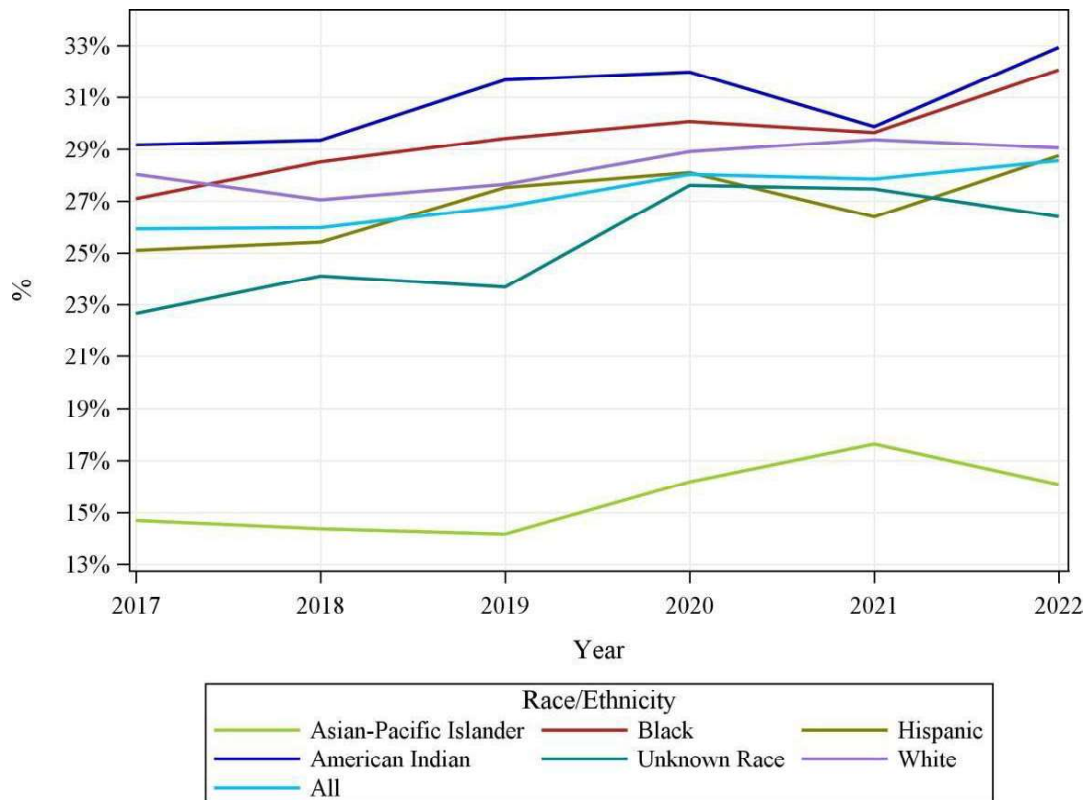
Figure 4b: Average number of prenatal services by race/ethnicity



On average, across all years, all pregnant people had between 9 and 11 provider visits that can be classified as prenatal care. For almost all groups of birthing people, the highest average number of visits were observed in 2017 and decreased between 2018 and 2020. American Indians are the exception; their average number of prenatal visits peaked in 2018. The average number of prenatal visits was at its lowest for all groups in 2020. The average number of visits remained the same or increased across all groups in 2022 relative to 2020. Excluding the unknown race category, which had the highest average number of visits per person, Hispanics had the highest average number of prenatal visits across all years. Excluding those whose race information is unknown, Black enrollees had the second highest average number of prenatal visits, with averages between 10 and 11, across all years. The average number of visits for American Indian enrollees dropped considerably between 2017 and 2020. Whites had the smallest change in average visits between 2017 and 2020. Asian and Pacific Islanders consistently had the lowest average number of prenatal visits, with averages between roughly 10% and 12% lower than those of the total population of all birthing people.

Medical Assistance Program Cesarean Section Deliveries

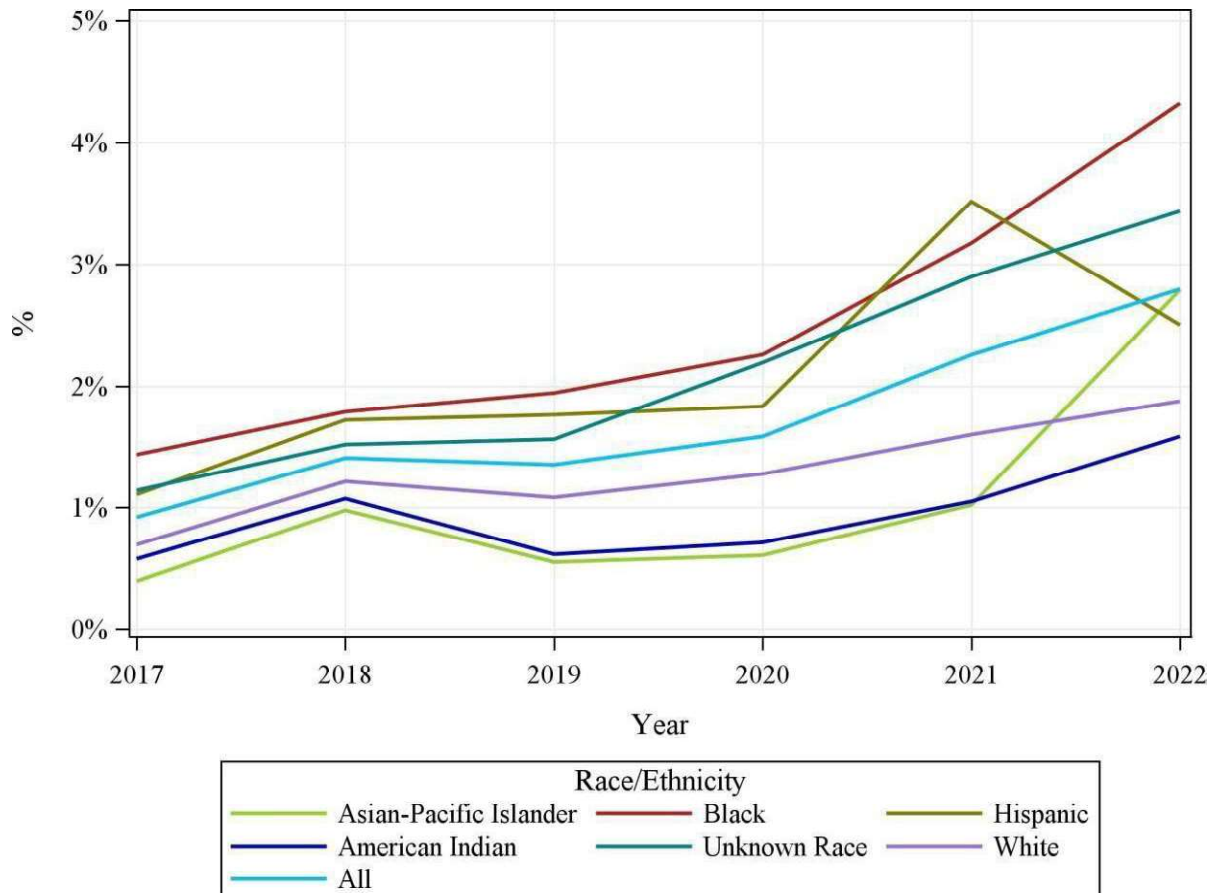
Figure 5: Percent of enrollees who delivered a live newborn via cesarean section by race and ethnicity



On average, the rate of newborns delivered via cesarean section slowly increased from 26% in 2017 to 29% in 2022. Asian and Pacific Islanders have the lowest rate of c-sections across all groups for all reported years. In 2021, this group had their highest rate of deliveries via cesarean section at 18%; this rate was 37% lower than the overall average. Across all years, American Indians had the highest rate of cesarean sections, peaking in 2022 at 33%. Blacks had the second highest rate of c-sections between 2018 and 2022; in 2017, Whites had the second highest rate. See table ‘Cesarean Section Deliveries’ in appendix A for more details.

Medical Assistance Program Use of Doula Services

Figure 6: Percent of enrollees who received at least one doula service by race and ethnicity



Over the years, efforts have been made to increase Medicaid enrollees’ access to doulas and their services. In fact, Minnesota’s Medical Director, Dr. Nathan Chomilo, released an official recommendation in January 2024 that all MHCP members who are pregnant or are in the postpartum

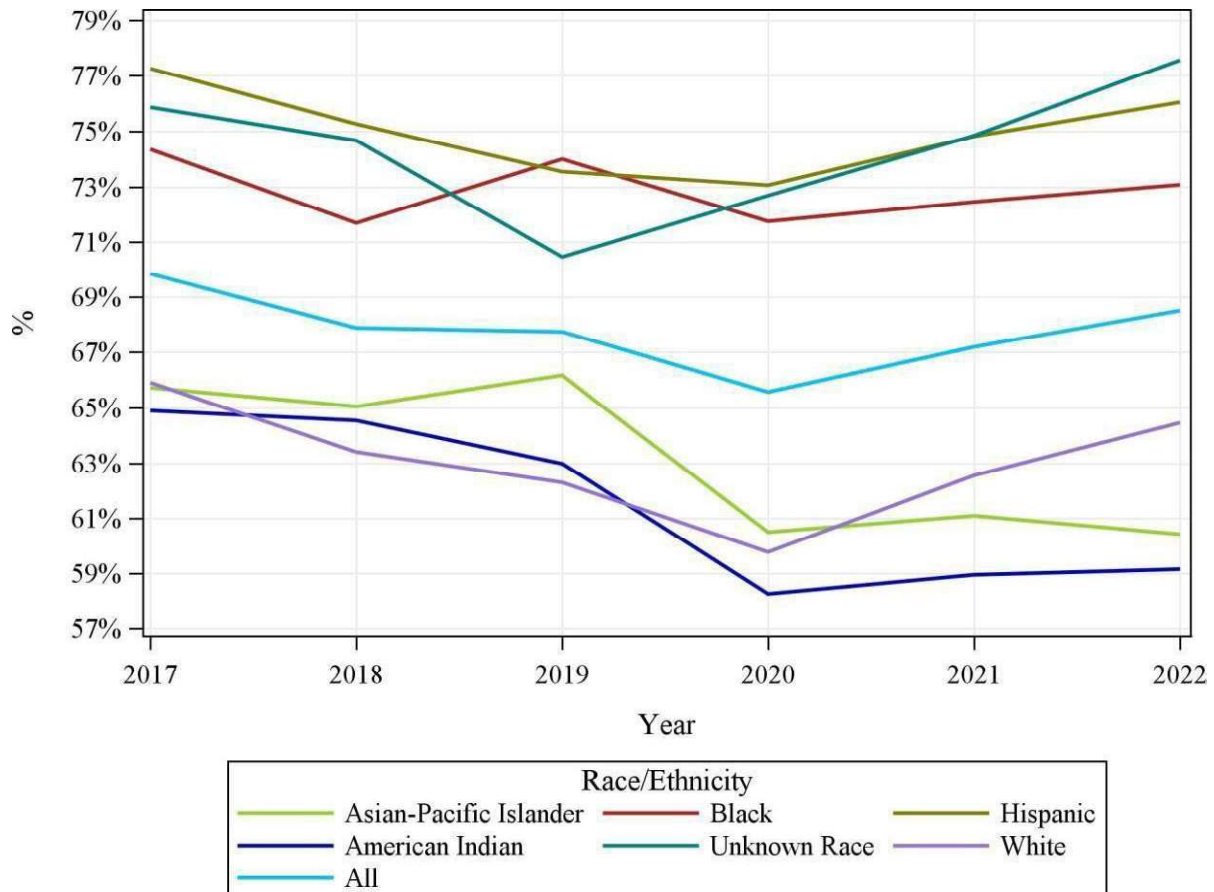
period receive doula services ¹. As of late, utilization of doula services is relatively low across the board for all pregnant and postpartum birthing people. However, the rates of people receiving doula services increased from 2017 to 2022. Almost 4.5% of Black pregnant/postpartum people received some kind of treatment from a doula in 2022. Asian and Pacific Islanders as well as American Indians had the fewest encounters with doulas between 2017 and 2021; however, for both groups, doula utilization increased in 2022 by 605% and 175% relative to 2017, respectively. Since January 1, 2024, the number of doulas registered to provide services to Medicaid enrollees increased 117%, from 18 registered providers to 39.

Doula services have been historically difficult to track accurately in Medical Assistance claims data. Prior to 2024, DHS did not enroll doulas as part of the provider system. As a result, doulas were rarely reported on paid Medicaid claims. Instead, the DHS provider manual provided guidance to providers that doula service were performed under the supervision of another provider; physicians, nurse practitioners, or certified midwives. This likely resulted in a large under reporting issue in Medicaid claims data of doula services and the results reported should be viewed with this limitation in mind. Of the few claims on which doula services can be detected, nearly all are from claims that share the same supervising midwife. As a result of the unavailability of information in the Medicaid data warehouse, DHS recommends the reader not attach too much meaning or interpretation into the small amount of data that can be reported.

¹https://www.dhs.state.mn.us/main/idcplg?IdcService=GET_FILE&RevisionSelectionMethod=LatestReleased&Renderition=Primary&allowInterrupt=1&dDocName=MNDHS-065293

Medical Assistance Program Postpartum Visits

Figure 7a: Percent of enrollees who received at least one postpartum service by race and ethnicity

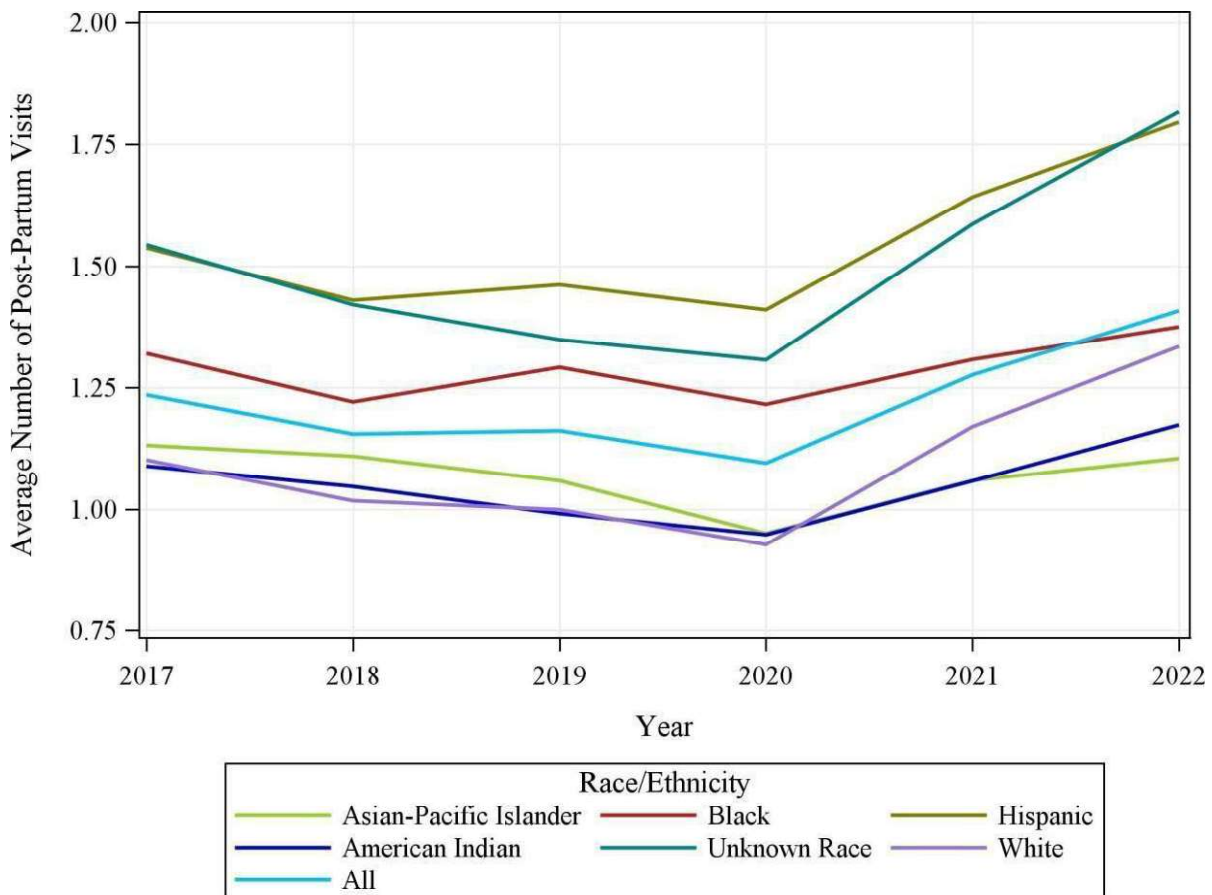


Between 2017 and 2020 about 70% of all enrollees who delivered a live newborn had at least one postpartum visit. This rate decreased from 70% in 2017 to just above 65% by 2020. Between 2017 and 2020, both the White and American Indian population had the lowest rate of birthing parents receiving at least one post partum visit; a rate substantially below the rate for all enrollees. However, in 2021 and 2022, rates for the White population surpassed those of the Asian and Pacific Islander and American Indian populations. In 2022, American Indians had the lowest rate with only about 59% having received at least one postpartum visit. In 2022, excluding those whose race information is unknown, Hispanics had the highest rate. However, across all known race groups, 2022 rates were lower than 2017 rates. Across all years, the rates for Black and Hispanic enrollees were much higher than those for all birthing people. The rates were, on average 73% and 75% for Blacks and Hispanics, respectively. The largest discrepancy was most notable in 2020.

Similar to prenatal services, postpartum care can also be billed using global maternity codes. For this reason, the average number of visits per person is an estimate, and when a range of services is listed in the description of a global billing code, the midpoint is chosen as an approximation of the number of

postpartum services a person received following delivery. Across all years, between 0.5% and 1.7% of enrollees who delivered a newborn did not have any additional claims indicating postpartum care beyond a single claim with a global maternity code. Between 1% and 4% of enrollees had a mix of bundled and non-bundled claims indicating postpartum care. The percentage of individuals who did not have any claim with a global billing code and only had claims for individual postpartum services was between 63% and 67% across all years. For more information about the prevalence of global maternity codes and their descriptions, see appendices A and C, respectively.

Figure 7b: Average number of postpartum visits within six weeks of delivery

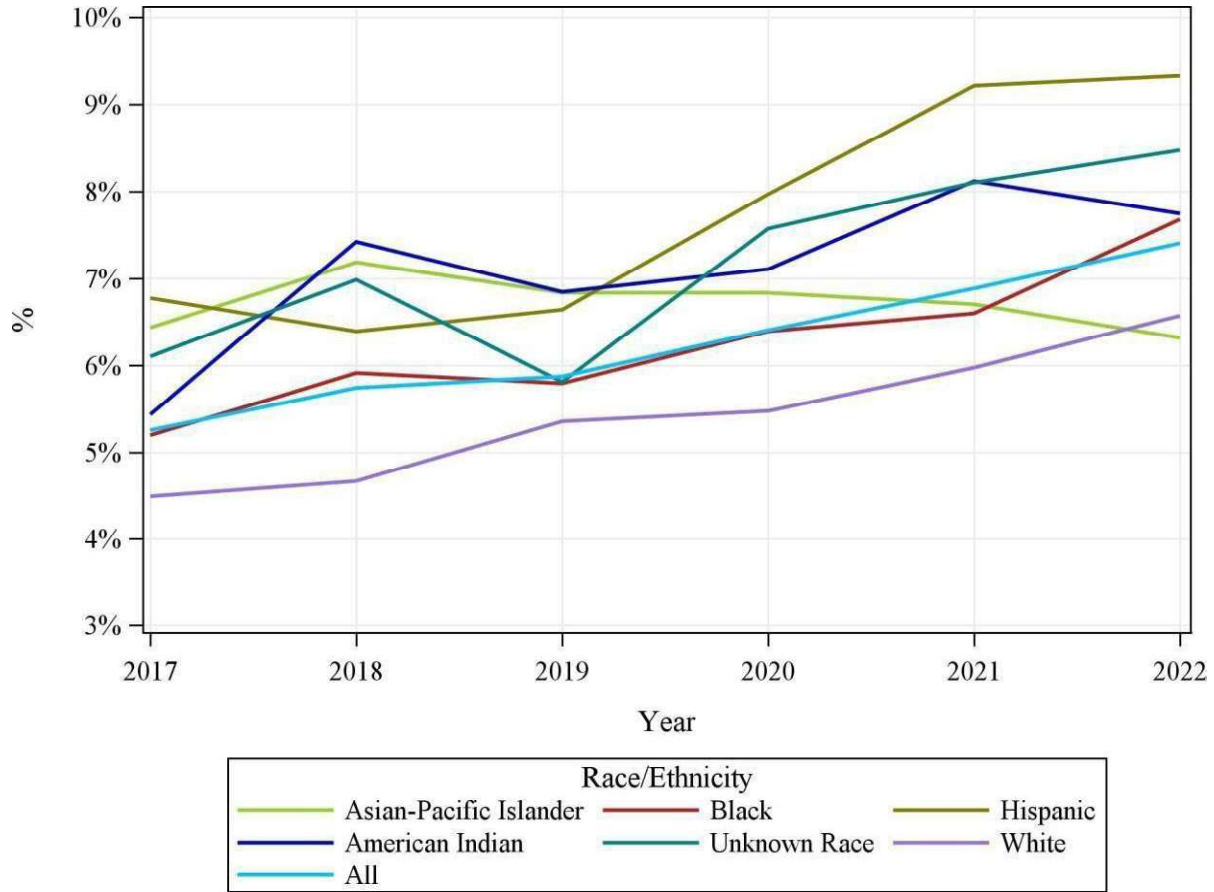


Like prenatal visits, the average number of postpartum visits might be a better indicator of access to such care. The average number of visits across all groups had fallen in 2020 relative to 2017. The average number of visits for all people during their postpartum period was between 1.23 and 1.1 for years 2017 and 2020, respectively. However, since 2020, the average number of postpartum visits per person increased; in most cases, the figures in 2022 surpass those in 2017. Asian and Pacific Islanders are the only group whose average number of visits in 2022 was lower than their 2017 average. Between

2020 and 2022, Whites had the highest percent increase in average visits, Hispanics had the second highest increase (27.7%). See table 'Postpartum Visits' in appendix A for more details.

Medical Assistance Program Postpartum Hemorrhaging

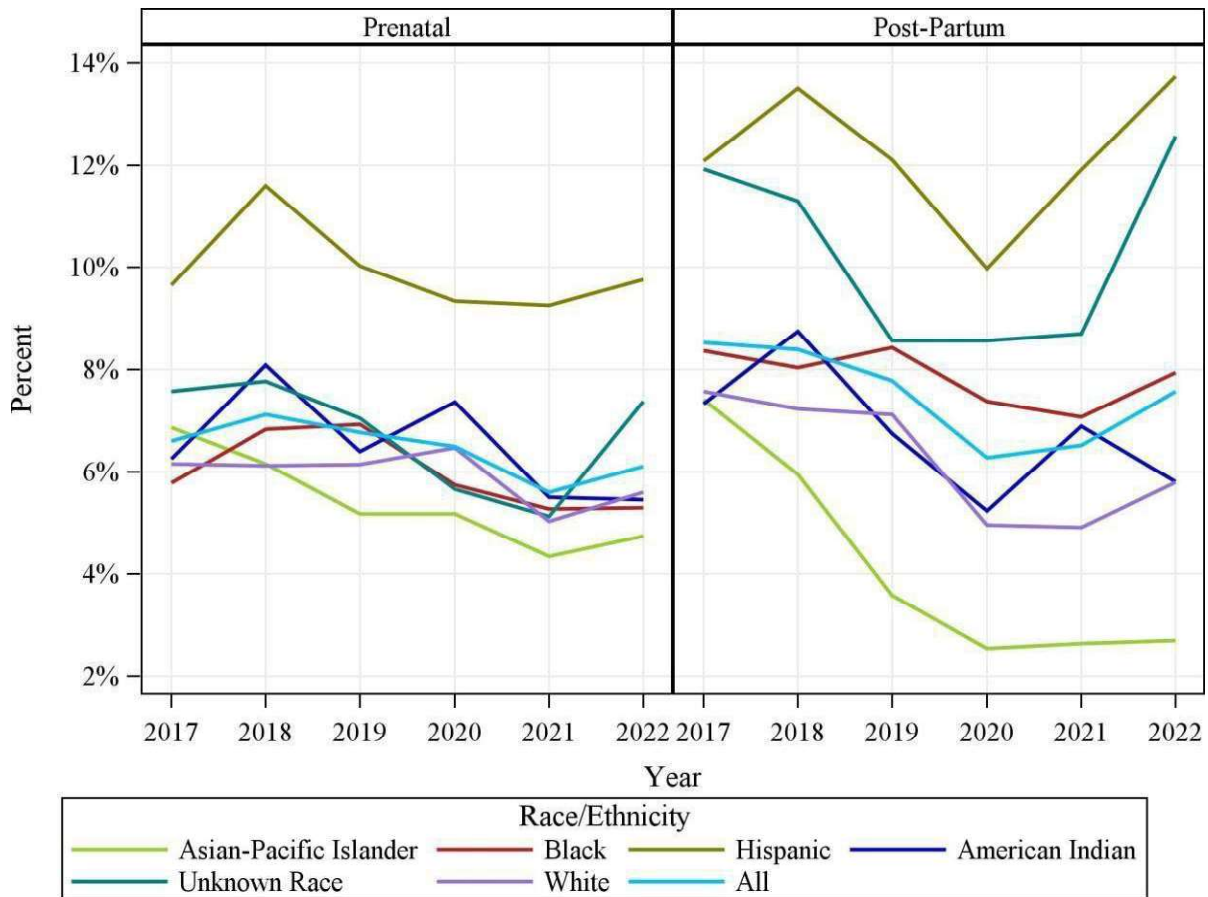
Figure 8: Percent of enrollees who experienced postpartum hemorrhaging by race and ethnicity



The rate of people who experienced postpartum hemorrhaging after giving birth increased slightly over time for almost all groups since 2017; the exception being Asian and Pacific Islanders. In 2018, their rate increased slightly to just above 7%, but then steadily dropped back to roughly 6% by 2022. Overall, the average rate had gone from 5% in 2017 to 7% in 2022. Between 2017 and 2022, postpartum hemorrhaging for the Black population increased from 5% to 8%, respectively. Although the White population experienced increased rates of postpartum hemorrhaging from 4% to 7%, their rates were still well below the average for all years between 2017 and 2022. In 2022, their rate of postpartum hemorrhaging exceeded that of the Asian and Pacific Islander group. See table 'Postpartum Hemorrhaging' in appendix A for more details.

Medical Assistance Program Prenatal and Postpartum Home Visits from a Public Health Nurse

Figure 9: Percent of enrollees receiving Prenatal and Postpartum home visits by race and ethnicity

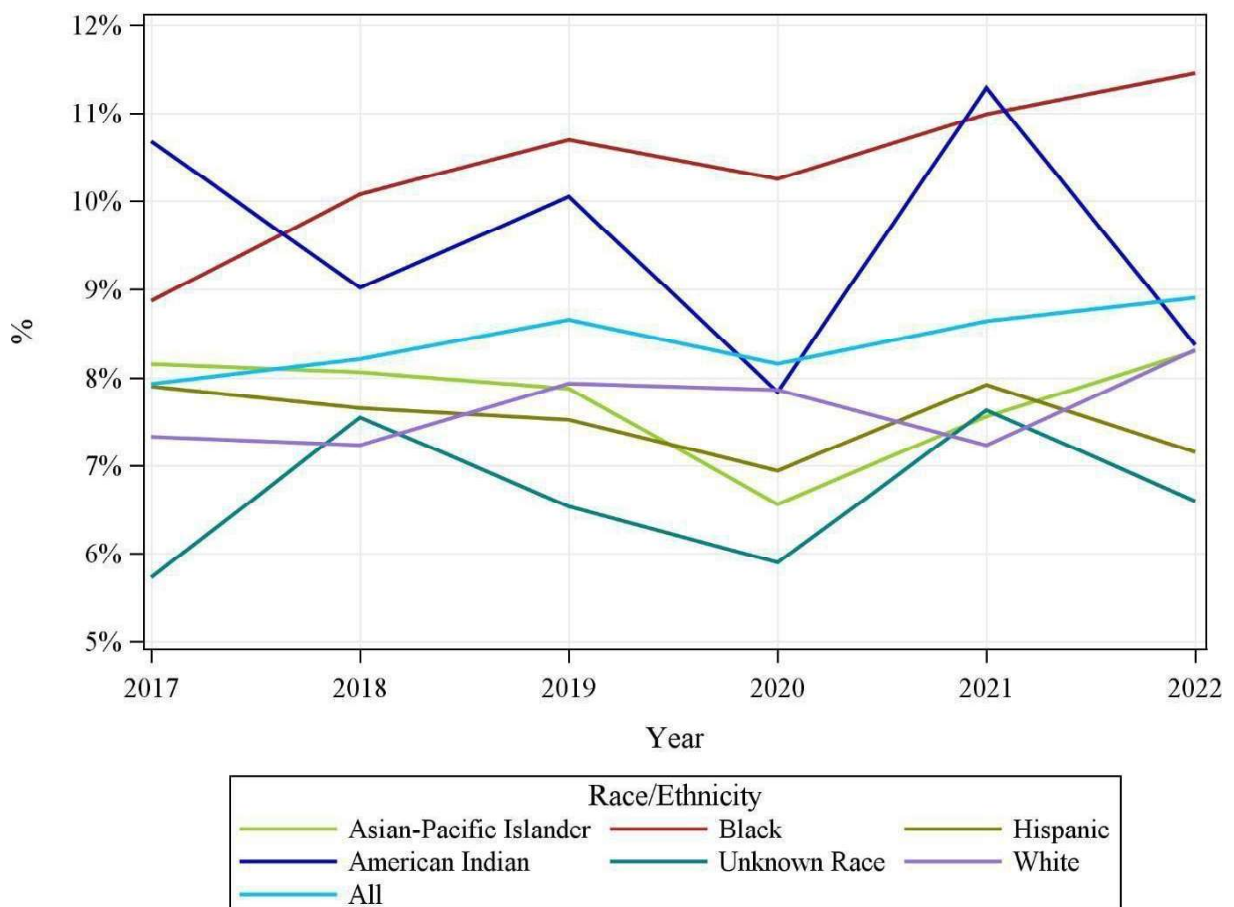


The percentage of pregnant people who received prenatal services at home from a public health nurse was between 5.6% and 7.1% across all years. Between 2018 and 2021, the overall rate trends downwards. In 2022, the rate increases from 5.6% in 2021 to 6.1%. The overall rate of enrollees receiving postpartum at home care from a public health nurse is between 6.3% and 8.5%. This overall rate was at its lowest in 2020. During the prenatal and postpartum periods, Hispanics had the highest rate of encounters with public health nurses in their home. In 2018, Hispanics had the highest rate of at-home encounters with a public health nurse during the prenatal period across all groups and time periods, with a rate of 11.6%; meaning, 11.6% of Hispanic pregnant enrollees had at least one prenatal at-home visit from a public health nurse. In 2018, 13.5% of Hispanics had at least one postpartum at-home visit from a public health nurse. The rate dropped in 2019 and remained below 13% until 2022 when it jumped up to 13.72%. Asian and Pacific Islanders had the lowest rate of encounters with public

health nurses providing at home services during both periods. Their highest rates were observed in 2017; their rates begin to drop in 2018 and during the prenatal period, do not increase again until 2022. During the postpartum period, the rate for Asian and Pacific Islanders reaches its lowest in 2020 and increases very slightly in 2021 and then again in 2022. See table 'Prenatal and Postpartum Home Visits from a Public Health Nurse' in appendix A for more details.

Medical Assistance Program Premature or Low Birth Weight Newborns

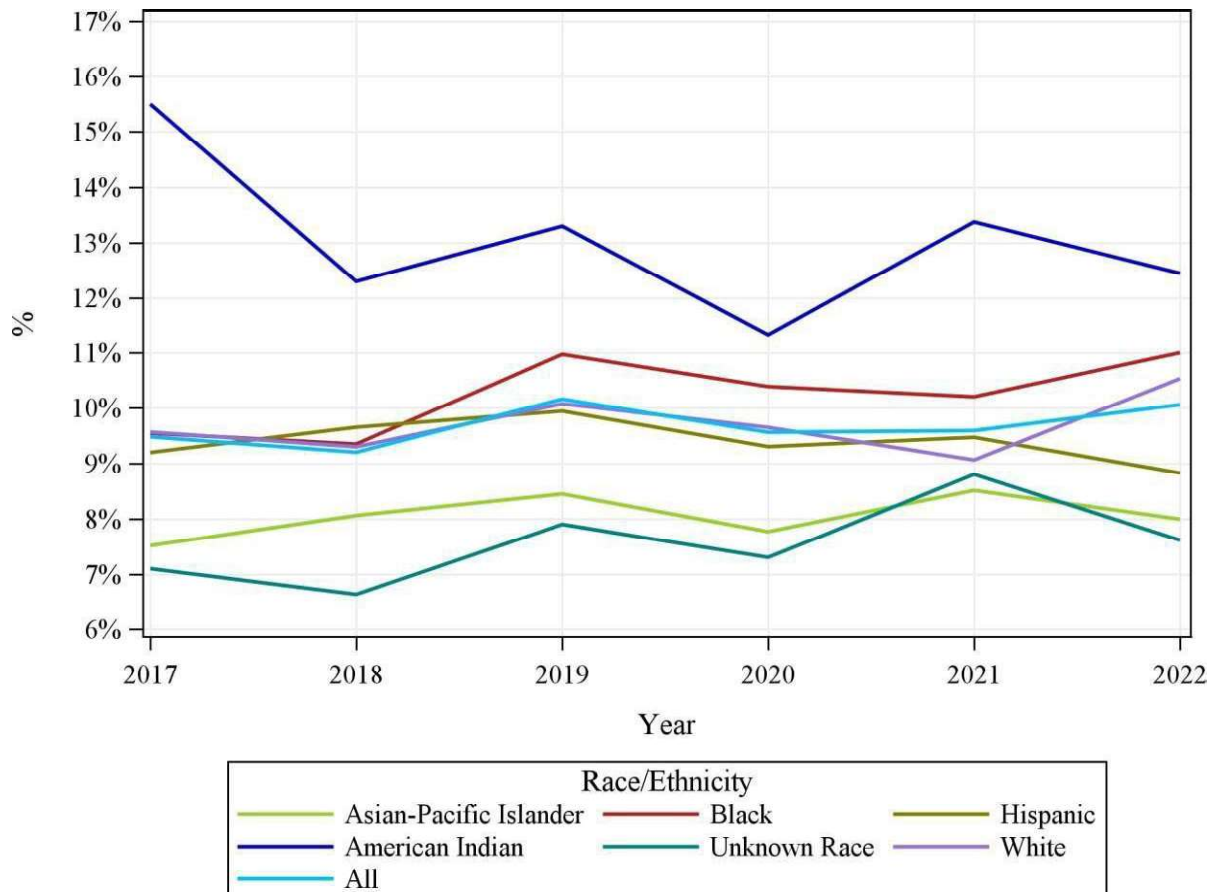
Figure 9a: Percent of newborns born with low birth weight by race and ethnicity



Between 2017 and 2022, the average rate of newborns, regardless of race, born with a low birth weight (LBW) was between 8% and 9%. For all years except 2017 and 2021, Black newborns had the highest incidence of low birth weight, with rates between 9% and 11% across all reported years. The average rate of newborns with low birth weight across all years for American Indians is 10% and in 2017 and 2021 this group had the highest prevalence of LBW relative to all other groups at 11%. Ignoring those whose race is unknown, Hispanics, Whites, and Asian and Pacific Islanders had the lowest rates. Whites had the lowest rates in 2017 (7%) and 2018 (7%), Hispanics had a rate of 8% and 7% in 2019 and 2022,

respectively, and Asian and Pacific Islanders had the lowest rate in 2020 (7%). Between 2019 and 2020, rates across all groups decreased, but increased again in 2021 for all groups except the White population; their rate dropped in 2021, but increased again in 2022.

Figure 9b: Percent of newborns born prematurely by race and ethnicity

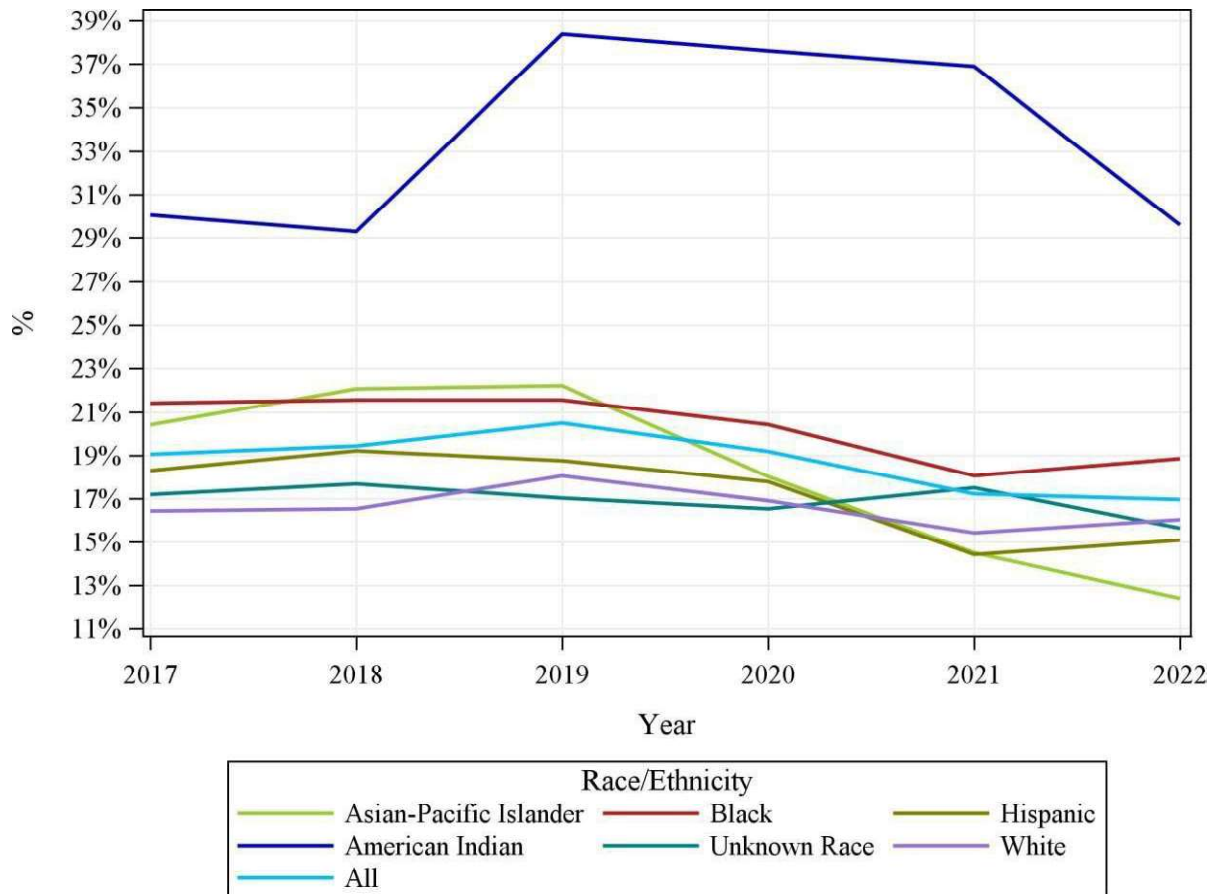


Overall, across all years, about 10% of newborns were born prematurely. American Indians consistently had the highest rate of newborns born prematurely; with a rate of over 15% in 2017. In 2018, this rate decreased substantially to 12%, but that rate remained greater than the average rate for all enrollees (10%) and increased to 13% in 2019 and 2021. In 2022, the rate of newborns born prematurely to American Indians was 12%, which was 20% smaller than the rate reported for year 2017. Black newborns had the second highest incidence of premature birth between 2019 and 2022, with rates between 10% and 11%. In 2017, Whites had the second highest rate (10%) and in 2018, Hispanics had the second highest rate (10%). Of the groups whose race/ethnicity is known, Asian and Pacific Islanders

had the lowest rates of premature birth between 2017 and 2022; during this time, rates were between 8% and 9%.

Medical Assistance Program Neonatal Intensive Care Unit (NICU) Newborns

Figure 10: NICU newborns by race/ethnicity



Overall, regardless of race/ethnicity, the percent of individuals who gave birth to a child who spent time in the NICU remained relatively constant at about 19% in 2017 and 2018. In 2019, the rate increased to 20%. After 2019, the overall rate of newborns who spent time in the NICU began to drop with a rate of 19% in 2020 and 17% in 2022. Between 2017 and 2022, Asian and Pacific Islanders had the most dramatic drop in rates; in 2017, their rate was 20% and in 2022, their rate had fallen by 8 percentage points to 12%; they did, however, experience a temporary rate increase with observed rates of 22% between 2018 and 2019. American Indians had rates that were between 58% (2017) and 114% (2021) higher than the overall average rate across all years. In 2019, American Indians had the highest rate of newborns who spent time in the NICU (38%), however, this rate appears to be decreasing with time and had fallen to 30% in 2022. See table 'Newborns who spent time in the NICU' in appendix A for more details.

V. Conclusion

This report is intended to provide information to the legislature on receipt of services and birth health outcomes for pregnant and postpartum people enrolled in the medical assistance program. The information in this report is summarized by race/ethnicity to assist in identifying areas where disparities may exist.

In the analysis of this report, there was no attempt to evaluate the differences in rates over time or across demographic groups based on statistical inference or statistical significance. These numbers represent the actual reported data, paid fee for service claims, and/or managed care encounters for the population of Medical Assistance beneficiaries who meet the reporting requirements (i.e., having had a live birth and live at the time of reporting). As such, the differences exist as part of the population of recipients in Medical Assistance. With groups of this size, the magnitude of the differences are more relevant factors on which to focus rather than statistical significance of those differences.

The observed trends across multiple measures suggest that there are few uniform patterns of disparity across all the reported items. There is no one single race or ethnic group that fares worse or better on all items. Differences in disparity exist across each of the reported metrics, but one cannot always say which group always fares best or worst. However, in general terms, the American Indian population seems to regularly appear towards the lowest range of the performance spectrum on most indicators. Despite seemingly having more utilization of prenatal and postpartum services, Black and Hispanic pregnant people seem to have worse birth outcomes on many measures. While at first blush this is counter intuitive, it speaks to the impact of other factors that are not measured in medical claims data alone. In addition, the quality of the prenatal and postpartum visits these enrollees receive is also not something that can be observed in claims data but could also be a contributing factor since volume of care does not necessarily translate to quality of care.

Numerous factors contribute to the differences observed in trends over time and between ethnic/racial groups seen in this report. It is important to remember that medical claims data such as those used in this report have many caveats, distinctions, and are often missing key pieces of information necessary to identify the true causes of these differences. This is because the primary purpose of claims data is to track a record of payer compensation to providers for services rendered. Factors such as environmental toxins, stable housing, food insecurity, comorbid medical conditions, disease severity, geographic variance in access to health care, provider enrollment rules, and socio-economic differences in the population of public health programs beneficiaries can be difficult, if not impossible to discern in these data alone.

As required by statute, in 2026 DHS will replicate this report to show changes in these trends and disparities over time from the baseline years established in the current version.

VI. Appendix A

Tables

Demographic summary

Race/Ethnicity	Year	Number of enrollees identifying as female in MA w/CE by race/Ethnicity	Total number of enrollees identifying as female in MA w/CE	Percent of enrollees identifying as female in MA by race	Number of enrollees identifying as female in report by race	Total number of enrollees identifying as female in report	Percent of enrollees identifying as female in report by race
Asian-Pacific Islander	2017	20,195	257,645	7.8%	2,022	21,461	9.42%
Asian-Pacific Islander	2018	20,121	258,459	7.78%	1,949	20,899	9.33%
Asian-Pacific Islander	2019	18,874	244,220	7.73%	1,815	19,826	9.15%
Asian-Pacific Islander	2020	23,035	292,434	7.88%	1,815	19,503	9.31%
Asian-Pacific Islander	2021	28,186	351,450	8.02%	1,866	19,399	9.62%
Asian-Pacific Islander	2022	31,792	391,570	8.12%	2,044	20,435	10.00%
Black	2017	52,461	257,645	20.36%	5,367	21,461	25.01%
Black	2018	54,958	258,459	21.26%	5,312	20,899	25.42%
Black	2019	53,323	244,220	21.83%	5,351	19,826	26.99%
Black	2020	65,269	292,434	22.32%	5,355	19,503	27.46%
Black	2021	78,169	351,450	22.24%	5,202	19,399	26.82%
Black	2022	87,241	391,570	22.28%	5,456	20,435	26.70%
Hispanic	2017	20,336	257,645	7.89%	2,260	21,461	10.53%
Hispanic	2018	21,489	258,459	8.31%	2,208	20,899	10.57%
Hispanic	2019	21,249	244,220	8.70%	2,155	19,826	10.87%
Hispanic	2020	26,869	292,434	9.19%	2,346	19,503	12.03%
Hispanic	2021	33,778	351,450	9.61%	2,475	19,399	12.76%
Hispanic	2022	39,663	391,570	10.13%	2,756	20,435	13.49%
American Indian	2017	14,041	257,645	5.45%	1,214	21,461	5.66%

Race/Ethnicity	Year	Number of enrollees identifying as female in MA w/CE by race/Ethnicity	Total number of enrollees identifying as female in MA w/CE	Percent of enrollees identifying as female in MA by race	Number of enrollees identifying as female in report by race	Total number of enrollees identifying as female in report	Percent of enrollees identifying as female in report by race
American Indian	2018	14,330	258,459	5.54%	1,213	20,899	5.80%
American Indian	2019	14,141	244,220	5.79%	1,140	19,826	5.75%
American Indian	2020	16,939	292,434	5.79%	1,126	19,503	5.77%
American Indian	2021	19,914	351,450	5.67%	1,145	19,399	5.90%
American Indian	2022	21,754	391,570	5.56%	1,136	20,435	5.56%
Unknown	2017	9,369	257,645	3.64%	1,492	21,461	6.95%
Unknown	2018	11,362	258,459	4.40%	1,647	20,899	7.88%
Unknown	2019	10,589	244,220	4.34%	1,601	19,826	8.08%
Unknown	2020	12,993	292,434	4.44%	1,413	19,503	7.25%
Unknown	2021	15,816	351,450	4.50%	1,209	19,399	6.23%
Unknown	2022	18,702	391,570	4.78%	1,368	20,435	6.69%
White	2017	141,243	257,645	54.82%	9,106	21,461	42.43%
White	2018	136,199	258,459	52.70%	8,570	20,899	41.01%
White	2019	126,044	244,220	51.61%	7,764	19,826	39.16%
White	2020	147,329	292,434	50.38%	7,448	19,503	38.19%
White	2021	175,587	351,450	49.96%	7,502	19,399	38.67%
White	2022	192,418	391,570	49.14%	7,675	20,435	37.56%

Deliveries

Race	Year	Number of deliveries	Total number of deliveries	Percent change relative to 2017	Percent of all deliveries
Asian-Pacific Islander	2017	2,022	21,461	.	9.42%
Asian-Pacific Islander	2018	1,949	20,899	-3.61%	9.33%
Asian-Pacific Islander	2019	1,815	19,826	-10.24%	9.15%
Asian-Pacific Islander	2020	1,815	19,503	-10.24%	9.31%
Asian-Pacific Islander	2021	1,866	19,399	-7.72%	9.62%
Asian-Pacific Islander	2022	2,044	20,435	1.09%	10.00%
Black	2017	5,367	21,461	.	25.01%
Black	2018	5,312	20,899	-1.02%	25.42%
Black	2019	5,351	19,826	-0.30%	26.99%
Black	2020	5,355	19,503	-0.22%	27.46%
Black	2021	5,202	19,399	-3.07%	26.82%
Black	2022	5,456	20,435	1.66%	26.70%
American Indian	2017	1,214	21,461	.	5.66%
American Indian	2018	1,213	20,899	-0.08%	5.80%
American Indian	2019	1,140	19,826	-6.10%	5.75%
American Indian	2020	1,126	19,503	-7.25%	5.77%
American Indian	2021	1,145	19,399	-5.68%	5.90%
American Indian	2022	1,136	20,435	-6.43%	5.56%
White	2017	9,106	21,461	.	42.43%
White	2018	8,570	20,899	-5.89%	41.01%
White	2019	7,764	19,826	-14.74%	39.16%
White	2020	7,448	19,503	-18.21%	38.19%
White	2021	7,502	19,399	-17.61%	38.67%
White	2022	7,675	20,435	-15.71%	37.56%
Hispanic	2017	2,260	21,461	.	10.53%

Race	Year	Number of deliveries	Total number of deliveries	Percent change relative to 2017	Percent of all deliveries
Hispanic	2018	2,208	20,899	-2.30%	10.57%
Hispanic	2019	2,155	19,826	-4.65%	10.87%
Hispanic	2020	2,346	19,503	3.81%	12.03%
Hispanic	2021	2,475	19,399	9.51%	12.76%
Hispanic	2022	2,756	20,435	21.95%	13.49%
Unknown Race	2017	1,492	21,461	.	6.95%
Unknown Race	2018	1,647	20,899	10.39%	7.88%
Unknown Race	2019	1,601	19,826	7.31%	8.08%
Unknown Race	2020	1,413	19,503	-5.29%	7.25%
Unknown Race	2021	1,209	19,399	-18.97%	6.23%
Unknown Race	2022	1,368	20,435	-8.31%	6.69%
All	2017	21,461	21,461	.	100.00%
All	2018	20,899	20,899	-2.62%	100.00%
All	2019	19,826	19,826	-7.62%	100.00%
All	2020	19,503	19,503	-9.12%	100.00%
All	2021	19,399	19,399	-9.61%	100.00%
All	2022	20,435	20,435	-4.78%	100.00%

Prenatal Visits – Any Visits

Race/Ethnicity	Year	Number of deliveries	Number of enrollees who received at least one prenatal visit prior to delivery	Percent of enrollees who received at least one prenatal visit prior to delivery	Change relative to 2017	Change relative to total population	Average across all years
All	2017	21,461	20,596	96%	.	.	96%
All	2018	20,899	20,046	96%	-0.05%	.	96%
All	2019	19,826	19,002	96%	-0.13%	.	96%
All	2020	19,503	18,639	96%	-0.42%	.	96%
All	2021	19,399	18,580	96%	-0.20%	.	96%
All	2022	20,435	19,536	96%	-0.38%	.	96%
American Indian	2017	1,214	1,167	96%	.	0.17%	95%
American Indian	2018	1,213	1,161	96%	-0.43%	-0.21%	95%
American Indian	2019	1,140	1,093	96%	-0.26%	0.03%	95%
American Indian	2020	1,126	1,065	95%	-1.61%	-1.03%	95%
American Indian	2021	1,145	1,081	94%	-1.79%	-1.43%	95%
American Indian	2022	1,136	1,061	93%	-2.84%	-2.30%	95%
Asian-Pacific Islander	2017	2,022	1,938	96%	.	-0.13%	96%
Asian-Pacific Islander	2018	1,949	1,884	97%	0.85%	0.78%	96%
Asian-Pacific Islander	2019	1,815	1,737	96%	-0.15%	-0.15%	96%
Asian-Pacific Islander	2020	1,815	1,722	95%	-1.01%	-0.73%	96%
Asian-Pacific Islander	2021	1,866	1,773	95%	-0.87%	-0.80%	96%
Asian-Pacific Islander	2022	2,044	1,953	96%	-0.31%	-0.06%	96%
Black	2017	5,367	5,276	98%	.	2.43%	98%
Black	2018	5,312	5,188	98%	-0.65%	1.82%	98%
Black	2019	5,351	5,246	98%	-0.27%	2.29%	98%
Black	2020	5,355	5,241	98%	-0.44%	2.41%	98%
Black	2021	5,202	5,100	98%	-0.27%	2.36%	98%

Race/Ethnicity	Year	Number of deliveries	Number of enrollees who received at least one prenatal visit prior to delivery	Percent of enrollees who received at least one prenatal visit prior to delivery	Change relative to 2017	Change relative to total population	Average across all years
Black	2022	5,456	5,348	98%	-0.29%	2.53%	98%
Hispanic	2017	2,260	2,194	97%	.	1.16%	97%
Hispanic	2018	2,208	2,144	97%	0.02%	1.23%	97%
Hispanic	2019	2,155	2,080	97%	-0.58%	0.71%	97%
Hispanic	2020	2,346	2,271	97%	-0.28%	1.29%	97%
Hispanic	2021	2,475	2,416	98%	0.55%	1.92%	97%
Hispanic	2022	2,756	2,673	97%	-0.09%	1.45%	97%
Unknown Race	2017	1,492	1,446	97%	.	0.99%	96%
Unknown Race	2018	1,647	1,595	97%	-0.08%	0.96%	96%
Unknown Race	2019	1,601	1,528	95%	-1.52%	-0.42%	96%
Unknown Race	2020	1,413	1,355	96%	-1.05%	0.34%	96%
Unknown Race	2021	1,209	1,164	96%	-0.66%	0.52%	96%
Unknown Race	2022	1,368	1,324	97%	-0.14%	1.24%	96%
White	2017	9,106	8,575	94%	.	-1.88%	94%
White	2018	8,570	8,074	94%	0.05%	-1.78%	94%
White	2019	7,764	7,318	94%	0.09%	-1.66%	94%
White	2020	7,448	6,985	94%	-0.41%	-1.87%	94%
White	2021	7,502	7,046	94%	-0.26%	-1.94%	94%
White	2022	7,675	7,177	94%	-0.70%	-2.19%	94%

Prenatal Visits – Prevalence of Claims with Bundled (Global) Maternity Codes

Year	Number of individuals with bundled claims only	Percent of individuals with bundled claims only	Number of individuals with bundled and non-bundled claims only	Percent of individuals with bundled and non-bundled claims only	Number of individuals with non-bundled claims only	Percent of individuals with non-bundled claims only	Number of deliveries
2017	1,394	6.50%	12,274	57.19%	6,937	32.32%	21,461
2018	1,435	6.87%	12,334	59.02%	6,288	30.09%	20,899
2019	1,379	6.96%	11,673	58.88%	5,958	30.05%	19,826
2020	1,316	6.75%	11,444	58.68%	5,884	30.17%	19,503
2021	1,313	6.77%	11,268	58.09%	6,010	30.98%	19,399
2022	1,267	6.20%	11,591	56.72%	6,685	32.71%	20,435

Prenatal Visits – Average Visits

Race/Ethnicity	Year	Number of deliveries	Total number of prenatal visits	Average number of prenatal visits per woman	change relative to 2017	change relative to total population
All	2017	21,461	227,624	10.61	.	.
All	2018	20,899	218,496	10.45	-1.43%	.
All	2019	19,826	203,132	10.25	-3.40%	.
All	2020	19,503	193,778	9.94	-6.32%	.
All	2021	19,399	194,440	10.02	-5.50%	.
All	2022	20,435	206,079	10.08	-4.92%	.
American Indian	2017	1,214	12,355	10.18	.	-4.05%
American Indian	2018	1,213	12,528	10.33	1.48%	-1.22%
American Indian	2019	1,140	10,837	9.51	-6.59%	-7.22%
American Indian	2020	1,126	10,167	9.03	-11.27%	-9.12%
American Indian	2021	1,145	10,745	9.38	-7.79%	-6.37%
American Indian	2022	1,136	10,684	9.40	-7.58%	-6.74%
Asian-Pacific Islander	2017	2,022	19,277	9.53	.	-10.11%

Race/Ethnicity	Year	Number of deliveries	Total number of prenatal visits	Average number of prenatal visits per woman	change relative to 2017	change relative to total population
Asian-Pacific Islander	2018	1,949	18,305	9.39	-1.49%	-10.17%
Asian-Pacific Islander	2019	1,815	16,447	9.06	-4.95%	-11.56%
Asian-Pacific Islander	2020	1,815	16,450	9.06	-4.93%	-8.78%
Asian-Pacific Islander	2021	1,866	16,883	9.05	-5.10%	-9.74%
Asian-Pacific Islander	2022	2,044	18,476	9.04	-5.19%	-10.37%
Black	2017	5,367	59,663	11.12	.	4.81%
Black	2018	5,312	57,692	10.86	-2.30%	3.88%
Black	2019	5,351	57,585	10.76	-3.19%	5.03%
Black	2020	5,355	54,429	10.16	-8.57%	2.30%
Black	2021	5,202	54,229	10.42	-6.22%	4.00%
Black	2022	5,456	56,584	10.37	-6.71%	2.84%
Hispanic	2017	2,260	26,822	11.87	.	11.89%
Hispanic	2018	2,208	25,692	11.64	-1.96%	11.30%
Hispanic	2019	2,155	24,343	11.30	-4.82%	10.25%
Hispanic	2020	2,346	25,585	10.91	-8.11%	9.76%
Hispanic	2021	2,475	27,413	11.08	-6.67%	10.50%
Hispanic	2022	2,756	30,308	11.00	-7.34%	9.05%
Unknown Race	2017	1,492	17,367	11.64	.	9.75%
Unknown Race	2018	1,647	18,905	11.48	-1.39%	9.79%
Unknown Race	2019	1,601	17,048	10.65	-8.52%	3.93%
Unknown Race	2020	1,413	14,500	10.26	-11.84%	3.28%
Unknown Race	2021	1,209	12,679	10.49	-9.91%	4.62%
Unknown Race	2022	1,368	14,958	10.93	-6.07%	8.42%
White	2017	9,106	92,141	10.12	.	-4.60%
White	2018	8,570	85,375	9.96	-1.55%	-4.71%
White	2019	7,764	76,874	9.90	-2.15%	-3.36%
White	2020	7,448	72,648	9.75	-3.60%	-1.83%
White	2021	7,502	72,493	9.66	-4.50%	-3.59%
White	2022	7,675	75,070	9.78	-3.34%	-3.01%

Cesarean Section Deliveries

Race/Ethnicity	Year	Number of deliveries	Number of enrollees who delivered at least one live infant via cesarean section	Percent of enrollees who delivered at least one live infant via cesarean section	Change relative to 2017	Change relative to total population	Average across all years
All	2017	21,461	5,562	26%	.	.	27%
All	2018	20,899	5,426	26%	0%	.	27%
All	2019	19,826	5,310	27%	3%	.	27%
All	2020	19,503	5,465	28%	8%	.	27%
All	2021	19,399	5,401	28%	7%	.	27%
All	2022	20,435	5,834	29%	10%	.	27%
American Indian	2017	1,214	354	29%	.	13%	31%
American Indian	2018	1,213	356	29%	1%	13%	31%
American Indian	2019	1,140	361	32%	9%	18%	31%
American Indian	2020	1,126	360	32%	10%	14%	31%
American Indian	2021	1,145	342	30%	2%	7%	31%
American Indian	2022	1,136	374	33%	13%	15%	31%
Asian-Pacific Islander	2017	2,022	297	15%	.	-43%	16%
Asian-Pacific Islander	2018	1,949	280	14%	-2%	-45%	16%
Asian-Pacific Islander	2019	1,815	257	14%	-4%	-47%	16%
Asian-Pacific Islander	2020	1,815	294	16%	10%	-42%	16%
Asian-Pacific Islander	2021	1,866	329	18%	20%	-37%	16%
Asian-Pacific Islander	2022	2,044	329	16%	10%	-44%	16%
Black	2017	5,367	1,454	27%	.	5%	29%
Black	2018	5,312	1,514	29%	5%	10%	29%
Black	2019	5,351	1,574	29%	9%	10%	29%

Race/Ethnicity	Year	Number of deliveries	Number of enrollees who delivered at least one live infant via cesarean section	Percent of enrollees who delivered at least one live infant via cesarean section	Change relative to 2017	Change relative to total population	Average across all years
Black	2020	5,355	1,610	30%	11%	7%	29%
Black	2021	5,202	1,542	30%	9%	6%	29%
Black	2022	5,456	1,749	32%	18%	12%	29%
Hispanic	2017	2,260	567	25%	.	-3%	27%
Hispanic	2018	2,208	561	25%	1%	-2%	27%
Hispanic	2019	2,155	593	28%	10%	3%	27%
Hispanic	2020	2,346	659	28%	12%	0%	27%
Hispanic	2021	2,475	653	26%	5%	-5%	27%
Hispanic	2022	2,756	792	29%	15%	1%	27%
Unknown Race	2017	1,492	338	23%	.	-13%	25%
Unknown Race	2018	1,647	397	24%	6%	-7%	25%
Unknown Race	2019	1,601	379	24%	4%	-12%	25%
Unknown Race	2020	1,413	390	28%	22%	-2%	25%
Unknown Race	2021	1,209	332	27%	21%	-1%	25%
Unknown Race	2022	1,368	361	26%	16%	-8%	25%
White	2017	9,106	2,552	28%	.	8%	28%
White	2018	8,570	2,318	27%	-3%	4%	28%
White	2019	7,764	2,146	28%	-1%	3%	28%
White	2020	7,448	2,152	29%	3%	3%	28%
White	2021	7,502	2,203	29%	5%	5%	28%
White	2022	7,675	2,229	29%	4%	2%	28%

Doula Services

Race/Ethnicity	Year	Number of deliveries	Number of enrollees who received at least one doula service	Percent of enrollees who received at least one doula service	Change relative to 2017	Change relative to total population	Average across all years
All	2017	21,461	197	0.92%	.	.	2%
All	2018	20,899	294	1.41%	53%	.	2%
All	2019	19,826	268	1.35%	47%	.	2%
All	2020	19,503	309	1.58%	73%	.	2%
All	2021	19,399	438	2.26%	146%	.	2%
All	2022	20,435	571	2.79%	204%	.	2%
American Indian	2017	1,214	7	0.58%	.	-37%	1%
American Indian	2018	1,213	13	1.07%	86%	-24%	1%
American Indian	2019	1,140	7	0.61%	6%	-55%	1%
American Indian	2020	1,126	8	0.71%	23%	-55%	1%
American Indian	2021	1,145	12	1.05%	82%	-54%	1%
American Indian	2022	1,136	18	1.58%	175%	-43%	1%
Asian-Pacific Islander	2017	2,022	8	0.40%	.	-57%	1%
Asian-Pacific Islander	2018	1,949	19	0.97%	146%	-31%	1%
Asian-Pacific Islander	2019	1,815	10	0.55%	39%	-59%	1%
Asian-Pacific Islander	2020	1,815	11	0.61%	53%	-62%	1%
Asian-Pacific Islander	2021	1,866	19	1.02%	157%	-55%	1%
Asian-Pacific Islander	2022	2,044	57	2.79%	605%	-0%	1%
Black	2017	5,367	77	1.43%	.	56%	2%
Black	2018	5,312	95	1.79%	25%	27%	2%
Black	2019	5,351	104	1.94%	35%	44%	2%
Black	2020	5,355	121	2.26%	57%	43%	2%

Race/Ethnicity	Year	Number of deliveries	Number of enrollees who received at least one doula service	Percent of enrollees who received at least one doula service	Change relative to 2017	Change relative to total population	Average across all years
Black	2021	5,202	165	3.17%	121%	40%	2%
Black	2022	5,456	236	4.33%	201%	55%	2%
Hispanic	2017	2,260	25	1.11%	.	21%	2%
Hispanic	2018	2,208	38	1.72%	56%	22%	2%
Hispanic	2019	2,155	38	1.76%	59%	30%	2%
Hispanic	2020	2,346	43	1.83%	66%	16%	2%
Hispanic	2021	2,475	87	3.52%	218%	56%	2%
Hispanic	2022	2,756	69	2.50%	126%	-10%	2%
Unknown Race	2017	1,492	17	1.14%	.	24%	2%
Unknown Race	2018	1,647	25	1.52%	33%	8%	2%
Unknown Race	2019	1,601	25	1.56%	37%	16%	2%
Unknown Race	2020	1,413	31	2.19%	93%	38%	2%
Unknown Race	2021	1,209	35	2.89%	154%	28%	2%
Unknown Race	2022	1,368	47	3.44%	202%	23%	2%
White	2017	9,106	63	0.69%	.	-25%	1%
White	2018	8,570	104	1.21%	75%	-14%	1%
White	2019	7,764	84	1.08%	56%	-20%	1%
White	2020	7,448	95	1.28%	84%	-19%	1%
White	2021	7,502	120	1.60%	131%	-29%	1%
White	2022	7,675	144	1.88%	171%	-33%	1%

Postpartum Visits – Any Visits

Race/Ethnicity	Year	Number of deliveries	Number of enrollees who received at least one postpartum service following delivery	Percent of enrollees who received at least one postpartum service following delivery	Change relative to 2017	Change relative to total population	Average across all years
All	2017	21,461	14,988	70%	.	.	68%
All	2018	20,899	14,185	68%	-3%	.	68%
All	2019	19,826	13,429	68%	-3%	.	68%
All	2020	19,503	12,789	66%	-6%	.	68%
All	2021	19,399	13,034	67%	-4%	.	68%
All	2022	20,435	13,999	69%	-2%	.	68%
American Indian	2017	1,214	788	65%	.	-7%	61%
American Indian	2018	1,213	783	65%	-1%	-5%	61%
American Indian	2019	1,140	718	63%	-3%	-7%	61%
American Indian	2020	1,126	656	58%	-10%	-11%	61%
American Indian	2021	1,145	675	59%	-9%	-12%	61%
American Indian	2022	1,136	672	59%	-9%	-14%	61%
Asian-Pacific Islander	2017	2,022	1,329	66%	.	-6%	63%
Asian-Pacific Islander	2018	1,949	1,268	65%	-1%	-4%	63%
Asian-Pacific Islander	2019	1,815	1,201	66%	1%	-2%	63%
Asian-Pacific Islander	2020	1,815	1,098	60%	-8%	-8%	63%
Asian-Pacific Islander	2021	1,866	1,140	61%	-7%	-9%	63%
Asian-Pacific Islander	2022	2,044	1,235	60%	-8%	-12%	63%
Black	2017	5,367	3,991	74%	.	6%	73%
Black	2018	5,312	3,808	72%	-4%	6%	73%
Black	2019	5,351	3,960	74%	-0%	9%	73%
Black	2020	5,355	3,842	72%	-4%	9%	73%

Race/Ethnicity	Year	Number of deliveries	Number of enrollees who received at least one postpartum service following delivery	Percent of enrollees who received at least one postpartum service following delivery	Change relative to 2017	Change relative to total population	Average across all years
Black	2021	5,202	3,769	72%	-3%	8%	73%
Black	2022	5,456	3,987	73%	-2%	7%	73%
Hispanic	2017	2,260	1,746	77%	.	11%	75%
Hispanic	2018	2,208	1,662	75%	-3%	11%	75%
Hispanic	2019	2,155	1,585	74%	-5%	9%	75%
Hispanic	2020	2,346	1,714	73%	-5%	11%	75%
Hispanic	2021	2,475	1,852	75%	-3%	11%	75%
Hispanic	2022	2,756	2,096	76%	-2%	11%	75%
Unknown Race	2017	1,492	1,132	76%	.	9%	74%
Unknown Race	2018	1,647	1,230	75%	-2%	10%	74%
Unknown Race	2019	1,601	1,128	70%	-7%	4%	74%
Unknown Race	2020	1,413	1,027	73%	-4%	11%	74%
Unknown Race	2021	1,209	905	75%	-1%	11%	74%
Unknown Race	2022	1,368	1,061	78%	2%	13%	74%
White	2017	9,106	6,002	66%	.	-6%	63%
White	2018	8,570	5,434	63%	-4%	-7%	63%
White	2019	7,764	4,837	62%	-5%	-8%	63%
White	2020	7,448	4,452	60%	-9%	-9%	63%
White	2021	7,502	4,693	63%	-5%	-7%	63%
White	2022	7,675	4,948	64%	-2%	-6%	63%

Postpartum Visits – Prevalence of Claims with Bundled (Global) Maternity Codes

Year	Number of individuals with bundled claims only	Percent of individuals with bundled claims only	Number of individuals with bundled and non-bundled claims only	Percent of individuals with bundled and non-bundled claims only	Number of individuals with non-bundled claims only	Percent of individuals with non-bundled claims only	Number of deliveries
2017	359	1.67%	894	4.17%	13,737	64.01%	21,461
2018	146	0.70%	216	1.03%	13,823	66.14%	20,899
2019	112	0.56%	203	1.02%	13,114	66.15%	19,826
2020	148	0.76%	202	1.04%	12,439	63.78%	19,503
2021	108	0.56%	183	0.94%	12,743	65.69%	19,399
2022	101	0.49%	230	1.13%	13,668	66.89%	20,435

Postpartum Visits – Average Number of Visits

Race/Ethnicity	Year	Number of enrollees	Total number of postpartum visits	Average number of postpartum visits	change relative to 2017	change relative to total population
All	2017	21,461	26,499	1.23	.	.
All	2018	20,899	24,131	1.15	-6.49%	.
All	2019	19,826	23,027	1.16	-5.94%	.
All	2020	19,503	21,359	1.10	-11.30%	.
All	2021	19,399	24,746	1.28	3.31%	.
All	2022	20,435	28,761	1.41	13.99%	.
American Indian	2017	1,214	1,322	1.09	.	-11.81%
American Indian	2018	1,213	1,270	1.05	-3.85%	-9.32%
American Indian	2019	1,140	1,130	0.99	-8.97%	-14.66%
American Indian	2020	1,126	1,067	0.95	-12.98%	-13.47%
American Indian	2021	1,145	1,212	1.06	-2.80%	-17.02%
American Indian	2022	1,136	1,333	1.17	7.76%	-16.63%
Asian-Pacific Islander	2017	2,022	2,288	1.13	.	-8.36%
Asian-Pacific Islander	2018	1,949	2,162	1.11	-1.97%	-3.93%
Asian-Pacific Islander	2019	1,815	1,922	1.06	-6.42%	-8.83%
Asian-Pacific Islander	2020	1,815	1,725	0.95	-16.01%	-13.22%
Asian-Pacific Islander	2021	1,866	1,977	1.06	-6.37%	-16.94%
Asian-Pacific Islander	2022	2,044	2,258	1.10	-2.37%	-21.51%
Black	2017	5,367	7,082	1.32	.	6.87%
Black	2018	5,312	6,482	1.22	-7.52%	5.68%
Black	2019	5,351	6,909	1.29	-2.15%	11.17%
Black	2020	5,355	6,508	1.22	-7.90%	10.97%
Black	2021	5,202	6,800	1.31	-0.94%	2.47%
Black	2022	5,456	7,498	1.37	4.15%	-2.36%
Hispanic	2017	2,260	3,474	1.54	.	24.49%
Hispanic	2018	2,208	3,156	1.43	-7.01%	23.79%
Hispanic	2019	2,155	3,149	1.46	-4.94%	25.81%
Hispanic	2020	2,346	3,307	1.41	-8.30%	28.71%
Hispanic	2021	2,475	4,064	1.64	6.82%	28.72%

Race/Ethnicity	Year	Number of enrollees	Total number of postpartum visits	Average number of postpartum visits	change relative to 2017	change relative to total population
Hispanic	2022	2,756	4,948	1.80	16.80%	27.56%
Unknown Race	2017	1,492	2,303	1.54	.	25.01%
Unknown Race	2018	1,647	2,339	1.42	-7.99%	22.99%
Unknown Race	2019	1,601	2,158	1.35	-12.68%	16.05%
Unknown Race	2020	1,413	1,846	1.31	-15.36%	19.29%
Unknown Race	2021	1,209	1,918	1.59	2.78%	24.36%
Unknown Race	2022	1,368	2,485	1.82	17.68%	29.07%
White	2017	9,106	10,030	1.10	.	-10.79%
White	2018	8,570	8,722	1.02	-7.60%	-11.86%
White	2019	7,764	7,759	1.00	-9.27%	-13.96%
White	2020	7,448	6,906	0.93	-15.82%	-15.33%
White	2021	7,502	8,775	1.17	6.19%	-8.31%
White	2022	7,675	10,239	1.33	21.12%	-5.21%

Postpartum Hemorrhaging

Race/Ethnicity	Year	Number of deliveries	Number of enrollees who experienced postpartum hemorrhaging following pregnancy	Percent of enrollees who experienced postpartum hemorrhaging following pregnancy	Change relative to 2017	Change relative to total population	Average across all years
All	2017	21,461	1,128	5%	.	.	6%
All	2018	20,899	1,200	6%	9%	.	6%
All	2019	19,826	1,164	6%	12%	.	6%
All	2020	19,503	1,248	6%	22%	.	6%
All	2021	19,399	1,335	7%	31%	.	6%
All	2022	20,435	1,513	7%	41%	.	6%
American Indian	2017	1,214	66	5%	.	3%	7%
American Indian	2018	1,213	90	7%	36%	29%	7%
American Indian	2019	1,140	78	7%	26%	17%	7%
American Indian	2020	1,126	80	7%	31%	11%	7%
American Indian	2021	1,145	93	8%	49%	18%	7%
American Indian	2022	1,136	88	8%	42%	5%	7%
Asian-Pacific Islander	2017	2,022	130	6%	.	22%	7%
Asian-Pacific Islander	2018	1,949	140	7%	12%	25%	7%
Asian-Pacific Islander	2019	1,815	124	7%	6%	16%	7%
Asian-Pacific Islander	2020	1,815	124	7%	6%	7%	7%
Asian-Pacific Islander	2021	1,866	125	7%	4%	-3%	7%
Asian-Pacific Islander	2022	2,044	129	6%	-2%	-15%	7%
Black	2017	5,367	279	5%	.	-1%	6%
Black	2018	5,312	314	6%	14%	3%	6%
Black	2019	5,351	310	6%	11%	-1%	6%
Black	2020	5,355	342	6%	23%	-0%	6%
Black	2021	5,202	343	7%	27%	-4%	6%

Race/Ethnicity	Year	Number of deliveries	Number of enrollees who experienced postpartum hemorrhaging following pregnancy	Percent of enrollees who experienced postpartum hemorrhaging following pregnancy	Change relative to 2017	Change relative to total population	Average across all years
Black	2022	5,456	419	8%	48%	4%	6%
Hispanic	2017	2,260	153	7%	.	29%	8%
Hispanic	2018	2,208	141	6%	-6%	11%	8%
Hispanic	2019	2,155	143	7%	-2%	13%	8%
Hispanic	2020	2,346	187	8%	18%	25%	8%
Hispanic	2021	2,475	228	9%	36%	34%	8%
Hispanic	2022	2,756	257	9%	38%	26%	8%
Unknown Race	2017	1,492	91	6%	.	16%	7%
Unknown Race	2018	1,647	115	7%	14%	22%	7%
Unknown Race	2019	1,601	93	6%	-5%	-1%	7%
Unknown Race	2020	1,413	107	8%	24%	18%	7%
Unknown Race	2021	1,209	98	8%	33%	18%	7%
Unknown Race	2022	1,368	116	8%	39%	15%	7%
White	2017	9,106	409	4%	.	-15%	5%
White	2018	8,570	400	5%	4%	-19%	5%
White	2019	7,764	416	5%	19%	-9%	5%
White	2020	7,448	408	5%	22%	-14%	5%
White	2021	7,502	448	6%	33%	-13%	5%
White	2022	7,675	504	7%	46%	-11%	5%

Prenatal and Postpartum Home Visits from a Public Health Nurse

Year	Race/Ethnicity	Number of deliveries	Number of prenatal services	Prenatal %	Change PreNat relative to 2017, in %	Change PreNat relative to total population, in %	Number of prenatal services	Postpartum %	Change Post Partum relative to 2017 in %	Change Post Partum relative to total population in %
2017	All	21461	1417	6.60%	.	.	1829	8.52%	.	.
2018	All	20899	1490	7.13%	8%	.	1753	8.39%	-2%	.
2019	All	19826	1344	6.78%	3%	.	1544	7.79%	-9%	.
2020	All	19503	1266	6.49%	-2%	.	1224	6.28%	-26%	.
2021	All	19399	1086	5.60%	-15%	.	1264	6.52%	-24%	.
2022	All	20435	1248	6.11%	-8%	.	1549	7.58%	-11%	.
2017	American Indian	1214	76	6.26%	.	-5%	89	7.33%	.	-14%
2018	American Indian	1213	98	8.08%	29%	13%	106	8.74%	19%	4%
2019	American Indian	1140	73	6.40%	2%	-6%	77	6.75%	-8%	-13%
2020	American Indian	1126	83	7.37%	18%	14%	59	5.24%	-29%	-17%
2021	American Indian	1145	63	5.50%	-12%	-2%	79	6.90%	-6%	6%
2022	American Indian	1136	62	5.46%	-13%	-11%	66	5.81%	-21%	-23%
2017	Asian-Pacific Islander	2022	139	6.87%	.	4%	150	7.42%	.	-13%
2018	Asian-Pacific Islander	1949	120	6.16%	-10%	-14%	116	5.95%	-20%	-29%
2019	Asian-Pacific Islander	1815	94	5.18%	-25%	-24%	65	3.58%	-52%	-54%
2020	Asian-Pacific Islander	1815	94	5.18%	-25%	-20%	46	2.53%	-66%	-60%
2021	Asian-Pacific Islander	1866	81	4.34%	-37%	-22%	49	2.63%	-65%	-60%
2022	Asian-Pacific Islander	2044	97	4.75%	-31%	-22%	55	2.69%	-64%	-65%
2017	Black	5367	310	5.78%	.	-13%	449	8.37%	.	-2%
2018	Black	5312	363	6.83%	18%	-4%	427	8.04%	-4%	-4%

Year	Race/Ethnicity	Number of deliveries	Number of prenatal services	Prenatal %	Change PreNat relative to 2017, in %	Change PreNat relative to total population, in %	Number of prenatal services	Postpartum %	Change Post Partum relative to 2017 in %	Change Post Partum relative to total population in %
2019	Black	5351	371	6.93%	20%	2%	451	8.43%	1%	8%
2020	Black	5355	308	5.75%	-0%	-11%	395	7.38%	-12%	18%
2021	Black	5202	274	5.27%	-9%	-6%	368	7.07%	-15%	9%
2022	Black	5456	289	5.30%	-8%	-13%	433	7.94%	-5%	5%
2017	Hispanic	2260	218	9.65%	.	46%	273	12.08%	.	42%
2018	Hispanic	2208	256	11.59%	20%	63%	298	13.50%	12%	61%
2019	Hispanic	2155	216	10.02%	4%	48%	261	12.11%	0%	56%
2020	Hispanic	2346	219	9.34%	-3%	44%	234	9.97%	-17%	59%
2021	Hispanic	2475	229	9.25%	-4%	65%	295	11.92%	-1%	83%
2022	Hispanic	2756	269	9.76%	1%	60%	378	13.72%	14%	81%
2017	Unknown Race	1492	113	7.57%	.	15%	178	11.93%	.	40%
2018	Unknown Race	1647	128	7.77%	3%	9%	186	11.29%	-5%	35%
2019	Unknown Race	1601	113	7.06%	-7%	4%	137	8.56%	-28%	10%
2020	Unknown Race	1413	80	5.66%	-25%	-13%	121	8.56%	-28%	36%
2021	Unknown Race	1209	62	5.13%	-32%	-8%	105	8.68%	-27%	33%
2022	Unknown Race	1368	101	7.38%	-3%	21%	172	12.57%	5%	66%
2017	White	9106	561	6.16%	.	-7%	690	7.58%	.	-11%
2018	White	8570	525	6.13%	-1%	-14%	620	7.23%	-5%	-14%
2019	White	7764	477	6.14%	-0%	-9%	553	7.12%	-6%	-9%
2020	White	7448	482	6.47%	5%	-0%	369	4.95%	-35%	-21%
2021	White	7502	377	5.03%	-18%	-10%	368	4.91%	-35%	-25%
2022	White	7675	430	5.60%	-9%	-8%	445	5.80%	-23%	-24%

Low birth weight newborns

Race/Ethnicity	Year	Number of enrollees who delivered at least one live newborn and whose infant is identified by Medicaid-claims data	Total number of Medicaid-covered infants born to a mother covered by a MHCP	Number of newborns born with LBW	Percent of newborns born with LBW	Change relative to 2017	Change relative to total population	Avg across all years
All	2017	19,467	19,758	1,567	8%	.	.	8%
All	2018	18,935	19,207	1,577	8%	4%	.	8%
All	2019	18,174	18,460	1,597	9%	9%	.	8%
All	2020	17,545	17,799	1,452	8%	3%	.	8%
All	2021	17,322	17,577	1,518	9%	9%	.	8%
All	2022	18,496	18,785	1,672	9%	12%	.	8%
American Indian	2017	1,032	1,058	113	11%	.	35%	10%
American Indian	2018	1,043	1,065	96	9%	-16%	10%	10%
American Indian	2019	974	985	99	10%	-6%	16%	10%
American Indian	2020	931	944	74	8%	-27%	-4%	10%
American Indian	2021	941	957	108	11%	6%	31%	10%
American Indian	2022	946	956	80	8%	-22%	-6%	10%
Asian-Pacific Islander	2017	1,888	1,901	155	8%	.	3%	8%
Asian-Pacific Islander	2018	1,819	1,836	148	8%	-1%	-2%	8%
Asian-Pacific Islander	2019	1,732	1,752	138	8%	-3%	-9%	8%
Asian-Pacific Islander	2020	1,724	1,737	114	7%	-20%	-20%	8%
Asian-Pacific Islander	2021	1,766	1,786	135	8%	-7%	-12%	8%
Asian-Pacific Islander	2022	1,963	1,976	164	8%	2%	-7%	8%
Black	2017	4,937	5,008	444	9%	.	12%	10%
Black	2018	4,858	4,942	498	10%	14%	23%	10%
Black	2019	4,971	5,076	543	11%	21%	24%	10%
Black	2020	4,918	4,995	512	10%	16%	26%	10%

Race/Ethnicity	Year	Number of enrollees who delivered at least one live newborn and whose infant is identified by Medicaid-claims data	Total number of Medicaid-covered infants born to a mother covered by a MHCP	Number of newborns born with LBW	Percent of newborns born with LBW	Change relative to 2017	Change relative to total population	Avg across all years
Black	2021	4,764	4,840	532	11%	24%	27%	10%
Black	2022	5,056	5,162	591	11%	29%	29%	10%
Hispanic	2017	2,057	2,088	165	8%	.	-0%	8%
Hispanic	2018	2,022	2,051	157	8%	-3%	-7%	8%
Hispanic	2019	1,997	2,021	152	8%	-5%	-13%	8%
Hispanic	2020	2,176	2,204	153	7%	-12%	-15%	8%
Hispanic	2021	2,293	2,323	184	8%	0%	-8%	8%
Hispanic	2022	2,547	2,573	184	7%	-10%	-20%	8%
Unknown Race	2017	1,298	1,309	75	6%	.	-28%	7%
Unknown Race	2018	1,414	1,431	108	8%	32%	-8%	7%
Unknown Race	2019	1,375	1,392	91	7%	14%	-24%	7%
Unknown Race	2020	1,191	1,204	71	6%	3%	-28%	7%
Unknown Race	2021	1,096	1,114	85	8%	33%	-12%	7%
Unknown Race	2022	1,257	1,273	84	7%	15%	-26%	7%
White	2017	8,255	8,394	615	7%	.	-8%	8%
White	2018	7,779	7,883	570	7%	-1%	-12%	8%
White	2019	7,125	7,234	574	8%	8%	-8%	8%
White	2020	6,605	6,715	528	8%	7%	-4%	8%
White	2021	6,462	6,557	474	7%	-1%	-16%	8%
White	2022	6,727	6,845	569	8%	13%	-7%	8%

Newborns born prematurely

Race/Ethnicity	Year	Number of enrollees who delivered at least one live newborn and whose infant is identified by Medicaid-claims data	Total number of Medicaid-covered infants born to a mother covered by a MHCP	Number of newborns born prematurely	Percent of newborns born prematurely	Change relative to 2017	Change relative to total population	Avg across all years
All	2017	19,467	19,758	1,873	9%	.	.	10%
All	2018	18,935	19,207	1,767	9%	-3%	.	10%
All	2019	18,174	18,460	1,876	10%	7%	.	10%
All	2020	17,545	17,799	1,702	10%	1%	.	10%
All	2021	17,322	17,577	1,686	10%	1%	.	10%
All	2022	18,496	18,785	1,890	10%	6%	.	10%
American Indian	2017	1,032	1,058	164	16%	.	64%	13%
American Indian	2018	1,043	1,065	131	12%	-21%	34%	13%
American Indian	2019	974	985	131	13%	-14%	31%	13%
American Indian	2020	931	944	107	11%	-27%	19%	13%
American Indian	2021	941	957	128	13%	-14%	39%	13%
American Indian	2022	946	956	119	12%	-20%	24%	13%
Asian-Pacific Islander	2017	1,888	1,901	143	8%	.	-21%	8%
Asian-Pacific Islander	2018	1,819	1,836	148	8%	7%	-12%	8%
Asian-Pacific Islander	2019	1,732	1,752	148	8%	12%	-17%	8%
Asian-Pacific Islander	2020	1,724	1,737	135	8%	3%	-19%	8%
Asian-Pacific Islander	2021	1,766	1,786	152	9%	13%	-11%	8%
Asian-Pacific Islander	2022	1,963	1,976	158	8%	6%	-21%	8%
Black	2017	4,937	5,008	478	10%	.	1%	10%
Black	2018	4,858	4,942	462	9%	-2%	2%	10%
Black	2019	4,971	5,076	557	11%	15%	8%	10%
Black	2020	4,918	4,995	519	10%	9%	9%	10%

Race/Ethnicity	Year	Number of enrollees who delivered at least one live newborn and whose infant is identified by Medicaid-claims data	Total number of Medicaid-covered infants born to a mother covered by a MHCP	Number of newborns born prematurely	Percent of newborns born prematurely	Change relative to 2017	Change relative to total population	Avg across all years
Black	2021	4,764	4,840	494	10%	7%	6%	10%
Black	2022	5,056	5,162	568	11%	15%	9%	10%
Hispanic	2017	2,057	2,088	192	9%	.	-3%	9%
Hispanic	2018	2,022	2,051	198	10%	5%	5%	9%
Hispanic	2019	1,997	2,021	201	10%	8%	-2%	9%
Hispanic	2020	2,176	2,204	205	9%	1%	-3%	9%
Hispanic	2021	2,293	2,323	220	9%	3%	-1%	9%
Hispanic	2022	2,547	2,573	227	9%	-4%	-12%	9%
Unknown Race	2017	1,298	1,309	93	7%	.	-25%	8%
Unknown Race	2018	1,414	1,431	95	7%	-7%	-28%	8%
Unknown Race	2019	1,375	1,392	110	8%	11%	-22%	8%
Unknown Race	2020	1,191	1,204	88	7%	3%	-24%	8%
Unknown Race	2021	1,096	1,114	98	9%	24%	-8%	8%
Unknown Race	2022	1,257	1,273	97	8%	7%	-24%	8%
White	2017	8,255	8,394	803	10%	.	1%	10%
White	2018	7,779	7,883	733	9%	-3%	1%	10%
White	2019	7,125	7,234	729	10%	5%	-1%	10%
White	2020	6,605	6,715	648	10%	1%	1%	10%
White	2021	6,462	6,557	594	9%	-5%	-6%	10%
White	2022	6,727	6,845	721	11%	10%	5%	10%

Newborns born prematurely or with low-birth-weight

Race/Ethnicity	Year	Number of enrollees who delivered at least one live newborn and whose infant is identified by Medicaid-claims data	Total number of Medicaid-covered infants born to a mother covered by a MHCP	Number of newborns born prematurely or with LBW	Percent of newborns born prematurely or with LBW	Change relative to 2017	Change relative to total population	Avg across all years
All	2017	19,467	19,758	2,387	12%	.	.	12%
All	2018	18,935	19,207	2,306	12%	-1%	.	12%
All	2019	18,174	18,460	2,340	13%	5%	.	12%
All	2020	17,545	17,799	2,167	12%	1%	.	12%
All	2021	17,322	17,577	2,214	13%	4%	.	12%
All	2022	18,496	18,785	2,433	13%	7%	.	12%
American Indian	2017	1,032	1,058	184	17%	.	44%	16%
American Indian	2018	1,043	1,065	156	15%	-16%	22%	16%
American Indian	2019	974	985	163	17%	-5%	31%	16%
American Indian	2020	931	944	131	14%	-20%	14%	16%
American Indian	2021	941	957	163	17%	-2%	35%	16%
American Indian	2022	946	956	136	14%	-18%	10%	16%
Asian-Pacific Islander	2017	1,888	1,901	203	11%	.	-12%	11%
Asian-Pacific Islander	2018	1,819	1,836	207	11%	6%	-6%	11%
Asian-Pacific Islander	2019	1,732	1,752	197	11%	5%	-11%	11%
Asian-Pacific Islander	2020	1,724	1,737	172	10%	-7%	-19%	11%
Asian-Pacific Islander	2021	1,766	1,786	209	12%	10%	-7%	11%
Asian-Pacific Islander	2022	1,963	1,976	228	12%	8%	-11%	11%
Black	2017	4,937	5,008	634	13%	.	5%	14%
Black	2018	4,858	4,942	644	13%	3%	9%	14%
Black	2019	4,971	5,076	711	14%	11%	11%	14%
Black	2020	4,918	4,995	692	14%	9%	14%	14%

Race/Ethnicity	Year	Number of enrollees who delivered at least one live newborn and whose infant is identified by Medicaid-claims data	Total number of Medicaid-covered infants born to a mother covered by a MHCP	Number of newborns born prematurely or with LBW	Percent of newborns born prematurely or with LBW	Change relative to 2017	Change relative to total population	Avg across all years
Black	2021	4,764	4,840	685	14%	12%	12%	14%
Black	2022	5,056	5,162	772	15%	18%	15%	14%
Hispanic	2017	2,057	2,088	248	12%	.	-2%	12%
Hispanic	2018	2,022	2,051	244	12%	0%	-1%	12%
Hispanic	2019	1,997	2,021	253	13%	5%	-1%	12%
Hispanic	2020	2,176	2,204	253	11%	-3%	-6%	12%
Hispanic	2021	2,293	2,323	280	12%	1%	-4%	12%
Hispanic	2022	2,547	2,573	290	11%	-5%	-13%	12%
Unknown Race	2017	1,298	1,309	123	9%	.	-22%	10%
Unknown Race	2018	1,414	1,431	139	10%	3%	-19%	10%
Unknown Race	2019	1,375	1,392	140	10%	7%	-21%	10%
Unknown Race	2020	1,191	1,204	110	9%	-3%	-25%	10%
Unknown Race	2021	1,096	1,114	121	11%	16%	-14%	10%
Unknown Race	2022	1,257	1,273	125	10%	4%	-24%	10%
White	2017	8,255	8,394	995	12%	.	-2%	12%
White	2018	7,779	7,883	916	12%	-2%	-3%	12%
White	2019	7,125	7,234	876	12%	2%	-4%	12%
White	2020	6,605	6,715	809	12%	2%	-1%	12%
White	2021	6,462	6,557	756	12%	-3%	-8%	12%
White	2022	6,727	6,845	882	13%	9%	-1%	12%

Newborns who spent time in the NICU

Race/Ethnicity	Year	Number of enrollees who delivered at least one live newborn and whose infant is identified by Medicaid-claims data	Total number of Medicaid-covered infants born to a mother covered by a MHCP	Number of newborns who spent time in the NICU	Percent of newborns who spent time in the NICU	Change relative to 2017	Change relative to total population	Avg across all years
All	2017	19,467	19,758	3,764	19%	.	.	19%
All	2018	18,935	19,207	3,732	19%	2%	.	19%
All	2019	18,174	18,460	3,783	20%	8%	.	19%
All	2020	17,545	17,799	3,414	19%	1%	.	19%
All	2021	17,322	17,577	3,027	17%	-10%	.	19%
All	2022	18,496	18,785	3,185	17%	-11%	.	19%
American Indian	2017	1,032	1,058	318	30%	.	58%	34%
American Indian	2018	1,043	1,065	312	29%	-3%	51%	34%
American Indian	2019	974	985	378	38%	28%	87%	34%
American Indian	2020	931	944	355	38%	25%	96%	34%
American Indian	2021	941	957	353	37%	23%	114%	34%
American Indian	2022	946	956	283	30%	-2%	75%	34%
Asian-Pacific Islander	2017	1,888	1,901	388	20%	.	7%	18%
Asian-Pacific Islander	2018	1,819	1,836	405	22%	8%	14%	18%
Asian-Pacific Islander	2019	1,732	1,752	389	22%	9%	8%	18%
Asian-Pacific Islander	2020	1,724	1,737	313	18%	-12%	-6%	18%
Asian-Pacific Islander	2021	1,766	1,786	259	15%	-29%	-16%	18%
Asian-Pacific Islander	2022	1,963	1,976	245	12%	-39%	-27%	18%
Black	2017	4,937	5,008	1,072	21%	.	12%	20%
Black	2018	4,858	4,942	1,065	22%	1%	11%	20%
Black	2019	4,971	5,076	1,094	22%	1%	5%	20%
Black	2020	4,918	4,995	1,020	20%	-5%	6%	20%

Race/Ethnicity	Year	Number of enrollees who delivered at least one live newborn and whose infant is identified by Medicaid-claims data	Total number of Medicaid-covered infants born to a mother covered by a MHCP	Number of newborns who spent time in the NICU	Percent of newborns who spent time in the NICU	Change relative to 2017	Change relative to total population	Avg across all years
Black	2021	4,764	4,840	874	18%	-16%	5%	20%
Black	2022	5,056	5,162	973	19%	-12%	11%	20%
Hispanic	2017	2,057	2,088	382	18%	.	-4%	17%
Hispanic	2018	2,022	2,051	394	19%	5%	-1%	17%
Hispanic	2019	1,997	2,021	379	19%	3%	-8%	17%
Hispanic	2020	2,176	2,204	392	18%	-3%	-7%	17%
Hispanic	2021	2,293	2,323	335	14%	-21%	-16%	17%
Hispanic	2022	2,547	2,573	388	15%	-18%	-11%	17%
Unknown Race	2017	1,298	1,309	225	17%	.	-10%	17%
Unknown Race	2018	1,414	1,431	253	18%	3%	-9%	17%
Unknown Race	2019	1,375	1,392	237	17%	-1%	-17%	17%
Unknown Race	2020	1,191	1,204	199	17%	-4%	-14%	17%
Unknown Race	2021	1,096	1,114	195	18%	2%	2%	17%
Unknown Race	2022	1,257	1,273	199	16%	-9%	-8%	17%
White	2017	8,255	8,394	1,379	16%	.	-14%	17%
White	2018	7,779	7,883	1,303	17%	1%	-15%	17%
White	2019	7,125	7,234	1,306	18%	10%	-12%	17%
White	2020	6,605	6,715	1,135	17%	3%	-12%	17%
White	2021	6,462	6,557	1,011	15%	-6%	-10%	17%
White	2022	6,727	6,845	1,097	16%	-2%	-5%	17%

VII. Appendix B – Medical coding values

Metric	Code type	Code	Description
Deliveries	ICD10PCS	10D00Z0	Extraction of Products of Conception, Hi
Deliveries	ICD10PCS	10D00Z1	Extraction of Products of Conception, Lo
Deliveries	ICD10PCS	10D00Z2	Extraction of POC, Extraperitoneal, Open
Deliveries	ICD10PCS	10D07Z3	Extraction of POC, Low Forceps, Via Open
Deliveries	ICD10PCS	10D07Z4	Extraction of POC, Mid Forceps, Via Open
Deliveries	ICD10PCS	10D07Z5	Extraction of POC, High Forceps, Via Ope
Deliveries	ICD10PCS	10D07Z6	Extraction of Products of Conception, Va
Deliveries	ICD10PCS	10D07Z7	Extraction of POC, Int Version, Via Open
Deliveries	ICD10PCS	10D07Z8	Extraction of Products of Conception, Ot
Deliveries	ICD10PCS	10E0XZZ	Delivery of Products of Conception, Exte
Deliveries	CPT	59400	OBSTETRICAL CARE
Deliveries	CPT	59409	MATERNITY CARE AND DELIVERY
Deliveries	CPT	59410	OBSTETRICAL CARE
Deliveries	CPT	59510	CESAREAN DELIVERY
Deliveries	CPT	59514	MATERNITY CARE AND DELIVERY
Deliveries	CPT	59515	CESAREAN DELIVERY
Deliveries	CPT	59610	Vbac delivery
Deliveries	CPT	59612	Vbac delivery only
Deliveries	CPT	59614	Vbac care after delivery
Deliveries	CPT	59618	Attempted vbc delivery
Deliveries	CPT	59620	Attempted vbc delivery only
Deliveries	CPT	59622	Attempted vbc after care
Deliveries	CPT	59510	CESAREAN DELIVERY
Deliveries	CPT	59514	MATERNITY CARE AND DELIVERY
Deliveries	CPT	59515	CESAREAN DELIVERY
Deliveries	CPT	59525	REMOVE UTERUS AFTER CESAREAN
Deliveries	CPT	59618	Attempted vbc delivery

Metric	Code type	Code	Description
Deliveries	CPT	59620	Attempted vbac delivery only
Deliveries	CPT	59622	Attempted vbac after care
Prenatal Services	HCPCS	S9442	Birthing class
Prenatal Services	HCPCS	S9443	Lactation class
Prenatal Services	HCPCS	S9446	PT education noc group
Prenatal Services	CPT	98969	Online service by hc pro
Prenatal Services	CPT	98970	Qnhp ol dig e/m svc 5-10min
Prenatal Services	CPT	98971	Qnhp ol dig em svc 11-20min
Prenatal Services	CPT	98972	Qnhp ol dig e/m svc 21+ min
Prenatal Services	CPT	99421	Ol dig e/m svc 5-10 min
Prenatal Services	CPT	99422	Ol dig e/m svc 11-20 min
Prenatal Services	CPT	99423	Ol dig e/m svc 21+ min
Prenatal Services	CPT	99444	Online e/m by phys
Prenatal Services	CPT	99457	Rem physiol mntr 20 min mo
Prenatal Services	HCPCS	G0071	COMM SVCS BY RHC/FQHC 5 MIN
Prenatal Services	HCPCS	G2010	Remot image submit by pt
Prenatal Services	HCPCS	G2012	Brief check in by md/qhp
Prenatal Services	HCPCS	G2061	Qual nonmd est pt 5-10m
Prenatal Services	HCPCS	G2062	Qual nonmd est pt 11-20m
Prenatal Services	HCPCS	G2063	Qual nonmd est pt 21>min
Prenatal Services	CPT	59400	OBSTETRICAL CARE
Prenatal Services	CPT	59425	MATERNITY CARE AND DELIVERY
Prenatal Services	CPT	59426	ANTEPARTUM CARE ONLY
Prenatal Services	CPT	59510	CESAREAN DELIVERY
Prenatal Services	CPT	59610	Vbac delivery
Prenatal Services	CPT	59618	Attempted vbac delivery
Prenatal Services	HCPCS	H1005	Prenatalcare enhanced srv pk
Prenatal Services	CPT	99201	OFFICE/OUTPATIENT VISIT, NEW

Metric	Code type	Code	Description
Prenatal Services	CPT	99202	OFFICE/OUTPATIENT VISIT, NEW
Prenatal Services	CPT	99203	OFFICE/OUTPATIENT VISIT, NEW
Prenatal Services	CPT	99204	OFFICE/OUTPATIENT VISIT, NEW
Prenatal Services	CPT	99205	OFFICE/OUTPATIENT VISIT, NEW
Prenatal Services	CPT	99211	OFFICE/OUTPATIENT VISIT, EST
Prenatal Services	CPT	99212	OFFICE/OUTPATIENT VISIT, EST
Prenatal Services	CPT	99213	OFFICE/OUTPATIENT VISIT, EST
Prenatal Services	CPT	99214	OFFICE/OUTPATIENT VISIT, EST
Prenatal Services	CPT	99215	OFFICE/OUTPATIENT VISIT, EST
Prenatal Services	CPT	99241	OFFICE CONSULTATION
Prenatal Services	CPT	99242	OFFICE CONSULTATION
Prenatal Services	CPT	99243	OFFICE CONSULTATION
Prenatal Services	CPT	99244	OFFICE CONSULTATION
Prenatal Services	CPT	99245	OFFICE CONSULTATION
Prenatal Services	CPT	99483	Assmt & care pln pt cog imp
Prenatal Services	HCPCS	G0463	Hospital outpt clinic visit
Prenatal Services	HCPCS	T1015	Clinic service
Prenatal Services	CPT	99500	Home visit, prenatal
Prenatal Services	HCPCS	H1000	Prenatal care at-risk assessment
Prenatal Services	HCPCS	H1001	Antepartum management
Prenatal Services	HCPCS	H1002	CARE COORDINATION PRENATAL
Prenatal Services	HCPCS	H1003	Prenatal at-risk education
Prenatal Services	CPT	98966	Hc pro phone call 5-10 min
Prenatal Services	CPT	98967	Hc pro phone call 11-20 min
Prenatal Services	CPT	98968	Hc pro phone call 21-30 min
Prenatal Services	CPT	99441	Phone e/m by phys 5-10 min
Prenatal Services	CPT	99442	Phone e/m by phys 11-20 min
Prenatal Services	CPT	99443	Phone e/m by phys 21-30 min

Metric	Code type	Code	Description
Doula Services	CPT	99199	SPECIAL SERVICE OR REPORT
Doula Services	HCPCS	S9445	PT education noc individ
NICU	REV	0172	NURSERY/LEVEL II
NICU	REV	0173	NURSERY/NEWBORN - LEVEL III
NICU	REV	0174	NURSERY/NEWBORN - LEVEL IV
LBW	CPT	99478	lc, lbw inf < 1500 gm subsq
LBW	CPT	99479	lc lbw inf 1500-2500 g subsq
LBW	ICD10CM	P07.0	Extremely low birth weight newborn
LBW	ICD10CM	P07.1	Other low birth weight newborn, unspecified weight
Postpartum Visits	CPT	99221	INITIAL HOSPITAL CARE
Postpartum Visits	CPT	99222	INITIAL HOSPITAL CARE
Postpartum Visits	CPT	99223	INITIAL HOSPITAL CARE
Postpartum Visits	CPT	99231	SUBSEQUENT HOSPITAL CARE
Postpartum Visits	CPT	99232	SUBSEQUENT HOSPITAL CARE
Postpartum Visits	CPT	99233	SUBSEQUENT HOSPITAL CARE
Postpartum Visits	CPT	99238	HOSPITAL DISCHARGE DAY
Postpartum Visits	CPT	99239	Hospital discharge day
Postpartum Visits	CPT	99251	INITIAL INPATIENT CONSULT
Postpartum Visits	CPT	99252	INITIAL INPATIENT CONSULT
Postpartum Visits	CPT	99253	INITIAL INPATIENT CONSULT
Postpartum Visits	CPT	99254	INITIAL INPATIENT CONSULT
Postpartum Visits	CPT	99255	INITIAL INPATIENT CONSULT
Postpartum Visits	CPT	99291	CRITICAL CARE, FIRST HOUR
Postpartum Visits	CPT	59400	OBSTETRICAL CARE
Postpartum Visits	CPT	59410	OBSTETRICAL CARE
Postpartum Visits	CPT	59510	CESAREAN DELIVERY
Postpartum Visits	CPT	59515	CESAREAN DELIVERY
Postpartum Visits	CPT	59610	Vbac delivery

Metric	Code type	Code	Description
Postpartum Visits	CPT	59614	Vbac care after delivery
Postpartum Visits	CPT	59618	Attempted vbac delivery
Postpartum Visits	CPT	59622	Attempted vbac after care
Postpartum Visits	CPT	57170	FITTING OF DIAPHRAGM/CAP
Postpartum Visits	CPT	58300	INSERT INTRAUTERINE DEVICE
Postpartum Visits	CPT	59430	CARE AFTER DELIVERY
Postpartum Visits	CPT	99501	Home visit, postnatal
Postpartum Visits	CPT	99502	Home visit for newborn care and assessment
Postpartum Visits	HCPCS	H1004	Postpartum Follow-up Home Visit
Postpartum Visits	HCPCS	G0101	CA screen;pelvic/breast exam
Postpartum Visits	HCPCS	S9123	Nursing care, in the home or place of residence, by a public health nurse or registered nurse

VII. Appendix C – Global maternity care billing codes

Global Maternity Code*	
59618, Under Delivery Procedures After Previous Cesarean Delivery	In this global service, the provider provides all of the antepartum care, admission to the hospital for delivery, intensive management of labor followed by delivery of the fetus and placenta via an abdominal incision, and inpatient and outpatient postpartum care. The patient’s attempt at a vaginal delivery after a previous cesarean delivery fails, resulting in a repeat cesarean. Typical global services begin at eight to ten weeks gestation, with a full-term cesarean delivery at thirty–nine to forty weeks gestation, and routine outpatient postpartum care of one or more visits up to six weeks following delivery.

<p>59426, Under Vaginal Delivery, Antepartum and Postpartum Care Procedures</p>	<p>This service is considered a mini global code for the provider who provides seven or more antepartum visits. This can happen when the patient transfers out of the practice prior to delivery, or the pregnancy terminates prior to delivery. In some cases, the provider must use this code when he does not provide all the antepartum care, but does perform the delivery with or without postpartum care because the patient transfers in from another practice and the payer does not allow the physician to report the global services code, such as 59400.</p>
<p>59425, Under Vaginal Delivery, Antepartum and Postpartum Care Procedures</p>	<p>This service is considered a mini global code for the provider who provides only four to six of the patient’s antepartum visits. This can happen when the patient transfers out of the practice prior to delivery or the pregnancy terminates prior to delivery. In some cases, the provider must use this code when he does not provide all of the antepartum care, but does perform the delivery with or without postpartum care because the patient transfers in from another practice, and the payer does not allow the provider to bill a global services code such as 59400.</p>
<p>59510, Under Cesarean Delivery Procedures</p>	<p>In this global service, the provider provides all of the antepartum care, admission to the hospital for delivery, delivery of the fetus and placenta via an abdominal incision, and inpatient and outpatient postpartum care. Typical global services begin at eight to ten weeks gestation and include a full-term cesarean delivery at thirty-nine to forty weeks gestation and routine inpatient and outpatient postpartum care of one or more visits up to six weeks following delivery.</p>
<p>59610, Under Delivery Procedures After Previous Cesarean Delivery</p>	<p>In this global service, the provider provides all of the antepartum care, admission to the hospital</p>

	<p>for delivery, intensive labor management, including fetal monitoring, use of low forceps, and episiotomy, vaginal delivery of the fetus and placenta, and inpatient and outpatient postpartum care. The patient has had a previous cesarean delivery but was able to deliver vaginally at this delivery. Typical global services begin at eight to ten weeks gestation, with a full term vaginal delivery at thirty–nine to forty weeks gestation, and routine outpatient postpartum care at six weeks following delivery.</p>
<p>59400, Under Vaginal Delivery, Antepartum and Postpartum Care Procedures</p>	<p>In this global service, the provider and non-physician healthcare providers in the practice provide all of the antepartum care, admission to the hospital for delivery, labor management, including induction of labor, fetal monitoring, use of low forceps and episiotomy, vaginal delivery of the fetus and placenta, and inpatient and outpatient postpartum care. Typical global services begin at eight to ten weeks gestation, with a full-term vaginal delivery at thirty–nine to forty weeks gestation, and routine outpatient postpartum care for six weeks following delivery.</p>

*Descriptions from aapc.com